# COMMONWEALTH BUREAU OF CENSUS AND STATISTICS, CANBERRA.

#### **OFFICIAL**

# YEAR BOOK

OF THE

# COMMONWEALTH OF AUSTRALIA

No. 44-1958.

Prepared under Instructions from The Right Honorable the Treasurer,

 $\mathbf{BY}$ 

S. R. CARVER, COMMONWEALTH STATISTICIAN.

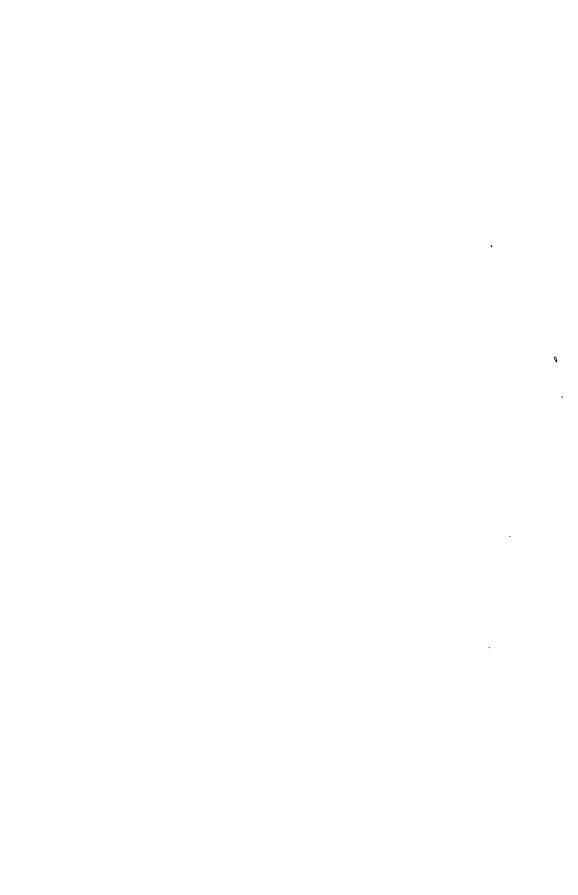


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A. J. ARTHUR, COMMONWEALTH GOVERNMENT PRINTER, CANBERRA.

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#### PREFACE.

By the Constitution of the Commonwealth of Australia, the Parliament of the Commonwealth is empowered, subject to the Constitution, "to make laws for the peace, order, and good government of the Commonwealth, with respect to........Census and statistics." In the exercise of the power so conferred, a "Census and Statistics Act" was passed in 1905, and in the year following the "Commonwealth Bureau of Census and Statistics" was created. The first Official Year Book was published early in 1908. The publication here presented is the forty-fourth Official Year Book issued under the authority of the Commonwealth Government.

The Synopsis on pp. xi to xxxi following shows the general arrangement of the work. The special index (preceding the General Index) provided at the end of the volume, together with certain references given in the various chapters, will assist in tracing in previous issues special articles and other more or less important miscellaneous matter which, owing to limitations of space, have been omitted or abbreviated in the present volume. Where, in the General Index, more than one reference to a subject is given, the chief reference (or references) has been specially indicated wherever possible.

Every endeavour has been made to meet the demand occasioned by the current economic and financial conditions for new information, or information expressed in new terms, concerning many branches of statistics, while a Diary of Principal Economic Events of the years 1954 to 1957 is inserted after the last chapter.

It is not proposed to refer to the whole of the new matter or to the new treatment of existing matter incorporated in the present volume, but attention may be drawn to the following:—

Chapter VI.—Labour, Wages and Prices.—Basic Wage Inquiry, 1956-57. Précis of judgment (p. 178).

Chapter XI.—Transport and Communication.—New matter dealing with Registration of Motor Vehicles (p. 407), and Census of Motor Vehicles, 1955 (p. 415). Expanded sections dealing with Television and Radio and Television Licences (pp. 442-4).

Chapter XIII.—Public Justice (p. 487).—Revised and expanded chapter.

Chapter XIV.—Public Health.—New section dealing with Mental Hospital Benefits (p. 522).

Chapter XX.—Private Finance.—Expanded and revised section dealing with Savings Banks (p. 744). New sections relating to Hire Purchase Business, and Capital Raisings by Australian Companies (p. 769), and Survey of Private Superannuation Schemes, 1955-56 (p. 776).

Chapter XXII.—Agricultural Production.—New sections dealing with Aerial Agriculture (p. 909), and classification of Rural Holdings (p. 912).

Chapter XXV.—Forestry.—Special article on Softwood Plantations (p. 975).

Chapter XXIX.—Repatriation.—New section dealing with Seamen's War Pensions and Allowances (p. 1077).

Appendix.—Basic Wage Inquiry, 1958.—Précis of judgment (p. 1,158).

The material in the Year Book has been carefully checked throughout, but I shall be grateful to those who will be kind enough to point out defects or make suggestions.

In a publication of this size, a considerable time must necessarily elapse between the handling, both by author and printer, of the earlier and later parts of the work. In order to offset, to some extent, the consequent delay in presentation, the contents of this issue have already been published in separate Parts as the successive chapters or groups of chapters were printed. Particulars of these Parts, numbering eleven in all, are shown in the Price List of Printed Publications at the end of this volume. In a statistical publication, however, the time element does result in an unevenness in the periods to which the statistics relate. To overcome this difficulty, in part at least, an Appendix is provided in which so far as space permits, later particulars, where available, of many statistical series appearing in preceding chapters have been inserted. The insertions have been restricted mainly to figures, as the inclusion of current textual matter is not generally practicable.

In a number of chapters the figures in this issue have been brought forward two years from those in the previous issue. The Appendix to this issue contains information for various periods up to 1957-58.

vi Preface.

It should be pointed out that for the most recent statistics the reader should refer to other publications issued by this Bureau, notably the Monthly Review of Business Statistics and the Quarterly Summary of Australian Statistics. There are also numerous mimeographed statements issued from time to time on a wide range of subjects. Particulars of these are shown in Chapter XXXI.—Statistical Organization and Sources of Information.

My thanks are tendered to the State Statisticians, who have collected and compiled the data on which a great part of the information given in the Official Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments, and to others who have kindly, and often at considerable trouble, supplied information.

I also desire to express my keen appreciation of the valuable work performed by Mr. A. E. Callander, Editor of Publications, Mr. E. H. Harry, B.A., B.Com., and Mr. G. I. Neville, B.Com., Assistant Editors, and the other officers of the Publications Division, and of the services rendered by the officers in charge of the several Branches of the Commonwealth Bureau of Census and Statistics upon whom has devolved the duty of revising the chapters relative to their respective Branches.

S. R. CARVER, Commonwealth Statistician.

Commonwealth Bureau of Census and Statistics, Canberra, A.C.T., August, 1958.

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#### OFFICIAL YEAR BOOK

OF THE

#### COMMONWEALTH OF AUSTRALIA.

#### CHAPTER I.

# DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA.

#### § 1. Early Knowledge and Discovery of Australia.

- 1. Introduction:—The following paragraphs contain only a bare outline of the more important facts relating to the early history of Australian discovery. A more detailed summary of these facts may be found in Official Year Book No. 39 (see page 1) and earlier issues:
- 2. Terra Australis.—There was, apparently, an early Chaldean tradition as to the existence of an Austral land to the south of India and rumours to that effect found their way in the course of time to Europe. References to this *Terra Australis* are found in the works of Elianus (A.D. 205-234), Manilius (probably a contemporary of Augustus of Tiberius Caesar), and Prolemy (A.D. 107-161). Evidence pointing to knowledge of such a land appeared in maps and manuscripts of the Middle Ages and the fourteenth and fifteenth centuries, but there is no definite evidence connecting this so-called *Terra Australis* with Australia.

Reference by Marco Polo (1254-1324) to a land called Locac, and several indications on maps and globes in the fifteenth and sixteenth centuries have been assumed to relate to Australia, but little weight can now be attached to these suppositions. Cornelius Wytfliet's map of 1597, however, indicates roughly the eastern and western coasts of Australia, as well as the Gulf of Carpentaria, although the off-quoted passage in his Descriptionis: Ptolemaicae. Augmentum describing the Australia Terra has been considered to have had its origin in the voyages through the Straits of Magellan and the discovery of Tierra del Fuego rather than that of Australia.

3. Discovery of Australia.—(i) The Spaniards. Disregarding the suggestion, for which there is no evidence, that the Arabs had come to Australia long before the Portuguese, the Spaniards or the Dutch, and apart from the possibility that the Portuguese may have discovered part of the Australian coast before 1542, the coastal exploration of Australia may be taken as having begun with the Spaniards and the Dutch.

In 1606; the Spaniard Quiros; on reaching the island that has retained the name of Espiritu Santo (the largest island of the New Hebrides group), thought he had discovered the great land of the south, and therefore named the group La Australia del Espiritu Santo. After leaving the New Hebrides, Quiros sailed eastward, but Torres, his second-in-command, took a westerly course and passed through the strait that now bears his name. In all probability he sighted the Australian continent; but no mention of it is made in his records. This voyage marks the close of Spanish activity in the work of discovery in the South Seas:

(ii) The Dutch. The Dutch discovered Australia when the Dutch East India Companysent the Duyfken from Bantam, Java, to explore the islands of New Guinea. During March, 1606, the Duyfken coasted along the southern shores of New Guinea and followed the west coast of Cape York peninsula as far as Cape Keer-Weer (Turn Again).

During the following thirty years, there were nine visits of Dutch navigators to Australian waters; by 1636, through their efforts, the coast of Australia from Cape York westward around to the Great Australian Bight had been discovered.

6875/57.

In 1642, Abel Janszoon Tasman set out from Batavia to ascertain the extent of the great southern continent. He named Van Diemen's Land, imagining it to be part of Australia proper, and sailing north-easterly discovered New Zealand and returned to Batavia. In his second voyage in 1644, Tasman visited the northern coast of Australia, sailing round the Gulf of Carpentaria and along the north-west coast as far south as the tropic of Capricorn. This voyage of Tasman's may be said to have ended the period of Dutch discoveries, although there were subsequent visits by the Dutch to Australia (de Vlamingh in 1696 and Van Delft in 1705).

4. Discoveries by the English.—In the meantime, the English had made their first appearance on the Australian coast in 1688, when the north-westerly shores were visited by William Dampier, as supercargo of the Cygnet, a trading vessel whose crew had turned buccaneers. In 1699, he again visited Australia, in command of H.M.S. Roebuck, and on his return to England published an account in which a description is given of trees, flowers, birds and reptiles observed, and of encounters with natives.

At the end of the seventeenth century, it was uncertain whether Tasmania and New Zealand were parts of Australia, or whether they were separated from it, but themselves formed part of a great Antarctic Continent. Lieutenant (later Captain) James Cook's first voyage, though primarily undertaken for the purpose of observing the transit of Venus from Tahiti, had also the objective of ascertaining whether the unexplored part of the southern hemisphere was only an immense mass of water or contained another continent. In command of H.M.S. Endeavour, a barque of 370 tons burden, carrying about 85 persons, and accompanied by Sir Joseph Banks the botanist, Dr. Solander the naturalist, Green the astronomer, draughtsmen and servants, Cook, after observing the transit of Venus at Tahiti, turned towards New Zealand, sighting that land on 7th October, 1769, in the neighbourhood of Poverty Bay. Circumnavigating the North and South Islands, he proved that New Zealand was connected neither with the supposed Antarctic Continent nor with Australia, and took formal possession thereof in the name of the British Crown. On 20th April, 1770, at 6 a.m., Cook sighted the Australian mainland at a place he called Point Hicks, naming it after his first-lieutenant, who first saw it. Coasting northwards, Botany Bay was discovered on 29th April, 1770. The Endeavour dropped anchor and Cook landed on the same day. Cook sailed along the coast in a northerly direction for nearly 1,300 miles until 11th June, 1770, when the Endeavour was seriously damaged by striking a coral reef in the vicinity of Trinity Bay. Repairs occupied nearly two months and the Endeavour then again set her course to the north, sailing through Torres Strait and anchoring in the Downs on 13th July, 1771. In 1772, Cook was put in command of the ships Resolution and Adventure, with a view to ascertaining whether a great southern continent existed. Having satisfied himself that, even if it did, it lay so far to the south as to be useless for trade and settlement, he returned to England in 1774. Cook's last voyage was undertaken in 1776, and he met his death on 14th February, 1779, by which date practically the whole coast of Australia had been explored. The only remaining discovery of importance was the existence of a channel between Tasmania and Australia. This was made by Bass and Flinders in 1798.

#### § 2. The Annexation of Australia.

1. Annexation of Eastern Part of Australia, 1770.—Although representatives of the nations mentioned in the previous section landed or claimed to have landed on the shores of Australia on various occasions during the sixteenth and seventeenth centuries, it was not until 23rd August, 1770, that the history of Australia was brought into definite political connexion with Western civilization. It was on that date that Captain Cook took possession "of the whole eastern coast, from latitude 38° to this place, latitude 10½° S., in right of His Majesty King George the Third." Cook, however, proclaimed British sovereignty over only what are now the eastern parts of New South Wales and Queensland, and formal possession, on behalf of the British Crown, of the whole of the eastern part of the Australian continent and Tasmania was not taken until 26th January, 1788. It was on this last date that Captain Phillip's commission, first issued to him on 12th October, 1786, and amplified on 2nd April, 1787, was read to the people whom he had brought with him in the "First Filert"

A full historical account of the period referred to may be found in the Historical Records of New South Wales Vol. 1., parts 1 and 2.

2. Original Extent of New South Wales.—The commission appointed Phillip "Captain-General and Governor-in-Chief in and over our territory called New South Wales, extending from the Northern Cape or extremity of the coast called Cape York, in the latitude of ten degrees thirty-seven minutes south, to the southern extremity of the said territory of New South Wales or South Cape, in the latitude of forty-three degrees thirty-nine minutes south, and of all the country inland westward as far as the one hundred and thirty-fifth degree of east longitude reckoning from the meridian of Greenwich, including all the islands adjacent in the Pacific Ocean within the latitudes aforesaid of ten degrees thirty-seven minutes south and forty-three degrees thirty-nine minutes south."

Although in November, 1769, Captain Cook had taken possession of the North Island of New Zealand, and in January, 1770, also of the South Island, it is doubtful whether, at the time when Captain Phillip's commission was drawn up, New Zealand was considered as one of the "islands adjacent in the Pacific Ocean." The fact that under the Supreme Court Act (Imperial) of 1823 British residents in New Zealand were brought under the jurisdiction of the Court at Sydney, and that in 1839 there was a proposal on the part of the British Government to appoint a consul in New Zealand, would leave this an open question, as nothing more than extra-territorial jurisdiction may have been intended. Various hoistings of flags notwithstanding, New Zealand does not appear to have become British territory unequivocally until 1840. In that year, on 29th January, Captain Hobson arrived at the Bay of Islands. On the following day, he read the commission, which extended the boundaries of the Colony of New South Wales so as to embrace and comprehend the islands of New Zealand. On 5th February, the Treaty of Waitangi, made with the native chiefs, was signed. Finally, on 21st May, British sovereignty over the islands of New Zealand was explicitly proclaimed.

- 3. Extension of New South Wales Westward, 1825.—On 17th February, 1824, Earl Bathurst notified Sir Thomas Brisbane that he had recommended to His Majesty the dispatch of a ship of war to the north-west coast of New Holland for the purpose of taking possession of the coast between the western coast of Bathurst Island and the eastern side of Coburg Peninsula. Captain James J. Gordon Bremer of H.M.S. Tamar, who was selected for the purpose, took possession on 20th September, 1824, of the coast from the 135th to the 129th degree of east longitude. On 16th July, 1825, the whole territory between those boundaries was described in Darling's commission as being within the boundaries of New South Wales, thus increasing its area by 518,134 square miles, and making it, including New Zealand and excluding Tasmania, 2,076,308 square miles, or also excluding New Zealand, 1,972,446 square miles.
- 4. Annexation of Western Australia, 1827.—An expedition under Major Lockyer, sent by Lieutenant-General Sir Ralph Darling, then Governor of New South Wales, to found a settlement at King George Sound, sailed from Sydney on 9th November, 1826, landed at the Sound on 26th December following, and on 21st January, 1827, hoisted the British flag. Captain Stirling, in command of H.M.S. Success, arrived at Sydney a few weeks after the departure of the expedition to King George Sound. He obtained the Governor's permission to visit Swan River with a view to seizing a position on the western coast and reporting upon its suitability as a place of settlement. Captain Stirling left Sydney on 17th January, 1827, and on his return in the following April submitted a glowing report on what he described as a "rich and romantic country," urging its occupation for the purpose of settlement. He left for England in July, 1827, continuing his advocacy—notwithstanding much discouragement—with unabated enthusiasm. He was at last successful, the result being mainly due to the formation of an association of prospective settlers having capital at their disposal. He was appointed Lieutenant-Governor and with a party of settlers arrived at Garden Island, near the Swan River, in the ship Parmelia in June, 1829. On the 2nd of the preceding month, Captain Fremantle, in command of H.M.S. Challenge, arrived and hoisted the British flag on the south head of Swan River, again asserting possession of "all that part of New Holland, which is not included within the territory of New South Wales." Thus, before the middle of 1829, the whole territory now known as the Commonwealth of Australia had been constituted a dependency of the United Kingdom.

#### § 3. The Exploration of Australia.

A summary of the more important facts relating to the exploration of Australia was embodied in this Chapter in issues of the Official Year Book up to and including No. 22.

#### § 4. The Creation of the Several Colonies.

1. New South Wales.—In Governor Phillip's commission of 1786, the mainland of Australia was divided by the 135th meridian of east longitude into two parts. The earliest colonists believed that the present-State of Tasmania was actually joined to the mainland, and it was not till 1798 that the contrary was known. In that year, Bass and Flinders proved that it was an island by sailing through Bass. Strait. The territory of New South Wales, as originally constituted, and of New Zealand, which may be included although Cook's annexation was not properly given effect to until 1840; consisted of 1,584,389 square miles. A further area of 518,134 square miles was added in 1825, when the western boundary was extended to the 129th meridian. The territory was subsequently reduced by the separation of various areas to form the other colonies, and at the time of the establishment of the Commonwealth the area of New South Wales was 310,372 square miles.

Lord Howe Island, which is a dependency of New South Wales and for political purposes is included in one of the electorates of Sydney, is situated in latitude 31° 30′ south, longitude 159° 5′ east, about 436 miles north-east of Sydney, and has an area of 3;220 acres. The climate is mild and the rainfall abundant, but on account of the rocky formation of its surface only about 300 acres are suitable for cultivation, most of which are devoted to the production of Kentia palm seed. The land belongs to the Crown and is occupied rent-free on sufferance.

Discovered in 1788, the Island was first settled by a small party of Maoris in 1853; afterwards a colony was settled from Sydney. A Board of Control at Sydney manages the affairs of the Island and supervises the palm seed industry. The population was 278 at the Census of 30th June, 1954.

2. Tasmania.—In 1825, Van Diemen's Land, as Tasmania was then called, was politically separated from New South Wales, being constituted a separate colony on 14th June of that year. The area of the colony was 26,215 square miles.

Macquarie Island, about 1,000 miles south-east of Hobart, together with a few rocky islets nearby, has been a dependency of Tasmania since the nineteenth century. In December, 1911, five members of the Australian National Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new base and this has since been maintained as a scientific base. The island is about 21 miles long and 2 miles wide.

- 3. Western Australia.—The territory westward of the 129th meridian, comprising 975,920 square miles, was constituted a colony under the name of Western Australia in June, 1829. It was always distinct and independent of New South Wales, though until 1831 the settlement on King George Sound remained under that jurisdiction.
- 4. South Australia.—On 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province," and towards the end of the year 1836 settlement took place. The first Governor, Captain Hindmarsh, R.N., arrived at Holdfast Bay on 28th December, 1836, and on the same day-the new colony was officially proclaimed. The new colony embraced 309,850 square miles of territory, lying south of the 26th parallel of south latitude, and between the 141st and 132nd meridians of east longitude. On 10th December, 1861, by the authority of the Imperial Act 24 and 25 Vict., cap. 44, the western boundary of South Australia was extended to coincide with the eastern boundary of Western Australia, namely, the 129th meridian. The area of the extension was approximately 70,220 square miles. Nearly two years later, on 6th July, 1863, the Northern Territory, comprising 523,620 square miles, was, by letters patent, brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles.
- 5. New Zealand.—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales, was, by letters patent of 16th November of that year, constituted a separate colony under the powers of the Act 3 and 4 Vict., cap. 62, of 7th August, 1840. Proclamation of the separation was made on 3rd May, 1841. The area of the colony was 103,862 square miles.
- 6. Victoria.—In 1851, what was known as the "Port Phillip District" of New South Wales was constituted the colony of Victoria, "bounded on the north and north-west by a straight line drawn from Cape Howe to the nearest source of the River Murray and thence by the course of that river to the eastern boundary of the colony of South Australia." The area of the new colony was:87;884 square miles, and its separate existence took effect from 1st July, 1851, upon the issuing of the writs for the first election of elective members of the Legislative Council.
- 7. Queensland.—The northern squatting districts of Moreton, Darling Downs, Burnett, Wide Bay, Maranoa, Leichhardt and Port Curtis, together with the reputed county of Stanley, were granted an independent administration and formed into a distinct colony

under the name of Queensland by letters patent dated 6th June, 1859, although separation from New South Wales was not completed until 10th December of the same year, upon the assumption of office of the first Governor. The territory comprised in the new colony was "so much of the colony of New South Wales as lies northwards of a line commencing on the sea-coast at Point Danger in latitude about 28° 8' south, running westward along the Macpherson and Dividing Ranges and the Dumaresq River to the MacIntyre River, thence downward to the 29th parallel of south latitude, and following that parallel westerly to the 141st meridian of east longitude, which is the eastern boundary of South Australia, together with all the adjacent islands, their members, and appurtenances in the Pacific Ocean". The area of the colony thus constituted was 554,300 square miles. By letters patent dated 13th March, 1861, forwarded by the Colonial Secretary to the Governor of Queensland on 12th April, 1862, the area of Queensland was increased by the annexation of "so much of the colony of New South Wales as lies to the northward of the 26th parallel of south latitude, and between the 141st and 138th meridians of east longitude, together with all and every the adjacent islands, their members, and appurtenances, in the Gulf of Carpentaria." With this addition the area of Queensland became 670,500 square miles.

#### § 5. The Establishment of the Commonwealth of Australia.

- 1. General.—On 1st January, 1901, the colonies mentioned, with the exception of New Zealand, were federated under the name of the "Commonwealth of Australia," the designation of "Colonies"—except in the case of the Northern Territory, to which the designation "Territory" is applied—being at the same time changed into that of "States".
- 2. Transfer of the Northern Territory to the Commonwealth.—On 7th December, 1907, the Commonwealth and the State of South Australia entered into an agreement for the surrender to and acceptance by the Commonwealth of the Northern Territory, subject to approval by the Parliaments of the Commonwealth and the State. This approval was given by the South Australian Parliament under The Northern Territory Surrender Act 1907 (assented to on 14th May, 1908), and by the Commonwealth Parliament under the Northern Territory Acceptance Act 1910 (assented to on 16th November, 1910). The Territory was formally transferred to the Commonwealth on 1st January, 1911, and became the Northern Territory of Australia.
- 3. Transfer of the Australian Capital Territory to the Commonwealth.—On 18th October, 1909, the Commonwealth and the State of New South Wales entered into an agreement for the surrender to and acceptance by the Commonwealth of an area of 911 square miles as the Seat of Government of the Commonwealth. In December, 1909, Acts were passed by the Commonwealth and New South Wales Parliaments approving the agreement, and on 5th December, 1910, a proclamation was issued vesting the Territory in the Commonwealth on and from 1st January, 1911. By the Jervis Bay Territory Acceptance Act 1915, an area of 28 square miles at Jervis Bay, surrendered by New South Wales according to an agreement made in 1913, was accepted by the Commonwealth, and was transferred as from 4th September, 1915.
- 4. Present Composition of the Commonwealth.—The total area of the Commonwealth of Australia is 2,974,581 square miles. The dates of creation and the areas of its component States and Territories, as determined on the final adjustment of their boundaries, are shown below:—

THE COMMONWEALTH OF AUSTRALIA: AREA, ETC., OF COMPONENT STATES AND TERRITORIES.

State or Territory.	Year of Formation into Separate Colony or Territory.	Present Area in Square Miles.	State or Territory.	Year of Formation into Separate Colony or Territory.	Present Area in Square Miles.
New South Wales	1786	309,433	Northern Territory	1863	523,620
Victoria Queensland	1851 1859	87,884 670,500	Australian Capital Territory	1911	939
South Australia Western Australia Tasmania	1834 1829 1825	380,070 975,920 26,215	Commonwealth of Australia		2,974,581

#### § 6. The Constitutions of the States and of the Commonwealth.

- 1. General.—Information regarding the development of the Constitutions of the various Colonies (now States), together with a brief history of the Federal movement in Australia, was embodied in this Chapter in issues of the Official Year Book up to No. 22.
- 2. Commonwealth Constitution Act.—The Commonwealth of Australia Constitution Act, 63 and 64 Vict., Chapter 12, namely: "An Act to constitute the Commonwealth of Australia," as amended by the Constitution Alteration (Senate Elections) 1906, the Constitution Alteration (State Debts) 1909, the Constitution Alteration (State Debts) 1928, and the Constitution Alteration (Social Services) 1946, is given in extenso hereunder, and the text contains all the alterations of the Constitution which have been made up to and including 31st December, 1956.

# THE COMMONWEALTH OF AUSTRALIA CONSTITUTION ACT, 63 & 64 VICT., CHAPTER 12.

An Act to constitute the Commonwealth of Australia. [9th July, 1900.]

WHEREAS the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, humbly relying on the blessing of Almighty God, have agreed to unite in one indissoluble Federal Commonwealth under the Crown of the United Kingdom of Great Britain and Ireland, and under the Constitution hereby established:

And whereas it is expedient to provide for the admission into the Commonwealth of other Australian Colonies and possessions of the Queen:

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:—

- 1. This Act may be cited as the Commonwealth of Australia Constitution Act.
- 2. The provisions of this Act referring to the Queen shall extend to Her Majesty's heirs and successors in the sovereignty of the United Kingdom.
- 3. It shall be lawful for the Queen, with the advice of the Privy Council, to declare by proclamation that, on and after a day therein appointed, not being later than one year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia. But the Queen may, at any time after the proclamation, appoint a Governor-General for the Commonwealth.
- 4. The Commonwealth shall be established, and the Constitution of the Commonwealth shall take effect, on and after the day so appointed. But the Parliaments of the several colonies may at any time after the passing of this Act make any such laws, to come into operation on the day so appointed, as they might have made if the Constitution had taken effect at the passing of this Act.
- 5. This Act, and all laws made by the Parliament of the Commonwealth under the Constitution, shall be binding on the courts, judges, and people of every State and of every part of the Commonwealth, notwithstanding anything in the laws of any State; and the laws of the Commonwealth shall be in force on all British ships, the Queen's ships of war excepted, whose first port of clearance and whose port of destination are in the Commonwealth.
- 6. "The Commonwealth" shall mean the Commonwealth of Australia as established under this Act.
- "The States" shall mean such of the colonies of New South Wales, New Zealand, Queensland, Tasmania, Victoria, Western Australia, and South Australia, including the northern territory of South Australia, as for the time being are parts of the Commonwealth, and such colonies or territories as may be admitted into or established by the Commonwealth as States; and each of such parts of the Commonwealth shall be called "a State."
- "Original States" shall mean such States as are parts of the Commonwealth at its establishment.

7. The Federal Council of Australasia Act. 1885, is hereby repealed, but so as not to affect any laws passed by the Federal Council of Australasia and in force at the establishment of the Commonwealth.

Any such law may be repealed as to any State by the Parliament of the Commonwealth, or as to any colony not being a State by the Parliament thereof.

- 8. After the passing of this Act the Colonial Boundaries Act, 1895, shall not apply to any colony which becomes a State of the Commonwealth; but the Commonwealth shall be taken to be a self-governing colony for the purposes of that Act.
  - 9. The Constitution of the Commonwealth shall be as follows:-

#### THE CONSTITUTION.

This Constitution is divided as follows:--

I.—The Parliament: Chapter

Part I.—General:

Part II.—The Senate:

Part III.—The House of Representatives:

Part IV.—Both Houses of the Parliament:
Part V.—Powers of the Parliament:
er II.—The Executive Government:

Chapter III.—The Judicature: Chapter

Chapter IV .- Finance and Trade:

Chapter V.—The States:

VI.-New States: Chapter

Chapter VII.-Miscellaneous:

Chapter VIII.—Alteration of the Constitution.

The Schedule.

#### CHAPTER L-THE PARLIAMENT.

## PART I.—GENERAL.

- 1. The legislative power of the Commonwealth shall be vested in a Federal Parliament. which shall consist of the Queen, a Senate, and a House of Representatives, and which is hereinafter called "The Parliament," or "The Parliament of the Commonwealth."
- 2. A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him.
- 3. There shall be payable to the Queen out of the Consolidated Revenue Fund of the Commonwealth, for the salary of the Governor-General, an annual sum which, until the Parliament otherwise provides, shall be ten thousand pounds.

The salary of a Governor-General shall not be altered during his continuance in office.

- 4. The provisions of this Constitution relating to the Governor-General extend and apply to the Governor-General for the time being, or such person as the Queen may appoint to administer the Government of the Commonwealth; but no such person shall be entitled to receive any salary from the Commonwealth in respect of any other office during his administration of the Government of the Commonwealth.
- 5. The Governor-General may appoint such times for holding the sessions of the Parliament as he thinks fit, and may also from time to time, by Proclamation or otherwise, prorogue the Parliament, and may in like manner dissolve the House of Representatives.

After any general election the Parliament shall be summoned to meet not later than thirty days after the day appointed for the return of the writs.

The Parliament shall be summoned to meet not later than six months after the establishment of the Commonwealth.

6. There shall be a session of the Parliament once at least in every year, so that twelve months shall not intervene between the last sitting of the Parliament in one session and its first sitting in the next session.

## PART II .- THE SENATE.

7. The Senate shall be composed of senators for each State, directly chosen by the people of the State, voting, until the Parliament otherwise provides, as one electorate.

But until the Parliament of the Commonwealth otherwise provides, the Parliament of the State of Queensland, if that State be an Original State, may make laws dividing the State into divisions and determining the number of senators to be chosen for each division. and in the absence of such provision the State shall be one electorate.

Until the Parliament otherwise provides there shall be six senators for each Original State.\* The Parliament may make laws increasing or diminishing the number of senators for each State, but so that equal representation of the several Original States shall be maintained and that no Original State shall have less than six senators.

The senators shall be chosen for a term of six years, and the names of the senators chosen for each State shall be certified! by the Governor to the Governor-General.

- 8. The qualification of electors of senators shall be in each State that which is prescribed by this Constitution, or by the Parliament, as the qualification for electors of members of the House of Representatives; but in the choosing of senators each elector shall vote only
- 9. The Parliament of the Commonwealth may make; laws prescribing; the method of choosing senators, but so that the method shall be uniform for all the States. Subject to any such law, the Parliament of each State may make laws prescribing the method of choosing the senators for that State.

The Parliament of a State may make laws for determining the times and places of elections of senators for the State.

- 10. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State, for the time being, relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections of senators for the State.
- 11. The Senate may proceed to the despatch of business, notwithstanding the failure of any State to provide for its representation in the Senate..
- 12. The Governor of any State may cause writs to be issued for elections of senators for the State. In case of the dissolution of the Senate the writs shall be issued within ten days from the proclamation of such dissolution.
- 13. As soon as may be after the Senate first meets, and after each first meeting of the Senate following a dissolution thereof, the Senate shall divide the senators chosen for each State into two classes, as nearly equal in number as practicable; and the places of the senators of the first class shall become vacant at the expiration of [the third year] three: years, † and the places of those of the second class at the expiration of [the sixth year] six years,† from the beginning of their term of service; and afterwards the places of senators; shall become vacant at the expiration of six years from the beginning of their term of

The election to fill vacant places shall be made fin the year at the expiration of which] within one year beforet the places are to become vacant.

For the purposes of this section the term of service of a senator shall be taken to begin on the first day of [January] July following the day of his election, except in the cases of the first election and of the election next after any dissolution of the Senate; when it shall be taken to begin on the first day of [January] July preceding the day of his election.

- 14. Whenever the number of senators for a State is increased or diminished, the Parliament of the Commonwealth may make such provision for the vacating of the places: of senators for the State as it deems necessary to maintain regularity in the rotation.
- 15. If the place of a senator becomes vacant before the expiration of his term of service, the Houses of Parliament of the State for which he was chosen shall, sitting and voting together, choose a person to hold the place until the expiration of the term, or until the election of a successor as hereinafter provided, whichever first happens. But if the Houses of Parliament of the State are not in session at the time when the vacancy is notified,

<sup>\*</sup> The Parliament has otherwise provided, by means of the Representation Act 1948, that the number of senators shall be ten for each State, from the first meeting of Parliament after the first dissolution of the House of Representatives occurring after the commencement of the Act (18th May, 1948):

† As amended by Section 2 of the Constitution Alteration (Senate Elections) 1906. The words in square brackets have been repealed; amendments are shown in italics.

the Governor of the State, with the advice of the Executive Council thereof, may appoint a person to hold the place until the expiration of fourteen days after the beginning of the next session of the Parliament of the State, or until the election of a successor, whichever first happens.

At the next general election of members of the House of Representatives, or at the next election of senators for the State, whichever first happens, a successor shall, if the term has not then expired, be chosen to hold the place from the date of his election until the expiration of the term.

The name of any senator so chosen or appointed shall be certified by the Governor of the State to the Governor-General.

- 16. The qualifications of a senator shall be the same as those of a member of the House of Representatives.
- 17. The Senate shall, before proceeding to the despatch of any other business, choose a senator to be the President of the Senate; and as often as the office of President becomes vacant the Senate shall again choose a senator to be the President.

The President:shall cease to hold his office if he ceases to be a senator. He may be removed from office by a vote of the Senate, or he may resign his office or his seat by writing addressed to the Governor-General.

- 18. Before or during any absence of the President, the Senate may choose a senator to perform his duties in his absence.
- 19. A senator may, by writing addressed to the President, or to the Governor-General if there is no President or if the President is absent from the Commonwealth, resign his place, which thereupon shall become vacant.
- 20. The place of a senator shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the Senate, fails to attend the Senate.
- 21. Whenever a vacancy happens in the Senate, the President, or if there is no President or if the President is absent from the Commonwealth the Governor-General, shall notify the same to the Governor of the State in the representation of which the vacancy has happened.
- 22. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the senators shall be necessary to constitute a meeting of the Senate for the exercise of its powers.
- 23. Questions arising in the Senate-shall be determined by a majority of votes, and each senator shall have one vote. The President shall in all cases be entitled to a vote; and when the votes are equal the question shall pass in the negative.

#### PART III.—THE HOUSE OF REPRESENTATIVES.

24. The House of Representatives shall be composed of members directly chosen by the people of the Commonwealth, and the number of such members shall be, as nearly as practicable, twice the number of the senators.

The number of members chosen in the several States shall be in proportion to the respective numbers of their people, and shall, until the Parliament otherwise provides, be determined, whenever necessary, in the following manner:—

- (i) A quota shall be ascertained by dividing the number of the people of the Commonwealth, as shown by the latest statistics of the Commonwealth, by twice the number of the senators;
- (ii) The number of members to be chosen in each State shall be determined by dividing the number of the people of the State, as shown by the latest statistics of the Commonwealth, by the quota; and if on such division there is a remainder greater than one-half of the quota, one more member shall be chosen in the State.

But notwithstanding anything in this section five members at least shall be chosen in each Original State.

25. For the purposes of the last section, if by the law of any State all persons of any race are disqualified from voting at elections for the more numerous House of the Parliament of the State, then, in reckoning the number of the people of the State or of the Commonwealth, persons of that race resident in that State shall not be counted.

26. Notwithstanding anything in section twenty-four, the number of members to be chosen in each State at the first election shall be as follows:—

New South Wales Victoria Queensland	23 20 8	South Australia Tasmania	6 5
Provided that if Western Aus	tralia is an Origi	nal State, the numbers shall	be as follows:-
New South Wales Victoria	26	South Australia Western Australia	7
Queensland	9	Tasmania	5

- 27. Subject to this Constitution, the Parliament may make laws for increasing or diminishing the number of the members of the House of Representatives.
- 28. Every House of Representatives shall continue for three years from the first meeting of the House, and no longer, but may be sooner dissolved by the Governor-General.
- 29. Until the Parliament of the Commonwealth otherwise provides, the Parliament of any State may make laws for determining the divisions in each State for which members of the House of Representatives may be chosen, and the number of members to be chosen for each division. A division shall not be formed out of parts of different States.

In the absence of other provision, each State shall be one electorate.

- 30. Until the Parliament otherwise provides, the qualification of electors of members of the House of Representatives shall be in each State that which is prescribed by the law of the State as the qualification of electors of the more numerous House of Parliament of the State; but in the choosing of members each elector shall vote only once.\*
- 31. Until the Parliament otherwise provides, but subject to this Constitution, the laws in force in each State for the time being relating to elections for the more numerous House of the Parliament of the State shall, as nearly as practicable, apply to elections in the State of members of the House of Representatives.
- 32. The Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives.
- After the first general election, the writs shall be issued within ten days from the expiry of a House of Representatives or from the proclamation of a dissolution thereof.
- 33. Whenever a vacancy happens in the House of Representatives, the Speaker shall issue his writ for the election of a new member, or if there is no Speaker or if he is absent from the Commonwealth the Governor-General in Council may issue the writ.
- 34. Until the Parliament otherwise provides, the qualifications of a member of the House of Representatives shall be as follows:—
  - (i) He must be of the full age of twenty-one years, and must be an elector entitled to vote at the election of members of the House of Representatives, or a person qualified to become such elector, and must have been for three years at the least a resident within the limits of the Commonwealth as existing at the time when he is chosen:
  - (ii) He must be a subject of the Queen, either natural-born or for at least five years naturalized under a law of the United Kingdom, or of a Colony which has become or becomes a State, or of the Commonwealth, or of a State.
- 35. The House of Representatives shall, before proceeding to the despatch of any other business; choose a member to be the Speaker of the House, and as often as the office of Speaker becomes vacant the House shall again choose a member to be the Speaker.

The Speaker shall cease to hold his office if he ceases to be a member. He may be removed from office by a vote of the House, or he may resign his office or his seat by writing addressed to the Governor-General.

36. Before or during any absence of the Speaker, the House of Representatives may choose a member to perform his duties in his absence.

† The Parliament has otherwise provided, by means of the Commonwealth Electoral Act 1918-1949, Section 69. For present qualifications see Chapter III.—General Government.

<sup>•</sup> The Parliament has otherwise provided, by means of the Commonwealth Electoral Act 1918–1949, Section 39 (repealing an earlier provision made by the Commonwealth Franchise Act 1902). For present qualifications see Chapter III.—General Government.

- 37. A member may by writing addressed to the Speaker, or to the Governor-General if there is no Speaker or if the Speaker is absent from the Commonwealth, resign his place, which thereupon shall become vacant.
- 38. The place of a member shall become vacant if for two consecutive months of any session of the Parliament he, without the permission of the House, fails to attend the House,
- 39. Until the Parliament otherwise provides, the presence of at least one-third of the whole number of the members of the House of Representatives shall be necessary to constitute a meeting of the House for the exercise of its powers.
- 40. Questions arising in the House of Representatives shall be determined by a majority of votes other than that of the Speaker. The Speaker shall not vote unless the numbers are equal, and then he shall have a casting vote.

#### PART IV.—BOTH HOUSES OF THE PARLIAMENT.

- 41. No adult person who has or acquires a right to vote at elections for the more numerous House of the Parliament of a State shall, while the right continues, be prevented by any law of the Commonwealth from voting at elections for either House of the Parliament of the Commonwealth.
- 42. Every senator and every member of the House of Representatives shall before taking his seat make and subscribe before the Governor-General, or some person authorized by him, an oath or affirmation of allegiance in the form set forth in the schedule to this Constitution.
- 43. A member of either House of the Parliament shall be incapable of being chosen or of sitting as a member of the other House.

## 44. Any person who--

- (i) Is under any acknowledgment of allegiance, obedience, or adherence to a foreign power, or is a subject or a citizen or entitled to the rights or privileges of a subject or a citizen of a foreign power: or
- (ii) Is attainted of treason, or has been convicted and is under sentence, or subject to be sentenced, for any offence punishable under the law of the Commonwealth or of a State by imprisonment for one year or longer: or
- (iii) Is an undischarged bankrupt or insolvent: or
- (iv) Holds any office of profit under the Crown, or any pension payable during the pleasure of the Crown out of any of the revenues of the Commonwealth: or
- (v) Has any direct or indirect pecuniary interest in any agreement with the Public Service of the Commonwealth otherwise than as a member and in common with the other members of an incorporated company consisting of more than twenty-five persons:

shall be incapable of being chosen or of sitting as a senator or a member of the House of Representatives.

But sub-section iv. does not apply to the office of any of the Queen's Ministers of State for the Commonwealth, or of any of the Queen's Ministers for a State, or to the receipt of pay, half-pay, or a pension by any person as an officer or member of the Queen's navy or army, or to the receipt of pay as an officer or member of the naval or military forces of the Commonwealth by any person whose services are not wholly employed by the Commonwealth.

- 45. If a senator or member of the House of Representatives-
  - (i) Becomes subject to any of the disabilities mentioned in the last preceding section: or
  - (ii) Takes the benefit, whether by assignment, composition, or otherwise, of any law relating to bankrupt or insolvent debtors: or
  - (iii) Directly or indirectly takes or agrees to take any fee or honorarium for services rendered to the Commonwealth, or for services rendered in the Parliament to any person or State:

his place shall thereupon become vacant.

46. Until the Parliament otherwise provides, any person declared by this Constitution to be incapable of sitting as a senator or as a member of the House of Representatives shall, for every day on which he so sits, be liable to pay the sum of one hundred pounds to any person who sues for it in any court of competent jurisdiction.

- 47. Until the Parliament otherwise provides, any question respecting the qualification of a senator or of a member of the House of Representatives, or respecting a vacancy in either House of the Parliament, and any question of a disputed election to either House shall be determined by the House in which the question arises.
- 48. Until the Parliament otherwise provides, each senator and each member of the House of Representatives shall receive an allowance of four hundred pounds a year, to be reckoned from the day on which he takes his seat.\*
- 49. The powers, privileges, and immunities of the Senate and of the House of Representatives, and of the members and the committees of each House, shall be such as are declared by the Parliament, and until declared shall be those of the Commons House of Parliament of the United Kingdom; and of its members and committees, at the establishment of the Commonwealth.
  - 50. Each House of the Parliament may make rules and orders with respect to-
    - (i) The mode in which its powers, privileges, and immunities may be exercised and upheld:
    - (ii) The order and conduct of its business and proceedings either separately or jointly with the other House.

## PART V .- POWERS OF THE PARLIAMENT. †

- 51. The Parliament shall, subject to this Constitution, have power to make laws for the peace, order, and good government of the Commonwealth with respect to:—
  - (i) Trade and commerce with other countries, and among the States:
  - (ii) Taxation; but so as not to discriminate between States or parts of States:
  - (iii) Bounties on the production or export of goods, but so that such bounties shall be uniform throughout the Commonwealth:
  - (iv) Borrowing money on the public credit of the Commonwealth:
  - (v) Postal, telegraphic, telephonic, and other like services:
  - (vi) The naval and military defence of the Commonwealth and of the several States, and the control of the forces to execute and maintain the laws of the Commonwealth:
  - (vii) Lighthouses, lightships, beacons and buoys:
  - (viii) Astronomical and meteorological observations:
    - (ix) Quarantine:
  - (x) Fisheries in Australian waters beyond territorial limits:
  - (xi) Census and statistics:
  - (xii) Currency, coinage, and legal tender:
  - (xiii) Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money:
  - (xiv) Insurance, other than State insurance; also State insurance extending beyond the limits of the State concerned:
  - (xv) Weights and measures:
  - (xvi) Bills of exchange and promissory notes:
  - (xvii) Bankruptcy and insolvency:
  - (xviii) Copyrights, patents of inventions and designs, and trade marks:
  - (xix) Naturalization and aliens:
  - (xx). Foreign corporations, and trading or financial corporations formed within the limits of the Commonwealth:
  - (xxi) Marriage:

† Particulars of proposed laws which were submitted to referenda are referred to in Chapter III.—General Government.

The Parliamentary allowance was increased to £600 a year in 1907 (except in the cases of Ministers, the Presiding Officers of the two Houses, and the Chairman of Committees, whose allowances remained at £400 in addition to the emoluments of office), and to £1,000 a year in 1920 (Ministers, etc., £800). Under financial emergency legislation, Parliamentary salaries and allowances were reduced generally, the lowest level reached in respect of the Parliamentary allowance being £750 a year in 1932. Subsequently there was a gradual restoration to former levels; the allowance reaching £1,000 a year again in 1938, when, also, the proviso for the reduced allowance to Ministers, etc. was removed. In 1947, the Parliamentary allowance was increased to £1,500 a year, and in 1952 to £1,750. In 1920, additional allowances of £200 and £400 a year, respectively, were granted to the Leaders of the Opposition in the Senate and the House of Representatives, and in 1947 they were increased to £300, and £600 respectively. In 1947, also, an additional allowance of £400 a year was granted to the Leader in the House of Representatives (other than the Leader of the Opposition) of a recognized political party-which has not less than ten members in the House of Representatives, and of which no member is a Minister.

(xxii) Divorce and matrimonial causes; and in relation thereto, parental rights, and the custody and guardianship of infants:

(xxiii) Invalid and old-age pensions:

- (xxiiiA) \*The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances:
  - (xxiv) The service and execution throughout the Commonwealth of the civil and criminal process and the judgments of the courts of the States:
  - (xxv) The recognition throughout the Commonwealth of the laws, the public Acts and records, and the judicial proceedings of the States:
  - (xxvi) The people of any race, other than the aboriginal race in any State, for whom, it is deemed necessary to make special laws:

(xxvii) Immigration and emigration:

(xxviii) The influx of criminals:

(xxix) External affairs:

- (xxx) The relations of the Commonwealth with the islands of the Pacific:
- (xxxi) The acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws:
- (xxxii) The control of railways with respect to transport for the naval and military purposes of the Commonwealth:
- (xxxiii) The acquisition, with the consent of a State, of any railways of the State on terms arranged between the Commonwealth and the State:
- (xxxiv) Railway construction and extension in any State with the consent of that State:
- (xxxv) Conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State:
- (xxxvi) Matters in respect of which this Constitution makes provision until the Parliament otherwise provides:
- (xxxvii) Matters referred to the Parliament of the Commonwealth by the Parliament or Parliaments of any State or States, but so that the law shall extend only to States by whose Parliaments the matter is referred, or which afterwards adopt the law:
- (xxxviii) The exercise within the Commonwealth, at the request or with the concurrence of the Parliaments of all the States directly concerned, of any power which can at the establishment: of this Constitution be exercised only by the Parliament: of the United Kingdom: or by the Federal Council of Australasia:
- (xxxix) Matters incidental to the execution of any power vested by this Constitution in the Parliament or in either House thereof, or in the Government of the Commonwealth, or in the Federal Judicature, or in any department or officer of the Commonwealth.
- 52. The Parliament shall, subject to this Constitution, have exclusive power to make laws for the peace; order, and good government of the Commonwealth with respect to—
  - (i) The seat of Government of the Commonwealth, and all places acquired by the, Commonwealth for public purposes:
  - (ii) Matters relating to any department of the public service the control of which is by this Constitution transferred to the Executive Government of the, Commonwealth:
  - (iii) Other matters declared by this Constitution to be within the exclusive power of the Parliament.
- 53. Proposed laws appropriating revenue or moneys; or imposing taxation, shall not originate in the Senate. But a proposed law shall not be taken to appropriate revenue or moneys, or to impose taxation, by reason only of its containing provisions for the imposition or appropriation of fines or other pecuniary penalties; or for the demand or payment or appropriation of fees for licences, or fees for services under the proposed law.

The Senate may not amend proposed laws imposing taxation, or proposed laws appropriating revenue or moneys for the ordinary annual services of the Government.

The Senate may not amend any proposed law so as to increase any proposed charge or burden on the people.

<sup>\*</sup> Under Section 2 of the Constitution Alteration (Social Services) 1946, the Constitution was amended by the insertion of this paragraph.

The Senate may at any stage return to the House of Representatives any proposed law which the Senate may not amend, requesting, by message, the omission or amendment of any items or provisions therein. And the House of Representatives may, if it thinks fit, make any of such omissions or amendments, with or without modifications.

Except as provided in this section, the Senate shall have equal power with the House of Representatives in respect of all proposed laws.

- 54. The proposed law which appropriates revenue or moneys for the ordinary annual services of the Government shall deal only with such appropriation.
- 55. Laws imposing taxation shall deal only with the imposition of taxation, and any provision therein dealing with any other matter shall be of no effect.

Laws imposing taxation, except laws imposing duties of customs or of excise, shall deal with one subject of taxation only; but laws imposing duties of customs shall deal with duties of customs only, and laws imposing duties of excise shall deal with duties of excise only.

- 56. A vote, resolution, or proposed law for the appropriation of revenue or moneys shall not be passed unless the purpose of the appropriation has in the same session been recommended by message of the Governor-General to the House in which the proposal originated.
- 57. If the House of Representatives passes any proposed law, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, and if after an interval of three months the House of Representatives, in the same or the next session, again passes the proposed law with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may dissolve the Senate and the House of Representatives simultaneously. But such dissolution shall not take place within six months before the date of the expiry of the House of Representatives by effluxion of time.

If after such dissolution the House of Representatives again passes the proposed law, with or without any amendments which have been made, suggested, or agreed to by the Senate, and the Senate rejects or fails to pass it, or passes it with amendments to which the House of Representatives will not agree, the Governor-General may convene a joint sitting of the members of the Senate and of the House of Representatives.

The members present at the joint sitting may deliberate and shall vote together upon the proposed law as last proposed by the House of Representatives, and upon amendments, if any, which have been made therein by one House and not agreed to by the other, and any such amendments which are affirmed by an absolute majority of the total number of the members of the Senate and House of Representatives shall be taken to have been carried, and if the proposed law, with the amendments, if any, so carried is affirmed by an absolute majority of the total number of members of the Senate and House of Representatives, it shall be taken to have been duly passed by both Houses of the Parliament, and shall be presented to the Governor-General for the Queen's assent.

58. When a proposed law passed by both Houses of the Parliament is presented to the Governor-General for the Queen's assent, he shall declare, according to his discretion, but subject to this Constitution, that he assents in the Queen's name, or that he withholds assent, or that he reserves the law for the Queen's pleasure.

The Governor-General may return to the House in which it originated any proposed law so presented to him, and may transmit therewith any amendments which he may recommend, and the Houses may deal with the recommendation.

- 59. The Queen may disallow any law within one year from the Governor-General's assent, and such disallowance on being made known by the Governor-General by speech or message to each of the Houses of the Parliament, or by Proclamation, shall annul the law from the day when the disallowance is so made known.
- 60. A proposed law reserved for the Queen's pleasure shall not have any force unless and until within two years from the day on which it was presented to the Governor-General for the Queen's assent the Governor-General makes known, by speech or message to each of the Houses of the Parliament, or by Proclamation, that it has received the Queen's assent.

## CHAPTER II.—THE EXECUTIVE GOVERNMENT.

- 61. The executive power of the Commonwealth is vested in the Queen and is exercisable by the Governor-General as the Queen's representative, and extends to the execution and maintenance of this Constitution, and of the laws of the Commonwealth.
- 62. There shall be a Federal Executive Council to advise the Governor-General in the government of the Commonwealth, and the members of the Council shall be chosen and summoned by the Governor-General and sworn as Executive Councillors, and shall hold office during his pleasure.
- 63. The provisions of this Constitution referring to the Governor-General in Council shall be construed as referring to the Governor-General acting with the advice of the Federal Executive Council.
- 64. The Governor-General may appoint officers to administer such departments of State of the Commonwealth as the Governor-General in Council may establish.

Such officers shall hold office during the pleasure of the Governor-General. They shall be members of the Federal Executive Council, and shall be the Queen's Ministers of State for the Commonwealth.

After the first general election no Minister of State shall hold office for a longer period than three months unless he is or becomes a senator or a member of the House of Representatives.

- 65. Until the Parliament otherwise provides, the Ministers of State shall not exceed seven in number, and shall hold such offices as the Parliament prescribes, or, in the absence of provision, as the Governor-General directs.\*
- 66. There shall be payable to the Queen, out of the Consolidated Revenue Fund of the Commonwealth, for the salaries of the Ministers of State, an annual sum which until the Parliament otherwise provides, shall not exceed twelve thousand pounds a year.\*
- 67. Until the Parliament otherwise provides, the appointment and removal of all other officers of the Executive Government of the Commonwealth shall be vested in the Governor-General in Council, unless the appointment is delegated by the Governor-General in Council or by a law of the Commonwealth to some other authority.
- 68. The command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General as the Queen's representative.
- 69. On a date or dates to be proclaimed by the Governor-General after the establishment of the Commonwealth the following departments of the public service in each State shall become transferred to the Commonwealth:—

Posts, telegraphs, and telephones: Lighthouses, lightships, beacons, and buoys: Naval and military defence: Quarantine.

But the Departments of customs and of excise in each State shall become transferred to the Commonwealth on its establishment.

70. In respect of matters which, under this Constitution, pass to the Executive Government of the Commonwealth, all powers and functions which at the establishment of the Commonwealth are vested in the Governor of a Colony, or in the Governor of a Colony with the advice of his Executive Council, or in any authority of a Colony, shall vest in the Governor-General, or in the Governor-General in Council, or in the authority exercising similar powers under the Commonwealth, as the case requires.

<sup>\*</sup> The Ministers of State were increased to eight in 1915, to nine in 1917, to ten in 1935, to eleven in 1938, and to nineteen in 1941, a special war-time provision during the continuance in operation of the National Security Act which was extended in 1946 on the expiry of that Act. The number was increased to twenty in 1951 and to twenty-two in 1956. The annual appropriation for Ministers' salaries received in addition to their allowances as Members (see page 12) was increased to £13,650 in 1915 and to £15,300 in 1917. Under financial emergency legislation, in addition to the reductions in Members' allowances the appropriation for Ministers was also reduced, in 1932 reaching the level of £10,710. The reductions were removed gradually, and finally in 1938 when the appropriation was £16,950. At the same time, an additional allowance of £1,500 a year was granted to the Prime Minister, and the proviso for the reduced Parliamentary allowance to Ministers was removed. In 1941, the annual appropriation for Ministers was increased, as a war-time provision, to £21,250. This was extended in 1946. In 1947, the appropriation was increased to £27,650, in 1951 to £29,000, in 1952 to £41,000, and in 1956 to £46,500.

#### CHAPTER III.—THE JUDICATURE.

- 71. The judicial power of the Commonwealth shall be vested in a Federal Supreme Court, to be called the High-Court of Australia, and in such other federal courts as the Parliament creates, and in such other courts as it invests with federal jurisdiction. The High Court shall consist of a Chief Justice, and so many other Justices, not less than two, as the Parliament prescribes.\*
- 72. The Justices of the High Court and of the other Courts created by the Parliament—

(i) Shall be appointed by the Governor-General in Council:

- (ii) Shall not be removed except by the Governor-General in Council, on an address from both Houses of the Parliament in the same session, praying for such removal on the ground of proved misbehaviour or incapacity:
- (iii) Shall receive such remuneration as the Parliament may fix; but the remuneration shall not be diminished during their continuance in office.\*
- 73. The High Court shall have jurisdiction, with such exceptions and subject to such regulations as the Parliament prescribes, to hear and determine appeals from all judgments, decrees, orders, and sentences—
  - (i) Of any Justice or Justices exercising the original jurisdiction of the High Court:
  - (ii) Of any other federal court, or court exercising federal jurisdiction; or of the Supreme Court of any State, or of any other court of any State from which at the establishment of the Commonwealth an appeal lies to the Queen in Council:
- (iii) Of the Inter-State Commission, but as to questions of law only: and the judgment of the High Court in all such cases shall be final and conclusive.

But no exception or regulation prescribed by the Parliament shall prevent the High Court from hearing and determining any appeal from the Supreme Court of a State in any matter in which at the establishment of the Commonwealth an appeal lies from such Supreme Court to the Queen in Council.

Until the Parliament otherwise provides, the conditions of and restrictions on appeals to the Queen in Council from the Supreme Courts of the several States shall be applicable to appeals from them to the High Court.

74. No appeal shall be permitted to the Queen in Council from a decision of the High Court upon any question, howsoever arising, as to the limits inter se of the Constitutional powers of the Commonwealth and those of any State or States, or as to the limits inter se of the Constitutional powers of any two or more States, unless the High Court shall certify that the question is one which ought to be determined by Her Majesty in Council.

The High Court may so certify if satisfied that for any special reason the certificate should be granted, and thereupon an appeal shall lie to Her Majesty in Council on the question without further leave.

Except as provided in this section, this Constitution shall not impair any right which the Queen may be pleased to exercise by virtue of Her Royal prerogative to grant special leave of appeal from the High Court to Her Majesty in Council. The Parliament may make laws limiting the matters in which such leave may be asked, but proposed laws containing any such limitation shall be reserved by the Governor-General for Her Majesty's pleasure.

## 75. In all matters-

(i) Arising under any treaty:

(ii) Affecting consuls or other representatives of other countries:

(iii) In which the Commonwealth, or a person suing or being sued on behalf of the Commonwealth, is a party:

(iv) Between States, or between residents of different States, or between a State and a resident of another State:

(v) In which a writ of Mandamus or prohibition or an injunction is sought against an officer of the Commonwealth.

the High Court shall have original jurisdiction.

<sup>\*</sup> The Judiciary Act 1903 provided for a Chief Justice and two other Justices. Subsequent amendments to the Act increased the number-of other Justices to four and later six, and then reduced it to five. In 1946, the number was again increased to six. The Judiciary Act 1903 also provided for the payment of a salary of £3,500 a year to the Chief Justice and of £3,000 a year to each other Justice. In 1947, these salaries were increased respectively to £4,500 and £4,000 a year, in 1950 to £5,000 and £4,500 a year, and in 1955 to £8,000 and £6,500 a year.

- .76. The Parliament may make laws conferring original jurisdiction on the High Court in any matter—
  - (i) Arising under this Constitution, or involving its interpretation:
  - (ii) Arising under any laws made by the Parliament:
  - (iii) Of Admiralty and maritime jurisdiction:
  - (iv) Relating to the same subject-matter claimed under the laws of different States.
- 77. With respect to any of the matters mentioned in the last two sections the Parliament may make laws—
  - (i) Defining the jurisdiction of any federal court other than the High Court:
  - (ii) Defining the extent to which the jurisdiction of any federal court shall be exclusive of that which belongs to or is invested in the courts of the States:
  - (iii) Investing any court of a State with federal jurisdiction.
- 78. The Parliament may make laws conferring rights to proceed against the Commonwealth or a State in respect of matters within the limits of the judicial power.
- 79. The federal jurisdiction of any court may be exercised by such number of judges as the Parliament prescribes.
- 80. The trial on indictment of any offence against any law of the Commonwealth shall be by jury, and every such trial shall be held in the State where the offence was committed, and if the offence was not committed within any State the trial shall be held at such place or places as the Parliament prescribes.

## CHAPTER IV.-FINANCE AND TRADE.

- 81. All revenues or moneys raised or received by the Executive Government of the Commonwealth shall form one Consolidated Revenue Fund, to be appropriated for the purposes of the Commonwealth in the manner and subject to the charges and liabilities imposed by this Constitution.
- 82. The costs, charges, and expenses incident to the collection, management, and receipt of the Consolidated Revenue Fund shall form the first charge thereon; and the revenue of the Commonwealth shall in the first instance be applied to the payment of the expenditure of the Commonwealth.
- 83. No money shall be drawn from the Treasury of the Commonwealth except under appropriation made by law.

But until the expiration of one month after the first meeting of the Parliament the Governor-General in Council may draw from the Treasury and expend such moneys as may be necessary for the maintenance of any department transferred to the Commonwealth and for the holding of the first elections for the Parliament.

84. When any department of the public service of a State becomes transferred to the Commonwealth, all officers of the department shall become subject to the control of the Executive Government of the Commonwealth.

Any such officer who is not retained in the service of the Commonwealth shall, unless he is appointed to some other office of equal emolument in the public service of the State, be entitled to receive from the State any pension, gratuity, or other compensation, payable under the law of the State on the abolition of his office.

Any such officer who is retained in the service of the Commonwealth shall preserve all his existing and accruing rights, and shall be entitled to retire from office at the time, and on the pension or retiring allowance, which would be permitted by the law of the State if his service with the Commonwealth were a continuation of his service with the State. Such pension or retiring allowance shall be paid to him by the Commonwealth; but the State shall pay to the Commonwealth a part thereof, to be calculated on the proportion which his term of service with the State bears to his whole term of service, and for the purpose of the calculation his salary shall be taken to be that paid to him by the State at the time of the transfer.

Any officer who is, at the establishment of the Commonwealth, in the public service of a State, and who is, by consent of the Governor of the State with the advice of the Executive Council thereof, transferred to the public service of the Commonwealth, shall have the same rights as if the had been an officer of a department transferred to the Commonwealth and were retained in the service of the Commonwealth.

- 85. When any department of the public service of a State is transferred to the Commonwealth—
  - (i) All property of the State of any kind, used exclusively in connexion with the department, shall become vested in the Commonwealth; but, in the case of the departments controlling customs and excise and bounties, for such time only as the Governor-General in Council may declare to be necessary:
  - (ii) The Commonwealth may acquire any property of the State, of any kind used, but not exclusively used in connexion with the department; the value thereof shall, if no agreement can be made, be ascertained in, as nearly as may be, the manner in which the value of land, or of an interest in land, taken by the State for public purposes is ascertained under the law of the State in force at the establishment of the Commonwealth:
  - (iii) The Commonwealth shall compensate the State for the value of any property passing to the Commonwealth under this section; if no agreement can be made as to the mode of compensation, it shall be determined under laws to be made by the Parliament;
  - (iv) The Commonwealth shall, at the date of the transfer, assume the current obligations of the State in respect of the department transferred.
- 86. On the establishment of the Commonwealth, the collection and control of duties of customs and of excise, and the control of the payment of bounties, shall pass to the Executive Government of the Commonwealth.
- 87. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, of the net revenue of the Commonwealth from duties of customs and of excise not more than one-fourth shall be applied annually by the Commonwealth towards its expenditure.

The balance shall, in accordance with this Constitution, be paid to the several States, or applied towards the payment of interest on debts of the several States taken over by the Commonwealth.

- 88. Uniform duties of customs shall be imposed within two years after the establishment of the Commonwealth.
  - 89. Until the imposition of uniform duties of customs-
    - (i) The Commonwealth shall credit to each State the revenues collected therein by the Commonwealth.
    - (ii) The Commonwealth shall debit to each State-
      - (a) The expenditure therein of the Commonwealth incurred solely for the maintenance or continuance, as at the time of transfer, of any department transferred from the State to the Commonwealth;
      - (b) The proportion of the State, according to the number of its people, in the other expenditure of the Commonwealth.
    - (iii) The Commonwealth shall pay to each State month by month the balance (if any) in favour of the State.
- 90. On the imposition of uniform duties of customs the power of the Parliament to impose duties of customs and of excise, and to grant bounties on the production or export of goods, shall become exclusive.

On the imposition of uniform duties of customs all laws of the several States imposing duties of customs or of excise, or offering bounties on the production or export of goods, shall cease to have effect, but any grant of or agreement for any such bounty lawfully made by or under the authority of the Government of any State shall be taken to be good if made before the thirtieth day of June, one thousand eight hundred and ninety-eight, and not otherwise.

- 91. Nothing in this Constitution prohibits a State from granting any aid to or bounty on mining for gold, silver, or other metals, nor from granting, with the consent of both Houses of the Parliament of the Commonwealth expressed by resolution, any aid to or bounty on the production or export of goods.
- 92. On the imposition of uniform duties of customs, trade, commerce, and intercourse among the States, whether by means of internal carriage or ocean navigation, shall be absolutely free.

But notwithstanding anything in this Constitution, goods imported before the imposition of uniform duties of customs into any State, or into any Colony which, whilst the goods remain therein, becomes a State, shall, on thence passing into another State within two

years after the imposition of such duties, be liable to any duty chargeable on the importation of such goods into the Commonwealth, less any duty paid in respect of the goods on their importation.

- 93. During the first five years after the imposition of uniform duties of customs, and thereafter until the Parliament otherwise provides—
  - (i) The duties of customs chargeable on goods imported into a State and afterwards passing into another State for consumption, and the duties of excise paid on goods produced or manufactured in a State and afterwards passing into another State for consumption, shall be taken to have been collected not in the former but in the latter State.
  - (ii) Subject to the last sub-section, the Commonwealth shall credit revenue, debit expenditure, and pay balances to the several States as prescribed for the period preceding the imposition of uniform duties of customs.
- 94. After five years from the imposition of uniform duties of customs, the Parliament may provide, on such basis as it deems fair, for the monthly payment to the several States of all surplus revenue of the Commonwealth.
- 95. Notwithstanding anything in this Constitution, the Parliament of the State of Western Australia, if that State be an Original State, may, during the first five years after the imposition of uniform duties of customs, impose duties of customs on goods passing into that State and not originally imported from beyond the limits of the Commonwealth; and such duties shall be collected by the Commonwealth.

But any duty so imposed on any goods shall not exceed during the first of such years the duty chargeable on the goods under the law of Western Australia in force at the imposition of uniform duties, and shall not exceed during the second, third, fourth, and fifth of such years respectively, four-fifths, three-fifths, two-fifths, and one-fifth of such latter duty, and all duties imposed under this section shall cease at the expiration of the fifth year after the imposition of uniform duties.

If at any time during the five years the duty on any goods under this section is higher than the duty imposed by the Commonwealth on the importation of the like goods, then such higher duty shall be collected on the goods when imported into Western Australia from beyond the limits of the Commonwealth.

- 96. During a period of ten years after the establishment of the Commonwealth and thereafter until the Parliament otherwise provides, the Parliament may grant financial assistance to any State on such terms and conditions as the Parliament thinks fit.
- 97. Until the Parliament otherwise provides, the laws in force in any Colony which has become or becomes a State with respect to the receipt of revenue and the expenditure of money on account of the Government of the Colony, and the review and audit of such receipt and expenditure, shall apply to the receipt of revenue and the expenditure of money on account of the Commonwealth in the State in the same manner as if the Commonwealth, or the Government or an officer of the Commonwealth, were mentioned whenever the Colony, or the Government or an officer of the Colony, is mentioned.
- 98. The power of the Parliament to make laws with respect to trade and commerce extends to navigation and shipping, and to railways the property of any State.
- 99. The Commonwealth shall not, by any law or regulation of trade, commerce, or revenue, give preference to one State or any part thereof over another State or any part thereof.
- 100. The Commonwealth shall not, by any law or regulation of trade or commerce, abridge the right of a State or of the residents therein to the reasonable use of the waters of rivers for conservation or irrigation.
- 101. There shall be an Inter-State Commission, with such powers of adjudication and administration as the Parliament deems necessary for the execution and maintenance, within the Commonwealth, of the provisions of this Constitution relating to trade and commerce, and of all laws made thereunder.
- 102. The Parliament may by any law with respect to trade or commerce forbid, as to railways, any preference or discrimination by any State, or by any authority constituted under a State, if such preference or discrimination is undue and unreasonable, or unjust to any State; due regard being had to the financial responsibilities incurred by any State in connexion with the construction and maintenance of its railways. But no preference or discrimination shall, within the meaning of this section, be taken to be undue and unreasonable, or unjust to any State, unless so adjudged by the Inter-State Commission.

- 103. The members of the Inter-State Commission-
  - (i) Shall be appointed by the Governor-General in Council:
  - (ii) Shall hold office for seven years, but may be removed within that time by the Governor-General in Council, on an address from both Houses of the Parliament in the same session praying for such removal on the ground of proved misbehaviour or incapacity:
  - (iii) Shall receive such remuneration as the Parliament may fix; but such remuneration shall not be diminished during their continuance in office.
- 104. Nothing in this Constitution shall render unlawful any rate for the carriage of goods upon a railway, the property of a State, if the rate is deemed by the Inter-State Commission to be necessary for the development of the territory of the State; and if the rate applies equally to goods within the State and to goods passing into the State from other States.
- 105. The Parliament may take over from the States their public debts [as existing at the establishment of the Commonwealth],\* or a proportion thereof according to the respective numbers of their people as shown by the latest statistics of the Commonwealth, and may convert, renew, or consolidate such debts, or any part thereof; and the States shall indemnify the Commonwealth in respect of the debts taken over, and thereafter the interest payable in respect of the debts shall be deducted and retained from the portions of the surplus revenue of the Commonwealth payable to the several States, or if such surplus is insufficient, or if there is no surplus, then the deficiency or the whole amount shall be paid by the several States.
- 105A.† (1.) The Commonwealth may make agreements with the States with respect to the public debts of the States, including—
  - (a) the taking over of such debts by the Commonwealth;
  - (b) the management of such debts;
  - (c) the payment of interest and the provision and management of sinking funds in respect of such debts;
  - (d) the consolidation, renewal, conversion, and redemption of such debts;
  - (e) the indemnification of the Commonwealth by the States in respect of debts taken over by the Commonwealth; and
  - (f) the borrowing of money by the States or by the Commonwealth, or by the Commonwealth for the States.
- (2.) The Parliament may make laws for validating any such agreement made before the commencment of this section.
- (3.) The Parliament may make laws for the carrying out by the parties thereto of any such agreement;
  - (4.) Any such agreement may be varied or rescinded by the parties thereto:
- (5.) Every such agreement and any such variation thereof, shall be, binding upon the Commonwealth and the States parties thereto notwithstanding anything; contained, in this Constitution or the Constitution of the several States or in any law of the Parliament of the Commonwealth or of any State.
- (6.) The powers conferred by this section shall not be construed as being limited in any way to the provisions of section one hundred and five of this Constitution.

## CHAPTER V.-THE STATES.

- 106. The Constitution of each State of the Commonwealth shall, subject to this Constitution, continue as at the establishment of the Commonwealth, or as at the admission or establishment of the State, as the case may be, until altered in accordance with the Constitution of the State.
- 107. Every power of the Parliament of a Colony which has become or becomes a State, shall, unless it is by this Constitution exclusively vested in the Parliament of the Commonwealth or withdrawn from the Parliament of the State, continue as at the establishment of the Commonwealth; or as at the admission or establishment of the State, as the case may be.

†. Under Section 2 of the Constitution Alteration (State Debts) 1928, the Constitution was amended by the insertion of this section.

<sup>\*</sup> Under Section 2 of the Constitution Alteration (State Debts) 1909, the words in square brackets are omitted.

- 108. Every law in force in a Colony which has become or becomes a State, and relating to any matter within the powers of the Parliament of the Commonwealth, shall, subject to this Constitution, continue in force in the State: and, until provision is made in that behalf by the Parliament of the Commonwealth, the Parliament of the State shall have such powers of alteration and of repeal in respect of any such law as the Parliament of the Colony had until the Colony became a State.
- 109. When a law of a Statesis inconsistent with a law of the Commonwealth, the latter shall prevail, and the former shall, to the extent of the inconsistency, be invalid.
- 110. The provisions of this Constitution relating to the Governor of a State extend and apply to the Governor for the time being of the State, or other chief executive officer or administrator of the government of the State.
- 111. The Parliament of a State may surrender any part of the State to the Commonwealth; and upon such surrender, and the acceptance thereof by the Commonwealth, such part of the State shall become subject to the exclusive jurisdiction of the Commonwealth.
- 112. After uniform duties of customs have been imposed, a State may levy on imports or exports, or on goods passing into or out of the State, such charges as may be necessary for executing the inspection laws of the State; but the net produce of all charges so levied shall be for the use of the Commonwealth; and any such inspection laws may be annulled by the Parliament of the Commonwealth:
- 113. All fermented, distilled, or other intoxicating liquids passing into any State or remaining therein for use, consumption, sale, or storage, shall be subject to the laws of the State as if such liquids had been produced in the State.
- 114. A State shall not, without the consent of the Parliament of the Commonwealth, raise or maintain any naval or military force, or impose any tax on property of any kind belonging to the Commonwealth, nor shall the Commonwealth impose any tax on property of any kind belonging to a State.
- 115. A State shall not coin money, nor make anything but gold and silver coin a legal tender in payment of debts.
- 116. The Commonwealth shall not make any law for establishing any religion, or for imposing any religious observance, or for prohibiting the free exercise of any religion, and no religious test shall be required as a qualification for any office or public trust under the Commonwealth.
- 117. A subject of the Queen, resident in any State, shall not be subject in any other State to any disability or discrimination which would not be equally applicable to him if he were a subject of the Queen resident in such other State.
- 118. Full faith and credit shall be given, throughout the Commonwealth, to the laws, the public Acts and records, and the judicial proceedings of every State.
- 119. The Commonwealth shall protect every State against invasion and, on the application of the Executive Government of the State, against domestic violence.
- 120. Every State shall make provision for the detention in its prisons of persons accused or convicted of offences against the laws of the Commonwealth, and for the punishment of persons convicted of such offences, and the Parliament of the Commonwealth may make laws to give effect to this provision.

### CHAPTER VI.—NEW STATES:

- 121. The Parliament may admit to the Commonwealth or establish new States, and may upon such admission or establishment make or impose such terms and conditions, including the extent of representation in either House of the Parliament, as it thinks fit.
- 122. The Parliament may make laws for the government of any territory surrendered by any State to and accepted by the Commonwealth, or of any territory placed by the Queen under the authority of and accepted by the Commonwealth, or otherwise acquired by the Commonwealth, and may allow the representation of such territory in either House of the Parliament to the extent and on the terms which it thinks fit.
- 123. The Parliament of the Commonwealth may, with the consent of the Parliament of a State, and the approval of the majority of the electors of the State voting upon the question, increase, diminish, or otherwise alter the limits of the State, upon such terms and conditions as may be agreed on, and may, with the like consent, make provision respecting the effect and operation of any increase or diminution or alteration of territory in relation to any State affected.

124. A new State may be formed by separation of territory from a State, but only with the consent of the Parliament thereof, and a new State may be formed by the union of two or more States or parts of States, but only with the consent of the Parliaments of the States affected.

## CHAPTER VII.-MISCELLANEOUS.

125. The seat of Government of the Commonwealth shall be determined by the Parliament, and shall be within territory which shall have been granted to or acquired by the Commonwealth, and shall be vested in and belong to the Commonwealth, and shall be in the State of New South Wales, and be distant not less than one hundred miles from Sydney.

Such territory shall contain an area of not less than one hundred square miles, and such portion thereof as shall consist of Crown lands shall be granted to the Commonwealth without any payment therefor.

The Parliament shall sit at Melbourne until it meet at the Seat of Government.

126. The Queen may authorize the Governor-General to appoint any person, or any persons jointly or severally, to be his deputy or deputies within any part of the Commonwealth, and in that capacity to exercise during the pleasure of the Governor-General such powers and functions of the Governor-General as he thinks fit to assign to such deputy or deputies, subject to any limitations expressed or directions given by the Queen; but the appointment of such deputy or deputies shall not affect the exercise by the Governor-General himself of any power or function.

127. In reckoning the numbers of the people of the Commonwealth, or of a State or other part of the Commonwealth, aboriginal natives shall not be counted.

## CHAPTER VIII.—ALTERATION OF THE CONSTITUTION.

128. This Constitution shall not be altered except in the following manner:-

The proposed law for the alteration thereof must be passed by an absolute majority of each House of the Parliament, and not less than two nor more than six months after its passage through both Houses the proposed law shall be submitted in each State to the electors qualified to vote for the election of members of the House of Representatives.

But if either House passes any such proposed law by an absolute majority, and the other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, and if after an interval of three months the first-mentioned House in the same or the next session again passes the proposed law by an absolute majority with or without any amendment which has been made or agreed to by the other House, and such other House rejects or fails to pass it or passes it with any amendment to which the first-mentioned House will not agree, the Governor-General may submit the proposed law as last proposed by the first-mentioned House, and either with or without any amendments subsequently agreed to by both Houses, to the electors in each State qualified to vote for the election of the House of Representatives.

When a proposed law is submitted to the electors the vote shall be taken in such manner as the Parliament prescribes. But until the qualification of electors of members of the House of Representatives becomes uniform throughout the Commonwealth, only one-half the electors voting for and against the proposed law shall be counted in any State in which adult suffrage prevails.

And if in a majority of the States a majority of the electors voting approve the proposed law, and if a majority of all the electors voting also approve the proposed law, it shall be presented to the Governor-General for the Queen's assent.

No alteration diminishing the proportionate representation of any State in either House of the Parliament, or the minimum number of representatives of a State in the House of Representatives, or increasing, diminishing, or otherwise altering the limits of the State, or in any manner affecting the provisions of the Constitution in relation thereto, shall become law unless the majority of the electors voting in that State approve the proposed law.

## SCHEDULE.

#### OATH.

I, A.B., do swear that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. So HELP ME GOD!

#### AFFIRMATION

- I, A.B., do solemnly and sincerely affirm and declare that I will be faithful and bear true allegiance to Her Majesty Queen Victoria, Her heirs and successors according to law. (Note.—The name of the King or Queen of the United Kingdom of Great Britain and Ireland for the time being is to be substituted from time to time.)
- 3. The Royal Proclamation.—The preceding Act received the Royal assent on the 9th July, 1900. This made it lawful to declare that the people of Australia should be united in a Federal Commonwealth. This proclamation, made on the 17th September, 1900, constituted the Commonwealth as from the 1st January, 1901; it read as follows:—

# BY THE QUEEN. A PROCLAMATION.

(Signed) VICTORIA R.

WHEREAS by an Act of Parliament passed in the Sixty-third and Sixty-fourth Years of Our Reign, intituled "An Act to constitute the Commonwealth of Australia," it is enacted that it shall be lawful for the Queen, with the advice of the Privy Council, to declare by Proclamation, that, on and after a day therein appointed, not being later than One year after the passing of this Act, the people of New South Wales, Victoria, South Australia, Queensland, and Tasmania, and also, if Her Majesty is satisfied that the people of Western Australia have agreed thereto, of Western Australia, shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

And whereas We are satisfied that the people of Western Australia have agreed thereto accordingly.

We therefore, by and with the advice of Our Privy Council, have thought fit to issue this Our Royal Proclamation, and We do hereby declare that on and after the First day of January One thousand nine hundred and one, the people of New South Wales, Victoria, South Australia, Queensland, Tasmania, and Western Australia shall be united in a Federal Commonwealth under the name of the Commonwealth of Australia.

Given at Our Court at Balmoral this Seventeenth day of September, in the Year of Our Lord One thousand nine hundred, and in the Sixty-fourth Year of Our Reign.

GOD SAVE THE QUEEN.

## § 7. The External Territories of Australia.

- 1. Transfer of Norfolk Island.—In 1856, Norfolk Island was created a distinct and separate settlement under the jurisdiction of New South Wales. Later, in 1896, it was made a dependency under the Governor of that colony and finally by the passage of the Norfolk Island Act 1913 it was accepted as a Territory of the Commonwealth of Australia. The island is situated in latitude 29° 3′ 3″ S., longitude 167° 57′ 5″ E., and comprises an area of 8,528 acres.
- 2. Transfer of British New Guinea or Papua.—Under the administration of the Commonwealth, but not included in it, is British New Guinea or Papua, finally annexed by the British Government in 1884. This Territory was for a number of years administered by the Queensland Government, but was transferred to the Commonwealth by proclamation on 1st September, 1906, under the authority of the Papua Act (Commonwealth) of 16th November, 1905. The area of Papua is about 90,540 square miles.
- 3. Territory of New Guinea.—In 1919, it was agreed by the Principal Allied and Associated Powers that a mandate should be conferred on Australia for the government of the former German territories and islands situated in latitude between the Equator and 8° S., and in longitude between 141° E. and 159° 25′ E. The mandate was issued

by the League of Nations on 17th December, 1920. The Governor-General of the Commonwealth was authorized to accept the mandate by the New Guinea Act 1920, which also declared the area to be a Territory under the authority of the Commonwealth by the name of the Territory of New Guinea. The Territory comprises about 93,000 square miles, and the administration under the mandate dated from 9th May, 1921. New Guinea is now administered under a Trusteeship Agreement with the United Nations, approved 13th December, 1946.

- 4. Nauru.—In 1919, the Governments of the United Kingdom, Australia and New Zealand entered into an agreement to make provision for the exercise of the mandate conferred on the British Empire for the administration of the island of Nauru, and for the mining of the phosphate deposits thereon. The island is situated in latitude 0° 32′ south of the Equator and longitude 166° 55′ east of Greenwich, and comprises about 5,263 acres. The agreement provided that the administration of the island should be vested in an administrator, the first appointment to be made by the Commonwealth Government, and thereafter in such manner as the three Governments decided. The agreement was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and a supplementary agreement of 30th May, 1923, which gave the Government immediately responsible for the administration greater powers of control over the Administrator, was approved in 1932. The administration under the mandate operated from 17th December, 1920, until 1st November, 1947, and so far the administrators have been appointed by the Commonwealth Government. As with the Territory of New Guinea, Nauru is now administered under a Trusteeship Agreement with the United Nations.
- 5. Territory of Ashmore and Cartier Islands.—By Imperial Order in Council, dated 23rd July, 1931, Ashmore Islands, known as Middle, East and West Islands, and Cartier Island, situated in the Indian Ocean off the north-west coast of Australia, were placed under the authority of the Commonwealth. The islands were accepted by the Commonwealth in the Ashmore and Cartier Islands Acceptance Act 1933 under the name of the Territory of Ashmore and Cartier Islands on 10th May, 1934. The Act authorized the Governor of Western Australia to make ordinances having the force of law in and in relation to the Territory. An amendment to the Act in July, 1938, annexed the islands to the Northern Territory, whose laws, ordinances and regulations, wherever applicable, thereupon applied.
- 6. Australian Antarctic Territory.—An Imperial Order in Council of 7th February, 1933, placed under Australian authority "all the islands and territories other than Adélie Land which are situated south of the 60th degree of South Latitude and lying between the 160th degree of East Longitude and the 45th degree of East Longitude."

The Order came into force with a proclamation issued by the Governor-General on 24th August, 1936, after the Commonwealth Parliament had passed the Australian Antarctic Territory Acceptance Act on 13th June, 1933. The boundaries of Adélie Land were definitely fixed by a decree of 1st April, 1938, as latitude 60° S., longitude 136° E. and longitude 142° E.

- 7. Territory of Heard and McDonald Islands.—Heard and McDonald Islands, about 2,500 miles south-west of Fremantle, were transferred from United Kingdom to Australian control as from 26th December, 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act 1953.
- 8. Territory of Cocos (Keeling) Islands.—The Cocos (Keeling) Islands Act 1955 provided for the acceptance of the Cocos Islands, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia and was parallel to an Act of the United Kingdom Parliament transferring authority over the islands to the Commonwealth. Consequent on the passing of these Acts Her Majesty, by Order in Council, specified 23rd November, 1955, as the date of transfer. From that date the islands came under Australian administration and an Official Representative of Australia was appointed to take charge of the local administration of the islands.

## CHAPTER: IL.

## PHYSIOGRAPHY.

## § 1. General: Description of Australia.

- 1. Geographical Position.—(i) General. The Australian Commonwealth; which includes the island continent of Australian proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises in all an area of about 2,974,581 square miles, the mainland alone containing about 2,948,366 square miles. Bounded on the west and east by the Indian and Pacific Oceans respectively, it lies between longitudes 113° 9′ E. and 153° 39′ E., while its northern and southern limits are the parallels of latitude 10° 41′ S. and 43° 39′ S., or, excluding Tasmania, 39° 8′ S. On its north are the Timor and Arafura Seas and Torres Strait, on its south the Southern Ocean. The extreme points are Steep Point on the west, Cape Byron on the east, Cape York on the north, and South-East Cape or, if Tasmania be excluded, Wilson's Promontory, on the south.
- (ii) Tropical and Temperate Regions. Of the total area of Australia, nearly 39 per cent. lies within the tropics. Assuming, as is usual, that the latitude of the Tropic of Capricorn is 23° 30′ S., the areas within the tropical and temperate zones are approximately as follows:—

AUSTRALIA: AREAS OF TROPICAL AND TEMPERATE REGIONS: (Square miles.)

Area.	N.S.W.	Vic.,	Qld.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Within Tropical Zone Temperate Zone	310,372.	87,884.	359,000 311,500	380,070	364,000 611,920	26,215	426,320 97,300	1,149,320 1,825,261
Total Area	310,372	87,884	670,500	380,070	975,920	26,215	523,620	2,974,581

(a) Includes Australian Capital Territory (939 square miles).

Fifty-four per cent. of Queensland lies within the tropical zone and 46 per cent. in the temperate zone; 37 per cent. of Western Australia is tropical and 63 per cent. temperate; while 81 per cent. of the Northern Territory is tropical and 19 per cent. temperate. All of the remaining States lie within the temperate zone. The tropical part of Australia thus comprises about 39 per cent. of the whole of the continent, and about 53 per cent. of the three territories which have areas within the tropical zone.

2. Area of Australia compared with Areas of other Countries.—The area of Australia is almost as great as that of the United States of America, four-fifths of that of Canada, nearly three-quarters of the whole area of Europe, and about 25 times as large as Great Britain and Ireland. The areas of Australia and of certain other countries are shown in the table on the following page.

# AREA OF AUSTRALIA AND OF OTHER COUNTRIES, circa 1955.

# ('000 square miles.)

Country.	Area.	Country.	Агеа.
Continental Divisions—		Africa—continued.	
Europe (a)	1,903	Rhodesia and Nyasaland	
Asia (a)	10,456	Federation	488
U.S.S.R. (Europe and Asia)	8,650	Angola	481
Africa	11,634	Union of South Africa	472
North and Central America	11,054	Ethiopia and Eritrea	457
and West Indies	9,354	Egypt	386
South America	6,856	Nigeria and Protectorate (b)	373
	3,304	1 = 5 = 4 11 1	363
Oceania	3,304		318
Total, excluding Arctic			302
and Antarctic Conts	52,157		275
		Bechuanaland Protectorate	
Europe (a)—		Madagascar	228
France	213	Kenya Colony and Protec-	000
Spain (incl. possessions)	194	torate	225
Sweden	174	Other	1,110
Germany	137	Total	11,634
Finland	130	1	
Norway	125	North and Central America—	
Poland	120	Canada	3,846
Italy	116	United States of America	3,022
Yugoslavia	99	Greenland	840
United Kingdom	94	Mexico	760
Romania	92	Alaska	586
Other	409	Nicaragua	57
Total (a)	1,903	Cuba	44
Total (a)	1,903	Honduras	43
Asia (a)—		Other	156
China and Dependencies	3,745		
India and Nepal	1,270	Total	9,354
Iran	629	South America-	
Saudi Arabia	618	Brazil	3,287
Mongolian People's Republic	591		1.073
Indonesia	576	Argentina Peru	482
Pakistan	365	Peru Colombia (excl. of Panama)	440
Turkey	300	1 - 4 - 1	440
Burma	262	1 5 1	424 352
Afghanistan	251	1 1 1 1	352 286
Thailand	198		
Jraq	172	Paraguay Ecuador	157
Other	1,479		105 250
Total (a)	10.456	Other	230
` '	10,430	Total	6,856
J.S.S.R	8,650	-	
Africa		Oceania—	2.025
French West Africa	1,789	Commonwealth of Australia	2,975
French Equatorial Africa	969	New Zealand	103
<b>C</b> 1	968	New Guinea (c)	93
D 1	905	Papua	91
	905 846	Other	42
*		Total	3,304
Libya	679	Total	3,304

<sup>(</sup>a) Excludes U.S.S.R., shown below. (b) Includes British Cameroons. (c) Australian Trust Territory.

The areas shown in the table are obtained from the *Demographic Yearbook*, 1956 published by the Statistical Office of the United Nations and the countries have been arranged in accordance with the continental groups used therein.

3. Areas of States and Territories, Coastal Configuration and Standard Times.—As already stated, Australia consists of six States and the Northern and Australian Capital Territories. Particulars of areas, coastline and standard times are shown in the following table:—

AUSTRALIA: AREAS OF	STATES AND	TERRITORIES,	COASTLINE	AND
	STANDARD	TIMES.		

State or Territory.		Area.	Proportion of Total Area.		Area per	Standard Times.	
				Coastline.	Mile of Coastline.	Meridian Selected.	Ahead of G.M.T.
		Sq. miles.	%	Miles.	Sq. miles.	}	Hours.
New South Wales	٠.	309,433	10.40	(a) 700	(a) 443	150° E.	10
Victoria	٠.	87,884	2.96	680	129	150° E.	10
Queensland	٠.	670,500	22.54	3,000	223	150° E.	10
South Australia	٠.	380,070	12.78	1,540	247	142°30'E.	9 <del>1</del>
Western Australia	٠.	975,920	32.81	4,350	224	120° E.	8
Northern Territory		523,620	17.60	1,040	503	142°30'E.	91
Australian Capital Te	erri-			·	1	i i	_
tory	••	939	0.03			150° E.	10
Mainland	٠.	2,948,366	99.12	11,310	261		
Tasmania	٠.	26,215	0.88	900	29	150° E.	10
Australia		2,974,581	100.00	12,210	244		

(a) Includes Australian Capital Territory.

There are few striking features in the configuration of the coast; the most remarkable indentations are the Gulf of Carpentaria on the north and the Great Australian Bight on the south. The Cape York Peninsula on the extreme north is the only other remarkable feature in the outline. In Official Year Book No. 1 an enumeration was given of the features of the coastline of Australia (see pp. 60-68).

Prior to 1895, the official time adopted in the several colonies was for most purposes the mean solar time of the capital city of each. In 1894 and 1895, after several conferences had been held, legislation was enacted by each of the colonies whereby the mean solar times of the meridians of east longitude 120° (Western Australia), 135° (South Australia and Northern Territory) and 150° (Queensland, New South Wales, Victoria and Tasmania) were adopted. In 1898, however, the South Australian legislature amended its earlier provision and adopted the mean solar time of the meridian 142° 30′ E. longitude as the standard time for that colony. For further information on this subject, see Official Year Book No. 39, p. 65.

- 4. Geographical Features of Australia.—(i) General. The following description is only a broad summarization of the main physical characteristics of the Australian continent. For greater detail of particular geographical elements, earlier issues of the Official Year Book should be consulted. The list of special articles, etc., at the end of this volume indicates the nature of the information available and its position in the various issues.
- (ii) Orography of Australia. (a) General Description of the Surface. Owing to the absence of any very high mountain chains, and to the great depression in the centre of Australia, the average elevation of the Australian continent above the level of the surrounding oceans is less than that of any of the other continents. Three-quarters of the land-mass lies between the 600 and 1,500 feet contours in the form of a huge plateau.

A section through the continent from east to west, at the point of its greatest breadth, shows first a narrow belt of coastal plain. This plain, extending north and south along the whole eastern coast, is well watered by rivers. It is of variable width, seldom more than sixty or seventy miles, and occasionally only a few miles, the average being roughly about forty to fifty miles. From this plain, the Great Dividing Range, extending from the north of Queensland to the south of New South Wales, and thence sweeping westward through Victoria, rises, often abruptly, and frequently presents bold escarpments on its eastern face. The descent on its western slopes is gradual, until, in the country to the north of Spencer's Gulf, the plain is not above sea-level and occasionally even below it. Thence there is another almost imperceptible rise until the mountain ranges of Western Australia are reached, and beyond these lies another coastal plain.

The great central plain or plateau is the most distinctive feature of the Australian

continent and its climatic peculiarities can probably be largely ascribed thereto.

(b) Mountain Systems. The main mountain feature of Australia is the Great Dividing Range, which runs along the whole eastern coast of the continent and can be traced over the islands of Torres Strait to New Guinea, while in the south one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania.

This mountain system is at no place more than 250 miles from the eastern coastline and it approaches to less than 30 miles. On the whole, it is much closer to the coast in both New South Wales and Victoria than it is in Queensland, the corresponding average distances being about 70, 65 and 130 miles respectively. There is no connexion between the mountains of the eastern and other States of Australia.

the mountains of the eastern and other States of Australia.

The mountains of Australia are relatively low. Thus, in Queensland, the Great Dividing Range reaches a height above sea-level of less than 5,500 feet, the highest peak being Mount Bartle Frere. Mount Kosciusko, in New South Wales, is only about 7,300 feet, and Mount Bogong, in Victoria, about 6,500 feet high. In South Australia and Western Australia, heights of three and four thousand feet are attained. In Tasmania the greatest height is only a little more than 5,000 feet. This fact, that there are no high mountains in Australia, is also of considerable importance in considering the climate of Australia.

It may be of interest to observe that at one time Tasmania was probably connected with the mainland. As the Great Dividing Range can, in the north, be traced from Cape York across Torres-Strait to New Guinea, so its main axis can be similarly followed across the shallow waters of Bass Strait and its islands from Wilson's Promontory to Tasmania, which may be said to be completely occupied by ramifications of the chain. The central part of the island is occupied by an elevated plateau, roughly triangular in shape, and presenting bold fronts to the east, west and north. This does not extend in any direction more than about 60 miles. The plateau rests upon a more extensive tableland, the contour of which closely follows the coastline, and occasionally broadens out into low-lying tracts not much above sea-level. The extreme south of the island is rugged in character.

- (iii) Hydrology of Australia. (a) Rainfall. On the whole, Australia is a country with a limited rainfall. This is immediately evident on studying its river systems, its lakes, and its artesian areas. Its one large river system is that of the Murray and Darling Rivers, of which the former stream is the larger and more important. Many of the rivers of the interior run only after heavy rains. Depending almost entirely on rainfall, a consequence of the absence of high mountains, they drain large areas with widely varying relation as between rainfall and flow. Thus it has been estimated that not more than 10 per cent. of the rainfall on the catchment area of the Darling River above Bourke (New South Wales) discharges itself past that town. The rate of fall is often very slight.
- (b) Rivers. The rivers of Australia may be divided into two major classes, those of the coastal plains with moderate rates of fall; and those of the central plains with very slight fall. Of the former not many are navigable for any distance from their mouths, and bars make many of them difficult of access or inaccessible from the sea.

The two longest rivers of the northern part of the eastern coast are the Burdekin, discharging into Upstart Bay, with a catchment area of 53,500 square miles, and the Fitzroy, which reaches the sea at Keppel Bay and drains about 55,600 square miles.

The Hunter is the largest coastal river of New South Wales, draining about 11,000 square miles before it reaches the sea at Newcastle. The Murray River, with its great tributary the Darling, drains a considerable part of Queensland, the major part of New South Wales and a large part of Victoria. It debouches into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australia coast. The total length of the Murray is about 1,500 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Darling-Murray from the source of the Darling to the mouth of the Murray is about 2,300 miles. In good seasons the river is navigable for a considerable proportion of its length.

The rivers of the north-west coast of Australia (Western Australia) are of considerable size, e.g., the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale and Ord. So also are those in the Northern Territory, e.g., the Victoria and Daly. The former of these, estimated to drain 90,000 square miles, is said to be mavigable for 50 miles.

The crivers on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell, are also of considerable size.

Owing to the small amount of fall of many of the interior rivers, they may flood hundreds of miles of country in wet seasons, while in dry seasons they form a mere succession of waterholes or are entirely dry. It is this fact that explains the apparently conflicting reports of the early explorers, one regarding the interior as an inland sea, and another as a desert.

The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the territory.

(c) Lakes. The "lakes" of Australia may be divided into three classes, true permanent lakes; lakes which, being very shallow, become mere morasses in dry seasons or even dry up and finally-present a cracked surface of salt and dry mud; and lakes which are really inlets of the ocean, opening out into a lake-like expanse.

The second class is the only one which seems to demand special mention. These are a characteristic of the great central plain of Australia. Some of them, such as Lake Torrens, Gairdner, Eyre and Frome, are of considerable extent.

(d) Artesian Areas. A considerable tract of the plain country of New South Wales and Queensland carries a water-bearing stratum, usually at a great depth. A large number of artesian bores have been put down, from which there is a considerable flow. These are of great value and render usable large areas which otherwise would be difficult to occupy even for pastoral purposes.

-For further information on this subject, see Chapter IX.—Water Conservation and Irrigation.

5. Fauna, Flora, Geology and Seismology of Australia.—Special articles dealing with these features have appeared in previous issues of the Official Year Book, but limits of space preclude their repetition in each volume. The nature and location of these articles can be readily ascertained from the special index preceding the general index at the end of this issue.

## § 2. Climate and Meteorology of Australia.

Note.—This Section has been prepared by the Director, Commonwealth Meteorological Bureau, and the various States and Territories have been arranged in the standard order adopted by that Bureau.

1. Introductory.—Previous issues of the Official Year Book, notably No. 3, pp. 79-83, and No. 4, pp. 84 and 87, contained outlines of the history of Australian meteorology and the creation and organization of the Commonwealth Bureau of Meteorology. Official Year Book No. 38, pp. 30-32, contained paragraphs devoted to (i) Organization of the Meteorological Service; (ii) Meteorological Publications; (iii) Equipment; and (iv) Meteorological Divisions.

By reason of its insular geographical position and the absence of striking physical features, whether in marine gulfs or in important mountains, Australia is, on the whole, less subject to extremes of weather than are regions of similar area in other parts of the globe, and latitude for latitude Australia is generally more temperate.

The average elevation of the surface of the land is low, probably close to 900 feet above the sea. The altitudes range up to a little more than 7,300 feet, hence the Australian climate displays a great many features, from the charactistically tropical to what is essentially alpine, a fact indicated in some measure by the name Australian Alps given to the southern portion of the Great Dividing Range.

On the coast, the rainfall is often abundant and the atmosphere moist, but in some portions of the interior it is very limited, and the atmosphere dry. The distribution of forest, therefore, with its climatic influence, is very uneven. In the interior, in places, there are fine belts of trees, but there are also large areas which are treeless, and here the air is hot and parching in summer. Again, on the coast, even so far south as latitude 35°, the vegetation is tropical in its luxuriance, and to some extent also in character.

2. Temperature.—(i) Effective Temperature. When a meteorologist speaks of temperature, he means the temperature of the air indicated by a thermometer sheltered from precipitation, from direct rays of the sun and from radiation of heat from the ground

and neighbouring objects, yet freely exposed to the circulation of the air. In other words, he means temperature measured under conditions standardized as near as possible in a Stevenson Screen, which is the standard housing for meteorological thermometers.

This shade temperature as measured by a "dry bulb" thermometer shows only the actual temperature experienced by dry inorganic substances, not the sensible temperatures felt by organic bodies. In the case of human beings, sensible temperature is affected by the rate of conduction of heat to or from the body by moving air and also by the rate of cooling due to evaporation from the skin and respiratory passages. The wind and humidity therefore determine the sensible temperature.

The humidity (relative humidity) is determined from the readings of the dry and wet bulb thermometers. Of late years, however, with increasing interest in human comfort in tropical climates, another term, effective temperature, has come into use. It may be defined as "the temperature of a still, saturated atmosphere which would on the average produce the same feeling of warmth or cold as the atmosphere in question".\*

The 80° F. isotherm is confined to a very narrow tract of country on the north-west coast of Western Australia. The 75° F. isotherm extends, broadly, from Onslow on the north-west coast of Western Australia to Daly Waters to Camooweal to Moreton in Cape York Peninsula following in a general way the coastline of Northern Australia but from 100 to 300 miles inland.

Later investigations have established "comfort zones" bounded by limits of effective temperature within which people will feel comfortable. American research workers have determined the following figures :—

#### Fifty per cent. of subjects feel No subjects feel No subjects feel Season. comfortable belowcomfortable comfortable above between-60° F. 63° and 71° F. 74° F. Winter... 64° F. 66° and 75° F. 79° F. Summer

## COMFORT ZONES: EFFECTIVE TEMPERATURES.

Queensland investigators in recent years have divided some towns of Queensland into three classes on the basis of deviation from comfort:—

Class 1 (Sub-tropics).—Quite suitable for Caucasian habitation—Rockhampton, Bundaberg, Brisbane, Longreach, Charleville.

Class 2 (Marginal tropics).—Suitable for Caucasian habitation, but requires adaptation in summer—Mackay, Townsville.

Class 3 (Tropics).—(a) Permissible for Caucasian habitation but requires selection and marked adaptation—Cardwell, Cairns. Cloncurry. (b) Not suitable for continuous Caucasian habitation—Cape York Burketown.

These results of recent years bear out investigations made previously in Australia in which the atmospheric vapour pressure was used as a measure of comfort, its value for this purpose being that it has equal effect in both indoor and outdoor climates. The limits of comfort range from .2 to .5 inch of vapour pressure. After drawing isopleths for effective temperature (not corrected for altitude), mean vapour pressure reduced to a logarithmic scale, and mean wet bulb temperature, it is found that there is close agreement in defining zones of relative discomfort.

(ii) Seasons. The Australian seasons are:—Summer, December to February; autumn, March to May; winter, June to August; spring, September to November. In most parts of Australia, January is the hottest month, but in Tasmania and southern Victoria, February is the hottest; in the tropical north, probably because the cooling "monsoon" rains occur in late summer, December is the hottest month, and at Darwin, November.

On a rainfall basis, in the tropical north the year is divisible into "wet" and "dry" seasons, but on the basis of temperatures and physical comfort the "dry" season can be further sub-divided into two parts—"cool dry" and "warm dusty".¶

(a) "Cool dry" Season. From May to August. The average maximum temperature ranges from 80° to 85° F., the relative humidity is low and in inland areas cold nights are experienced when the temperature drops to 40° F. The skies generally are cloudless, but in about one year in three during June or July one to two inches of rain fall.

<sup>\*</sup> Houghton, F. C., Teague, W. W. and Miller, W. E. (1926) Amer. Soc. Heat. Vent. Engns, † Yaglou, C. P. (1926) J. Industr. Hyg. ‡ Yaglou, C. P. (1927) Ibid. § Lee, D. H. K. Trans. Roy. Soc. Trop. Med. and Hyg. (1940) Vol. XXXII. | Barkley, H. Zones of Relative Physical Comfort in Australia, Met. Bull. 20, 1934. ¶ Maze, W. H. Austn. Geog. June, 1945. Settlement in E. Kimberleys.

- (b) "Warm dusty" Season. From the end of August, temperatures rise and reach a maximum in October or the beginning of November. Temperatures of over 120° F. have been recorded.
- (c) "Wet" Season. After the first of the heavy storms, the maximum temperatures fall but still remain high with high relative humidity. At Wyndham during January, 1944, the minimum temperature did not drop below 75° F. for fourteen consecutive days. A maximum of over 100° F. was recorded on each rainless day.

In Central and Northern Australia, during the hottest months, the average temperatures range from 80° to 85° F., whereas in Southern Australia they vary from 65° to 70° (see maps pp. 33, 34).

Throughout Australia, the coldest month is July, when only a very narrow strip of the northern sea-board has an average temperature as high as 75°. Over the southern half of the continent, July temperatures range from 55° to 45° at elevations below 1,500 feet and fall as low as 35° on the Australian Alps (see maps pp. 35, 36). Here the temperature seldom, if ever, reaches 100° even in the hottest of seasons. Hotham Heights (6,100 feet above Mean Sea Level) recorded the highest maximum of 82.0° on 20th January, 1935. In winter, readings slightly below zero are occasionally recorded on the extreme heights.

Tasmania, as a whole, enjoys a moderate and equable range of temperature throughout the year, although occasionally hot winds may cause the temperature to rise to 100° in the eastern part of the State.

(iii) Comparisons with other Countries. In respect of Australian temperatures generally, it may be pointed out that the mean annual isotherm for 70° F. extends in South America and South Africa as far south as latitude 33°, while in Australia it reaches only as far south as latitude 30°, thus showing that, on the whole, Australia has, latitude for latitude, a more temperate climate than other places in the Southern Hemisphere.

The comparison is even more favourable when the Northern Hemisphere is included, for in the United States of America the 70° isotherm extends in several of the western States as far north as latitude 41°. In Europe, the same isotherm reaches almost to the southern shores of Spain, passing afterwards, however, along the northern shores of Africa till it reaches the Red Sea, when it bends northward along the eastern shore of the Mediterranean till it reaches Syria. In Asia, nearly the whole of the land area south of latitude 40° N. has a mean annual temperature higher than 70°.

The extreme range of temperature is less than 100° over practically the whole of Australia, that figure being only slightly exceeded at a very few places; it is mostly 70° to 90° over inland areas, and somewhat less on the coast. In parts of Asia and North America, the extreme range exceeds 130° and 150° in some localities.

Along the northern shores of Australia, the temperatures are very equable. At Darwin, for example, the difference in the means for the hottest and coldest month is only 8.4°, and the extreme readings, or the highest maximum on record and the lowest minimum, show a difference of under 50°.

The highest temperature recorded in Australia was 127.5° F. at Cloncurry on 16th January, 1889. The world's highest (136° F.) was recorded at Azizia (Tripoli) on 13th August, 1922. The lowest temperature ever recorded in Australia was -8° F. at Charlotte Pass on 14th June, 1945, and again on 22nd July, 1947, as contrasted with the world's lowest recorded temperature of -90° F. at Verkhoyansk (Siberia) on 5th and 7th February, 1892.

A comparison of the mean temperatures and the range from the extreme maximum to the extreme minimum temperatures (in whole degrees) of the capital cities of Australia with those of the main cities of some other countries was presented in tabular form in Official Year Book No. 38, p. 42.

(iv) Hottest and Coldest Parts. A comparison of the temperatures recorded at coast and inland stations shows that, in Australia, as in other continents, the range increases, within certain limits, with increasing distance from the coast.

In the interior of Australia, and during exceptionally dry summers, the temperature occasionally reaches or exceeds 120° in the shade. The hottest area of the continent is situated in the northern part of Western Australia about the Marble Bar and Nullagine goldfields, where the maximum shade temperature during the summer sometimes exceeds 100° continuously for days and weeks. The longest recorded period was 160 days from 31st October, 1923 to 7th April, 1924.

The area affected and the period of duration of the longest heat waves in Australia are shown in the map and diagram on page 37.

(v) Tabulated Data for Selected Climatological Stations in Australia. Tables showing normal mean temperature, extreme temperatures and normal rainfall for each month for

selected climatological stations in each State and the Northern Territory appeared in Official Year Book No. 40, pp. 16-23, and similar data for other selected stations in the Commonwealth in Official Year Book No. 39, pp. 41-48. Pages 53-60 of this issue contain this information in respect of Canberra, Darwin and the six State capitals.

(vi) Frosts:\* The Observer's Handbook of the Meteorological Office; London, gives the following definition:—"Injury to the tissues of growing plants is not caused until the temperature has fallen considerably below the freezing point of water (32° F.) and a 'ground frost' is regarded as having occurred when the thermometer on the grass has fallen to 30.4° F. or below".

In Australia, this definition is adopted for stations equipped with terrestrial minimum thermometers. However, these are few in number, so although many rainfall observers record "hoar frost" when seen, for statistical purposes a screen temperature of 36° F. is taken as indicating light frosts at ground level. For heavy frosts, a screen temperature of 32° F. is taken.

In America, a "killing," frost is defined as a frost: "that is generally destructive of vegetation.". A "black frost" is the phenomenon arising out of a combination of low temperature and low-humidity causing rupturing of planticells by expansion, when freezing takes place, of the water which they contain, though frost crystals are not formed on the ground.

The parts of Australia most subject to low temperature are the eastern highlands from about Omeo in Victoria northward to Cambooya and Bybera in Queensland. Most stations in this region experience more than ten nights per month with readings of 32° F. or under for three to five months of the year. In Tasmania, districts on the Central Plateau are subject to such conditions for three to six months of the year. Minimum temperatures of 32° F. are comparatively infrequent in Western Australia except in parts of the south and south-west. In South Australia, the Yongala district is much more subject to such temperatures than other parts of the State. Much of the south-east of Queensland has a higher frequency of such readings than South Australia. Generally speaking, the frequency is controlled mainly by altitude, latitude and, to a lesser degree, by proximity to the sea.

Frosts may occur within a few miles of the coastline over the whole continent, exceptin, the Northern Territory and a considerable area of Northern Queensland. Regions subject to frost in all months of the year comprise portions of the tablelands of New South Wales, the Eastern, Highlands, and, parts of the Central Divide, and, Western district in Victoria, practically the whole of Tasmania and a small area in the south-west of Western Australia.

A map showing the average annual number of frost-free days (i.e., days on which the temperature does not fall below 36° F.) appears on page 39..

Over most of the interior of the continent; and on the Highlands in Queensland ast far north as the Atherton Plateau frosts appear in April and end in September, but they are infrequent in these months. Minimum temperatures of 32° F. are experienced in most of the sub-tropical interior in June and July.

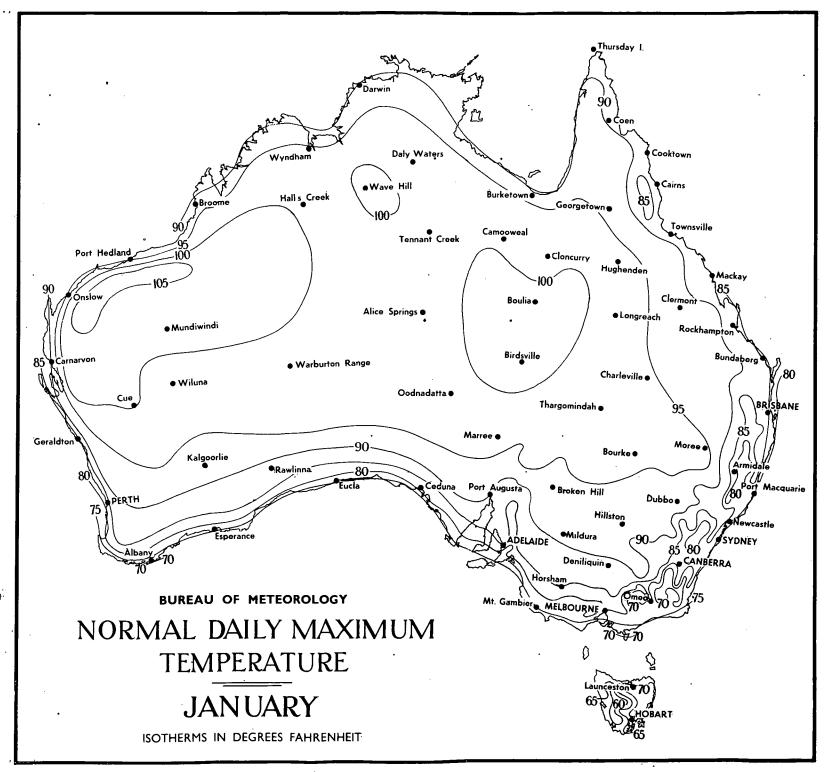
3. Humidity:—After temperature, humidity is the most important element of climate, particularly as regards its effects on human comfort, rainfall supply and conservation and related problems.

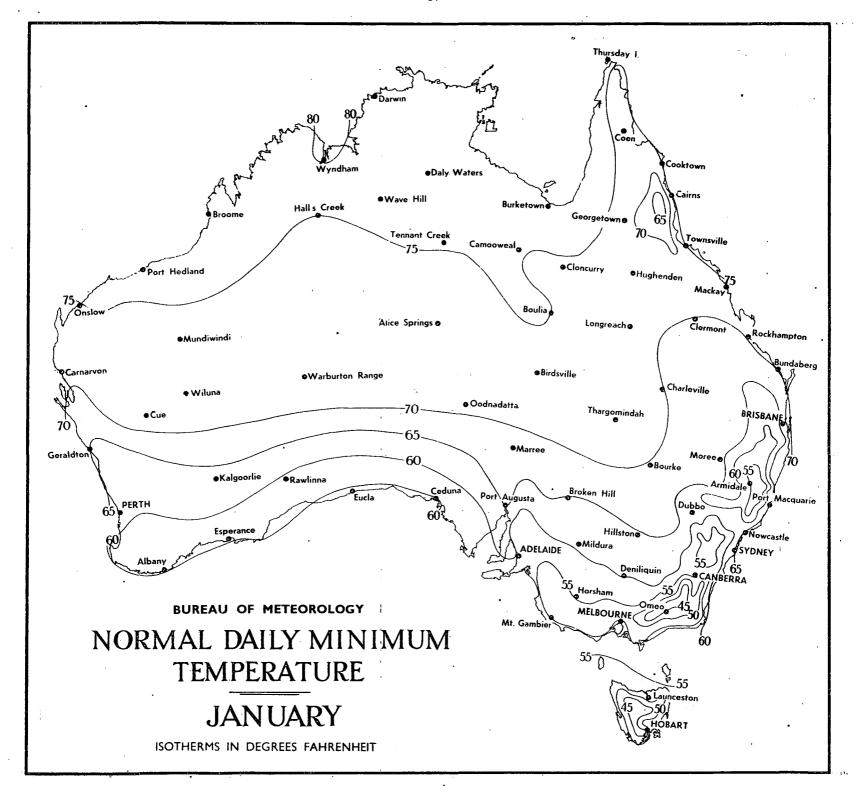
"Vapour pressure" is the pressure exerted by the water vapour in the atmosphere... At any given temperature there is a definite upper limit to the amount of water that can exist as vapour in the atmosphere. When this limit is reached, the air is said to be saturated and the pressure of the water vapour is equal to the "saturation vapour pressure".

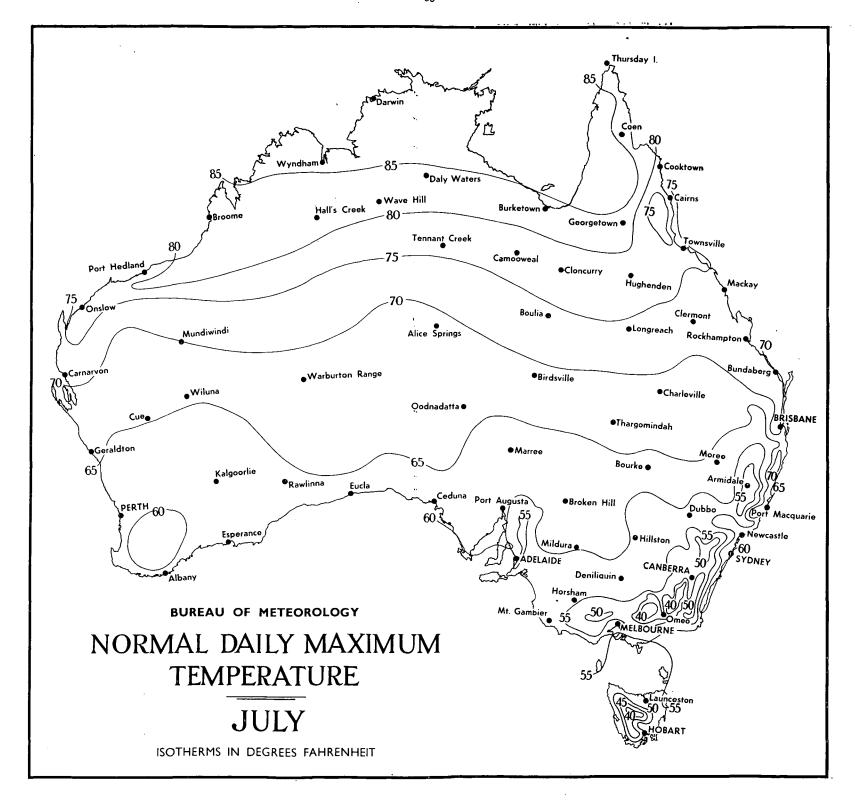
In this publication, the humidity of the air has been expressed by the relative humidity; which is the quotient of the vapour pressure divided by the saturation vapour pressure and multiplied by one hundred. The mean 9 a.m. relative humidity, as well as its highest and lowest recorded mean values at 9 a.m., are shown in the tables of climatological data for the capital cities (see pp. 53-60). The mean monthly vapour pressure has also been added to these tables.

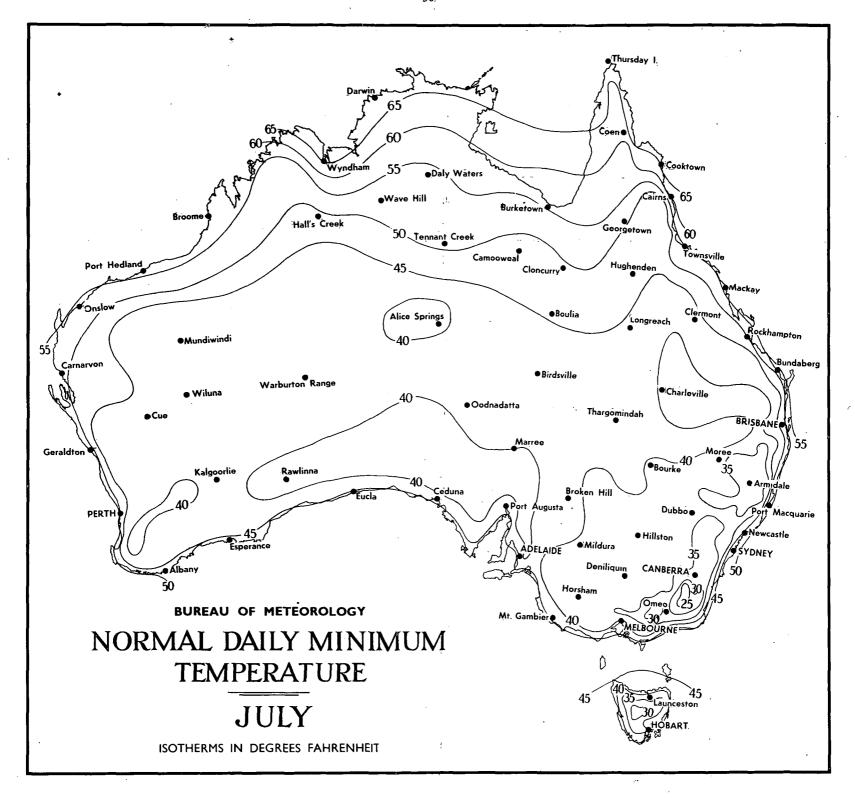
The annual curve of vapour pressure derived from the normal monthly values for this element is comparable with the maximum and minimum temperature curves, but the relative humidities; consisting as they do of the extremes for each month, do not show the normal annual fluctuation which would be approximately midway between the extremes.

The order of stations in descending values of 9 a.m. vapour pressure is Darwin, Brisbane Sydney, Perth, Melbourne, Adelaide, Canberra, Hobart and Alice Springs, while the relative humidity at 9 a.m. diminishes in the order, Melbourne, Sydney, Darwin, Brisbane, Canberra, Hobart, Perth, Adelaide and Alice Springs.

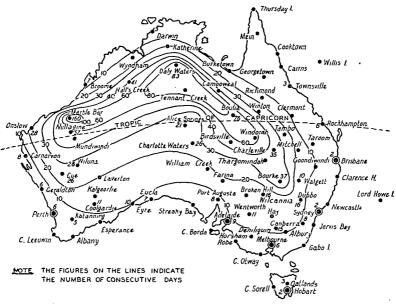


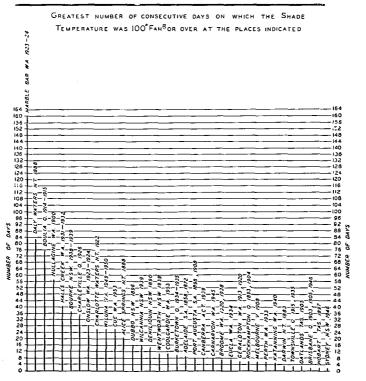




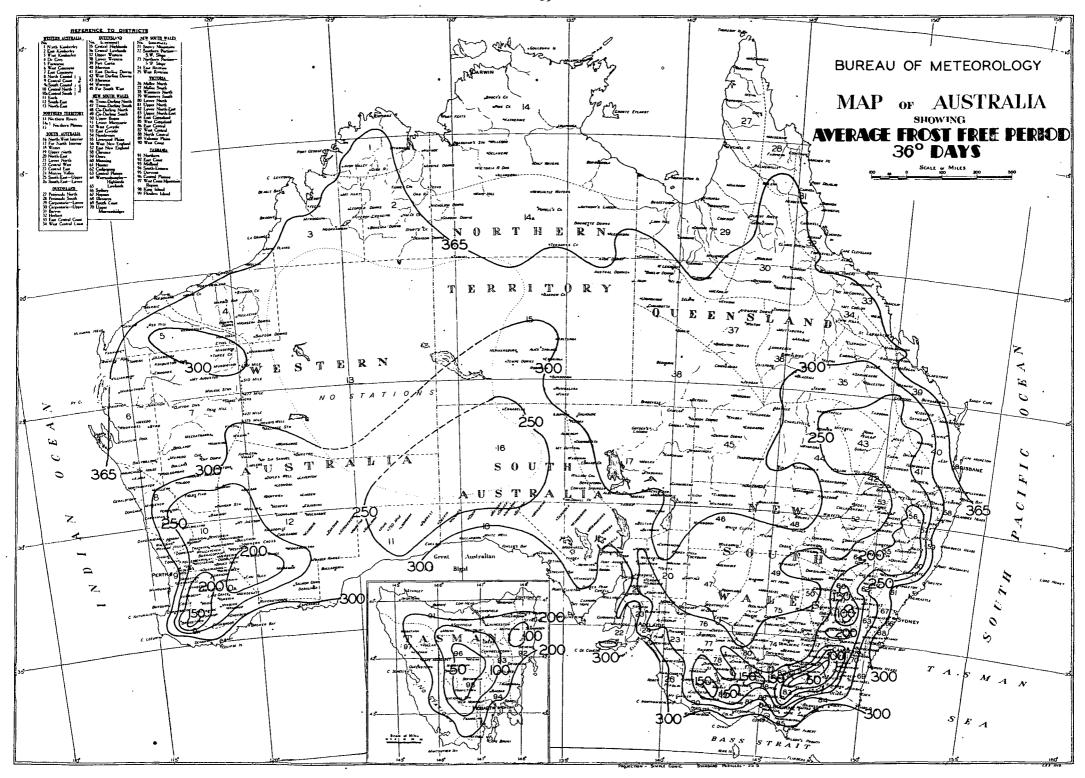


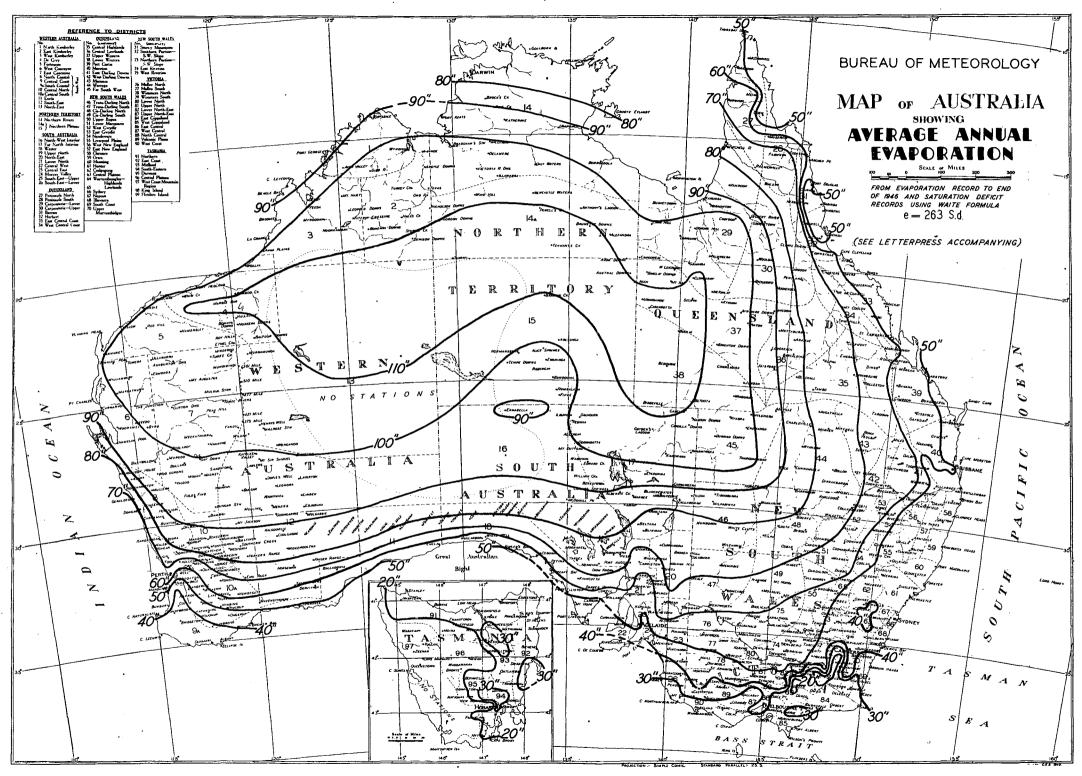
AREA AFFECTED AND PERIOD OF DURATION OF THE LONGEST HEAT WAVES WHEN THE MAXIMUM TEMPERATURE FOR CONSECUTIVE 24 HOURS REACHED OR EXCEEDED 100°F.

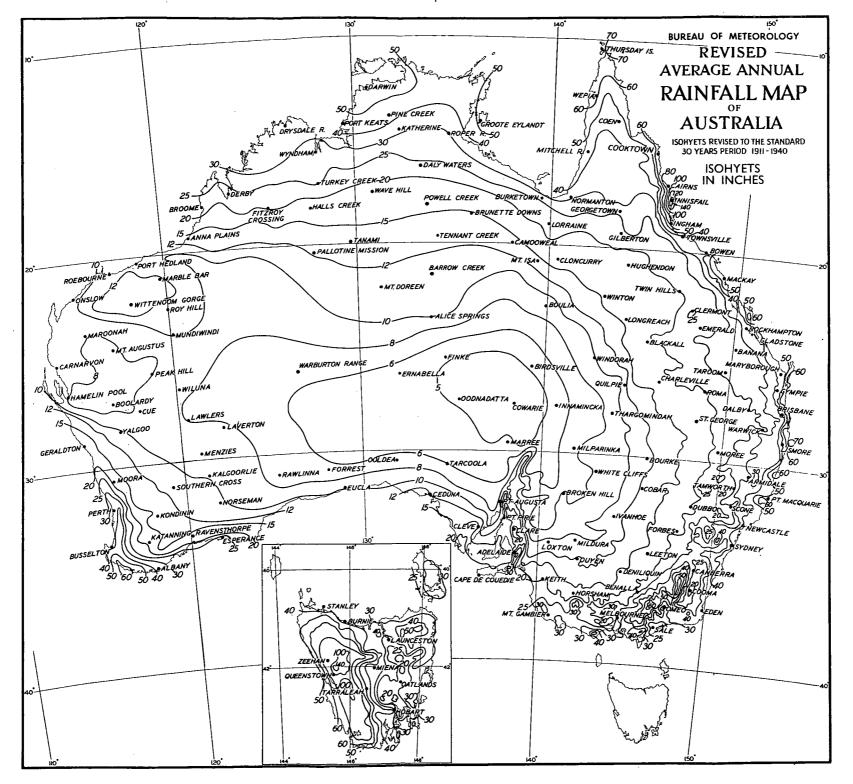


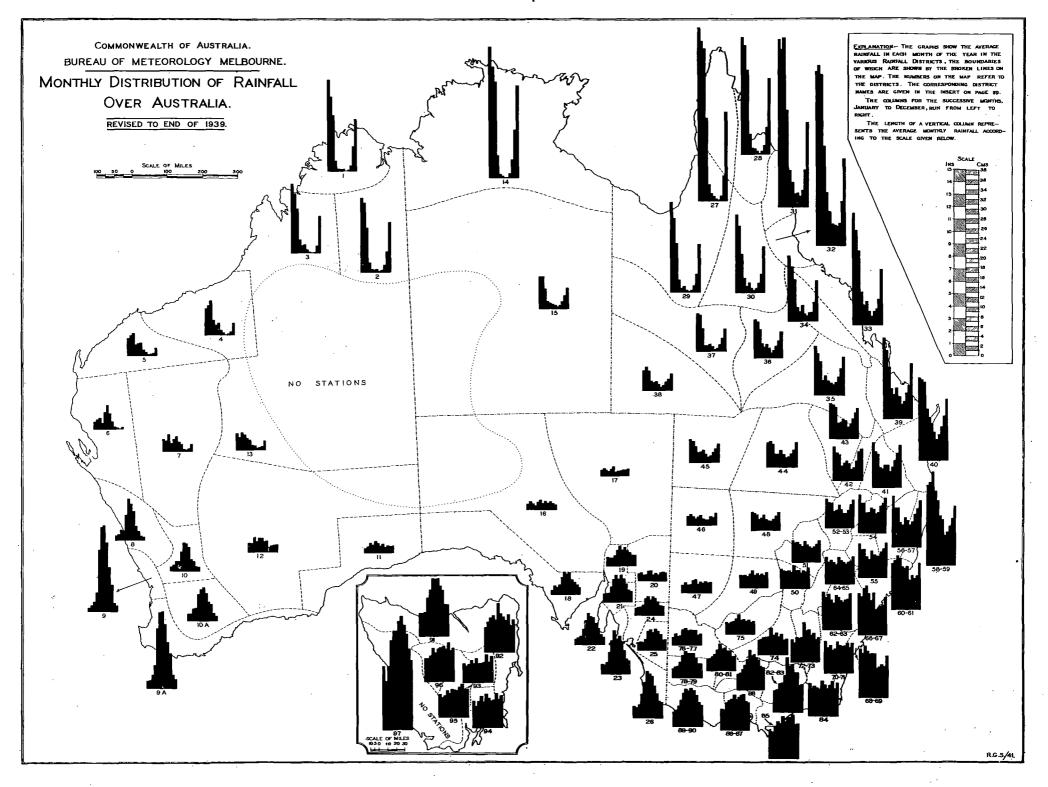


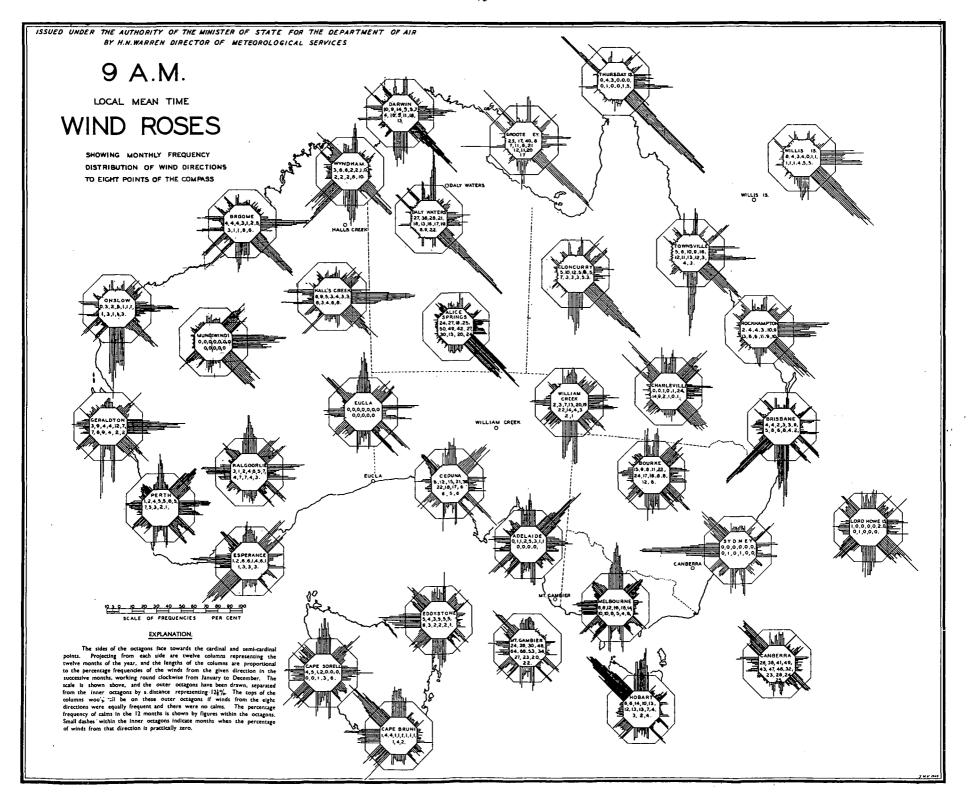


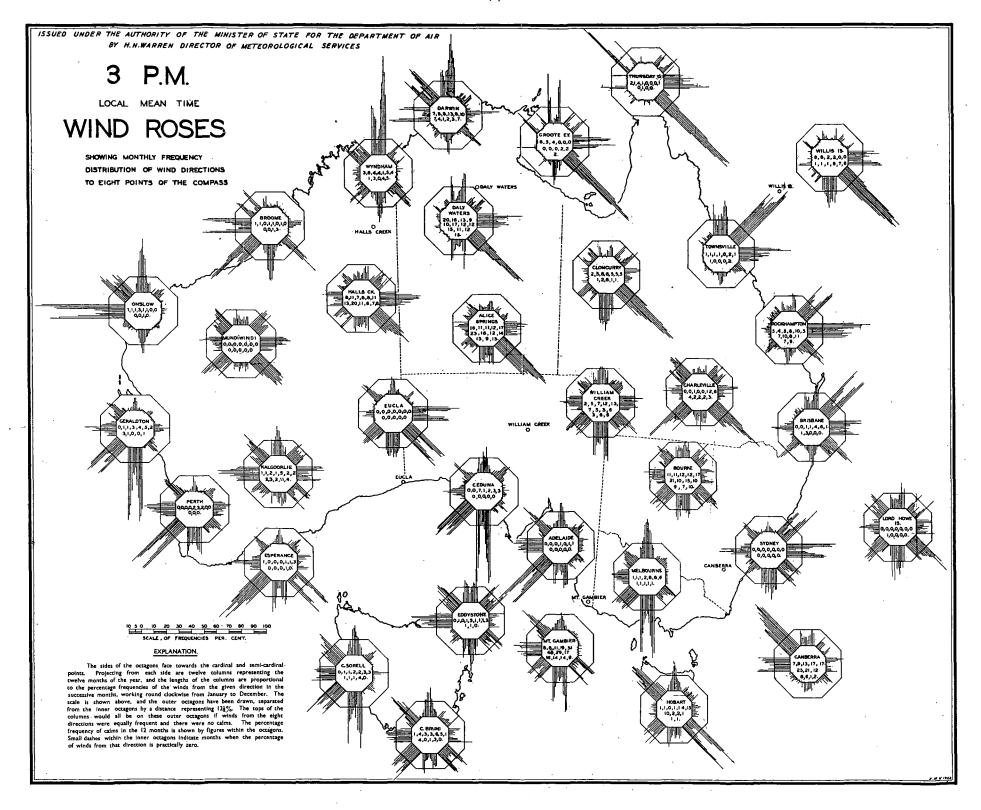












Further reference to humidity will be found in the section on effective temperature (see page 29).

4. Evaporation.—(i) General. The rate and quantity of evaporation in any territory is influenced by the prevailing temperature, and by atmospheric humidity, pressure and wind movement. In Australia, the question is, perhaps, of more than ordinary importance, since in its drier regions water has often to be conserved in tanks and dams. The magnitude of the economic loss by evaporation will be appreciated from the map reproduced herein (see page 40) which shows that the yearly amount varies from about 20 inches over western Tasmania to more than 100 inches over the central and north-western parts of Australia. Over an area of 70 per cent. of the continent, comprising most inland districts and extending to the coast in the North-West and Eucla divisions of Western Australia, the rainfall does not exceed the evaporation during any month of the year. The central and north-western portions of the continent, comprising 46 per cent. of the total land mass, experience evaporation more than twice as great as their rainfall; it is noteworthy that the vegetation over most of this region is characterized by acacia, semi-desert, shrub steppe and porcupine grass. Since the loss by evaporation depends largely on the exposed area, tanks and dams so designed that the surface shall be a minimum are advantageous. Further, the more they are protected from the direct rays of the sun and from winds by means of suitable tree planting, the less will be the loss by evaporation. The Mansfield Process for treatment of tanks, dams and ponds by hexadecanol film, materially reducing effective evaporation, is a recent development which is already having beneficial results. These matters are naturally of more than ordinary concern in the drier districts of Australia.

(ii) Comments on Map of Average Annual Evaporation. The map of average annual evaporation in Australia (see page 40) has been compiled on the basis of records obtained from a number of evaporimeters supplemented by estimates derived from records of saturation deficit by applying the Waite Institute factor of 263.\* Some modification of the latter values was found to be necessary in comparison with recordings of evaporimeters.

The standard evaporation tank used in Australia is cylindrical in form and is 36 inches in diameter and 36 inches deep. It is surrounded by a 6-inch water jacket and the whole is sunk into the ground so that the water surface is approximately at ground level.

Saturation deficit is obtained from readings of dry and wet bulb thermometers exposed in a standard Stevenson thermometer shelter. Saturation deficit is the difference between the vapour pressure indicated by the dry and wet bulb readings, and the saturation vapour pressure corresponding to the dry bulb temperature.

The Waite formula, e = 263 s.d., is not an exact relationship, but it takes account of one of the major factors in evaporation, i.e., the difference between saturation vapour pressures at the mean dew point and at the mean air temperature. Errors in the formula are found to be fairly consistent in considerable areas of Australia and corrections have been applied accordingly. No evaporation records are available north of latitude 20°, and corrections have been extrapolated for these areas. The evaporation stations on which estimates for the tropics have been based are Alice Springs (Northern Territory): and Winton (Queensland), and to a lesser degree Blackall (Queensland) and Marble Bar (Western Australia).

The map thus presents an estimate of evaporation for which allowance should be made for a certain margin of error (perhaps 10 per cent. or so) on the conservative side. In the absence of definite information, such a map should serve a useful purpose as a basis for many climatic studies.

For graphs and tables of mean monthly evaporation and rainfall at certain selected stations, see Official Year Book No. 37, pp. 34-35.

5. Rainfall.—(i) General. The rainfall of any region is determined mainly by the direction and route of the prevailing winds, by the varying temperatures of the earth's surface over which they blow, and by its physiographical features.

Australia lies within the zones of the south-east trades and "prevailing" westerly winds. The southern limit of the south-east trades strikes the eastern shores at about 30° south latitude, and, with very few exceptions, the heaviest rains of the Australian continent are precipitated along the Pacific slopes to the north of that latitude, the varying quantities being more or less regulated by the differences in elevation of the shores and of the chain of mountains from the New South Wales northern border to Thursday Island, upon which the rain-laden winds blow. The converse effect is exemplified on the northwest coast of Western Australia, where the prevailing winds, blowing from the interior of the continent instead of from the ocean, result in the lightest coastal rain in Australia.

The westerly winds, which skirt the southern shores, are responsible for the reliable, generally light to moderate rains enjoyed by the south-western portion of Western Australia, the agricultural areas of South Australia, a great part of Victoria, and the whole of Tasmania.

Prescott, J. A. "Atmospheric Saturation Deficit in Australia" (Trans. Royal Society, S.A. Vol. LV., 1931).

- (ii) Distribution of Rainfall. The average annual rainfall map of Australia (see page 41) shows that the heaviest yearly falls occur on the north coast of Queensland (up to more than 160 inches) and in western Tasmania (up to 140 inches), while from 50 to over 60 inches are received on parts of the eastern seaboard from Jervis Bay to the northern part of Cape York Peninsula, also around Darwin, on the West Kimberley coast, near Cape Leeuwin, about the Australian Alps in eastern Victoria and New South Wales, and on the north-eastern highlands in Tasmania. A great part of the interior of the continent, stretching from the far west of New South Wales and the south-west of Queensland to the vicinity of Shark Bay in Western Australia, has a very low average rainfall of less than 10 inches a year. Between these two regions of heavy and very low rainfall are the extensive areas which experience useful to good rains, and in the southern and eastern parts of which are found the best country and most of the population and primary production.
- (iii) Factors Determining Occurrence, Intensity and Seasonal Distribution of Rainfall. Reference has already been made to the frequent rains occurring in the north-eastern coastal districts of Queensland with the prevailing south-east trade winds and to similar rains in the west of Tasmania with the prevailing westerly winds. Other rains in Australia are associated mainly with tropical and southern depressions.

The former chiefly affect the northern, eastern, and to some extent the central parts of the continent and operate in an irregular manner during the warmer half of the year, but principally from December to March. They vary considerably in activity and scope from year to year, occasionally developing into severe storms off the east and north-west coasts. Tropical rainstorms sometimes cover an extensive area, half of the continent on occasions receiving moderate to very heavy falls during a period of a few days. Rain is also experienced, with some regularity, with thunderstorms in tropical areas, especially near the coast. All these tropical rains, however, favour mostly the northern and eastern parts of the area referred to; the other parts further inland receive lighter, less frequent and less reliable rainfall. With the exception of districts near the east coast, where some rain falls in all seasons, the tropical parts of the continent receive useful rains only on rare occasions from May to September.

The southern depressions are most active in the winter—June to August—and early spring months. The rains associated with them are fairly reliable and frequent over southern Australia and Tasmania, and provide during that period the principal factor in the successful growing of wheat. These depressions also operate with varying activity during the remainder of the year, but the accompanying rains are usually lighter. The southern rains favour chiefly the south-west of Western Australia, the agricultural districts of South Australia, Victoria, Tasmania, and the southern parts of New South Wales. They sometimes extend into the drier regions of the interior, but only infrequently and irregularly.

The map showing mean monthly distribution of rainfall over Australia (see page 42) gives, in graphic form, information on the amount and occurrence of rain.

(iv) Wettest and Driest Regions. The wettest known part of Australia is on the north-east coast of Queensland, between Port Douglas and Cardwell, where Deeral on the northern coast-line has an average annual rainfall of 172.26 inches and Tully on the Tully River 179.26 inches. In addition, three stations situated on, or adjacent to, the Johnstone and Russell Rivers have an average annual rainfall of between 144 and 169 inches. The maximum and minimum annual amounts there, in inches, are:—Deeral, 287.18 in 1945 and 94.65 in 1951, a range of 192.53 inches; Tully, 310.92 in 1950 and 104.98 in 1943, a range of 205.94 inches; Goondi, 241.53 in 1894 and 67.88 in 1915, a range of 173.65 inches; Innisfail, 232.06 in 1950 and 69.87 in 1902, a range of 162.19 inches; Harvey Creek, 254.77 in 1921 and 80.47 in 1902, a range of 174.30 inches.

On five occasions, more than 200 inches have been recorded at Goondi, the last of these being in 1950, when 204.97 inches were registered. The records at this station cover a period of 70 years.

In 30 years of record, Tully has exceeded 200 inches on eleven occasions, and in 28 complete years of record Harvey Creek has exceeded this figure four times.

In Tasmania, the wettest part is in the West Coast region, the average annual rainfall at Lake Margaret being 146.51 inches, with a maximum of 177.30 inches in 1948.

The driest known part of the continent is in an area of approximately 180,000 square miles surrounding Lake Eyre in South Australia, where the annual average is between 4 and 6 inches and where the fall rarely exceeds 10 inches in twelve months.

Records at stations have at times been interrupted, but of the 23 stations in this region which have an annual average of less than 5 inches, six have complete records extending from 30 to 55 years. Of these, Mulka has the lowest average of 4.05 inches (34 years), followed by Troudaninna with an average of 4.15 inches in 42 years. Troudaninna in the period 1893 to 1936 had only one year in which the total exceeded 9 inches (11.07 inches in 1894). There have been protracted periods when the average has even been less

than 3 inches. From 1895 to 1903, Troudaninna received the following annual totals:—2.78, 0.99, 5.71, 3.04, 3.18, 2.83, 1.80, 1.11, 4.87, an average of 2.91 inches. From 1918 to 1929 the average was only 2.65 inches, and in this period from December, 1924, to November, 1929, the average was only 1.70 inches.

Mulka since 1918 has only twice exceeded 10 inches for the annual total (11.72 inches in 1920 and 13.56 in 1955) and on 16 occasions in 34 years the annual total has been less than 3 inches. In one particular period from October, 1926 to September, 1930, the average was only 1.26 inches (505 points in 48 months). However, at Kanowana, an even lower four-year average of 1.12 inches was recorded between 1896 and 1899 with yearly totals of 43,225, 87 and 94 points. An even smaller yearly total was recorded at Mungeranie in 1889 when only 39 points were recorded on five days.

The average number of days of rain per month in this region is only 1 to 2 and the annual number ranges between 10 and 20. Oodnadatta (standard 30 years' average rainfall equal to 4.44 inches) has an average of 20 days of rain per year, while Cordillo Downs in the extreme north-east corner of the State of South Australia receives 5.16 inches on twelve days per year, averaging about one day of rain each month in the 30 year period 1911-1940.

No part of the earth, so far as is known, is absolutely rainless, and although at Arica, in northern Chile, the rainfall over a period of 15 years was nil, a further two years in which there were three measurable showers made the "average" for 17 years 0.02 inches.

(v) Quantities and Distribution of Rainfall. The general distribution is best seen from the rainfall map (see page 41) which shows the areas subject to average annual rainfalls lying between certain limits. The proportions of the total area of each State and of Australia as a whole enjoying varying quantities of rainfall determined from the latest available information are shown in the following table:—

### AVERAGE ANNUAL RAINFALL DISTRIBUTION. (Per Cent.)

Average Annual Rainfall.	W. Aust.	N. Terr.	S. Aust.	Q'land.	N.S.W.	Vic.	Tas.	Total.
Under 10 inches	58.0	24.7	82.8	13.0	19.7	Nil	Nil	37.6
10 and under 15 ins.	22.4	32.4	9.4	14.4	23.5	22.4	Nil	19.9
15 and under 20 ,	6.8	9.7	4.5	19.7	17.5	15.2	0.7	10.9
20 and under 25 ,,	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.1
25 and under 30 ,,	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.3
30 and under 40 ,,	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.6
40 inches and over	2.1	12.6	Nil	11.4	6.1	10.4	56.5	8.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>(</sup>a) Includes Australian Capital Territory, are available.

Referring first to the capital cities, the records of which are given in the next table, it will be seen that Sydney, with an average rainfall of 44.80 inches, occupies the chief place; Brisbane, Perth, Melbourne, Hcbart and Canberra follow in that order, Adelaide with 21.09 inches being the driest. The extreme range from the wettest to the driest year is greatest at Brisbane (72.09 inches) and least at Adelaide (19.46 inches).

In order to show how the rainfall is distributed throughout the year in various parts of the continent, average figures for the various climatological districts have been selected (see map on page 42). The figures for Northern Rivers (District 14), show that nearly the whole of the rainfall occurs there in the summer months, while little or none falls in the middle of the year. The figures for the Central Coast, south-west of Western Australia (District 9), are the reverse, for while the summer months are dry, the winter months are very wet. In the districts containing Melbourne and Hobart, the rain is fairly well distributed throughout the twelve months, with a maximum in October for both districts. In Queensland, the heaviest rains fall in the summer months, but good averages are also maintained during the other seasons in eastern parts.

On the coast of New South Wales, the first half of the year is the wettest, with heaviest falls in the autumn; the averages during the last six months are fair, and moderately uniform. Generally, it may be said that approximately one-third of the area of the continent, principally in the eastern and northern parts, enjoys an annual average rainfall of from 20 to 50 inches or more, the remaining two-thirds averaging from 5 to 20 inches.

(vi) Tables of Rainfall. The following table of rainfall for a fairly long period of years for each of the Australian capitals affords information as to the variability of the fall in successive years, and the list which follows in the next paragraph of the more remarkable falls furnishes information as to what may be expected on particular occasions.

<sup>(</sup>b) Over an area of 2,777 square miles no records

RAINFALL: AUSTRALIAN CAPITAL CITIES.

	PERT	н.	ADELA	IDE.	BRISBA	ANE.	SYDN	EY.	CANBER	RA.(a)	MELBOU	JRNE.	Hobar	T.(b)
Year.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.	Amount.	No. of Days.
1926 1927 1928 1929 1930	in. 49.22 36.59 44.88 36.77 39.80	167 133 140 132 129	in. 22.20 16.92 19.43 17.51 18.65	116 101 107 119 116	in. 30.82 62.08 52.64 39.78 41.22	111 130 145 118 144	in 37.07 48.56 40.07 57.90 44.47	127 138 130 129 141	in. 18.59 23.12 17.33	90 70 82	in. 20.51 17.98 24.09 28.81 25.41	149 135 151 168 145	in. 25.79 20.13 30.23 26.55 19.38	187 185 205 194 152
1931	39.18 39.40 32.47 40.61 32.28	118 121 116 120 129	22.26 25.04 22.12 20.24 23.45	145 141 130 125 140	66.72 24.79 49.71 54.26 34.64	136 97 118 117 111	49.22 37.47 42.71 64.91 30.97	153 146 153 183 131	24.02 20.18 20.78 35.58 23.78	103 118 96 131 95	28.63 31.08 22.28 33.53 29.98	164 179 136 157 183	27.17 30.29 23.18 23.17 32.22	179 155 182 194 196
1936	30.64 35.28 29.64 45.70 20.00	118 120 111 123 98	19.34 23.01 19.26 23.29 16.16	121 128 119 139 116	21.77 34.79 43.49 41.43 42.37	101 113 110 122 93	30.22 52.00 39.17 33.67 39.34	130 157 132 127 125	26.24 20.46 19.26 27.63 17.38	108 82 79 116 64	24.30 21.45 17.63 33.11 19.83	187 144 131 166 126	19.60 20.65 31.32 27.23 17.17	178 160 169 188 135
1941 1942 1943 1944 1945	34.74 39.24 31.46 27.39 52.67	122 140 117 123 137	22.56 25.44 17.84 17.13 17.85	126 133 135 114 105	31.50 44.01 50.68 27.85 48.16	105 125 126 100 130	26.74 48.29 50.74 31.04 46.47	129 121 136 115 136	19.55 25.76 24.59 12.05 22.35	91 104 123 75 100	31.78 29.79 18.80 21.32 19.22	157 148 150 143 152	23.49 19.42 20.84 26.23 16.92	145 163 149 151 157
1946	41.47 43.42 34.75 27.15 32.27	122 137 126 126 122	22.59 21.89 21.40 18.23 16.06	135 146 122 119 91	38.66 60.30 41.54 47.18 63.93	83 146 106 121 152	36:05 41.45 38.83 66.26 86.33	111 137 131 149 183	22.31 27.95 32.11 27.71 43.35	94 135 101 100 132	29.80 30.47 20.98 31.41 26.18	177 163 155 163 147	39.45 38.61 23.42 22.85 19.25	193 181 178 157 131
1951 1952 1953 1954 1955	34.14 39.28 37.14 28.05 46.52	127 123 119 112 138	25.44 19.99 20.00 16.73 24.58	135 128 121 109 134	33.89 33.49 43.60 61.36 50.41	87 122 101 142 136	53.15 59.19 40.86 41.29 72.46	143 130 110 134 160	22.00 37.87 19.40 18.81 30.85	103 141 102 82 124	29.85 34.39 28.38 33.53 30.70	155 177 148 139 160	24.57 30.35 28.06 27.20 22.32	163 165 162 143 168
1956	37.35	107	27.24	154	59.18	120	67.33	155	40.46	150	30.96	188	36.63	175
Average No. of	35.07	122	21.08	121	45.05	125	47.40	151	24.88	103	25.95	143	24.86	167
Years Stand- ard 30 years' Nor-	. 81	81	118	118	105	97	98	. 98	29	29	101	101	74	74
mal(c)	35.99	128	21.09	122	40.09	117	44.80		00.17	١	25.89	156	25.03	180

<sup>(</sup>a) Commonwealth Forestry Bureau; records in issues of the Official Year Book prior to No. 36 were fot the station at Acton which closed down in 1939. (b) Records taken from present site commenced 1883. (c) 1911-1940.

HEAVY RAINFALLS: WESTERN AUSTRALIA, UP TO 1956 INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.	
		in.			in.	
Whim Creek	3 Apr., 1898	29.41	Pilbara	2 Apr., 1898	14.04	
Fortesque	3 May, 1890	23.36	Roebuck Plains	5 Jan., 1917	14.01	
Roebuck Plains	6 Jan., 1917	22.36	Broome	6 Jan., 1917	14.00	
Widjip	1 Apr., 1934	19.54	Carlton Hill	7 Feb., 1942	12.75	
Derby	7 Jan., 1917	16.47	Towrana	1 Mar., 1943	12.16	
Boodarie	21 Mar., 1899	14.53	Marble Bar	2 Mar., 1941	12.00	
Balla Balla	21 Mar., 1899	14.40	Jimba Jimba	1 Mar., 1943	11.54	
Winderrie	17 Jan., 1923	14.23		,	ĺ	

<sup>6.</sup> Remarkable Falls of Rain.—The following are the most notable falls of rain which have occurred within a period of twenty-four hours in the various States and Territories. For other very heavy falls at various localities, reference may be made to Official Year Book No. 14, pp. 60-64, No. 22, pp. 46-48 and No. 29, pp. 43, 44 and 51.

#### HEAVY RAINFALLS: NORTHERN TERRITORY, UP TO 1956, INCLUSIVE.

Name of Town:or Locality.	Date.	Amt.	Name of Town or Locality.	Date,	Amt.	
Groote Eylandt	24 Dec., 1915 9 Apr., 1931 14 Mar., 1899 5 Feb., 1942	14.29 14.00	Bathurst Island Mission	13 Jan., 1935 7 Apr., 1925 7 Jan., 1897	11.85	

#### HEAVY RAINFALLS: SOUTH AUSTRALIA, UP TO 1956, INCLUSIVE.

Name of Town or Locality.		Date.	Amt.	Name of Town or Locality.	Date.	Amt.	
Ardrossan Carpa Wynbring Edithburg Hesso Maitland		18 Feb., 1946 18 Feb., 1946 28 Feb., 1921 18 Feb., 1946 18 Feb., 1946 18 Feb., 1946	in. 8.10 7.83 7.70 7.46 7.36 7.21	Wilmington Port Victoria Mannum Wirrabarra Cape Willoughby Torrens Vale	1 Mar., 1921 18 Feb., 1946 25 Jan., 1941 7 Mar., 1910 18 Feb., 1946 25 Jan., 1941	in. 7.12 7.08 6.84 6.80 6.80 6.77	

#### HEAVY RAINFALLS: QUEENSLAND, UP TO 1956, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
Crohamhurst Port Douglas Yarrabah Kuranda Harvey Creek Sarina Plane Ck. (Mackay) Deeral Springbrook Buderim Mountain	2 Feb., 1893 1 Apr., 1911 2 Apr., 1911 2 Apr., 1911 3 Jan., 1911 26 Feb., 1913 26 Feb., 1913 2 Mar., 1935 24 Jan., 1947 11 Jan., 1898	in. 35.71 31.53 30.65 28.80 27.75 27.75 27.73 27.60 27.07 26.20	Flat Top Island Landsborough Babinda (Cairns) Goondi Banyan (Cardwell) Carruchan Tully Mill Macnade Mill Woodlands (Yeppoon)	21 Jan., 1918 2 Feb., 1893 2 Mar., 1935 30 Jan., 1913 12 Feb., 1927 24 Jan., 1934 12 Feb., 1927 6 Feb., 1901 3 Jan., 1893	in. 25.18 25.15 24.14 24.10 24.00 24.00 23.86 23.33 23.07
Buderini Mountain	11 Jan., 1070	20.20	poon)	J Jan., 1093	25.07

#### HEAVY RAINFALLS: NEW SOUTH WALES, UP TO 1956, INCLUSIVE.

Name of Town or Locality.	Date.	Amt,	Name of Town or Locality.	Date.	Amt.	
Dorrigo Cordeaux River Morpeth Broger's Creek South Head (Sydney Harbour)	24 June, 1950 14 Feb., 1898 9 Mar., 1893 13 Jan., 1911 16 Oct., 1844 29 Apr., 1841 5 May, 1925 14 Feb., 1898 5 Mar., 1893	in. 25.04 22.58 21.52 20.83 20.41 20.12 20.10 20.05 20.00	Viaduct Creek Buladelah Orara Upper Madden's Creek Condong Mt. Kembla Bega Kembla Heights Foxground	15 Mar., 1936 16 Apr., 1927 24 June, 1950 13 Jan., 1911 27 Mar., 1887 27 Feb., 1919 13 Jan., 1911 27 Feb., 1919 13 Jan., 1911 11 Sept., 1950	in. 20.00 19.80 19.80 18.68 18.66 18.58 18.25 17.88 17.46 17.04	

## HEAVY RAINFALL: AUSTRALIAN CAPITAL TERRITORY, UP TO 1956, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.	Date.	Amt.
Cotter Junction Canberra (Acton)			Uriarra (Woodside) Land's End	27 May, 1925 27 May, 1925	in. 6.57 6.35

Name of Town or Locality.		Date.	Amt.	Name of Town or Locality.	Date.	Amt.	
			in.			in.	
Balook		18 Feb., 1951	10.81	Blackwood (Green-			
Hazel Park		1 Dec., 1934	10.50	hill)	26 Jan., 1941	8.98	
Kalorama		1 Dec., 1934	10.05	Tambo Crossing	13 July, 1925	8.89	
Cann River		16 Mar., 1938	9.94	Corinella	28 June, 1948	8.75	
Tonghi Creek		27 Feb., 1919	9.90	Erica	1 Dec., 1934	8.66	
Cann River		27 Feb., 1919	9.56	Mt. Buffalo	6 June, 1917	8.53	
Olinda		1 Dec., 1934	9.10	Korumburra	1 Dec., 1934	8.51	
	••						

#### HEAVY RAINFALLS: TASMANIA, UP TO 1956, INCLUSIVE.

Name of Town or Locality.	Date.	Amt.	Name of Town or Locality.		Date.	Amt.
Mathinna Cullenswood	5 Apr., 1929 5 Apr., 1929				5 Apr., 1929 5 June, 1923	in. 11.08 10.20

- 7. Snowfall.—Light snow has been known to fall occasionally as far north as latitude 31° S., and from the western to the eastern shores of the continent. During exceptional seasons, it has fallen simultaneously over two-thirds of New South Wales, and has extended at times along the whole of the Great Dividing Range, from its southern extremity in Victoria as far north as Toowoomba in Queensland. During the winter, for several months, snow covers the ground to a great extent on the Australian Alps, where the temperature falls below zero Fahrenheit during the night. In the ravines around Mt. Kosciusko and similar localities the snow never entirely disappears after a severe winter.
- 8. Hail.—Hail falls most frequently along the southern shores of the continent in the winter, and over eastern Australia during the summer months. The size of the hailstones generally increases with distance from the coast. A summer rarely passes without some station experiencing a fall of stones exceeding in size an ordinary hen egg and many riddled sheets of light-gauge galvanized iron bear evidence of the weight and penetrating power of the stones.

The hailstones occur most frequently when the barometric readings indicate a flat and unstable condition of pressure. Tornadoes or tornadic tendencies are almost invariably accompanied by hail, and on the east coast the clouds from which the stones fall are frequently of a remarkable sepia-coloured tint.

- 9. Barometric Pressures.—The mean annual barometric pressure (corrected to sea level and standard gravity) in Australia varies from 29.80 inches on the north coast to 29.92 inches over the central and 30.03 inches in the southern parts of the continent. In January, the mean pressure ranges from 29.70 inches in the northern and central areas to 29.95 inches in the southern. The July mean pressure ranges from 29.90 inches at Darwin to 30.12 inches at Alice Springs. Barometer readings corrected to mean sea level and standard gravity have, under anticyclonic conditions, ranged as high as 30.935 inches (at Hobart on 13th July, 1846) and have fallen as low as 27.55 inches. This record low was registered at Mackay during a tropical hurricane on 21st January, 1918. An almost equally abnormal reading of 27.88 inches was recorded at Innisfail during a similar storm on 10th March, 1918. For graphs of Mean Barometric Pressure at Capital Cities, see Official Year Book No. 37, p. 35.
- 10. Wind.—(i) Trade Winds. The two distinctive wind currents in Australia are, as previously stated, the south-east trade and the "prevailing" westerly winds. As the belt of the earth's atmosphere in which they blow apparently follows the sun's ecliptic path north and south of the equator, so the area of the continent affected by these winds varies at different seasons of the year. During the summer months, the anticyclonic belt travels in high latitudes, thereby bringing the south-east trade winds as far south

as 30° south latitude. The "prevailing" westerly winds retreat a considerable distance to the south of Australia, and are less in evidence in the hot months. When the sun passes to the north of the equator, the south-east trade winds follow it, and only operate to the north of the tropics for the greater part of the winter. The westerly winds come into lower latitudes during the same period of the year. They sweep across the southern areas of the continent from Cape Leeuwin to Cape Howe, and during some seasons are remarkably persistent and strong, and occasionally penetrate to almost tropical latitudes.

(ii) North-west Monsoon. As the belt of south-east trade winds retreats southward during the summer, it is replaced in the north and north-west of Australia first by a sequence of light variable winds and then by the north-west monsoon. In Australia, the north-west monsoon has not the persistence nor regularity of the Indian south-west monsoon but is sufficiently characteristic for the summer in the north of Australia to be called the "North-west Season". In central and eastern Queensland, the north-west monsoon in the summer has comparatively little effect and the trade winds, albeit weakened, are still dominant winds. With the migration of the sun northward in the autumn, the northwest monsoon is replaced first by light variable winds and then by the trade winds.

Further particulars of Australian wind conditions and meteorology will be found in Official Year Book No. 38, pp. 58-61.

(iii) Cyclones and Storms. The "elements" in Australia are ordinarily peaceful, and while destructive cyclones have visited various parts, more especially coastal areas, such visitations are rare, and may be properly described as erratic.

During the winter months, the southern shores of the continent are subject to deep depressions of the southern low-pressure belt. They are felt most severely over the south-western parts of Western Australia, to the south-east of South Australia, in Bass Strait, including the coastline of Victoria, and on the west coast of Tasmania. Apparently the more violent wind pressures from these disturbances are experienced in their northern half, or in that part of them which has a north-westerly to a south-westerly circulation.

The north-east coast of Queensland is occasionally visited by hurricanes from the north-east tropics. During the first four months of the year, these hurricanes appear to have their origin in the neighbourhood of the South Pacific Islands, their path being a parabolic curve first to the south-west and finally towards the south-east.

Very severe cyclones. locally known as "willy willies," are peculiar to the north-west coast of Western Australia from the months of November to April, inclusive. They usually originate over the ocean to the north or north-west of Australia, and travel in a south-westerly direction with continually increasing force, displaying their greatest energy near Cossack and Onslow, between latitudes 20° and 22° South. The winds in these storms, like those from the north-east tropics, are very violent and destructive. The greatest velocities are usually to be found in the south-eastern quadrant of the cyclones, with north-east to east winds. After leaving the north-west coast, these storms either travel southwards, following the coast-line, or cross the continent to the Great Australian Bight. When they take the latter course, their track is marked by torrential rains, as much as 29.41 inches, for example, being recorded in 24 hours at Whim Creek from one such occurrence. Falls of 10 inches and over have frequently been recorded in the northern interior of Western Australia from similar storms.

Some further notes on severe cyclones and on "southerly bursters", a characteristic feature of the eastern part of Australia, appeared in early issues of the Official Year Book (see No. 6, pp. 84-86), and a special article dealing with "Australian Hurricanes and Related Storms" appeared in Official Year Book No. 16, pp. 80-84.

Depressions vary considerably in their isobaric forms, intensity and other characteristics. Some bring rain in variable quantities, some heat and others mainly wind. A common type in southern Australia is the "A" shaped trough with an abrupt "backing" of the wind or "line squall" as it passes. The cold front is most frequently found through the centre of the "trough" because it is along this line, and extending into the upper levels of the atmosphere, that the demarcation of different air masses is so well defined. The best rains in inland Australia occur when extensive masses of warm moist tropical air move into the interior and are forced to rise by convergence of flow or by impact with a cold air stream.

The speed of low pressure systems is very variable, but in general in southern latitude the movement is of the order of 500 to 700 miles per day.

- 11. Influences affecting Australian Climate.—(i) General. Australian history does not cover a sufficient period, nor is the country sufficiently occupied, to ascertain whether or not the advance of settlement has materially affected the climate as a whole. Local changes have, however, taken place, a fact which suggests that settlement and the treatment of the land have a distinct effect on local conditions. For example, low-lying lands on the north coast of New South Wales, which originally were seldom subject to frosts, have, with the deforestation of the surrounding hills, experienced annual visitations, the probable explanation being that through the absence of trees the cold air of the highlands now flows unchecked and untempered down the sides of the hills to the valleys and lower lands.
- (ii) Influence of Forests on Climate: As already indicated, forests doubtless exercise a great influence on local climate, and hence, to the extent that forestal undertakings will allow, the weather can be controlled by human agency. The direct action of forests is an equalizing one; thus, especially in equatorial regions, and during the warmest portion of the year, they considerably reduce the mean temperature of the air. They also reduce the diurnal extremes of shade temperatures by altering the extent of radiating surface by evaporation, and by checking the movement of air, and while decreasing evaporation from the ground, they increase the relative humidity. Vegetation greatly diminishes the rate of flow-off of rain and the washing away of surface soil, and when a region is protected by trees a steadier water supply is ensured, and the rainfall is better conserved. In regions of snowfall, the supply of water to rivers is similarly regulated, and without this and the sheltering influence of ravines and "gullies," watercourses supplied mainly by melting, snow would be subject to alternate periods of flooding and dryness. This is borne out in the case of the inland rivers, the River Murray, for example, which has never been known to become dry, deriving its steadiness of flow mainly through the causes indicated.
- (iii) Direct Influence of Forests on Rainfall. Whether forests have a direct influence on rainfall is a debatable question, some authorities alleging that precipitation is undoubtedly induced by forests, while others take the opposite view.

Sufficient evidence exists, however, to prove that, even if the rainfall is not increased, the beneficial climatic effect of forest lands more than warrants their protection and extension. Rapid rate of evaporation, induced by both hot and cold winds, injures crops, and makes life uncomfortable on the plains, and, while it may be doubted that the forest aids in increasing precipitation, it must be admitted that it does check winds and the rapid evaporation due to them. Trees as wind-breaks have been successfully planted in central parts of the United States of America, and there is no reason why similar experiments should not be successful in many parts of the treeless interior of Australia. The belts should be planted at right angles to the direction of the prevailing parching winds, and if not more than half a mile apart will afford shelter to the enclosed areas.

- 12. Rainfall and Temperatures, Various Cities.—Official Year Book No. 34, p. 28, shows rainfall and temperature and No. 38, p. 42, temperature, for various importanticities throughout the world and for the Australian capitals.
- 13. Climatological Tables.—The averages and extremes for a number of climatological elements, which have been determined from long series of observations at the Australian capitals up to and including the year 1956, are given on the following eight pages.

Note.—The following points apply throughout:—

- (i) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (ii) Extreme values have been extracted from all available years of actual record, but the number of years quoted does not include intervening periods when observations were temporarily discontinued.

## CLIMATOLOGICAL DATA: PERTH, WESTERN AUSTRALIA. (LAT. 31° 57' S., LONG. 115° 51' E. HEIGHT ABOVE M.S.L. 210 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

	. Sea an- and and angs.	-	(Height of	Wind. Anemo	meter 71 feet	L.)		[	T E @	
Month.	F. Muncette and St. Man Average and St. Muncette and St. M. B. B. Miles		age Mean Speed Gust		Preva Direc	lean Amount Evaporation nches).	of Days Lightning.	ouds, 9 a.r., 9 p.m.	of Clear S.	
Bar. to 32 Leve dard from 3 p.r.	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mear of Ey (inch	o Zo	Mean of Clo	No. Days	
No. of years of observations.	30(b)	30(b)	58	44	30(b)	30(b)	30(b)	30(b)	30( <i>b</i> )	30( <i>b</i> )
January	29.897	10.1	33.2 27/98	49	E	SSW	10.37	2	2.9	14
February	29.922	9.9	27.1 6/08	54	ENE	SSW	8.63	2	3.1	13
March	29.976	9.4	27.1 6/13	66	_ E	SSW	7.52	2	3.5	12
April	30.071	7.9	39.8 25/00	61	ENE	SSW	4.62	2	4.2	9
May	30.062	7.8	34.4 29/32	73	NE	wsw	2.80	3	5.4	6
June	30.068	7.8	38.1 17/27	80	N	NW	1.82	2	5.9	5
July	30.082	8.2	42.3 20/26	73	NNE	W	1.76	2	5.6	5
August	30.084	8.7	40.3 15/03	77	N	WNW	2.37	2	5.6	- 6
September	30.073	8.7	36.0 11/05	75	ENE	SSW	3.44	] ]	4.9	. 8
October	30.033	9.3	33.7 6/16	65	SE	SW	5.38	l l	4.8	8
November	29.989	9.9	32.4 18/97	63	E	SW	7.65	2	3.9	9
December	29.923	10.2	32.3 6/22	64	E	SSW	9.69	2	3.2	13
(Totals	-	_ i					66.05	23		108
Year \ Averages	30.015	9.0	_	-	$\boldsymbol{E}$	SSW		l —	4.4	_
Extremes	l	!	42.3 20 7 26			mal (1011_10		l —	<u> </u>	I —

#### (a) Scale 0-10.

#### Temperature and Sunshine.

25			n Tem e (°Fal		Extreme Temperatur		e ne	Extr Temperatur	eme re (°Fahr.).	Daily s of ine.
Month.		Mean Max.	Mean Min.	Mean	Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean Do Hours of Sunshine
No. of years over w observation exter		30(a)	30(a)	53.3 73.9 110.7 29		60	60	53	58	30(a)
January February March April May June July August September October		84.6 85.1 81.3 76.3 69.0 64.4 62.8 63.8 66.8 69.7	63.3 63.5 61.5 57.4 52.8 49.8 48.0 48.4 50.4 52.6	74.3 71.4 66.8 60.9 57.1 55.4 56.1 58.6 61.1	112.2 8/33 106.4 14/22 99.7 9/10 90.4 2/07 81.7 2/14 76.4 21/21 82.0 21/40 90.9 30/18 95.3 30/22	48.6 20/25 47.7 1/02 45.8 8/03 39.3 20/14 34.3 11/14 34.9 22/55 34.2 7/16 35.3 31/08 36.7 22/56 40.0 16/31	62.1 64.5 60.6 60.4 56.1 46.8 42.2 46.7 54.2 55.3	177.3 22/14 173.7 4/34 175.9 23/47 157.0 8/16 146.0 4/25 135.5 9/14 133.2 13/15 145.1 29/21 153.6 29/16 157.5 31/36	39.5 20/25 39.8 1/13 36.7 8/03 31.0 20/14 25.3 11/14 26.3 11/37 25.1 30/20 26.7 24/35 27.2 (b) 29.8 16/31	10.4 9.8 8.8 7.5 5.7 4.8 5.4 6.0 7.2 8.1
November December	••	76.7 81.2	·57.3 60.9	67.0 71.0	104.6 24/13 107.9 20/04	42.0 1/04 47.9 10/55	62.6 60.0	167.0 30/25 168.8 11/27	35.5 (c) 39.0 12/20	9.6 10.4
Year { Averages Extremes		73.5	55.5	64.5	112.2 8/2/33	34.27/7/16		177.3 22/1/14	25.1.30/7/20	7.8

<sup>(</sup>a) Standard 30 years' normal (1911-1940).

(b) 8/52 and 6/56.

(c) 6/10 and 14/12.

### Humidity, Rainfall and Fog.

	Vapour Rel. Hum. (%) Pres- sure at 9 a.m.					Fog.				
Month.	(inches)		st	. يو	zł.	Z SZ.E	aly.	aly.	t a	n No.
	Mean 9 a.m.	Mean	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean of Da	Greatest Monthly.	Least Monthly.	Greatest in One Day.	Mean of Da
No. of years over which observation extends.	30(a)	30(a)	59	59	30(a)	30(a)	81	81	81	30(a)
January	0.438	51	1 61 41 0.33 3 2.17 1879 N 1 65 43 0.50 3 6.55 1955 N 7 66 46 0.90 5 5.71 1934 N						1.74 27/79	0
February	0.434	51							3.43 17/55	.0
March	0.432	57							3.03 9/34	0
April	0.397	61	73	51	1.75	8	5.85 1926		2.62 30/04	1
May	0.365	70	81	61	5.14	15	12.13 1879	0.98 1903	3.00 17/42	2 2
June	0.337	. 75	83	68	7.55	17	18.75 1945		3.90 10/20	2
July	0.322	76	84	69	7.08	19	12.28 1926		3.00 4/91	2
August	0.316	71	83	62	5.78	19	12.53 1945	0.46 1902	2.91 14/45	1
September	0.341	66	75	58	3.37	15	7.84 1923		1.82 4/31	0
October	0.345	60	75	52	2.30	12	7.87 1890		1.73 3/33	0
November	0.374	52	63	41	0.75	7	2.78 1916	Nil 1891	1.40 15/48	0
December	0.409	51	63	44	0.54	5	3.05 1888	Nil (c)	1.72 1/88	0
(Totals				_	35.99	128		_		8
Year \ Averages	0.370	62	_		<b>—</b>	l —	l —	1 —	3.90 10/6/20	
Extremes	-	_	84	41			18.75 6/194	Nil Various months		
	,						, months	1	<u> </u>	

<sup>(</sup>a) Standard 30 years' normal (1911-1940).

<sup>(</sup>b) Standard 30 years' normal (1911-1940).

<sup>(</sup>b) Various years.

<sup>(</sup>c) 1886 and 1924.

CLIMATOLOGICAL DATA; DARWIN, NORTHERN TERRITORY. (Lat. 12° 28' S., Long. 130° 51' E. Height above M.S.L. 97 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

			<u> </u>						
	ed Sea tan- y and ngs.			Wind.			1 to 12		# E @
Month.	F. Mn. and St Gravity 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed		ailing ction.	Mean Amount of Evaporation (inches).	of Days ightning.	Amoun ouds, 9 a
	Bar. c to 32° Level dard d from 3 p.m.	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mea of E	No. of Li	Mean of Clc 3 p.m No. o Days.
No. of years of observations.	30	14	_		_	_	-	30	30 30
January	29.706	6.1		_	NW & S	W & NW		16	7.1
February	29.728 29.751	6.7 5.3	<del>-</del>	_	W & S SE	W & NW W & NW	- 1	16 14	7.0 1
A:1	29.809	6.1			SE	E E		6	6.2 3 3.5 11
λ/ο	29.859	6.5	_		SE	Ë		1	2.1 19
June	29.892	6.5	_	!	ŠĔ	E&SE		ò	1.6 22
July	29.911	6.2	_		SE SE	E & SE		ŏ	1.4 23
August	29.914	5.9			ŠE	NW & N		ŏ	1.3 23
September	29.886	6.2	_	}	SE & S	NW & N		ī	2.0 18
October	29.850	6.2	-	_	S	NW & N	!	8	3.2 - 10
November	29.797	5.5		- 1	W & S	NW & N	- !	17	4.8 4
December	29.738	6.2	_	- 1	NW & S	NW & N	-	17	6.0 ← 2
(Totals				_				96	— <u>137</u>
Yeur \ Averages	29.820	6.1			SE	NW	_	_	3.9 -
Extremes		<u> </u>				_	_	-	ı — ! <b>—</b>
			(a) s	Scale 0	-10.				

Temperature and Sunshine.

			n Tem e (°Fal		Extreme Temperatur		me e.	Extr Temperatur		Daily
Мо	onth.	Mean Max.	Mean Min.	Mean	Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean Daily Hours of Sunshine
	bruary		30	30	39(a)	39(a)	_	25	_	_
January	ervation extends.		77.3	83.6	99.1 8/28	69.2 21/44	_	168.0 26/42		
February		89.8	77.1	83.4	97.0 13/37	63.0 25/49	<b>—</b>	163.6 23/38	_	I -
March			77.1	83.6	100.0 8/31	66.6 31/45	<u> </u>	165.6 23/38	_	_
April			75.9 72.6	83.9	98.0 19/24	60.8 11/43	<u> </u>	163.0 1/38		_
May		90.2		81.4	96.8 (b)	59.2 8/49	I —	160.0 5/20	_	_
une	90		69.5	78.5	98.6 17/37	55.3 18/49		155.2 2/16	_	_
uly		86.6	67.8	77.2	94.0 16/21	50.7 29/42	-	156.0 28/17	_	_
August		88.5	69.7	79.1	96.0 30/36	58.0 (c)	-	156.2 28/16	_	_
September		91.0	73.9	82.5	99.0 25/28	63.8 1/46	<b>—</b>	157.0 (d)		_
October		92.6	77.2	84.9	99.0 14/33	68.5 26/45	l —	160.5 30/38		I —
November		93.2	78.2	85.7	101.0 27/24	67.4 12/45	_	170.4 14/37	_	-
December			78.1	85.0	100.4 13/31	68.5 24/41		169.0 26/23	_	
. ſ Ave	rages	90.3	74.5	82.4						_
	remes	-	-	-	101.0 27/11/24	50.7 29 7 42	-	170.4 14/11/37	-	-

(a) Years 1918-41 at Post Office, 1942-56 at aerodrome; sites not strictly comparable. (c) 9/42 and 12/42. (d) 28/16 and 3/21. (b) 2/37 and 2/42.

Humidity, Rainfall and Fog.

-	Vapour Pres- sure	Rel.	Hum. t 9 a.n	(%) n.			Fog.						
Month.	(inches)		isst.	t .	hly.	N. S. ii	est	hly.		hly.	est		S S m
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean Not Days of Rain.	Great	Monthly.	Least	Mont	Great	in One Day.	Mean Not Days
No. of years over which observation extends.	57	57 57 58 30 21 88 88 78 89 69 16.18 20 27.86 1906 2.25 1930 79 88 71 12.37 18 25.74 1955 0.44 1931										38	30
January	0.925										11.67	7/97	0
February	0.920										5.25	15/49	0
March	0.912						21.88	1898			7.18	6/19	0
April	0.800	69	80	60	3.08	6	23.74	1891	Nil	(a)	5.51	1/29	0
May	0.652	63	76	49	0.33	ļ	14.00	1953	Nil	(a)	2.19	6/22	0
June	0.545	61	75	52	0.09	Ĭ	1.53	1902	Nil	(a)	1.32	10/02	0.4
July	0.522	59	71	47	0.01	0	2.56	1900	Nil	(a)	1.71	2/00	1.1
August	0.613	63	73	53	0.02	0	3.00	1870	Nil	(a)	1.06	14/09	0.7
September	0.732	65	73	54	0.60	2 5	2.72	1950	Nil	(a)	2.00	26/50	0.2
October	0.832	65	72	60	1.93		13.34	1954	Nil	(a)	3.74	18/56	0
November	0.868	68 73	75	62	4.32	10	15.72	1938	0.40	1870	4.73	9/51	Ŏ
December	0.890	_/3	_83	65	8.57 58.68	95	22.38	1910	0.98	1934	7.87	28/10	0
							-	-	-		-	_	2.4
Year \ Averages	0.764	68	_	_	_	_		-		<del>-</del>	l		i —
Extremes										<u> </u>			
	(a)	Vario	us yea	rs.	(b) I	April to	Octobe	r, vario	us year	s.			

7.0

## CLIMATOLOGICAL DATA; ADELAIDE, SOUTH AUSTRALIA. (LAT. 34° 56′ S., LONG. 138° 35′ E. HEIGHT ABOVE M.S.L. 140 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

				_′	- 0,					
	ed n. Sea lan- y and ngs.		(Height of	Wind. Anemo	meter 75 feet	.)	= =		ا الله	
Month.	F. Mr and Si Gravit 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed	Preva Direc		ean Amount Evaporation ches).	of Days	ean Amount Clouds, 9 a.r 3.m., 9 p.m.(	of Clear s.
	Bar. c to 32 Level dard from 3 p.m	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mean of Evg (inche	of L.	Mean of Clo	No.
No. of years of observations.	30(b)	30(b)	79	40	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January February	29.917 29.953	9.9	31.6 19/99 28.8 22/96	72	SW NE	SW SW	9.27 7.56	2.3	3.6	12.9
March	30.037	8.3	26.2 9/12	67	S	SW	6.39	1.8	4.0	11.2
April	30.119	8.0	32.2 10/96	81	. NE	św	3.78	1.5	5.2	7.2
May	30.131	8.1	31.7 9/80	67	NE	NW	2.27	1.3	5.8	4.9
June	30.119	8.3	31.3 12/78	67	NE	N	1.37	1.3	6.1	4.1
July	30.111	8.5	28.1 25/82	60	NE	NW	1.34	1.5	6.0	4.3
August	30.084	9.2	32.2 31/97	57	NE	SW	1.99	2.0	5.5	5.6
September	30.050 30.007	9.2 9.8	30.0 2/87	69	NNE	SW SW	3.05	2.0	5.3	5.8
October November	29.990	9.8	32.0 28/98 32.2 7/48	73 79	NNE SW	sw sw	5.03 6.89	2.8 3.3	5.3 4.9	5.7
December	29.922	9.9	28.1 12/91	75	sw	sw	8.74	2.2	4.2	7.2 9.5
(Totals		<del></del>		<u> </u>			57.68	24.0		89.0
Year \ Averages	30.037	9.0		l —	NE	SW			5.0	
Extremes	<u> </u>	<u> </u>	32.2 (c)	81	l <u> </u>	· -		l —_	I —	

(a) Scale 0-10.

Year { Averages Extremes

(b) Standard 30 years' normal (1911-1940).

(c) 10/4/1896, 31/8/1897 and 7/11/1948.

					Temperature a	and Sunshine	·.			
			n Tem e (°Fa		Extreme Temperatur		e ne	Extra Temperatur		Daily s of inc.
М	onth.	Mean Max.	Mean Min.	Mean	Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean Da Hours of Sunshine
	No. of years over which observation extends.		30(a)	30(a)	100	100	100	54(b)	94	30(a)
January		84.8	61.0	72.9	117.7 12/39	45.1 21/84	72.6	180.0 18/82	36.5 14/79	10.0
February	••	85.7 81.3	61.8	73.7 70.2	113.6 12/99 110.5 9/34	45.5 23/18 43.9 21/33	66.6	170.5 10/00 174.0 17/83	35.8 23/26 32.1 21/33	9.3
March April		73.0	.54.4	63.7	98.6 5/38	39.6 15/59	59.0	155.0 1/83	30.2 16/17	6.0
May		66.8	50.8	58.8	89.5 4/21	36.9 26/95	52.6	148.2 12/79	25.6 19/28	4.8
June		61.0	46.6	53.8	76.0 23/65	32.5 (c)	43.5	138.8 18/79	21.0 24/44	4.2
July		59.9	45.4	52.7	74.0 11/06	32.0 24/08	42.0	134.5 26/90	22.1 30/29	4.3
August		62.3	46.2	54.3	85.0 31/11	32.3 17/59	52.7	140.0 31/92	22.8 11/29	5.4
September		66.8	48.3	57.5	91.3 29/44	32.7 4/58	58.6	160.5 23/82	25.0 25/27	6.3
October		72.5	51.7	62.1	102.9 21/22	36.0 -/57	66.9	162.0 30/21	27.8 (d)	7.3
November		78.1	55.4	66.7	113.5 21/65	40.8 2/09	72.7	166.9 20/78	31.5 2/09	8.6
December		82.6	58.9	70.7	114.6 29/31	43.0 (e)	71.6	175.7 7/99	32.5 4/84	9.5

72.9 (a) Standard 30 years' normal (1911–1940). (c) 27/1876 and 24/1944. (d) 4/1931 and 2/1918.

117.7 12/1/39 32.0 24/7/08 85.7 180.0 18/1/82 21.0 24/6/44 (b) Records incomplete, 1931-34. (e) 16/1861 and 4/1906. Discontinued,

#### Humidity, Rainfall and Fog.

					-3,			<u> </u>					
	Vapour Pres- sure	at 9 a.m.			Rainfall (inches).								Fog.
Month.	(inches)		st .	<u></u> .	hly.	Z S'E	est	hly.		hly.	est	D	S 28
	Mean 9 a.m.	Mean	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean Not Days	Great	Monthly	Least	Monthly.	Greatest	Day.	Mean of Da of Fog
No. of years over which observation extends		30(a)	89	89	30(a)	30(a)	1	18	1	18	1	18	30(a)
	. 0.327	0.327 39 0.352 41 0.332 44		29	0.76	5	4.00	1850	Nil	(b)	2.30	2/89	0.0
			56	30	1.10	5	6.09	1925	Nil	(b)	5.57	7/25	0.0
			58	29	0.87	5	4.60	1878	Nil	(b)	3.50	5/78	0.0
	. 0.329	55	72	37	1.45	10	6.78	1853	Nil	1945	3.15	5/60	0.0
May	. 0.313	64	76	49	2.49	13	7.75	1875	0.10	1934	2.75	1/53	0.6]
June	. 0.294	75	84	67	2.93	15	8.58	1916	0.42	1886	2.11	1/20	1.1
July	. 0.282	75	87	66	2.49	16	5.38	1865	0.37	1899	1.75	10/65	1.4
August	. 0.282	68	78	54	2.58	16	6.24	1852	0.33	1944	2.23	19/51	0.4
September	. 0.289	59	72	44	2.39	13	5.83	1923	0.27	1951	1.59	20/23	0.2
Ostabas	. 0.287	48	67	29	1.54	10	4.38	1948	0.17	1914	2.24	16/08	0.0
November	. 0.292	41	57	31	1.22	8	4.10	1934	0.04	1885	2.08	7/34	0.0
December			31	1.27	6	3.98	1861	Nil	1904	2.42	23/13	0.0	
[ Totals .		-		_	21.09	122		_					3.7
	. 0.304	52			l —	I —	1	<del>-</del>	٠ ا		٠ :		
Extremes .	. ! —	١ —	87	29	!	' —	8.58	611916	Nil_	(c)	5.57	7/2/25	<u> </u>

(a) Standard 30 years' normal (1911-1940).

(b) Various years.

(c) December to April, various years.

## CLIMATOLOGICAL DATA; BRISBANE, QUEENSLAND. (LAT. 27° 28' S., Long. 153° 2' E. Height above M.S.L. 134 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days:

	ed n. Sea tan- y and ings.		(Height of	Wind. Anemor	meter 105 fee	et.)	25		nount , 9 a.m., p.m.(a)	
Month.	orrecte F. Mn and St Gravity 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed	Prev	ailing ction.	Mean Amount of Evaporation (inches).	of Days	A go	5
	Bar. c to 32° Level dard ( from 3 p.m.	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	of E	No. of L	Mean of Clor 3 p.m.	No. o Days.
No. of years of observations.	30(b)	30(b)	42	42	30(b)	30(b)	30(b)	30(b)	30( <i>b</i> )	30( <i>b</i> )
January February	29.865 29.912 29.975	6.8 7.0 6.5	19.7 23/47 23.2 21/54 20.3 1/29	58 67 50	SE SE S	NE NE	6.74 5.49 5.05	9.8 6.5 5.9	5.7 5.6 5.1	3.5 2.4 5.4
March April	30.035 30.083	5.9 5.8	16.7 3/25 17.9 17/26	57 49	s sw	E E SE	4.05 3.09	5.0 4.1	4.3	7.8 8.3
June	30.091 30.090	5.7 5.6	19.0 14/28 22.0 13/54	58 52	SW SW	W & SW W & SW	2.45 2.69 3.51	2.9 2.8 3.8	4.4 3.8	9.2 12.4
August September October	30.105 30.067 30.019	5.8 5.9 6.3	14.8 4/35 16.1 1/48 15.7 1/41	56 57 62	SW SW S	NE NE NE	3.51 4.51 5.81	5.8 7.1	3.1 3.3 4.2	13.1 13.0 8.5
November December	29.958 29.890	6.7 7.0	15.5 10/28 19.5 15/26	62 79	SE & N SE	NE NE	6.32 7.02	9.5 10.6	4.9 5.3	5.9 3.8
Year { Totals Averages Extremes	zes 30.007 6.3 —		<u> </u>	79	sw	NE	56.73	73.8	4.5	93.3

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940).

Temperature and Sunshing.

				L'emperature a	and Sunshine	•			
Month.		n Tem e (°Fal		Extreme Temperatur		e.	Extr Temperatur		Mean Daily Hours of Sinshine.
, ATTORNIA	Mean Max.	Mean Min.	Mean	Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean Hour Sinsh
No. of years over which observation extends.		30(a)	30(a)	70	70	70	50(b)	70	30(a)
	ary 85.5 69.1 ary 84.6 68.7		77.3	109.8 26/40	58.8 4/93	51.0	169.0 2/37	49.9 4/93	7.6
February			76.6	105.7 21/25	58.5 23/31	47.2	165.2 6/10	49.1 22/31	7.4
		66.2	74.3	99.4 5/19	52.4 29/13	47.0	162.5 6/39	45.4 29/13	7.0
April		61.5	70.3	95.2 (c)	44.4 25/25	50.8	153.8 11/16	36.7 24/25	7.1
May	. 73.7	55.6	64.7	90.3 21/23	40.6 30/51	49.7	147.0 1/10	29.8 8/97	6.6
June	. 69.4	51.5	60.5	88.9 19/18	36.3 29/08	52.6	136.0 3/18	25.4 23/88	6.3
July	. 68.6	49.4	59.0	84.3 23/46	36.1 (d)	48.2	146.1 20/15	23.9 11/90	6.8
August	. 71.1	50.0	60.6	91.0 14/46	37.4 6/87	53.6	141.9 20/17	27.1 9/99	7.9
September	. 75.5	54.8	65.1	100.9 22/43	40.7 1/96	60.2	155.5 26/03	30.4 1/89	8.2 <sup>-</sup>
October	70.3	60.3	69.8	101.4 18/93	43.3 3/99	58.1	157.4 31/18	34.9 8/89	8.4
November	00.0	64.6	73.4	106.1 18/13	48.5 2/05	57.6	162.3 7/89	38.8 1/05	8.2
		67.5	76.0	105.9 26/93	56.4 13/12	49.5	165.9 28/42	49.1 3/94	8.2
Y S Averages .	. 78.0	59.9	69.0						7.5
Year Extremes :		I —		109.8 26/1/40	36.1 (d)	73.7	169.0 2/1/37	23.9 11/7/90	

(a) Standard 30 years' normal (1911-1940).
(b) From 1887 to March, 1947, excluding 1927 to 1936.
(c) 9/1896 and 5/1903.
(d) 12/7/1894 and 2/7/1896.

Humidity, Rainfall and Fog.

	Vapour Pres- sure		Hum. 19 a.n		Rainfall (inches).								Fog.
Month.	(inches)	1	st	يد	<u></u>	NS i	ışst				, st		No.
	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	Mean Not Days of Rain.	Greatest Monthly.		Least	Mont	Greatest in One	Day.	Mean of Day of Fog
No. of years over which observation extends.	30(a)	30(a)		69	30(a)	30(a)	10:	5		05(b)	105		30(a)
January	0.636	66	79	53	5.72	12		895	0.32	1919	18.31	21/87	0.6
February March	0.644	69 72	82 85	55 56	5.47 4.97	12 14		893 870	0.58 Nil	1849 1849	10.61	6/31 14/08	0.9 1.6
April	0.512	71	80	56	3.68	17		867	0.04	1944	5.46	5/33	4.0
May	0.420	71	85	59	2.35	ۋ ا		876	Nil	1846	5.62	9/79	5.4
June	0.357	73	84	54	2.75	8		873	Nil	1847	6.41	15/48	4.5
July	0.331	71	88	53	1.88	8		950	Nil	1841	3.54	(c)	4.9
August	0.338	67	80	53	1.07	7		879	Nil	(d)	4.89	12/87	5.9
September	0.396	62	76	47	1.69	7		886	0.10	1907	2.46	2/94	2.8
October	0.459	59	72	48	2.27	8		949	0.03	1948	5.34	25/49	1.6
November	0.533	61	73	45	4.00	10		917	Nil	1842	4.46	16/86	
December	0.589	62	70	51	4.24	11	17.36 19	942	0.35	1865	6.60	28/71	0.4
(Totals —		$\equiv$	_	_	40.09	117	_				-	33.3	
Year { Averages	0.485	67	<u> </u>		l —		. –		i	-	-	-	_
Extremes	l —	ـــ	88	45	٠	1	40.39 2/1	1893	Nil	(e)	18.31 2	1/1/87	· —

<sup>(</sup>a) Standard 30 years' normal (1911-1940). (b) Records incomplete for various years between 1846 and 1859.. (c) 15/1876/and 16/1889. (d) 1862, 1869, 1880.. (e) Various months in various years.

# CLIMATOLOGICAL DATA: SYDNEY, NEW SOUTH WALES. (LAT. 33° 52' S., LONG. 151° 12' E. HEIGHT ABOVE M.S.L. 138 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

	ed Fan- tan- y and ngs.		(Height of	Wind. Anemor	neter 58 feet.	)	# 5		a.m., m.(a)	
Month.	F. Mn and Shavity Gravity 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed	Preva Direc		n Amount vaporation ies).	No. of Days of Lightning.	4 mou	of Clear s.
	Bar. to 32 Level dard from 3 p.m	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mean Aof Evapo (inches).	of L	Mean Clouds 3 p.m.	D.S.
No. of years of observations.	30(b)	26(c)	43(d)	37(e)	26(c)	26(c)	26(c)	30(f)	30(b)	30(b)
January February March April May	29.875 29.942 30.009 30.063 30.098	8.9 8.1 7.5 7.0 6.8	24.9 2/22 20.1 14/18 20.7 10/44 23.4 19/27 19.6 2/26	74 61 58 72 63	S NE W W	ENE ENE ENE NE S	5.71 4.68 4.05 2.91 2.17	4.8 3.3 2.8 2.4 1.6	5.7 5.5 5.3 5.0 4.9	4.8 5.4 5.8 7.0 7.4
June	30.078 30.070 30.060 30.018 29.976 29.935	7.1 7.2 7.4 8.0 8.2 8.5	24.5 17/14 26.6 6/31 24.6 9/51 22.3 19/17 21.1 18/44 22.6 14/30	73 68 68 70 95	W W W W W & E	W NE NE ENE ENE	1.61 1.69 2.30 3.00 4.17 4.97	1.5 1.1 2.1 3.0 3.9 4.5	4.8 4.5 3.9 4.2 4.9 5.5	8.3 10.1 11.1 10.0 7.4 5.7
Year { Totals Averages Extremes	30.000	7.8	24.9 10/20 — 26.6 6/7/31	75.	<u> </u>	ENE NE	5.64 42.90	36.4 —	5.8	87.8

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940): (c) 1915-1940. (d) 1914-1953. (e) 1917-1954. (f) 1921-1950.

Temperature and Sunshine.

			-	1	emperature a	na Sunsnine.				
Ma	Alb		n Tem e (°Fal		Extreme Temperatur		e ii	Extre Temperatur		Mean Daily Hours of Sunshine.
MO	servation extends.   30(a) 30(				Highest,	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mear Hour Sunsi
	of years over which servation extends. 30(a) 30(a) 30(a) ary				98	98	98	84	98	30(b)
February March April May June July August September October	:: ::	78.7 76.6		71.8 72.1 69.8 64.9 59.7 55.5 54.1 56.0 59.9 63.8 67.1 70.1	113.6 14/39 107.8 8/26 102.6 3/69 91.4 1/36 86.0 1/19 80.4 11/31 78.3 22/26 82.8 12/46 92.3 27/19 99.4 4/42 104.5 6/46 107.5 (c)	51.1 18/49 49.3 28/63 48.8 14/86 44.6 27/64 40.2 22/59 35.7 22/32 35.9 12/90 36.8 3/72 40.8 2/45 42.2 6/27 45.8 1/05 48.4 3/24	62.5 58.5 53.8 46.8 45.8 44.7 42.4 46.0 51.5 57.2 61.3 59.1	164.3 26/15 168.3 14/39 158.3 10/26 144.1 10/77 129.7 1/96 125.5 2/23 124.7 19/77 149.0 30/78 142.2 12/78 152.2 20/33 158.5 28/99 164.5 27/89	43.7 6/25 42.8 22/33 39.9 17/13 33.3 24/09 29.3 25/17 28.0 22/32 24.0 4/93 26.1 4/09 30.1 17/05 32.7 9/05 32.0 6/06 41.4 3/24	7.5 7.0 6.4 6.1 5.7 5.3 6.1 7.0 7.3 7.5 7.5
	Year { Averages 71.1 56.3 63 Extremes			63.7	113.6		77.9	168.3 14 2 39	24.0 4/7/93	6.8

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921). (c) 31/04 and 21/53.

Humidity, Rainfall and Fog.

			11	ummi.	iy, mar	man a	nu rog.	·				
	Vapour Pres- sure	Rel.	Hum. t 9 a.n	(%) n.			R	ainfall (	(inches)			Fog.
Month.	(inches)	ĺ	ışı .	z .	hly.	n No.	e,	YE	1	hly.	e st	Z S S
	Meau Meau Meau Meau Meau Meau Meau Meau											Mean Not Days of Fog.
No. of years over which observation extends.	30(a)	30(a) 30(a) 80 80 30(a) 30(a) 98 98 98										
January	0.537         65         78         58         3.86         13         15.26         1911         0.25         1932         7.08         13/11           0.560         68         81         60         3.15         12         22.22         1956         0.12         1939         8.90         25/73           0.527         71         85         62         4.44         13         20.52         1942         0.42         1876         11.05         28/42											0.4
February March	0.560 68 81 60 3.15 12 22.22 1956 0.12 1939 8.90 25 0.527 71 85 62 4.44 13 20.52 1942 0.42 1876 11.05 28										0.8	
April	0.527 71 85 62 4.44 13 20.52 1942 0.42 1 0.441 73 87 63 5.65 14 24.49 1861 0.06 1									7.52 29/60	2.8	
May	0.441 73 87 63 5.65 14 24.49 1861 0.06 1866 0.362 75 90 63 4.98 12 23.03 1919 0.18 1860								1860	8.36 28/89	3.7	
June	0.362 75 90 63 4.98 12 23.03 1919 0.18 1860 8. 0.303 76 89 63 3.68 11 25.30 1950 0.19 1904 5.								5.17 16/84	3.3		
July	0.282	74	88	63	4.89	12	13.23	1950	0.10	1946	7.80 7/31	2.9
August	0.288	68	84	54	2.41	10	14.89	1899	0.04	1885	5.33 2/60	2.3
September	0.325	62	79	49	2.77	11	14.05	1879	0.08	1882	5.69 10/79	1.0
October	0.378	60	77	46	2.80	11	9.88	1916	0.21	1867	6.37 13/02	0.6
November	mber 0.433 60 79 42 2.54 11							1865	0.07	1915	4.23 19/00	0.6
December									0.4			
Totals	l . <del>-</del>	0 200 44.80 143									20.6	
Year \ Averages	0.393	68		-	25 20 611050 0 04 911995 11 05							
Extremes	$\frac{10.05}{200}$ xtremes $\frac{1}{100}$										. —	
	· ( ) (0)					11 104		(1) 10	1 1056		20131-72	

(a) Standard 30 years' normal (1911-1940).

(b) 1921-1950.

## CLIMATOLOGICAL DATA; CANBERRA, AUSTRALIAN CAPITAL TERRITORY. (Lat. 35° 18' S., Long. 149° 6' E. Height above M.S.L., 1,906 Ft.)

Reremeter	Wind	Evanoration.	Lightning.	Clouds and Clear Days.
Dai Unicici,	TT LILL,	Liuporations		Cioam mie Ciemi Dilio.

	Sea an- and ngs.		(Height of	Wind. Anemo	meter 20 fee	et.)	- =	i	ii.	
Month.	orrecte F. Mn and St Gravity 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed	Direc	ailing ction.	lean Amount Evaporation nches).	of Days ightning.	Amount ouds, 9 a.r 3 p.m.(a)	บี้
	Bar. c to 32° Level dard C from 9	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mear of Ev (inch	No. of Li	Mean of Clou and 3 1	No. o Days.
No. of years of observations.	26	27	27	(b)	27	27	28	20	26	27
January	29.856	4.7	14.9 23/33		NW	NW	8.31	1.5	4.9	7.3
February March	29.900 30.009	4.2 3.7	15.3 24/33 18.2 28/42	=	E E	NW NW	6.42 5.20	2.3 0.2	5.1 5.1	6.9
April	30.059 30.126	3.6 3.0	18.6 8/45 12.6 3/30		NW NW	NW NW	3.28 1.95	0.3	5.4 5.6	4.7 5.8
June	30.120	3.6	16.1 2/30		NW	NW	1.29	0.1	6.0	4.5
July August	30.133 30.065	3.4 4.1	23.4 7/31 15.7 25/36		NW NW	NW NW	1.27	0.0	5.7 5.4	5.6 5.7
September	30.057	4.2	17.4 28/34 12.4 27/40	-	NW NW	NW NW	2.87	0.4	5.1 5.4	6.1 5.2
October November	29.954 29.885	4.3 4.7	17.2 28/42	=	NW	NW	5.87	1.0	5.5	4.5
December	29.834	4.7	16.1 11/38		NW	NW	7.64	0.7	5.0	6.3
Year { Totals	30.000	4.0			NW	NW	50.34	7.9	5.3	68.9
Extremes	30.000		23.4 7/7/31							

(a) Scale 0-10. (b) No record.

Tamparatura

			emperature a	ina Sunsnine	<u> </u>			
M4L	Mean Te ture (°F		Extreme Temperatur		me G.	Extr Temperatur	eme e (°Fahr.).	Mean Daily Hours of Sunshine,
Wonth.	vation extends.		Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean Hour Sunsh
No. of years over which observation extends.	29 2		29	29	29	(a)	29	27
January February March April May June July August September October November December Vear  Averages Extremes	82.4 56. 80.7 56. 76.2 52. 66.7 45. 59.3 39. 52.6 35. 51.8 33. 55.1 35. 61.4 38. 67.0 48. 72.9 48. 79.5 53.	.1 68.4 .7 64.4 .5 56.1 .1 49.2 .7 44.1 .8 42.8 .8 45.3 .9 50.1 .2 55.6 .7 60.8 .3 66.4	107.4 11/39 99.8 13/33 99.1 6/38 89.7 6/38 72.6 1/36 64.9 1/54 63.5 16/34 71.0 24/54 81.5 16/34 90.0 13/46 101.4 19/44 103.5 27/38	38. 0 1/56 35. 0 1/56 34. 8 31/49 29. 0 29/34 22. 5 9/29 18. 1 20/35 20. 0 (d) 21. 0 3/29 25. 2 6/46 29. 0 24/28 32. 2 11/36 36. 0 24/28	69.4 64.8 64.3 60.7 50.1 43.9 43.5 56.3 61.0 69.2 67.5		30. 1 10/50 26.5 23/43 26.4 26/35 19.0 18/44 15.6 (c) 8.9 25/44 10.8 9/37 10.1 6/44 13.0 6/45 18.2 2/45 22.9 6/56 29.1 21/56 8.9 25/6/44	8.4 7.3 7.2 6.7 5.2 4.2 4.8 5.8 7.2 7.8 8.2 8.5

(a) No record.

Humidity Rainfall and Fog

(b) 22/31 and 23/31. (c) 13/37 and 15/46. (d) 19/29, 9/37 and 27/43.

Humidity, Rainfall and Fog.													
	Vapour Pres-		Hum. t 9 a.n				Ra	ainfall	(inches)				Fog.
Month.	Mean 9 a.m.	Mean.	Highest Mean.	Lowest Mean.	Mean Monthly.	MeanaNo. of Days of Rain.	Greatest	Monthly.	Least	Monthly.	Greatest	in One Day.	Mean No. of Days of Fog.
No. of years over which observation extends.	of years over which servation extends. 26 28 28 28 29 29 29 29 29 29 29 29 29 29 29 29 29												
January	0.370 0.388 0.378 0.315 0.254 0.212 0.196 0.213 0.239 0.273 0.301 0.338	53 59 66 71 79 81 81 75 66 60 55 51	69 71 82 81 89 90 91 88 72 67 70	40 48 54 67 72 73 60 51 46 38 37	2.17 2.48 2.17 2.06 1.92 1.61 1.98 1.62 2.77 2.11 1.86 24.88	7 7 8 8 9 10 11 9 11 8 8	6.03 12.69 5.19 6.13 6.09 4.71 3.03 6.59 4.45 8.80	1948 1950 1952 1948 1931 1933 1939 1937 1934 1950 1947	0.02 0.01 0.01 0.07 0.06 0.18 0.27 0.36 0.13 0.34 0.28 0.16	1933 1940 1942 1935 1944 1940 (a) 1946 1940 1936	3.24 2.53 2.52 3.88 2.32 2.02 2.07 1.75 2.51 2.45 2.29	19/50 17/28 20/52 9/45 3/48 25/56 13/33 12/29 3/47 25/34 9/50 28/29	0.1 0.2 1.0 1.4 4.8 5.8 5.3 2.4 1.4 0.4 0.1 0.0
				(a)	1944 a	ind 1949	9.						

CLIMATOLOGICAL DATA; MELBOURNE, VICTORIA. (LAT. 37° 49′ S., LONG. 144° 58′ E. HEIGHT ABOVE M.S.L. 114 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

	Darometer	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	i, Evaporatio		time, ciou	us une Cicu	200,00			
	ed n. Sea tan- y and ngs.		(Height of	Wind. Anemo	meter 93 fee	ı.)	==		# E @	
Month.	F. Mr. and St Gravity 9 a.m.	Aver- age Miles	Highest Mean Speed in One Day	High- est Gust Speed	Preva Direc		lean Amount Evaporation oches).	of Days	n Amount louds, 9 a.r n., 9 p.m.(	of Clear s.
	Bar. c to 32, Level dard from 3 p.m	per Hour.	(miles per hour).	(miles per hour).	9 a.m.	3 p.m.	Mea of E	of Z.	Mean of Clo 3 p.m.	Day.
No. of years of observations.	30(b)	15(c)	44	47	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January February	29.897 29.950	8.8 8.4	21.1 27/41 19.0 13/47	66 74	S & SW N & S	S S	6.55 5.10	1.8	4.9	6.8 6.4
March	30.025 30.092	7.8	17.2 19/50 19.9 16/43	66 67	N N	S S	4.26 2.53	1.8	5.3	5.5 4.6
May June	30.113 30.097	7.4	20.0 4/44 22.8 16/47	72 62	N N	N	1.57	0.5	6.1	3.4
July	30.079 30.048	8.7	20.9 9/44 21.3 20/42	68	N N	N	1.16	0.3	6.3	2.9 3.1
September October	30.001 29.968	8.5 8.4	19.4 6/53 18.6 12/52	69 69	N & W N	N&S S	2.41 3.54	1.3	5.9	3.3
November December	29.951 29.896	8.6 8.7	19.4 4/50 21.0 11/52	71 61	S & SW S & SW	S S	4.62 5.85	2.3	6.0 5.6	3.6 4.5
Year { Totals Averages	30.010	8.1			N	·	40.31	16.5	5.8	50.6
(a) Scale 0-	10. (b) S	tandard	22.8 16/6/47 30 years' nor		11~1940).	(c) Early	records r	ot con	parable	<u>! -</u>

Temperature and Sunshine.

			n Tem e (°Fal		Extreme Temperatur		وا	Extr Temperatur		Daily of ine.
M	onth.	Mean		Mann		Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean I Hours Sunshin
	s over which on extends.	30(a)	30(a)	30(a)	101	101	101	86(b)	97	35(c)
January February March April May June July August September October		77.7 78.6 74.9 67.9 62.0 56.8 56.2 58.7 63.3 67.9	56.9 58.0 55.2 50.8 46.9 43.8 42.6 43.7 46.0 48.7	67.3 68.3 65.1 59.3 54.5 50.3 49.4 51.2 54.7 58.3	114.1 13/39 109.5 7/01 107.0 11/40 94.8 5/38 83.7 7/05 72.2 1/07 69.3 22/26 77.0 20/85 88.6 28/28 98.4 24/14	42.0 28/85 40.2 24/24 37.1 17/84 34.8 24/88 29.9 29/16 28.0 11/66 27.0 21/69 28.3 11/63 31.0 3/40 32.1 3/71	72.1 69.3 69.9 60.0 53.8 44.2 42.3 48.7 57.6 66.3	178.5 14/62 167.5 15/70 164.5 1/68 152.0 8/61 142.6 2/59 129.0 11/61 125.8 27/80 137.4 29/69 142.1 20/67 154.3 28/68	30.2 28/85 30.9 6/91 28.9 (d) 25.0 23/97 21.1 26/16 19.9 30/29 20.5 12/03 21.3 14/02 22.8 8/18 24.8 22/18	7.8 7.4 6.5 5.0 4.1 3.4 3.7 4.6 5.5 5.8
November December		71.3	51.8	61.5	105.7 27/94 110.7 15/76	36.5 2/96 40.0 4/70	69.2 70.7	159.6 29/65 170.3 20/69	24.6 2/96 33.2 1/04	6.2 7.0
	( Averages 67.6 50.0 5		58.8	114.1 13/1/39	27.0 21/7/69	87.1	178.5 14/1/62	19.9 30/6/29	5.6	
	(a) Standard 30 years' normal (1911–1940). f) 17/1884 and 20/1897.				40).	(b) Records d	(c) 19	16-1950•		

#### Humidity, Rainfall and Fog.

	Vapour Pres- sure		Hum. 19 a.n				R	ainfall (	inches)				Fog.
Month.	Mean 9 a.m.	Mean.  Mean.  Mean.  Mean.  Mean.  Monthl  Monthl										in One Day.	Mean No. of Days
No. of years over which observation extends.	30(a)	0(a) 30(a) 48 48 30(a) 30(a) 101 101 101 382 58 68 50 1.88 9 6.66 1941 0.01 1932 2.97 9/97											30(a)
January	0.382 0.417 0.385 0.351 0.276 0.264 0.271 0.288 0.307 0.336	58 62 64 72 79 83 82 76 68 62 60	68 77 79 82 88 92 86 82 76 67 69	50 48 50 66 70 75 75 65 60 52 52	1.88 2.00 2.22 2.30 1.94 2.06 1.93 2.02 2.20 2.63 2.33	9 8 9 13 14 16 17 17 15 14	6.66 7.72 7.50 6.71 5.60 4.51 7.02 4.35 7.93 7.61 8.11	1941 1939 1911 1901 1942 1859 1891 1939 1916 1869	0.01 0.03 0.14 Nil 0.73 0.57 0.48 0.52 0.29	1932 1870 1934 1923 1934 1877 1902 1903 1907 1914 1895	2.97 3.44 3.55 2.28 1.85 1.74 2.71 1.94 2.62 3.00 2.86	9/97 26/46 5/19 22/01 7/91 21/04 12/91 26/24 12/80 17/69 21/54	0.1 0.3 1.1 2.3 6.8 6.5 6.5 3.7 1.3 0.3
December	0.373	69	48	2.38	11	7.18	1863	0.11	1904	3.92	4/54	0.2	
Year { Totals Averages Extremes	0.323	69	- 92	48	25.89	156	8 11 1	 !!!!954	Nil 4	 (11923	١ -	-	29.4

# CLIMATOLOGICAL DATA; HOBART, TASMANIA. (LAT. 42° 53' S., LONG. 147° 20' E. HEIGHT ABOVE M.S.L. 177 Ft.) Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days.

	e les		(Height of	Wind.	ometer 40 fee	t.)	+ =		T E 3	
Month.	ar. corrected 32° F. Mn. See evel and Stan- ard Gravity om 9 a.m. and p.m. readings.	Average Miles per	Highest Mean Speed in One Day (miles per	High- est Gust Speed (miles	Preva Direc	ailing	fean Amount f Evaporation nches).	of Da ightní	ean Amount Clouds, 9 a.n. p.m., 9 p.m.(c	No. of Clear Days.
	Bar. to 32 Level dard from 3 p.m	Hour.	hour).	per hour).	9 a.m.	3.p.m.	E G	or Z	30 X	ŽÃ
No. of years of observations.	30(b)	30(b)	65	65	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)
January February	29.819 29.913	8.0 7.2	20.8 30/16 25.2 4/27	76 65	NNW NNW	SSE SSE	4.84	0.9	6.4	1.9
March	29.961 29.997	6.8	21.4 13/38 24.1 9/52	75 74	NW NW	SSE	3.10	1.2 0.7	6.1 6.5	2.4
May June	30.009 29.986	6.3	20.2 20/36 23.7 27/20	79 71	NNW NW	NW NW	1.37	0.4	6.1	2.4
July August	29.958 29.906	6.5	22.9 22/53 25.5 19/26	78 87	NNW NNW	NNW NW	0.94	0.3	6.1 6.1	2.0
September October	29.860 29.833	7.9 8.2	21.5 26/15 19.2 8/12	84 74	NNW NNW	NW SW	1.97 3.05	0.7 0.6	6.3	1.5
November December	29.831 29.816	7.9 7.6	21.2 18/15 23.4 1/34	73 70	NNW NNW	SSE	3.77 4.37	0.7 0.5	6.4	1.3
\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	29.907	7.2	=	=	NNW	$\overline{\overline{w}}$	31.29	7.8	6.3	22.1
Extremes			25.5 19 8 26	87		<u> </u>	( <u> </u>	_		-

(a) Scale 0-10.

(b) Standard 30 years' normal (1911-1940).

#### Temperature and Sunshine.

		_								
			n Tem e (°Fal		Extreme Temperatur		e in	Extr Temperatur		Mean Daily Hours of
Month.	•	Mean Max.	Mean Min.	Mean	Highest.	Lowest.	Extreme Range.	Highest in Sun.	Lowest on Grass.	Mean
No. of years over observation e		30(a)	30(a)	30(a)	87(b)	87(b)	87(b)	57(c)	69(b)	30
January February March April May June July August September October		69.8 70.6 67.5 62.2 57.8 52.8 52.7 55.4 59.0 62.5	52.4 53.7 51.3 48.0 44.6 41.2 40.6 41.7 43.7 46.1	61.0 62.2 59.4 55.1 51.2 47.0 46.6 48.7 51.4 54.3	105.0 1/00 104.4 12/99 99.1 13/40 87.1 1/41 77.8 5/21 69.2 1/07 66.I 14/34 71.6 28/14 81.7 23/26 92.0 24/14	40.1 (d) 39.0 20/87 35.2 31/26 33.3 24/88 29.2 20/02 29.2 28/44 27.7 11/95 28.9 9/51 31.0 16/97 32.0 12/89	64.9 65.4 63.9 53.8 48.6 40.0 38.4 42.7 50.7 60.0	160.0 (e) 165.0 24/98 150.9 26/44 142.0 18/93 128.0 (f) 122.0 12/94 121.0 12/93 129.0 —(87 138.0 23/93 156.0 9/93	30.6 19/97 28.3 —/87 27.5 30/02 25.0 —/86 20.0 19/02 21.0 6/87 18.7 16/86 20.1 7/09 18.3 16/26 23.8 (g)	7.7 7.1 6.4 5.0 4.4 4.0 4.4 5.1 5.9 6.1
November December	ovember 65.0		48.2 51.3	56.6 59.6	98.3 26/37 105.2 30/97	35.0 16/41 38.0 3/06	63.3 67.2	154.0 19/92 161.5 10/39	26.0 1/08 27.2 —/86	7.
$Year \begin{cases} Averages \\ Extreme \end{cases}$		61.9	46.9	54.4	105.2	27.7 11 7 95	77.5	165.0 24 2 98	18.3 16/9/26	5.9

(a) Standard 30 years' normal (1911-1940). not comparable; records discontinued, 1946. (g) 1/86 and -/99. (b) Records 1855–1882 not comparable. (d) 9/37 and 11/37. (e) 5/86 and 13/05. (c) Period 1934-1938 (f) -/89 and -/93.

#### Humidity, Rainfall and Fog.

	Vapour Pres- sure	Rel.	Hum. a.n				Rai	nfall (	inches)	•			Fog.
Month.	(inches)		hest an.	vest an.	ean onthly.	on No. Says	atest		ts.	nthly.	atest	. ·	can No. Days Fog.
	9 a.m.	THE E TE LEE SE SEE SEE SEE SEE										Day	of E
No. of years over which observation extends.	30(a)	54         69         69         30(a)         30(a)         74(b)         74(b)         74(b)         74(b)           59         72         46         1.82         13         5.91         1893         0.17         1915         2.96         30/16									30(c)		
January February	0.309	54         69         69         30(a)         30(a)         74(b)         74(b)           59         72         46         1.82         13         5.91         1893         0.17         1915         2           63         77         48         1.68         10         5.01         1956         0.11         1914         2           67         77         52         2.13         13         10.05         1946         0.29         1943         3									2.96	30/16 1/54	0.0
March	0.323	67	77	52	2.13	13	10.05	1946	0.29	1943	3.47	17/46 20/09	0.3
May	0.263	78 80	89 91	65 68	1.71	14	6.37	1905	0.14	1913	1.75	2/93	0.9
June July	0.233	80	94	72	2.14	16 17	6.02	1889 1922	0.28	1886 1950		7/54 18/22	0.8
August September	0.232 0.240	76 67	92 85	60 58	1.82	18 17	5.02	1946 1953	0.30	1892 1951	2.34	14/90 21/53	0.4
October November	0.258	63 60	- 73 - 72	51 50	2.52	18 16	7.39	1947 1885	0.39	1914 1921		4/06 30/85	0.0
December	0.306		_67	45	2.52 25.03	180	7.72	1916	0.17	1931	3.33	5/41	3.8
Year Averages	0.271	69	94	45	=	=	10.05 3	3/1946	0.07	_ 411904	5.80	7 6 54	_
(a) Standard 30 year	rs' norma	ıl (191			(b) Re	cords p	rior to 18					1922-1	

<sup>(</sup>a) Standard 30 years' normal (1911-1940).

<sup>(</sup>b) Records prior to 1883 not comparable.

#### CHAPTER III.

#### GENERAL GOVERNMENT.

#### § 1. Scheme of Parliamentary Government.

- 1. General.—The legislative power of the Commonwealth is vested in the Parliament of the Commonwealth, which consists of the Sovereign, the Senate, and the House of Representatives. The Sovereign is represented throughout the Commonwealth by the Governor-General who, subject to the Constitution of the Commonwealth, has such powers and functions as the Sovereign is pleased to assign to him. In each State, there is a State Governor, who is the representative of the Sovereign for the State, and who exercises such powers within the State as are conferred upon him by the Letters Patent which constitute his office and by the instructions which inform him in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral until 1922, in which year the Queensland Parliament became uni-cameral. In the bi-cameral States, it consists of (a) a Legislative Council and (b) a Legislative Assembly or House of Assembly. In Queensland, the Legislative Assembly constitutes the legislature. The Upper House is known as the Senate in the Commonwealth Parliament, and as the Legislative Council in the State Parliaments. The Lower House in the bi-cameral Parliaments is known as the House of Representatives in the Commonwealth Parliament, as the Legislative Assembly in the State Parliaments of New South Wales, Victoria and Western Australia, and as the House of Assembly in the State Parliaments of South Australia and Tasmania. The legislative powers of these Parliaments are delimited by the Commonwealth and the State Constitutions. The Assembly, which is the the larger House, (Queensland as pointed out above is uni-cameral) is, in all cases, elective, the franchise extending to adult British subjects with certain residential qualifications. The Council in each of the States other than New South Wales is elected by the people of the State concerned, the constituencies being differently arranged and, in general, some property or special qualification for the electorate being required. In Victoria, however, under the Legislative Council Reform Act passed in October, 1950, adult suffrage was adopted for Legislative Council elections. In the case of New South Wales, the Council is elected by the members of both Houses of Parliament at a simultaneous sitting. In the Federal Parliament, the qualifications for the franchise are identical for both Houses.
- 2. The Sovereign.—(i) Accession of Queen Elizabeth II. On 7th February, 1952, the Governor-General and members of the Federal Executive Council proclaimed Princess Elizabeth Queen Elizabeth the Second, Queen of this Realm and of all her other Realms and Territories, Head of the Commonwealth, Defender of the Faith, Supreme Liege Lady in and over the Commonwealth of Australia. The coronation of Her Majesty in Westminster Abbey took place on 2nd June, 1953.
- (ii) Royal Style and Titles Act 1953. At a conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952, it was agreed that the Royal Style and Titles then in use were not in accord with current relationships within the British Commonwealth and that there was need of a new form which would, in particular, "reflect the special position of the Sovereign as Head of the Commonwealth".

It was therefore decided that each member of the British Commonwealth should use a form of the Royal Style and Titles suited for its own circumstances, while retaining as a common element the description "Queen of Her other Realms and Territories and Head of the Commonwealth"; and that consultation between all countries of the Commonwealth should take place on any future proposal to change the form of the Royal Style and Titles used in any country.

To give effect to these decisions in Australia, the Royal Style and Titles Act was passed on 3rd April, 1953, giving Parliament's assent to the adoption by the Queen, for use in relation to the Commonwealth of Australia and its Territories, of the following Royal Style and Titles:—" Elizabeth the Second, by the Grace of God of the United Kingdom,

Australia and Her other Realms and Territories Queen, Head of the Commonwealth, Defender of the Faith." The Act also approves the adoption by the Queen of a Royal Style and Titles for use in relation to other countries of the British Commonwealth in accordance with the principles formulated at the London conference.

- (iii) Authorization of a Royal Great Seal. By warrant published in the Commonwealth Gazette of 17th November, 1955, Her Majesty authorized the Great Seal of the Commonwealth to be used as a Royal Great Seal in sealing all things whatsoever (other than things that pass the said Great Seal) that bear Her Majesty's Sign Manual and the countersignature of one of Her Ministers of State for the Commonwealth.
- 3. Powers and Functions of the Governor-General and of the State Governors.—
  (i) Governor-General of the Commonwealth. Section 2 of the Commonwealth Constitution provides as follows:—
  - "A Governor-General appointed by the Queen shall be Her Majesty's representative in the Commonwealth, and shall have and may exercise in the Commonwealth during the Queen's pleasure, but subject to this Constitution, such powers and functions of the Queen as Her Majesty may be pleased to assign to him."

As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen—either by Letters Patent (see Letters Patent dated 29th October, 1900, and 15th December, 1920), by Instructions under the Royal Sign Manual and Signet, by Commission issued to him under the Royal Sign Manual and Signet, or by any instrument of delegation under section 2 of the Constitution. Powers which have been so assigned include, amongst others, the power to appoint a Deputy or Deputies of the Governor-General, to administer or authorize any other person to administer the Oath of Allegiance, to grant pardons and to remit fines for offences against the laws of the Commonwealth and to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth.

Other powers and functions are conferred on the Governor-General by the Constitution. For example, under section 5 of the Constitution he may appoint times for holding the sessions of the Parliament, prorogue Parliament and dissolve the House of Representatives. Under section 32, the Governor-General in Council may cause writs to be issued for general elections of members of the House of Representatives. Under section 58, he assents in the Queen's name to a proposed law passed by both Houses of the Parliament or withholds assent, or reserves the law for the Queen's pleasure; or he may return the proposed law to the House in which it originated and may transmit therewith any amendments which he may recommend. Under section 61, he exercises the executive power of the Commonwealth, under section 62, he chooses and summons Executive Councillors, who hold office during his pleasure, and under section 64, he may appoint Ministers of State for the Commonwealth. By section 68, the command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General, as the Queen's representative. Under the conventions of responsible government obtaining in Commonwealth countries, the Governor-General's executive functions generally are exercised on the advice of Ministers of State. In this regard, the Governor-General's position has become assimilated to that of the Queen in relation to her Ministers of State for the United Kingdom.

In addition, many powers and functions are exercised by the Governor-General under Acts of the Commonwealth Parliament. Most Acts, for example, provide that the Governor-General may make regulations, not inconsistent with the Act, either generally to give effect to the Act or to cover certain matters specified in the power. The Governor-General may be authorized by statute to issue prociamations—for example, to declare an Act in force or a state of things to exist, e.g. the existence of an epidemic. The Governor-General has been given power by statute to legislate for certain Territories of the Commonwealth. Other statutory powers include the power to appoint and dismiss certain office holders. A reference to the Governor-General, in Acts of the Commonwealth Parliament, means, unless the contrary intention appears, the Governor-General acting with the advice of the Executive Council (Acts Interpretation Act 1901–1950, section 17 (f)).

(ii) Governors of the States. The Queen is represented in each of the States by a Governor, the office having been constituted by Letters Patent under the Great Seal of the United Kingdom of various dates.

The Governors of the States exercise prerogative powers conferred on them by these Letters Patent, their Commissions of appointment, and the "Governor's Instructions" given them under the Royal Sign Manual and Signet or other instrument as specified in the Letters Patent. In addition they have been invested with various statutory functions, either under the State Constitutions, conferred by Imperial Act, or by Act of the Parliament of the State.

A Governor of a State assents in the Queen's name to Bills passed by the Parliament of the State, except those reserved for the Royal assent. The latter include certain classes of Bills, which are regulated by the Constitution Acts and by the Governor's Instructions. He administers the prerogative of mercy by the reprieve or pardon of criminal offenders within his jurisdiction, and may remit fines and penalties due to the Crown.

In the performance of his functions generally, particularly those conferred by Statute, the Governor of a State acts on the advice of Ministers of State for the State.

- (iii) Holders of Office. For the names of the Governors-General since the inception of the Commonwealth and of the present State Governors, see § 3., page 73.
- 4. The Cabinet and Executive Government.—(i) General. Both in the Commonwealth and in the States, executive government is based on the system which was evolved in Britain in the 18th century, and which is generally known as "Cabinet" or "responsible" government. Its essence is that the head of the State (Her Majesty the Queen, and her representative, the Governor-General or Governor) should perform Governmental acts on the advice of her Ministers; that she should choose her principal Ministers of State from members of Parliament belonging to the party, or coalition of parties, commanding a majority in the popular House; that the Ministry so chosen should be collectively responsible to that House for the government of the country; and that the Ministry should resign if it ceases to command a majority there.

The Cabinet system operates chiefly by means of constitutional conventions, customs or understandings, and of institutions that do not form part of the legal structure of the government at all. The constitutions of the Commonwealth and the States make fuller legal provision for the Cabinet system than the British Constitution does—for example, by requiring that Ministers shall either be, or within a prescribed period become, members of the Legislature. In general, however, the legal structure of the executive government remains the same as it was before the establishment of the Cabinet system.

The executive power of the Commonwealth is exercisable by the Governor-General, and that of the States by the Governor. In each case, he is advised by an Executive Council, which, however, meets only for certain formal purposes, as explained below. The whole policy of a Ministry is, in practice, determined by some or all of the Ministers of State, meeting, without the Governor-General or Governor, under the chairmanship of the Prime Minister or Premier. This group of Ministers is known as the Cabinet.

- (ii) The Cabinet. This body does not form part of the legal mechanism of government. Its meetings are private and deliberative. The actual Ministers of the day alone are present, no records of the meetings are made public, and the decisions taken have, in themselves, no legal effect. In Australia, until January, 1956, all Ministers were members of the Cabinet. Since then, however, although in the States all Ministers are members of the Cabinet, the Commonwealth ministry is made up of twelve senior Ministers, who constitute the Cabinet, and ten Ministers of non-Cabinet rank who attend meetings of the Cabinet only when required, as, for example, when the business of the Cabinet concerns their department. As Ministers are the leaders of the party or parties commanding a majority in the popular House, the Cabinet substantially controls, in ordinary circumstances, not only the general legislative programme of Parliament, but the whole course of Parliamentary proceedings. In effect, though not in form, the Cabinet, by reason of the fact that all Ministers are members of the Executive Council, is also the dominant element in the executive government of the country. Even in summoning, proroguing or dissolving Parliament, the Governor-General or Governor is usually guided by the advice tendered him by the Cabinet, through the Prime Minister or Premier, though legally the discretion is vested in the Governor-General or Governor himself.
- (iii) The Executive Council. This body is usually presided over by the Governor-General or Governor, the members thereof holding office during his pleasure. All Ministers of State are ex officio members of the Executive Council. In the Commonwealth, and also in the States of Victoria and Tasmania, Ministers remain members of the Executive Council on leaving office, but are not summoned to attend its meetings, for it is an essential feature of the Cabinet system that attendance should be limited to the Ministers of the day. The meetings of the Executive Council are formal and official in character, and a record of

proceedings is kept by the Secretary or Clerk. At Executive Council meetings, the decisions of the Cabinet are (where necessary) given legal form, appointments made, resignations accepted, proclamations issued, and regulations and the like approved.

(iv) The Appointment of Ministers. Legally, Ministers hold office during the pleasure of the Governor-General or Governor. In practice, however, the discretion of the Queen's representative in the choice of Ministers is limited by the conventions on which the Cabinet system rests. Australian practice follows, broadly, that of the United Kingdom. When a Ministry resigns, the Crown's custom is to send for the leader of the party which commands, or is likely to be able to command, a majority in the popular House, and to commission him, as Prime Minister or Premier, to "form a Ministry"—that is, to nominate other persons to be appointed as Ministers of State and to serve as his colleagues in the Cabinet.

The customary procedure in connexion with the resignation or acceptance of office by a Ministry is described fully in previous issues of the Official Year Book (see No. 6, p. 942). It may be added, however, that legislation now exists in all States, the effect of which is to obviate the necessity of responsible Ministers vacating their seats in Parliament on appointment to office.

(v) Ministers in Upper and Lower Houses. The following table shows the number of Ministers with seats in the Upper or Lower Houses of each Parliament in December, 1957:—

### AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1957.

Ministers with Seats in-	C'wealth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
The Upper House The Lower House	5 16	2 14	4 10	(a) 11	3 5	2 8	· 9	16 73
Total	21	16	14	11	8	10	9	89

(a) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in December, 1957, see § 3. of this chapter (page 73). Subsequent changes of importance in Ministries will be found in the Appendix to this volume.

(vi) Numbers and Salaries of Commonwealth Ministers. Under sections 65 and 66, respectively, of the Constitution of the Commonwealth, the number of Ministers of State was not to exceed seven, and the annual sum payable for their salaries was not to exceed £12,000, each provision to operate, however, "until the Parliament otherwise provides."

Subsequently, number and salaries were increased to 8-£13,650 (1915) and to 9-£15,300 (1917). During the period of financial emergency in the early thirties the ministerial salary appropriation was reduced to as low as £10,710 a year, and was not restored to its former level until 1938. During the period of restoration of salary the number of Ministers was increased to 10 (1935). Later increases were as follows: —to 11-£18,600 (1938); 19-£21,250 (1941)—these increases were war-time provisions, extended into peacetime in 1946; £27,650 (1947—number unaltered): 20-£29,000 (1951); £41,000 (1952—number unaltered); 22-£46,500 (1956). In 1938, an additional ministerial allowance of £1,500 a year was granted to the Prime Minister; this was increased to £3,500 a year (exempt from income tax) in 1952 and at the same time an additional ministerial allowance of £1,000 a year (exempt from income tax) was granted to each other Minister.

All amounts payable in the foregoing paragraphs are in addition to amounts payable as Parliamentary allowances (see paras. 5 and 6 following).

5. Number and Salary of Members of the Legislatures, Australian Parliaments, December, 1957.—The following table shows the number and annual salary of members in each of the legislative chambers in December, 1957.

### AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES, 31st DECEMBER, 1957.

Members in-	-	C'wealth.	N.S.W.	Vic.	Q'iand.	S. Aust.	W. Aust.	Tas.	Total.
		· ·	Nu	JMBER OF	Мемве	RS.	<u> </u>		
Upper House Lower House		60 124	60 94	34 66	(a) 75	20 39	30 50	19 30	223 478
Total		184	154	100	75	59	80	49	701
			1	Annual (£	Salary.		·		
Upper House		(b) 2,350	(c) 500	( <i>d</i> )1,600	(a)	(e) 1,900	(f) 2,100	(g) 1,000	
Lower House	••	(b) 2,350	1,975	( <i>d</i> )1,600	h£2,501 10s.	(e) 1,900	(f) 2,100	(g) 1,000	••

- (a) Abolished in 1922. (b) Plus expense allowances—Senators, £700; Members of the House of Representatives, city electorates, £600, country electorates, £800. See also para. 6 following. (c) Plus allowance varying from £500 to £800 according to remoteness of electorate, (d) Plus allowance of £400 for metropolitan, £600 for urban, £700 for inner country and £800 for outer country electorates. (e) Plus allowance according to distance of electorate from Adelaide; £50 if more than 50 miles, £75 if more than 200 miles. (f) Plus an adjustment in accordance with variations of the State basic wage which at 31st December, 1956 was £40. Plus £50 where any part of electorate is more than 50 miles from Perth. (g) Plus cost of living adjustment, pegged at £382. Plus allowance according to area of electorate and distance from the capital varying from £250 to £500 in the case of the Legislative Council, and from £500 to £800 in the case of the House of Assembly. (h) Plus marging from £175 to £400 for other non-metropolitan electorates and ranging from £175 to £400 for other non-metropolitan electorates.
- 6. Commonwealth Parliamentary Allowances. Section 48 of the Commonwealth Constitution granted to each senator and member of the House of Representatives an allowance of £400 a year until Parliament should decide to alter it. This general allowance has been altered on several occasions (see Official Year Book No. 42, pp. 69 and 70) and in 1956 was raised to £2,350 a year. Certain additional allowances are also provided for holders of Parliamentary Offices, etc., details of which are also given in the issue referred to above.
- 7. Enactments of the Parliament.—In the Commonwealth, all laws are enacted in the name of the Sovereign, the Senate, and the House of Representatives. The subjects with respect to which the Commonwealth Parliament is empowered to make laws are enumerated in the Constitution. In the States, other than South Australia and Tasmania, laws are enacted in the name of the Sovereign by and with the consent of the Legislative Council (except in Queensland) and Legislative Assembly. In South Australia and Tasmania, laws are expressed to be enacted in the name of the Governor of the State, with the advice and consent of the Parliament in the case of South Australia, and of the Legislative Council and House of Assembly in the case of Tasmania. The Governor-General or the State Governor acts on behalf of, and in the name of, the Sovereign, in assenting to Bills passed by the Legislatures, but he may reserve them for the special consideration of the Sovereign. Parliaments of the States are empowered generally, subject to the Commonwealth Constitution, to make laws in and for their respective States, in all cases whatsoever. Subject to certain limitations, they may alter, repeal, or vary their Constitutions. Where a law of a State is inconsistent with a law of the Commonwealth, the latter prevails, and the former is, to the extent of the inconsistency, invalid.

#### § 2. Parliaments and Elections.

1. Commonwealth.—(i) Qualifications for Membership and for Franchise—Commonwealth Parliament. Qualifications necessary for membership of either House of the Commonwealth Parliament are possessed by any British subject, twenty-one years of age

or over, who has resided in the Commonwealth for at least three years and who is, or is qualified to become, an elector of the Commonwealth. Qualifications for Commonwealth franchise are possessed by any British subject, not under twenty-one years of age and not disentitled on racial or other grounds, who has lived in Australia for six months continuously. Residence in a sub-division for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory. A member of the Defence Forces on service outside Australia who is a British subject not less than 21 years of age and has lived in Australia for six months continuously is entitled to vote at Commonwealth elections whether enrolled or not.

The principal reasons for disqualification of persons otherwise eligible as members of either Commonwealth House are:—Membership of the other House, allegiance to a foreign power, being attainted of treason, being convicted and under sentence for any offence punishable by imprisonment for one year or longer, being an undischarged bankrupt or insolvent, holding office of profit under the Crown (with certain exceptions), or having pecuniary interest in any agreement with the public service of the Commonwealth except as a member of an incorporated company of more than 25 persons. Persons of unsound mind, attainted of treason, convicted and under sentence for any offence punishable by imprisonment for one year or longer, or of certain non-European races are excluded from the franchise. In the main these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(ii) Commonwealth Parliaments and Elections. From the establishment of the Commonwealth until 1949, the Senate consisted of 36 members six being returned by each of the original federating States. The Constitution empowers Parliament to increase or decrease the size of the Parliament and, as the population of the Commonwealth had more than doubled since its inception, the Parliament enacted legislation in 1948 enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation. Thus, the Representation Act 1948 provided that there shall be ten Senators from each State instead of six, increasing the total to 60 Senators. To effect this transition in the Senate, seven Senators were elected from each State at the elections of 1949, four taking office immediately the Senate sat after the election, the remaining three commencing their term on the usual date—1st July, 1950. Members of this Chamber are normally elected for a term of six years, but half the members retire at the end of every third year, although they are eligible for re-election. Accordingly, at each normal election of Senators, five Senators are now elected in each State, making 30 to be elected at each such election.

In accordance with the constitution, the total number of members of the House of Representatives must be as nearly as practicable double that of the Senate. Consequently, in terms of the Constitution and the Representation Act 1905–1938, from the date of the 1949 elections the number of members in the House of Representatives was increased from 74 to 121 (excluding the members for the internal Territories). As the States are represented in the House of Representatives on a population basis, the numbers were increased as follows:—New South Wales—from 28 to 47; Victoria—from 20 to 33; Queensland—from 10 to 18; South Australia—from 6 to 10; and Western Australia—from 5 to 8. Tasmania's representation remained at 5 and the total was increased from 74 to 121. The increase in the number of members of Parliament necessitated a redistribution of seats and a redetermination of electoral boundaries. This was carried out by Distribution Commissioners in each State on a quota basis, but taking into account community or diversity of interest, means of communication, physical features, existing boundaries of divisions and sub-divisions, and State electoral boundaries.

The population as disclosed by the Census taken on 30th June, 1954, necessitated a further alteration in representation in the House of Representatives in respect of New South Wales, South Australia, and Western Australia. Representation as from the General Election for the House of Representatives on 12th December, 1955, is New South Wales 46, Victoria 33, Queensland 18, South Australia 11, Western Australia 9, Tasmania 5, the total number of members (excluding the members for the internal Territories) being increased from 121 to 122. A redistribution of electoral boundaries was effected by Distribution Commissioners appointed in each State.

Since the general elections of 1922, the Northern Territory has been represented by one member in the House of Representatives. The Australian Capital Territory Representation Act 1948 gave similar representation to the Australian Capital Territory as from the elections of 1949. The members for the Territories may join in the debates but are

not entitled to vote, except on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion. The Commonwealth Parliament, however, when providing for a Legislative Council for the Northern Territory in 1947, relinquished the power to disallow ordinances for that Territory.

The Constitution provides for a minimum of five members for each original State. Members of the House of Representatives are elected for the duration of the Parliament, which is limited to three years. At elections for Senators, the whole State constitutes the electorate. For the purposes of elections for the House of Representatives, the State is divided into single electorates corresponding in number with the number of members to which the State is entitled. Further information regarding the Senate and the House of Representatives is given in earlier issues of the Official Year Book.

There have been twenty-one complete Parliaments since the inauguration of Federation. Until 1927 the Parliament met in Melbourne; it now meets at Canberra, the first meeting at Parliament House, Canberra, being opened by the late King George VI., then Duke of York, on 9th May. 1927.

The fifth Parliament, which was opened on 9th July, 1913, was dissolved on 30th July, 1914 in somewhat unusual circumstances, when for the first time in the history of the Commonwealth, a deadlock occurred between the Senate and the House of Representatives, and, in accordance with section 57 of the Constitution which provides for such an eventuality. both Houses were dissolved by the Governor-General. The nineteenth Parliament was similarly dissolved. It opened on 22nd February, 1950, but on 19th March, 1951, in its first session, a double dissolution was proclaimed for the second time since the inception of the Commonwealth.

The system of voting for the House of Representatives is preferential and for the Senate, until 1948, voting was also preferential. The Commonwealth Electoral Act 1948, however, introduced with the Representation Act 1948 to enlarge the Commonwealth Parliament (see page 66), changed the system of scrutiny and counting of votes in Senate elections from preferential to that of proportional representation. For a description of the system, see Official Year Book No. 38, pp. 82-3.

For particulars of electors enrolled and of electors who voted at the various Commonwealth elections, see earlier Year Books. Elections for the Senate have usually been held at the same time as those for the House of Representatives. The double dissolution of the nineteenth Parliament, however, referred to above, led to the holding of Senate elections on separate dates. An election for the Senate was held on 9th May, 1953, and a further election was due within one year of 30th June, 1956, i.e. the date of the completion of the term of office of half the elected Senators.

Following the House of Representatives election on 29th May, 1954, the twenty-first Parliament opened on 4th August, 1954 and was dissolved on 4th November, 1955, which enabled the elections for the Senate and House of Representatives again to be held simultaneously.

The elections for both Houses were held on 10th December, 1955, and particulars of electors and voting in the several States are as follows:—

State.	Elec	tors Enrol	led.	Electe	ors who V	oted.		ntage of El who Voted	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales Victoria Queensland South Australia West. Australia Tasmania	972,265 702,812 379,143 224,507 171,069 85,929	373,502 238,240 171,944	1,444,035 752,645 462,747 343,013	356,410 216,679 162,637	699,070 353,846 228,148 163,126	444,827	94.81 94.00 96.51	94.73 94.31 94.74 95.76 94.87 95.55	95.21 94.55 94.37 96.13 94.97 96.28
Total	2,535,725	2,636,718	 5,172,443	2,416,018	2,498,076	4,914,094	95.28	94.74	95.01

SENATE ELECTION, 10th DECEMBER, 1955.

ELECTION FOR H	TOUSE OF	REPRESENTATIVES.	10th	DECEMBER.	1955.(a)
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State.	Elec	tors Enro	lled.	Elect	ors who V	oted.		ntage of El who Voted	
	Males.	Females.	Total.	Males.	Females.	Total.	Males.	Females.	Total.
New South Wales Victoria Queensland South Australia West. Australia Tasmania Nor. Territory(b) Aust. Cap. Terr.	891,668 702,812 336,251 224,507 94,367 85,929	741,223 331,487 238,240 97,123 87,693	462,747	315,287 216,679	699,070 314,218 228,148 92,593 83,787	444,827 182,042 167,169	95.69 94.81 93.77 96.51 94.79 97.04	94.75 94.31 94.79 95.76 95.34 95.55	95.21 94.55 94.27 96.13 95.07 96.28
Australia	2,343,851	2,436,123	4,779,974	2,232,100	2,308,651	4,540,751	95.23	94.77	95.00

(a) Contested Electorates only.

(b) Uncontested.

The twenty-second Parliament opened on 15th February, 1956.

- (iii) Commonwealth Referenda. According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution must, in addition to being passed by an absolute majority of each House of Parliament, be submitted to a referendum of the electors in each State, and must further be approved by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far, 24 proposals have been submitted to referenda and the consent of the electors has been received in four cases only, the first in relation to the election of Senators in 1906, the second and third in respect of State Debts—one in 1910 and the other in 1928—and the fourth in respect of Social Services in 1946. Details of the various referenda and the voting thereon were given in previous issues of the Official Year Book (see No. 18, p. 87, No. 31, p. 67, No. 35, p. 60, No. 36, p. 61, No. 37, pp. 64–5, No. 38, p. 84 and No. 40, p. 56), and a brief résumé was given in Official Year Book No. 41 (see page 67).
- 2. State Elections.—(i) Latest in each State. (a) Upper Houses. The following table shows particulars of the voting at the most recent elections for the Upper Houses or Legislative Councils in the States of Victoria, South Australia and Western Australia. In New South Wales, members of the Legislative Council are elected at simultaneous sittings of the members of both Houses, in Queensland there has been no Legislative Council since 1922, and in Tasmania three members of the Council are elected annually (but four in each sixth year) and the Council cannot be dissolved as a whole.

#### STATE UPPER HOUSE ELECTIONS.

					Contested Electorates.						
State.	Year of Latest Elec-		ors Enro hole Sta		Electo	ors who	Voted.		tage of E vho Vote		
	tion.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	
Victoria South Australia Western Australia	1955 1956 1956	695,638 (a) 70,958	(a)	174,241	(a)	570,681 (a) 15,563	16,002	(a)	91.37 (a) 71.32	9152 69.69 73.31	

(a) Not available.

Particulars of voting in 1956 at the latest contested election for the Legislative Council in Tasmania are as follows:—Number of electors on the roll, 9,538; number of votes recorded, 8,129; percentage of electors who voted, 85.23.

(b) Lower Houses. The following table shows particulars of the voting at the most recent election for the Lower House in each State.

STATE LOWER HOUSE ELECTIONS	

			_			Cont	ested Ele	ectorates	•	
State.	Year of Latest Elec-		ors Enro hole Sta		Electo	rs who \	oted.		tage of E	
	tion.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.	Males.	Fe- males.	Total.
New South Wales Victoria	1956 1955 1957 1956 1956 1956	691,034	731,554	1422588 791,719 468,303 342,018	639,535 355,395 (a) 118,511	679,402 351,512 (a) 123,352	706,907 280,811 241,863	93.93 94.92 (a) 91.95	92.64 94.11 94.23 (a) 92.40 94.94	93.21 94.01 94.58 93.90 92.18 95.23

(a) Not available.

- (ii) Elections in Earlier Years. Official Year Book No. 38 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above, and some general information is given in the following paragraphs.
- 3. The Parliament of New South Wales.—The Parliament of New South Wales consists of two Chambers, the Legislative Assembly and the Legislative Council. By legislation assented to in July, 1949, the Assembly was enlarged from 90 to 94 members, elected in single-seat electoral districts, who hold their seats during the existence of the Parliament to which they are elected. The duration of Parliament is limited to three years and by legislation enacted in 1950 cannot be extended beyond that period except with the approval of electors by referendum. Until 1934, the Council was a nominee Chamber, consisting of a variable number of members appointed for life without remuneration, but as from 23rd April, 1934 it was reconstituted and became a House of 60 members to serve without remuneration for a term of twelve years, with one-quarter of the members retiring every third year. As from 1st September, 1948, however, members of the Council have been paid an allowance, now £500 a year. Vacancies are filled by members of both Chambers, who vote as a single electoral body at simultaneous sittings of both Chambers.

Any person who is an elector entitled to vote at a Legislative Assembly election, or a person entitled to become such elector, and who has been for at least three years resident in Australia, and who is a natural-born or naturalized subject of the Queen, is eligible for election to the Legislative Council. For the Council franchise, an elector must be a sitting member of either the Legislative Council or the Legislative Assembly. Any person qualified to vote at a Legislative Assembly election for any electoral district in New South Wales is qualified to be elected as a Member for that or any other district. Any person not under twenty-one years of age, who is a natural born or naturalized subject of the Queen, and who has lived in Australia for at least six months continuously, and in New South Wales for at least three months, and in any sub-division for at least one month immediately preceding the date of claim for enrolment, is entitled to enrolment as an elector for the Legislative Assembly. Persons are disqualified either as members or voters for reasons generally the same as those outlined on page 66.

Since the introduction of responsible government in New South Wales there have been 37 complete Parliaments, the first of which opened on 22nd May, 1856, and was dissolved on 19th December, 1857, while the thirty-seventh was dissolved on 6th February, 1956. The thirty-eighth Parliament opened on 10th April, 1956.

The elections of 1920, 1922, and 1925 were contested on the principle of proportional representation, but a reversion to the system of single seats and preferential voting was made at all later appeals to the people. The principle of one elector one vote was adopted in 1894, and that of compulsory enrolment in 1921. Compulsory voting was introduced at the 1930 election. The franchise was extended to women (Women's Franchise Act) in 1902, and was exercised by them for the first time in 1904.

4. The Parliament of Victoria.—Both of the Victorian legislative Chambers are elective bodies, but there is a considerable difference in the number of members of each House, and there was also, until the Legislative Council Reform Act 1950, a difference in the qualifications

necessary for members and electors. The number of members in the Upper House is 34, and in the Lower House, 66. In the Legislative Council, the tenure of the seat is for six years, except that one-half of the members who are elected for provinces at any general election for the Council are entitled to hold their seats for a period of only three years, one member for each of the seventeen provinces retiring every third year. Members of the Legislative Assembly are elected for the duration of Parliament, which is limited to three years.

Prior to the passing of the Act just referred to, which operated from November, 1951, property qualifications were required for membership of, and franchise for, the Legislative Council. As alternatives to the property qualifications for the Council franchise, certain professional and academic qualifications were also allowed. As amended, however, the qualifications for membership of the Council are possessed by any adult natural-born subject of the Queen, or by any adult alien naturalized for five years and resident in Victoria for two years. Entitlement for enrolment as an elector is extended to every adult natural-born or naturalized subject who has resided in Australia for at least six months continuously and in Victoria for at least three months and in any subdivision for at least one month immediately preceding the date of claim for enrolment. These qualifications for membership and electors apply also in respect of the Legislative Assembly. Reasons for disqualification follow the general pattern for Australia (see page 66)

Since the introduction of responsible government in Victoria, there have been 39 complete Parliaments, the first of which opened on 21st November, 1856, and closed on 9th August, 1859, while the thirty-ninth was dissolved on 22nd April, 1955. The fortieth Parliament was opened on 15th June, 1955.

Single voting is observed in elections held for either House, plural voting having been abolished for the Legislative Assembly in 1899 and for the Legislative Council in 1937. A preferential system of voting (see Official Year Book No. 6, p. 1182) was adopted for the first time in Victoria at the election held in November, 1911. The franchise was extended to women by the Adult Suffrage Act 1908, while voting at elections was made compulsory for the Legislative Assembly in 1926 and for the Legislative Council in 1935.

5. The Parliament of Queensland.—As stated previously, the Legislative Council in Queensland was abolished in 1922, the date of Royal Assent to the Act being 23rd March, 1922. The Legislative Assembly is composed of 75 members, each elected for a period of three years and each representing an electoral district.

Any person qualified to be enrolled for any electoral district is qualified for election to the Legislative Assembly. Any person of the age of twenty-one years, who is a natural-born or naturalized British subject with continuous residence within Australia for six months, in Queensland for three months, and in an electoral district for one month prior to making a claim for enrolment, is qualified to enrol as an elector. The classes of persons not qualified to be elected are similar to those for other Australian Parliaments (see page 66).

Under the Electoral Districts Act of 1949, the number of members and the number of electorates were increased from 62 to 75, and the increase became effective from the beginning of the thirty-second Parliament, elected in 1950. The Act divided the State into four zones, and a commission of three appointed by the Governor-in-Council completely distributed the prescribed zones into the number of electoral districts, taking into account community or diversity of interest, means of communication, physical features, boundaries of Petty Sessions Districts and of areas of Local Authorities.

Since the establishment of responsible government in Queensland, there have been 34 complete Parliaments, the last of which was dissolved on 13th June, 1957. Opinions differ regarding the opening date of the first Queensland Parliament. According to the Votes and Proceedings of the Legislative Assembly, the House met for the first time on 22nd May, 1860, when the members were sworn and the Speaker elected. The Governor, however, was unable to be present on that date, but he duly attended on 29th May, 1860, and delivered the Opening Address. The thirty-fifth Parliament was opened on 27th August, 1957.

At the elections held in May, 1915, the principle of compulsory voting was introduced for the first time in Australia. The election of 1907 was the first State election in Queensland at which women voted, the right being conferred under the Elections Acts Amendment Act 1905. In 1942, the system of preferential voting was abolished and that of election of the candidate obtaining the highest number of votes in the electorate now operates.

6. The Parliament of South Australia.—In this State, there is a Legislative Council composed of twenty members and a House of Assembly with 39 members, both Chambers

being elective. For the Legislative Council, the State is divided into five districts each returning four members, two of whom retire alternately, the term of office being six years. Thirty-nine districts return one member each to the House of Assembly; prior to 1938 there were 46 members representing nineteen districts. The duration of the House of Assembly is three years.

Any person who is at least thirty years of age, is a British subject or legally made a denizen of the State and who has resided in the State for at least three years is qualified for membership in the Legislative Council. Qualifications for the Council franchise are that a person is at least twenty-one years of age, a British subject, an inhabitant of the State with residence for at least six months prior to the registration of the electoral claim, and that he or she has had certain war service, or possesses property qualifications relating to ownership, leaseholding, or inhabitant occupancy. Any person qualified and entitled to be registered as an elector for the House of Assembly is qualified and entitled for election as a member of that House. Qualifications for enrolment as an elector for the House of Assembly are that a person is at least twenty-one years of age, is a British subject, and has lived continuously in Australia for at least six months, in the State for three months and in an Assembly subdivision for one month immediately preceding the date of claim for enrolment. Provisions in the Constitution for disqualification from membership or from the franchise in respect of either House follow the usual pattern for Australia (see page 66).

Since the inauguration of responsible government in South Australia, there have been 34 complete Parliaments, the first of which was opened on 22nd April, 1857. The thirty-fourth Parliament closed on 29th February, 1956 and the thirty-fifth was opened on 22nd May, 1956. The duration of the twenty-eighth Parliament was extended from three to five years by the provisions of the Constitution (Quinquennial Parliament) Act 1933, but this Act was repealed by the Constitution Act Amendment Act (No. 2) 1939, and the three-year term was reverted to.

South Australia was the first of the States to grant women's suffrage (under the Constitution Amendment Act 1894), the franchise being exercised by women for the first time at the Legislative Assembly election on 25th April, 1896. Compulsory voting for the House of Assembly was first observed at the 1944 election. A system of preferential voting is in operation.

7. The Parliament of Western Australia.—In this State, both Chambers are elective. For the Legislative Council, there are 30 members, each of the ten provinces returning three members, one of whom retires biennially. At each biennial election, the member elected holds office for a term of six years, and automatically retires at the end of that period. The Legislative Assembly is composed of 50 members, one member being returned by each electoral district. Members of the Legislative Assembly are elected for three years.

Qualifications required for membership of the Legislative Council are the age of thirty years, residence in Western Australia for two years, being a natural-born British subject or naturalized for five years prior to election and resident in the State for that period, and freedom from legal incapacity. Qualifications required for Council franchise are the age of twenty-one years, residence in Western Australia for six months, being a natural-born British subject or naturalized for twelve months, freedom from legal incapacity, and certain property qualifications relating to freehold, leasehold, or householder occupancy. Qualifications required for membership of the Legislative Assembly are the age of twenty-one years, residence in Western Australia for twelve months, being a natural-born British subject or naturalized for five years and resident in the State for two years prior to election, and freedom from legal incapacity. Qualifications required for the franchise are the age of twenty-one years, residence in Western Australia for six months and in an electoral district continuously for three months, and being a natural-born or naturalized British subject. Persons may be disqualified as members or voters for reasons similar to those for other Australian Parliaments (see page 66).

Since the establishment of responsible government in Western Australia, there have been twenty-one complete Parliaments, the first of which was opened on 30th December, 1890. The twenty-first Parliament closed on 6th April, 1956 and the twenty-second was opened on 2nd August, 1956. The preferential system of voting in use in Western Australia is described in Official Year Book No. 6, p. 1184.

Women's suffrage was granted by the Electoral Act of 1899. The first woman member to be elected to an Australian Parliament was returned at the 1921 election in this State. Voting for the Legislative Assembly was made compulsory in December, 1936, the first elections for which the provision was in force being those held on 18th March, 1939.

8. The Parliament of Tasmania.—In Tasmania there are two legislative Chambers, the Legislative Council and the House of Assembly, both bodies being elective. In accordance with the Constitution Act 1946, the Council now consists of nineteen members, elected for six years and returned from nineteen divisions. Three members retire annually (except in the 1953 elections and in each sixth successive year thereafter, when four retire) and the Council cannot be dissolved as a whole. There are five House of Assembly divisions, corresponding to the Commonwealth electoral divisions, each returning six members elected under a system of proportional representation which first came into force at the 1909 elections (see Official Year Book No. 6, p. 1185). By the Constitution Act 1936, the life of the Assembly was extended from three to five years except where, after a general election, all the Members elected are members of either of two opposing parties, and, of these, fifteen are member of one of those parties and fifteen are members of the other of those parties, when the Governor shall by Proclamation, invoke the Constitution Act (No. 2) 1954 which limits the life of the Assembly to three years.

Persons qualified for election to the Legislative Council must be 25 years of age and qualified to vote as Council electors, have been resident in Tasmania for a period of five years at any one time or at least two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for at least five years. An elector for the Council must be twenty-one years of age, a natural-born or naturalized subject and resident in Tasmania for a period of twelve months, with certain freehold or occupancy property qualifications, or the spouse of a person qualified to vote as the owner or occupier of property, or with certain academic, professional, defence force, or war service qualifications. For the House of Assembly, members must be twenty-one years of age, have been resident in Tasmania for a period of five years at any one time or for a period of two years immediately preceding the election, and be natural-born subjects of the Queen or naturalized for a period of five years. Electors must be twenty-one years of age, natural-born or naturalized subjects and resident in Tasmania for a period of six months continuously. Reasons for disqualification of members or voters are similar to those for other Australian Parliaments (see page 66).

The first Tasmanian Parliament opened on 2nd December, 1856, and closed on 8th May, 1861. There have been 31 complete Parliaments since the inauguration of responsible government, the thirty-first having been dissolved on 20th September, 1956. The thirty-second Parliament was opened on 4th December, 1956.

The suffrage was granted to women under the Constitution Amendment Act 1903 and compulsory voting for both Houses came into force on the passing of the Electoral Act in 1928. The system of voting is proportional representation by single transferable vote.

- 9. Superannuation Funds of the Parliament of the Commonwealth and of the Australian States .- (i) General. In Official Year Book No. 38, there is a conspectus of Superannuation Funds of the Parliaments of the Commonwealth and of the five States (New South Wales, Victoria, Queensland, South Australia and Western Australia) in which such schemes operate (see pp. 91-9). This conspectus summarized the main features of each fund as at 30th June, 1949. Although the schemes are still essentially as described in the conspectus, there have subsequently been several amending Acts providing for extensions or increases in benefits, increased contributions, etc., in some of the schemes. In December, 1955, the Tasmanian Parliament passed an Act, the Parliamentary Retiring Allowances Act, No. 59 of 1955, which set up a trust to administer a Parliamentary Retiring Allowances Contributions to this fund are to be made by every member at the rate of £156 a year and subject to specified conditions persons aged 45 years or over ceasing to be members, other than by voluntary retirement, are entitled to a pension after a period of service of not less than eight years. Other provisions are, in general, on much the same lines as for other parliamentary superannuation funds. The Commonwealth Retiring Allowances Act 1952 provided inter alia for additional benefit of £1,200 a year, subject to certain conditions, to a retired Prime Minister, and in case of his death, additional benefit of £750 a year to his widow.
- (ii) Finances. For particulars of the financial operations of these schemes see Chapter XX.—Private Finance of this volume.

#### § 3. Administration and Legislation.

1. The Commonwealth Parliaments.—The first Parliament of the Commonwealth was convened by proclamation dated 29th April, 1901, by His Excellency the Marquis of Linlithgow, then Earl of Hopetoun, Governor-General. It was opened on 9th May, 1901, by H.R.H. the Duke of Cornwall and York, who had been sent to Australia for that purpose by His Majesty the King. The Rt. Hon. Sir Edmund Barton, G.C.M.G., K.C., was Prime Minister.

The following table shows the number and duration of Parliaments since Federation:-

#### COMMONWEALTH PARLIAMENTS.

Number of Parliament.			Date of Opening.	Date of Dissolution.	
First	•••		9th May, 1901		23rd November, 1903
Second			2nd March, 1904		5th November, 1906
Third		•	20th February, 1907		19th February, 1910
Fourth			1st July, 1910		23rd April, 1913
Fifth			9th July, 1913		30th July, 1914(a)
Sixth			8th October, 1914		26th March, 1917
Seventh			14th June, 1917	٠.	3rd November, 1919
Eighth			26th February, 1920		6th November, 1922
Ninth			28th February, 1923		3rd October, 1925
Tenth			13th January, 1926		9th October, 1928
Eleventh			9th February, 1929	٠.	16th September, 1929
Twelfth			20th November, 1929	٠.	27th November, 1931
Thirteenth			17th February, 1932		7th August, 1934
Fourteenth			23rd October, 1934	٠.	21st September, 1937
Fifteenth			30th November, 1937		27th August, 1940
Sixteenth			20th November, 1940		7th July, 1943
Seventeenth			23rd September, 1943		16th August, 1946
Eighteenth			6th November, 1946		31st October, 1949
Nineteenth			22nd February, 1950		19th March, 1951(a)
<b>Twentieth</b>			12th June, 1951		21st April, 1954
Twenty-first	• •		4th August, 1954		28th October, 1955
Twenty-second			15th February, 1956		

<sup>(</sup>a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Ministry, and under section 57 of the Constitution.

2. Governors-General and Commonwealth Ministries .- (i) Governors-General. The following statement shows the names of the Governors-General since the inception of the Commonwealth :-

#### GOVERNORS-GENERAL.

- Rt. Hon. John Adrian Louis, Earl of Hopetoun (afterwards Marquis of Linlithgow), K.T. G.C.M.G., G.C.V.O. From 1st January, 1901 to 9th January, 1903.
   Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. From 17th July, 1902 to 9th January, 1903,
- (Acting).
- Rt. Hon. Hallam, Baron Tennyson, G.C.M.G. From 9th January, 1903 to 21st January, 1904. Rt. Hon. Henry Stafford, Baron Northcote, G.C.M.G., G.C.I.E., C.B. From 21st January,
- 1904 to 9th September, 1908.

  Rt. Hon. William Humble, Earl of Dudley, G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908 to 31st July, 1911.

  Rt. Hon. Thomas, Baron Denman, G.C.M.G., K.C.V.O. From 31st July, 1911 to 18th May,
- Rt. Hon. Sir Ronald Craufurd Munro Ferguson (afterwards Viscount Novar of Raith), G.C.M.G. From 18th May, 1914 to 6th October, 1920.

  Rt. Hon. Henry William, Baron Forster of Lepe, G.C.M.G. From 6th October, 1920 to
- 8th October, 1925.

  Rt. Hon. John Lawrence, Baron Stonehaven, G.C.M.G., D.S.O. From 8th October, 1925 to 22nd January, 1931.

  G.C.B. G.C.M.G. From 22nd January, 1931 to 23rd January,
- Rt. Hon. Srr Isaac Alfred Isaacs, G.C.B., G.C.M.G. From 22nd January, 1931 to 23rd January, 1936.
- General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., G.C.M.G., C.B., D.S.O., K.G.St.J. From 23rd January, 1936 to 30th January, 1945.

His Royal Highness Prince Henry William Frederick Albert, Duke of Gloucester, Earl of Ulster and Baron Culloden, K.G., K.T., K.P., P.C., G.C.B., G.C.M.G., G.C.V.O., General in the Army, Air Chief Marshal in the Royal Air Force, One of His Majesty's Personal Aides-de-Camp. From 30th January, 1945 to 11th March, 1947.

Rt. Hon. Sir William John McKell, G.C.M.G. From 11th March, 1947 to 8th May, 1953.

Field-Marshal Sir William Joseph Slim, G.C.B., G.C.M.G., G.C.V.O., G.B.E., D.S.O., M.C., K.St.J. From 8th May, 1953.

(ii) Administrators. In addition to the holders of the office of Governor-General listed above, certain persons have, from time to time, been appointed as Administrator of the Government of the Commonwealth during the absence from Australia or illness of the Governor-General. The following is a list of such appointments.

#### Term of Office.

Rt. Hon. Frederic John Napier, Baron Chelmsford, K.C.M.G.	21st December, 1909 to 27th January, 1910
Lieut-Colonel the Rt. Hon. Arthur Herbert Tennyson, Baron Somers, K.C.M.G., D.S.O., M.C.	3rd October, 1930 to 22nd January, 1931
Captain the Rt. Hon. William Charles Arcedeckne Vanneck, Baron Huntingfield, K.C.M.G., K.St.J.	29th March, 1938 to 24th September, 1938
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	5th September, 1944 to 30th January, 1945
Major-General Sir Winston Joseph Dugan, G.C.M.G., C.B., D.S.O.	18th January, 1947 to 11th March, 1947
General* Sir John Northcott, K.C.M.G., C.B., M.V.O.†	19th July, 1951 to 14th December, 1951
General* Sir John Northcott, K.C.M.G., K.C.V.O., C.B.	30th July, 1956 to 22nd October, 1956

(iii) Commonwealth Ministeries. (a) Names and Tenure of Office, 1901 to 1956. The following list shows the name of each Commonwealth Ministry to hold office since 1st January, 1901, and the limits of its term of office.

#### COMMONWEALTH MINISTRIES.

- (i) Barton Ministry, 1st January, 1901 to 24th September, 1903. (ii) DEAKIN MINISTRY, 24th September, 1903 to 27th April, 1904.
- (iii) Watson Ministry, 27th April, 1904 to 17th August, 1904.
- (iv) Reid-McLean Ministry, 18th August, 1904 to 5th July, 1905.
- (v) DEAKIN MINISTRY, 5th July, 1905 to 13th November, 1908.
- (vi) FISHER MINISTRY, 13th November, 1908 to 1st June, 1909.
- (vii) DEAKIN MINISTRY, 2nd June, 1909 to 29th April, 1910.
- (viii) FISHER MINISTRY, 29th April, 1910 to 24th June, 1913.
- (ix) Cook Ministry, 24th June, 1913 to 17th September, 1914.
- (x) FISHER MINISTRY, 17th September, 1914 to 27th October, 1915.
- (xi) Hughes Ministry, 27th October, 1915 to 14th November, 1916
- (xii) Hughes Ministry, 14th November, 1916 to 17th February, 1917. (xiii) Hughes Ministry, 17th February, 1917 to 10th January, 1918. (xiv) Hughes Ministry, 10th January, 1918 to 9th February, 1923.
- (xv) BRUCE-PAGE MINISTRY, 9th February, 1923 to 22nd October, 1929.
- (xvi) Scullin Ministry, 22nd October, 1929 to 6th January, 1932.
- (xvii) Lyons Ministry, 6th January, 1932 to 7th November, 1938.
- (xviii) Lyons Ministry, 7th November, 1938 to 7th April, 1939.

  (xix) Page Ministry, 7th April, 1939 to 26th April, 1939.

  - (xx) MENZIES MINISTRY, 26th April, 1939 to 14th March, 1940.
  - (xxi) Menzies Ministry, 14th March, 1940 to 28th October, 1940.
- (xxii) Menzies Ministry, 28th October, 1940 to 29th August, 1941.
- (xxiii) FADDEN MINISTRY, 29th August, 1941 to 7th October, 1941.

Lieutenant-General Sir John Northcott was granted honorary rank of General whilst administering Government of the Commonwealth.
 † K.C.V.O., 1954. the Government of the Commonwealth.

#### COMMONWEALTH MINISTRIES-continued.

(xxiv) Curtin Ministry, 7th October, 1941 to 21st September, 1943. (xxv) Curtin Ministry, 21st September, 1943 to 6th July, 1945. (xxvi) Forde Ministry, 6th July, 1945 to 13th July, 1945.

(xxvii) CHIFLEY MINISTRY, 13th July, 1945 to 1st November, 1946.

(xxviii) CHIFLEY MINISTRY, 1st November, 1946 to 19th December, 1949.

(xxix) Menzies Ministry, 19th December, 1949 to 11th May, 1951.

(xxx) Menzies Ministry, 11th May, 1951 to 11th January, 1956.

(xxxi) Menzies Ministry, 11th January, 1956.

(b) Names of Successive Holders of Ministerial Office, 9th February, 1923 to 31st December, 1957. In Official Year Book No. 17, 1924, there appeared the names of each Ministry up to the Bruce-Page Ministry (9th February, 1923 to 22nd October, 1929), together with the names of the successive holders of portfolios therein, and issue No. 39 contained a list, commencing with the Bruce-Page Ministry, which covered the period between the date on which it assumed power, 9th February, 1923, and 31st July, 1951, showing the names of all persons who held office in each Ministry during that period.

This issue shows only particulars of the latest Menzies Ministry, but includes any changes therein during its term of office up to and including the reconstruction of 24th October, 1956. For any subsequent changes see Appendix to this volume.

#### MENZIES MINISTRY-from 11th January, 1956.

(Portfolios as from 24th October, 1956.)

(The State in which each Minister's electorate is situated is shown in parentheses.)

Prime Minister-

THE RT. HON. R. G. MENZIES, C.H., Q.C. (Vic.).

Treasurer-

THE RT. HON. SIR ARTHUR FADDEN, K.C.M.G. (Qld.).

Minister for Labour and National Service-THE RT. HON. H. E. HOLT (Vic.).

Minister for Trade— THE RT. HON. J. McEWEN (Vic.).

Minister for External Affairs-

THE RT. HON. R. G. CASEY, C.H., D.S.O., M.C. (Vic.).

Minister for Defence-

HON. SIR PHILIP McBRIDE. THE K.C.M.G. (S.A.).

Vice-President of the Executive Council; and Attorney-General—

SENATOR THE HON. N. O'SULLIVAN, (Qld.).

Minister for National Development-SENATOR THE HON. W. H. SPOONER, M.M. (N.S.W.).

Minister for Immigration-

THE HON. A. G. TOWNLEY (Tas.).

Minister for Territories-

THE HON. P. M. C. HASLUCK (W.A.).

Minister for Supply; and Minister for Defence Production-

THE HON. H. BEALE, O.C. (N.S.W.)

Minister for Primary Industry-

THE HON. W. McMahon (N.S.W.).

(The above Ministers constitute the Cabinet.)

Minister for Repatriation-

SENATOR THE HON. W. J. COOPER, M.B.E. (Qld.).

Minister for Shipping and Transport; and Minister for Civil Aviation-

SENATOR THE HON. S. D. PALTRIDGE (W.A.).

Minister for Health-

THE HON. D. A. CAMERON, O.B.E. (Qld).

Minister for the Army-

THE HON. J. O. CRAMER (N. S.W.).

Postmaster-General; and Minister for the

THE HON. C. W. DAVIDSON, O.B.E. (Old.).

Minister for Air-

THE HON. F. M. OSBORNE, D.S.C. (N.S.W.).

Minister for the Interior; and Minister for Works-

THE HON. A. FAIRHALL (N.S.W.).

Minister for Social Services—

THE HON. H. S. ROBERTON (N.S.W.).

Minister for Customs and Excise-

SENATOR THE HON. N. H. D. HENTY (Tas.).

(iv) Commonwealth Ministers of State. In Official Year Book No. 38 a statement was included showing the names of the Ministers of State who had administered the several Departments during the period 1st April, 1925, to 31st December, 1949 (pp. 74-79). This was in continuation of a similar statement covering the period from the inauguration of Commonwealth Government to 1925 which appeared in Official Year Book No. 18.

3. Governors and State Ministers.—The names of the Governors and members of the Ministries in each State in December, 1957, are as shown in the following statement. (Changes since December, 1957 are shown in the Appendix to this volume.)

#### NEW SOUTH WALES..

Governor-Lieut.-General Sir Eric Winslow Woodward, K.C.M.G., C.B., C.B.E., D.S.O.

Ministry (from 15th March, 1956). (Portfolios as from 25th November, 1957.)

Premier and Colonial Treasurer— THE HON. J. J. CAHILL.

Deputy Premier and Minister for Education— THE HON. R. J. HEFFRON.

Attorney-General, Minister of Justice and Vice-President of the Executive Council— THE HON. R. R. DOWNING, M.L.C.

Chief Secretary, Minister for Immigration and Minister for Co-operative Societies— THE HON. C. A. KELLY.

Minister for Health— THE HON. W. F. SHEAHAN, Q.C.

Minister for Child Welfare and Minister for Social Welfare—
THE HON, F. H. HAWKINS.

Minister for Local Government and Minister for Highways— The Hon. J. B. Renshaw. Minister for Transport—

THE HON. A. G. ENTICKNAP.

Minister for Housing-

THE HON. A. LANDA.

Secretary for Public Works— THE HON. J. F. McGrath.

Minister for Conservation— THE HON. E. WETHERELL.

Secretary for Lands— THE HON. W. M. GOLLAN.

THE HON. W. M. GOLLAN.

Minister for Agriculture and M

Minister for Agriculture and Minister for Food Production—
THE HON. R. B. NOTT.

Minister for Labour and Industry— THE HON. J. J. MALONEY, M.L.C.

Secretary for Mines— THE HON. J. B. SIMPSON.

Minister without Portfolio—
THE HON. J. M. A. MCMAHON.

#### VICTORIA.

Governor-General Sir Reginald Alexander Dallas Brooks, K.C.B., K.C.M.G., K.C.V.O., D.S.O., K.St.J.

Ministry (from 7th June, 1955).

Premier, Treasurer and Minister for Conservation— The Hon, H. E. Bolte.

Chief Secretary and Attorney-General— THE HON, A. G. RYLAH.

Minister of Transport and a Vice-President of the Board of Land and Works— THE HON. SIR ARTHUR WARNER, M.L.C.

Minister of Agriculture and a Vice-President of the Board of Land and Works—
THE HON. G. L. CHANDLER, C.M.G.,

M.L.C.

Commissioner of Public Works and a Vice-

Commissioner of Public Works and a Vice-President of the Board of Land and Works— THE HON. SIR THOMAS MALTBY.

Minister of Health—
The Hon, E. P. Cameron, M.L.C.

Minister of Water Supply and Minister of Mines.—

THE HON. W. J. MIBUS.

Minister of Education—
THE HON. J. S. BLOOMFIELD.

Minister of Housing and Minister of Immigration—

THE HON. H. R. PETTY.

Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and President of the Board of Land and Works— THE HON. K. H. TURNBULL.

Minister of Labour and Industry and Minister of Electrical Undertakings—
The Hon. G. O. Reid.

Minister of Forests and Minister of State Development and Decentralization— THE HON. G. S. MCARTHUR, M.L.C.

Ministers without Portfolio— THE HON. M. V. PORTER. THE HON. A. J. FRASER.

### GOVERNORS AND STATE MINISTERS—continued.

#### QUEENSLAND.

Governor-Colonel Sir Henry Abel Smith, K.C.V.O., D.S.O.

Ministry (from 12th August, 1957).

Premier and Chief Secretary; and Vice-President of the Executive Council-THE HON. G. F. R. NICKLIN.

Minister for Labour and Industry-THE HON. K. J. MORRIS.

Minister for Education-THE HON. J. C. A. PIZZEY.

Attorney-General-THE HON. A. W. MUNRO.

Treasurer and Minister for Housing-THE HON. T. A. HILEY.

Minister for Development, Mines and Main Roads-

THE HON. E. EVANS.

Minister for Public Lands and Irrigation-THE HON. A. G. MULLER.

Minister for Health and Home Affairs-THE HON. H. W. NOBLE.

Minister for Agriculture and Stock— THE HON. O. O. MADSEN.

Minister for Public Works and Local Government-

THE HON. J. A. HEADING, C.M.G.

Minister for Transport-THE HON. G. W. W. CHALK.

#### SOUTH AUSTRALIA.

GOVERNOY-AIR VICE-MARSHAL SIR ROBERT ALLINGHAM GEORGE, K.C.V.O., K.B.E., C.B., M.C.

Ministry (from 15th May, 1944).

Premier, Treasurer and Minister of Immigration-

THE HON. SIR THOMAS PLAYFORD, G.C.M.G.

Chief Secretary, Minister of Health and Minister of Mines-

THE HON. SIR LYELL MCEWIN, K.B.E., M.L.C.

Attorney-General and Minister of Industry and Employment-

THE HON. C. D. ROWE, M.L.C. Minister of Lands, Minister of Repatriation and Minister of Irrigation-

THE HON. C. S. HINCKS.

Minister of Works and Minister of Marine-THE HON. SIR MALCOLM MCINTOSH, K.B.E.

Minister of Education-THE HON. B. PATTINSON.

Minister of Local Government, Minister of Roads and Minister of Railways-THE HON. N. L. JUDE, M.L.C.

Minister of Agriculture and Minister of Forests-

THE HON. G. G. PEARSON.

#### WESTERN AUSTRALIA.

GOVERNOY-LIEUT.-GENERAL SIR CHARLES GAIRDNER, K.C.M.G., K.C.V.O., C.B., C.B.E. Ministry (from 20th April, 1956).

Premier, Treasurer and Minister for Child | Minister for Education and Labour-Welfare and Industrial Development-THE HON. A. R. G. HAWKE.

Deputy Premier, Minister for Works and Water Supplies-THE HON. J. T. TONKIN.

Minister for Transport, Housing and Forests-THE HON. H. E. GRAHAM.

Chief Secretary and Minister for Local Government and Town Planning-THE HON. G. FRASER, M.L.C.

Minister for Health and Justice-THE HON. E. NULSEN. 6875/57.--3

THE HON. W. HEGNEY.

Minister Lands, Agriculture for and Fisheries-THE HON. L. F. KELLY.

Minister for Railways, the North-West and Supply and Shipping-THE HON. H. C. STRICKLAND, M.L.C.

Minister for Native Welfare and Police-THE HON. J. J. BRADY.

Minister for Mines-THE HON. A. M. MOIR.

#### GOVERNORS AND STATE MINISTERS-continued.

#### TASMANIA.

Governor-The Rt. Hon. Sir Ronald Hibbert Cross, Bart., K.C.M.G., K.C.V.O. Ministry (from 25th February, 1948).

Premier and Minister for Education-THE HON. R. COSGROVE.

Attorney-General-THE HON. R. F. FAGAN.

Minister for Lands and Works-THE HON. E. E. REECE.

Chief Secretary-THE HON. A. J. WHITE.

Minister for Agriculture-

THE HON. J. J. DWYER, V.C.

Treasurer and Minister for Health-THE HON. R. J. D. TURNBULL.

Minister for Housing-THE HON. C. B. AYLETT.

Minister for Tourist and Immigration-THE HON. W. A. NEILSON.

Minister for Transport— THE HON. D. A. CASHION.

4. Leaders of the Opposition, Commonwealth and State Parliaments,-The Leader of the Opposition plays an important part in the Party system of government which operates in the Australian Parliaments. The following list gives the names of the holders of this position in each of the Parliaments in December, 1957.

Leader of the Opposition, Commonwealth and State Parliaments— Commonwealth-The Rt. Hon. H. V. Evatt, Q.C. New South Wales-P. H. Morton. Victoria—The Hon. A. E. Shepherd. Queensland—L. A. Wood. South Australia-M. R. O'Halloran. Western Australia-The Hon. D. Brand. Tasmania-The Hon. W. Jackson.

- 5. The Course of Legislation.—The actual legislation by the Commonwealth Parliament up to the end of 1955 is indicated in alphabetical order in "The Acts of the Parliament of The Commonwealth of Australia passed during the year 1955, in portion of the First Session of the Twenty-first Parliament of the Commonwealth, with Tables, Appendix and Index."
- A "Chronological Table of Acts passed from 1901 to 1955, showing how they are affected by subsequent legislation or lapse of time" is also given, and, further, "A table of Commonwealth Legislation passed from 1901 to 1955 in relation to the several provisions of the Constitution", is furnished. Reference should be made to these for complete information.
- 6. Legislation during 1956.—The following paragraphs present a selection from the legislative enactments of the Commonwealth Parliament during the year 1956. The acts included have been selected as the more important new measures and amending measures enacted during the year. The selection is somewhat arbitrary, however, because of the task of determining, in view of the limitations on space that might reasonably be allotted, the relative importance of the acts passed. Certain principles regulating the choice of acts have nevertheless been generally observed. Ordinary appropriation and loan acts are excluded, as are also acts relating to less important changes in existing forms of taxation, in superannuation and pension schemes, and in workers' compensation. Acts providing for minor amendments to existing statutes and continuance acts are similarly excluded.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a general increase. About 17 acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939 and 113 in 1956.

In Official Year Book No. 40 (see pp. 66-70), and previous Year Books, similar information was published for the principal legislative enactments of State Parliaments.

Commonwealth Legislation Passed in 1956.—Australian Coastal Shipping Agreement Act 1956 (No. 42 of 1956). Approves the Agreement (a copy of which appears in the Schedule to the Act) made on 18th June, 1956, between the Commonwealth and major shipping companies operating shipping services on the Australian coast. The Agreement makes provision for the purpose of ensuring the continued operation by the companies, as well as the Australian Coastal Shipping Commission, of ships in the Australian coastal trade; the maintenance of competition between the respective companies and between the companies and the Commission; the efficient and economical operation of shipping services in the Australian coastal trade; and the maintenance of the Australian shipbuilding industry. The Act requires the Commission to do all such things as the agreement provides it will do and to refrain from doing anything which would be contrary to the provisions of the agreement.

Australian Coastal Shipping Commission Act 1956 (No. 41 of 1956). Repeals the Shipping Act 1949 and provides for the establishment of the Australian Coastal Shipping Commission. It defines the functions, powers and duties of the Commission for the purpose of establishing, maintaining and operating interstate, overseas and territorial shipping services and provides for the winding up of the affairs of the Australian Shipping Board.

Australian Security Intelligence Organization Act 1956 (No. 113 of 1956). Provides that the Australian Security Intelligence Organization, being the Organization established in pursuance of a directive given by the Prime Minister on 16th March, 1949, shall continue in existence; defines the functions of the Organization in relation to the protection of the Commonwealth and its Territories from acts of espionage, sabotage and subversion; and provides for the employment of officers and employees of the Organization.

Broadcasting and Television Act 1956 (No. 33 of 1956). Repeals the Television Act 1953 and the Commercial Broadcasting Stations Licence Fees Act 1942, amends the Broadcasting Act 1942–1954, and alters the citation of that Act as so amended to the Broadcasting and Television Act 1942–1956. It defines the functions and powers of the Australian Broadcasting Control Board in relation to broadcasting and television, the national broadcasting service and the national television service. It makes provision for the licensing of commercial broadcasting stations and commercial television stations and imposes limitations on the ownership or control of commercial television stations.

Broadcasting and Television Stations Licence Fees Act 1956 (No. 34 of 1956). Provides for fees to be paid for the issue and renewal of licences for commercial broadcasting and television stations.

Cellulose Acetate Flake Bounty Act 1956 (No. 38 of 1956). Provides, subject to the conditions set out in the Act, for the payment from Consolidated Revenue of bounty at the rate of tenpence a pound to producers of good quality cellulose acetate flake sold for use in the manufacture in Australia of cellulose acetate flake rayon yarn.

Commonwealth Aid Roads Act 1956 (No. 31 of 1956). Amends the Commonwealth Aid Roads Act 1954–1955 by providing for the payment of additional amounts into the Commonwealth Aid Roads Trust Account.

Commonwealth Employees' Compensation Act 1956 (No. 93 of 1956). Amends the Commonwealth Employees' Compensation Act 1930-1954 by providing that that Act shall not apply in respect of service of a member of the Defence Force in respect of which the Repatriation (Far East Strategic Reserve) Act 1956 makes provision for payment of a pension.

Conciliation and Arbitration Act 1956 (No. 44 of 1956). Amends the Conciliation and Arbitration Act 1904–1955. It specifies that the chief objects of the Act are to promote goodwill in industry, to encourage conciliation with a view to amicable settlement of threatened industrial disputes, to provide means of preventing and settling disputes and to encourage the organization of representative bodies of employers and employees and the registration of those bodies.

It establishes the Commonwealth Conciliation and Arbitration Commission and, as a Superior Court of Record, a federal court to be known as the Commonwealth Industrial Court

Conciliation and Arbitration Act (No. 2) 1956 (No. 103 of 1956). Amends the Conciliation and Arbitration Act 1904–1955 as amended by the Conciliation and Arbitration Act 1956. It empowers the Commission to prevent or settle, by conciliation or arbitration, disputes as to industrial matters in relation to employment in connexion with Commonwealth projects (as defined by the Act) and to hear and determine industrial matters submitted to it. It also makes provision for the persons by whom parties may be represented in proceedings before the Commonwealth Industrial Court.

Customs Tariff (Federation of Rhodesia and Nyasaland Preference) 1956 (No. 61 of 1956). Repeals the Customs Tariff (Southern Rhodesian Preference) 1941 and the Customs Tariff (Southern Rhodesian Preference) 1948, and imposes duties of customs on goods produced or manufactured in the Federation of Rhodesia and Nyasaland, which have been shipped in the Federation for export to Australia.

Customs Tariff (Industries Preservation) Act 1956 (No. 111 of 1956). Amends the Customs Tariff (Industries Preservation) Act 1921-1936 and provides for the imposition of an emergency duty on imported goods where the Minister is satisfied that the importation of those goods is likely to cause injury to producers in Australia, or, in certain cases, to producers in a third country, of like or directly competitive goods.

Export Payments Insurance Corporation Act 1956 (No. 32 of 1956). Provides for the establishment of the Export Payments Insurance Corporation and specifies the functions, duties and powers of the Corporation. The Corporation is, subject to the Act, required to carry on the business of insurance under contracts of insurance—not being contracts against risks that are normally insured with commercial insurers—against risk of monetary loss arising out of acts in the course of, or for the purpose of, trade with countries outside Australia.

Fishing Industry Act 1956 (No. 22 of 1956). Provides for-

- (a) the establishment of the Fisheries Development Trust Account into which shall be paid the moneys referred to in section 5 of the Act; and
- (b) the application of moneys in the Account for the purposes of research in connexion with or for the promotion of the fishing industry; financial assistance to persons engaged in the industry; the training of persons, the dissemination of information and advice, and the publication of scientific, technical and commercial reports in connexion with the industry.

Home Nursing Subsidy Act 1956 (No. 84 of 1956). Provides for the payment by the Commonwealth from the National Welfare Fund of subsidies to organizations which conduct a home nursing service and are carried on otherwise than for the purpose of profit or gain to individual members. An organization conducted or controlled by a State Government, not being an organization administering a public hospital or an organization conducted or controlled by such an organization, is not eligible for a subsidy.

Housing Agreement Act 1956 (No. 43 of 1956). Authorizes the execution by or on behalf of the Commonwealth of an agreement substantially in accordance with the form contained in the Schedule to the Act between the Commonwealth and a State or States. The agreement provides for the Commonwealth to grant financial assistance to the States for the purposes of housing.

Income Tax and Social Services Contribution Assessment Act 1956 (No. 25 of 1956). Amends the Income Tax and Social Services Contribution Assessment Act 1936-1955. It extends to 30th June, 1955, the period during which income derived from mining and treating uranium shall be exempt from tax, and extends to 30th June, 1959, the special depreciation allowance to primary producers.

Income Tax and Social Services Contribution Assessment Act (No. 2) 1956 (No. 30 of 1956). Makes consequential amendments following on the amendments made by the Ministers of State Act 1956 and the Parliamentary Allowances Act 1956.

Income Tax and Social Services Contribution Assessment Act (No. 3) 1956 (No. 101 of 1956). Provides for deduction of capital expenditure in timber operations and in respect of industrial property. It increases the maximum deductible amount of education expenses, life insurance premiums, etc.; exempts the income of certain hospital and medical benefits funds; discontinues the exemption of pay and allowances of members of the Defence Force allotted for duty in Malaya; increases the amount of special deduction for residents of isolated areas; and allows deductions of gifts to certain authorities and institutions in Australia.

Income Tax and Social Services Contribution (Companies) Act 1956 (No. 28 of 1956). Sets out the rates of income tax and social services contribution payable for the financial year which commenced on 1st July, 1956, by a company, other than a company in the capacity of a trustee.

International Wheat Agreement Act 1956 (No. 80 of 1956). Approves the acceptance by Australia of the International Wheat Agreement, 1956, signed on behalf of Australia at Washington in the United States of America on 17th May, 1956.

Loans Securities Act 1956 (No. 82 of 1956). Amends the Loans Securities Act 1919. It empowers the Governor-General, notwithstanding the provisions of the Commonwealth Inscribed Stock Act 1911–1946 or of an Act authorizing the issue of Treasury Bills, to authorize the Treasurer to borrow moneys in such amounts and in such manner and to issue securities in such form as the Governor-General determines, and empowers the Governor-General to authorize the Treasurer to determine those matters. It also authorizes the Treasurer to borrow the moneys in currency other than Australian currency.

Meat Export (Additional Charge) Act 1956 (No. 2 of 1956). Repeals the Meat Export (Additional Charge) Act 1955, and, for the purpose of making good the amount by which the deficiency payments made by the Australian Meat Board under the Meat Agreement (Deficiency Payments) Act 1955 exceed the payments made to the Commonwealth of Australia by the Government of the United Kingdom, imposes a charge in addition to the charge payable under the Meat Export Charge Act 1935–1954 on meat, other than canned meat, exported to the United Kingdom. The rate of charge is to be fixed by the Minister by notice in the Commonwealth Gazette.

Ministers of State Act 1956 (No. 1 of 1956). Amends the Ministers of State Act 1952 by providing for the number of Ministers to be increased to twenty-two, and for the annual sum payable for the salaries of Ministers to be increased to Forty-six thousand five hundred pounds.

Mount Stromlo Observatory Act 1956 (No. 79 of 1956). Authorizes the making of an arrangement between the Commonwealth and the Australian National University for and in relation to the transfer to the University of the administration of the Commonwealth Observatory situated at Mount Stromlo. It repeals the Commonwealth Observatory Trust Fund Act 1953, and provides for the payment to the University of moneys standing to the credit of the Trust Fund established under that Act.

Northern Territory (Administration) Act (No. 2) 1956 (No. 110 of 1956). Amends the Northern Territory (Administration) Act 1901-1955 as amended by the Northern Territory (Administration) Act 1956. It provides that the Supreme Court of the Territory shall be deemed to be a Court of Disputed Returns; that writs for elections of the Legislative Council shall be issued by the Administrator; that public servants are ineligible to nominate for or continue as elected members; that an elected member who is a party to or has an interest in a contract made by the Commonwealth under which goods or services are to be supplied to the Commonwealth shall not take part in a discussion or vote on a matter which relates to that contract; and that the provisions of the Commonwealth Electoral Act as applied by the Principal Act may be substituted by regulations to suit the requirements of the Territory.

Parliamentary Allowances Act 1956 (No. 29 of 1956). Increases, as from 1st July, 1956, the allowances payable to members of each house of the Parliament, and provides for an allowance to be paid as from that date to the Deputy Leader of the Opposition in the Senate. It also increases the allowances payable to members of the House of Representatives during the period 10th December, 1955 to 30th June, 1956.

Post and Telegraph Rates Act 1956 (No. 66 of 1956). Amends the Post and Telegraph Rates Act 1902–1951 and provides for increased rates for the postage of postal articles and for telegrams.

Public Service Arbitration Act 1956 (No. 51 of 1956). Amends the Public Service Arbitration Act 1920-1955 consequent on the amendments made to the Conciliation and Arbitration Act 1904-1955. It provides that the Public Service Arbitrator may in the public interest refer matters of importance to the Commonwealth Conciliation and Arbitration Commission constituted by at least two presidential members and the Arbitrator; for appeals to the Commission constituted by at least three presidential members against a determination of the Arbitrator in cases where the Commission considers the matter is of importance in the public interest; for representation of parties before the Commission by counsel or solicitor; and for the continuance before the Commonwealth Court of Conciliation and Arbitration, constituted as provided by the Principal Act, of matters begun before that Court but not completed at the date of commencement of this Act.

Public Service Arbitration Act (No. 2) 1956 (No. 104 of 1956). Provides that, except as provided by the Act, an organization of employees is not entitled to submit claims to the Commonwealth Court of Conciliation and Arbitration; that the Public Service Arbitrator shall determine matters submitted to him relating to conditions of employment in the Public Service and may refrain from hearing and determining other claims if he considers it unnecessary or undesirable in the public interest; that he may make a determination which is not in accord with an award or order of the Commonwealth Court of Conciliation or of the Commission, that he may make a determination which is not in accord with a law of the Commonwealth except the Commonwealth Employees' Compensation Act 1930–1954, the Commonwealth Employees' Furlough Act 1943–1953 and the Superannuation Act 1922–1956 or any other prescribed Act or the prescribed provisions of an Act.

Rayon Yarn Bounty Act 1956 (No. 39 of 1956). Amends the Rayon Yarn Bounty Act 1954, and extends to 30th June, 1959, the period during which bounty under that Act will be paid in respect of the sale of rayon yarn.

Repatriation (Far East Strategic Reserve) Act 1956 (No. 91 of 1956). Provides a scheme of pensions and other repatriation benefits in respect of members (and dependants of members) of the Defence Force of the Commonwealth as part of or in connexion with the British Commonwealth Far East Strategic Reserve who suffer an incapacity or die during or as a result of service in Malaya.

States Grants (Universities) Act 1956 (No. 37 of 1956). Provides for the payment by the Commonwealth to the States, subject to the conditions set out in the Act, of specified sums of money by way of financial assistance during 1956 in connexion with Universities and university purposes, payment to be made by the Treasurer out of Consolidated Revenue.

Statistics (Arrangements with States) Act 1956 (No. 17 of 1956). Provides that the Commonwealth may enter into an arrangement with a State with respect to the collection and publication of statistics, and the supply of statistical information, for the purposes of both the Commonwealth and the State. It provides also for the transfer of State employees

to the Public Service of the Commonwealth in pursuance of that arrangement, and for the rates of remuneration, the preservation of rights in relation to leave, furlough, gratuities and superannuation of those employees.

Stevedoring Industry Act 1956 (No. 53 of 1956). Repeals the Stevedoring Act 1949 and Part II. of the Stevedoring Act 1954. It provides for the establishment of the Australian Stevedoring Industry Authority which shall consist of a Chairman and two members, and for the appointment of officers to constitute the Service of the Authority to assist the Authority in the exercise of its powers and the performance of its functions. It specifies the functions of the Authority and provides that the Authority may, for the purpose of the performance of its functions, make orders, and, where an emergency is declared to exist, give directions either orally or in writing, and that those orders or directions shall not be challenged in any way in a court. It provides for the appointment of Inspectors and specifies their duties. It provides that the Authority may define the limits of a port and shall determine, from time to time, the quota of waterside workers for a port and establish and maintain a register of employers and of waterside workers at that port. It provides that a rule of a Union which discriminates against a registered waterside worker is void and of no effect and that a person shall not, by boycott or discriminatory action, hinder or dissuade a person from applying for registration or engaging in employment as a waterside worker. It provides that the stevedoring industry charge shall be paid to the Authority out of the Consolidated Revenue Fund, that the Authority may borrow moneys, shall keep accounts and furnish monthly and annual reports of its activities and annual financial statements and shall not be subject to taxation under any law of a State to which the Commonwealth is not subject.

Stevedoring Industry Charge Act 1956 (No. 83 of 1956). Amends the Stevedoring Industry Charge Act 1947–1954 by increasing the rate of charge in respect of the employment of waterside workers from sixpence to one shilling and sevenpence per man-hour.

Sugar Agreement Act 1956 (No. 109 of 1956). Approves the Agreement, a copy of which is set out in the Schedule to the Act, made on 11th October, 1956, between the Commonwealth and the State of Queensland, and prohibits the importation of sugar into the Commonwealth except with the written consent of the Minister.

Tractor Bounty Act 1956 (No. 40 of 1956). Amends the Tractor Bounty Act 1939-1954, and extends to 23rd October, 1958, the period during which bounty under that Act is to be paid in respect of tractors. It provides that bounty is not payable on crawler tractors.

### § 4. Commonwealth Government Departments.

Official Year Book No. 37 contains, on pp. 76-86, a list of the Commonwealth Government Departments as at 31st March, 1947, showing details of the matters dealt with by each Department, and the Acts administered by the Minister of each Department, and Year Book No. 39 contains, on pp. 100-1, a description of major changes in Departmental structure from 1947 to 1951. Apart from the structural changes and transfers of functions described therein, there are several Departments which, in the interval between 1947 and 1956, were developed to cope with changing circumstances affecting the particular Department. The Prime Minister's Department, the Department of Immigration, and the Department of Social Services are among those whose organizations were thus altered, On page 81 of Official Year Book No. 43, details were shown of a major re-organization, in January 1956, of the functions of the Departments of Commerce and Agriculture and Trade and Customs, resulting in the creation of the Departments of Trade, Customs and Excise, and Primary Industry.

### § 5. Cost of Parliamentary Government.

The tables in this section are intended to represent the expenditure incurred in the operation of the Parliamentary system in Australia, comprising the Governor-General and Governors, the Ministries, the Upper and Lower Houses of Parliament, and electoral activities: they do not attempt to cover the expenditure on Commonwealth and State administration generally.

Comparison between individual items should be made with caution because of differences in accounting and presentation.

The following statement shows this expenditure for the Commonwealth and for each State, as well as the cost per head of population, for the year ended 30th June, 1956. In order to avoid incorrect conclusions as to the cost of the Governor-General's or Governor's establishment, it may be pointed out that a very large part of the expenditure (with the exception of the item "Governor's salary") under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, and carried out at the request of the Government.

### COST OF PARLIAMENTARY GOVERNMENT, 1955-56.

(£)

	<del></del>		<u> </u>					
Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
1. Governor-General or Governor(a)—								1
Governor's salary	10,000	6,408	6,000 7.495					
Other salaries Other expenses, including main-	12,775	23,917	7,493	10,026	6,961	4,245	18,069	83,488
tenance of house and grounds		12,802						214,849
Total	128,919	43,127	55,143	30,710	27,118	32,638	31,075	348,730
2. Ministry—	Į į		1	ł	i	1		}
Salaries of Ministers	66,129	52,270		41,049	30,019	13,430	8,700	232,802
Travelling expenses Other	13,932 172	(b) 1,695	1,008	(b) (b)	(b) (b)	2,415 7,783	5,109 14,057	22,464 23,707
Total	80.233	53,965	22,213		30.019	23,628		
	-50,440						1 1,000	1
3. Parliament—					İ			
A. Upper House: President and Chairman of	1		<b>!</b>	1	1	ļ	ł	i
Committees	2,900	3,600	1,250		2,800		35831	389,543
Allowance to members	139,386 9,750	27,894 16,968	75,479 (d)	1	30,950 1,644		,,	,
Railway passes(c)	e 12,278	10,900	(4)	::		(d)	l	12,278
Postage for members	3,996				240	1,199		5,435
B. Lower House: Speaker and Chairman of					Ì	1	1	
Speaker and Chairman of Committees	2,900	4,783	1,250	5,940	4,588	3,917	2 0000	000.00
Allowance to members	281,766	147,742	147,223	153,084	63,151	112,658	المحددة ع	
Railway passes (c) Other travelling expenses	21,640 e 28,147	32,001 1,600	(f)9,000	11,434	3,205	13,109 (f)1,411	1,891	92,280 45,436
Postage for members	7,949	9,045		8,180	750	1,942	::	27,866
C. Both Houses:				]	1	j	1	
Government contribution to Members' Superannuation						ŀ		
Fund	19,912	g 5,976	15,587	7,266	7,676		]	56,417
Printing—				10 207	0.022	10.264		126 406
Hansard Other	65,436 52,475	10,657	19,889 15,586					126,486
Reporting Staff—	'			<b>1</b>	1 1		ĺ .	l í
Salaries	60,939	26,188 329	22,751 420	8,140 192		20,016 268		160,860
Library—	ı '	32,7		ļ	l	!	1	
Salaries	36,407	14,483	7,690	5,144	3,900 1,301	100 434		67,724
Contingencies	13,853 300,974	3,393 110,182	2,000 61,939		28,098			23,619 579,43 <b>5</b>
	h173225	12,585	7,804	8,663	12,047	783		216,392
D. Miscellaneous:	1			ľ				
Fuel, light, heat, power, and water	3,930	4,076	5,242	2,507	6,244	240	1	
Posts, telegraphs, telephones	26,655	9,803	542	1,663	2,635	864		364,732
Furniture, stores and stationery Other	16,415 i157,802	8,748 29,015	5,348 8,459	2,224 7,842	40,300	748 (j) 8,356	1,.05	50.,752
Total		505,470	407,459	277,885	270,233	290,800	148.374	3,343,183
75.4		303,770	.07,105	271,000		=======		-,,
4. Electoral-	704 706	7.000	4 500	16 900	22.400	22 000	5.036	467 700
Salaries Cost of elections, contingencies,	384,796	7,998	4,798	16,802	23,499	23,890	5,926	467,709
etc	447,210		84,012	96,965	21,196	71,551	8,953	
Toral	832,006	137,831	88,810	113,767	44,695	95,441	14,879	1,327,429
5. Royal Commissions, Select Com-	1							
mittees, etc.	48,126	2,360	13,315	11,104	428	2,020	2,746	80,099
	450000				370		334040	E 250 41 1
Grand Total	2532246	742,753	586,940	474,515	372,493	444,527	224,940	5,378,414
Cost per head of population	5s. 5d.	4s. 3d.	4s. 7d.	7s. 0d.	8s. 11d.	13s. 3d.	14s. 1d.	11s.7d.

<sup>(</sup>a) Includes Executive Council except in Tasmania, where duties are performed by Chief Secretary's Department. (b) Not available separately. (c) Actual amounts paid to the respective Railway Departments, except in New South Wales and Western Australia, where the amounts shown represent the value of railway passes as supplied by the Railway Departments. (d) Included with Lower House. (e) While in Canberra. See also (h). (f) Both Houses. (g) Lower House only. (h) Conveyance of Members of Parliament and others not elsewhere included. (f) Includes maintenance of Ministers' and Members' rooms, £70,850, and additions, new works, buildings, etc., £39,446. (j) Includes Ex-Ministers' and Ex-Members' Life Passes (Rail), £2,714.

Figures for total cost and cost per head during each of the years 1948-49 to 1955-56 are shown in the next table.

### COST OF PARLIAMENTARY GOVERNMENT.

Year.	C'wealth.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
				OTAL. (£.)				
1948–49 1949–50 1950–51 1951–52 1952–53 1953–54 1954–55 1955–56	903,853 1,418,532 11,624,998 1,853,709 2,089,968 2,072,757 2,007,013 2,532,246	1	266,559 361,387 303,417 407,278 474,731 419,261 535,939 586,940	201,873 248,174 246,941 298,401 349,262 452,527 348,458 474,515	145,698 174,240 181,758 215,673 254,147 290,110 281,351 372,493	181,227 213,611 212,933 294,441 292,289 298,426 320,572 444,527	113,643 112,615 117,208 156,982 161,383 175,525 189,699 224,940	2,180,236 2,956,514 3,118,065 3,734,508 4,301,726 4,354,111 4,393,671 5,378,414
		PE		of Popul	ATION.			
1948-49 1949-50 1950-51 1951-52 1952-53 1953-54 1954-55 1955-56	2 4 3 6 3 11 4 4 4 9 4 8 4 5 5 5	2 5 2 9 2 8 3 1 4 0 3 9 4 1 4 3	2 6 3 4 2 8 3 6 4 0 3 6 4 7	3 6 4 3 4 2 4 10 5 7 7 0 5 3 7 0	4. 4 5. 0 5. 0 5. 10 6. 8 7. 5 7. 0 8.11	6-11 7-10, 7-6 10-0, 9-7 9-6, 9-11 13-3	8 6 8 2 8 3 10 8 10 8 11 4 12 1	5 7 7 4 7 6 8 9 9 10 9 9 9 8 11 7

# § 6. Government Employees.

Information concerning the number of employees of Australian Government Authorities may be found in Chapter VI.—Labour, Wages and Prices.

### CHAPTER IV.

### LAND TENURE AND SETTLEMENT.

### § 1. Introduction.

For descriptions of the land tenure systems of the several States and the internal Territories see Official Year Book No. 4 (pp. 235-333) and subsequent issues, in particular No. 22 (pp. 133-195). Conspectuses of land legislation in force and of the systems of land tenure in the several States have appeared in issues up to and including No. 38, but only a brief summary is given below.

The land legislation in force in the several States may be classified broadly under five major types of land enactments, i.e., Crown Lands Acts, Closer Settlement Acts, Mining Acts, Returned Service Personnel Settlement Acts, and Advances to Settlers Acts, but within the groupings there is, of course, a wide variety of individual Acts. In the two internal Territories, the legislation relating to lands is embodied in various ordinances.

In each of the States, there is a Lands Department under the direction of a Minister who is charged generally with the administration of the Acts relating to the alienation, occupation and management of Crown Lands. In the Northern Territory, the Administrator, under the control of the Minister for Territories, is charged with the general administration of the Lands Ordinance and of Crown lands in the Northern Territory. In the Australian Capital Territory, the administration of the Leases Ordinances is in the hands of the Department of the Interior.

In each of the States, there is also a Mines Department which is empowered under the several Acts relating to mining to grant leases and licences of Crown lands for mining and allied purposes. In the Northern Territory, there are several ordinances relative to mining.

As with land legislation, land tenures may be classified under broad headings; these indicate the nature of the tenure and comprise:—Free Grants and Reservations, Unconditional Purchases of Freehold, Conditional Purchases of Freehold, Leases and Licences under Land Acts, Closer Settlement, Leases and Licences under Mining Acts, and Settlement of Returned Service Personnel. For details of the various particular forms of land tenure within these seven groups in each State see Official Year Book No. 38 (pp. 114–116) and earlier issues. Descriptions of the systems operating in the two internal Territories may be found on pp. 329–30 and 338 of Official Year Book No. 39.

The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter.

### § 2. Free Grants and Reservations.

- 1. New South Wales.—(i) Free Grants. Crown lands may, by notification in the Gazette, be dedicated for public purposes and be granted therefor in fee simple. Such lands may be placed under the care and management of trustees, not less than three nor more than seven in number, appointed by the Minister.
- (ii) Reservations. Temporary reservations of Crown lands from sale or lease may be made by the Minister.
- (iii) Areas Granted and Reserved. During 1955-56, 12,331 acres were permanently reserved or dedicated for miscellaneous recreation reserves and similar purposes. The areas reserved at 30th June, 1956 were as follows:—For travelling stock, 5,304,318 acres; pending classification and survey, 4,501,183 acres; forest reserves, 2,300,456 acres; water and camping reserves, 864,275 acres; mining reserves, 1,114,750 acres; for recreation and parks, 467,898 acres; other reserves, 6,708,721 acres; total, 21,261,601 acres.
- Victoria.—(i) Free Grants. The Governor may grant, convey or otherwise dispose of Crown lands for public purposes.
- (ii) Reservations. The Governor may temporarily or permanently reserve from sale, .ease or licence any Crown lands required for public purposes.

- (iii) Areas Granted and Reserved. During 1956, 70 acres were granted without purchase. The areas both temporarily and permanently reserved at the end of 1956 were as follows:—For roads, 1,666,768 acres; water reserves, 317,724 acres; agricultural colleges, etc., 8,434 acres; forest and timber reserves, 5,677,117 acres; reserves in the mallee, 410,000 acres; other reserves, 554,098 acres; total, 8,634,141 acres.
- (iv) Revoking of Agricultural Reservations. Under the Agricultural Colleges Act 1944, the land on which the agricultural colleges and experimental farms at Longerenong (2,386 acres) and Dookie (6,048 acres) are established is permanently reserved as sites for the purposes of State Agricultural Colleges and the remainder of the lands previously reserved has become unalienated for treatment as such under the Lands Acts.
- 3. Queensland.—(i) Free Grants. The Governor may grant in trust any Crown land which is or may be required for public purposes. Under the Irrigation Acts, land to be used for the purpose of any undertaking under the Acts may be vested in fee simple in the Commissioner of Irrigation and Water Supply.
- (ii) Reservations. The Governor may reserve from sale or lease, either temporarily or permanently, any Crown land which is or may be required for public purposes. Reserved lands may be placed under the control of trustees who are empowered to lease them for not more than 21 years with the approval of the Minister.

Under the State Forests and National Parks Acts, the Governor may permanently reserve any Crown lands and declare them to be a State Forest or a National Park.

- (iii) Areas Granted and Reserved. During 1956, no areas were granted in fee simple without payment, 337,091 acres were set apart as reserves and reserves cancelled totalled 223,520 acres. The areas reserved, including roads, at the end of 1956 were as follows:—Timber reserves, 3,082,917 acres; for State forests and national parks, 5,764,065 acres; aboriginal reserves, 7,848,825 acres; for streets, surveyed roads and stock routes, 3,688,413 acres; general reserves, 5,682,420 acres; total, 26,066,640 acres.
- 4. South Australia.—(i) Free Grants. The Governor may dedicate Crown lands for any public purpose and grant the fee simple of such lands, with the exception of foreshores and lands for quays, wharves or landing-places, which are inalienable in fee simple from the Crown.
- (ii) Reservations. The Governor may reserve Crown lands for the use and benefit of aboriginals, military defence, forest reserves, railway stations, park lands or any other purpose that he may think fit.
- (iii) Areas Granted and Reserved. During 1955-56, free grants were issued for an area of 110 acres and reserves comprising 503 acres were proclaimed. At 30th June, 1956, the total area of surveyed roads, railways and other reserves was 21,867,221 acres, including 18,787,900 acres set apart as aboriginal reserves.
- 5. Western Australia.—(i) Free Grants. The Governor may dispose of, in such manner as for the public interest may seem best, any lands vested in the Crown for public purposes, and may grant the fee simple of any reserve to secure the use thereof for the purpose for which such reserve was made.
- (ii) Reservations. The Governor may reserve any lands vested in the Crown for public purposes. Areas not immediately required may be leased by the Governor for periods up to 10 years. Reserves may be placed under the control of a local authority or trustees, with power to lease them for a period not exceeding 21 years, or may be leased for 99 years. Temporary reserves may also be proclaimed.
- (iii) Areas Granted or Reserved. During the year ended 30th June, 1956, approximately 404,530 acres were reserved for various purposes. At 30th June, 1956 the total area reserved was 55,628,760 acres, comprising State forests, 3,891,687 acres, timber reserves, 1,821,271 acres and other reserves 49,915,802 acres.
- 6. Tasmania.—(i) Free Grants. No mention is made in the Crown Lands Act respecting free grants of land, and it is expressly stated that no lands may be disposed of as sites for religious purposes except by way of sale under the Act. Under the Returned Soldiers' Settlement Act 1916, returned soldiers who applied prior to 31st March, 1922 were eligible to receive free grants of Crown land not exceeding £100 each in value, but these grants were conditional on the land being adequately improved.
- (ii) Reservations. The Governor in Council may except from sale or lease, and reserve to Her Majesty any Crown land for public purposes, and vest for such term as he thinks fit any land so reserved in any person or corporate body. Any breach or non-fulfilment of the conditions upon which such land is reserved renders it liable to forfeiture. A school allotment, not exceeding 5 acres in area, may also be reserved.

- (iii) Areas Granted or Reserved. The total area reserved at 30th June, 1956 was 4,129,666 acres, excluding 21,485 acres of land occupied by Commonwealth and State Departments.
- 7. Northern Territory.—(i) Reservations. The Governor-General may resume for public purposes any Crown lands not subject to any right of, or contract for, purchase, and may reserve, for the purpose for which they are resumed, the whole or any portion of the lands so resumed
  - (ii) Areas Reserved. The total area of reserves at 30th June, 1956 was 47,927,661 acres.
- 8. Summary.—The following table shows the total areas reserved in each State, and the grand totals, for the years 1951 to 1955:—

# AREAS RESERVED. ('000 Acres.)

	N.S.W.	Victoria.	Q'ld. (b)	S. Aust.	W. Aust.	Tas. (a)	Nor. Terr. (a)	Total.
1952	 20,158	8,429	25,538	21,252	52,014	4,068	46,159	177,618
1953	 20,319	8,429	25,797	21,265	52,238	4,069	47,001	179,118
1954	 20,344	8,451	25,873	21,336	52,613	4,070	47,032	179,719
1955	 20,865	8,631	25,939	21,863	55,224	4,129	47,544	184,195
1956	 21,261	8,634	26,067	21.867	55,629	4.130	47.928	185,516

(a) At 30th June.

(b) At 31st December.

#### § 3. Unconditional Purchases of Freehold.

- 1. New South Wales.—(i) Auction Purchases, Crown lands, not exceeding in the aggregate 200,000 acres in any one year, may be sold by public auction in areas not exceeding half-an-acre for town lands, 20 acres for suburban lands, and 640 acres for country lands, at the minimum upset price of £8, £2 10s., and 15s. per acre respectively. At least 10 per cent. of the purchase-money must be paid at the time of sale, and the balance within three months, or the Minister may allow the payment of such balance to be deferred for a period not exceeding ten years, 4 per cent. interest being charged. Town blocks in irrigation areas may also be sold by auction.
- (ii) After-auction Purchases. In certain cases, land offered at auction and not sold may be purchased at the upset price. A deposit in accordance with the terms and conditions under which the land was previously offered must be lodged, and, if the application be approved by the Minister, the balance of purchase money is payable as required by the specified terms and conditions.
- (iii) Special Purchases. Under certain circumstances, land may be sold in fee simple, the purchaser paying the cost of survey and of reports thereon, in addition to the purchasemoney as determined by the local Land Board.
- (iv) Improvement Purchases. The owner of improvements in land in authorized occupation by residence under any Mining Act or the Western Lands Act of land within a gold-field or mineral field may purchase such land without competition at a price determined by the local Land Board, but at not less than £8 per acre for town lands or £2 10s. per acre for other lands. The area must not exceed ‡ acre within a town or village, or two acres elsewhere, and no person may purchase more than one such area within three miles of a similar prior purchase by him.
- (v) Road Purchases. Land from roads that are closed may, with certain exceptions, be sold to the owners of adjoining lands at a value determined by the local Land Board.
- (vi) Areas Sold. During the year ended 30th June, 1956, the total area sold was 2,004 acres. of which two acres were sold by auction and two acres as after auction purchases, while 29 acres were sold as improvement purchases, 1927 acres as road purchases and 44 acres as special purchases.

- 2. Victoria.—(i) General. Lands, not exceeding 100,000 acres in any one year, specially classed for sale by auction, may be sold by auction in fee simple at an upset price of not. less than £1 per acre. The purchaser must pay the survey fee at the time of the sale, together with a deposit of 12½ per cent. of the whole price; the residue is payable in equal halfyearly instalments with interest. Any unsold land in a city, town or borough area, areas specially classed for sale, isolated pieces of land not exceeding 150 acres in area, and sites for churches or charitable purposes, if not more than three acres in extent, may be sold by auction on the same terms. Swamp or reclaimed lands may also be sold by auction, subject to the condition that the owner keeps open all drains, etc., thereon.
- (ii) Areas Sold at Auction and by Special Sales. During 1956, a total of 2,653 acres was disposed of under this tenure, 2,412 acres being country lands and 241 acres town and suburban lands.
- 3. Queensland.—(i) General. From 1917 to 1929, the law precluded land being made available for any class of selection which gave the selector the right to acquire the freehold title. Amending legislation giving power to make land available under freehold tenures was passed in 1929, but this provision was repealed by the Act of 1932.
  - (ii) Areas Sold, etc. One unconditional selection was made freehold during 1956.
- 4. South Australia.—(i) Sales by Auction. The following lands may be sold by auction for cash:—(a) special blocks; (b) Crown lands which have been offered for lease and not taken up within two years; (c) town lands; and (d) suburban lands which the Governor excepts from the operations of the Land Board. A purchaser must pay 20 per cent. of the purchase money in cash, and the balance within one month or within such extended time as the Commissioner of Crown Lands may allow. Town lands may be sold subject to the condition that they cannot be transferred or mortgaged within six years without the consent of the Commissioner. If the Commissioner of Crown Lands so determines, town lands may also be offered at auction on terms that the buyer may at his option purchase the lands for cash or on agreement for sale and purchase.
- (ii) Areas Sold, etc. During the year ended 30th June, 1956, the area of town lands and special blocks sold by auction was 19 acres. In addition, 72,591 acres were sold at fixed prices, and purchases on credit of 22,273 acres were completed, making a total of 94,883 acres.
- 5. Western Australia.—(i) Sales by Auction. Town, suburban and village lands may be sold by auction after being surveyed into lots and notified in the Gazette. Ten per cent. of the purchase-money must be paid in cash, together with the value of any improvements, and the balance in four equal quarterly instalments. Suburban land must be fenced within two years, and no Crown grant may be issued until the land is fenced.
- (ii) Areas Sold. During the year ended 30th June, 1956, the area of town and suburban allotments sold by auction was 540 acres in 445 allotments.
- 6. Tasmania.—(i) Sales by Auction. Town lands may be sold by auction.
  (ii) After-auction Sales. Town lands, not within five miles of any city, which, after having been offered at auction, have not been sold, may be sold at the upset price by private contract.
- (iii) Sales of Land in Mining Towns. Any person being the holder of a residence licence or business licence who shall be in lawful occupation of any residence area or business area, and who shall be the owner of buildings and permanent improvements upon such land of a value equal to or greater than the upset price of such area, shall be entitled to purchase such area at the upset price at any time prior to the day on which such area is to be offered for sale as advertised. The upset price for such area shall not be less than £10, excluding the value of improvements, cost of survey, and of grant deed. The area which may be so purchased may, with the consent of the Commissioner, exceed one-quarter of an acre, but shall not in any case exceed one-half of an acre.

### § 4. Conditional Purchases of Freehold.

- 1. General.—The various methods of obtaining Crown lands by conditional purchase in the several States are given in some detail in preceding issues of the Official Year Book (see No. 22, pp. 141-9).
- 2. New South Wales.—At 30th June, 1956, the total number of incomplete conditional purchases in existence was 35,161 covering an area of 11,565,508 acres. During 1955-56, applications received for conditional purchases numbered eleven, of which six, with an

area of 1,074 acres, were confirmed; during the year, deeds were issued for 486,948 acres, bringing the total acreage for which deeds had been issued to 35,051,189 at the end of the year. These figures exclude conversions from other tenures—609 comprising 218,792 acres.

- 3. Victoria.—The total area purchased conditionally in 1956 was 4,901 acres, all with residence. The number of selectors was 25. There were no selections in the Mallee in 1956.
- 4. Queensland.—The following selections were made freehold during 1956:—Agricultural farms, 79,340 acres, prickly pear selections, 154,332 acres, prickly pear development selections, 20,543 acres, and unconditional selections, 634 acres.
- 5. South Australia.—During 1955-56, 1,792 acres were allotted under agreements to purchase, comprising surplus lands, 1,458 acres, Pinnaroo Railway lands, 10 acres, Eyre Peninsula Land Purchase Act lands, one acre, and other Crown lands, 323 acres.
- 6. Western Australia.—During the year ended 30th June, 1956, the number of holdings conditionally alienated was 592, the total area involved being 876,405 acres, comprising conditional purchases by deferred payments, 875,921 acres and free homestead farms, 484 acres. Under the heading "deferred payments", are included conditional purchases of grazing lands.
- In addition, Crown grants were issued during 1955-56 for the following selections, the prescribed conditions having been complied with:—Free homestead farms, 10,679 acres and conditional purchases, 487,205 acres.
- 7. Tasmania.—During 1955-56, Crown grants were issued for 22,655 acres. The total area sold conditionally was 2,356 acres, comprising selections for purchase, 2,096 acres, and town and suburban allotments, 260 acres. The numbers of applications confirmed were 45 for country selections and 93 for town and suburban allotments.

### § 5. Leases and Licences under Land Acts.

- 1. General.—Information regarding the methods of obtaining leases and licences of Crown lands in the several States and Territories was given in earlier issues of the Official Year Book (see No. 22, pp. 149-63).
- New South Wales.—The following table shows the areas held under various descriptions of leases and licences under the control of the Department of Lands, the Water Conservation and Irrigation Commission and the Western Lands Commission at 30th June, 1956.

AREAS OCCUPIED UNDER LEASE OR LICENCE AT 30th JUNE, 1956, NEW SOUTH WALES.(a)

(Acres.)

Particulars.	Area.	Particulars.	Area.
Crown Lands or Closer Settlement Acts	' <del></del>	Crown Lands or Closer Settlement	
Occupation licences	551,189	Suburban holdings	53,045
Conditional leases	10.827.340	Group purchase leases	222,434
Conditional purchase leases	124,870	Irrigation areas	174,131
Settlement leases	2,596,739	Other leases(b)	165.543
Improvement leases	27,898	1	1
Annual leases	399,521	Western Lands Act.	1
Scrub and Snow leases	614,623	Conditional leases	121,596
Special leases	1,359,772	Perpetual leases	66,748,018
Permissive occupancies	1,870,760	Other long-term leases	10,313,634
Prickly pear leases	92,083	Permissive occupancies	290,968
Crown leases	7,063,561	Leases being issued—occupation	,
Homestead farms		licences	110,285
Homestead selections and grants	1,691,768	Preferential occupation licences	147,127
Closer settlement leases			
Settlement purchase leases	1,044,547	Total	114,230,94

<sup>(</sup>a) Excludes mining leases and permits; forest leases and occupation permits. (b) Includes leases outside irrigation areas, controlled by the Water Conservation and Irrigation Commission—146,446 acres.

<sup>3.</sup> Victoria.—The area of Crown lands occupied under leases and licences in the year 1956 was as follows:—Grazing licences—other than Mallee, 4,105,738 acres; Mallee, 1,956,122 acres; auriferous lands licences, 15,866 acres; perpetual leases—other than Mallee, 17,819 acres; Mallee, 41,852 acres; swamp lands leases, 3,978 acres; agricultural college lands, 33,917 acres; total, 6,175,292 acres.

- 4. Queensland.—The area occupied under lease or licence, excluding mining leases, at the end of 1956 was as follows:—Pastoral leases, 249,710,360 acres; occupation licences, 12,739,640 acres; grazing selections and settlement farm leases, 90,340,359 acres; special purpose leases—Crown land, 478,229 acres; reserves, 1,767,964 acres; perpetual lease (including prickly pear) selections, 6,813,955 acres; auction perpetual leases, 38,983 acres; forest grazing leases (reserves), 1,203,760 acres; total, 363,093,250 acres.
- 5. South Australia.—The total area, including repurchased lands held under lease or licence except mining lease and licence, at 30th June, 1956 was 139,639,677 acres of which pastoral leases, 117,084,712 acres, constituted the major proportion.
- 6. Western Australia.—At 30th June, 1956, the total area held under lease or licence issued by the Lands Department amounted to 212,379,595 acres, of which 208,003,368 acres were under pastoral lease.
- 7. Tasmania.—Crown lands leased at 30th June, 1956, for other than mining purposes amounted to 2,465,835 acres of which 2,019,762 acres were leased for pastoral purposes.
- 8. Northern Territory.—At 30th June, 1956, the total area under lease, etc., was 177,020,718 acres of which pastoral leases accounted for 139,289,161 acres and other leases, licences and mission stations, 37,731,557 acres.
- 9. Australian Capital Territory.—Under the terms of the City Area Leases Ordinance 1936–1951, each block is leased for a period of 99 years at a rental of five per cent. per annum of the unimproved capital value as assessed by the Commonwealth. The number of leases granted under this Ordinance to 30th June, 1956 (excluding leases surrendered and determined) was 3,164 representing an unimproved value of £1,188,845. Auction sales of city leaseholds are described in Official Year Book No. 22, p. 599. During the year ended 30th June, 1956, 478 leases were granted for residential purposes and 67 for business purposes.

Thirteen leases under the Church Lands Leases Ordinance 1924–1932, which require the lesses to submit a definite building programme within a specified period, and one lease under the Church of England Lands Ordinance 1926, have been granted for church purposes. A further 30 leases have been granted for either church or scholastic purposes under the various Ordinances.

The total area held under lease and licence for grazing, agricultural, dairying and other purposes (including the Jervis Bay area) amounted to 314,189 acres in 1956.

10. Summary.—The following table shows particulars of the land held in each State under lease or licence for purposes other than mining and forestry, the total leased or licensed land in the Territories, and the grand totals, for the years 1952 to 1956.

AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY.

#### ('000 Acres.)

Year.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (a)	N.T. ( <u>a) (c)</u>	A.C.T. (a)(c)(d)	Total.
1952 1953 1954 1955 1956	114,051 114,913 114,452 114,311 114,231	7,501 6,367 6,502	363,870	139,509 137,867 137,461	202,761 202,754 204,782	2,712 2,576 2,487	178,135 180,015 180,020 181,165 177,021	323 323 321	1,002,129 1,009,328 1,006,016 1,010,899 1,015,320

(a) At 30th June. (d) Includes Jervis Bay area.

(b) At 31st December.

(c) Leases and licences for all purposes.

### § 6. Leases and Licences under Mining Acts.

- 1. General.—Information regarding the various forms of leases and licences under Mining Acts in the several States and the Northern Territory is given in preceding issues of the Official Year Book (see No. 22, pp. 170-7). The following paragraphs contain particulars of operations during the year 1955-56 or 1956 and of areas occupied at the end of the year, under the various forms of lease, licence, etc., issued for mining purposes.
- 2. New South Wales.—At 30th June, 1956, total areas occupied under Mining Acts were as follows:—Gold-mining, 2,642 acres; mining for other minerals, 202,089 acres; authorities to prospect, 16,684,834 acres; other purposes, 7,842 acres; total, 16,897,407 acres.

- 3. Victoria.—During 1956, there were 113 leases and licences granted under Mining Acts, including 16 for gold-mining. Areas occupied at the end of 1956 were as follows:—Gold-mining, 13,958 acres; petroleum prospecting, 3,860,794 acres; coal, 12,297 acres; uranium and radio active minerals, 5,858 acres; other purposes, 5,610 acres; total, 3,898,517 acres.
- 4. Queensland.—During 1956, there were 3,258 miners' rights and three business licences issued. Areas taken up during 1956 totalled 39,180 acres, of which 25,332 acres were for mining for minerals other than gold. Total areas occupied at the end of 1956 were as follows:—Gold-mining, 2,507 acres; mining for other minerals, 135,698 acres; miners' homesteads, 425,699 acres; petroleum prospecting, 192,000 acres; coal prospecting, 6,480 acres; total, 762,384 acres. The area of land held under lease only was 563,904 acres.
- 5. South Australia.—Areas taken up under Mining Acts during 1955-56 totalled 6,481,039 acres, including claims, 10,644 acres, mineral and miscellaneous leases, 6,260 acres, gold leases 135 acres, and oil licences, 6,464,000 acres. Total areas occupied at 30th June, 1956 were as follows:—Gold-mining 670 acres; other mineral and miscellaneous leases, 755,648 acres; claims, 14,276 acres; oil licences, 141,944,000 acres; other purposes, 24 acres; total, 142,714,618 acres.
- 6. Western Australia.—Areas taken up during 1956 under Mining Acts totalled 21,639 acres, including gold-mining, 10,482 acres, and mining for other minerals, 10,911 acres. Total areas occupied at the end of 1956 were as follows:—Gold-mining, 28,766 acres; mining for other minerals, 85,441 acres; other purposes, 37,709 acres; total, 151,916 acres.
- 7. Tasmania.—During 1956, the number of leases issued covered 3,781 acres, including coal-mining, 1,833 acres and tin-mining, 206 acres. Total areas occupied at the end of 1956 were as follows:—Gold-mining, 617 acres; coal-mining, 8,947 acres; mining for other minerals, 18,655 acres; other purposes, 4,959 acres; total, 33,178 acres.
- 8. Northern Territory.—At 30th June, 1956, the number and acreage of holdings under mining leases and tenements were as follows:—Gold-mining leases, 313 (5,359 acres); other minerals leases, 433 (11,134 acres); gold and tin dredging areas, 3 (760 acres); gold and other mineral prospecting areas, 15 (280 acres); business and residence areas, 189 (118 acres); other purposes, 156 (8,975 acres); total, 1,109 (26,626 acres). In addition, 38 authorities to prospect aggregating 18,780 square miles were held at 30th June, 1956.
- 9. Summary.—(a) Mining Leases etc., (other than oil prospecting licences). The following table shows the total areas occupied under Mining Acts in each State at the end of the years 1952 to 1956:—

### AREAS OCCUPIED UNDER MINING ACTS.

(Acres.)

Ye	аг.	N S.W.	Victoria.	Q'land. (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania.	Total. (d)
1952		477,873	40,869	520,344	100,094	151,376	32,150	1,322,70
1953	٠.	355,868	39,917	528,821	44,742	148,932	31,398	1,149,678
1954		13,053,930	97,041	545,469	775,650	166,378	30,059	14,668,52
1955		8,151,778	55,544	555,996	773,816	159,891	30,408	9,727,433
1956		13,924,407	37,723	570,384	770,618	151,916	33,178	15,488,220

(a) Year ended 30th June. (b) Excludes lands held under miners' rights and dredging claims (c) Excludes holdings under miners' rights. (d) Excludes Northern Territory.

(b) Oil Prospecting Licences. The following table shows for each year from 1952 to 1956 the areas occupied in each State under authorities to prospect or explore for petroleum or other oils.

AREAS OCCUPIED UNDER AUTHORITIES TO PROSPECT FOR PETROLEUM. ('000 Acres,)

	ear.	N.S.W. (a)	Victoria.	Q'land.	S. Aust. (a)	W. Aust.	Tasmania.	Total.
1952		293	800,	320	640	251,808		253,861
1953		2,016	918	512		78,472		81,918
1954		1,024	2,881	1,212	155,968	292,958		454,043
1955		13,984	3,851	576	136,480	107,654		262,545
1956		32,237	3,861	192	141,944	384		178,618

### § 7. Closer Settlement.

- 1. General.—Particulars regarding the methods of acquisition and disposal of land for closer settlement in the several States are given in issues of the Official Year Book up to No. 22 (see No. 22, pp. 163-9) and the results of the operations of the several schemes have appeared in subsequent issues in considerable detail. In more recent years, however, the amalgamation, in some States, of closer settlement records with those of other authorities has made it impossible to obtain up-to-date figures for those States and for Australia as a whole, although aggregations of State totals as at the latest dates available have been published as rough approximations intended to convey some idea of the extent of the schemes throughout Australia. Particulars in this issue are restricted to a summary only of the position in each State at the latest date available.
- 2. New South Wales.—From the inception of closer settlement in 1905 to 30th June, 1956, 2,567 estates totalling 6,907,264 acres had been purchased by the Crown at a cost of £32,321,769 for purposes of closer settlement of civilians and returned service personnel.

Closer settlement is now being effected entirely under perpetual leasehold tenure (closer settlement leases).

- 3. Victoria.—The Closer Settlement Commission was abolished as from 31st December, 1938, and land settlement was placed under the control of the Department of Lands and Survey. On 31st March, 1939, all Closer Settlement and Discharged Soldiers' accounts were amalgamated, the settlers' accounts adjusted and the new debt made payable over an extended period. Particulars of the operations under the provisions of the Closer Settlement Acts to 30th June, 1938, the latest date for which separate details are available, were given in earlier issues of the Official Year Book, (see No. 42, p. 98).
- 4. Queensland.—Separate records relating to the closer settlement of re-purchased land are no longer kept by the Land Administration Board, and the operations under this heading are now included with "Leases and Licences under Land Acts." Details of the position at 31st December, 1934, the latest date for which the information is available, were given in earlier issues of the Official Year Book, (see No. 42, page 98).
- 5. South Australia.—The total area re-purchased for closer settlement at 30th June, 1956 was 948,885 acres, at a cost of £2,865,200. Included in these figures are 51,872 acres purchased for £185,285, and afterwards set apart for returned service personnel, 3,214 acres reserved for forest and waterworks purposes the purchase-money being £16,185, and also 26,563 acres of swamp and other lands, which were purchased for £111,850, in connexion with reclamation of swamp-lands on the River Murray. Of the total area, 818,252 acres have been allotted to 2,795 persons.
- 6. Western Australia.—The total area acquired for closer settlement up to 30th June, 1956 was 3,059,205 acres, costing £4,390,872. Particulars of operations under the Act for the year ended 30th June, 1956 are as follows:—Area selected during the year, 98,258 acres; number of farms, etc., allotted to date, 2,481; total area occupied to date, 2,072,974 acres; area set aside for roads, reserves, etc., 20,972 acres; balance available for selection, 965,259 acres.
- 7. Tasmania.—Up to 30th June, 1956, 38 areas had been opened up for closer settlement, the total purchase-money paid by the Government being £371,548 and the total area acquired amounting to 104,554 acres, including 12,149 acres of Crown lands. The number of farms occupied at 30th June, 1956 was 81.

#### § 8. Settlement of Returned Service Personnel.

1. War Service Land Settlement Scheme.—(i) General. The War Service Land Settlement Scheme provides for the settlement on the land of eligible ex-servicemen from the 1939–45 War and the Korea-Malaya operations. Finance for the scheme in South Australia, Western Australia and Tasmania and for certain aspects of the Scheme in other States is provided through annual States Grants (War Service Land Settlement) Acts. The States Grants (War Service Land Settlement) Acts. The States Grants (War Service Land Settlement) Act 1952 provides that the responsible Commonwealth Minister may make grants of financial assistance to the States under such terms as he may from time to time determine.

New South Wales, Victoria and Queensland agreed, at the inception of the Scheme, to find their own finance for the acquisition and development of properties. In 1954, Queensland abandoned the Scheme and made available for general settlement all unallotted lands held under it.

In an effort to hasten the settlement of qualified applicants in New South Wales and Victoria, the Commonwealth has made available to those States repayable loans on the basis of £1 for each £2 spent by the State on War Service Land Settlement, with a maximum of £2 million in any one year.

This offer is available for a period of three years from 1st July, 1955.

For more detailed information about the agreements and the methods of operation and administration of the Scheme, *see* Official Year Book No. 37, pp. 113-8. Issue No. 39 contains a brief general description of the Scheme.

(ii) Summary of Operations to 30th June, 1957. The tables hereunder show the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1956 and 30th June, 1957.

# WAR SERVICE LAND SETTLEMENT.

SUMMARY TO 30TH JUNE, 1956.

State.	Land Acquired.	Farms A	allotted.	Farms in Course of Development.		
	Acres.	No.	Acres.	No.	Acres.	
New South Wales—(a)	-		1		1	
Western Lands	6,170,989	215	6,170,989			
Subdivision (Irrigation)	175,714	306	175,714			
" (Dry)	975,633	873	975,633			
Promotions (Irrigation)	99,623	162	99,623			
" (Dry)	1,332,172	952	1,332,172	••	••	
Total, New South Wales	8,754,131	2,508	8,754,131	••		
Victoria	993,852	2,502	955,880	(b)	37,972	
Queensland	398,524	470	218,640		(c) 179,884	
South Australia	614,605	718	343,433	(b)	271,172	
Western Australia (d)	2,128,675	692	1,130,015	(b)	998,660	
Tasmania	431,202	231	130,621	(b)	300,581	
Total	13,320,989	7,121	11,532,720	(b)	1,788,269	

### SUMMARY TO 30TH JUNE, 1957.

State.	Land Acquired.	Farms A	Allotted.	Farms in Course of Development.		
	Acres.	No.	Acres.	No.	Acres.	
New South Wales—(a)						
Western Lands	6,151,607	214	6,151,607			
Subdivision (Irrigation)	180,234	323	180,234			
" (Dry)	1,191,044	1,041	1,191,044			
Promotions (Irrigation)	86,444	130	86,444		1	
" (Dry)	1,416,556	1,209	1,416,556	• •	• •	
Total, New South Wales	9,025,885	2,917	9,025,885			
Victoria	1,154,329	2,728	1,035,999	313	(e) 118,330	
Queensland	398,524	470	218,640		(d) 179,884	
South Australia	682,269	804	395,092	229	287,177	
Western Australia(d)	2,110,014	791	1,331,565	290	778,449	
Tasmania	423,444	339	167,307	475	256,137	
Total	13,794,465	8;049	12,174,488	1,307	1,619,977	

<sup>(</sup>a) In New South Wales, properties are regarded by the State as being allotted at the date of acquisition. (b) Not available. (c) War Service Land Settlement was discontinued in 1954; unallotted lands were made available for general settlement. (d) Estimated. (e) To 31st May, 1957; during the period 1st June to 31st July, 1957, 43 acres of land were acquired and 25 farms totalling 5,523 acres were allotted.

(iii) Expenditure. The following tables show a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1956 and 30th June, 1957 respectively:—

WAR SERVICE LAND SETTLEMENT (1939-45 WAR AND KOREA/MALAYA OPERATIONS): COMMONWEALTH EXPENDITURE TO 30th JUNE, 1956.

(£.)

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land				2,384,269	3,408,613	1,383,833	7,176,715
provement of land				9.936.323	11.577,498	6.008.410	27,522,231
Special Loans	1,570,139	1,610,000					3,180,139
Commonwealth contribu- tions to excess cost over valuation	160,978	1,632,930	116,105	147,600	187,222	126,080	2,370,915
To provide credit facilities to settlers				2,491,341	7,618,743	1,486,159	11,596,243
For remission of settlers' rent and interest For payment of living allow-	279,108	105,794	35,231	90,190	220,344	59,990	790,657
ances to settlers	766,744	738,000	164,000	197,528	289,166	67.433	2,222,871
For operation and mainten- ance of irrigation projects	'			316,746		•	
Loss on advances		522	11,536	2,107		.,	47,281
Cost of administration of		i	, l				ĺ
credit facilities		:_ \	• • • • •	78,554			
Total	2,776,969	4,087,246	326,872	15,644,658	23,666,733	9,161,688	55,664,166

Repayments of expenditure to 30th June, 1956, on the acquisition, development and improvement of land amounted to £4,219,301, and on the provision of credit facilities to settlers to £4,979,062, so that the total expenditure was reduced by £9,198,363 to £46,465,803. In addition, miscellaneous receipts in South Australia, Western Australia and Tasmania to 30th June, 1956, amounted to £1,944,037.

WAR SERVICE LAND SETTLEMENT (1939-45 WAR AND KOREA/MALAYA OPERATIONS): COMMONWEALTH EXPENDITURE TO 30th JUNE, 1957.

(£.)

Advances to States.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Total.
For acquisition of land			•••	2,682,947	3,469,960	1,610,750	7,763,657
For development and improvement of land Special Loans	3,181,156	3,194,928		11,136,036	14,006,410	7,394,723	32,537,169 6,376,084
Commonwealth contribu- tions to excess cost over valuation	220,953	2,149,429	116,105	315,600	332,722	174,542	3,309,351
To provide credit facilities to settlers			••	2,896,073	9,023,628	2,007,426	13,927,127
rent and interest	321,562	120,555	35,398	112,622	249,124	72,890	912,151
For payment of living allow- ances to settlers	873,087	845,000	163,136	232,600	313,781	88,302	2,515,906
For operation and maintenance of irrigation projects  Loss on advances			18,560	390,174 2,107			
Cost of administration of credit facilities				99,972	375,662	39,359	514,993
Total	4,596,758	6,310,727	333,199	17,868,131	27,823,297	11,391,711	68,323,823

Repayments of expenditure to 30th June, 1957, on the acquisition, development and improvement of land amounted to £5,225,576, and on the provision of credit facilities to settlers to £6,177,956, so that the total expenditure was reduced by £11,403,532 to £56,920,291. In addition, miscellaneous receipts in South Australia, Western Australia and Tasmania to 30th June, 1957, amounted £2,256,789.

- 2. Loans and Allowances (Agricultural Occupations) Scheme.—(i) General. Full details of the measures taken to provide for the re-establishment of ex-servicemen in rural occupations were given in Official Year Book No. 37, pp. 117-8.
- (ii) Loans (Agricultural Occupations). The following tables show particulars for each State and certain Territories to 30th June, 1956 and 30th June, 1957 respectively:—

LOANS (AGRICULTURAL OCCUPATIONS): SUMMARY TO 30th JUNE, 1956.

	į f	Application	is.	Loa	ins Approv	Advanced Advanced by by		
State.	Re-	Ap-	Refused, With-	Gross	Net App	rovals.(a)	Common- wealth Treasury	Lending Autho- rities to
	ceived.	proved.	drawn or Not Yet Approved.	Amount.	Applica- tions.	Amount.	Lending Autho- rities.	Appli- cants. (b)
				£		£	£	£
New South Wales	7,767	6,298		4,951,862	5,481	4,247,978	2,660,000	4,271,291
Victoria	4,818	3,350			3,090			
Queensland	2,374	1,970						
South Australia	2,131	1,285						
Western Australia	3,198	2,288						
Tasmania	1,124	758						
Northern Territory	34	15	19	11,945		10,148		
New Guinea	16	?	9	7,272		6,772	6,772	6,772
Norfolk Island	3	1		1,000			··	
Total	21,465	15,972	5,493	11,873,759	14,296	10,608,503	6,203,770	10,131,601

<sup>(</sup>a) After deduction of loans declined after approval—£1,265,256. principal repaid by borrowers.

### LOANS (AGRICULTURAL OCCUPATIONS): SUMMARY TO 30th JUNE, 1957.

:	Applications.				ans Approv	Advanced by	Advanced by	
State.	Re-	Ap-	Refused, With-	Gross	Net App	rovals.(a)	Common- wealth Treasury	Lending Autho- rities to
	ceived.	proved.	drawn or Not Yet Approved.	Amount.	Applica- tions.	Amount.	Lending Autho- rities.	Appli- cants. (b)
				£		£	t	£
New South Wales	7,771	6,300	1,471	4,957,212	5,483		2,660,000	
Victoria	4,818	3,350			3,090		1,040,000	
Queensland	2,376	1,972	404	1,096,190				
South Australia	2,135		847	1,003,303				
Western Australia	3,200	2,289	911	2,158,228	2,152	2,024,885	1,111,450	
Tasmania	1,124	758	366	473,558	728	454,697	300,400	
Northern Territory	34	15	19	11,945		10,148	10,148	
New Guinea	16	7	9	7,272	6	6,772	6, <b>7</b> 72	6,772
Norfolk Island	3	1	2	1,000	••	••	••	••
Total	21,477	15,980	5,497	11,884,719	14,303	10,619,808	6,203,770	10,149,732

<sup>(</sup>a) After deduction of loans declined after approval—£1,264,911. (b) Includes advances from principal repaid by borrowers.

These loans are made to eligible ex-servicemen for the purchase of land, effecting improvements on land, the acquisition of tools of trade, livestock, plant or equipment, the establishment of a co-operative business with other persons, reduction or discharge of a mortgage, bill of sale, etc.

<sup>(</sup>b) Includes advances from

(iii) Allowances (Agricultural Occupations). The following tables show details for each State and New Guinea to 30th June, 1956 and 30th June, 1957 respectively:—

# ALLOWANCES (AGRICULTURAL OCCUPATIONS): SUMMARY TO 30th JUNE, 1956.

		Applications.	Advanced by				
State.		Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.	Common- wealth Treasury to Bank.	Allowances Paid.	
					£	£	
New South Wales		4,076	3,623	453	582,000	579,522	
Victoria		3,068	2,311	757	296,500	296,013	
Queensland	!	3,043	2,514	529·	477,206	477,206	
South Australia(a)		2,264	1,754	510	324,500	324,047	
Western Australia	!	3,020	2,610	410	480,800	480,643	
Tasmania		634	523	111	116,150	116,114	
New Guinea		4	3	1	1,360	1,360	
Total		16,109	13,338	2,771	2,278,516	2,274,905	

<sup>(</sup>a) Includes allowances paid to four ex-servicemen in the Northern Territory.

# ALLOWANCES (AGRICULTURAL OCCUPATIONS): SUMMARY TO 30th JUNE, 1957,

	ļ		Applications.	Advanced by			
State.		Received.	Approved.	Rejected, Withdrawn or Not Yet Approved.	Common- wealth Treasury to Bank.	Allowances Paid.	
<del></del>					£	£	
New South Wales		4,077	3,624	453	582,000	579,601	
Victoria		3,068	2,311	757	296,500	296,013	
Queensland		3,043	2,514	529	477,206	477,206	
South Australia(a)		2,265	1,756	509	324,500	324,366	
Western Australia		3,020	2,610	410	480,800	480,788	
Tasmania		634	523	111	116,150	116,114	
New Guinea		4-	3	1	1,360	1,360	
Total		16,111	13,341	2,770	2,278,516	2,275,448	

<sup>(</sup>a) Includes allowances paid to four ex-servicemen in the Northern Territory.

These allowances are payable only in respect of the period during which the income derived from the occupation by the ex-serviceman concerned is considered inadequate.

3. War Service Land Settlement Division—Total Expenditure.—The following table shows details of the total expenditure on various projects by the War Service Land Settlement Division from the commencement of operations to 30th June, 1957. Figures published in previous issues of the Year Book for years up to 30th June, 1955 have been revised throughout:to accord with changed accounting treatment of certain items and cannot be compared directly with the following table.

# COMMONWEALTH WAR SERVICE LAND SETTLEMENT DIVISION: TOTAL EXPENDITURE TO 30th JUNE, 1957.

	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.	N.G.	Total.
War Service Land Settlement expendi- ture from Revenue							1		
on Loan Funds	4,596,758	6.310.727	333,199	17,868,131	27.823.297	11.391.711	'		68,323,82
Agricultural Loans(a)			871,693						10,149,73
Agricultural Allow- ances Administration Ex-	582,000	296,500	477,206	324,500	480,800	116,150		1,360	2,278,51
penses	589,578	136,964	67,737	68,099	310.179	40.641			1,213,19
Rural Training	326,206		106,211						1,435,65
	·						!		!
Total	10,370,869	9,024,145	1,856,046	19,275,683	30,797,771	12,058,126	10,148	8,132	83,400,92

<sup>(</sup>a) Includes expenditure on new loans of moneys repaid by borrowers.

The following summary sets out the Net Expenditure to 30th June, 1957, after allowing for miscellaneous receipts and repayments:-

Miscellaneous Receipts to 30th June, War Service Land Settlement Agricultural Loans and Allowance Rural Training			·· ··	 ::	 £ 2,496,710 5,239,432 148,738
Total	'				 7,884,880
Repayments, War Service Land Settler	nent Lo	ans	• • •		 11,403,532
Total Receipts and Repayment	s		••		 19,288,412
Total Expenditure to 30th June, 1957 less Receipts and Repayments	 	::		::	 83,400,920 19,288,412
Net Expenditure to 30th June,	1957	••			 64,112,508

# § 9. Advances to Settlers.

1. General.—A detailed statement regarding the terms and conditions governing advances to settlers in the several States and the Northern Territory may be found in earlier issues of the Official Year Book (see No. 22, pp. 179-186).

The summaries of loans and advances in the following paragraphs are compiled from returns supplied by the various State government lending agencies in the several States. They include the transactions in lands acquired under closer and soldier settlement schemes, but exclude the balances owing on former Crown lands sold on the conditional purchase, etc., system.

The amounts outstanding do not represent the actual differences between the total advances and settlers' repayments, for considerable remissions of indebtedness have been made in all States as a result of reappraisements of land values and the writing down of debts. In general, they include both principal and interest outstanding.

A summary for Western Australia is not included, as practically the only Governmental funds being made available are Commonwealth (see § 8 above).

In New South Wales and Victoria, expenditure on the acquisition, development and improvement of land for war service land settlement is provided for by the States, and particulars thereof are included in the respective summaries. In Queensland, no money is paid for the value of the land acquired, most land being occupied on lease from the Government, but advances in respect of improvements are included. In the other States, this expenditure is provided for by the Commonwealth and particulars are included in § 8

Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and certain advances for the purchase of wire-netting and for other purposes made from finance provided by the Commonwealth are included in the summaries following.

2. New South Wales.—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1956:—

ADVANCES TO SETTLERS, ETC.: NEW SOUTH WALES.

	Advances, etc., made	Total Advances,	Balance outstanding at 30th June, 1956.	
Advances, etc.	during 1955–56.	etc., at 30th June, 1956.	Number of Accounts.	Amount.
Department of Lands—	£			
Closer Land Settlement	~	15,124,116	5 923	(a) 2,012,111
Soldier Settlers 1914-18 War	• • • • • • • • • • • • • • • • • • • •	(b) 3,196,005	254	
1939-45 War	1,251,106		5,456	
Soldier Land Settlement-Acquisition, develop-	',,,	:	-,	0,200,20
ment and improvement of land, War Service		1		
Land Settlement Agreement Act	2,107,954	23,595,808	2,284	c 20,112,342
Wire Netting		1,494,653	96	8,974
Prickly Pear	18,635	285,570	133	7,683
Rural Bank		1		
General Bank Department—	!			
Commonwealth Re-establishment and Employ-				
_ ment Act 1945	3,480		1,731	
Other	1,710,870	71,719,482	8,656	18,605,854
Government Agency Department—		2 - 1 - 2 - 1		
Rural Industries	225,366		980	
Unemployment Relief and Dairy Promotion	448,273		1,935	
Rural Reconstruction(d)	253,350		768	1,755,310
Shallow Boring	74,642		189	210,536
Farm Water Supplies	120,339		451	363,792
Soil Conservation	5,247	10,860	18	
Rivers and Foreshores Improvement	-630		29	
Irrigation Areas	367,946	(e)	332	3,114,965
Government Guarantee Agency		225,475	.6	2,684
Closer Settlement Agency		167,914	41	47,406
Total	6,586,578	1157,709,397	29,282	52,973,763

<sup>(</sup>a) Excludes an amount of £4,681,046 capitalized to 30th June, 1956, on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act 1943. (b) In addition, the sum of £1,926,973 has been expended to 30th June, 1956 on developmental works on soldiers' settlements. (c) Includes capital value of Closer Settlement Leases, £14,882,057, and unpaid balance and interest on structural improvements, £5,230,285. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,014,379. (e) Not available. (f) Incomplete.

3. Victoria.—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1956:—

#### ADVANCES TO SETTLERS, ETC.: VICTORIA.

State Savings Bank, Crédit Foncier—		Advances,	Total Advances,	Balance outstanding at 30th June, 1956.		
Civilians	Advances, etc.	during			Amount.	
Civilians	State Savings Bank Crédit Foncier-	£	£.			
Discharged Soldiers	Civilians		11,744,744	617		
Treasurer		1		28		
Department of Lands and Survey—   Closer Settlement Settlers and Soldier Settlers					•	
Closer Settlement Settlers and Soldier Settlers .   b 46,904,855   2,257   2,361,407   20,1016   2,463,558   145   26,016   2,463,558   145   26,016   2,463,558   2,257   2,361,407   2,463,558   145   26,016   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,463,558   145   2,6016   1,657,280   1,657,280   1,657,280   1,657,280   1,9297,363   1,9297,36		23,907	1,610,449	(a) 2	611,293	
Cultivators of Land  Wire Netting  Soldier Settlement Commission— Purchase of land Development and Improvement of Holdings Advances for sales of land not required for Soldier Settlement(d) Advances for Settlers' Lease Liability, Soldier Settlement Act 1946 Advances to assist in acquiring and developing single unit farms Advances for improvements, stock, implements, etc.  Advances for shares in Co-operative Companies, Soldier Settlement Act 1946  Commonwealth Re-establishment and Employment Act 1945 Advances .  Commonwealth Re-establishment and Employment Act 1945 Advances .  2,463,558 728,398 81 4,222 15,098,853 19,297,363 1,104,002 7 175,096 10,540,110 1,930 7,311,647 1,250 110,164 190 83,868	Department of Lands and Survey—					
Wire Netting         728,398         81         4,222           Soldier Settlement Commission—         1,657,280         15,098,853         19,297,363         15,098,853         19,297,363         10,297,363<						
Soldier Settlement Commission—  Purchase of land   1,657,280   15,098,853   19,297,363   19,29		٠.			26,016	
Purchase of land   Development and Improvement of Holdings   Advances for sales of land not required for Soldier   Settlement(d)   1,104,002   7   175,096			728,398	81	4,222	
Development and Improvement of Holdings				.		
Advances for sales of land not required for Soldier Settlement(d)  Advances for Settlers' Lease Liability, Soldier Settlement Act 1946  Advances to assist in acquiring and developing single unit farms.  Advances for improvements, stock, implements, etc.  Advances for shares in Co-operative Companies, Soldier Settlement Act 1946  Commonwealth Re-establishment and Employment Act 1945 Advances .  2,410,822  107,642  1,104,002  7  175,096  3,423,481  11,723,743  1,507  10,819,669  466,294  10,540,110  1,930  7,311,647  3,062,825  1,285  1,238,051  1,238,051  3,433,481  1,796,725  802  347,261			15,098,853	٠٠ إ	c 16.973.278	
Settlement(d) 107,642 1,104,002 7 175,096 Advances for Settlers' Lease Liability, Soldier Settlement Act 1946 Advances for shares in Co-operative Companies, Soldier Settlement Act 1945 Advances 107,642 1,104,002 7 175,096  3,423,481 1,723,743 1,507 10,819,669  464,294 10,540,110 1,930 7,311,647  667,427 3,062,825 1,285 1,238,051  1,250 110,164 190 83,868  1,250 110,164 190 83,868  1,250 110,164 190 83,868	Development and Improvement of Holdings	2,470,982	19,297,363	3		
Advances for Settlers' Lease Liability, Soldier Settlement Act 1946  Advances to assist in acquiring and developing single unit farms				_		
Settlement Act 1946       3,423,481       11,723,743       1,507       10,819,669         Advances to assist in acquiring and developing single unit farms       646,294       10,540,110       1,930       7,311,647         Advances for improvements, etc.       677,427       3,062,825       1,285       1,285       1,238,051         Advances for shares in Co-operative Companies, Soldier Settlement Act 1946       1,250       110,164       190       83,868         Commonwealth Re-establishment and Employment Act 1945 Advances       341       1,796,725       802       347,261	Settlement(d)	107,642	1,104,002	7	175,096	
Advances to assist in acquiring and developing single unit farms	Advances for Settlers' Lease Liability, Soldier	2 122 121		4	10.010.660	
single unit farms		3,423,481	11,723,743	1,507	10,819,669	
Advances for improvements, stock, implements, etc.  Advances for shares in Co-operative Companies, Soldier Settlement Act 1946  Commonwealth Re-establishment and Employment Act 1945 Advances			40 5 440	أممما	- 244 645	
etc. Advances for shares in Co-operative Companies, Soldier Settlement Act 1946		646,294	10,540,110	1,930	7,311,047	
Advances for shares in Co-operative Companies, Soldier Settlement Act 1946 1,250 110,164 190 83,868 Commonwealth Re-establishment and Employment Act 1945 Advances		C77 407	2.000.000	1 205	1 220 051	
Soldier Settlement Act 1946         1,250         110,164         190         83,868           Commonwealth Re-establishment and Employment Act 1945 Advances         341         1,796,725         802         347,261		6//,42/	3,062,823	1,285	1,238,031	
Commonwealth Re-establishment and Employment Act 1945 Advances		1.250	110 164	100	02.060	
ment Act 1945 Advances		1,250	110,104	190	63,606	
		241	1 704 725	902	247 261	
7-4-1   0.038.049.127.034.356  8.8511.40.427.837						
10131	Total	9,038,949	127,034,356	8,851	40,427,837	

<sup>(</sup>a) Number of Companies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) After allowing an amount of £4,128,579 representing excess acquisition, development and improvement cost which has been written off. (d) Sale price of land not required for settlement; balance outstanding represents instalments not yet due where terms were given to purchasers.

4. Queensland.—The following table shows particulars of advances, etc. to 30th June, 1956. The figures exclude transactions in land:—

ADVANCES TO SETTLERS, ETC.: QUEENSLAND.

Advances, etc.	Advances, etc., made	Total Advances, etc., at	Balance outstanding at 30th June, 1956.		
Auvances, etc.	during 1955-56.	30th June, 1956.	Number of Accounts.	Amount.	
Co-ordination of Rural Advances and Agricultural	£	£			
Bank Acts	2,247,126		3,938	7,978,063	
Discharged Soldiers' Settlement (a)		2,467,913	217	40,902	
William Engilition		58,079	217	40,502	
\$\$77 . \$1-44' 44-		1,019,403	266	17,922	
	1,345				
Seed Wheat and Barley	1,343		(c)	11,966	
Drought Relief	200 000	961,047	40	37,835	
War Service Land Settlement	308,566	3,574,535	455	2,498,898	
Income (Unemployment Relief and State Develop-		1	ì		
ment) Tax Acts $(d)$	١	1,183,891	(e) 310	37,624	
Irrigation		54.914	6	754	
Farmers' Assistance (Debt Adjustment Acts)	6,567	1,044,490	7Ŏ <sup>t</sup>	113,438	
Commonwealth Re-establishment and Employment	0,00.	2,0 , 1, 1,0		115,450	
Act 1945	240	870,679	350	106,891	
Total	2,563,844	34,401,601	(e) 5,654	10,844,378	

<sup>(</sup>a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Not available. (d) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (e) Incomplete.

5. South Australia.—The following table shows particulars respecting advances, etc., under State Authorities to 30th June, 1956:—

ADVANCES TO SETTLERS, ETC.: SOUTH AUSTRALIA.

Ad	Advances,	Total Advances,	Balance outstanding at 30th June, 1956.	
Advances, etc.	during 1955-56.	erc., at 30th June, 1956.	Number of Persons.	Amount.
Department of Lands—	£	£		£
Advances to Soldier Settlers	16,784			1,179,294
Advances to Blockholders		41,451		
Advances for Sheds and Tanks		75,693		4,284
Advances Under Closer Settlement Acts	1,948	2,729,913	597	807,601
Advances under Agricultural Graduates Settle-		(2.250		20.210
ment Act		62,258	10	20,319
Settlement of Returned Service Personnel, 1939-45	370 040	2 525 200	850	2,029,541
War Primary Producers Assistance Department—	378,849	2,535,380	1 830	2,023,341
A town on the Post of A second A second	1	2,146,768	4	1,234
Advances and a Frances Ballof Acts	• • •	4,435,509		2,063
Irrigation Branch—		4,455,505	1 1	2,003
Advances to Civilians	{	291,443	38	14,431
Advances to Soldier Settlers	1 ::	1,048,174		344,392
State Bank of South Australia (Crédit Foncier De-	1	1,010,11		,
partment)—	[		ĺĺĺ	
Advances to Primary Producers	143,104	9,873,522	1,263	2,649,296
Advances to Settlers for Improvements	47,994		158	126,589
Advances under Vermin and Fencing Acts	3,993		108	44,785
Advances under Loans to Producers Act	138,250	1,470,448	130	1,088,223
Commonwealth Re-establishment and Employ-	Í			
ment Act 1945	6,615	822,606		258,597
Total	737,537	33,034,243	3,479	8,570,649

6. Western Australia.—The operations prior to 1945 covered in this section related to moneys made available through, or by, the old Agricultural Bank and other Government Departments for the purpose of agricultural development. On 1st October, 1945, however, the Agricultural Bank was reconstituted as the Rural and Industries Bank of Western Australia, and was given authority to operate similarly to the associated banks. Certain securities in the books of the old bank were taken over by the general banking division of the new bank, and the clients concerned then operated with privileges and obligations similar to those provided by other banking institutions. The majority of the remaining securities, also, were eventually transferred.

At present, very limited funds are being made available by the State Government for advances for agricultural development, the bulk of the moneys for this purpose being provided by the Commonwealth Government under the War Service Land Settlement and Commonwealth Re-establishment and Employment Acts. Particulars of this expenditure are shown in § 8 above.

7. Tasmania.—The following table shows particulars of advances under State Authorities to 30th June, 1956. Although not regarded as outstanding advances by the Department of Agriculture the figures in connexion with closer and soldier land settlement have been included in the table for comparative purposes; the areas so purchased have been leased on 99-year terms having an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS, ETC.: TASMANIA.

	Advances, etc., made	Total Advances,	Balance outstanding at 30th June, 1956.		
Advances, etc.	during 1955–56.	etc., at 30th June, 1956.	Number of Persons.	Amount.	
	£	£		£	
Agricultural Bank	Į.			1	
State Advances Act and Rural Credits	127,849	3,314,999	727	(a) 711,676	
Orchardists' Relief, 1926		46,832	٠.	1	
Unemployed (Assistance to Primary Producers)					
Relief Act 1930-31		114,302	, , ,	·	
Bush Fire Relief 1934	1	14,555	2	21	
Crop Losses, 1934–35		10,086	2 2	213	
Assistance to Fruitgrowers Act 1941		34,556	3	229	
Flood Sufferers' Relief Act 1942		3,764			
Flood Sufferers' Relief Act 1944		1,902	1	12	
Commonwealth Re-establishment and Employ-					
ment Act 1945	1,333	407,203	308	166,793	
Primary Producers' Relief Act 1947		297,846	149	29,442	
Minister for Agriculture—	1				
Soldier Settlers-				i	
Advances	1,646	996,565	55	(b) 37,469	
Purchase of Estates, etc.(c)	2,234	2,558,216	(d) 396	334,891	
Closer Settlers-	] -,	_,,		,	
Advances	28	100,558	11	4,570	
Purchase of Estates, etc.(c)	1,368	527,298	92	81,133	
Total	134,458	8,428,682	1,746	1,366,449	

- (a) Excludes £3,261 forfeited properties. (b) Excludes £204,813 advances capitalized, £79,166 advances written off to bad debts, and £40,789 written off to revaluation. (c) Not regarded as outstanding advances by the Department. (d) Number of leaseholders, including those to whom advances have been made.
- 8. Northern Territory.—During the year 1955-56, 31 advances totalling £37,859 were made. The total amount advanced to 30th June, 1956, was approximately £74,763. At 30th June, 1956, the balance outstanding from 41 settlers, including interest, was £41,558.
- 9. Summary of Advances.—The following table is a summary for each State (except Western Australia) and the Northern Territory to the 30th June, 1956. The particulars so far as they are available, represent the total sums advanced to settlers, including amounts spent by the various Governments in the purchase and improvement of estates disposed of by closer and soldier land settlement, while the amounts outstanding reveal the present indebtedness of settlers to the Governments, including arrears of principal and interest but excluding amounts written off debts and adjustments for land revaluations. Particulars of Loans (Agricultural Occupations) under the Commonwealth Re-establishment and Employment Act 1945 and of certain advances for wire-netting and other purposes provided from Commonwealth funds are included.

### ADVANCES TO SETTLERS. ETC.: SUMMARY.

State.		Advances, etc., made during	Total Advances, etc., at 30th June,	Balance outstanding at 30th June, 1956.		
		1955-		1956.	Number of Persons.	Amount.
			£	£		£
New South Wales(a)			6,586,578	b157,709,397	29,282	52,973,763
Victoria(a)			9,038,949	127,034,356	8,851	40,427,837
Queensland			2,563,844	34,401,601	(b)(c) 5,654	10,844,378
South Australia		• • •	737,537	33,034,243	3,479	8,570,649
Tasmania			134,458	8,428,682	1,746	1,366,449
Northern Territory			37,859	74,763	41	41,558

<sup>(</sup>a) Includes expenditure on acquisition, development and improvement of land for war service land settlement (see p. 97). (b) Incomplete. (c) Number of accounts.

### § 11. Alienation and Occupation of Crown Lands.

- 1. General.—The figures shown in the previous parts of this chapter show separately the areas alienated, in process of alienation, or occupied under various tenures. The following tables set out the position with regard to the tenure of land in each State, in the Northern Territory, and in the Australian Capital Territory during the latest year for which information is available—1956 in all cases. A summary for each State and Territory and for Australia as a whole is also supplied. Particulars for each year from 1945 to 1955 appear in *Primary Industries Bulletin* No. 49, Part 1.—Rural Industries, page 1. The area occupied includes roads, permanent reserves, forests, etc. In some cases, lands which are permanently reserved from alienation are occupied under leases and licences, and have been included therein. Lands occupied under leases or licences for pastoral purposes are frequently held on short tenures only, and could thus be made available for settlement practically whenever required.
- 2. New South Wales.—The total area of New South Wales is 198,037,120 acres, of which 26.5 per cent. had been alienated at 30th June, 1956; 6.7 per cent. was in process of alienation; 58.7 per cent. was held under leases and licences; and the remaining 8.1 per cent. was unoccupied, or held by the Crown.

The following table shows particulars as at 30th June, 1956:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: NEW SOUTH WALES, 30th JUNE, 1956.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated: Granted and sold prior to 1862	7,146,579	3. Held under Leases and Licences.	
Sold by auction and other sales, 1862		Homestead selections and grants	1,691,768
to date Conditionally sold, 1862 to date	15,714,866 35,051,189	Alienable leases, long-term and per- petual	25,748,805
Granted under Volunteer Land Regulations, 1867 to date Granted for public and religious pur-	172,198	Long-term leases with limited right of alienation	1,611,120 80,973,802
poses	265,953	Short-term leases and temporary tenures	4,205,531
	58,350,785	Forest leases	1,814,939 188,966
Less lands resumed or reverted to Crown	5,883,856	Total	116,234,931
Total	52,466,929		
2. In Process of Alienation. Conditional purchases Closer settlement purchases	11,565,508 1,379,076 152,506	4. Unoccupied—Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (approximate)	16,003,486
Other forms of sale	234,684		
Total	13,331,774	5. Total Area of State	198,037,120

3. Victoria.—The total area of Victoria is 56,245,760 acres, of which 55.1 per cent. had been alienated up to the end of 1956; 4.1 per cent. was in process of alienation under deferred payments and closer settlement schemes; 18.1 per cent. was occupied under leases and licences; and 22.7 per cent. was unoccupied or held by the Crown.

The following table shows the distribution:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: VICTORIA, 31st DECEMBER, 1956.

(Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated	31,002,709	3. Leases and Licences held— Under Lands Department— Perpetual Leases Agricultural College Leases Other Leases and Licences.	59,671 33,917 19,844
2. In Process of Alienation— Exclusive of Mallee and Closer Settlement Lands Mallee Lands (exclusive of Closer Settlement Lands)	296,031 1,532,402	Temporary (Yearly) Grazing Licences Under Mines Department (a)	6,061,860 3,987,684
Closer Settlement Lands Village Settlement	504,176	Total 4. Occupied by the Crown or Unoccupied	10,162,976
Total	2,332,642	5. Total Area of State	56,245,760

<sup>(</sup>a) Includes State Coal Mine area, 7,575 acres and State Electricity Commission area, 2,800 acres.

4. Queensland.—The total area of this State is 429,120,000 acres, of which, on 31st December, 1956, 5.8 per cent. was alienated; 0.6 per cent, was in process of alienation; and 84.8 per cent. was occupied under leases and licences. The remainder, 8.8 per cent., was either unoccupied or held as reserves or for roads.

The distribution is shown in the following table:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: QUEENSLAND. 31st DECEMBER, 1956.

(Acres.)

TAGES,)									
Particulars.		Area.	Particulars.	Area.					
1. Alienated—  By Purchase Without Payment	::	25,027,283 92,182	3. Occupied under Leases and Licences— Pastoral Leases Occupation Licences Grazing Selections and Settlement Farm Leases Leases—Special Purposes Mining Leases Perpetual Leases Selections and Perpetual Lease Prickly Pear Selections Auction Perpetual Leases, etc. Forest Grazing Leases (of Reserves)	249,710,360 12,739,640 90,340,359 2,246,193 591,366 6,813,955 38,983 1,203,760					
Total		25,119,465	Total	23 094,916 14,586,057					
2. In Process of Alienation	••	2,634,946	6. Total Area of State	429,120,000					

<sup>(</sup>a) Special leases of Crown land, 478,229 acres; special leases of reserves, 1,767,964 acres.

<sup>5.</sup> South Australia.—The area of South Australia is 243,244,800 acres and at 30th June, 1956, 5.9 per cent. was alienated; 0.2 per cent. in process of alienation; 57.4 per cent. occupied under leases and licences; and 36.5 per cent. occupied by the Crown or unoccupied.

The following table shows the distribution:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: SOUTH AUSTRALIA. 30th JUNE, 1956.

#### (Acres.)

Particulars.		Area.	Area. Particulars.	
1. Alienated— Sold Free Grants Dedicated	:: ::	13,937,562 145,999 269,338	3. Held under Lease and Licence(a)— Perpetual Leases, including Irrigation Leases Pastoral Leases Other Leases and Licences	19,562,907 117,084,712
			Total	139,639,677
Total		14,352,899	4. Area Unoccupied(b)	88,703,959
2. In Process of Alienation	on	548,265	5. Total Area of State	243,244,800

<sup>(</sup>a) Mining leases and licences have also been issued over an area comprising 142,714,618 acres. (b) Includes surveyed roads, railways and other reserves, salt water lakes, lagoons, and fresh water lakes.

6. Western Australia.—The total area of Western Australia is 624,588,800 acres, of which, at 31st December, 1956, 4.1 per cent. was alienated; 2.1 per cent. was in process of alienation; and 34.5 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 59.3 per cent. was unoccupied.

The following table shows the distribution:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: WESTERN AUSTRALIA, 31st DECEMBER, 1956.

### (Acres.)

Particulars.	Area.	Particulars.	Area.
2. In Process of Alienation— Midland Railway Concessions Free Homestead Farms Conditional Purchase Selections under the Agricultural Lands Purchase Act Grazing Land Town and Suburban Lots Crown Grants of Reserves	25,464,718 362,954 10,445,168 307,323 1,659,820 1,964 74,973	3. Leases and Licences in Force—  (i) Issued by Lands Department— Pastoral Leases Special Leases Leases of Reserves Residential Lots Perpetual Leases  (ii) Issued by Mines Department— Gold-mining Leases Mineral Leases Miners' Homestead Leases Leases (iii) Issued by Forests Department— Timber Permits	207,453,706 2,534,244 690,417 4,650 1,144,496 20,831 42,335 33,107 3,874,898 215,798,684
-		4. Area Unoccupied	370,473,196
Total	12,852,202	5. Total Area of State	624,588,800

<sup>7.</sup> Tasmania.—The total area of Tasmania is 16,778,000 acres, of which, at 30th June, 1956, 37.6 per cent. had been alienated; 1.9 per cent. was in process of alienation; 16.1 per cent. was occupied under leases and licences for either pastoral, agricultural, timber, or mining purposes, or for closer or soldier settlement; while the remainder (44.4 per cent.) was unoccupied or reserved by the Crown.

The following table shows the distribution:-

# ALIENATION AND OCCUPATION OF CROWN LANDS: TASMANIA, 30th JUNE, 1956. (Acres.)

Particulars.	Area.	Particulars.	Area.
1. Alienated	6,310,573	3. Leases and Licences—continued. (i) Issued by Lands Depart-	
2. In Process of Alienation	311,776	ment—continued. Soldier Settlement	66,302
3. Leases and Licences—		Short-term Leases (ii) Issued by Mines Depart-	1,002
(i) Issued by Lands Depart-		ment	30,407
ment— Islands	161,142	Total	2,700,361
Ordinary Leased Land	1.858,620	4. Area Occupied by the Crown or Un-	
Land Leased for Timber.	562,989	occupied(a)	7,455,290
Closer Settlement	19,899	5. Total Area of State	16,778.000

<sup>(</sup>a) Includes reservations for roads and various other public purposes, 4,129,666 acres, lands occupied by Commonwealth or State Departments, 21,485 acres and land acquired for Soldier and Closer Settlement but not leased, 200 acres.

8. Northern Territory.—The area of the Northern Territory is 335,116,800 acres, of which, at 30th June, 1956, only 0.1 per cent. was alienated; 52.8 per cent, was held under leases and licences; 14.3 per cent. was reserved for aboriginal, defence and public requirements; and the remaining 32.8 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1956:—Alienated, 455,322 acres; leased—pastoral leases, 139,289,161 acres, other leases, licences and mission stations, 37,731,557 acres, total leased, 177,020,718 acres; reserved for aboriginal, defence and public requirements, 47,927,661 acres; unoccupied and unreserved, 109,713,099 acres; total, 335,116,800 acres.

9. Australian Capital Territory.—Alienated land of the Territory (excluding the Jervis Bay area) at the end of 1956 comprised 11.3 per cent. of the total area; land in process of alienation 7.1 per cent; land held under lease and licence 52.7 per cent; land otherwise occupied, including city tenures, 6.8 per cent.; and unoccupied 22.1 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1956:—Alienated, 65,857 acres; in process of alienation, 41,224 acres; leased—grazing, agricultural, etc., leases, 300,749 acres; grazing licences, 7,174 acres; total leased, 307,923 acres; otherwise occupied, 38,360 acres; unoccupied, 129,436 acres; total. 582,800 acres. Including the Jervis Bay area of 18,000 acres—6,266 acres leased and 11,734 acres otherwise occupied—the grand total for the whole Territory is 600,800 acres.

10. Summary.—The following table provides a summary for each State and Territory, and for Australia as a whole, of the alienation and occupation of Crown lands in 1956:—

ALIENATION AND OCCUPATION OF CROWN LANDS, 1956.

State or Territory.		Private	Lands.		Crown Lands.				
	Alienated.		In Process of Alienation.		Leased or Licensed.		Other.		Total Area.
	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.	Per Cent.	'000 Acres.
N.S.W.(a) Victoria(b)	52,467 31,003	26.5 55.1	13,332 2,333	6.7	116,235 10,163	58.7 18.1	16,003 12,747	8.1 22.7	198,037 56,246
Queensland(b)	25,119	5.8	2,635	0.6	363,685	84.8	37,681	8.8	429,120
S. Aust.(a)	14,353	5.9	548	0.2	139,640	57.4	88,704 370,473	36.5 59.3	243,245
W. Aust.(b) Tasmania(a)	25,465 6,311	4.1 37.6	12,852 312	2.1 1.9	215,798 2,700	34.5 16.1	7,455	44.4	624,588 16,778
Nor. Terr.(a)	455	0.1		1.5	177,021	52.8	157,641	47.1	335,117
A.C.T.(b)(c)	66	11.0	41	6.8	314	52.2	. 180	30.0	601
Australia	155,239	8.1	32,053	1.7	1,025,556	53.9	690,884	36.3	1,903,732

<sup>(</sup>a) At 30th June.

A diagram showing in graphical form the areas alienated from the State, those in process of alienation under the various systems of deferred payments, the areas held under leases or licences and the areas left unoccupied was included in earlier issues of the Official Year Book (see No. 41, page 73), but is not reprinted in this issue.

<sup>(</sup>b) At 31st December.

<sup>(</sup>c) Includes Jervis Bay area.

#### CHAPTER V.

### THE TERRITORIES OF AUSTRALIA.

Note.—The internal Territories of Australia are the Northern Territory and the Australian Capital Territory. External Territories under the control of Australia are:—Norfolk Island; Papua (formerly British New Guinea); the Territory of New Guinea (under Trusteeship Agreement with the United Nations); Nauru (under Trusteeship Agreement with the United Nations); the Territory of Heard and McDonald Islands; the Australian Antarctic Territory; the Territory of Ashmore and Cartier Islands; and the Territory of Cocos (Keeling) Islands. Information on all except Ashmore and Cartier Islands is contained in the following pages, and details of the acquisition of all the Territories will be found on pp. 5, 23 and 24 of Chapter I.

#### THE NORTHERN TERRITORY.

### § 1. Area and Population.

- 1. Area. —Upon the extension of New South Wales westward to the 129th meridian in 1825, the Northern Territory was incorporated in that colony, but in 1863, it was annexed by Royal Letters Patent to the province of South Australia. With the adjacent islands, it was transferred to the Commonwealth on 1st January, 1911. The total area is 523,620 square miles.
- 2. Population.—(i) Population excluding Full-blood Aboriginals. At the Census of 30th June, 1954, the population of the Northern Territory, excluding full-blood aboriginals, was 10,288 males, 6,181 females, 16,469 persons. Corresponding figures at the Census of 30th June, 1947, were 7,378, 3,490 and 10,868 respectively. The estimated population, excluding full-blood aboriginals, at 30th June, 1956, was 18,297 persons.

The European population of the Northern Territory increased slowly from 670 at the Census of 1881 to 3,767 in 1918. By 1921, it had decreased to 2,458, and in 1933 was still only 3,306. At the Census of 1947, it had risen to 9,116, an increase of 176 per cent. on the 1933 figures, while at the Census of 1954 it had risen a further 54 per cent. to 14,028.

Although at one time there were more than 4,000 Chinese in the Territory, at 30th June, 1954, there were only 325, and these comprised the major proportion of the 486 full-blood non-European inhabitants, excluding Australian aboriginals, at that date.

The half-caste population recorded at the Census of 1954 numbered 1,955, of whom 1,659 were half-caste Australian aboriginals. Corresponding figures at the 1947 Census were 1,364 and 1,247 respectively.

(ii) The Aboriginals. The total number of full-blood aboriginals at 30th June, 1956, was estimated at 15,971, of whom approximately 3,761 were in regular employment. By virtue of the Aboriginals Ordinance No. 2 of 1953, part aboriginals are not now deemed to be aboriginals within the meaning of the Aboriginals Ordinance 1918-1953, except children who were committed to institutions prior to the commencement of the ordinance and those who have requested the Director of Native Affairs to declare them aboriginals within the meaning of the ordinance.\* Aboriginal reserves comprise an area of approximately 67,000 square miles. (See also Chapter XVI.—Population.)

## § 2. Legislation and Administration.

On 1st January, 1911, the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Official Year Book No. 15, p. 940. For particulars of the administration up to the Northern Territory (Administration) Act 1931, by which it was for the second time placed in the hands of an Administrator, see Official Year Book No. 38 and earlier issues.

<sup>\*</sup> The Aboriginals Ordinance was replaced by the Welfare Ordinance which came into operation on 11th May, 1957. Under the Aboriginals Ordinance all aboriginals were, as a race, deprived of citizenship rights and could only attain them by individual exemption from the legislation. The Welfare Ordinance recognizes that, from birth, they are Australian citizens, and temporarily deprives of full citizen rights only those who are committed by name as wards of the State under processes laid down by law. Their committal is subject to the right of individual appeal. This is the same basic idea that is expressed in social legislation applying to those members of the white community who are not able to look after themselves or who have to be protected (e.g., neglected children).

The Northern Territory (Administration) Act 1947 enabled the Northern Territory to set up a Legislative Council. The Council consists of the Administrator as President, seven official and six elected members who make ordinances for the Territory, which must be submitted to the Administrator for assent. The Administrator may, or may not, assent to them, or he may reserve them for the Governor-General. The Governor-General may disallow any ordinance assented to by the Administrator within six months from the date of assent, and the operation of ordinances relating to certain matters including Crown Lands and aboriginal affairs is dependent on his approval. Money votes may be proposed in the Council only by the Administrator himself, or by his permission or direction.

The Territory elects a member to the House of Representatives, who has the right

to take part in debates but not to vote.

### § 3. Physiography.

- 1. Tropical Nature of the Country.—The Territory is within the torrid zone, with the exception of a strip 2½ degrees wide which lies south of the Tropic of Capricorn.
- 2. Contour and Physical Characteristics.—The low flat coast-line seldom reaches a height of 100 feet. Sandy beaches and mud flats, thickly fringed with mangroves, prevail. Sandstone, marl and laterite form the occasional cliffy headlands. The sea frontage of more than 1,000 miles is indented by bays and inlets and intersected by numerous rivers, many of which are navigable for considerable distances from their estuaries. The only practicable deep-water port, however, is Darwin.

Inland, the country generally is destitute of conspicuous landmarks. From the coast, there is a general rise southwards to the vicinity of the 17th or 18th parallel of south latitude, where the higher lands form the watershed between the rivers that flow northwards to the sea and those that form the scanty supply of the interior systems. Towards the centre of the continent, the land over a wide area is of considerable elevation, and there are several mountain ranges, generally with an east and west trend.

## § 4. Climate, Fauna and Flora.

- 1. The Seasons.—There are two main climatic divisions, the wet season, November to April, and the dry season, May to October, with uniform and regular changes of weather. Nearly the whole of the rainfall occurs in the summer mouths. Further particulars appear in Official Year Book No. 6, p. 1116.
- 2. Fauna.—The ordinary types of native Australian fauna inhabit the Territory. As elsewhere on the continent, the higher *Theria* are rare, but marsupials, birds, crocodiles, fresh-water tortoises, snakes (mostly non-venomous) and frogs abound. There are many varieties of fresh-water fish and littoral mollusca. Butterflies and beetles are strongly represented. The white ant is a pest which is capable of serious destruction to wooden buildings unless special preventative measures are taken. Another species of the ant builds anthills which sometimes attain great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Native fauna are in some cases protected. Buffalo formerly existed in large herds, but their number has been greatly reduced by indiscriminate shooting. Buffalo shooting is now controlled by Ordinance.
- 3. Flora.—The vegetation is North Australian in type, but a number of the forms belong to the Malayan and Oceanic regions. The timber trees are not of great commercial value, but in the coastal regions tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paperbark timbers are now cut and milled for local building purposes. These three timbers are resistant to termites. On the wide expanses of plain country in the interior there is little vegetation, the principal orders represented being:—Euphorbiaceae, Compositae, Convolvulaceae, Rubiaceae, Goodenoviaceae, Leguminosae, Utricaceae.

### § 5. Production.

1. Agriculture.—Up to the present, agriculture has made little progress in the Territory, although rice, peanuts, tobacco, grain sorghum, bananas, pineapples, citrus, mangoes, papaws, vegetables, fodder plants and improved pastures can be grown in certain areas. At the present time, commercial agricultural production is practically confined to peanuts, which have been an export crop for some time, and vegetables and small-scale fruit production (mainly pineapple and citrus) for local consumption.

In 1946, the Commonwealth Scientific and Industrial Research Organization commenced scientific surveys to define more accurately the potentialities of the Territory. Surveys

have been completed of the Katherine-Darwin, Barkly Tablelands and Victoria River Regions. The survey of the Katherine-Darwin Region indicated that further investigations into agricultural possibilities were warranted. As a result, the Commonwealth Scientific and Industrial Research Organization established an agricultural research station at Katherine to investigate the possibilities of dry farming in a land system covering an area of about 7,000 square miles in the Katherine-Daly River basin. The research work at this station was sufficiently encouraging in respect of the production of peanuts, grain sorghum, and pastures to warrant investigations into the application of the findings on a commercial scale. To further the investigations, the Commonwealth Government approved of the establishment by the Northern Territory Administration in 1952 of an experimental farm at Katherine for the purpose of carrying out trials with these crops to determine the requirements for farming them on a commercial scale. The trials are in progress but it is too early to make any pronouncements. In 1956, the Administration established an experimental farm at Berrimah, near Darwin. Investigation into fruit and vegetable growing and pasture production are being carried out under both dryland and irrigated conditions.

The survey of the Katherine-Darwin Region also indicated various soil types in other parts of the Region on which agricultural production tests would be worthwhile. In order to carry out these tests economically and quickly, the Administration, in 1952, organized a mobile unit for the purpose of conducting trials on five soil types with pineapples, peanuts,

sorghum, tobacco and other crops.

Prospects for rice growing were indicated by the survey and, in 1952, the Administration established rice research stations at Humpty Doo and at a location known as Sixty Mile, on the Stuart Highway, 60 miles from Darwin. Because of flooding difficulties in the wet season, rice quarantine for the Northern Territory is carried out by the C.S.I.R.O. at the Kimberley Research Station, Western Australia. At the rice research stations, it has been demonstrated that rice can be grown but that the main problems of rice growing in the Territory are adequate water control and drainage, determination of cultivation techniques in the soil conditions which obtain in the Territory and the production of suitable rice varieties for the rainfall, temperature and soil conditions of the area. Since the 1954–55 season, Territory Rice Limited, a firm with Australian and American capital, has been conducting large-scale trials near Humpty Doo to prove its theory that commercial production of rice is possible on the sub-coastal plains of the Territory.

2. Pastoral Industry.—The pastoral possibilities of certain parts of the Northern Territory were recognized at an early date, and in 1866 stock were brought into the Macdonnell Range country from South Australia. Six years later, cattle were moved from Queensland to the northern parts of the Territory, and in 1879 Giles reached the Katherine River with 2,000 head of cattle and 12,000 sheep from South Australia. For various reasons sheep-raising did not succeed. The cattle industry, however, progressed steadily and the expansion of the industry is continuing.

Cattle exported during 1956-57 numbered 135,988—76,528 to Queensland, 55,808 to South Australia and 3,652 to Western Australia—170 horses were also exported. Importations of livestock were—Bulls, 874; other cattle, 18,456; stallions, three; other horses, 151;

rams, 26; other sheep, 1,825; and pigs, 10.

The estimated number of livestock in the Territory at the end of the years 1939 and 1952 to 1956 is given in the table hereunder:—

### NORTHERN TERRITORY: LIVESTOCK.

31st December—		Horses.	Cattle.	Sheep.	Pigs.	Goats.	Camels.	Donkeys.	Mules.	
1939			32,721	922,581	38,587	483	20,335	331	1,443	366
1952			34,645	935,602	33,773	799	11.861	100	873	546
1953			36,985	966,033	31,232	1,132	12,502	53	1,475	626
1954			33,035	968,755	28,644	911	11,152	50	661	364
1955			37,306	1,027,819	33,249	1,076	12,273	59	755	363
1957 (	2)		38,180	1,175,997	30,466	755	11,189	51	450	286

(a) 30th June. No figures available for 31st December, 1956.

<sup>3.</sup> Hides and Skins.—The number of hides and skins exported from the Northern Territory during 1956-57 was as follows:—buffalo, 1,482; sheep, 1,408; crocodile, 229; and cattle, 4,063. Kangaroo skins also were exported, but details are not available.

1955-56.

4. Mining.—Alluvial gold digging in the Northern Territory commenced in 1869 and in 1881 the yearly return was valued at £111,945. The value of minerals produced in the Territory in 1956 reached an all-time peak of £2,789,000 compared with £1,691,000 in the previous year, mainly because of an increase in the value of copper production. Gold, which in the past has always returned the highest value of mineral production, was surpassed by copper in 1956. The total value of copper production in 1956 was £1,579,000, most of which was won at Tennant Creek, where production is concentrated on copper with gold as a by-product.

The value of gold production increased, most of the ore also being obtained from Tennant Creek. The ore is treated by plant at the mine. The value of wolfram production increased slightly. The Harts Range Mica Field continues to produce the bulk of Australian high grade mica. The production of tin concentrates continued to decline.

Uranium minerals were first discovered at Rum Jungle in September, 1949, and other deposits have been found since. Continued interest in uranium mining is being shown by Australian and oversea mining companies. The first full-scale uranium treatment plant was opened at Rum Jungle in 1954, and continuous production of uranium oxide is now being achieved. The production of manganese was first reported during 1955, and is being mined for use at the Rum Jungle treatment plant.

The following table shows the value of mineral production for the years 1952 to 1956:— NORTHERN TERRITORY: VALUE OF MINERAL PRODUCTION. (£2000.)

-				(**					
	Year.		Gold.	Gold. Tin Concentrates. Copper Ore.		Mica.	. Wolfram.	Total All Minerals.	
1952	• • •		681	10	53	125	413.	1,282	
1953			820	15	· 18·	102	267	1,221	
1954		[	839	13	114	124	54	1,145	
1955			866	3	611	65°	118	1,691	
1956			996-	1	1,579	42	141	2,789	
		1	j	l					

(a) Excludes uranium. Includes small quantities of other minerals produced.

5. Pearl and Other Fisheries.-In 1884, mother-of-pearl-shell was discovered in the harbour of Port Darwin. Since that time, the areas fished have extended to the various banks to seaward and coastwise along the Northern Territory coast. Figures for production and value of shell for the seasons 1951-52 to 1955-56 are shown in the following table:-NORTHERN TERRITORY: PEARL FISHING.

					Pearl-shell Taken.		
Season;				Quantity. ('000 lb.)	Value. (£'000.).		
1951–52		••		5	188	51	
1952-53				7	260	59	
1953-54				10	371	95	
1954–55				9	343	89	
1955-56				10	311	74	

The price of shell remains high, £600 a ton for good grade shell being the average for

### § 6. Land Tenure.

1. General.—A description of the system of land tenure in force in the Territory in 1928 is given in Official Year Book No. 22, Chapter V.—Land Tenure and Settlement. It was revised in Official Year Book No. 39, pp. 329-30, and Chapter IV.—Land Tenure and Settlement of this issue contains up-to-date statistical information on the subject.

Almost half the land in the Northern Territory is reserved, or unoccupied and unreserved, the remainder, apart from a very small proportion alienated; being held under various forms of lease and licence, which are described briefly below and in more detail in Official Year Book No. 39, pp. 329-30.

2. Pastoral, Agricultural, etc., Leases.—Pastoral Leases—granted for periods not exceeding 50 years.

Pastoral Homestead Leases—granted in perpetuity but available only to persons who intend to reside bona fide on the leased land. Companies are not eligible to hold this type of lease.

Agricultural Leases—granted in perpetuity, with area for any one lease limited according to type of farm (Cultivation Farms, Class 1, 1,280 acres, Class 2, 2,560 acres; Mixed Farming and Grazing, Class 1, 12,800 acres, Class 2, 38,400 acres).

Leases of Town Lands—except in Darwin, granted in perpetuity (in Darwin granted for periods up to 99 years).

Special Purpose Leases—granted for periods up to 99 years, for purposes other than pastoral, agricultural or mining, or private residential purposes within a town.

Agricultural Development Leases—granted for periods up to 30 years for the purpose of large scale agricultural development.

Church Lands Leases—granted for church purposes at a nominal rental in perpetuity, Leases to Aboriginals—granted for areas not exceeding 160 acres each for any period of years upon such terms and conditions as thought fit.

Leases to Mission Organizations-granted for periods up to 21 years.

Miscellaneous Leases—granted for any prescribed or approved purpose, for periods not exceeding 21 years.

Grazing Licences—granted to graze stock on Crown lands for periods not exceeding one year.

Occupation Licences—granted for manufacturing, industrial or any prescribed purposes, for periods not exceeding 5 years.

Miscellaneous Licences—granted for periods not exceeding 12 months.

The foregoing leases and licences are granted at specified rentals or rentals fixed by the Administrator and subject to re-appraisement, and under various prescribed or specified conditions.

3. Mining Leases, etc.—Holdings under Miners' Rights—entitling holder, for a fee of 5s. for 12 months from date of issue, to take possession of and occupy Crown lands for mining purposes.

Gold-mining Leases—granted for a period of 21 years, renewable for further periods of 21 years, for areas not exceeding 20 acres each, at an annual rent of 2s. an acre and with payment of a royalty of 3d. in the £1 on the value of gold won, or 6d. in the £1 if on Aboriginal Reserves.

Mineral Leases—granted in blocks not exceeding 40 acres each, at an annual rent of 1s. an acre, with term, renewal, and royalty conditions as for gold-mining leases.

Dredging Claims—granted for gold or minerals claims, the area not exceeding 300 acres each, at an annual rent of 2s. an acre and with payment of a royalty of 6d. in the £1 if on Aboriginal Reserves.

Petroleum Prospecting Permits—granted to search for oil over one, two or three areas not exceeding in the aggregate 10,000 square miles for an initial term not exceeding 12 months with provision for extensions in three-year periods up to a maximum of 10 years. The permittee must lodge a fee of £100 and enter into a bond for at least £1,000 to comply with the conditions of the permit and the provisions of the Petroleum (Prospecting and Mining) Ordinances 1954 and the regulations thereunder.

Petroleum Licences—confer an exclusive right to carry out the detailed surveys and other operations necessary to test the land for petroleum. A licence is granted only to a permittee for a fee of £20 over an area not exceeding 2,500 square miles upon the permittee entering into a bond of at least £5,000 to comply with the provisions of the licence and the Ordinance and Regulations.

Petroleum Leases—granted only to a licensee for a period of 21 years, and renewable for further periods of 21 years, in respect of an area not exceeding 500 square miles. The lessee is required to pay a royalty of 10 per cent. upon the gross value of all crude oil produced.

Coal Licences—granted to search for coal over an area not exceeding 1,000 square miles for a period of five years, at an annual fee of £10.

Coal Leases—granted for a period of 21 years, renewable for 21 years at an annual rental of 1s. per acre and a royalty fixed by regulation.

Business and Residence Areas—granted at the prescribed fee, authorizing the holder to occupy on a gold or mineral field an area not exceeding one acre for residence and carrying on business (one-quarter of an acre if for residence only).

Garden Areas—granted under prescribed conditions, on a gold or mineral field for growing fruit or other garden produce, the area of each garden not exceeding 5 acres.

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There are various conditions regarding working, employment and value of machinery used, which apply to the foregoing leases and licences.

### § 7. Trade, Transport and Communication.

- 1. Trade.—No record is kept of the trade between the States and the Territory. In the post-war years 1945-46 to 1948-49, direct oversea imports averaged about £200,000 a year, but in the four years 1950-51 to 1953-54, the average was about £625,000 a year. In 1955-56, imports totalled £1,154,810. Direct oversea exports amounted to £558,879 in 1955-56.
- 2. Shipping.—Shipping services to Darwin are provided at intervals of about six weeks by ships of the Australian Shipping Board from the eastern States and a twice monthly service from Western Australia by ships of the Western Australian State Shipping Service. Oversea tankers visit Darwin approximately six times annually with supplies of aircraft fuel and other petroleum products. Other oversea vessels call at irregular intervals. During 1955-56, 54 calls were made by vessels at Darwin, landing approximately 52,235 tons of merchandise and 47,515 tons of petroleum products.
- 3. Air Services.—At 30th June, 1956, there were 33 government aerodromes and 103 licenced aerodromes in the Territory. Darwin, a first class international airport, is the first port of arrival in Australia for virtually all aircraft from Europe and Asia. Qantas Empire Airways Ltd. and British Overseas Airways Corporation operate, through Darwin, a Sydney-Singapore-London passenger and freight service, and Qantas also operates a Sydney-Japan service and a Sydney-Johannesburg service. The Air France service from Paris to New Zealand via Saigon and the K.L.M. London-Singapore-Sydney services also call at Darwin. Regular inland services calling at Darwin are Trans-Australia Airlines (from Perth and Wyndham). MacRobertson-Miller Airways Ltd. (from Perth and Wyndham). MacRobertson-Miller Airways Ltd. and Connellan Airways Ltd. operate a network of air services throughout the Territory, the latter company's base being at Alice Springs. The Aerial Medical Service operates aircraft, and charter services can be secured at Darwin and Alice Springs.
- 4. Railways.—The Commonwealth Railways Commissioner, under the Commonwealth Railways Act 1917–1955, operates the Central Australia Railway from Port Augusta to Alice Springs over a distance of 771 miles, of which about 200 are in the Northern Territory. The Commissioner also operates the North Australian Railway between Darwin and Birdum on a 3 ft. 6 in. gauge over a distance of 316 miles. The two inland terminals, Alice Springs and Birdum, are over 600 miles apart and are connected by road transport along the Stuart Highway. A road-rail passenger and freight service operates between Adelaide and Darwin.

The Clapp plan for the standardization of Australian railways recommended, inter alia, the construction of a standard gauge (4 ft.  $8\frac{1}{2}$  in.) strategic and developmental railway between Dajarra (Queensland) and Birdum, and the conversion to standard gauge of the Birdum-Darwin line, but not the conversion of the Port Augusta-Alice Springs line nor the construction of a 4 ft.  $8\frac{1}{2}$  in. line between Alice Springs and Birdum. Provision for both of the last two projects, however, was included in an agreement with South Australia enacted in 1949.

The Governments of the Commonwealth and South Australia agreed in 1950 that a standard gauge railway from Stirling North to Leigh Creek coalfields (157 miles) should be constructed. A further agreement, in 1954, provided for an extension to Maree, 56 miles north of Leigh Creek. This line was officially opened by the Acting Prime Minister, Sir Arthur Fadden, on 27th July, 1957.

5. Roads.—During the war, roads were built connecting Alice Springs with Darwin, and Mount Isa (Queensland) with Tennant Creek. The first of these roads, known as the North-South Road or Stuart Highway, is 954 miles long, and runs via Larrimah and Tennant Creek. The Mount Isa-Tennant Creek Road (Barkly Highway) is 403 miles long and joins the Stuart Highway some 14 miles north of Tennant Creek. Both were used extensively during the war, the Stuart Highway, in particular, experiencing very heavy and continuous traffic. Since the war, the Stuart Highway has been used continually as a means of transporting foodstuffs and other supplies to Darwin and northern centres. The route is used also for overland tourists and travellers from the southern States to

Darwin. With the further development of the pastoral and mining industries in the Territory, road trains are now being used on both highways for the export of cattle and ore. Both roads have good water bores and communications. There are now approximately 12,000 miles of road in the Territory of which 1,287 miles are sealed.

6. Posts, Telegraphs, Telephones and Wireless.—Postal communication is maintained by road and rail transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service give a regular service between Fremantle and Darwin. Mail is also carried between the capital cities of Australia and Darwin by the airway companies operating in each State. Inland, the northern part of the Territory receives its mail via Darwin or by means of the aerial services, and the southern districts are served via Adelaide.

The transcontinental telegraph line, covering a length of 2,230 miles, runs in a northerly direction from Adelaide to Darwin, and links Darwin in telegraphic communication with other parts of the world.

Long-distance telephone communication is established between Darwin and the capital cities of Australia, and oversea telephone communication through Sydney is also available.

Regional national broadcasting stations are situated at Darwin and Alice Springs. The majority of homesteads on pastoral leases are equipped with pedal wireless sets operated under licence from the Postmaster-General's Department. These stations are in daily communication with Flying Doctor Bases situated at Alice Springs (Northern Territory), Wyndham (Western Australia) and Cloncurry (Queensland), and are used for transmission of radio-telegrams and other communications.

### § 8. Education.

1. European.—Schools for European and part-European children in the Northern Territory are conducted for the Commonwealth on an agreed basis of reimbursement by the South Australian Department of Education which is represented in Darwin by an Assistant Supervisor of Education, Northern Territory Schools.

At the beginning of the 1957 school year, there were 10 Government schools for European children in the Northern Territory, with 2,298 pupils, providing instruction according to the South Australian curriculum. Classes up to the Leaving Certificate are provided at Alice Springs and at Darwin there is a separate High School with classes up to the Leaving Certificate.

Children of primary and pre-Intermediate secondary standard who live more than 10 miles from an established school receive an allowance of £80 per annum plus fare concessions if they board away from home in order to attend school. Nine exhibitions are available annually on the results of the Intermediate Certificate, the maximum benefits being £110 per annum and annual return fares if the recipients are required to board away from home in order to attend school.

Approximately 100 children receive correspondence education under the South Australian Correspondence School system. The "School of the Air" supplements normal correspondence instruction for certain children. Some of these live as much as 500 miles distant from Alice Springs, from which point the "School of the Air" is conducted. Three half-hourly sessions are given each day and the unique feature of the "School of the Air" is the "Question and Answer" section which forms a part of every session. Children with access to radio transceivers are able to ask questions of their teacher and all other pupils listen to the answers.

Six pre-school centres have been established in the Territory. Of these, four reach the required standards for subsidy by the Administration of the amount of the salary of a trained pre-school teacher. Two centres occupy buildings specially erected for the purpose at the expense of the Administration, and a third centre occupies a building purchased by the Administration. Two scholarships are offered each year for Territory girls to qualify as pre-school teachers.

2. Native.—The social, cultural and educational background of the aboriginals has made necessary the establishment of special schools for them. It is envisaged that this necessity will ultimately pass. As from the beginning of the 1956 school year, control of these schools passed from the Commonwealth Office of Education to the Welfare Branch of the Administration. Twelve have so far been established. A special syllabus and series of readers have been prepared for use in these schools. Free mid-day meals, milk

and school clothes are supplied to the pupils. In addition to the 12 Administration schools, 13 schools for aboriginal children are conducted by Missions with the aid of Government subsidies. Three schools, also aided by Government subsidies, have been established on pastoral properties and the establishment of others along similar lines is planned.

3. Theoretical Training of Apprentices.—The recognition that technical school training is an extension of workshop training has led to the introduction of day-time classes which apprentices attend without loss of pay. Apprentices are directed by the Apprentices Board to undertake correspondence courses conducted by the Technical Correspondence School of the South Australian Education Department and the Sydney Technical College, these courses covering the work prescribed for the various trades in South Australia and New South Wales.

## § 9. Native Welfare.

The Welfare Ordinance, which came into operation on 13th May, 1957, established the principle that native people would be committed to the care of the State only on the grounds of their need for special care and assistance and not on the grounds of race or colour, and it laid on the Director of Welfare a positive responsibility for the advancement of wards in his care. The Employment Ordinance provides for the training of wards and assistance in establishing them in occupations, either on their own account or as employees. The Ordinance envisages, amongst other forms of training, apprenticeships for the better-educated wards and training on the job for those wards not yet capable of entering into apprenticeships. It also envisages financial aid to natives or groups of natives who may, under the guidance of the Director, be able to engage on activities (for example in agriculture, cattle raising, hunting or fishing) on their own behalf. The Director of Welfare is responsible for supervising employment for the wards in his care, and protective legislation for those in employment is retained. The legislation does not, of course, apply to any persons who are not wards and native people who have ceased to be wards will come within the normal industrial customs of the country.

# § 10. Finance.

Details of revenue and expenditure of the Territory for the years 1951-52 to 1955-56 are shown below. The information given covers the transactions of the Commonwealth Consolidated Revenue Fund relating to the Northern Territory and the transactions of the North Australia Railway.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE.

(£.)										
Item.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.					
	Re	VENUE.								
Taxation—										
Probate and Stamp Duties	6,201	5,565	6,292	9,928	7,765					
Motor Registration	(a)	11,354	25,882	36,694	41,528					
Total	(a)	16,919	32,174	46,622	49,293					
Business Undertakings—	,									
North Australia Railway	48,929	42,160	68,411	69,494	85,559					
Electricity Supply	139,572	260,521	259,687	264,969	311,158					
Total	188,501	302,681	328,098	334,463	396,717					
Other-										
Rent and Rates	101,263	115,758	127,852	143,152	187,068					
Miscellaneous	167,536	177,839	227,110	188,169	189,064					
Total	268,799	293,597	354,962	331,321	376,132					
Grand Total	(b)463,501	613,197	715,234	712,406	822,142					

<sup>(</sup>a) Not available.

<sup>(</sup>b) Incomplete.

### NORTHERN TERRITORY: REVENUE AND EXPENDITURE—continued.

(£,)

Item.	₁1951≟52.	1952-53.	1953-54.	1954-55.	1955-56.		
	Ехр	Expenditure.					
Public Debt Charges—			j				
Interest(a)	125,879	126,328	133,866	135,546	124,561		
Debt Redemption(b)	62,783	65,907	69,194	'72,651	76,283		
Other( $c$ )	••	.79		7,029			
Total	188,662	192,314	.203,060	215,226	200;844		
Business Undertakings-							
North Australia Railway	90,966	114,477	139,324	158,383	183,268		
Electricity Supply	280,064	266,614	.268,307	275,423	282,976		
Water Supply	56,151	71,104	73,495	64,736	83,959		
Hostels Loss	29,185	42,653	25,159	31,607	41,849		
Total	456,366	494,848	.506,285	530,149	592,052		
Social Expenditure—							
Aboriginal Affairs	286,041	278,492	354,266	413,833	421,412		
Educational Services	75,838	95,476	94,578	132,311	131,548		
Public Health, Recreation	1		· 1	1	,		
and Charitable	389,158	508,166	547,680	586,158	668,835		
Law, Order and Public Safety	31,357	35,063	32,738	48,520	52,291		
Total	782,394	9.17,197	1,029,262	1,180,822	1,274,086		
Capital Works and Services—							
North Australia Railway	20,209	162,020	229,861	141,529	93,371		
Water Supplies, Roads,							
Stock Routes, etc.	.215,366	174,780	142,402	115,873	106,344		
Darwin Lands Acquisition		56,209		1 555 001			
Buildings, Works, Sites, etc.	974,058	858,459	1,162,146	1,565,381	2,467,573		
Plant and Equipment	91,651	116,707	137,096	137,338	214,117		
Additional Working Account	ĺ	1	1	ĺ			
(Northern Territory Ser-		1	10.000				
vices Trust Account)	•.•	• • •	10,000	• • •	<u> </u>		
Loans for housing					73,000		
Total	1,301,284	1,368,175	1,681,505	1,960,121	2,954,405		
All Other—							
Territory Administration	529,127	683,711	735,215	772,476	1,048,967		
Developmental Services	88,170	117,419	140,541	126,797	128,717		
Municipal, Sanitary and Gar-	00,1.0		,	,	120,111		
bage Services	73,565	88,336	81,796	72,866	83,466		
Shipping Subsidy	3,800	3,800	3,800	3,800	3,800		
Airmail Service Subsidy	5,200	11,000	11,708	18,300	35,229		
Railway Freight Concessions	26,323	22,955	20,367	24,039	20,200		
Rent, Repairs and Mainten-	20,525	,	20,507	24,000	20,200		
ance, n.e.i	125,233	153,608	152,768	178,242	191,528		
Total	851,418	1,080,829	1,146,195	1,196,520	1,511,907		
Grand Total	3,580,124	4,053,363	4,566,307	5,082,838	6,533,294		

<sup>(</sup>a) Includes North Australia Railway Interest and Exchange, 1951-52, £83,959; 1952-53, £84,887; 1953-54, £83,633; 1954-55, £86,403; 1955-56, £76,634, (b) Includes North Australia Railway Debt Redemption, 1951-52, £36,303; 1952-53, £38,103; 1953-54, £40,000; 1954-55, £41,997; 1955-56. £44,096. (c) Railways Loan Redemption and Conversion Expenses.

### THE AUSTRALIAN CAPITAL TERRITORY.

1. Introductory.—Information regarding the selection and establishment of Canberra as the Australian capital city, the physiography of the Territory and its early history will be found in earlier issues of the Official Year Book—See List of Special Articles, etc., at the end of this volume under "Canberra" and "Federal Capital City".

On 12th March, 1913, the official ceremony to mark the start of operations in connexion with the establishment of the Seat of Government was carried out. At this ceremony, the selection of "Canberra" as the name of the capital city was announced.

On 9th May, 1927, Parliament House at Canberra was officially opened by His Royal Highness Albert, Duke of York—afterwards His Majesty King George VI.—the occasion being the 26th anniversary of the opening of the first Parliament of the Commonwealth at Melbourne by His Royal Highness George, Duke of Cornwall and York—afterwards His Majesty King George V.—on 9th May, 1901. (For particulars of the opening ceremony see Official Year Book No. 21, p. 604.)

The development of the Territory administration prior to the taking over of control by the Federal Capital Commission on 1st January, 1925, is described in summarized form in Official Year Book No. 18, and in Official Year Book No. 22 a summary is given of the administrative activities of the Federal Capital Commission. The administration of the Territory by this authority was continued until 30th April, 1930, when the Seat of Government (Administration) Act 1924–1929 was repealed, and the powers and functions of the Commission reverted to the Government.

Since April, 1932, the general control of the Territory has been exercised by the Minister for the Interior, certain specific services, however, being undertaken by the Department of Health, the Department of Works and the Attorney-General's Department.

An amendment to the Seat of Government Acceptance Act in 1938 provides that the Territory shall be known as the Australian Capital Territory.

2. Progress of Work.—(i) General. Further progress in providing housing and allied community facilities was shown in the works programme in the Australian Capital Territory for the financial year 1954-55 and engineering services were kept abreast of developmental requirements. Planning was begun for the increase in population which will result from transferring other Departments to Canberra as the various sections of the new Administrative Building are completed.

The total expenditure on capital and maintenance works in the works programme amounted to £6,592,149 in 1955-56 and £6,378,707 in 1956-57.

The combined labour force of the Department of Works and contractors working for the Department totalled 2,194 men, at 30th June 1956, and 2,445 at 30th June, 1957.

- (ii) Works Programme. (a) Housing. During 1956-57, 654 dwelling units were completed (621 built by contract and 33 by day labour) as compared with 454 (430 by contract and 24 by day labour) in 1955-56. The number of houses of each type completed in 1956-57 (1955-56 figures in parentheses) was as follows:—Brick 60 (55), brick veneer 84 (107), brick flats 236 (eight), timber 98 (181), monocrete 157 (102), and masonry veneer 19 (one). Of the total units built, in 1956-57 and 1955-56, 45 and 77 respectively were built in the suburb of Ainslie, 114 and nil in Braddon, 43 and 85 in Deakin, 87 and 160 in Narrabundah, 20 and 72 in O'Connor, 114 and nil in Reid, and 212 and 26 in Yarralumla. More than 90 per cent. of the units built were for the Department of the Interior. At 30th June, 1957, there were 310 houses and 460 flats under construction.
- (b) Other Building. Major projects completed during the year 1955-56 included an infants' school at Yarralumla, the Olympic Swimming Pool at Parkes, additional nurse's quarters for the Canberra Community Hospital, a pre-school centre at North Ainslie and a Mothercraft Centre at Throsby Crescent, Griffith. In 1956-57 major projects completed

were alterations and additions to the Canberra High School, an air-conditioned brick insectory for the C.S.I.R.O. at Black Mountain, and new recreational buildings at the Royal Military College, Duntroon, and H.M.A.S. Harman.

Further progress was made on the permanent Administrative Building at Parkes and at 30th June, 1957, its erection was well advanced. The concrete structure has been completed, and "A" block has been occupied.

Further progress was made on the construction of a 20-chamber Hoffman brick kiln at Westridge and work was begun on the construction of a bitumen hot mix plant for the Department of Works.

At 30th June, 1957, work was well advanced on new primary schools at Turner, Griffith, Yarralumla, and North Ainslie, while the new North Ainslie Infants school was 46 per cent. complete.

Other major building works under construction at 30th June, 1957, were the erection of a plant industry laboratory for the C.S.I.R.O., new Sergeants' mess and quarters at the R.M.C., Duntroon, Airmen's Quarters at the R.A.A.F. station, Fairbairn, and alterations and additions to chilling halls at the Canberra abattoirs.

(c) Engineering Works and Services. During 1955-56, five miles of sub-divisional roads were constructed to serve newly built areas and a further 15 miles were constructed in 1956-57, bringing the length of city roads at 30th June, 1957, to 237 miles, comprising 3 miles of concrete, 139 miles of bitumen paved and 95 miles of gravel. At the same date, the length of city footpaths was 141 miles. During 1956-57, about 15 miles of city roads were sealed and road maintenance works included the resealing of 38 miles of city roads. Major projects were the completion of three concrete bridges over Sullivan's Creek and of Woden's Creek bridge on the Cooma road, reconstruction of Cooma road and sealing to Tharwa turn off, sub-divisional roads in Yarralumla, Narrabundah, Ainslie, Duntroon, Griffith, Parkes and the Molonglo industrial area. Other projects carried out were the widening of a section of London Circuit, the construction of roads, parking area, etc., at the Olympic pool, realignment of Kambah lane, and the construction of a parking area in Mort Street, City. Considerable maintenance work was carried out on all city and country roads particularly in 1955-56 after excessive rainfall and storm damage.

During 1955-56, 47,348 feet of water mains were laid to reticulate water services to new buildings. A further 39,560 feet were laid in 1956-57. At 30th June, 1957, 8,081 houses were connected to the water supply system and of this number 6,926 were metered. The consumption for 1956-57 was 2,333 million gallons with an average daily consumption of about 176 gallons per head.

Construction of the 24" main from Lower Red Hill to London Circuit and a 36" suction main at the Cotter was completed.

Investigational work is being carried out at the site of the proposed new dam on the Upper Cotter River.

During 1955-56 and 1956-57, 61,811 feet and 61,104 feet respectively of sewer mains were laid to connect newly built houses to the sewerage system and 7,784 houses and buildings had been connected to the sewerage system by 30th June, 1957.

The main outfall sewer from Condamine Street to the Motel site was completed and the augmentation of the sewage treatment plant at Western Creek was nearly complete.

3. Forestry.—A considerable amount of reafforestation work has been undertaken and plantations (mainly *Pinus radiata*) have been established at Uriarra, Mount Stromlo, Pierce's Creek, Green Hills and Kowen. Experimental plots have been established in the Brindabella mountains and soil conservation areas at various locations throughout the Territory.

The total area of softwood plantations at 30th June, 1956, was 18,300 acres, of which 15,500 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus laricio*.

Forestry operations in the Territory were begun on Mount Stromlo in 1915. Plantings up to 1925 were chiefly on decorative lines, but since then a much wider programme has been undertaken. Sawmill timber is now being obtained from the logs resulting from thinning operations and clear felling of mature plantations. The yearly output of pine timber has increased

from 30,000 super. feet in 1930-31 to approximately 12 million super. feet at the present time, the total amount cut to date being about 113 million super. feet. The present output consists of approximately 50 per cent. saw log timber producing building material, and 50 per cent. case-making materials,

In 1926, a comprehensive review was undertaken of the Territory's potentialities for forest development. A system of forest management was instituted in the existing forest area, and a considerable amount of survey and assessment work has been completed, resulting in the extension of operations, including fire protection, to 100,000 acres of hardwood forests in the Cotter catchment area. Hardwood produced during 1955-56 amounted to 2,000,000 super. feet log measure all of which was used in building operations in Canberra. The total amount of hardwood cut from Australian Capital Territory forests to date is about 33,000,000 super. feet.

4. Lands.—(i) General. Reference has been made in previous issues of the Official Year Book to the general conditions of land tenure in the Australian Capital Territory and to the area of alienated and leased land, and Chapter IV.—Land Tenure and Settlement; of this issue contains statistical information on the subject.

Under the Seat of Government: (Administration) Act 1910; Crown lands in the Territory may not be sold on disposed of for any estate: in freehold except in pursuance; of some contract: entered into before the commencement of that. Act. Leases: of land in the city area are: granted under the: City. Area Leases: Ordinance 1936–1951, and leases: of other lands: under the Leases: Ordinance 1918–1955. Land, is: also: leased for various, purposes in the city area, under the Church Lands. Leases: Ordinance: 1924–1932; and, the Leases (Special Rurposes). Ordinance: 1925–1943; while one: lease under the Church of England Lands: Ordinance: 1926 has; been granted; for church purposess.

Under the City Area Leases Ordinance 1936-1951, the Government may grant leases in the city area of any Crown land for business or residential purposes. Such leases may be issued for a period not exceeding 99 years at a rental equal to five percent, of the unimproved value of the land, which value is subject to re-appraisement at the expiration of 20 years, and thereafter every 20 years. A suitable building must be commenced within six months and completed within 12 months unless an extension of time is allowed.

As considerable portions of the Territory lands are not required in connexion with the establishment of the city, large areas have been leased for agricultural or grazing purposes. Leases may be granted for grazing, dairying, fruitgrowing, horticulture, agriculture or other purposes for periods not exceeding 50 years. The annual rental is 5 per cent. of the assessed value of the land inclusive of rates, the value being subject to re-appraisement every 10 years.

- (ii) Jervis Bay Territory. The Commonwealth acquired from the State of New South Wales sovereign rights over the area comprising about 28 square miles of land and water at Jervis Bay for possible use as a port in connexion with the Australian Capital Territory. The Royal Australian Naval College was established in this area on a site known as Capitain's Point, but was removed in 1930 to Flinders Naval Base, Victoria. It was, however, re-established at the original site as from the beginning of 1958. Some 13,000 acres of land in the Jervis Bay area, mostly of little value agriculturally, have been leased for short terms from time to time, chiefly for grazing purposes.
- 5. Transport and Communication.—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line 42 miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. The railway terminus is situated in the suburb of Kingston. A daily passenger service operates between Canberra and Sydney and Canberra and Melbourne.

Two airlines provide several services daily each way, on the Sydney,—Canberra-Melbourne route,

Regular motor-coach services link Canberra with towns in New South Wales, Victoria and South Australia.

There are three radio broadcasting stations in the Australian Capital Territory, 2CY and 2CN of the national broadcasting system and 2CA, a commercial station.

6. Population.—From 1911 until 1921, the population of the Australian Capital Territory remained at about 2,000 persons. In 1922, it commenced to rise, and by 1927 was nearing 6,000. The following year, with the transfer of departments from Melbourne, it passed 8,000.

The population at the Census of 30th June, 1947, was 16,905 persons—15,156 in the city area, 1,389 in the rural districts and 360 in the Jervis Bay area—and at the Census of 30th June, 1954, it was 30,315 persons, 28,277 being in the Canberra city area and 517 in the Jervis Bay area. At 30th June, 1957, when a special count of Canberra City area was made, the population was 35,827 persons, The estimated population of the Territory at the same date was 37,865 persons.

- 7. Production.—During 1955-56, the production of the more important items of the agricultural and pastoral industry was—Wheat, 18,867 bushels; wool, 2,333,000 lb.; whole milk, 913,000 gallons; meat (bone-in weight, fresh), 3,332 tons. The numbers of livestock depastured at 31st March, 1956, were—Horses, 794; cattle, 9,489; sheep, 257,901; and pigs, 120.
- 8. Education.—The Commonwealth Department of the Interior is primarily responsible for the education of children in the Australian Capital Territory. The New South Wales Education Department, however, provides teachers and the curriculum for schools in the Territory and is reimbursed annually for expenses incurred.

There are two public secondary schools in Canberra providing courses to the Leaving Certificate standard, Canberra High School, Acton, and Telopea Park High School, Barton.

Twelve schools provide courses for children in infants and primary classes, including two in the Jervis Bay area and three in rural districts. A school for mentally handicapped children was opened early in 1955.

There are eight private schools in Canberra. Of these, St. Edmund's Christian Brothers College, St. Christopher's Convent, Canberra Grammar School (Boys) and Canberra Church of England Girls' Grammar School provide courses leading to the Leaving Certificate Examination.

The Australian Capital Territory Education Ordinance provides for the compulsory attendance at school of children between the ages of six and fifteen years.

Fifteen pre-school centres, including two sub-centres, an occasional care centre and a mobile unit which visits outlying areas provide pre-school facilities for approximately 1,250 children between the ages of three and five years.

The Canberra Technical College, which follows the curriculum set by the New South Wales Technical Education Department, provides trades courses for apprentices, vocational (non-trades) courses including accountancy, women's handicrafts, and sheep and wool courses, hobbies courses including ceramics, dressmaking, art, woodwork, and motor maintenance, and courses for Commonwealth authorities, including workshop practice for Royal Military College cadets, motor maintenance for Australian Forestry School cadets and shorthand and typing courses for the Public Service Board. In addition, the Technical College undertakes the trade testing of migrants seeking to enter skilled trades.

Education at university level is provided by the Canberra University College, details of which will be found in Chapter XII.—Education.

An area of about 250 acres has been set aside at Acton, for the Australian National University. Provision has been made for the University to establish such research schools as may be thought desirable, including a School of Medical Research, and Research Schools of Physical Sciences, Social Sciences and Pacific Studies. Further reference to this University appears in § 8 of Chapter XIL—Education.

9. Finance.—Details of revenue and expenditure for the years 1951-52 to 1955-56 are given in the following table:—

AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE.

		(£.)				
Item.	-	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
		REVENUE				
Taxation—			1			
Motor Registration		37,723	41,973	47,998	53,768	79,229
Liquor		15,689	21,034	22,756	25,436	26,213
Rates		18,271	22,312	30,306	38,333	51,542
Other		765	1,196	935	1,149	990
Total		72,448	86,515	101,995	118,686	157,974
Business Undertakings						
Railways		10,246	24,493	14,557	29,233	15,168
Electricity Supply		230,363	328,108	471,410	510,852	(a)
Water Supply and Sewerage		24,086	22,002	25,390	26,706	24,361
Abattoirs		22,337	28,706	27,115	29,254	31,410
Total		287,032	403,309	538,472	596,045	70,939
Rent-						
Housing		334,020	409,915	502,096	556,725	585,940
Land		77,832	91,038	110,080	88,150	115,970
Miscellaneous		11,246	13,299	16,196	8,473	8,956
Total		423,098	514,252	628,372	653,348	710,866
	-					
Interest	• •	11,798	17,335	22,300	25,032	52,388
Fees for Services and Fines	• •	18,456	21,325	21,559	40,273	45,991
Mortgages—Principal		267,399	128,037	155,596	113,453	210,270
Sale of Houses		_::	<i>::</i>	-::	170,298	151,029
Other	• •	73,644	61,619	94,628	88,400	128,260
Grand Total		1,153,875	1,232,392	1,562,922	1,805,535	1,527,717
		Expenditu	re.			
Public Debt Charges—						
Interest		173,836	172,579			180,826
Debt Redemption		81,530	85,605	89,884	94,323	99,025
Other	• •		42		336	• •
Total		255,366	 258,226	272,970	275,318	279,85
Business Undertakinos(h)-			<del></del>			
Business Undertakings(b)— Railways		37.058	45,802	42,721	39,705	44,530
Railways		37,058 329,707	45,802 436,271		39,705 542,939	
Railways Electricity Supply		37,058 329,707 59,040	436,271	504,559	542,939	(a)
Railways	• • •	329,707 59,040	436,271 69,279	504,559 83,047	542,939 81,642	(a) 166,781
Railways Electricity Supply	••	329,707 59,040 17,736	436,271 69,279 20,310	504,559 83,047 20,379	542,939 81,642 20,933	(a) 166,781 24,782
Railways Electricity Supply Water Supply and Sewerage Abattoirs Brickworks Loss	••	329,707 59,040 17,736 (c)	436,271 69,279 20,310 25,000	504,559 83,047 20,379 30,000	542,939 81,642 20,933 18,000	(a) 166,781 24,782 18,000
Railways Electricity Supply Water Supply and Sewerage Abattoirs Brickworks Loss Transport Services(d)		329,707 59,040 17,736 (c) 63,000	436,271 69,279 20,310 25,000 60,000	504,559 83,047 20,379 30,000 60,000	542,939 81,642 20,933 18,000 64,000	(a) 166,781 24,782 18,000 70,000
Railways Electricity Supply Water Supply and Sewerage Abattoirs Brickworks Loss	••	329,707 59,040 17,736 (c)	436,271 69,279 20,310 25,000	504,559 83,047 20,379 30,000 60,000 1,000	542,939 81,642 20,933 18,000 64,000 1,000	166,781 24,782 18,000 70,000 1,000

Note.—For notes see end of table, page 120.

# AUSTRALIAN CAPITAL TERRITORY : REVENUE AND EXPENDITURE —continued.

(£.)

Item.	1951–52.	1952–53.	1953–54.	1954–55.	1955-56.
Ехрі	ENDITURE—	continued.			
G	1				1
Social Expenditure(b)— Education—	j				
	158,298	183,356	239,525	296,783	327,162
	28,005				
Technical College	48,100	39,191	38,490	42,190	
University	48,100	60,300		79,625	
Science, Art, Research, etc Nursery Schools and Pre-School	4,444	5,459	5,727	5,691	6,35
	12,690	18,724	18,749	10.634	23,37
Centres Public Health and Recreation		75,369		19,624	
Charitable—	62,218	73,309	88,820	89,755	95,31
	125 407	144,733	126 220	141 021	100.21
Hospital—General Relief of Aged, Indigent, etc	135,487		135,328		
	2,933	2,739	3,227	3,241	3,42
Other Law, Order and Public Safety—	8,459	11,250	14,801	17,225	20,45
	14 207	17 200	22.467	25 767	26.77
Justice Police	14,297	17,399	22,467	25,767	
	63,995	74,492	86,413	87,126	
Public Safety	16,264	18,499	20,559	19,658	20,01
Total	555,190	651,511	738,988	828,516	971,23
Capital Works and Services(f)-					
Business Undertakings—	j				J
Railways	7 (20	2.166	2.5/2	7 422	6046
Electricity Supply	7,620	3,166	2,562	7,432	
Water Supply and Sewerage	223,297	272,038			
4.1	362,735	364,006			
Transport Services	8,558	9,856	4,992	9,526	
** ( ( )	46,844	41,956		44,191	93,723
Brickworks	1,918	420			
		7,738	21,154		••
Total	650,972	699,180	594,231	629,975	946,250
Social Expenditure—					
Primary and Secondary Education	1			l .	
Technical College	(c)	169,628	151,192	193,081	284,762
University		105,020	131,172	175,001	204,702
Public Health and Recreation	3,631	17,884	23,741	10,309	7,770
Hospital—General	37,361	66,285	64,674	86,147	26,786
Police	146	3,238	2,485	00,147	20,700
Public Safety	2,214	5,528		8,212	10,342
					10,512
Total	43,352	262,563	245,756	297,749	329,660
Other-					
Roads and Bridges	110,616	264,307	208,391	249,980	389,319
Parks and Gardens, etc	24,695	26,540	23,927	21,348	34,164
Lands and Surveys	72	2,509	1,367	1,052	120
Forestry	80,370	33,050	45,871	67,805	
Housing	2,287,179	1,578,790			
Civil Andadan	(c)	(c)	(c)	(c)	12,78
Public Works, n.e.i	661,900	382,661	356,351	573,934	
Total Capital Works and					<del></del>
Services	3 850 156	3,249,600	2.644 303	3.340 047	5 200 100
	3,039,130	2,272,000	2,077,393	2,277,077	2,200,103

Note.—See next page for notes.

## AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE —continued.

(£.)

Item.	_	1951–52.	1952-53.	1953–54.	1954–55.	1955–56.						
EXPENDITURE—continued.												
All Other-						_						
Roads and Bridges		184,824	243,480	208,733	199,111	239,748						
Parks and Gardens, etc.		189,546	204,905	220,008	246,933	252,251						
Lands and Surveys:		43,584	43,910	53,125	47,745	54,530						
Agriculture and Pasture		26,162	19,291	18,386	22,208	22,874						
Forestry		12,000	10,000	7,000	5,000	5,000						
Housing		94,038	102,220	101,254	121,179	164,584						
Civil Aviation		(c):	(c)	(c) <sup>-</sup>	(c);	24,36						
Legislative and General A	dmini-	1	` '	` '	,,	•						
stration		175,458	183,442	211,726	266,081	296,383						
Public Works, n.e.i	• • •	27,1.12	28,093	25,828	30,290	31,54						
Miscellaneous(h)		60,641	79,380	64,036	9,039	43,80						
Total		813,365	914,721	910,096	947,586	1,135,09						
Grand Total		6,055,306	5,758,233	5,341,695	6,177,761	7,934,09						

(a) Transactions in Australian Capital Territory Electricity Supply Trust Account. (b) Other than Capital Works and Services. (c) Not available. (d) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service) (e) Includes loss on operations, 1951-52, £54,900 1952-53, £12,700; 1953-54, £24,000; 1954-55, £7,500; and 1955-56, £7,500. (f) Excludes repairs and maintenance. (g) Expenditure on plant and equipment by Department of Interior only. (h) Includes restoration of bushfire damage, 1951-52, £54,441; 1952-53, £72,783; 1953-54, £53,701; 1954-55, £3,582; and 1955-56, £1,391.

The following table, which was prepared by the Department of the Interior, shows the total receipts and expenditure of the Australian Capital Territory from 1901-2 to 30th June, 1956:—

AUSTRALIAN CAPITAL TERRITORY: RECEIPTS AND EXPENDITURE TO 30th JUNE, 1956.

Receipts.	£	Expenditure.	£
Commonwealth Treasury— Parliamentary Appropriations— Revenue	51,177,605 5,695,967		932,595 13;938,051 20,016,766 5;913,786
		Seat of Government Establishment Account, being maintenance and administration less revenue; ex- penditure of a capital nature for which assets no longer exist; profit and loss accounts of trading activities, etc.	a 16;072,374
Total Receipts	56,873,572	Net Expenditure	56,873,572

(a) Excludes interest £5,991,920.

The foregoing figures exclude part cost of national buildings (Parliament House, the Secretariats, etc.), federal highways within the Territory, the Queanbeyan-Canberra Railway, the housing loan, etc.

### NORFOLK ISLAND.

- 1. Area, Location, etc.—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude 29° 3′ 30″ South, longitude 167° 57′ 5″ East. Its total area is 8,528 acres, the island being about 5 miles long and 3 miles wide. From Sydney, it is distant 930 miles, and from Auckland, 660 miles. The length of the coast line is 20 miles, and its form that of an irregular ellipse. Except for a portion on the south side and the landing place at Cascade on the northern side, almost inaccessible cliffs rise from the water's edge. The climate is equable, the temperature ranging between 49° and 85° F. with a mean of 68° F. The average annual rainfall is 53 inches. It has been said that the healthy climate together with the beauty of its landscapes and seascapes, should make Norfolk Island "the Madeira of the Pacific". The island, both pre-war and post-war, has been popular as a tourist resort. Pre-war the only means of transport to the island was by ship. However, with the inauguration of direct air services from Australia and New Zealand the majority of tourists now take advantage of these services.
- 2. Settlement and Population.—The first colonization, in 1788, was by Lieutenant King, who in H.M.S. Supply established a small penal station as a branch settlement of that at Port Jackson. The settlement was abandoned in 1813, and for 13 years thereafter its chief use was as a whaling station and place of call for British warships.

From 1826 to 1855, it was again a penal station. In 1844, it was annexed to Van Diemen's Land (Tasmania).

The descendants of the Bounty mutineers, having become too numerous to subsist on Pitcairn Island, were removed to Norfolk Island in 1856. The new community, numbering 94 males and 100 females, were the descendants of British sailors and Tahitian women. The last of those transferred died at Norfolk Island on 1st March, 1943. The population of the island as disclosed by the Census of 30th June, 1954, was 942, consisting of 478 males and 464 females. The estimated population at 30th June, 1956, was 1,039 persons.

- 3. Administration.—In 1856, the island was created a distinct and separate settlement under the jurisdiction of New South Wales. In 1896, it was made a dependency under the Governor of that Colony, and finally by the passage of the Norfolk Island Act 1913 it was accepted by the Federal Parliament as a territory of Australia. From July, 1914, until 1st January, 1929, Norfolk Island was administered by the Department of Home and Territories, and then, until 25th June, 1941, by the Territories Branch of the Prime Minister's Department, but it is now controlled by the Minister for Territories through an Administrator. An amending measure, the Norfolk Island Act 1935, provided for the establishment of air Advisory Council of eight elected members which may advise the Administrator on matters affecting Norfolk Island.
- 4. Economic Activity—The major economic activities of the island are primary production, whaling, the tourist trade and employment by Government instrumentalities.
- (i) Primary Industries. The soil on the island is particularly fertile, the climate equable, and the rainfall fairly evenly distributed except for a pronounced dry period in November. This enables a wide range of temperate and semi-tropical products to be cultivated. However, the island's comparative isolation and trading difficulties with New Zealand have hampered production in the past. A relaxation of some restrictions enabled out-of-season fruit and vegetables up to a limit of 3,000 lb. per week to be sent by air freight to Auckland, but the air service was reduced to fortnightly from August, 1956.

Prior to 1939, the principal primary product was passion fruit pulp. However, the introduction of disease together with the high cost of trellising and land reclamation has led to the curtailment of this industry. The production of bean seed has now become the main export industry. The island's isolation from many plant diseases found on the mainland, plus the fairly reliable dry period (which is conducive to the setting and maturing of seed), together with improved prices, induced a rapid expansion of production. In 1955-56, 1,084 bushels were exported and prices ranged from £6 f0s. to £8 10s. per bushel. (This yield is lower than normal as adverse harvesting weather occurred resulting in considerable loss of bean seed.) The conditions on Norfolk Island also favour the production of other types of seed. Some cut flowers are exported to New Zealand at suitable periods.

Island conditions are also conducive to good pasture growth but for a number of reasons meat production is insufficient to satisfy the demands of both the fourists and the local inhabitants. However, as a joint product to pastoral pursuits, quantities of hides and wool are exported.

Fish and, in certain months, whales abound off the island. In the past, a number of ventures have been formed to exploit these resources. They have been short-lived owing, for the most part, to the lack of a sheltered harbour. However, a modern whaling station was started on the island in 1955 and production commenced during the second half of 1956, the quota of 150 humpback whales being taken before the close of the season.

An active forestry programme is being carried out to increase the resources of Norfolk Island pine and to introduce suitable types of eucalypts.

- (ii) Tourists. The unique history and unusual beauty of the island had always attracted a number of tourists in pre-war days. The building of the airstrip during the war has made the island far more accessible and a considerable tourist industry has developed, particularly with visitors from New Zealand. The industry is at present limited only by the accommodation available. Approximately 120 can now be catered for and accommodation is being continually expanded.
- (iii) Government Instrumentalities. A large proportion of the population is employed by Commonwealth Government instrumentalities, namely:—Department of Civil Aviation, Norfolk Island Administration, Overseas Telecommunications Commission and Department of the Interior (Meteorological Branch). The bulk of the finance for the operation of these instrumentalities is supplied by the Commonwealth Government and this greatly increases the income of the island.
- 5. Trade, Transport and Communication.—Imports to Norfolk Island in 1938-39 amounted to £27,590, mainly from Australia. Since the 1939-45 War, they have risen from £32,402 in 1945-46 to £264,023 in 1955-56. In 1955-56 the major proportion (£248,633 or 94 per cent.) still came from Australia, while New Zealand supplied six per cent. Exports were valued at £16,970 in 1938-39, and have risen from £9,024 in 1945-46 to £38,330 in 1955-56. Australia was again the principal country concerned, exports thereto amounting to £31,214.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are (a) the produce or manufacture of Norfolk Island; (b) shipped direct to Australia; and (c) not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the Territory is maintained at approximately seven-week intervals by Burns Philp & Co. Ltd., Sydney. The route is from Sydney via Norfolk Island to the New Hebrides, Solomon Islands and other island groups and thence back to Sydney. Shipping between Norfolk Island and New Zealand is infrequent.

The construction of the aerodrome on the island was completed during 1943. A fortnightly passenger and air freight service between Sydney and Norfolk Island maintained by Qantas Empire Airways Ltd. extends to New Zealand under charter to Tasman Empire Airways Ltd.

There are approximately 50 miles of usable road on Norfolk Island. As a substantial section of the population possesses private motor cars, and taxi-cab services are available, transport is almost exclusively by motor vehicle.

The cable from Great Britain via Vancouver, Fanning Island, and Fiji bifurcates at Norfolk Island, one line connecting with New Zealand, the other with Brisbane. Until 10th June, 1947, the post office at Norfolk Island was part of the Commonwealth postal system, but as from that date Norfolk Island was established as a separate postal administration with its own issue of stamps.

6. Social Condition.—Education is free and compulsory up to the age of fifteen years. The school conforms to the Australian standard of public education, ranging from kindergarten to the intermediate certificate, with a two years' super-primary course of instruction in cultural subjects and in woodwork, needlework, leatherwork, basketry and hat-making. The headmaster and assistant teachers are lent by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1956, was 148, including 43 in kindergarten. Dental examination and free dental service are provided for school children.

The Court of Norfolk Island is a court of record with dual jurisdiction. Sitting in its Limited Jurisdiction, the Court has power to hear and determine actions of claims not

exceeding £30 and to punish summarily all crimes and offences involving a pecuniary penalty or a sentence of imprisonment not exceeding six months. In its Full Jurisdiction, the Court can hear and determine all actions, punish all crimes and offences, grant probate and letters of administration, hear and determine appeals from any conviction of the Court sitting in its Limited Jurisdiction, and exercise authority in all other matters. An appeal lies to the High Court of Australia from any judgment, order, decree or sentence of the Court sitting in its Full Jurisdiction when constituted by a Judge or the Chief Magistrate.

7. Finance.—The revenue of the Territory, together with an annual grant from the Commonwealth Government in aid of administrative expenses, is paid to the credit of the Norfolk Island Trust Fund, and advances for administrative and developmental expenses are drawn from the account. The principal sources of revenue in 1955-56 were:—Sale of liquor, £26,552; Commonwealth subsidy, £26,600; customs duties, £10,711. The total revenue was £119,655. Major items of expenditure in 1955-56 were:—administrative, £21,493; miscellaneous services, £23,412; repairs and maintenance, £14,545; capital works and services, £3,214; business undertakings, £29,895. Total expenditure amounted to £109,438.

### PAPUA AND NEW GUINEA.

## § 1. Administration.

Following the outbreak of the Pacific War, civil administration in Papua and New Guinea was suspended on 11th February, 1942, and military control commenced. The Territory of New Guinea came under Japanese occupation in 1942, but the greater part had already been recaptured by Australian and Allied Forces when the Japanese surrendered in August, 1945. Information relating to the transfer back from military to civil control under the Papua-New Guinea Provisional Administration Act 1945–1946 may be found in Official Year Book No. 39 and earlier issues.

The Papua-New Guinea Provisional Administration Act 1945-1946 was repealed by the Papua and New Guinea Act 1949 which came into force on 1st July, 1949. The latter Act approved the placing of the Territory of New Guinea under the International Trusteeship system and provides for an Administrative Union, one Administrator, one Supreme Court and one Public Service.

Provision is made for an Executive Council of not less than nine officers of the Territory, who shall be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members, namely:—(a) the Administrator; (b) sixteen officers of the Territory (who shall be known as official members); (c) three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; (d) three non-official members representing the interests of the Christian missions in the Territory; (e) three non-official native members; and (f) three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951, by His Excellency Sir John Northcott, while Administrator of Australia.

Subject to the Act, provision may be made by Ordinance for the establishment of Advisory Councils for Native Matters and Native Village Councils.

The Act also makes provision for the continuance of the existing laws of the Territory of Papua and the Territory of New Guinea.

## § 2. Finance.

The following table shows particulars of the financial operations of the Papua and New Guinea Administration for the years 1951-52 to 1955-56. Further information on each Territory will be found on pages 132 and 139.

TERRITORY OF PAPUA AND NEW GUINEA: REVENUE AND EXPENDITURE. (£.)

			,				
Particulars.			1951-52.		1953-54.	1954-55.	1955–56
			REVENU	Е.			
Taxation-			1				
Customs Duties			1,475,117	1,455,055	1,931,851	2,089,143	2,443,734
Motor Registration			27,374	30,914	36,544	42,372	47,99
Stamp Duties	• •	• •	10,742	7,217	36,266	32,043	35,75
Licences Business Undertakings—	• •	• •	13,221	20,785	24,759	26,312	37,71
			94,946	158,013	126,861	134,653	141,73
Post Office Harbour Dues, Wharfage, etc	. • •	• •	111,566	87,901	52,818	63,650	68,83
Electricity Supply	• • •	••	65,573	91,401	111,699	168,869	229,78
Sale of Timber	• •	• •	85,872	72,415	110,491	96,384	133,09
Copra and Rubber Productio	n	• • • • • • • • • • • • • • • • • • • •	65,786	54,100	41,352	44,508	69,72
Other Agricultural Production	n	• • •	9,873	12,345	16,760	13,970	17,56
Water Supply and Sewerage	• • •	::	375	9,371	23,462	15,267	16,94
Lands—	••	• •		,,,,,,	20,.02	10,20	1,
Mining—			1	1			
Royalty on Gold			79,684	109,246	71,480	66,446	54,66
Other	••	• •	9,079	9,612	8.977	9,412	9,59
Forestry	• •		19,804	21,947 47,296	34,388	58,588	75,83
Land Sales, Rents, etc.			36,450	47,296	52,838	101,618	81,57
Commonwealth Grant			5,285,559	4,657,022	5,421,981	7,125,687	8,433,82
Fees and Fines			49,837	55,620	55,597	67,485	69,64
All Other	••	••	235,568	191,095	233,259	123,632	329,11
Total		• •	7,676,426	7,091,355	8,391,383	10,280,039	12,297,14
			Expendi	rure.			
Business Undertakings—						1	
Post Office	• •		246,527 91,330	255,187	275,457	363,989	546,510
Harbours			91,330	55,375	56,588	65,434	106,75
Electricity Supply	: '		258,296 52,958	294,142	310,137	321,598	359,19
Saw-mill	• •		52,938	87,646	88,897	85,358	99,70
Water Supply and Sewerage	• •	• •	60,699	58,160	71,693	83,284	109,35
Social Expenditure—			376,799	221 172	389,590	466,291	602,90
Education Grants to Missions for Educa	***	• •	68,994	331,172 85,959		107,036	102,04
Dublic Health Heavitals at	uon	• •	1,362,027	1,092,459	90,342 1,245,493	1,655,817	1,921,63
Public Health, Hospitals, etc. Mission Medical Services—Gr		• •	117,517	153,200	130,043	191,295	245,70
Law, Order and Public Safety	. 07772	• •	557,380	511,523	542,221	608,729	701,23
District Services and Native Aff	airs	• •	337,300	211,223	J-92,22I	000,729	101,23
Compensation to Natives for		1age	286,653	280,505	196,504	92,135	67,71
Other			951,419	737,692	750,218	808,941	1,003,00
Capital Works and Services	• • •	• • •	1,755,970	1,592,690	2,258,150	3,142,899	3,332,41
All Other	::	.;	1,509,688	1,586,464	1,929,765	2,255,997	2,948,63
Total			7,696,257	7,122,174	8,335,098	10,248,803	12 146 70

## § 3. Agriculture and Animal Industry.

1. Soils.—Although a large proportion of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all parts where fertile soils occur, suitable for growing a wide range of crops. Most of the agriculture of the Territory up to the present has been on soils on the coastal plains, which, apart from the swamp soils, consist mainly of alluvium and podsolized alluvium. So far, these have been mostly under coconut plantations, although other crops such as rubber and cocoa have also been grown. The swamp soils, of which there are extensive areas in the Delta plains and other parts of the Gulf of Papua, and in smaller areas, are found intermittently around the coasts and along the lower reaches of the rivers, and are in general quite unsuited to any form of agricultural development.

Volcanic soils probably offer the greatest prospects for development. They are found mostly on the Central Plateau and southern foothills of the main island, but there are also areas in New Britain (particularly in the Gazelle and Willaumez Peninsulas),

Bougainville and New Ireland, as well as in numbers of smaller islands. Other rich soils are the alluvials of the river valleys. The largest single area of this type is in the trough occupied by the Ramu and Markham Rivers.

2. Climate.—The climate, particularly the rainfall, over so wide an area as Papua and New Guinea, with its numerous islands and varying elevations, naturally presents many variations. Generally speaking, the climate is moist and tropical, except at high altitudes. There are only small differences in both daily and seasonal extremes. The Territory has no winter and summer, and thus no great variation in day-length over the year. The two seasons which are experienced are generally described as the "south-east" and the "north-west", corresponding with the periods of the year when the south-east trade winds and the north-west monsoons direct the main Territory air-flow. The south-east season prevails approximately from May to October, the trade winds attaining maximum velocities during July and August. The north-west monsoon operates over a considerably shorter period, between the end of December and about March. During the periods between these seasons, November and early December, and about March to April, there are two short spells of calm weather.

Rainfall varies considerably, from an average annual rainfall of 245 in. at Gasmata in New Britain and 231 in. at Kikori in Papua, to about 88 in. at Wewak in New Guinea and 40 in. at Port Moresby.

Although the Territory has no summer and winter, it has a wide temperature range, due to differences in altitude, varying from an absolute highest temperature of about 100° F. along the coast, to freezing point on its highest peak, Mt. Wilhelm (15,400 ft.).

Humidity in the Territory is very high throughout the year. Some coastal stations register an average relative humidity of more than 90 per cent. Humidities below 60 per cent. are rare at coastal stations, average figures Ferying from 80 per cent. at 9 a.m. to 65 per cent. at noon and 75 per cent. at 3 p.m. Humidity in mid-mountain forests appears to be higher than in the lowlands, while in the mossy forests there are periods when the whole belt is saturated.

- 3. Suitable Crops.—The crops which can be grown in Papua and New Guinea include coconuts, rubber, tea, coffee, cocoa, jute, kenaf, manila hemp, sisal, rice, pepper, tobacco, peanuts, kapok, cassava, ginger, cinchona, nutmeg, vanilla, tropical fruits and vegetables, sago and tung oil, but of these, the only crops of any commercial importance are copra, coffee, cocoa and rubber.
- 4. Plantation Agriculture.—The principal plantation crops cultivated are coconuts, rubber, cocoa and coffee.

Coconuts. Territory coconut plantations suffered severely from damage and neglect during the 1939-45 War, but rehabilitation has been rapid and, in 1955-56, about 500 plantations together with native coconut stands produced 80,185 tons of copra for export valued at £6,186,055. The area (excluding native stands) planted with coconut palms in March, 1956, was 242,004 acres. In addition, 10,331 tons of coconut oil valued at £1,326,806 and about 6,127 tons of coconut meal and cake valued at £131,467 were exported in 1955-56. A copra crushing mill was established at Rabaul in 1952. Native stands produce about 20 per cent. of the copra exported.

A contract with the United Kingdom commenced on 1st March, 1949, for a period of nine years, for the sale of Territory copra in excess of Territory and Australian requirements. The price of copra sold for the first contract year, 1949, was £60 per ton f.o.b. Territory ports, and the contract provides that the price for each subsequent year is to be not more than 10 per cent. higher or lower than that for the preceding year and is to be negotiated before the end of the preceding year. Early in 1952, the termination date of the contract was varied to 31st December, 1957, and prices are now negotiated on the basis of calendar years. The price for the calendar year 1957 was £67 10s. per ton f.o.b. Territory ports for fair merchantable sun-dried copra with small price differentials for other grades.

Rubber. Rubber exports have more than doubled since before the Japanese invasion, increasing from an average of 1,352 tons per year during the three years 1937-38 to 1939-40 to 3,793 tons in 1955-56, valued at £1,386,787. A total area of 28,118 acres had been planted with rubber trees up to March, 1956.

Cocoa. Exports of cocoa beans increased from 207 tons in 1949-50 to 1,290 tons in 1955-56, valued at £360,864. The area (excluding native stands) planted with cocoa trees in March, 1956, was 39,310 acres, native stands comprised 7,450 acres.

Coffee. Exports of coffee beans increased from 21 tons in 1949-50 to 171 tons in 1955-56, valued at £93,829. The area (excluding native stands) planted with coffee trees in March, 1956, was 39,310 acres, native stands comprising 7,450 acres.

5. Native Agriculture.—Most of the native inhabitants of Papua and New Guinea are agriculturalists producing fruit and vegetables for their own consumption. The crops grown vary according to environment and altitude, and include yams, taro and sweet potatoes, coconuts, bananas, papaws, maize, sugar-cane, cassava, beans, peanuts, rice, cucurbits and tobacco. Sago is the staple food in the extensive semi-inundated areas which occur along the lower valleys of the major rivers. In these areas, it is usually cut largely from naturally occurring stands. In other parts of the country, small areas of sago are grown along stream banks and in swampy patches and are regarded as a reserve in times of poor harvest. In recent years, the natives have taken up the production of introduced crops such as peanuts, rice, cucurbits and maize for their own consumption and cocoa and coffee for export. In coconut areas, large quantities of copra are produced. In 1955-56, native copra production was estimated at about 20,000 tons.

In many localities, the natives follow a farming system known as "Bush Fallowing Rotation". The inhabitants of each village have, at any one time, a number of distinct and separate cleared garden areas in the land surrounding the village. The garden clearings may be located some miles from the village and are not usually contiguous. Each garden area may be made up of a number of distinct plots owned by individual natives or families. Communal ownership of gardens is rare. The number of garden clearings (and their area) attached to each village depends on the size of the village and the fertility of the land.

The method of cultivation followed is for the jungle trees to be felled and undergrowth cleared with axes and knives, the larger trees being usually left standing. The timber and foliage is allowed to dry out and then terms. In some localities, there is a little cultivation before the crops are planted, and root vegetables are placed in holes dug with a stick. In other places, however, there is careful preparation of the soil. Some weeding is done while the crops are growing. After harvesting, a second crop is rarely planted immediately in that garden area, but a new area of land is selected, cleared, burnt and planted. The natives return to the first area to harvest fruit from trees, such as papaw and banana, that may have been planted in the garden, but these are soon submerged in the new growth which quickly appears. The plot is allowed to lie fallow for a number of years, the period varying from 7 to 10 years or even longer, depending upon the local population pressure. During this time, high secondary jungle has probably grown. Ultimately the natives return to the original plot, and clear, burn and plant again. The cycle continues year by year throughout the agricultural land belonging to the village. The foregoing is a broad generalization of the method followed. There are, however, many variations.

The business of growing food is done by both the men and women. The division of work is usually clearly defined within the village itself but this division is not necessarily the same in all areas. Generally it is found that felling the forests is always done by the men, and carrying the harvested food home to the village is nearly always done by the women. Other work, however, such as cultivating, planting and weeding may be done by either men or women according to the customs of the particular village or area.

The advancement of native agriculture for local food supply and improved land use in village gardens, as well as for economic production of crops for sale, has a high priority in Government policy for the Territory.

6. Animal Industry.—At 31st March, 1956, the livestock in the Territory consisted of 10,435 cattie, 1,714 sheep, 4,640 goats and 5,687 pigs, besides horses, mules and poultry. These figures exclude native-owned livestock. The introduction of rabbits, foxes, hares and monkeys is prohibited.

A number of British breeds of cattle are represented in Territory herds. For dairying, Jersey and Australian Illawarra Shorthorns are most popular; Black Polled, Polled and Horned Shorthorns, and Red Polled cattle are raised for meat production. Under good management these breeds have done well in the Territory.

Most of the sheep now in the Territory are Romney Marsh breed located at Nondugl in the highlands of New Guinea. This breed has been tried in various parts of the Territory. It produces a good carcass, and in drier parts a useful sheep. There are also some Asiatic sheep and crossed with Romney Marsh they produce good carcasses and are hardy. Current investigations on sheep raising which include tests and observations to determine the most suitable breeds and areas for grazing for both mutton and wool are based on the Hallstrom Livestock Station in New Guinea.

7. Co-operative Societies.—There has been a rapid increase in organized co-operative societies in recent years. Societies now total 224, membership 61,385 and turnover £1,002,965, representing increases of 26, 7,135 and £40,362 respectively, for the year ended 31st March, 1956.

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The following table sets out details of the number of societies, members, etc., for the year ended 31st March, 1956:—

CO-OPERATIVE SOCIETIES: YEAR ENDED 31st MARCH, 1956.

Type of Society.	Number of Societies.	Number of Members.	Turnover.	Rebates to Members.	Total Capital.	Total Fixed Assets.
Consumer Societies . Producer Societies . Dual Purpose Societies .	20	2,930 10,940 47,515	£ 129,578 90,014 783,373	£ 5,881 8,367 35,880	£ 14,680 52,182 266,827	£ 9,545 8,399 38,469
Total	224	61,385	1,002,965	50,128	333,689	56,413

### PAPUA.

## § 1. General Description.

- 1. Early Administration.—Particulars of the early administration of Papua are given in Official Year Book No. 19, p. 576.
- 2. Administration by the Commonwealth of Australia.—The Territory was placed under the authority of the Commonwealth on 1st September, 1906, by proclamation issued in pursuance of Letters Patent of 18th March, 1902, and was accepted by the Commonwealth by the Papua Act, 1905, which came into force by virtue of the aforesaid proclamation. The transfer was made under the authority of Section 122 of the Constitution. The Territory is now under the control of the Commonwealth, but not included within it, and is divided into six magisterial districts, Southern Highlands, Western, Gulf, Central, Milne Bay and Northern.
- 3. Area, etc.—Papua lies wholly within the tropics. The northernmost point touches 5° S. latitude; its southernmost portion, comprising Tagula and Rossel Islands, lies between 11° S. and 12° S. latitude. It is separated from Australia by Torres Strait. The length of Papua from east to west is upwards of 920 miles; towards either end the breadth from north to south is about 200 miles, but about the centre it is considerably narrower. The Territory comprises also the islands of the Trobriand, Woodlark, D'Entrecasteaux and Louisiade groups. The length of coast-line is estimated at 3,664 miles—1,728 on the mainland, and 1,936 on the islands. The total area is about 90,600 square miles, of which 87,806 are on the mainland, and 2,794 on the islands. A reference to the physical characteristics of the Territory appears in previous issues of the Official Year Book (see No. 18, p. 633).

## § 2. Population.

1. Non-indigenous Population.—At the Census of 30th June, 1954, the non-indigenous population of Papua was 3,867 males, 2,446 females, 6,313 persons. Corresponding figures at the Census of 30th June, 1947, were, respectively, 2,057, 1,182 and 3,239.

The European population of Papua increased slowly, and with some reversals in trend, from less than 700 in 1906, the year in which the Territory came under Commonwealth control, to 1,343 at the Census of 1921. It numbered only 1,148 at the 1933 Census, but at the 1954 Census amounted to 5,295 (3,372 males and 1,923 females).

The non-European section of the non-indigenous population at 30th June, 1954 was 1,018, of whom 34 were full-bloods and 984 were half-castes with one of the parents a European. Comparable figures as at the 1947 and 1933 Censuses, respectively, were:—full-bloods—194 and 786; half-castes—503 and 227.

The estimated non-indigenous population at 30th June, 1957 (30th June, 1956 in parentheses) was—Males, 4,897 (4,708); females, 3,225 (3,003); Europeans, 7,071 (6,683); Asians, seven (nine); and Others (mainly half-caste), 1,044 (1,019); Total, 8,122 (7,711).

2. Native Population.—It is not possible to give exact data regarding the number of natives, because part of the interior is not as yet under complete Government control. However, the enumerated and estimated population of the Territory of Papua at 30th June, 1956 numbered 444,448 persons. This comprised 299,018 enumerated persons (158,092 males and 140,926 females) and 145,430 estimated. The total number was distributed through districts as follows:—Southern Highlands, 116,037; Western, 48,357; Gulf (including the former Delta district), 64,086; Central, 86,181; Milne Bay, 83,318; and Northern, 46,469.

## § 3. Native Labour, Taxation and Health.

1. Native Labour.—The laws relating to the employment of natives are uniform in Papua and New Guinea, and are contained in the Native Labour Ordinance 1950-53. They provide for the engagement of natives under a permit. Permits are issued by a District Officer, and authorize the holder to engage natives for employment on his own behalf, or on behalf of a registered employer who has authorized him to act on his behalf. Under this Ordinance, a native may be issued with a Native Assistant's Permit, which authorizes him to solicit natives to work for his employer, or for other employers who have authorized him to act on their behalf.

Natives are employed under written agreements which have been sanctioned and attested by a District Officer. The period of the agreement must not exceed two years, but one further agreement, for a period not exceeding one year, may be drawn up, if both parties desire it. The period, in both cases, begins on the day on which the agreement is sanctioned and attested. Both parties may, by mutual consent, and with the approval of a District Officer, cancel an agreement. On the termination of an agreement, employers are required to repatriate workers to their own villages.

Natives under the age of sixteen years may not be employed. Employers must provide native employees with housing, medical attention, food and clothing free of charge. A minimum monthly wage of twenty-five shillings and a working week of 44 hours are prescribed by Ordinance. Provision is also made for compensation in the case of injury or death.

- 2. Native Taxes.—No direct taxes have been levied on natives since the war. Native Village Councils (which are formed voluntarily by the natives) are, however, empowered to levy rates on villagers for the purpose of providing for local services carried out by the Councils.
- 3. Health.—The Department of Health has the general oversight of all medical and dental services. It maintains a large number of hospitals, which are staffed by fully-trained European medical personnel and trained native assistants, for both European and native patients. The Department has adequate facilities for research in tropical medicine.

At 30th June, 1956, there were in the Territory three European hospitals (one privately controlled); 36 native hospitals (one private and 15 mission); one mental hospital; 245 village aid posts (76 mission); 148 welfare clinics (49 mission); and three Hansenide colonies. The Missions employ their own doctors and nurses in their medical establishments. A training school has been established for the purpose of training natives in first aid, elementary physics, chemistry, anatomy, physiology and pathology in preparation for their employment as Native Medical Assistants. Natives are also attending the Central Medical School at Suva, Fiji, to be trained as Native Medical Practitioners and for other medical occupations. The chief complaints treated in hospital are malaria, yaws, tropical ulcers, respiratory infections, hookworm, venereal and skin diseases.

## § 4. Land Tenure.

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the natives, or established to be vacant and ownerless, is native land. At 30th June, 1956, of the total estimated area of Papua, approximately 58,000,000 acres, only 1,901,543 acres had been alienated. The distribution of alienated land at 30th June, 1956, according to tenure, was as follows:—Held by private non-indigenous inhabitants—freehold, 24,280 acres, leasehold, 304,751 acres; held by administration, 1,505,185 acres; native reserves, 67,327 acres; total, 1,901,543 acres.

Although, as the figures above show, a small amount of freehold land exists in Papua, no further estates in freehold can be granted under the provisions of the Land Ordinance 1911–1953 of Papua. Leases of various kinds may be granted by the Administration. The principal types of leases available are agricultural leases, pastoral leases, leases of town allotments, business leases and residence leases of other than town allotments, and various forms of special leases and licences over land. Leasehold terms are liberal and, in general, leases may be granted for periods of up to 99 years. Rent is based on the unimproved value of the land. For agricultural leases, the rental rate per annum is 5 per cent. of the unimproved value and for pastoral leases the rate is 2½ per cent. Concessions regarding freedom from, or reduction of, rents apply during the early developmental periods of agricultural and pastoral leases. All leases are subject to improvement conditions which may be varied or relaxed under certain circumstances. The following classes of leases were in force in Papua at 30th June, 1956:—Agricultural, 659—259,492 acres; pastoral, 28—42,373 acres; residence, 160—226 acres; special, 189—1,108 acres; mission, 343—969 acres; business, 114—224 acres; town allotment, 591—254 acres; agricultural leases granted to missions, four—165 acres; total, 2,088—304,751 acres.

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Leases of Crown land are granted by the Administrator following a land use examination, advertisement of leases available and consideration of applications by the Land Board. Dealings in privately-owned land are a matter for private treaty. Native-owned land, however, cannot be acquired or leased from the native owners by private individuals. The Administration alone may purchase native-owned land, and then only if the owners are willing to sell and the Administration is satisfied that the owners do not require, and are not likely to require, the land.

The registration of titles, interests and dealings in alienated land is provided for under the Real Property Ordinance 1913–1955 modelled on the Torrens system of land registration. A start has been made on the recording of native land ownership under the Native Land Registration Ordinance 1952.

## § 5. Production.

1. General.—The products of the Territory are obtained from its agricultural, forest, mining and fishing industries. A factory for the extraction of cutch from mangrove bark has been established at Kikori in the Gulf District. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, bananas and pawpaws. Peanuts are becoming of increasing importance in native diet. Non-indigenous enterprise produces most of the commodities exported. Natives however, do produce copra for export, while native enterprise in other fields of agricultural production for export purposes, e.g., cocoa and coffee, is being encouraged. The principal agricultural products of Papua for the export trade are copra and rubber. Practically all the timber milled during 1955–56 was absorbed by local building requirements. The main products of fisheries exported from Papua are trochus and green snail shell. Gold and manganese, zinc-lead and copper ores have been mined in commercial quantities.

Agricultural and pastoral conditions in Papua and New Guinea have, for the sake of convenience, been dealt with as a whole, and reference should be made to pp. 124-127 for information on the soils, climate, crops, methods of cultivation, etc., throughout both Territories. The following paragraphs relate to forestry, mining, fisheries and water-power resources in Papua.

- 2. Forestry:—(i) General. A general description of the forest policy which applies in Papua as well as in the Trust Territory of New Guinea is given under the heading "Timber" on page 135.
- (ii) Timbers. Mixed species tropical rain forest covers most of Papua, although north-east of Port Moresby there is an area of monsoonal savannah country. Because of the mixed nature of the timbers in any one area, their utilization on an economical basis is somewhat difficult. Kwila, the most important hardwood found in millable quantities in Papua and New Guinea occurs in important stands east of Port Moresby. Mangroves occur in large areas fringing the Gulf of Papua and are cut for the preparation of cutch from the bark.
- (iii) Survey Work. Forestry field work is being carried out in Papua with a view to assessing the forest resources available and to survey areas that will be thrown open for cutting. In the middle of 1956, tenders were called for approximately 50 million super, feet of logs on the Brown River area near Port Moresby, and the contract was subsequently let to a Port Moresby sawmiller.
- (iv) *Permits*. At 30th June, 1956, 15 permits and two licences were current. The total areas of forest involved were 71,234 acres and 11,123 acres respectively. The total number of mills was 17, and the total sawn-timber produced for the year was 3..6 million super feet, most of which was used locally. There were also 250,000 acres of mangrove swamp being utilized for cutch production.
- 3. Mining.—(i) Variety of Minerals. Although a large number of minerals have been found in Papua including platinum, gold, silver, copper, tin, lead, zinc, cinnabar, iron, osmiridium, manganese, sulphur, chromite, gypsum and lignite, most deposits are not of economic importance.

Gold was discovered in 1888 and has been found in many parts of Papua. Before the 1939-45 War, gold was an important item in the Territory's production and it was the major export in 1938-39 (valued at more than £150,000), but has dwindled to insignificance since the war. Gold production in 1955-56 was 491 fine oz. and in 1954-55 1,065 fine oz. compared with an average of almost 28,000 fine oz., for the last three pre-war years. During 1955-56, the production of gold realized £7,675, bringing the total value of gold won up to 30th June, 1956, to £3,323,043.

Manganese ore valued at £540 was exported from Papua during the year ended 30th June, 1956. Large quantities of copper ore were mined and exported, up to 1940. Good samples of galena (sulphide of lead) have been obtained, but other minerals are not found in commercial quantities.

- (ii) Oil Search. Since the search for oil began in Papua in 1911, nearly £22 million has been spent. The existence of petroleum has been traced at scattered intervals over a large area, but commercial quantities have not been discovered. At 30th June, 1956, three companies held petroleum prospecting permits under the provisions of the Petroleum (Prospecting and Mining) Ordinance 1951-1955. Oil prospecting is, at present, confined mainly to the Gulf and Western Divisions.
- 4. Fisheries.—Surveys have been carried out of the resources of swimming fish. They have been demonstrated to be considerable and efforts are being made to increase the small degree of utilization. Shell fishing, particularly trochus, provides the main cash return, exports being valued at £138,000 in 1955-56.
- 5. Water Power.—Most of the rivers in Papua carry a large volume of water from a great height over a relatively short distance, thereby offering opportunities for the installation of hydro-electric power plants. It is estimated that there is at least 10 million horse-power available for this purpose.

## § 6. Trade, Transport and Communication.

1. Customs Tariff.—The present customs tariff provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods and jewellery but allows duty-free treatment of most necessities. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes and for goods imported by passengers. No preferential rates are specified in the schedule. Export duties are imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced in and imported direct from Papua (see Chapter X.-Trade), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

2. Imports and Exports.—(i) Total Values. The table below summarizes and compares the values of imports and exports for the pre-war year 1938-39 and the post-war years 1953-54 to 1955-56.

TERRITORY OF PAPUA: IMPORTS AND EXPORTS.

(£. f.o.b.) Particulars. 1938-39. 1953\_54 1954-55. 1955-56. 514.808 5,201,969 7,471,221 8.975.834 **Imports** Exports-410,666 1,683,188 2,965,559 Domestic Exports 2,517,526 . . Non-Domestic Exports 79,492 304,376 308,170 398,976 1,987,564 Total Exports 490,158 2,825,696 3,364,535

<sup>(</sup>ii) Imports. The following table summarizes the countries of origin of imports. In the post-war years Australia has supplied a far greater proportion of the imports than was the case pre-war and this proportion has continued to increase in each successive postwar year. The increase in total imports in 1955-56 was due partly to increased purchasing power arising from the higher Commonwealth Government grant and from increased exports.

## TERRITORY OF PAPUA: COUNTRY OF ORIGIN OF IMPORTS.

(£.)

	Count	try of Origi	n.		1938–39.	1953–54.	1954-55.	1955–56.
Australia					239,105	3,788,492	5,119,030	5,759,504
Canada					(a)	3,914	6,473	7,254
China				1		10,609	(a)	352
Hong Kong						120,215	147,786	163,424
India						32,908	43,255	49,938
United King	dom				56,699	381,883	619,807	1,131,401
United State	s of A	merica			73,446	384,235	804,331	1,020,436
Other Count	ries	••	• •		145,558	479,713	730,539	843,525
т	otal I	mports			514,808	5,201,969	7,471,221	8,975,834

<sup>(</sup>a) Not available, included in "Other countries".

(iii) Exports. (a) Countries of Destination. The countries of destination of Papuan exports are shown below. The increase during 1955-56 in the value of total exports, and of exports to Australia in particular, was due mainly to the higher price of rubber. Australia imports practically the whole of the Territory's production of this crop.

## TERRITORY OF PAPUA: COUNTRY OF DESTINATION OF EXPORTS.

(£.)

Count	ry of Destina	ation.		1938–39.	1953–54.	1954–55.	1955–56.
Australia United Kingdom Other Countries				409,408 25,840 54,910	1,749,049 161,896 76,619	2,231,659 536,724 57,313	2,699,059 610,832 54,644
Total	Exports		••	490,158	1,987,564	2,825,696	3,364,535

(b) Principal Commodities. The following table provides details of the value of the principal domestic exports for the same years. The increase in value of total domestic exports during 1955-56 was caused mainly by higher returns from rubber and shell.

TERRITORY OF PAPUA: PRINCIPAL DOMESTIC EXPORTS.

(£.)

	Co	mmodity.		I	1938–39.	1953–54.	1954–55.	1955-56.
Rubber					114,949	612,788	953,623	1,386,787
Copra					57,999	950,216	1,381,372	1,390,068
Other Cocor	ut Pro	ducts			48,140	27,211		
Cocoa Beans	S				.,	3,638	13.314	8.759
Gold					152,103	4,785	16,548	8,837
Shell (Marin	e)				9,600	38,803	111.652	137,938
Hides and S	kins (C				105	23,038	22,136	23.791
Other		••	••	!	27,770	22,709	18,881	9,379
7	otal D	omestic E	kports		410,666	1,683,188	2,517,526	2,965,559

3. Shipping.—In 1954-55, 154 British vessels and four of other nationality called at Territory ports and discharged 88,602 tons of cargo and loaded 29,106 tons. Corresponding figures for 1955-56 were 131, nine, 98,522 and 29,617 respectively.

Regular passenger and freight services operate between Australia, New Guinea and Papua. Vessels trading between Australia and the East also call at Territory ports, and there are occasional ships to the United Kingdom. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

4. Other Forms of Transport and Communication.—Air services link Papua with Australia, New Guinea and the British Solomon Islands. There were 41 aerodromes and seaplane alighting areas in Papua at 30th June, 1956, and of these, 16 were the responsibility of the Department of Civil Aviation, 15 were operated and maintained by the Administration, and 10 owned and maintained by Missions, plantations and mining interests. Much of the internal traffic and freight is carried on a charter basis. Regular air services operate from Port Moresby to Daru and Lake Kutubu in the West, Samarai in the East, and to various centres in New Guinea.

There are nearly 1,332 miles of road in Papua, of which about 578 miles are suitable for medium and heavy traffic, the greater proportion being located in the Central and Northern Districts, which are north-east of Port Moresby.

Telephone services operate in the main centres. The radio station at Port Moresby for both transmission and reception is jointly shared by the Overseas Telecommunications Commission and the Administration. The former provides a service between Papua, Australia and the Territory of New Guinea, while the latter operates radio telephone and radio telegraph services from Port Moresby and Samarai to outstations.

Medium and short-wave programmes are broadcast from the Australian Broadcasting. Commission stations 9PA and VLT located at Port Moresby.

### § 7. Finance.

The principal source of revenue for the Territory of Papua is the annual grant received from the Commonwealth Government, which in 1955-56 amounted to £3,532,086. Customs duties, £910,752 in 1955-56, are next in importance. The total revenue during 1955-56 was £4,983,550 compared with £3,875,385 in 1954-55. Of a total expenditure of £4,833,194 in 1955-56, £2,279,599 was spent on public works, £647,975 on medical services, £315,574 on native affairs and £1,590,046 on ordinary votes. Expenditure amounted to £3,844,169 in 1954-55.

For particulars of the finances of the combined Territory administration, see p. 123.

### TRUST TERRITORY OF NEW GUINEA.

## § 1. General Description.

The land area of the Territory of New Guinea is about 93,000 square miles and the area, including the sea, within the lines drawn through its extreme outer points is more than one million square miles. As the coast of the Territory has not been completely surveyed, the areas of the various islands are known only approximately.

The approximate areas of the principal islands, together with the small islands adjacent thereto, are as follows:—North-East New Guinea, also called the mainland, 70,200 sq. miles; Bismarck Archipelago—New Britain, 14,100 sq. miles, New Ireland, 3,340 sq. miles, Lavongai, 460 sq. miles, Admiralty Islands, 800 sq. miles, total Bismarck Archipelago, 18,700 sq. miles; Solomon Islands—Bougainville, 3,880 sq. miles, Buka, 220 sq. miles, total Solomon Islands, 4,100 sq. miles; grand total, 93,000 sq. miles.

Information regarding physiography and climate will be found in Official Year Book No. 22, p. 613, and in the Official Handbook of the Territory of New Guinea.

### § 2. Government.

1. The Military Occupation (1914-18 War).—On 17th September, 1914, the Acting Governor of German New Guinea signed terms of capitulation with the officer commanding a Naval and Military Expedition sent from Australia, and thereafter the Territory was under military administration until the establishment of Civil Government on 9th May, 1921.

2. Mandate (1920).—In 1919, it was decided by the Principal Allied and Associated Powers that the Territory of New Guinea, which Germany gave up as one of the terms of peace, should be entrusted under Mandate from the League of Nations to the Government of the Commonwealth. The issuing of the Mandate was, however, delayed, and it was not until 17th December, 1920, that its terms were settled, and the Mandate itself did not reach Australia until April, 1921.

The terms of the Mandate are given in Official Year Book No. 33 (see p. 264).

- 3. 1939-45 War.—For the events following the outbreak of the Pacific War and the formation of the Papua-New Guinea Provisional Administration in 1945, see p. 123 of this chapter and earlier issues of the Official Year Book.
- 4. Trusteeship (1946).—The Commonwealth Government undertook to place the Territory of New Guinea under the Trusteeship System established under the Charter of the United Nations. The Trusteeship Agreement for the Territory, under which the Government of Australia is the sole administering authority, was approved by the General Assembly of the United Nations Organization on 13th December, 1946. The terms of the Agreement are shown in Official Year Book No. 39, pp. 355-7.
- 5. Administration.—For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration see Official Year Book No. 36 and earlier issues.

For administrative purposes, the Territory is divided into the following nine districts:—New Britain, comprising New Britain and adjacent islands; Morobe, Madang, Eastern Highlands, Western Highlands, and Sepik on the mainland; New Ireland, comprising New Ireland, Lavongai and adjacent islands; Manus, comprising the Admiralty Group; and Bougainville in the Solomon Islands. Each district is administered by a District Commissioner.

## § 3. Population.

1. Non-indigenous Population.—At the Census of 30th June, 1954, the non-indigenous population of the Territory of New Guinea was 7,201 males, 4,241 females, 11,442 persons. The total non-indigenous population at the Censuses of 1921, 1933 and 1947 was, respectively, 3,173, 5,216 and 6,200 persons.

The European population of the Territory increased from 64 in 1885 to 3,191 at the Census of 1933, and it reached its pre-war peak of 4,608 in 1939. At the 1954 Census, the European population numbered 8,020 (5,185 males and 2,835 females).

Malays seem to have been the first Asians brought by the Germans to German New Guinea; 37 of them were recorded on the mainland in 1885. About 1889, the New Guinea Company began to bring Chinese, Malays and Javanese in growing numbers from Singapore and Java to work on the plantations; in the year 1892, there were about 1,800 Asians on the mainland. By 1898, the number had decreased to 300 or 400, but it had risen to 1,830 at the time of the 1933 Census, and at 30th June, 1941, numbered 2,228, mostly Chinese. At the Census of 30th June, 1954, non-Europeans numbered 2,404, of whom Chinese (2,192) constituted the major proportion, whilst half-castes with one of the parents a European numbered 1,018.

2. Native Population.—The enumerated and estimated native population of the Territory of New Guinea as at 30th June, 1956 numbered 1,273,837 persons, comprising enumerated, 1,154,360 (610,110 males and 544,250 females), and estimated, 119,477. The total population was distributed throughout the several districts as follows:—Eastern Highlands, 305,859 persons; Western Highlands, 242,097; Sepik, 215,887; Madang, 119,435; Morobe, 192,691; New Britain, 96,822; New Ireland, 36,102; Bougainville, 49,071; Manus, 15,873.

## § 4. The Natives.

1. General.—The natives are divided into two main groups—Melanesian and Papuan—the former, with a few exceptions, constituting the population of the Bismarck Archipelago, the Solomon Islands, and the coastal districts of the New Guinea mainland, the latter inhabiting the interior of the mainland. Some tribes of Negritos exist in the mountains of New Guinea. There is a strain of Papuan, and possibly, of Polynesian blood in the Admiralty Islanders, while the Western Islanders and the inhabitants of the small islands east and south-east of New Ireland are Micronesians. (See Official Year Book No. 16, p. 670, and Official Handbook of the Territory of New Guinea, Pt. V.)

- 2. Land Tenure.—There is considerable variation throughout the Territory in the nature of customary ownership of land. In most areas some rights remain in the landholding group, and individuals within the group have limited rights of use, either for life or for a shorter period. Thus the normal system by which the rights of ownership in land use are acquired is by birth to a landholding group. Transfer of rights between individuals by sale and purchase appears to have been unusual in the past, but this practice is now an established custom in some localities and appears to be increasing. Inheritance may be based on either patrilineal or matrilineal descent, or both. In parts of the Territory, however, there is a tendency for the whole inheritance system to change, particularly in communities where it is based on matrilineal descent. In some cases, local government councils are discussing changes in land inheritance systems, and the Administration is also giving attention to the problem.
- 3. Research Work.—Research work among the native peoples of New Guinea was initiated under the German Administration and this work has been continued since on a wider scale.
- 4. Education.—Education in the Territory is provided by the Administration and various mission organizations. Schools for natives have also been established by Native Village Councils. The Education Ordinance 1952 enables the Administrator to establish an education advisory board, district education committees, European and native schools and to grant financial aid for educational purposes. European teachers are recruited from Australia, and native teachers are trained in the Territory by the Administration and the Missions. During the year ended 30th June, 1956, 132 schools were maintained by the Administration for 7,239 children, of whom 614 were Europeans, 364 Asians, 22 of mixed race and 6,239 natives. The total number of pupils in the various grades of mission schools was 110,672, of whom there were 107 Europeans, 244 Asians and 178 of mixed race. To assist the educational work of the Missions, the Administration provides expert advice, educational equipment and text-books. In addition, the sum of £60,638 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1956.
- 5. Health of Natives.—The main diseases affecting the native people are malaria, yaws, respiratory diseases, dysentery, tropical ulcers, hookworm and filariasis. The Department of Health is engaged in combating these diseases with a staff of fully-trained medical officers, medical assistants and orderlies in native hospitals. Its staff also supervises hospitals on plantations. It has adequate facilities for research in tropical medicine, and a training scheme for natives as medical orderlies. The Department also provides the Missions with much of their medical stores and supplies, and maintains two Hansenide colonies for the treatment of natives suffering from Hansen's Disease. The Department also undertakes the general oversight of sanitary conditions in the Territory.
- 6. Missions.—A number of mission societies operate in the Territory. The Society of the Sacred Heart of Jesus works in the Bismark Archipelago, the Society of the Holy Ghost, the Franciscan Order and the Society of the Divine Word along the coast of northeast New Guinea from Sepik to the Dutch border and in the Central Highlands, and the Marists in Buka and Bougainville. These are Roman Catholic Missions. The Protestant Missions include the Methodist Overseas Mission in New Britain and New Ireland, the New Zealand Methodist Mission in Bougainville, the Lutheran Mission (supported and staffed by the Lutheran Churches in Australia and America) which works in Morobe, Madang, the Eastern and Western Highlands, New Britain and Manus, the New Guinea Anglican Mission in New Britain, the Seventh Day Adventist Mission in Bougainville, New Britain and the Mainland of New Guinea, the East and West Indies Bible Mission and the Baptist Mission in the Central Highlands. The South Seas Evangelical Mission (Undenominational) and the Assemblies of God Mission are also working in the Sepik area. All these societies include teaching with their missionary work.

## § 5. Land Tenure.

The principles governing the acquisition and ownership of land and types of tenure available in New Guinea are in general similar to those which obtain in Papua and, although, under the Land Ordinance 1922-1951, grants of freehold estates may be made, as a matter of policy all grants are now restricted to leaseholds. In New Guinea, however, the amount of freehold land of earlier origin held by private non-indigenous owners amounts to more than half a million acres. Freehold titles to this land, which includes a good deal of plantation land, may be transferred by purchase subject only to the general provision that dealings in land require the approval of the Administrator.

The area of the Territory of New Guinea is estimated at 59,520,000 acres, of which at 30th June, 1956, 1.9 per cent. was alienated. The following was the distribution of alienated land according to tenure at 30th June, 1956:—held by private non-indigenous inhabitants—freehold, 518,490 acres, leasehold, 261,876 acres; held by Administration, 356,645 acres; native reserves, 26,926 acres; total, 1,163,937 acres.

Leases in force at 30th June, 1956 were as follows:—Agricultural, 715—201,723 acres; dairying, 6—1,300 acres; pastoral, 13—47,245 acres; residential and business, 1,350—1,257 acres; special, 157—3,425 acres; mission, 623—2,249 acres; leases granted to Chinese in towns, 526—162 acres; long period leases from German regime, 104—4,515 acres: total, 3,494—261,876 acres.

Under German law there was a system of registration of titles in a "Ground Book", but registration did not confer an indefeasible title. The German system has been replaced by one modelled on the Torrens plan, embodied in an Ordinance entitled the Lands Registration Ordinance 1924-1955. The land registers were lost during the 1939-45 War, and provision for restoration of the lost titles is made in the New Guinea Land Titles Restoration Ordinance 1951-55. A start has been made on the recording of native land interests under the Native Land Registration Ordinance 1952.

## § 6. Production.

1. General.—The products of the Territory are obtained from its agricultural, mining, fishing and forestry industries. A joint government-private enterprise copra crushing mill at Toboi, near Rabaul, is producing coconut oil at the rate of about 8,000-10,000 tons a year. At Bulolo, a company (Commonwealth-New Guinea Timbers Ltd.), in which the Commonwealth Government has a controlling interest, is producing high quality waterproof plywood and veneers in a factory whose capacity is over 40 million square feet, on a 36-in. basis, per annum. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the native population. The main native agricultural products are taro, yams, sweet potatoes, coconuts, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Natives, however, produce copra for export and, in recent years, have taken up the production of introduced crops such as peanuts, rice, cucurbits and maize for their own consumption and cocoa and coffee for export. The principal agricultural products of New Guinea for the export trade are copra and cocoa. While most of the timber milled during 1955-56 was absorbed by the local market, exports (especially of sawn timber) increased over 1954-55 figures (see para. 2 below). The main products of fisheries exported from New Guinea are trochus and green snail shell, including that collected by natives. Gold is the principal mineral mined.

For information on the agricultural and pastoral industries, which, for the sake of convenience covers the Territory of Papua and New Guinea as a whole, see pp. 124-127. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea.

2.—Timber.—Various species of timber are found in the Territory, but the only accessible pure stand is the valuable pine forests of the Bulolo Valley. The main use of this timber is for the production of plywood and veneer by Commonwealth-New Guinea Timbers Ltd., which is consuming a little over 10 million super. feet of logs per annum to produce the equivalent of approximately 30 million square feet of plywood on a  $\frac{1}{16}$  inch basis (26 million in 1955–56). Exports of plywood in 1955–56 were 21 million square feet, valued at £750,000, while veneer exports of 920,000 square feet were valued at £9,000 on a  $\frac{1}{16}$  inch basis. During the year 2.6 million super. feet of logs (some suitable for plywood manufacture) to the value of £62,000, and 3.8 million super. feet of sawn timber valued at £230,000 were also exported. The Territory forests also provided flitches, battery veneer and egg-case parts for export.

The Administration sawmill previously operated at Yalu has been moved to Lae. It and the Administration mill at Keravat in New Britain, provide a considerable amount of sawn timber for local consumption, and serve as a training centre for operatives in the sawmilling industry. The Administration also operates a training centre for forestry workers, nurseries and a herbarium.

The Forestry Ordinance 1936-1951 provides for the issue of permits and licences to cut timber. Present policy calls for the orderly development of the timber industry on sound forestry principles to ensure no waste of the resources and no over-exploitation; the grant

of emergency timber permits for limited quantities to assist in providing timber for Territory requirements; the disposal by public tender of timber areas designated by forest officials of the Territory; and the development of the pine stand in the Bulolo Valley by Commonwealth-New Guinea Timbers Ltd. Timber growing on native lands cannot be acquired by private purchasers direct from the natives but must be obtained through the Administration. Royalty is payable on all forest produce taken under permit or licence. Re-afforestation on areas dedicated for forestry in perpetuity is carried out by the Administration.

At 30th June, 1956, 21 permits and eight licences were current, the total area of forest involved being 255,078 acres and 1,061 acres respectively. Forty-two sawmills and also some benches on private property were operating.

- 3. Fisheries.—The wealth of the waters of the Territory has been little exploited, but as the result of surveys and the development of the Administration fisheries service, action is being taken to promote increased use of the resources. Fish are caught at many places along the coast to supply the small local demand of the natives and of Europeans. Trochus shell to the value of £230,000 and green snail shell to the value of £73,000 were exported during 1955-56.
- 4. Mining.—The production of gold and associated silver is the most important mining activity in New Guinea. Gold has been discovered on the Waria, the Ramu, the Francisco, and the Markham Rivers, and in tributaries of the Sepik River. Rich gold deposits were discovered in the Morobe District in 1926; the field is situated about 80 miles (40 by air) inland from Lae, the nearest coastal port. Communication is established with the coast by regular air service and by road transport. Silver is found, usually associated with the gold in these deposits. Osmiridium is reported to have been found on the upper tributaries of the Ramu, and platinum on the Kabenau River. Copper has been discovered in the form of chalcopyrite and malachite in the Baining District. Iron occurs as magnetite and haematite in the Baining District, apparently in large quantities. Sulphur occurs in several localities in the volcanic regions of the Territory. Brown coal has been found on the mainland in the vicinity of Astrolabe Bay, and in the southern portion of New Ireland. The commercial production of minerals other than gold and silver has not been undertaken to date.

The granting of rights, leases and claims for mining purposes is provided for in the Mining Ordinance 1928-1947 and Regulations thereunder.

The production of gold in New Guinea during the last three pre-war years averaged about 228,000 fine oz. a year, valued at £2,000,000. In 1940-41, it amounted to 263,113 fine oz., valued at £2,808,835. Although the market price of gold has been fixed at a much higher level than in 1938-39, mining costs have risen to a much greater extent and consequently production since the war has been on a much smaller scale, averaging 91,000 fine oz., at a value of £1,200,000 a year over the five years ended 1951-52. Production in 1955-56 amounted to 71,519 fine oz., valued at £1,117,483 and in 1954-55 to 85,726 fine oz., valued at £1,339,474.

The Petroleum Ordinance 1936 has been superseded by the Petroleum (Prospecting and Mining) Ordinance 1951-1955, which has facilitated the carrying out of geological surveys and prospecting activities generally. At present one company has a permit to search for petroleum in the Sepik River area.

## § 7. Trade, Transport and Communication.

1. Customs Tariff.—The present customs tariff provides high revenue rates on ale, spirits, wines, timepieces, cigarette papers, fancy goods and jewellery but allows duty-free treatment of most necessities. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant and machinery to be used mainly for developmental purposes and for goods imported by passengers. No preferential rates are specified in the schedule.

Export duties are imposed on cocoa, copra, trepang, tortoise shell, mother-of-pearl and trochus shell, cassowary, crown pigeon and heron feathers, rubber, sulphur and sulphur-bearing substances.

Provision is made in the Australian Customs Tariff (Papua and New Guinea Preference) 1936 for the free entry into Australia of certain goods produced in and imported direct from the Territory of New Guinea (see Chapter X.—Trade), and a proclamation of 25th September, 1935 exempted from primage duty goods produced or manufactured in the Territory.

2. Imports and Exports.—(i) Total Values. The table below summarizes and compares the values of imports and exports for the pre-war year 1938-39 and the post-war years 1953-54 to 1955-56.

TERRITORY OF NEW GUINEA: IMPORTS AND EXPORTS.

		(X.)			
		1938-39.	1953–54.	1954–55.	1955–56.
	••	1,340,835	8,586,024	9,577,088	10,280,029
	••	2,960,753 13,142	9,534,072 510,322	9,589,317 471,324	9,220,446 665,177
••	••	2,973,895	10,044,394	10,060,641	9,885,623
			1,340,835 2,960,753 13,142	1,340,835 8,586,024 2,960,753 9,534,072 13,142 510,322	1,340,835 8,586,024 9,577,088 2,960,753 9,534,072 9,589,317 13,142 510,322 471,324

<sup>(</sup>ii) Imports. The following table summarizes the countries of origin of imports. In the post-war years, Australia has supplied a far greater proportion of the imports than she did pre-war and this proportion has continued to increase.

## TERRITORY OF NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS.

				£.)			
Country	of Origi	n.		1938–39.	1953-54.	1954–55.	1955–56.
				563,594	5,745,001	5,888,143	6,668,947
	• •		• •	6,333	14,483	91,845	13,939
				69,831	630	(a)	180
				(a)	380,425	522,455	474,583
				20,235	137,879	121,465	149,805
dom				154,501	526,766	701,524	743,718
of Am	erica			265,591	901,083	972,947	797,869
ries	••	• •	••	260,750	879,757	1,278,709	1,430,988
Imports				1,340,835	8,586,024	9,577,088	10,280,029
	   dom	doms of America	dom	Country of Origin.		Country of Origin.  1938–39.  1953–54.	Country of Origin.  1938–39.  1953–54.  1954–55.  563,594 5,745,001 5,888,143 91,845 6,333 14,483 91,845 6,9831 630 (a) (a) 380,425 522,455 20,235 137,879 121,465 dom 154,501 526,766 701,524 s of America 265,591 901,083 972,947 ries 260,750 879,757 1,278,709

<sup>(</sup>a) Not available; included under "Other Countries".

(iii) Exports. (a) Countries of Destination. The countries of destination of New Guinea exports are shown below.

## TERRITORY OF NEW GUINEA; COUNTRY OF DESTINATION OF EXPORTS.

.~				(2.)			
Country of	Destin	ation.		1938–39.	1953-54.	1954–55.	1955–56.
Australia				2,313,127	3,651,008	4,338,701	4,575,510
United Kingdom				337,605	5,302,264	5,079,801	4,727,759
Other Countries	••	••	••	310,021	1,091,122	642,139	582,354
Total Exports				2,960,753	10,044,394	10,060,641	9,885,623
Domestic Expo	rts	••		2,960,753	9,534,072	9,589,317	9,220,446
Re-exports				• • •	510,322	471,324	665,177

(b) Principal Commodities. The following table provides details of the value of the principal domestic exports for the same years.

TERRITORY OF NEW GUINEA: PRINCIPAL DOMESTIC EXPORTS.

(£.)

Item.					1938–39.	1953–54.	1954-55.	1955–56.	
Сорга					727,949	5,883,960	5,144,352	4,795,987	
Other Coco	nut Pro	ducts			72,274	1,501,796	1,297,185	1,458,273	
Cocoa Bear	ns				6,580	245,950	512,204	352,105	
Coffee Bear	1S				843	58,367	72,575	91,698	
Peanuts					105	28,809	27,628	23,336	
Gold					2,129,263	1,409,480	1,339,473	1,064,279	
Shell (Mari	ne)				10.649	170,321	218,956	303,215	
Timber	,				6,911	113,941	212,199	285,505	
Plywood						66,112	644,929	749,179	
Veneer						1,677	36,196	9,440	
Other	••	••	••	• •	6,179	53,659	83,620	87,429	
Tota	l Dome	stic Expor	ts		2,960,753	9,534,072	9,589,317	9,220,446	

3. Shipping.—Regular passenger and freight services operate between Australia, Papua and the Territory of New Guinea. Vessels trading between Australia and the East also call at Territory ports and there are some ships to the United Kingdom and North America. Coastal and inter-island shipping services are maintained by vessels operating from the principal ports of the Territory. Shipping within the Territory is regulated by the Shipping. Ordinances 1951 and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for oversea vessels are Lae, Madang and Wewak (mainland), Rabaul (New Britain), Kavieng (New Ireland), Lorengau (Manus), and Kieta (Bougainville). Ports proclaimed under the Coastal Shipping, Ports and Harbours Regulations for the service of local vessels are, in addition to the main ports above-mentioned, Salamaua, Aitape and Wanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland), and Buka Passage (Bougainville).

There are no prepared inland waterways. The natural river system is not generally suitable for vessels except those of small tonnage.

In 1954-55, 96 British vessels and 36 vessels of other nationalities called at Territory ports and discharged 114,433 tons of cargo and loaded 114,923 tons. Corresponding figures for 1955-56 were 94, 26, 104,720 and 113,121 respectively.

4. Other Forms of Transport and Communication.—There are no railways, but an extensive road construction programme is progressively being undertaken to assist the economic development of the Territory. Road transport services operate in the main towns and on the trunk roads linking Rabaul and Kokopo; Lae, Bulolo and Wau; Kavieng and Namatanai; and on the network in the Eastern and Western Highland Districts centred on Goroka and Mt. Hagen. The total mileage of roads in the Territory of New Guinea at 30th June, 1956, was 3,879, of which 1,104 were suitable for heavy and medium traffic.

Air services link the Territory with Papua, Australia, Netherlands New Guinea and the British Solomon Islands. There are 105 aerodromes and seaplane alighting areas in New Guinea, and of these 27 are controlled by the Department of Civil Aviation, 38 by the Administration, 39 by private interests and one by the Royal Australian Air Force.

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Telephone services operate in the main centres. Radio telephone trunk circuits link Port Moresby with Lae, Rabaul and Madang and service is available from subscribers telephones in Port Moresby, Lae and Rabaul, and from the Post Office at Madang. Six zone or group centres for radio telephone communication with outstations have been established at Lae, Madang, Rabaul, Kavieng, Wewak and Lorengau. From these centres radio telegraph services are also available to 111 outstations.

## § 8. Finance.

The principal sources of revenue for the Territory of New Guinea are the grant by the Commonwealth Government and customs duties. Total revenue in 1955-56 amounted to £7,313,598, towards which the grant contributed £4,901,737 and customs duties, £1,601,820. The major groupings into which expenditure during 1955-56 may be classed were as follows:—Health, £1,503,501; district services and native affairs, £714,233; education, £439,039; justice, £400,172; agriculture, etc., £383,320; customs and marine, £124,073; forestry, £216,268; capital works and services, £1,658,328; maintenance, £713,346. Total expenditure in 1955-56 was £7,313,598 as compared with £6,404.654 in 1954-55.

For information on the finances of the combined Territory administration see Papua and New Guinea, § 2, p. 123.

#### TRUST TERRITORY OF NAURU.

- 1. General.—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about 5,263 acres, of which approximately two-thirds is phosphate-bearing. It is situated in latitude 0° 32′ south and longitude 166° 55′ east. Portion of the island between the sandy beach and the coral cliffs is fertile, and it is there that most of the Nauruans reside. With the exception of a small fringe around an inland lagoon, the plateau which contains the phosphate deposits possesses few food plants and is uninhabited, but portion of the area has been planted with fruit trees. The system of land tenure is governed by an old custom, and, with the exception of small allotments held by the Government, the British Phosphate Commissioners and the Missions, the whole of the island is owned by individual natives. The temperature range is from 76° F. at night to 94° F. during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the average for twenty years from 1920 to 1940 being 80.5 inches. However, falls as high as 181.76 inches during 1940 and as low as 12.29 inches during 1950 have been recorded.
- 2. History.—The island, discovered by Captain Fearn in 1798, was annexed by Germany in 1888, and prior to 1914 was part of the protectorate of German New Guinea.

In November, 1914, Nauru was occupied by a detachment from the Australian Naval and Military Expedition at Rabaul, and it was included in the cession of colonies made by Germany in 1919 to the Allied and Associated Powers, whose representatives agreed that a mandate for its administration should be conferred upon His Britannic Majesty. The mandate was confirmed by the Council of the League of Nations on 17th December, 1920. On 2nd July, 1919, the British, Australian and New Zealand Governments agreed that the administration (which, since 1915, had been in charge of an official appointed by the British Colonial Office) should be vested in an Administrator, who took up duty in June, 1921. The agreement between the three Governments was approved by the Commonwealth Parliament in the Nauru Island Agreement Act 1919, and is shown in the Schedule to that Act. A supplementary agreement concerning Nauru was drafted in May, 1923, and ratified by the Commonwealth Parliament by the Nauru Island Agreement Act 1932.

On 25th August, 1942, nine months after the outbreak of the war in the Pacific, communications with Nauru ceased, and the island was occupied by Japanese forces. It was re-occupied by a joint Australian Naval and Military Force on 14th September 1945, and civil administration was re-established on 1st November, 1945.

3. Trusteeship Agreement.—On 1st November, 1947, the General Assembly of the United Nations approved a Trusteeship Agreement for the Territory of Nauru submitted by the Governments of Australia, New Zealand and the United Kingdom in substitution

for the terms of the mandate under which the Territory had been administered. This Agreement designates the Governments of Australia, New Zealand and the United Kingdom as the Joint Administering Authority, with the Government of Australia continuing, on behalf of the Administering Authority, to exercise full powers of legislation, administration and jurisdiction in and over the Territory. The terms of the Agreement were given in Official Year Book No. 39, pp. 370-1.

- 4. Administration.—The administration of the island is vested in an Administrator, who is obliged to conform to instructions issued by the Government which appointed him. Until the Government of Australia ceases to exercise full powers of legislation, administration and jurisdiction in and over the Territory on behalf of the Administering Authority in pursuance of Article 4 of the Trusteeship Agreement, all ordinances made by the Administrator are subject to confirmation or disallowance by the Governor-General of Australia acting on the advice of the Federal Executive Council. All administration expenses are met from local revenue and phosphate royalties. Native industries such as canoe-building, fishing, mat-making, etc., are encouraged by the provision of prizes at annual competitions. An agency of the Commonwealth Savings Bank has been established. There is a co-operative store managed to a large extent by Nauruans. The store books, however, are audited by Government officers. Natives are not allowed to carry or be in possession of firearms, and the use by them of intoxicating liquors and deleterious drugs is prohibited.
- 5. Population.—The Nauruan component of the population numbered about 1,100 in 1921, but had grown to more than 1,800 before the Japanese invasion in August, 1942. In 1946, it numbered less than 1,400 but by 30th June, 1955, had risen again to 1,935. Chinese have for many years formed a considerable part of the population of Nauru; their numbers increased, with some reversals of trend, from about 600 in 1921 to more than 1,500 before the 1939-45 War. After the war, they increased from about 800 in 1946 to 1,491 in 1950, but at 30th June, 1956, numbered only 696. The number of other Pacific islanders in the early 1920's was almost 300, but they subsequently declined to less than 40. In recent years, the numbers have increased, and at 30th June, 1956, there were 935 persons. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred persons, and in 1940 numbered 192. In 1948, it numbered 247 and in 1956 it was 286. The total non-indigenous population of Nauru at 30th June, 1956, was 1,917 persons, while the total population was 3,893.
- 6. Health.—Cases of the usual diseases known in the Pacific occur. Venereal disease is rare, but elephantiasis is occasionally met with. An area has been set apart for the segregation of sufferers from Hansen's disease, and the latest methods of treatment are applied. The total number of persons receiving treatment at 30th June, 1956, was 42 of whom, however, only 3 were in segregation at the Hansenide colony. Two hospitals are maintained on the island, one by the Administration for Nauruans, and one by the British Phosphate Commissioners for their employees. A regular anti-mosquito campaign is conducted. Steps have been taken by the authorities to improve the water supply and to provide efficient sanitation generally. Every Nauruan is required to undergo a medical examination at intervals of three months. Baby clinics have been established to give help and advice to Nauruan mothers in respect of infant nurture.
- 7. Education.—The Administration assumed full responsibility for education on 1st October, 1923. Prior to that date, the education of native children was undertaken by the Missions, which were subsidized by the Administration. There are three primary schools, one each for European, Nauruan and Gilbertese students, one Nauruan secondary school and one mission school providing primary and secondary classes. Primary education only is provided for European children, allowances being provided to those who proceed to secondary schools in Australia. At 30th June, 1956, 419 Nauruans, 74 other Pacific Islanders, 25 Chinese and 51 Europeans were enrolled in the primary schools, and 83 at the two secondary schools. A teacher, who is on loan from the Victorian Education Department, is in charge of the European school, but education generally is controlled by a Director of Education.

The curriculum is based generally on that used in Australian schools, and the teaching is generally in English. Education is compulsory for Nauruan children from six to sixteen years of age. At 30th June, 1956, 40 Nauruans were attending secondary schools in Australia, or undertaking post-secondary training, nineteen as scholarship holders and the balance sponsored by their families. In addition to these, there were two students at the Central Medical School, Suva, and one private student in New Zealand.

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- 8. Judiciary.—The judicial power is vested in the Administrator, in a Central Court and a District Court. The right of appeal is provided.
- 9. Religion.—The London Missionary Society (Protestant) and the Sacred Heart of Jesus Mission (Roman Catholic) operate in Nauru.
- 10. Phosphate Deposits.—(i) General. From 1906 to 1919, the deposits were worked by the Pacific Phosphate Company, which also worked the deposits on Ocean Island (about 165 miles east of Nauru and part of the Gilbert and Ellice Islands Colony administeted by the Colonial Office). The quantity remaining on Nauru has been estimated at about 70 million tons, and the exports average 85 per cent. to 88 per cent. of tricalcium phosphate.

The interests of the Pacific Phosphate Company in the two islands (though not in other islands in the Pacific in which it had workings) were bought by the British, Australian and New Zealand Governments in 1919 for £3,500,000, the purchase money being contributed in the proportions of 42, 42 and 16 per cent. respectively. The Agreement of 2nd July, 1919, provides for the working of the deposits by three British Phosphate Commissioners, one appointed by each Government, and the three countries are entitled to receive the output in the same proportions of 42, 42, and 16 per cent.

- (ii) Royalty on Phosphate. Under an agreement between the British Phosphate Commissioners and the Nauruan landowners, an increased royalty of 1s. 6d. per ton of phosphate exported was payable from 1st July, 1953, as follows:—
  - (a) 3d. to the Nauru Royalty Trust Fund to be used for the benefit of Nauruans;
  - (b) 10d. to the landowner, being an immediate payment of 8d. per ton, and 2d. per ton to be invested on his account;
  - (c) 5d. to the Nauruan Community Long Term Investment Fund.

From 1st July, 1947, the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £45 per acre, with a minimum payment of £7 10s. for areas less than an acre.

(iii) Nauru and Ocean Island Phosphate Industry. Exports of phosphate from Nauru and Ocean Island in 1939-40 amounted to 1,243,428 tons, of which Australia received 54 per cent. and New Zealand 32 per cent. Following the interruption to production by the war in the Pacific, this figure was not exceeded until 1949-50 when 1,285,998 tons were exported (76 per cent. to Australia, 24 per cent. to New Zealand). Figures for 1955-56 were:—1,771,353 tons exported, 61 per cent. to Australia, 34 per cent. to New Zealand and five per cent. to the United Kingdom.

Receipts from the sale of phosphate in 1939-40 amounted to £1,041,418, and the f.o.b. cost, including interest on capital, sinking fund, etc., amounted to £1,037,208. In 1946-47, sales and costs each amounted to about £500,000, but they have since increased to more than £3,000,000. In 1955-56, receipts from sales, etc., amounted to £3,405,077, and costs, etc., to £3,386,564.

During the period of the Japanese occupation from August, 1942, to September, 1945, while waiting to resume activities at Nauru and Ocean Island, the Commissioners were engaged in meeting the phosphate requirements of Australia and New Zealand from other available sources. A programme of improvements and additions to equipment has been commenced.

The amount due by the British Phosphate Commissioners to the partner Governments for purchase-money and other capital sums was £3,666,457 on 30th June, 1921, and at 30th June, 1942, this had been reduced to £3,024,373. The partner Governments agreed to a suspension of interest and sinking fund payments from 1st July, 1942, while operations at Nauru and Ocean Island were curtailed. Modified payments were resumed in 1946-47, pending a review of the position.

The review was carried out in 1950, and as a result the revised capital indebtedness of the Commissioners to the partner Governments at 30th June, 1950, was determined at £3,881,711. Interest and sinking fund payments were resumed with effect from 1st July, 1950, on the basis of repayment of the revised capital indebtedness in 35 years.

(iv) Employees. Apart from a limited number of Europeans, the employees are Chinese and Pacific Islanders engaged under a one year contract. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

(v) Christmas Island Phosphates. It may be appropriate to refer here to the phosphate deposits on Christmas Island in which the Australian Government is interested. The concession to work phosphate at Christmas Island, situated in the Indian Ocean near Java, was held from 1897 by the Christmas Island Phosphate Company Limited, a private company incorporated in England.

The Australian and New Zealand Governments, jointly, acquired the Company's

interests and assets at Christmas Island as at 31st December, 1948.

The undertaking is controlled by a Board of Commissioners appointed by the Australian and New Zealand Governments. Phosphate is distributed by the British Phosphate Commissioners who have been appointed by the Board as its managing agents.

11. Transport.—There is no regular air service to Nauru, but when the need arises

charter flights are made to the island. The airstrip is to be improved.

There is relatively frequent sea communication with the island. During 1955-56, 179 vessels called there. Most of the vessels are run or chartered by the British Phosphate Commissioners for the carriage of phosphate. Many of them also provide for the carriage of passengers and other cargo as required.

12. Trade.—The Customs Tariff of Nauru provides for the free admission of all goods other than cigars, cigarettes, tobacco, spirits, wines, beer, cider and perry, and cylinder blocks for motor cycle engines. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. Imports into Nauru were valued at £192,749 in 1940 and exports, 808,400 tons of phosphate, at £541,168. In 1955-56, imports were valued at £877,264 and exports, 1,467,794 tons of phosphate, at £2,568,640. Of the total imports in 1955-56, Australia supplied 69 per cent. valued at £603,180; the balance came mainly from the United Kingdom, New Zealand, Hong Kong and the United States in that order.

In 1955-56, 882,025 tons of phosphate were exported to Australia, 483,619 tons to New

Zealand and 102,150 tons to the United Kingdom.

13. Revenue and Expenditure.—The revenue of the Administration has risen from £33,084 in 1939 to £261,164 in 1955-56, and expenditure from £29,391 to £257,274.

Of the revenue for the year ended 30th June, 1956, payments by the British Phosphate Commissioners amounted to £244,763, post office and radio receipts, £7,497, and customs duties, £3,527. Main items of expenditure were salaries and general expenses, £143,406, miscellaneous services (health, education, etc.), £63,153 and capital works and services, £50,715.

### TERRITORY OF HEARD AND McDONALD ISLANDS.

On 26th December, 1947, by an exchange of notes with the United Kingdom Government, the United Kingdom sovereignty over the Heard and McDonald Islands was transferred to the Commonwealth of Australia. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard and McDonald Islands by the Heard and McDonald Islands Act passed 18th March, 1953.

At the end of 1947, an Australian scientific post was established on Heard Island and maintained as a scientific base. Following the establishment of a base at Mawson, on MacRobertson Land in the Australian Antarctic Territory, the Heard Island base has been discontinued. Heard Island lies 2,500 miles south-west of Fremantle in the South Indian Ocean, and is about 27 miles long and 13 miles wide. The McDonald Islands are 26 miles to the west of Heard Island. They are small, rocky and precipitous.

### AUSTRALIAN ANTARCTIC TERRITORY.

On 13th February, 1954, the Australian National Antarctic Research Expedition established a base on MacRobertson Land at latitude 67° 36′ S. and longitude 62° 53′ E. The base was named Mawson in honour of Sir Douglas Mawson and was the first permanent Australian station to be set up on the Antarctic continent. Meteorological and other scientific research is conducted at Mawson, which is the centre for coastal and inland survey expeditions.

A second Australian scientific research station was established on the coast of Princess Elizabeth Land on 13th January, 1957 at latitude 68° 34.6′ S. and longitude 77° 58.6′ E. The station was named Davis in honour of Captain John King Davis of Melbourne, who commanded a number of famous Antarctic ships.

## TERRITORY OF COCOS (KEELING) ISLANDS.

1. General.—The Cocos (Keeling) Islands, two separate atolls comprising some 27 small coral islands with a total area of about five square miles, are situated in the Indian Ocean in latitude 12° 5′ S. and longitude 96° 53′ E. They lie some 1,720 miles north of Perth and 2,290 miles almost due west of Darwin, whilst Johannesburg is some 3,800 miles further distant to the south-west, and Colombo is 1,400 miles to the north-west of the group.

The main islands of the Territory are West Island, the largest, about 6 miles from north to south, on which is the aerodrome and most of the European community; Home Island, the head-quarters of the Clunies Ross Estate; Direction Island on which is situated the Cable and Wireless Station, the Admiralty Wireless Station and the Department of Civil Aviation's Marine Base; and Horsburgh. North Keeling Island, which forms part of the Territory, lies about 15 miles to the north of the group and has no inhabitants.

Main settlements are on West Island, Home Island and Direction Island. The group of atolls is low-lying, flat and thickly covered by coconut palms, and surrounds a lagoon which has a harbour in the northern part but which is extremely difficult for navigation.

The climate is equable and pleasant, usually being under the influence of the south-east trade winds for about three-quarters of the year. However, the winds vary at times and meteorological reports from the Territory are particularly valuable to those engaged in forecasting for the eastern Indian Ocean. The temperature varies between 70° and 89° F., the rainfall is moderate and there are occasional violent storms. The worst cyclone in their recorded history struck the islands in 1909, when about 400,000 coconut palms were uprooted or decapitated and the accompanying tidal wave left only five buildings standing.

2. History.—The islands were discovered in 1609 by Captain William Keeling of the East India Company. They were uninhabited and remained so until 1826 when the first settlement was established on the main atoll by an Englishman, Alexander Hare, who quitted the islands in about 1831. In the meantime, a second settlement was formed on the main atoll by John Clunies Ross, a Scottish seaman and adventurer, who landed with several boat-loads of Malay seamen. In 1857, the islands were annexed to the Crown and formally declared part of the British Dominions, and in 1878 responsibility for their supervision was transferred from the Colonial Office to the Government of Ceylon, and subsequently, in 1882, to the Government of the Straits Settlements. By indenture in 1886, Queen Victoria granted the land comprised in the islands to John Clunies Ross in perpetuity, and until 1946, the patriarchal rule of the head of the Clunies Ross family was recognized. The head of the family had semi-official status as resident magistrate and representative of the Government. However, in 1946, when the islands became a dependency of the Colony of Singapore, a Resident Administrator, responsible to the Governor of Singapore, was appointed.

Other items of significance in the islands' history are:—1901—small cable relay station was established at Direction Island; 1903—islands were incorporated in the Settlement of Singapore; 1909—worst cyclone in the history of the islands struck; 1914—German cruiser *Emden* raided Direction Island but was destroyed by H.M.A.S. *Sydney*; 1944—Islands were under military administration with allied troops stationed there (a military Administrator was appointed during the minority of the Clunies Ross heir who came of age in 1949): 1945—a R.A.F. air-strip was constructed on West Island; 1946—Civil administration was re-established.

- 3. Transfer to the Commonwealth of Australia.—On 23rd November, 1955 the Cocos Islands ceased to form part of the Colony of Singapore and were placed under the authority of the Commonwealth of Australia. The transfer was effected by an Order in Council made by Her Majesty Queen Elizabeth the Second under the Imperial Act entitled the Cocos Islands Act 1955, and by the Cocos (Keeling) Islands Act 1955 of the Commonwealth, whereby the islands are declared to be accepted by the Commonwealth as a Territory under the authority of the Commonwealth, to be known as the Territory of Cocos (Keeling) Islands.
- 4. Administration.—Responsibility for the administration of the Territory, in terms of the Cocos (Keeling) Islands Act 1955, rests with the Minister for Territories. An Official Representative was appointed on 23rd November, 1955, to take charge of the local administration of the Territory under delegation from the Minister. The laws of the

Colony of Singapore which were in force in the islands immediately before the date of the transfer have, with certain exceptions, been continued in force by the Cocos (Keeling) Islands Act 1955. Those laws may be amended or repealed by Ordinances made under the provisions of that Act which empower the Governor-General to make Ordinances for the peace, order and good government of the Territory.

- 5. Population.—The population of the Territory in June, 1956, was estimated to be 649, comprising 137 Europeans, 464 Cocos Islanders and 48 Asians. The Cocos Islanders reside on Home Island.
- 6. Transport.—An airport is established on West Island under the control of the Department of Civil Aviation. This is a re-fuelling point for aircraft of the oversea air-service between Australia and South Africa operated by Qantas Empire Airways Ltd. at fortnightly intervals. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals.

#### CHAPTER VI.

## LABOUR, WAGES AND PRICES.

Note.—Reference is made in this chapter to retail and wholesale price indexes. For particulars of the Export Price Index, see Chapter X., § 15, and of the Farm Production Price Index, see Chapter XXX., § 2.

## A. RETAIL PRICES AND PRICE INDEXES.

## § 1. General.

The information on retail prices and price indexes presented in this chapter is extracted from the annual Labour Report. For a full explanation of methods adopted and an analysis of problems involved see the detailed reference in Chapter I. of Labour Report No. 44, 1955 and 1956.

Retail prices of food and groceries and average rentals of houses for years extending back to 1901 were collected by the Commonwealth Statistician, and in some cases have been recorded by the Statisticians of various States for earlier years.

Retail prices of a more extensive range of commodities (including clothing) and certain services in common demand have been ascertained at frequent and regular intervals since 1923 for each of the six capital cities and for 27 of the more important towns of Australia. Comparable information is available for the month of November in each year from 1914 to 1922 for each of the six capital cities. The list of items priced for index purposes is published in Labour Report No. 44.

## § 2. Previous Retail Price Indexes.

- 1. General.—Four series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1954. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were:—
  - (i) The "A" Series Index (covering food, groceries and house tents) was first compiled in 1912 with the year 1911 as base = 1,000. It was discontinued in June, 1938.
  - (ii) The "B" Series Index (covering food, groceries and rent of 4 and 5 roomed houses) was first compiled in 1925 and continued until the December Quarter, 1953. It was the food and rent constituent of the "C" Series Index and was designed to replace the "A" Series Index for general statistical purposes.
  - (tii) The "C" Series Index (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking and some other miscellaneous items) was first compiled in 1921 and published at quarterly intervals from the June Quarter, 1922. It was used by the Commonwealth Court of Conciliation and Arbitration for purposes of quarterly wage adjustments from May, 1934. to August, 1953. Some State tribunals use or consider it in their proceedings. Its publication in mimeograph each quarter will be continued for the present in the customary form and on its customary basis. For general statistical purposes it has been replaced by the Interim Retail Price Index (1952-53 base year) described at length in a Statistical Bulletin published on 24th
  - March, 1954, and briefly in the following section of this chapter.

    (iv) The "D" Series Index, derived by combining the "A" and "C" Series Indexes, was used by the Commonwealth Court of Conciliation and Arbitration from May, 1933 to May, 1934, and then discontinued.

Of the four retail price indexes described above, only the "C" Series is now compiled. The new Interim Index will continue in its present form until the components of certain groups are finalized.

2. The "Court" Index.—In 1937 the Commonwealth Court of Conciliation and Arbitration introduced a "Court" Index for the purpose of its system of making automatic quarterly adjustments to the basic wage within its jurisdiction. By decision of the Court the "Court" Index ceased to be issued by the Industrial Registrar as at the December Quarter, 1953. "Court" index numbers were an arithmetical conversion of the "C" Series Index.

## § 3. The Interim Retail Price Index (1952-53 Base Year).

1. Origin of the Interim Retail Price Index (1952-53 Base Year).—The list of component items and the weighting pattern of the "C" Series Retail Price Index were first adopted in 1921 but were reviewed by Conference of Statisticians in 1936. (See Labour Report No. 41, 1952, page 33.)

From the outbreak of war in 1939 to late in 1948 periodic policy changes in regard to various war-time controls (including rationing) caused recurrent changes in consumption and the pattern of expenditure. This rendered it impracticable either to produce a new index or to revise the old one on any basis that would render the index more representative, than it already was, of the changing pattern.

When commodity rationing had virtually ceased in the latter part of 1948, action was taken by the Statistician to collect price data of about 100 additional items and to gather information as to current consumption and expenditure patterns. By the middle of 1949 a considerable number of new price series were coming into being and the body of data available as to expenditure and consumption (in the post-rationing period) was beginning to indicate something of the new weighting pattern likely to be appropriate for post-war review of the components and construction of the "C" Series Index.

There supervened in the next two years conditions which caused wide price dispersion, a very rapid rise in prices and a new sequence of changes in consumption and the pattern of wage earner expenditure. Under these conditions it was not possible to devise any new weighting pattern for the years 1949-50, 1950-51 and 1951-52 likely to be better suited to the index or more continuously representative of conditions then current than was the existing "C" Series Index on the 1936 revision. Conference of Statisticians therefore deferred revision of the weighting system and component items of the "C" Series Index until it was advised by the Acting Commonwealth Statistician in June, 1953 (a) that although the aggregate "C" Series Index (as verified by supplementary indexes) was still reasonably reliable for current use, some of the component groups (more particularly food and miscellaneous) were not satisfactory individually; and (b) that the time had arrived either to produce a new index or to reconstruct the "C" Series Index extensively.

The Interim Retail Price Index has been compiled pursuant to Resolution 13 of Conference of Statisticians in June, 1953, reading:—

#### "13. Retail Price Indexes-

(a) That in view of the persistence of recurrent changes in the pattern of consumer expenditure in the post-war period, it is undesirable to make a general revision of the list of items and weighting system of the "C" Series Retail Price Index at present, unless industrial tribunals expressly desire some revision for special purposes.

b) That an Interim Retail Price Index be compiled with putative weights and components representative, as nearly as may be, of the post-war pattern

of consumer usage and expenditure.

(c) That, having regard to the complexities of the problem and the limit of staff resources available, such interim index relate only to each capital city and to the six capital cities combined.

(d) That attention be drawn again to the statement already published that the "C" Series Retail Price Index cannot measure changes in relative retail price levels as between capital cities consistently with its main purpose of measuring periodic changes in retail price levels or each city.

(e) That the problem of measuring comparative retail price levels as between cities at any point of time differs in principle from the problem of measuring

periodic variations in price level in an individual city".

The Interim Retail Price Index (1952-53 base year) is used as the current retail price index in statistical publications of the Commonwealth Statistician for general statistical purposes. It relates only to six capital cities of Australia because it is not practicable with existing staff resources to collect price data for the greatly enlarged list of items for 28 other cities and towns. These continue to be covered as to the less extensive list of items used for the "C" Series Index.

At times appreciable disparities appear in the movement of the respective indexes for individual cities from quarter to quarter. The Interim Index, being based on recent weights and an extended list of items, is the more representative measure of current quarterly retail price variations.

- 2. Definition of the Interim Retail Price Index.—This index provides the interim results of researches designed to measure retail price variations (with 1952-53 = 100 as base year) on the basis of:—
  - (a) a current pattern of wage earner expenditure using recent consumption weights for foods and recent expenditure weights for combining groups of items into the aggregate index:
  - (b) a wider range of commodities and services than that covered by any existing price index in order to provide greater representativeness: and
  - (c) individual city weights for such items as electricity, gas and fares.

The components and weighting of the Interim Retail Price Index are being reviewed in the light of data derived from the Census of Retail Sales as to consumer expenditure on various kinds of goods, estimates of consumer expenditure on services relevant to construction of a retail price index of this type and data as to rents and housing derived from the Census of 30th June, 1954 and additional special surveys. It is proposed to cast the index into final form as soon as possible and this may entail some revision in the index.

3. Differences between the Structure of the Interim Retail Price Index and the "C" Series Retail Price Index.—The main differences between the structure of the Interim Retail Price Index and that of the "C" Series Retail Price Index are (a) the group weights and item weights of the Interim Index relate broadly to the consumption pattern 1950-53, while those of the "C" Series Index relate to pre-war years; and (b) the Interim Index includes a large number of items not included in the "C" Series Index.

A full list of the items used in the Interim Index was shown in Appendix III. of the Statistical Bulletin of 24th March, 1954, and on pages 10-13 of Labour Report No. 44. The changes in structure of each group of items as adopted for the Interim Retail Price Index are summarized below.

- (i) Food Group.—The weights of some of the main items (e.g., milk, eggs, meat, potatoes and flour) in the Interim Index are substantially different from those of the "C" Series Index. Twenty-four new items extend the group coverage over a wider field. The total number of items in the Food Group of the Interim Index is 60 as compared with 38 in the "C" Series Index. The principal new items are lamb, packaged breakfast foods, biscuits, ice cream, packet cheese, honey, sandwich spreads, coffee, cocoa, soft drinks and certain types of confectionery.
- (ii) Clothing and Drapery Group.—In the Interim Index, 17 new items have been added to the Clothing and Drapery Group, and 25 items each formerly represented by one type of article are now each represented by two or more types. Consequential adjustments have been made in weights of individual items. The principal new items added to this group are:—sports coat, sports trousers, cardigan (and other types of knitted wear), overalls, piece-goods (rayon, cotton and woollen) and knitting wool.
- (iii) Rent Group.—Only minor changes have been made in the Rent Group. Available data indicate (a) that, in general, very few new houses have been built by private owners for renting in the post-war years; (b) that in some cities considerable numbers of new government houses have been built for renting or occupancy on a quasi-rental basis; and (c) that there has been a substantial increase in the numbers of owner-occupied houses, including new instalment-purchase or quasi-instalment-purchase houses under governmental and private housing schemes. In recent years the difficulty of obtaining data suitable for the housing component of a price index has therefore intensified. The Census of 1954 showed that a very rapid diminution had occurred since 1947 in both the numbers and proportions of privately rented houses. Supplementary surveys in 1956 and 1957 indicated a continuation of this trend in the six capital cities. Further study is therefore being given to the hitherto intractable problems associated with measuring at quarterly intervals "housing price" variations in a form suitable for use in a retail price index in respect of owner-occupied houses, instalment-purchase houses, and houses occupied under the various types of governmental housing schemes.
- (iv) Other Groups.—Six new sub-groups are included in the Interim Index, comprising 75 items as compared with 32 in the "C" Series Index. The principal new items are garden tools, floor coverings, shaving cream, toilet soap, etc., patent medicines, baby foods, haircuts, dry cleaning, shoe repairs, postage, etc. Necessary adjustments have been made to bring the group weight into conformity with recent expenditure and consumption patterns. The weight of this group is much greater than it was in the "C" Series Index.
- (v) Group Weights.—The group weights in the new Interim Index have been brought into general conformity with the estimated group distribution of wage earner household expenditure in recent years over the field covered. In some cases the weights are putative weights assessed on available data and are subject to some revision.

In the year 1952-53 the ratio of the individual group "aggregate expenditure" to the "aggregate expenditure" of the whole index for the six capital cities combined was as follows:—

Group.		"C" Series Retail Price Index.	Interim Retail Price Index.				
Food Clothing and Drapery Rent Other Groups	••	Per cent. 41.0 33.0 11.3 14.7  5.3  2.8 2.1	Per cent. 37.1 26.8 9.0  4.6 Fuel and Light 4.6 Household Sundries 2.5 Certain Repairs and Services 3.0 Cinema, Radio, Newspapers 6.6 Rail, Tram and Bus Fares 5.8 Tobacco and Cigarettes				

In the Interim Index common weights are adopted for all groups and items in the index for each city except in respect of fares, gas, electricity and some minor items. The resultant indexes measure price movement from period to period for each city separately. While they indicate degree of price movement from time to time for respective cities, they do not indicate the relative level of prices (or level of living costs) in each city. For that reason the Interim Index for each city in the base year 1952-53 is 100.

4. Comparison of Trends of the Interim Retail Price Index with Trends of the "C" Series Retail Price Index.—The following table shows for each of the years 1952-53 to 1956-57 and for each quarter from the December Quarter, 1954 to the December Quarter, 1957 the Interim Index for the six capital cities combined, with the year 1952-53 as base = 100, in comparison with the "C" Series Index arithmetically converted to the same base:—

Period.	Si	Six Capital Cities: Weighted Average. (Base: Year 1952-53 = 100.)						
	" C " Seri	es Index.	Interim Index.					
Year ended June-			A	В				
1953	. 10	0.0	100.0	100.0				
1954	.   10:	2.8	102.2	102.5				
1955	. 10	3.7	103.7	103.6				
	Α	В						
1956	. 107.5	108.8	107.0	108.0				
1957	. 112.2	114.1	113.0	114.3				
Quarter ended—		•						
1954—December .	. 10	3.2	103.4	103.2				
1955-March	. 10	3.9	103.8	103.8				
June	. 10	105.0		104.7				
	A	В						
September .	. 105.9	106.6	105.1	105.7				
Donnerhan	. 106.7	107.7	106.3	107.0				
1956-March	. 107.8	109.0	107.4	108.3				
June	. 109.7	111.8	109.4	110.8				
September .	. 111.1	115.6	111.5	114.4				
December .	111.7	114.2	112.5	114.2				
1957—March	. 112.6	112.8	113.5	113.7				
June	113.5	113.8	114.5	114.8				
September .	114.0	113.8	115.1	115.1				
Danamban	. 114.0	113.5	115.1	114.9				

Note.—Indexes in columns "A" exclude, and those in columns "B" include, potatoes and onions. (See para. 5 below).

The figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted merely to avoid the distortion that would occur in rounding off the figures to the nearest whole number. Price indexes cannot measure aggregate price variations with an accuracy of the order of one-tenth of 1 per cent.

With changing conditions significant divergencies may occur between the movements shown by a retail price index (such as the "C" Series Index) constructed on pre-war weights and a comparatively limited range of major items and a retail price index (such as the Interim Index) constructed on 1950-53 weights and a broader list of items,

Due regard should be paid to the fact that a composite price index is necessarily an approximate summary which combines into one aggregate price variations of many items. Any more rigid use of the index for specific purposes is the responsibility of the bodies or persons using the indexes.

5. Compilation of Indexes Including and Excluding Price Movement of Potatoes and Onions.—Abnormally large seasonal fluctuations in prices of potatoes and onions had a major effect (first upwards and then downwards) on the movement of the price indexes in most cities from the September Quarter, 1956 to the March Quarter, 1957. The fluctuations also caused highly disparate movements in the aggregate indexes as between cities. In order to provide an indication of the recent trend of the indexes apart from these abnormally large seasonal fluctuations, index numbers excluding the effects of price movements of potatoes and onions are calculated for comparison with those which include those items.

The Interim Retail Price Index is calculated both inclusive and exclusive of potatoes and onions as from the base period 1952-53. For the "C" Series Retail Price Index, index numbers excluding the price movement of potatoes and onions have been calculated as from (and including) the September Quarter, 1955.

## § 4. Tabular Statements of Retail Price Index Numbers.

- 1. General.—Information on retail price movements is published as follows:-
- (i) Monthly. The Monthly Review of Business Statistics contains annual and quarterly index numbers to the latest available date.
- (ii) Quarterly. Statements are issued about three weeks after the end of each quarter relating to the Interim and the "C" Series Retail Price Indexes respectively for that quarter and immediately preceding quarters. The Quarterly Summary of Australian Statistics contains annual and quarterly index numbers to the latest available date. This publication also contains certain average prices of items of food and groceries for the latest available quarter.
- (iii) Annual. The Labour Report contains index numbers for past years, and the quarterly results for recent years. Certain average prices for the latest year of items of food and groceries are also published in this report.
- 2. The "C" Series Retail Price Index.—A table of "C" Series index numbers for the weighted average of the six capital cities combined together with index numbers for each of the four main groups of items in the "C" Series Index for each year from 1914 to 1957 is shown on page 153. Detailed tables were last published in *Labour Report* No. 41, 1952, pp. 19-31.
  - 3. The Interim Retail Price Index .- On the following pages are published:-
- (i) the Interim Retail Price index numbers for each of the years ended June from 1953 to 1957, and for each quarter during the period December Quarter, 1956 to December Quarter, 1957, for each capital city and for the six capital cities combined, together with separate indexes for each of the four groups of items (pages 150-1).
- (ii) the Interim Retail Price index numbers for each of the years ended June from 1953 to 1957, and for each quarter during the period December Quarter, 1954 to December Quarter, 1957, for the weighted average of the six capital cities combined, together with separate indexes for each of the four groups of items (page 151).

## INTERIM RETAIL PRICE INDEX NUMBERS.

(Base of each Index: Year 1952-53=100.)

Note.—The index numbers hereunder are designed to measure aggregate variations in retail prices of specified groups of items for specified cities individually. They measure variations from time to time and not differences in price level as between cities nor comparative costs of groups of items.

GROUP I.—FOOD (EXCLUDING POTATOES AND ONIONS).(a)  Sydney		ł	Year	Year	Year	Year	Year	1956.	<u> </u>	19	57.	
GROUP I.—FOOD (EXCLUDING POTATOES AND ONIONS).(a)  Vertney	City.	- 1	June,	June,	June,	June,	June,	Dec.		June	Sept.	Dec
ydney   100.0   101.5   104.0   106.7   111.4   110.8   111.8   111.8   112.6   111.6   115.0   110.0   101.3   104.7   109.9   114.2   113.8   114.5   115.2   115.6   114.0   115.0   110.0   102.5   106.3   108.7   111.1   109.7   110.7   112.7   113.3   110.0   112.5   106.3   108.7   111.1   109.7   110.7   112.7   113.3   110.0   112.5   115.0   114.0   112.5   114.0   112.5   115.0   114.0   112.5   11			1955.	1934.	1933.		1937.	Qtr.				Qtr.
Main		Grou	JP I.—	-Food	(Exclu	DING P	OTATOES	S AND (	Окоого)	.(a)		
Dotation	ydney		100.0	101.5	104.0	106.7	111.4		111.8	111.8	112.6	111.
							108.4	107.2	108.6	110.1	110.0	114.
terth	delaide	1	100.0	102.5	106.3	108.7	111.1	109.7	110.7	112.7	113.3	110.
GROUP II.—CLOTHING AND DRAPERY.    100.0   101.7   102.3   103.0   105.9   105.7   106.6   107.6   108.1   112.8   113.8   112.9   114.8   116.7   113.8   112.9   114.8   116.7   113.8   112.9   114.8   116.7   113.8   112.9   114.8   116.7   113.8   112.9   114.8   116.7   113.8   112.9   114.8   115.7   114.9   114.9   115.7   115.9   115				106.3	109.4	111.0	115.8	114.3	115.8	118.0	116.6	113.
GROUP I.—FOOD (INCLUDING POTATOES AND ONIONS).												
ydney	- ·		-	102.0	104.6					113.3		
fielbourne   100.0   104.6   104.3   112.9   118.6   120.2   115.4   116.5   115.9   114.   115.5   110.0   104.1   104.2   108.1   112.1   111.6   109.9   111.1   110.5   112.   111.6   109.9   111.1   110.5   112.   111.6   109.9   111.1   110.5   112.   111.6   109.9   111.1   110.5   112.   111.6   109.9   111.1   110.5   112.   111.6   109.9   111.1   110.5   112.   111.1   110.5   112.   111.1   110.5   112.   111.1   110.5   112.   111.1   110.5   112.   111.1   110.5   112.   114.2   113.1   110.0   100.0   107.7   106.8   113.6   118.3   120.4   116.7   117.0   114.2		Gro	OUP I.	—Foor	(Incl	UDING I	Ротатог	S AND	Onions	s).		
	ydney			102.4	103.6	109.0	114.4	114.2	112.1	112.4	112.3	110.
delaide		1 -	100.0	104.6	104.3	108.1	112.1	111.6	109.9		110.5	
	delaide		100.0	103.5	106.2	111.1	114.9	115,7	110.9	113.4	113.1	110.
GROUP III.—Rent(c) (4 And 5 Roomed Houses).  GROUP III.—Rent(c) (5 Ind. 9 I					109.5	111.3		115.4	116.7			
GROUP II.—CLOTHING AND DRAPERY.    Continue		1-										
rdney   100.0   101.7   102.3   103.0   105.9   105.7   106.6   107.6   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   108.1   109.0   101.7   102.9   103.3   105.8   104.9   106.7   107.9   108.3   109.6   101.0   100.0   102.2   102.9   102.9   103.9   103.2   104.1   105.5   106.2   107.5   108.1   109.0   101.6   103.0   105.4   104.4   106.0   107.3   107.7   108.0   108.1   109.0   101.6   103.1   104.6   107.8   106.8   108.6   109.6   109.9   108.3   109.2   108.3   109.0   108.6   109.0   109.9   108.4   109.0   108.2   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.4   109.0   108.0   10		1		<u> </u>		<u> </u>			i		:	
Melbourne 100.0 101.3 102.2 103.9 106.4 105.8 106.6 109.0 109.6 110.0 110.8 100.0 101.7 102.2 9 103.3 105.8 104.9 106.7 107.9 108.3 109.0 108.4 109.0 10				ROUP	11.—CL	OTHING	AND D	RAPERY	•			
risbane 100.0   101.7   102.5   103.3   105.8   104.9   106.7   107.9   108.3   109.0   100.0   100.0   102.2   102.9   103.9   103.2   104.1   105.5   106.2   107.9   108.3   109.0   100.0   100.0   100.1   103.0   105.4   104.4   106.0   107.5   106.2   107.0   108.4   109.0   100.0   100.6   103.1   104.6   107.8   106.8   108.6   109.6   109.9   110.0   100.0   101.6   102.4   103.3   105.8   105.3   106.3   107.7   109.5   110.0   100.0   101.6   102.4   103.3   105.8   105.3   106.3   107.9   108.4   109.0   100.0   100.0   100.8   102.3   111.9   123.3   122.4   114.2   115.4   116.9   117.0   115.0   11								105.7				
delaide 100.0 102.2 102.9 102.9 103.9 103.2 104.1 105.5 106.2 107.6 retth 100.0 100.9 101.6 103.0 105.4 104.4 106.0 107.3 107.7 108 (obart 100.0 100.0 102.6 103.1 104.6 107.8 106.8 108.6 109.6 109.9 110 ix Capitals(b) 100.0 101.6 102.4 103.3 105.8 105.3 106.3 107.9 108.4 109.9 110 ix Capitals(b) 100.0 101.6 102.4 103.3 105.8 105.3 106.3 107.9 108.4 109.9 110 ix Capitals(b) 100.0 107.7 109.5 111.3 113.5 112.4 114.2 115.4 116.9 117.6 relabourne 100.0 100.8 102.3 111.9 123.3 122.4 123.6 125.2 125.9 126.6 relabourne 100.0 102.9 105.2 107.0 111.0 110.3 111.7 113.3 115.0 115.0 delaide 100.0 102.9 105.2 107.0 111.0 110.3 111.7 113.3 115.0 115.0 delaide 100.0 102.7 105.6 114.9 124.8 123.7 126.3 128.1 131.2 132.0 relabourne 100.0 108.8 109.4 126.1 151.9 150.9 153.9 155.0 156.8 158.0 ix Capitals(b) 100.0 105.0 109.6 115.5 122.5 121.5 123.1 124.6 126.1 127   GROUP IV.—OTHER ITEMS.(d)  Valuey 100.0 100.9 101.3 109.6 116.4 116.4 116.7 116.9 117.4 117.9 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 risbane 100.0 103.0 104.5 110.1 117.9 113.0 118.5 114.8 115.3 115.5 115.5 115.0 115.0 115.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 117.9 112.0 112.1 11		111111111111111111111111111111111111111		1 202.0				104.9				
	delaide	1	100.0	102.2	102.9	102.9	103.9	103.2	104.1	105.5	106,2	107.
GROUP III.—RENT(c) (4 AND 5 ROOMED HOUSES).    Value   100.0   107.7   109.5   111.3   113.5   112.4   114.2   115.4   116.9   117.6   118.0   119.5					101.6		105.4	104.4	106.0	107.3	107.7	
GROUP III.—RENT(c) (4 AND 5 ROOMED HOUSES).  ydney				(								
ydney				101.0	102.4	103.3						
risbane 100.0 102.9 105.2 107.0 111.0 110.3 111.7 113.3 115.0 15.0 15.0 161.0 100.0 102.7 105.6 114.9 124.8 123.7 126.3 128.1 131.2 13		G	ROUP	III.—F	RENT(c)	(4 AND	5 Roo	MED H	ouses).	_		
risbane	ydney	]	100.0		109.5	111.3	113.5		114.2	115.4	116.9	117.
delaide 100.0 102.7 105.6 114.9 124.8 123.7 126.3 128.1 131.2 132. erth 100.0 110.8 149.6 159.1 169.2 168.5 169.7 171.8 173.5 174. lobart 100.0 108.8 109.4 126.1 151.9 150.9 153.9 155.0 156.8 158. x Capitals(b) 100.0 105.0 109.6 115.5 122.5 121.5 123.1 124.6 126.1 127.  GROUP IV.—OTHER ITEMS.(d)  ydney 100.0 100.5 100.9 103.6 121.5 121.4 122.5 124.1 124.6 126.1 127. 128.1 129.0 1	lelbourne risbane				102.3	107.0	123.3	1122.4	123.6	125.2	125.9	126.
Obart	delaide	1	100.0	102.7	105.6	114.9	124.8	123.7	126.3	128.1	131,2	132
GROUP IV.—OTHER ITEMS.(d)    Continue		[ ]			149.6		169.2	168.5	169.7			174.
GROUP IV.—OTHER ITEMS.(d)  rdney												
rdney	x Capitals(b)			103.0	109.0	113.3	122.3	121.3	123.1	124.0	120.1	127
elbourne     100.0     100.9     101.3     109.6     116.4     116.4     116.7     116.9     117.4     117.9       isbane     100.0     103.0     104.5     110.1     117.9     118.0     118.6     119.0     119.4     117.9       delaide     100.0     99.3     99.9     103.7     107.9     107.9     108.3     108.5     115.5     111.9       rrh     100.0     100.8     101.9     106.4     113.7     114.5     114.8     115.3     115.6     115.6       obart     100.0     108.2     105.1     110.3     120.1     119.7     120.3     121.1     121.2     121.2				Gro	UP IV.	—Отне	R ITEMS	s.(d)				
risbane 100 0 103.0 104.5 110.1 117.9 118.0 118.6 119.0 119.4 119.0 delaide 100 0 99.3 99.9 103.7 107.9 107.9 108.3 108.5 110.5 111. erth 100 0 100.8 101.9 106.4 113.7 114.5 114.8 115.3 115.6 115. obart 100 0 108.2 105.1 110.3 120.1 119.7 120.3 121.1 121.2 121.		1	100.0			103.6	121.5				124.6	124.
delaide 100.0 99.3 99.9 103.7 107.9 107.9 108.3 108.5 110.5 111. 100.0 100.8 101.9 106.4 113.7 114.5 114.8 115.3 115.6 115. obart 100.0 108.2 105.1 110.3 120.1 119.7 120.3 121.1 121.2 121.				100.9	101.3		116.4	116.4		116.9	117.4	117.
erth		::   {	100.0	99.3	99.9	103.7	107.9	107.9	108.3	108.5	110.5	111
obart 100.0   108.2   105.1   110.3   120.1   119.7   120.3   121.1   121.2   121.	erth	1	100.0	100.8	101.9	106.4	113.7	114.5	114.8	115.3	115.6	115.
(x Capitals(b)   100.0   100.9   101.4   106.4   117.8   117.8   118.5   119.3   119.9   120	lobart ix Capitals(b)			108.2	105.1	110.3	$\frac{120.1}{117.8}$	119.7	120.3	119.3	121.2	121

### INTERIM RETAIL PRICE INDEX NUMBERS-continued.

(Base of each Index: Year 1952-53=100.)

		Year	Year	Year	Year	Year	1956.		19:	57.	
City.		June, 1953.	ended June, 1954.	June, 1955.	June, 1956.	ended June, 1957.	Dec. Qtr.	Mar. Qtr.	June Qtr.	Sept. Qtr.	Dec. Qtr.
		ALL G	ROUPS	(Exclu	DING P	OTATOES	S AND	Onions)	.(a)	`	
Sydney Melbourne Brisbane Adelaide Perth Hobart Six Capitals(b)	::	100.0 100.0 100.0 100.0 100.0 100.0	101.9 102.1 102.3 101.6 103.9 106.3	103.2 102.9 103.7 103.6 109.5 105.6	105.3 108.4 105.9 106.3 112.6 110.6	113.0 113.5 110.3 109.5 117.9 118.0	112.6 113.1 109.5 108.7 117.2 117.7	113.7 113.7 110.9 109.7 118.4 118.5	114.5 114.8 112.0 111.0 119.9 119.2	115.2 115.3 112.3 112.2 119.8 119.0	115.2 115.2 113.6 111.8 118.9 119.4
		ALL	GROUP	s (Incl	UDING !	POTATO	ES AND	Оиюи	s).		
Sydney Melbourne Brisbane Adelaide Perth Hobart Six Capitals(b)	::	100.0 100.0 100.0 100.0 100.0 100.0	102.2 102.4 103.0 102.0 103.9 106.6 102.5	103.1 102.7 104.0 103.6 109.6 105.6	106.1 109.5 107.1 107.2 112.7 111.5	114.1 115.1 111.7 110.9 118.3 119.1	113.8 115.5 111.2 110.9 117.6 119.4	113.7 114.1 111.4 109.7 118.7 118.9	114.7 115.3 112.4 111.3 120.2 119.6	115.0 115.5 112.5 112.2 120.1 118.8	114.8 115.3 113.4 111.7 119.1 119.1

(a) See para, 5 on page 149. (b) Weighted average. (c) Rent.—The rent index numbers shown in the table above and elsewhere in this publication measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. They are "price" indexes in the strict sense, i.e., they are designed to measure only the "price" element in rent fluctuations. Rentals of new tenanted houses completed since the end of the war are not taken into account. (d) A group of items under the following headings—Electricity, Gas and Firewood; Household Sundries; Services; Cinema Admission, Radio Licence, and Newspapers; Fares; and Tobacco and Cigarettes.

### INTERIM RETAIL PRICE INDEX-GROUP INDEXES.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

 $(Rase: Year\ 1952-53 = 100.)$ 

Period.	Fo	od.(a)	Clothing and Drapery.	Rent.(b)	Other Items.	Aggr All Gro	egate ups.(a)
Year ended June—	Α	В				A	В
1953	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1954	102.8	103.7	101.6	105.0	100.9	102.2	102.5
1955	104.8	104.6	102.4	109.6	101.4	103.7	103.6
1956	108.1	110.6	103.3	115.5	106.4	107.0	108.0
1957	112.4	115.8	105.8	122.5	117.8	113.0	114.3
Quarter ended	i						
1954—December	104.3	103.7	102.3	109.3	101.2	103.4	103.2
1955March	105.3	105.3	102.4	109.7	101.2	103.8	103.8
June	106.0	106.4	103.3	110.5	101.9	104.5	104.7
September	106.7	108.2	103.3	111.4	102.8	105.1	105.7
December	107.0	109.0	103.4	112.0	106.2	106.3	107.0
1956—March	108.2	110.6	103.3	118.8	106.7	107.4	108.3
June	110.7	114.5	103.4	119.7	110.1	109.4	110.8
September	111.9	119.6	103.8	120.6	115.6	111.5	114.4
December	111.6	116.2	105.3	121.5	117.8	112.5	114.2
1957March	112.6	113.2	106.3	123.1	118.5	113.5	113.7
June	113.3	114.2	107.9	124.6	119.3	114.5	114.8
September	113.7	113.8	108.4	126.1	119.9	115.1	115.1
December	112.8	112.4	109.1	127.0	120.1	115.1	114.9

(a) Indexes in columns "A" exclude, and those in columns "B" include, potatoes and onions. See para. 5 on page 149. (b) See note (c) to table above.

### § 5. The "C" Series Retail Price Index: 1914-1957.

- 1. Construction.—Full particulars relating to the construction, items, weights and method of tabulation of the "C" Series Retail Price Index were last published in Labour Report No. 41, 1952, pp. 10-18. Tabular statements of index numbers were shown on pp. 19-27 and historical particulars of the index, and its relation to automatic basic wage variations prior to 12th September, 1953, on pp. 32-40.
- 2. Significant Dates.—The following table furnishes index numbers for the six capital cities as a whole for certain significant dates since November, 1914—the earliest date for which this index is available.

#### "C" SERIES RETAIL PRICE INDEX NUMBERS.

WEIGHTED AVERAGE OF SIX CAPITAL CITIES.

(Base: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

1914, November	• •	 	687	(Beginning of 1914–18 War)
1918, November		 	905	(End of 1914-18 War)
1920, November		 	1,166	(Post-War peak)
1922, November		 	975	(Post-War trough)
1929, Year		 	1,033	(Pre-Depression peak)
1933, Year		 	804	(Depression trough)
1939, September Quarter		 	916	(Pre-1939-45 War)
1943, March Quarter		 	1,123	(Pre-Price Stabilization)
1943, June Quarter		 	1,143	(1939-45 War peak)
1945, September Quarter		 	1,126	(End of 1939-45 War)
1948, September Quarter		 	1,311	
1950, September Quarter		 	1,572	
1952, September Quarter		 	2,238	
1953, September Quarter		 	2,321	
1954, September Quarter		 	2,321	
1957, September Quarter		 (a	)2,578	
-				

<sup>(</sup>a) Excludes price movement of potatoes and onions. See para. 5 on page 149.

The index rose by approximately 32 per cent. during the 1914-18 War, and by a further 29 per cent. in the two post-war years (November, 1918 to November, 1920). From November, 1920 to November, 1922, there was a fall of 16 per cent. and the index remained relatively stable until the onset of the depression in 1929. During the four years of the depression 1929 to 1933 the index fell by 22 per cent., rising thereafter steadily until 1939 when it was nearly 14 per cent. above the level of 1933, and approximately at the level it had occupied at the date of the Armistice of 1918. Between the outbreak of war (September, 1939) and March, 1943 (pre-price stabilization) the index rose by approximately 23 per cent. to a level slightly below that reached at the height of the post-war boom in 1920. Compared with that for the March Quarter, 1943, the index number at the close of the war was practically unchanged.

Immediately after the outbreak of the war, price control was established by the Government under Regulations dated 28th September, 1939, and a national policy of price stabilization was applied as from 12th April, 1943, backed by more stringent price control and price subsidies. The retail price level, as measured by the index, remained relatively steady throughout 1944 and 1945 at the level of March, 1943. This stabilized level was approximately 23 per cent. above that of 1939 and 63 per cent. above the level prevailing at the beginning of the 1914–18 War. After the June Quarter, 1946, war-time controls, subsidies, etc., were progressively modified and by early 1949 had been virtually eliminated. In the latter part of 1950, export prices (especially for wool) rose very substantially and have remained relatively very high. In December, 1950, the Commonwealth Court of Conciliation and Arbitration raised the basic wage by approximately 14 per cent. Concurrently, public works expenditure and private investment rose to very high levels.

This retail price index rose by 16 per cent. in the three years following the end of the 1939-45 War (i.e., to the September Quarter, 1948) and by 77 per cent. in the next five years

to September Quarter, 1953, and remained relatively stable at that level until the December Quarter, 1954. Since then the index (excluding recent price movement of potatoes and onions—see para. 5 on page 149) has risen each year and by the September Quarter, 1957 was 11.1 per cent. higher than at the September Quarter, 1954. The index including potatoes and onions showed an increase of 10.9 per cent. over the same period. This level was approximately 181 per cent. above that of 1939.

3. "C" Series Retail Price Index, Six Capital Cities, 1914 to 1957.—The movement in the various groups of the index and in the index as a whole for each year for which it has been compiled is shown in the following table for the six capital cities combined:—

### "C" SERIES RETAIL PRICE INDEX AND ITS "GROUP" INDEX NUMBERS(a) FOR THE SIX CAPITAL CITIES COMBINED.

(Base of Each Group: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

	Perio	od.		Food and Groceries. (b)	Rent (4 and 5 Roomed Houses). (c)	Clothing.	Miscel- laneous.	Total "C" Series Index. (b)
1914 (d)	• •	••	••	641	649	754	749	687
1915 (d)	• •		• •	842	659	792	786	782
1916 (d)	• •		• •	812	665	881	802	795
1917 (d)		• •		836	685	992	882	847
1918 (d)	••	• •	• •	861	722	1,097	972	905
1919 (d)				1,026	768	1,238	1,036	1,022
1920 (d)	• •	• • •		1,209		1,365	1,194	1.166
	• •	• •	• •		851 877	1,246	1,010	1,013
921 (d)	• •	• •	• •	950		1,240	999	975
1922 (d)	• •	• •	• •	945	929	1,052	999	
1923	• •	• •	• •	1,009	950	1,045	999	1,003
1924				969	988	1,003	1.004	987
1925				998	1,008	7991	992	997
926	• •	• •		1,023	1,026	986	998	1,011
927	• •	• •	• •	1,000	1,026	975	1.008	1,002
1921	• •	• •	• •			973 997	1,010	1,002
1928	• •	• •	• •	985	1,066	991	1,010	1,009
1929				1,044	1,073	996	1,007	1,033
1930				941	1,047	951	999	975
1931	• •			826	901	853	973	873
932	• • • • • • • • • • • • • • • • • • • •			796	817	804	958	830
1933	::	::		751	804	787	950	804
								1 015
1934	• •	• •	• •	783	810 839	785 783	944 94 <del>6</del>	817 832
1935	• •	• •	• •	806				
1936	• •	• •	• •	825	879	792	947	850
1937		• •	• •	851	912	811	960	873
1938	• •	• •	••	886	942	829	961	897
1939				927	965	841	962	920
1940			••	939	973	956	998	957
1941				947	976	1,118	1,060	1.008
1942	• •	••		1,031	976	1,308	1,112	1,091
1943	• •	• •	• •	1,037	975	1,440	1,160	1,131
1943	••	• •	••	1,037	913	1,440	1,100	1,151
1944				1,026	976	1,435	1,165	1,126
1945				1,034	975	1,425	1,161	1,126
1946				1,036	976	1,505	1,167	1,145
1947				1,100	977	1,566	1,199	1,188
948			••	1,256	979	1,744	1,257	1,295
					000	1.007	1 220	1 415
1949	• •	• •	• •	1,394	982	1,997	1,338	1,415
1950		• •		1,566	987	2,286	1,435	1,560
1951				2,041	1,009	2,749	1,679	1,883
1952				2,526	1,057	3,096	1,958	2,196
1953				2,641	1,138	3,223	2,053	2,302
1954				2,671	1,192	3,218	2,062	2,326
955	• •	• •	• • •	2,811	1,226	3,237	2,081	2,393
	••		- 7	IAB				A B
1956				2,923 3,084	1,325	3,261	2,236	2,489, 2,54
957				2,973 2,971	1,380	3,357	2,372	2,567 2,56
057_3/	arch Qua	rter		2,973 2,982	1,357	3,323	2,336	2,547 2,550
	iaich Qua		• •	2,973 2,982 2,977 2,997	1,373	3,354	2,368	2,565 2,57
	ptember	"	• •	2,987 2,975	1,389	3,365	2,387	2,578 2,57
					1.307	3.303	2,397	2,576 2,56

<sup>(</sup>a) "Group" index numbers in the above table cannot be compared with each other in order to show the relative cost of Food and Groceries, Rent, Clothing or Miscellaneous requirements, since each "Group" has its own base = 1,000, namely, the weighted average cost for the six capital cities as a whole during the five-year period 1923-27. (b) Indexes in columns "A" exclude, and those in columns "B" include, the price movement of potatoes and onions. See para. 5 on page 149. (c) See note (c) on page 151.

### § 6. International Comparisons.

The following table shows the increases in retail prices in recent years in Australia and certain other countries.

## RETAIL PRICE INDEX NUMBERS. (Food, Rent, Clothing, Miscellaneous Household Expenditure.)

(Base: September Quarter, 1939 = 100.)

Period.		Australia.		nited igdom.	Ca	ınada.		New aland.	Union of South Africa.(b)	United States of America.
1939— September Quarter 1940—Year 1941— " 1942— " 1944— " 1945— " 1946— " 1947— " 1948— " 1950— " 1951— " 1953— " 1954— " 1955— " 1955— " 1955— "		100 105 110 119 124 123 123 125 130 141 155 170 206 240 251 254 261	(c)	100 119 128 129 128 129 131 131 102 108 111 114 124 136 140 143 149	(d)	100 105 111 116 117 118 119 123 134 154 160 165 183 186 184 185	(e)	100 104 108 111 114 116 118 119 122 132 134 142 157 170 177 186 190	100 104 109 118 126 130 133 135 141 149 154 160 172 187 194 197 204	100 100 105 116 123 125 127 138 158 170 168 171 185 189 190 191
1956— " 1957— " 1957—March Quarter June ", Sept. ", Dec. ",	••	A B 272 278 280 280 278 278 280 281 281 281 281 280		157 162 160 161 163 165		188 (f) 192 193 195 (f)		197 201 198 201 202 203	207 213 210 211 216 217	193 200 197 199 201 202

<sup>(</sup>a) Index in column "A" excludes, and that in column "B" includes, the price movement of potatoes and onions. See para. 5 on page 149. (b) Food, Rent and Miscellaneous Expenditure. (c) New series (Base: 17th June, 1947 = 100); cannot be linked to former series. (d) New series linked to former series. (e) Consumers' Retail Price Index from March Quarter, 1949 onwards. Index numbers for earlier periods (shown for purposes of comparison) are obtained by linking the movement in the Retail Price Index (base 1926-30) to the new index. (f) Not available.

### B. WHOLESALE PRICES AND PRICE INDEXES.

#### § 1. General.

Two indexes of wholesale prices have been compiled by the Commonwealth Bureau of Census and Statistics. These are:—

- (i) The Melbourne Wholesale Price Index;
- (ii) The Wholesale Price (Basic Materials and Foodstuffs) Index.

Particulars of the Melbourne Wholesale Price Index, which is now obsolescent, are given in § 3 commencing on page 156.

After reviewing the list of items and weighting of this index, the 1930 Conference of Statisticians resolved that a new index of wholesale prices of basic materials and foodstuffs should be compiled. This index—the Wholesale Price (Basic Materials and Foodstuffs) Index—which extends back to the year 1928 and is compiled monthly, is a special purpose index and one of a series of wholesale price indexes designed for special purposes.

### § 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

1. Price Quotations.—The prices used in the index have in the main been obtained directly from manufacturers and merchants, and, with a few important exceptions, from Melbourne sources. Apart from locally-produced building materials and one or two minor commodities, however, the price movements may be taken as representative of variations in wholesale prices of basic materials in most Australian markets.

Commodities in the index are priced in their primary or basic form wherever possible and in respect of imported materials as nearly as may be at the point where they first make effective impact on the local price structure. Thus the price of imported goods is not taken at the time of import, but rather on an ex-bond (or into factory) basis.

Broadly, where home-consumption prices exist for local products, they have been used in this index. During the year 1950-51 wool for local manufacture was subsidized, and the home-consumption price for wool was used to calculate the index numbers shown in the table on page 156.

2. Commodities and Grouping.—For purposes of this index "basic" materials (as opposed to certain of the foodstuffs) are commodities in the primary or basic forms in which they first enter into productive processes carried out in Australia. The list of items is divided into seven main groups, each of which is sub-divided into goods which are mainly imported, and goods which are mainly home-produced. The percentage of the total aggregate in 1956 contributed by each group was as follows:—Metals and coal, 18.37; oils, fats and waxes, 8.95; textiles, 3.69; chemicals, 3.95; rubber and hides, 1.88; building materials, 11.14; foodstuffs and tobacco, 52.02. Goods principally imported comprised 26.29 per cent. of the total aggregate in 1956, and goods principally home-produced, 73.71 per cent.

A full list of the commodities and the quantity-multipliers (weights) will be found in Labour Report No. 44, p. 26.

3. Method of Construction.—The index is constructed on the simple aggregative fixed-weights formula. The weights (quantity-multipliers) are based on estimates of the average annual consumption of the commodities in Australia during the period 1928-29 to 1934-35 inclusive. Changes in usage, changes of category as between "imported" and "home-produced" for some commodities, and changes in the industrial structure have affected the validity of some of the weights in the index.

During 1956, supplies and prices of potatoes and onions fluctuated violently upwards and downwards between abnormally wide limits. These fluctuations were so great as to dominate the movement of the sections of the index in which these items were included, namely, "Foodstuffs and Tobacco", "Goods Principally Home-produced" and "Total All Groups". In the circumstances of the case, neither seasonal adjustment nor conversion of the index to a "changing weights" formula could be applied to eliminate these transient fluctuations. Accordingly, in order to provide a representative measure of general trend in wholesale prices, the index was reconstructed as from the base period (average, three years ended June 1939 = 100) by omitting potatoes and onions.

Consideration is being given to the enlargement of the index to cover additional groups and to revision of the weighting pattern of the index.

4. Index Numbers.—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are given in the following table. Current index numbers, on the base: Average of three years ended June, 1939 = 100, are published in the Monthly Review of Business Statistics, and a table showing index numbers computed to the base 1928 = 100 will be found in the Labour Report. A graph showing wholesale price index numbers for the period 1911 to 1957 appears on page 173.

### WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS.

(Base of each Group: Average, 3 years ended June, 1939 = 100.)

			Bas	ic Mater	ials.	,	i			Materia oodstuff	
Period	Metals and Coal.	Oils, Fats and Waxes.	Tex- tiles.	Chemi- cals.	Rubber and Hides.	Build- ing Ma- terials.	Totai.	Food- stuffs and To- bacco. (a)	Goods princi- pally Im- ported. (b)	Goods princi- pally Home- pro- duced. (a)	Total All Groups,
1928-29	127	106	129	121	115	95	114	107	91	118	110
1929-30	126	111	99	116	87	94	107	110	94	118	111
1930-31	116	117	80	117	73	96	105	91	100	99	99
1931-32	108	113	77	119	74	95	101	86	100	92	95
1932-33	104	109	75	119	69	95	98	80	97	87	90
1933-34	103	84	102	111	80	94	92	84	89	89	90
1934-35	97	90	78	102	77	93	89	87	92	89	90
1935-36	92	95	100	99	88	93	90	92	95	92	93
1936-37	96	99	118	99	111	99	99	98	99	98	99
1937-38	101	101	100	100	97	104	102	102	102	101	101
1938-39	103	100	82	101	92	97	99	101	99	100	100
1939-40	105	115	104	107	116	108	109	99	111	101	104
1940-41	107	137	111	124	126	128	122	107	133	106	114
1941-42	117	151	118	137	135	135	133	116	153	112	124
1942-43	129	167	147	142	138	163	149	126	176	120	136
1943-44	131	170	150	143	140	174	153	130	182	122	140
1944-45	131	168	152	143	140	175	152	132	182	124	141
1945-46	130	156	152	142	140	177	149	136	178	127	142
1946-47	132	145	191	140	131	180	149	139	177	130	144
1947-48	146	161	283	148	126	190	166	154	192	145	159
1948-49	185	173	342	159	130	198	188	174	201	172	180
1949-50	214	184	434	187	143	225	214	196	223	196	204
1950-51	256	196	641	242	292	268	264	229	256	240	244
1951-52	343	220	577	314	298	370	321	276	288	300	297
1952-53	392	234	607	350	224	404	350	293	292	331	319
1953-54	388	222	566	323	191	363	332	308	271	339	319
1954-55	391	214	510	314	246	372	330	315	277	340	322
1955-56	404	220	456	317	328	415	345	325	292	352	334
1956-57	409	241	520	344	302	463	367	324	311	357	344
Jan	412 409 407 407 403 402 399 401 398 398 398	240 244 244 244 240 240 240 240 240 240	533 544 532 547 548 527 524 495 490 454 444 419	344 344 344 344 345 353 353 353 353 346 346	307 298 296 289 289 288 283 283 285 295 297 293	467 467 467 467 467 467 467 457 457 457	369 370 368 369 367 365 364 363 358 357 354	321 324 324 324 317 328 333 339 334 322 314 319	316 318 315 313 311 307 305 306 303 304 308 304	354 356 358 352 360 365 368 365 353 345 348	343 345 344 344 340 345 347 350 346 338 334 335

<sup>(</sup>a) During 1956 these indexes were reconstructed from the base period (average, three years ended June 1939=100) by excluding potatoes and onions. See para. 3 on p. 155. (b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in the price of all imports.

Note.—The figures given in this table are comparable in the vertical columns, but are not directly comparable horizontally.

### § 3. Melbourne Wholesale Price Index.

1. General.—An index of Melbourne wholesale prices was first computed in 1912. It relates chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the components of the list of items nor the weighting have been varied, except as indicated in footnote (a) to the following table. Consequently, the index is outmoded for current use but it has some historical significance as a measure of changes in the prices of its component items combined in the proportions in which they were in common use about the year 1910. It is used mainly as an approximate indication of long-term trends since the year 1861, for which it was first compiled. It is now published only on an annual basis and consideration is

at present being given to the form of its future publication. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pp. 43-45.

2. Index Numbers.—Index numbers for each group of commodities as well as for all groups combined are shown in the following table:—

### MELBOURNE WHOLESALE PRICE INDEX NUMBERS. (Base of each Group: Year 1911 = 1,000.)

Year.	Metals and Coal.	Wool, Cotton, Leather, etc.	Agri- cultural Produce, etc.	Dairy Produce.	Gro- ceries.	Meat.	Ruilding Ma- terials.	Chemi- cals.	All Groups.
1861	1,438	1,381	1,583	1,008	1,963		1,070	2,030	1,538
1871	1,096	1,257	1,236	864	1,586		1,044	1,409	1,229
1881	1,178	1,115	1,012	935	1,421		1,091	1.587	1,121
1891	895	847	1,024	995	1,032	888	780	1,194	945
1901	1,061	774	928	1.029	1,048	1,345	841	917	974
1911	1,000	1,000	1,000	1.000	1,000	1,000	1.000	1,000	1.000
1921	2,173	1,361	1,767	2,000	1,977	2,158	2,733	2,303	1,903
1021	1,826	1,040	1,121	1,398	1,794	1,512	2,025	2,166	1,429
1941	1,960	1,402	1,721	1,554	1,883	1,776	3,138	2,527	1,796
4040	2 502	2000						2 221	
1949	3,502	3,966	2,876	2,309	2,558	3,356	4,611	3,221	3,191
1950	3,902	5,464	3,155	2,459	2,829	4,616	(a)5,567	3,263	3,816
1951	5,080	7,943	4,512	2,930	2,850	6,438	(a)7,074	3,294	5,098
1952	6,481	7,365	5,038	4.024	3,455	6,289	(a)9,338	3,723	5,647
1953	6,615	6,950	4,958	4,533	3,767	6,303	(a)8,519	4,691	(b)5,631

(a) The list of items and weighting of the original Building Materials group of this index are outmoded in respect of recent years. The movement shown here for this group between 1949 and 1953 has been calculated in accordance with the movement occurring in the Building Materials group of the Basic Materials and Foodstuffs Index. (b) The "All Groups" index numbers for the years 1954, 1955 and 1956 were 5,384, 5,548 and 5,916 respectively.

Note.—The figures given in this table are comparable in the vertical columns but are not directly comparable horizontally.

#### C. CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR.

- 1. General.—An account of the measures taken by the Commonwealth Government to control prices from September, 1939 (immediately after the outbreak of war), until 29th May, 1948 (the date of the Prices Referendum), was given in Official Year Book No. 37, pp. 458-464.
- 2. Transfer of Price Control to the States.—Consequent upon the rejection of the proposal embodied in the Prices Referendum held on 29th May, 1948, that permanent power to control rents and prices (including charges) be conferred on the Commonwealth Government, responsibility for price fixation was assumed by the State Governments and steps were taken to pass State Prices Acts. These acts were proclaimed to operate simultaneously on 20th September, 1948. Except in the case of Queensland, each Act was to remain in force for a specific period, but the period varied from State to State.

On 20th September, 1948, each State Government issued declarations covering uniform lists of goods and services, which were brought under price control. Existing Commonwealth Prices Regulation Orders continued to apply to these goods and services until specially varied in accordance with the terms of the State legislation. At the same time, the Commonwealth Government issued an identical list of declared items to operate in the Australian Capital Territory and other Territories of the Commonwealth.

In the operation of State price control, the State Prices Commissioners collaborated closely. Conferences of Commissioners were held at intervals of approximately two months. Thus a large degree of uniformity was attained in controlling and decontrolling items and in the fixation of margins and prices of major items.

Since 1952 price control has been progressively modified in most States. Price control ceased in Western Australia on 31st December, 1953; in Tasmania on 31st October, 1954; in Victoria on 31st December, 1954; and in the Australian Capital Territory on 10th February, 1955. In New South Wales general control of prices was suspended on 15th April, 1955 but was temporarily restored on some items from July, 1955 to September, 1956.

3. Price Stabilization.—Expenditure by the Commonwealth Government on price stabilization subsidies reached a peak in 1947–48 and since then the Commonwealth Government has progressively reduced the range of commodities eligible for subsidy.

In addition to those subsidies which had been an integral part of the Price Stabilization Plan, the Commonwealth Government paid bounties and subsidies for assistance to primary production, and these payments also had a stabilizing influence on prices.

For particulars of expenditure by the Commonwealth Government on price stabilization and other subsidies and bounties, see Chapter XXI.—Public Finance.

### D. WAGES.

### § 1. Arbitration and Wages Boards Acts and Associated Legislation.

- 1. General.—Particulars regarding the operation of Commonwealth and State Laws for the regulation of wages, hours and conditions of labour were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report* and in issues of the Official Year Book prior to No. 38.
- 2. Commonwealth.—Under placitum (xxxv) of section 51 of the Commonwealth of Australia Constitution, the Commonwealth Parliament is empowered to make laws with respect to "conciliation and arbitration for the prevention and settlement of industrial disputes extending beyond the limits of any one State". The Parliament has made such a law, namely, the Conciliation and Arbitration Act.

This Act defines an "industrial dispute" as "(a) A dispute (including a threatened, impending or probable dispute) as to industrial matters which extends beyond the limits of any one State; and (b) a situation which is likely to give rise to a dispute as to industrial matters which so extends; and includes—(c) such a dispute in relation to employment in an industry carried on by, or under the control of, a State or an authority of a State; (d) a dispute in relation to employment in an industry carried on by, or under the control of, the Commonwealth or an authority of the Commonwealth, whether or not the dispute extends beyond the limits of any one State; and (e) a claim which an organization is entitled to submit to the Commission under section eleven A of the Public Service Arbitration Act 1920–1956 or an application or matter which the Public Service Arbitrator has refrained from hearing, or from further hearing, or from determining under section fourteen A of that Act, whether or not there exists in relation to the claim, application or matter a dispute as to industrial matters which extends beyond the limits of any one State."

The Conciliation and Arbitration Act was extensively amended by an Act assented to on 30th June, 1956. This amendment altered the structure of the arbitration machinery by separating the judicial and arbitral functions. The Commonwealth Industrial Court was set up to deal with judicial matters under the Act and the Commonwealth Conciliation and Arbitration Commission to handle the function of conciliation and arbitration.

This amending legislation was introduced in an endeavour to expedite the arbitration process and was prompted to some extent by the implications of the High Court judgment in the Boilermakers' Case delivered on 2nd March, 1956. In this case, the High Court upheld a challenge by the Boilermakers' Union to the validity of sections 29 (1.) (b) and (c) and 29A of the Conciliation and Arbitration Act 1904–1952, the sections under which the Boilermakers' Union was required to observe a provision in an award which prohibits bans, limitations or restrictions on the performance of work in accordance with the award, and was found guilty of contempt of the Arbitration Court by wilfully disobeying this order and fined £500. An appeal against the decision of the High Court was upheld by the Privy Council, in its decision of 19th March, 1957.

The Commonwealth Industrial Court is composed of a Chief Judge and two other Judges. The Commonwealth Conciliation and Arbitration Commission comprises a President, not less than two Deputy Presidents, a Senior Commissioner, not less than five Commissioners and a number of Conciliators. Judges of the Commonwealth Court of Conciliation and Arbitration were made either members of the Commonwealth Industrial Court or presidential members of the Commonwealth Conciliation and Arbitration Commission. Conciliation Commissioners became non-presidential members of the Commission.

The jurisdiction of the Commonwealth Industrial Court shall be exercised by not less than two Judges except in the following circumstances. A single Judge may exercise the jurisdiction of the Court with respect to the dismissal or injury of an employee on account of industrial action, interpretation of awards, appeals to the Court from an act or decision of the Registrar, questions concerning eligibility of membership of an organization, the adoption, alteration or enforcement of rules of an organization, disputes between an organization and its members and a prescribed matter of practice or procedure. A single Judge may refer a question of law for the opinion of the Court constituted by not less than two Judges. The Court is a Superior Court of Record with the same power to punish contempts of its power and authority as is possessed by the High Court. In general, decisions of the Industrial Court are final; however, an appeal lies to the High Court but only when the latter grants leave to appeal.

The Commonwealth Conciliation and Arbitration Commission is empowered to prevent or settle industrial disputes by (a) effecting a reconciliation between parties to industrial disputes; (b) preventing and settling industrial disputes by amicable agreement; and (c) preventing and settling, by conciliation or arbitration, industrial disputes not prevented or settled by amicable agreement. The Commission may exercise its powers on its own motion or on the application of a party.

The President may assign a Commissioner to deal with industrial disputes relating to particular industries, or members of the Commission to deal with a particular industrial dispute. However, subject to the approval of the President, it is the duty of the Senior Commissioner to organize and allocate the work of the Commissioners and Conciliators.

When an industrial dispute occurs or is likely to occur, a Commissioner shall take steps for the prompt prevention or settlement of that dispute by conciliation or, if in his opinion conciliation is unlikely to succeed or has failed, by arbitration. A Commissioner may arrange with the Senior Commissioner for a Conciliator to assist the parties to reach an amicable agreement. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by a Commissioner. A certified memorandum shall have the same effect as an award.

The Commission in Presidential Session, that is, the Commission constituted by at least three presidential members, and not otherwise, is empowered to deal with the making of awards, or certifying agreements, in so far as they concern standard hours, basic wages and long service leave.

Upon application by a party to an industrial dispute, a Commissioner shall decide, in consultation with the President, whether in the public interest the dispute should be dealt with by a Commission constituted of not less than three members nominated by the President. The President may direct this Commission to hear the dispute; however, after consideration the Commission may refer the dispute back for determination to the Commissioner originally dealing with the dispute.

An appeal against the decision of a Commissioner shall be heard by not less than three members nominated by the President, of whom at least two are presidential members of the Commission, thereby allowing for the first time a lay member of the Commission to participate in the hearing of an appeal. However, an appeal will not be heard unless the Commission considers it is a matter of public interest.

The Act also provides for the registration of associations of employees and employers and for inquiries to be held concerning disputed elections in organizations, and certain powers in connexion therewith are, by the Act, given to the Industrial Court.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connexion with the Maritime Industries, Snowy Mountains Area and Stevedoring Industry, except in those matters where the Act requires that the Commission shall be constituted by more than one member.

Before the 1956 amendment of the Act outlined above, industrial disputes were dealt with, in part, by an Arbitration Court constituted under the Act and otherwise by Conciliation Commissioners appointed under the Act. However, the division of work between the Court and Conciliation Commissioners has varied with successive amendments to the Act. Prior to 1947 a dispute was dealt with by either one or other part of the tribunal, except that questions about basic wages and standard hours could be dealt with only by the Court constituted by at least three Judges. Decisions of Conciliation Commissioners were subject to appeal to the Court. An amending Act of 1947 gave Conciliation Commissioners the same power as the Court, except in the matter of standard hours, basic wages and annual leave, and made decisions of Conciliation Commissioners final. However, a further amending Act in 1952 provided a right of appeal to the Arbitration Court against decisions of Conciliation Commissioners.

A further amendment to the Conciliation and Arbitration Act, No. 103 of 1956 (assented to on 15th November, 1956), empowered the Commonwealth Conciliation and Arbitration Commission to deal with disputes and industrial matters, interstate or intra-state, associated with undertakings or projects of the Commonwealth Government which have been declared by the Minister to be Commonwealth projects for the purposes of this Act. In effect, this placed employees of Commonwealth projects, so declared, under the jurisdiction of the Commonwealth Conciliation and Arbitration Commission, whereas formerly some employees on the projects may have been working under conditions prescribed by other Industrial Tribunals. The Minister has the power to exempt certain persons or classes of persons working on the projects from the jurisdiction of the Commonwealth Conciliation and Arbitration Commission.

Special provision was also made concerning the right of audience before the Commonwealth Industrial Court. Briefly, except in proceedings which, in general, involve questions of law or offences against the Act, parties are able to elect whether to appear personally or to be represented by lawyers or officials. Even in proceedings involving questions of law, except appeals from other Courts to the Industrial Court, the parties may, if they wish and the Court grants leave, be represented by officials.

Section 54 of the Principal Act which provided that "The Commission shall not include in an award a provision requiring a person claiming a benefit of an award to notify his employer that he is a member of an organization bound by the award" was repealed.

The amending Act enabled the Commission to make an award in relation to an industrial dispute concerning employees of a "Commonwealth Project" or when the Public Service Arbitrator refrains from dealing with claims made by a Public Service employee organization or consents to the claims being presented to the Commission, though such an award may be inconsistent with a law of the Commonwealth relating to salaries, wages, rates of pay or terms or conditions of service of employees in the Public Service as defined by section 3 of the Public Service Arbitration Act 1920–1956, not being the Commonwealth Employees' Compensation Act 1930–1954, the Commonwealth Employees' Furlough Act 1943–1953, the Superannuation Act 1922–1956 or any other prescribed Act.

The Public Service Arbitration Act was amended by Act No. 104 of 1956 (assented to on 15th November, 1956), which provided that an organization of employees in the Public Service may submit a claim to the Commonwealth Conciliation and Arbitration Commission with the consent of the Public Service Arbitrator or where the Arbitrator has, otherwise than on the ground of triviality, refrained from hearing or determining the claim.

The Australian National Airlines Act, No. 105 of 1956, and the Aluminium Industry Act, No. 106 of 1956, transferred employees of the Australian National Airlines Commission and the Aluminium Production Commission from the jurisdiction of the Public Service Arbitrator to that of the Commonwealth Conciliation and Arbitration Commission.

3. States.—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. The chief of these are the Industrial Commission of New South Wales, the Industrial Courts of Queensland and South Australia, and the Western Australian Court of Arbitration, together with Wages Boards for specific industries or occupations which operate in Victoria, South Australia and Tasmania. Further details concerning the functions and powers of these authorities may be found in Labour Report No. 44.

### § 2. Rates of Wage and Hours of Labour.

1. General.—The collection of information respecting the current rates of wage payable in different callings and in occupations in various industries was first undertaken by this Bureau in the early part of 1913. The particulars are obtained primarily from awards, determinations and agreements under Commonwealth and State Industrial Acts and are therefore the minimum rates prescribed. They refer generally to the capital city in each State, but in industries which are not carried on in the capital cities, e.g., mining, agriculture, etc., the rates in the more important centres are taken. In those cases where no award, determination or agreement is in force, particulars are taken of the ruling union or predominant rate. During recent years the number of predominant rates of wage included in the tabulations has been reduced considerably, as most of the industries and occupations are now covered by awards, determinations or industrial agreements. The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts should not be regarded as actual current averages, but as an index of changes expressed in money and hour terms.

The index numbers for male adult workers are computed with the weighted average wage in 1911 as base (= 1,000). In the case of females, however, it has not been possible to secure information for the years prior to 1914, and the index numbers are therefore computed with the weighted average rate of wage payable to adult female workers in Australia at 30th April, 1914 as base (= 1,000).

An extensive tabular presentation of the minimum rates of wage for adult male and female workers in the main occupations in the capital city of each State is given in the Appendix to the Labour Report.

2. Weekly Wage Rates.—(i) General. The average rate of wage for each industrial group is computed by taking the arithmetic average of the rates of wage payable for all classified occupations within that group. These averages are weighted to give the averages for the States and for Australia.

(ii) Adult Males—States. The following table gives the weighted average nominal weekly rates of wage payable to adult male workers at the dates specified:—

#### WEEKLY WAGE RATES: ADULT MALES.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.(a)

	Part	iculars.		N.S	.w.	V	ic.	Q'la	and.	S.	Α.	w.	Α.	T	as.	Au	ıst.	
No. of (	No. of Occupations included.(b)			87		8	894		615		562		477		466		3,884	
					Rat	res o	r V	AGE.										
				, s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	5.	d.	
31st De	cember,	1939	٠.	96	7	93	6	97	5	88	11	100	6	89	5	95	3	
11	**	1953		296	8	282	6	273	10	278	9	292	5	296	11	287	7	
,,	,,	1954		298	4	284	3	278	7	282	2	293	3	299	2	290	0	
55	**	1955		310	1	296	7	284	11	284	9	304	9	302	7	300	0	
,,	**	1956(c)		331	3	312	9	301	3	297	11	318	1	319	9	317	7	
,,,	:>	1957	• •	333	2	818	2	304	0	309	2	326	6	326	11	322	2	

#### INDEX NUMBERS.

(Base: Weighted Average Wage for Australia (51s. 3d.), 1911 = 1,000.)

3fst De	ecembe	r, 1939	 1,885	1,825	1,900°	1,735	1,962	1,745	1,858
**	,,	1953	 5,788	5,513	5,342	5,439	5,705	5,794	5,611
,,	"	1954	 5,820	5,547	5,435	5,506	5,722	5,837	5,658
,,	,,	1955	 6,051	5,787	5,559	5,555	5,946	5,905	5,853
**	,,	1956(c)	 6,463	6,102	5.878	5,812	6,206	6,239	6.197
,,	,,	1957	 6,500	6,208	5,931	6,032	6,370	6,378	6,286

<sup>(</sup>a) The statistics of nominal wages and hours of labour are in course of revision to meet changes in industrial structure. The amounts shown should not be regarded as actual current averages but as an index of changes expressed in money and hour terms.

(b) As at 31st December, 1957. (c) Partly estimated.

(iii) Adult Males—Industrial Groups. The following table shows for Australia the average weekly rates of wage and index numbers in each industrial group and for all groups at the dates specified.

WEEKLY WAGE RATES: ADULT MALES, INDUSTRIAL GROUPS, AUSTRALIA.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK

(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL

GROUP.(a)

Industrial Group.	31st Dec., 1939.	31st Dec., 1953.	31st Dec., 1954.	31st Dec., 1955.	31st Dec., 1956.	31st Dec., 1957.
	RATES OF	Wage.				
II. Engineering. etc.  III. Food, Drink, etc.  IV. Clothing, Textiles, etc.  V. Books, Printing, etc.  VI. Other Manufacturing  VII. Building  VIII. Mining, etc.  IX. Railways, etc.  X. Air and Other Land Transport  XI. Shipping, etc.(b)  XII. Agricultural, etc.(b)  XIII. Domestic, etc.(b)	s. d 100 1 99 3 93 2 114 3 106 5 109 1 98 6 92 10 84 11 92 10	276 11 274 2 278 10 313 11 276 10 301 3 288 2 278 3 270 3 308 8 270 3 308 9 262 5	s. d. 281 11 284 1 280 9 278 10 324 11 279 7 307 6 288 0 289 9 273 3 308 9 319 7 263 0 270 5	s. d. 295 11 288 8 290 4 283 4 332 2 288 9 323 1 300 4 301 11 281 3 310 0 326 8 273 6 282 10	s. d. 309 4 303 5 307 3 294 2 348 9 304 1 340 0 313 9 322 1 298 3 324 9 c 351 0 287 7 300 1	\$. d. 315 0 309 6 312 3 308 11 353 4 310 6 344 7 319 4 323 2 302 4 334 8 292 9 302 9
All Industrial Groups	95 3	287 7	290 0	300 0	c317 7	322 2

### WEEKLY WAGE RATES: ADULT MALES, INDUSTRIAL GROUPS, AUSTRALIA —continued.

Industrial Group.	31st	31st	31st	31st	31st	31st
	Dec.,	Dec.,	Dec.,	Dec.,	Dec.,	Dec.,
	1939.	1953.	1954.	1955.	1956.	1957.
	1939.	1933.	1954.	1935.	1930.	1937.

#### INDEX NUMBERS.

### (Base: Weighted Average Wage for All Groups in 1911 (51s. 3d.) = 1,000.)

Wood, Furniture, etc.			1,953	5,403	5,501	5,774	6.036	6,146
Engineering, etc			1.936	5,349	5,542	5,632		6,039
Food, Drink, etc			1.888	5.452	5,478	5,665		6,093
Clothing, Textiles, etc.			1.817		5.441	5.529		6,028
Books, Printing, etc.								6,893
								6,059
								6,724
				5.622				6,231
								6,305
								5,899
	•		1,922					6,529
			1,639					6,920
								5,713
						5,519		5,908
			· 1		. ,-			-,
All Industrial Groups			1,858	5,611	5,658	5,853	(c)6,197	6,286
	Shipping, etc.(b) Agricultural, etc.(b) Domestic, etc.(b) Miscellaneous	Engineering, etc. Food, Drink, etc. Clothing, Textiles, etc. Books, Printing, etc. Other Manufacturing Building Mining, etc. Railways, etc. Air and Other Land Transport Shipping, etc.(b) Agricultural, etc.(b) Domestic, etc.(b) Miscellaneous	Engineering, etc. Food, Drink, etc. Clothing, Textiles, etc. Books, Printing, etc. Other Manufacturing Building Mining, etc. Railways, etc. Air and Other Land Transport Shipping, etc.(b) Agricultural, etc.(b) Domestic, etc.(b) Miscellaneous	Engineering, etc. 1,936 Food, Drink, etc. 1,888 Clothing, Textiles, etc. 1,817 Books, Printing, etc. 2,229 Other Manufacturing 1,867 Building 2,076 Mining, etc. 2,142 Railways, etc. 1,884 Air and Other Land Transport 1,812 Shipping, etc.(b) 1,639 Domestic, etc.(b) 1,639 Domestic, etc.(b) 1,755 Miscellaneous 1,811	Engineering, etc. 1,936 5,349 Food, Drink, etc. 1,888 5,452 Clothing, Textiles, etc. 1,817 5,441 Books, Printing, etc. 2,229 6,124 Other Manufacturing 1,867 5,401 Building 2,076 5,878 Mining, etc. 2,142 5,622 Railways, etc. 1,884 5,429 Air and Other Land Transport 1,812 5,274 Shipping, etc.(b) 1,922 6,025 Agricultural, etc.(b) 1,639 6,237 Domestic, etc.(b) 1,755 5,121 Miscellaneous 1,811 5,269	Engineering, etc	Engineering, etc. 1,936 5,349 5,542 5,632 Food, Drink, etc. 1,888 5,452 5,478 5,656 Clothing, Textiles, etc. 1,817 5,441 5,529 Books, Printing, etc. 2,229 6,124 6,340 6,481 Other Manufacturing 1,867 5,401 5,455 5,635 Building 2,076 5,878 6,000 6,305 Mining, etc. 2,142 5,622 5,620 5,861 Railways, etc. 1,884 5,429 5,654 5,891 Air and Other Land Transport 1,812 5,274 5,332 5,488 Shipping, etc.(b) 1,922 6,025 6,025 6,049 Agricultural, etc.(b) 1,639 6,237 6,236 6,374 Domestic, etc.(b) 1,755 5,121 5,132 5,337 Miscellaneous 1,811 5,269 5,276 5,519	Engineering, etc. 1,936 5,349 5,542 5,632 5,995 Food, Drink, etc. 1,888 5,452 5,478 5,665 5,995 Clothing, Textiles, etc. 1,817 5,441 5,529 5,740 Books, Printing, etc. 2,229 6,124 6,340 6,481 6,805 Other Manufacturing 1,867 5,401 5,455 5,635 5,933 Building 2,076 5,878 6,000 6,305 6,634 Mining, etc. 2,142 5,622 5,620 5,620 5,661 6,121 Railways, etc. 1,884 5,429 5,654 5,891 6,284 Air and Other Land Transport 1,812 5,274 5,332 5,488 5,820 Shipping, etc.(b) 1,922 6,025 6,025 6,049 6,337 Agricultural, etc.(b) 1,639 6,237 6,236 6,374 (c)6,849 Domestic, etc.(b) 1,755 5,121 5,132 5,337 5,611 Miscellaneous 1,811 5,269 5,276 5,519 5,855

<sup>(</sup>a) See note (a) to table on page 161. (b) Includes the value of keep, where supplied. (c) Partly estimated.

### WEEKLY WAGE RATES: ADULT FEMALES.

Weighted Average Nominal Weekly Rates Payable for a Full Week's Work (Excluding Overtime) and Index Numbers of Wage Rates.(a)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
No. of Occupations included(b)	84	87	38	47	24	32	312

### RATES OF WAGE.

				s.	d.	<i>s</i> .	d.	.S.	d.								
31st	December,	1939	••	53	3	51	9	55	2	49	7	55	8	50	8	52	
,,	•,	1953		198	5	200	10	188	7	199	6	190	5	196	4	197	11
,,	,,	1954	[	198	9	200	2	190	0	199	5	190	5	196	7	197	11
"	**	1955	••	205	3	206	9	192	10		11	193	71	197	11	203	4
**	**	1956	••	216	10		2	201	3	207	.5	201	8.		10		_
,,	**	1957	••	220	1	222	2	207	11	217	11	210	11	215	4	218	10
			l			Į	j						i				

### INDEX NUMBERS.

(Base: Weighted Average Wage for Australia (27s. 2d.), 30th April, 1914 = 1,000.)

31st D	ecembe	er, 1939		1,960	1,906	2,031	1,826	2,049	1,866	1,938
,,	**	1953		7,302	7,392	6,940	7,342	7,007	7,226	7,285
"	,,	1954		7,314	7,367	6,994	7,339	7,007	7,236	7,285
"	"	1955		7,554	7,608	7,098	7,358	7,125	7,284	7,483
	,,	1956		7,981	7,955	7,406	7,635	7,423	7,649	7,846
**		1957	•••	8,101	8,176	7,652	8.021	7,764	7,926	8,054
,,	. **		• • •	٠,	0,2	.,	7,1-2	.,	.,	0,00

<sup>(</sup>a) See note (a) to table on page 161.

<sup>(</sup>iv) Adult Females—States. The following table shows, for each State and Australia, the weighted average nominal weekly rates of wage payable to adult female workers for a full week's work at the dates specified.

It should be noted that because there was no tabulation for adult female rates prior to 1914 the base of these index numbers is 1914 and not 1911 as in the foregoing tables for adult males.

(v) Adult Females—Industrial Groups. The following table shows for Australia (a) the weighted average weekly rate of wage in each of the industrial groups in which the number of females employed is important, and (b) the weighted average for all groups combined, at the dates specified.

WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRIAL GROUPS, AUSTRALIA.

WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK

(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES IN EACH INDUSTRIAL

GROUP.(a)

Drink, etc.   Textiles, Manufacturing.   Domestic, Manufacturing.   Manu		<u> </u>	·							
The color of the	√r						Industr	al Group.		
S. d.   S. d		r	Pate.		Food, Drink,	Clothing, Textiles,	and VI. All Other Manufac-	Domestic,	Miscel-	All Groups.
31st December, 1939					RATE	S OF WAG	Е.			
(Base: Weighted Average Wage for All Groups (27s. 2d.), 30th April, 1914 = 1,000   31st December, 1939 1,795   1,869   1,910   2,003   2,085   1,510   3,000	21 22 22 23	,, ,, ,,	1953 1954 1955 1956		48 9 191 3 191 2 198 7 210 9	50 9 196 6 196 6 197 6 205 2	51 11 201 3 201 8 205 6 215 8	54 5 188 7 188 11 195 1 205 11	56 8 210 2 209 11 225 1 238 8	197 11 197 11 203 4
31st December, 1939 1,795 1,869 1,910 2,003 2,085 1,910 2,003 2,003 2,085 1,910 2,003 2,003 2,085 1,910 2,003 2,00					INDE	Number:	S.			
" " 1953   7,039   7,232   7,407   6,941   7,735   7, " " 1954   7,036   7,232   7,422   6,951   7,725   7,2 " " 1955   7,308   7,268   7,563   7,180   8,285   7,4	(Base	: Weig	thted Average	Wage	for All	Groups (2	27s. 2d.),	30th Apri	<i>l</i> , 1914 =	1,000.)
", 1954   7,036   7,232   7,422   6,951   7,725   7,2 ", 1955   7,308   7,268   7,563   7,180   8,285   7,4	31st De	ecembe	r, 1939				1,910		2,085	1,938
", 1955 7,308 7,268 7,563 7,180 8,285 7,4	,,	,,	10.51	• •						7,285
	**	**								7,285
. 1956   7,757   7,551   7,936   7,580   8,782   7,8			40.04		7,300		7,936	7,180	8,782	7,483 7,846
			1057							8,054

<sup>(</sup>a) See note (a) to table on page 161.

<sup>(</sup>b) Includes the value of keep, where supplied.

<sup>3.</sup> Hourly Wage Rates.—(i) General. The average rates of wage in the preceding tables are based on the minimum rates prescribed for selected occupations in awards, etc., for a full week's work, excluding overtime. The number of hours constituting a full week's work differs, however, in some instances between various trades and occupations in each State, and between the same trades and occupations in the several States. To secure what may be for some purposes a better comparison, the results in the preceding paragraphs have been reduced to a common basis, namely, the rate of wage per hour. The particulars of weighted average nominal hourly rates of wage given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). These groups are excluded because for earlier years the hours of labour for some of the occupations included were not regulated either by awards or determinations of industrial tribunals or by legislation. As a result, the necessary particulars for the computation of average working hours and hourly rates of wage are not available.

<sup>(</sup>ii) Adult Males—States. The following table shows the weighted average nominal hourly rates of wage payable to adult male workers in each State at the dates specified.

HOURLY WAGE RATES(a): ADULT MALES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

	Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			RATES	OF WAGE		· · · · · · · · · · · · · · · · · ·		-
			(Pe	ence.)				
31st De	ecember, 1939 .	. 27.41	25.60	27.62	23.62	27.94	23.97	26.55
**	,, 1953 .	. 85.55	83.19	78.16	80.78	87.09	84.34	83.57
,,	" 1954 .	. 86.20	83.97	80.35	82.19	87.42	85.32	84.51
,,	,, 1955 .	. 90.22	87.73	82.51	83.22	91.48	86.65	87.87
,,		. 95.89	91.97	87.99	86.28	95.14	91.19	92.68
"	", 1957 .	. 96.33	93.72	88.79	89.77	97.62	93.59	94.03
		1 _ 1	'		1			
(Base	e: Weighted A	verage Wag		Numbers stralia (1		0th April,	1914 =	1,000.)
		<del></del>	e for Aus	stralia (1	3.96 <i>d</i> .), 3	T		
31st De	ecember, 1939 .	. 1,963		-		2,001	1914 = 1,717 6.042	1,903
31st De	ecember, 1939 . ,, 1953 .	. 1,963 . 6,128	1,834 5,959	1,979 5,599	1,692 5,787	2,001 6,239	1,717 6,042	1,903 5,986
B1st De	ecember, 1939 . ,, 1953 . ,, 1954 .	. 1,963 . 6,128 . 6,175	1,834 5,959 6,015	1,979 5,599 5,756	1,692 5,787 5,888	2,001 6,239 6,262	1,717 6,042 6,112	1,903 5,986 6,054
31st D	ecember, 1939 . ,, 1953 .	. 1,963 . 6,128 . 6,175 . 6,463	1,834 5,959	1,979 5,599	1,692 5,787	2,001 6,239	1,717 6,042	

<sup>(</sup>a) Weighted average hourly rates of wage for all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). See para. 3 (i) on previous page. See also note (a) to table on page 161.

(iii) Adult Females—States. The following table shows the weighted average nominal hourly rates of wage payable to adult female workers in each State at the dates specified.

### HOURLY WAGE RATES(a): ADULT FEMALES.

WEIGHTED AVERAGE NOMINAL HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES.

	Date.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			<del></del>	RATES	OF WAGE	······································	·	<u>'</u>	
				(P	ence.)				
31st D	ecember,	1939	14.56	13.99	15.05	12.96	14.72	13.49	14.24
,,	**	1953	59.52	60.25	56.57	59.84	57.11	58.90	59.38
,,	,,	1954	59.62	60.05	57.01	59.82	57.11	58.98	59.38
19	,,	1955	61.57	62.01	57.86	59.98	58.07	59.37	61.00
,,	,,	1956	65.05	64.84	60.36	62.24	60.50	62.35	63.95
,,	**	1957	66.03	66.64	62.37	65.38	63.29	64.61	65.65
				INDEX	Numbers.		<u> </u>	'	
(Ba	ise: We	ighted A	verage Wa	ge for Au.	stralia (6	.64 <i>d</i> .), 30 <i>i</i>	h April, 1	914 = 1	,000.)
31st D	ecember,	1939	2,193	2,107	2,267	1,952	2,217	2,032	2,145
,,	,,	1953	8,964	9,074	8,520	9,012	8,601	8,870	8,943
,,	,,	1954	8,979	9,044	8,586	9,009	8,601	8,883	8,943
,,	,,	1955	9,273	9,339	8,714	9,033	8,745	8,941	9,18
	,,	1956	9,797	9,765	9,090	9,373	9,111	9,390	9,630
,,				10,036	9,393	9,846	9.532	9,730	9,88

<sup>(</sup>a) See note (a) to table on page 161.

- 4. Weekly Hours of Labour.—(i) General. The number of hours constituting a full week's work (excluding overtime) differs in some instances between various trades and occupations in each State and between the same trades and occupations in the several States. The particulars of weekly hours of labour given in the following tables relate to all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). These groups are excluded because for earlier years the hours of labour for some of the occupations included were not regulated either by awards or determinations of industrial tribunals or by legislation. As a result, the necessary particulars for the computation of average working hours for these groups are not available.
- (ii) Adult Males—States. The following table shows the weighted average nominal hours of labour (excluding overtime) prescribed in awards for a full working week in respect of adult male workers in each State and Australia at 31st December, 1939 and 1957, together with the corresponding index numbers.

There has been no change in the weighted average nominal hours of labour for adult males since 1951.

### WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a): ADULT MALES.

WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	WEI	EKLY HO	URS OF L	ABOUR.			
31st December, 1939 , 1957	43.92 39.99	44.61 39.98	43.46 40.00	45.83 40.00		45.33 40.00	44.29 39.95
(Base: Weighte	ed Average		Numbers ralia (48.		<i>April</i> , 1914	= 1,000	).
31st December, 1939 , 1957	898 817	912 817	888 817	937 817	906 807	926 817	905 816

- (a) Weighted average working hours per week for all industrial groups except Groups XI. (Shipping, etc.) and XII. (Pastoral, Agricultural, etc.). See para. 4 (i) above. See also note (a) to table on page 161.
- (iii) Adult Females—States. The following table shows the weighted average nominal hours of labour (excluding overtime) in a full working week for adult female workers in each State and Australia at 31st December, 1939 and 1957, together with the corresponding index numbers.

There has been no change in the weighted average nominal hours of labour for adult females since 1948.

## WEEKLY HOURS OF LABOUR (EXCLUDING OVERTIME)(a): ADULT FEMALES. WEIGHTED AVERAGE NOMINAL HOURS OF LABOUR (EXCLUDING OVERTIME) WORKED DURING A FULL WORKING WEEK AND INDEX NUMBERS OF HOURS OF LABOUR.

Date.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	WEI	KLY HO	URS OF L	ABOUR.	<u> </u>		
31st December, 1939 , , 1957	43.88 40.00	44.42 40.00	44.01 40.00	45.96 40.00	45.38 40.00	45.10 40.00	44.36 40.00
(Base: Weighted	d Average		Numbers alia (49.0		<i>pril</i> , 1914	= 1,000).	
31st December, 1939, 1957	894 814	905 814	897 814	936 814	925 814	919 814	904 814

(a) See note (a) to table on page 161.

<sup>5.</sup> Nominal and "Real" Wage Rates.—(i) General. Index numbers of wage rates are said to be nominal when they represent changes in the wage rates themselves but are described as real when they represent changes in equivalent purchasing power, that is, the purchasing power of the corresponding wages in terms of some definite composite unit or list of items the cost of which can be ascertained at different times.

Prior to 1936 it was the practice of this Bureau to compute real wage rate index numbers by dividing the nominal wage rate index numbers by the corresponding retail price index numbers for food, groceries and rent of all houses ("A" Series). While wage rates were generally varied on the basis of the "A" Series index numbers there was a good deal to be said for this procedure. When the Commonwealth Court of Conciliation and Arbitration abandoned the "A" Series, the merits of the "C" Series for "deflating" nominal wage rates were strengthened and real wages to the end of 1937 were measured in terms of their purchasing power over both the "A" and "C" Series. Since 1938, when computation of the "A" Series was discontinued, real wages have been measured in terms of their purchasing power over the "C" Series only. The "C" Series covers food, groceries, rent of four and five roomed houses, clothing and miscellaneous household requirements.

A graph showing nominal and real wage rate index numbers for the period 1911 to

1957 appears on page 173.

(ii) Nominal Weekly Wage Rate Index Numbers. The following table shows, for the period 1911 to 1957, index numbers of the weighted average nominal weekly rates of wage payable for adult males in each State, the weighted average rate for Australia in 1911 being taken as the base (= 1,000). These results are based generally upon rates of wage prevailing in the capital city of each State, but in certain industries, such as mining, rates are necessarily taken for places other than the capital cities. The index numbers for 1911 are based on rates current at the end of December, 1911, annual averages not being available. For 1914 and subsequent years, however, the index numbers are based on the average of the rates operative at the end of each of the four quarters.

NOMINAL WEEKLY WAGE RATE(a) INDEX NUMBERS: ADULT MALES.

(Base: Weighted Average Nominal Wage Rate(a) for Australia, 1911 = 1,000.)

	<u> </u>									
State.	1911.	1914.	1921.	1929.	1931.	1939.	1954.	1955.	1956. (b)	1957.
New South Wales Victoria Queensland South Australia Western Australia Tasmania	1,003 985 997 1,013 1,152 799	1,093 1,062 1,035 1,061 1,223 1,027	1,862 1,803 1,879 1,697 1,832 1,745	2,012 1,964 1,976 1,891 1,960 1,840	1,851 1,683 1,769 1,580 1,745 1,625	1,874 1,808 1,885 1,725 1,956 1,738	5,797 5,523 5,419 5,456 5,711 5,805	5,942 5,699 5,508 5,548 5,869 5,899	6,254 6,000 5,737 5,721 6,084 6,144	6,475 6,183 5,909 5,973 6,320 6,343
Australia	1,000	1,081	1,826	1,972	1,752	1,846	5,632	5,773	6,049	6,253

(a) For a full week's work (excluding overtime).

(b) Partly estimated.

(iii) Real Wage Rate Index Numbers. In obtaining the real wage rate index numbers in the following table, the nominal wage rate index numbers shown above have been divided by the corresponding retail price index numbers for the capital city and multiplied by 1,000. Since the "C" Series index numbers were not compiled for periods prior to November, 1914, it has been assumed that fluctuations between 1911 (the base of the table) and 1914 in the "C" Series would have been similar to the fluctuations observed in the "A" Series. A table showing real wage rate index numbers from 1901 to 1937 measured in terms of purchasing power over the "A" Series regimen appeared in earlier issues of the Official Year Book (see No. 37, page 473).

REAL WEEKLY WAGE RATE(a) INDEX NUMBERS: ADULT MALES. Measured in terms of purchasing power over the "C" series list of items.

(Base: Weighted Average Real Wage Rate (a) for Australia, 1911 = 1,000.)

State.	1911.	1914.	1921.	1929.	1931.	1939.	1954.	1955.	195	6.( <i>b</i> )	195	7.(b)
N.S. Wales Victoria Queensland South Australia W. Australia Tasmania		925 954 1,022 914 1,043 902	1,073 1,034 1,227 1,034 1,096 984	1,130 1,164 1,290 1,099 1,152 1,108	1,210 1,200 1,336 1,137 1,189 1,120	1,207 1,180 1,306 1,147 1,308 1,153	1,467 1,455 1,506 1,444 1,400 1,454	1,469 1,453 1,501 1,421 1,385 1,447	A 1,493 1,451 1,521 1,432 1,382 1,412	B 1,459 1,409 1,493 1,398 1,381 1,390	A 1,491 1,458 1,509 1,459 1,397 1,416	B 1,493 1,454 1,520 1,461 1,395 1,421
Australia	1,000	948	1,087	1,151	1,210	1,211	1,459	1,454	1,465	1,431	1,468	1,469

(a) For a full week's work (excluding overtime). (b) Based on the "C" Series retail price index. column A excluding and column B including, the price movement of potatoes and onions. See para. 5 on p. 149.

In earlier issues of the Official Year Book (see No. 39, page 410) a table was included showing similar index numbers for Australia as a whole under the "A" Series at intervals from 1901 to 1937 and under the "C" Series from 1901 to 1950.

### § 3. Average Weekly Wage Earnings.

1. Average Weekly Total Wages Paid and Average Earnings, All Industries.—The following figures are derived from employment and wages recorded on Pay-roll Tax returns (which cover approximately 75 per cent. of the estimated number of civilian wage and salary earners in employment) and from estimates of the unrecorded balance. Pay of members of the armed forces is not included. The figures are not seasonally adjusted, but a seasonally adjusted quarterly index of average weekly wage earnings is shown in para. 2 below. Corresponding figures for each quarter are published in the Monthly Review of Business Statistics and the Monthly Bulletin of Employment Statistics.

AVERAGE WEEKLY TOTAL WAGES PAID AND AVERAGE EARNINGS.

	Үеаг.		N.S.W. (a)	Vic.	Qʻland.	S. Aust. (b)	W. Aust.	Tas.	Aust.
			Average		TOTAL V '000.)	VAGES PA	ID.		
1952-53			15,090 [	10,490	4,750	3,311	2,344	1,178	37,163
1953-54			16,043	11,305	5,065	3,561	2,586	1,280	39,840
1954-55			17,357	12,221	5,398	3,839	2,731	1,365	42,911
1955-56			18,955	13,358	5,809	4,195	2,897	1,476	46,690
1956–57		]	20,167	14,111	6,218	4,387	2,979	1,596	49,458
	Av	ERAGE	WEEKLY 1	Earnings	PER EMP	LOYED M	IALE UNIT	.(c)	
					(£.)				
1952-53			15.50	15.46	13.32	14.58	14.13	13.97	14.95
1953-54			16.15	16.27	14.05	15.30	15.04	14.92	15.69
1954-55			16.96	17.06	14.51	16.09	15.55	15.60	16.42
1955-56			18.16	18.22	15.34	17.10	16.37	16.66	17.51
1956-57			19.20	19.13	16.24	17.70	17.02	17.73	18.43

<sup>(</sup>a) Includes the Australian Capital Territory. (b) Includes the Northern Territory. (c) Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. The same ratio has been used in each State, and because the average ratio of female to male earnings may vary between States, precise comparisons between average earnings in different States cannot be made on the basis of the figures above.

2. Average Weekly Wage Earnings Index Numbers.—The following table shows, for "All Industries" and for "Manufacturing", the movement in average weekly wage earnings from 1945-46 to the December Quarter, 1957. The "All Industries" index is based on Pay-roll Tax returns and other data. The index for manufacturing industries for the years 1945-46 to 1955-56 is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory returns (see Chapter VII.—Manufacturing Industry, § 8, para. 2 (iii)); figures subsequent to June, 1956 are preliminary estimates based on Pay-roll Tax returns.

The index numbers show for "All Industries" and "Manufacturing" the movement in average earnings over a period of time. However, they do not give, at any point of time, a comparison of actual earnings in the two groups. The base of each series is the year 1945-46 = 1,000 and both series have been seasonally adjusted.

AVERAGE WEEKLY WAGE EARNINGS(a) INDEX NUMBERS: AUSTRALIA. SEASONALLY ADJUSTED.

	(Base o	f each Seri	ies: Year 1945-46 =	1,000.)		
Year.	 All Indus- tries.(b)	Manufac- turing.(c)	Quarter.		All Indus- tries.(b)	Manufac- turing.(c)
1945-46	 1,000	1,000	1955-March Qtr.		2,589	2,732
1946-47	 1,037	1,056	June "		2,652	2,758
1947-48	 1,164	1,206	Sept. ,,		2,689	2,806
1948-49	 1,322	1,365	Dec. "		2,731	2,849
1949-50	 1,451	1,505	1956—March ,,		2,749	2,859
1950-51	 1,742	1,810	June "		2,801	2,897
			Sept. "		2,863	2,968
1951-52	 2,145	2,213	Dec. "		2,903	2,996
1952-53	 2,350	2,394	1957—March ,,		2,910	2,983
1953-54	 2,462	2,511	June "		2,921	2,986
1954-55	 2,572	2,685	Sept. ,,		2,975	3,016
1955-56	 2,743	2,853	Dec. ,,		2,996	(d)
1956-57	 2,899	2,984			-	

<sup>(</sup>a) Includes salaries. (b) Average earnings per male unit employed. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. (c) Average earnings of male wage and salary earners in factories. (d) Not available.

### § 4. Basic Wages in Australia.

1. General.—The concept of a "basic" or "living" wage is common to rates of wage determined by industrial authorities in Australia. Initially the concept was interpreted as the "minimum" or "basic" wage necessary to maintain an average employee and his family in a reasonable state of comfort. However, it is now generally accepted "that the dominant factor in fixing the basic wage . . . . is the economic or productivity factor and that the basic wage must be the highest that industry as a whole can pay".\*

Under the Commonwealth Conciliation and Arbitration Act, as amended in June, 1956 (see page 158), the Commonwealth Conciliation and Arbitration Commission (previously the Commonwealth Court of Conciliation and Arbitration) may, for the purpose of preventing or settling an industrial dispute extending beyond the limits of any State, make an order or award "altering the basic wage (that is to say, that wage or that part of the wage, which is just and reasonable for an adult male [female], without regard to any circumstance pertaining to the work upon which, or the industry in which he [she] is employed) or the principles upon which it is computed ".

In the past, the Commonwealth Court of Conciliation and Arbitration held general basic wage inquiries from time to time and its findings applied to industrial awards within its jurisdiction. Prior to the decision of the Commonwealth Court of Conciliation and Arbitration, announced on 12th September, 1953, discontinuing the automatic adjustment of basic wages in Commonwealth awards in accordance with variations occurring in retail price index numbers, the relevant basic wage of the Commonwealth Court of Conciliation and Arbitration was adopted to a considerable extent by State Industrial Tribunals. In New South Wales and South Australia, the State industrial authorities adopted the relevant Commonwealth basic wage. In Victoria and Tasmania, where the Wages Boards systems operate, no provision was included in the industrial Acts for the declaration of a basic wage, although, in the past, Wages Boards generally adopted basic wages based on those of the Commonwealth Court. In Queensland and Western Australia, the determination of a basic wage is a function of the respective State Industrial or Arbitration Courts and (subject to State law) they have regard to rates determined by the Commonwealth Court. Following the decision of the Commonwealth Court of Conciliation and Arbitration to discontinue automatic quarterly adjustments to the basic wage, the various State industrial authorities determined State basic wages in accordance with the provisions of their respective State industrial legislation. Details of the action taken in each State and subsequent variations in State basic wages are set out in para. 5 (see pp. 181-6).

In addition to the basic wage, "secondary" wage payments, including margins for skill, loadings and other special considerations peculiar to the occupations or industry, are determined by these authorities. The basic wage, and the "secondary" wage, where prescribed, make up the "minimum" wage for a particular occupation. The term "minimum wage" as distinct from the basic wage is used currently to express the lowest rate payable for a particular occupation or industry.

2. The Commonwealth Basic Wage.—(i) Early Judgments. The principle of a living or basic wage was propounded as far back as 1890 but it was not until 1907 that a wage, as such, was declared by a Court in Australia. The declaration was made by way of an order in terms of section 2 (d) of the Excise Tariff 1906 in the matter of an application by H. V. McKay that the remuneration of labour employed by him at the Sunshine Harvester Works, Victoria, was "fair and reasonable". Mr. Justice Higgins, President of the Commonwealth Court of Conciliation and Arbitration, defined the standard of "a fair and reasonable" minimum wage for unskilled labourers as that standard appropriate to "the normal needs of the average employee, regarded as a human being living in a civilized community".† The rate declared was 7s. a day or £2 2s. a week for Melbourne, the amount considered reasonable for "a family of about five".

The "Harvester" standard was adopted by the Commonwealth Court of Conciliation and Arbitration for incorporation in its awards, and practically the same rates continued until 1913, when the Court took cognizance of retail price index numbers, covering food and groceries and rent of all houses ("A" Series) for the 30 more important towns of Australia, which had been published by the Commonwealth Statistician for the first time in the preceding year. The basic wage rates for towns were thereafter varied in accordance with the respective retail price index numbers. Court practice was to equate the retail price index number 875 for Melbourne for the year 1907 to the "Harvester" rate of 42s. a week (or the base of the index (1,000) to 48s. a week). At intervals thereafter as awards came before it for review, the Court usually revised the basic wage rate of the award in proportion to variations in the retail price index. In some country towns certain "loadings" were added by the Court to wage rates so derived to

offset the effect of lower housing standards, and consequently of house rents, on the index numbers for these towns.

Over the period of its operation, the adequacy or otherwise of the "Harvester" standard was the subject of much discussion, the author of the judgment himself urging on several occasions the need for its review. During the period of rapidly rising prices towards the end of the 1914-18 War strong criticism developed that this system did not adequately maintain the "Harvester" equivalent. A Royal Commission was appointed in 1919 to inquire as to what it would actually cost a man, wife and three children under fourteen years of age to live in a reasonable standard of comfort, and as to how the basic wage might be automatically adjusted to maintain purchasing power. The Commission's Report was presented in 1920. An application by the unions to have the amounts arrived at by the inquiry declared as the basic wage was not accepted by the Court because they were considerably in advance of existing rates and grave doubts were expressed by members of the Court as to the ability of industry to pay such rates. Further details of the recommendations of the Commission were given in Labour Report No. 40, p. 106.

The system of making automatic quarterly adjustments of the basic wage in direct ratio to variations in the retail price index ("A" Series) was first introduced in 1921. The practice then adopted was to calculate the adjustments to the basic wage quarterly on the index number for the preceding quarter. Previously, adjustments had been made sporadically in relation to retail price indexes for the previous calendar year or the year ended with the preceding quarter. The practice adopted by the Commonwealth Court in 1921 of making automatic quarterly adjustments continued until the Court's judgment of 12th September, 1953 (see page 171).

In 1922 an amount known as the "Powers' 3s." was added by the Court as a general "loading" to the weekly basic wage for the purpose of maintaining during a period of rising prices the full equivalent of the "Harvester" standard. This loading continued until 1934.

(ii) Basic Wage Inquiries, 1930-31, 1932, 1933. No change was made in the method of fixation and adjustment of the basic wage until the onset of depression, which began to be felt severely during 1930. Applications were then made to the Court for some greater measure of reduction of wages than that which resulted from the automatic adjustments due to falling retail prices. The Court held a general inquiry, and, while declining to make any change in the existing method of calculating the basic wage, reduced all wage rates under its jurisdiction by 10 per cent. from 1st February, 1931. In June, 1932 the Court refused applications by employee organizations for the cancellation of the 10 per cent. reduction of wage rates. In May, 1933 the Court again refused to cancel the 10 per cent. reduction in wage rates, but decided that the existing method of adjustment of the basic wage in accordance with the "A" Series retail price index number had resulted in some instances in a reduction of more than 10 per cent. In order to rectify this the Court adopted the "D" Series of retail price index numbers for future quarterly adjustments of the basic wage.

Particulars of the 1930-31 and the 1932 Inquiries may be found in Labour Report No. 22, pp. 45-48 and of the 1933 Inquiry in Labour Report No. 23, pp. 45-46.

(iii) Basic Wage Inquiry, 1934. A summary of the judgment delivered on 17th April 1934, was given in Official Year Book No. 29, page 545. Until this judgment the "Harvester" standard, adjusted by variations in retail price index numbers, continued to be the theoretical basis of the wage of the Commonwealth Court. The new rate for the six capital cities was in effect the same as that previously paid under the "A" Series, without the "Powers' 3s." and without the 10 per cent. reduction which then ceased to operate.

Automatic quarterly adjustment of the basic wage was transferred from the "A" and the "D" Series to the "C" Series Retail Price Index. The base of the index (1,000) was taken by the Court as equal to 81s. a week. This gave rates as declared on this occasion for the capital cities on the basis of their respective index numbers ranging from 61s. for Brisbane to 67s. for Sydney and Hobart, the average wage for the six capital cities being 65s.

- (iv) Basic Wage Inquiry, 1937. In May, 1937, the Commonwealth Court heard an application by the combined unions for an increase in the basic wage. The unions asked that the equivalent of the base (1,000) of the "C" Series Index be increased from 81s. to 93s., which on index numbers then current would have represented an average increase of about 10s. a week. The chief features of the judgment delivered on 23rd June were:—
- (a) Amounts were added to the basic wage not as an integral, and therefore adjustable, part of that wage, but as "loadings" additional to the rates payable under the 1934 judgment, which were referred to in the judgment as the "needs" portion of the total resultant basic wages. These loadings, commonly referred to as "Prosperity" loadings, ranged, for capital cities, from 4s. to 6s., that for the six capitals being 5s.

- (b) The basis of the adjustment of the "needs" portion of the wage in accordance with the variations shown by retail price index numbers was transferred from the "C" Series to a special "Court" Series based upon the "C" Series (see page 145).
- (c) Female and junior rates were left for adjustment by individual Judges when dealing with specific awards.

The main parts of the judgment were reprinted in Official Year Book No. 30, pp. 564-75 and in *Labour Report* No. 28, pp. 77-87.

(v) Basic Wage Inquiry, 1940. On 5th August, 1940 the Full Court commenced the hearing of an application by the combined unions for an increase in the existing basic wage by raising the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series was based) from 81s. to 100s. a week, and the incorporation of the existing "Prosperity" loadings in the new rate mentioned. In its judgment of 7th February, 1941, the Court unanimously refused to grant any increase, owing mainly to the uncertainty of the economic outlook under existing war conditions. The application was stood over for further consideration. (See (vi) following.)

The Chief Judge stated: "The Court has always conceded that the 'needs' of an average family should be kept in mind in fixing a basic wage. But it has never, as the result of its own inquiry, specifically declared what is an average family, or what is the cost of a regimen of food, clothing, shelter and miscellaneous items necessary to maintain it in frugal comfort, or that a basic wage should give effect to any such finding. In the end economic possibilities have always been the determining factor . . . . what should be sought is the independent ascertainment and prescription of the highest basic wage that can be sustained by the total of industry in all its primary, secondary and ancillary forms ".\*

The Chief Judge also suggested that the more logical system would be to grade the basic wage according to family responsibilities by means of a comprehensive system of child endowment, and that if a scheme of this nature were established, future fixations of the basic wage would be greatly simplified.†

- (vi) "Interim" Basic Wage Inquiry, 1946. As the result of (a) an application made by the Commonwealth Attorney-General for the restoration to the Full Court List of certain adjourned 1940 basic wage applications (see (v) above), (b) a number of fresh cases which had come to the Court since 1941, and (c) an application by the combined unions for an "interim" basic wage declaration, the Court commenced the hearing of this case on 25th November, 1946. Judgment was delivered on 13th December, 1946 whereby an increase of 7s. a week was granted in the "needs" portion of the basic wage then current, the rate for the six capital cities as a whole being increased from 93s. to 100s. a week. For automatic quarterly adjustments a new "Court" Index (Second Series) (Base 1923-27 = 87.0) was adopted. All "loadings" on the basic wage were retained. Further particulars of this judgment may be obtained from Labour Report No. 38, page 79.
- (vii) Basic Wage Inquiry, 1949-50. This finalized the case begun in 1940 and continued in 1946 (see above). Evidence was completed on 22nd August, 1950, and the three judges (Kelly C.J., Foster and Dunphy JJ.) delivered separate judgments on 12th October, 1950. In these judgments, which were in the nature of general declarations, a majority of the Court (Foster and Dunphy JJ.) was of the opinion that the basic wage for adult males should be increased by £1 a week, and that for adult females should be 75 per cent. of the adult male rate. Kelly C.J., dissenting, considered that no increase in either the male or the female wage was justified.

On 24th October, 1950 and 23rd November, 1950 the Court made further declarations regarding the "Prosperity" loading of 1937 (see page 169), which was being paid at rates between 3s. and 6s. a week according to localities, etc., and the future basis of quarterly adjustments. The "Prosperity" loading was standardized at a uniform rate of 5s. a week for all localities and was declared to be an adjustable part of the basic wage. The Court also declared that the "war" loadings were not part of the basic wage.

With regard to other "loadings" the Court, on 17th November, 1950, proceeded to examine the individual awards in the claims before it, for the purpose of determining to what extent such "loadings" formed part of the basic wage. Any "loading" declared to be part of the basic wage ceased to be paid as a separate entity, but apart from the special case of the Australian Capital Territory there were very few "loadings" which fell within this category.

<sup>\*</sup> Commonwealth Arbitration Reports, Vol. 44, pp. 47-8, † Legislation covering a scheme to become operative on 1st July, 1941 was passed by the Commonwealth Parliament on 3rd April, 1941. For details see Chapter XV.—Welfare Services.

The new rates operated from the beginning of the first pay-period in December, 1950, in all cases being the "needs" rate (Second Series) on the indexes of the September quarter 1950, plus a flat-rate addition of £1, together with the standardized "Prosperity" loading of 5s. (see above).

The basic wage rate for the six capital cities (weighted average) arrived at by the Court after applying the foregoing declarations was £8 2s., comprising £6 17s. "needs" (Second Series) plus 5s. uniform "Prosperity" loading plus the £1 addition. The declaration provided that the whole of this basic wage would be subject to automatic quarterly adjustments as from the beginning of the first pay-period commencing in February, 1951, on the basis of the index numbers for the December quarter, 1950. For this purpose the new rate of £8 2s. was equated to the "C" Series retail price index number 1572 for the six capital cities (weighted average) for the September quarter, 1950. From this equation was derived a new "Court" Index (Third Series) with 103.0 equated to 1,000 in the "C" Series Index.

The basic wage rates operative from the beginning of the first pay-period commencing in December, 1950 compared with those operative in November, 1950 were as follows (November rates in parentheses):—Sydney, £8 5s. (£7 6s.); Melbourne, £8 2s. (£7 3s.); Brisbane, £7 14s. (£6 15s.); Adelaide, £7 18s. (£6 17s.); Perth, £8 (£6 19s.); Hobart, £8 (£6 19s.); Six Capitals, £8 2s. (£7 2s.).

Further details of this judgment were given in Labour Report No. 40, page 81.

- (viii) Basic Wage and Standard Hours Inquiry, 1952-53. On 5th August, 1952, the Commonwealth Court of Conciliation and Arbitration began hearing claims by—
  - (1) The Metal Trades Employers' Association and other employers' organizations-
    - (a) that the basic wage for adult males be reduced;
    - (b) that the basic wage for adult females be reduced;
    - (c) that the standard hours of work be increased;
    - (d) that the system of adjusting the basic wages in accordance with variations occurring in retail price index numbers be abandoned.
  - (2) The Metal Trades Federation, an association of employees' organizations, that the basic wage for adult males be increased, which would also have resulted in increasing the amount, though not the proportion it bore to the basic wage for adult males, of the basic wage for adult females.

A number of Governments, organizations and other bodies obtained leave to intervene and in this role the Australian Council of Trade Unions supported the claims of the Metal Trades Federation.

The Court consisted of Kelly C.J., Foster, Kirby, Dunphy, Wright, McIntyre and Morgan, J.J., but before the hearing of evidence commenced Wright J. withdrew and during the hearing of the case Foster J. withdrew from the bench. The Court gave its decision on 12th September, 1953 and stated that reasons for its decision would be delivered later. McIntyre J. died before the reasons for the judgment could be delivered.

In the early stages of the case the employers applied for an immediate and separate hearing of the question of suspension of the basic wage adjustment provisions in awards. However, after hearing argument, the Court indicated that it was not satisfied that a sufficient case had been made out for such a separate hearing.

Evidence in the employers' case began on 16th September, 1952. On completion of the employers' case the counsel for employee organizations submitted that there was no case to answer and asked for the dismissal of the case. The Court rejected this claim and the hearing of evidence for the employee organizations was concluded on 11th September, 1953.

The decision of the Court, announced on 12th September, 1953, was expressed in the following terms:—

- "1. The employers' applications for reduction of the current basic wages for adult males and for reduction of the current basic wages for adult females are refused.
- 2. The employers' applications for an increase of the standard hours of work in the industries covered thereby are refused.
- 3. The employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages are granted.

4. The Unions' applications for increases of basic wages are refused.

The Court makes orders accordingly, to operate as from to-day. The reasons for the above decisions will be delivered at a later date. The form of the appropriate orders will be settled by the Industrial Registrar." \*

The reasons for the above decisions were delivered on 27th October, 1953.

The Court in the course of its judgment said that in the present case nothing had been put before it in support of a departure from its now well established principle that the basic wage should be the highest that the capacity of the community as a whole could sustain. If the Court is at any time asked to fix a basic wage on a true needs basis, the question of whether such a method is correct in principle and all questions as to the size of the family unit remain open.

No evidence was submitted in the inquiry to suggest that the basic wage in its character of a "foundational wage" of providing, or helping to provide, a just and reasonable standard of living to employees whose income is based or dependent upon it, was inadequate, and the arguments of both the employers and employees were directed towards a basic wage based on the capacity of industry to pay.

The Court, in reviewing the claims of the respondents, in the light of the existing economic situation, indicated that although aware of the difficulties besetting industry and of the dependence of Australia's prosperity upon that large part of her productive effort whose rewards are conditioned by good seasons and whose prices are largely beyond her control, the Court was not satisfied that the employers had discharged the onus of proving that the existing situation called for a reduction of general standards either in the matter of the basic wage or in the ordinary working week. The Court was satisfied that there could be, in the existing situation, no increase in the basic wage, as was claimed by the Metal Trades Federation.

The Court decided to discontinue the principle of automatically adjusting the basic wage in accordance with variations in retail price index numbers while the basic wage was assessed on the capacity of industry. It was considered that "the further the Court has withdrawn from relating the basic wage to the fulfilment of any particular standard of needs, the less has become the justification for keeping the nominal wage automatically adjusted during the currency of an award".† Moreover, there was no ground for assuming that the capacity of industry to pay will be maintained at the same level or that it will rise or fall coincidentally with the purchasing power of money. The Court found that the system of automatic adjustments had undoubtedly been an accelerating factor in the rapid increase in prices in Australia, particularly in the years 1951 and 1952, and this factor supported the Court's decision to abolish the system.

In regard to the basic wage for female employees the Court decided that no basis for a review of the existing ratio of the female to the male basic wage existed on the material presented to it, the Court being satisfied that industry had the capacity to maintain the existing female basic wage rates.

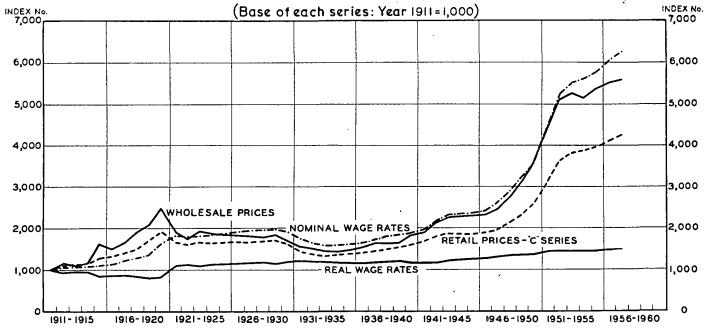
In rejecting the claim for an increase in the standard hours of work, the Court considered that the industry of the country was healthy and prosperous enough at present to sustain the existing standard (i.e., 40 hours a week).

The Court intimated that time would be saved in future inquiries if the parties to the disputes, in discussing the principle of the "capacity to pay", directed their attention to the broader aspects of the economy, such as indicated by a study of employment, investment, production and productivity, oversea trade, oversea balances, competitive position of secondary industry and retail trade.

In order to remove certain misconceptions about the function of the Court, it was stated during the course of the judgment that "the Arbitration Court is neither a social nor an economic legislature. Its function under section 25 of the Act is to prevent or settle specific industrial disputes". However, this function "must be exercised in the social and economic setting of the time at which it makes its decision. It must settle industrial disputes upon terms which seem to it to be just, having regard to conditions which exist at the time of its decision." In addition, the Court stressed that "the primary rule that a claimant is required to substantiate his claim should always be observed".

### 7.3

# WHOLESALE AND RETAIL PRICES; NOMINAL AND REAL WAGE RATES INDEX NUMBERS, AUSTRALIA, 1911 to 1957



Note.—Index numbers in this graph are for the six capital cities as a whole, except for those for wholesale prices up to December quarter, 1927, which are for Melbourne. The wholesale prices graph shows the trend of prices according to the "old" Melbourne Index up to December quarter, 1927, but thereafter, this index having been "spliced" with the Basic Materials and Foodstuffs Index, the curve moves in accordance with the variations of the latter.

The price quotations for this index are, in the main, obtained from Melbourne sources, but their movements may be taken as representative of fluctuations in most Australian markets.

For the period 1911–1914 the "C" Series index numbers are taken back from the true base (November, 1914 = 1,000) by means of the "A" Series Index (Food and Rent of All Houses).

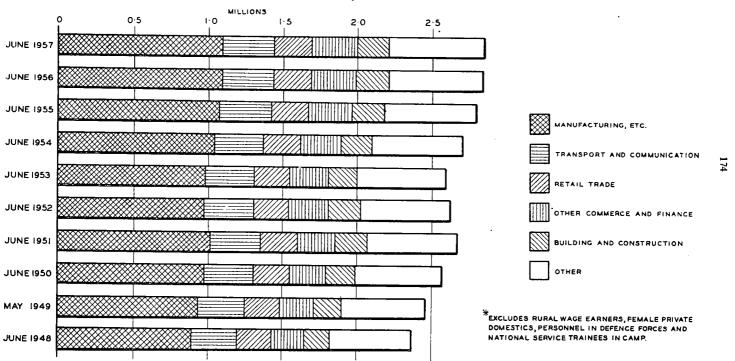
From September quarter, 1955 these "C" Series index numbers exclude the price movement of potatoes and onions.

See para. 5, p. 149.

Real wage rates are computed on the basis of the "C" Series Retail Price Index.

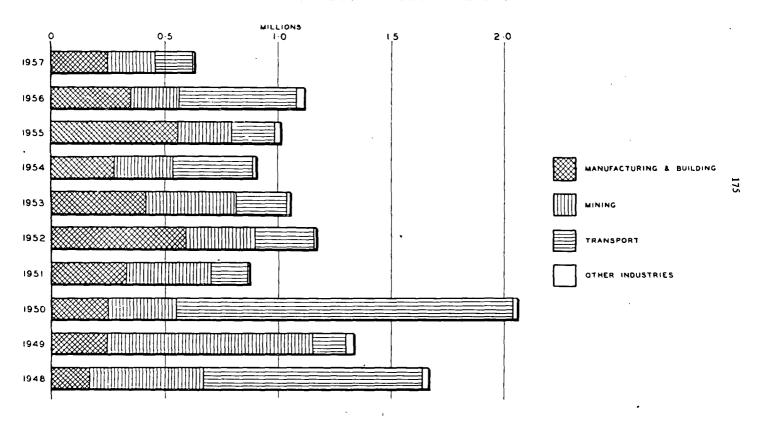
### WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT\*

AUSTRALIA, 1948 TO 1957



### INDUSTRIAL DISPUTES, AUSTRALIA, 1948 TO 1957

WORKING DAYS LOST - INDUSTRIAL GROUPS





In accordance with its decision to abolish the automatic adjustment clause from its awards, the Court began, on 21st October, 1953, to deal with awards which were not actually affected by the original order. During this process the Court announced that it had no other method in mind in substitution of the automatic adjustment clauses. In fact the only issue before the Court was the abolition or retention of the adjustment principle and that issue had been determined. The basic wage as fixed by the Court in the new or amended clauses in awards was that which had become operative in August, 1953, and no provision was made for its automatic quarterly adjustment. The last such adjustment had been made on the "Court" Series Index for the June quarter, 1953.

After the Court had amended all the awards listed before it as a result of applications by one of the parties to the awards, the Court, on its own motion under section 49 of the Commonwealth Conciliation and Arbitration Act, listed those awards not the subject of an application by one of the parties and then proceeded to delete the clauses providing for the automatic adjustment of the basic wage.

The power of the Commonwealth Court of Conciliation and Arbitration to vary awards not the subject of an application by one of the parties was unsuccessfully challenged in the High Court of Australia.

(ix) Basic Wage Inquiry, 1956. On 14th February, 1956 the Commonwealth Court of Conciliation and Arbitration, consisting of Kirby, Dunphy, Wright and Morgan JJ., commenced hearing an application by the Amalgamated Engineering Union and others made by summons for alteration of the basic wage prescribed in the Metal Trades Award in the following respects:—namely, for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments deleted by the Court in September, 1953 had remained in force; an increase of a further £1 in the basic wage; the re-introduction of automatic quarterly adjustments; and the abolition of what is known as the 3s. country differential. This application was regarded as a general application for variation of the basic wage in all awards of the Commonwealth Court of Conciliation and Arbitration.

All the claims made by the unions were opposed by the respondent employers. The Attorney-General of the Commonwealth intervened in the public interest under section 26 (1.) of the Commonwealth Conciliation and Arbitration Act, and in the course of proceedings all six States were represented by counsel or a State official.

Counsel for the Commonwealth stressed that the Commonwealth appeared not as a party but in the public interest and supplied much factual and statistical material in a review of the economy from 1953. He submitted that the Australian economy "is to all appearances a prosperous economy", with two inherent weaknesses "in the state of our overseas trade and reserves" and "the rising tendency of costs and prices". The Commonwealth made no submission as to the amount of the basic wage; however, it submitted that the Court had been correct in its decision of 1953 to abolish the system of automatic quarterly adjustments and that its grounds for doing so were valid.

The States of New South Wales, Queensland, Western Australia and Tasmania supported the union claims for the re-establishment of the system of automatic adjustments and the raising of the basic wage to the levels indicated by current "C" Series index numbers, but made no submission at all regarding the union claims for a further increase of £1 a week for adult males. The State of South Australia opposed the re-introduction of automatic adjustments, but conceded that "in making a review of the basic wage a substantial factor to be taken into account is the changed cost of living". However, as regards the union claim for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments deleted by the Court in September, 1953 had remained in force, together with a £1 increase in the basic wage, amounting in total to 35s. a week at that time, the State submitted without elaboration "that there are grave doubts as to whether the increased basic wage to the extent asked by the applicant could be granted without serious damage to the economy". The State of Victoria neither supported nor opposed the union claims, either as an employer or as "representing all interests in the Community", but supplied to the Court comprehensive statements relating to activities of the State Departments and instrumentalities and estimates of the amount and effects of the claims before the Court

In delivering its judgment on 26th May, 1956, the Court rejected each claim made by the unions, but decided to increase the adult male basic wage by 10s. a week payable from the beginning of the first pay-period in June. As a result of this decision, the basic wage for adult females was increased by 7s. 6d. a week with proportionate increases for juniors of both sexes and for apprentices.

The Court took the view that its decision in 1953 to abandon the system of quarterly adjustments was clearly right and that "so long as the assessment of the basic wage is made as the highest which the capacity of the economy can sustain, the automatic adjustment of that basic wage upon price index numbers cannot be justified, since movements in the index

have no relation to the movements in the capacity of the economy". The Court was satisfied "that a basic wage assessed at the highest amount which the economy can afford to pay cannot in any way be arrived at on the current price of listed commodities. There is simply no relationship between the two methods of assessment".

"The Court's examination of the economy and of its indicators—employment, investment, production and productivity, overseas trade, overseas balances, the competitive position of secondary industry and retail trade and its consideration of inflation and its possible disastrous extension has led to the Court's conclusion that the nation now has not the capacity to pay a basic wage of the amount to which automatic quarterly adjustments would have brought it."

As far as the application for the abolition of the 3s. country differential was concerned, the Court stated, "The onus lies on a party seeking a change of present prescription to establish its case. The Court holds that the present claim for abolition of the country differential of 3s. has not been made out of the evidence and submissions presented to the Court and the claim is rejected.".

In the course of setting out the reasons for its decision the Court considered the period over which the capacity of the economy should be assessed, and concluded: "A year has been found almost universally to be a sensible and practicable period for such a purpose in the case of trading institutions the world over. The Court considers—fortified by the Judges' experience of considering from time to time Australia's capacity—that a yearly assessment of the capacity of Australia for the purpose of fixing a basic wage would be most appropriate. We would encourage any steps to have the Court fulfil such a task each year."

- (x) Basic Wage Inquiry, 1956-57. Following a summons filed on 26th October, 1956 by the Amalgamated Engineering Union and others, the Commonwealth Conciliation and Arbitration Commission in Presidential Session (consisting of Kirby C.J., Wright and Ashburner JJ.) on 13th November, 1956 commenced to hear claims for alteration of the basic wage prescribed in the Metal Trades Award. The claims made were as follows:—
- 1. "For the increase of the basic wage in all its manifestations to the amount it would have reached if there had remained in the award provisions for automatic quarterly adjustments which had been deleted in September, 1953 ..........".
- 2. "For the re-insertion in the award of the provisions for the automatic quarterly adjustment of the basic wage.....".

In accordance with past practice this application in respect of the Metal Trades Award was treated by the Commission as a general application for alteration of the basic wage in all Federal awards.

By leave of the Commission the Australian Council of Salaried and Professional Associations intervened in support of the applicant unions.

The claims of the unions were opposed by the respondent employers. Victoria and South Australia were the only States to appear before the Commission and the Attorney-General of the Commonwealth intervened in the public interest under section 36 (1.) of the Conciliation and Arbitration Act.

The State of South Australia opposed the unions' claims and suggested that if, contrary to that State's opposition, an increase in the basic wage were prescribed, the Commission should first decide upon the increase to be added to the six capitals basic wage and then apportion that increase amongst the six capital cities on a basis accurately reflecting the differences in cost of living in the different cities.

The State of Victoria neither supported nor opposed the application by the unions and during the hearing, at the request of the counsel for the employers, submitted statistics relating to Victorian State Government Departments and Instrumentalities.

The Attorney-General of the Commonwealth intervened in the public interest but the only issue on which his counsel made a positive submission was the application for the restoration of the automatic adjustment system. The Commonwealth opposed such a system whatever index were used. The Commonwealth did not make any submission in regard to the amount of the basic wage. However, counsel for the Commonwealth, after supplying information on all aspects of the national economy, made this general statement:—
"It is submitted that it remains true that any steps that would lead to a general increase in the level of demand and of the level of costs and prices would run counter to the best interests of the Australian economy at the present time". The Commonwealth also proposed that the Commission should, in the absence of an adjustment system, undertake an annual review of the basic wage.

The Commission decided that before it could reach a decision it would have to examine, in detail, three main issues, namely, (i) should the system of automatic adjustments be restored? (ii) should there be an increase in the basic wage and, if so, of what amount? and, (iii) should the increase, if there be one, be of a uniform amount or should it be variable as between capital cities?

(i) Should the System of Automatic Adjustments be Restored? The Commission set out the reasons why the Court in 1953 repealed the provisions for automatic quarterly adjustment of the basic wage then contained in awards and orders of the Court. "The Court's decision was primarily based on the view that there is no justification for automatically adjusting in accordance with a price index a wage assessed as the highest that the capacity of the community as a whole can sustain".

Counsel for the unions argued that the Court in 1956 had misdirected itself in holding that in its judgments given before 1953 it had been considering the capacity of the economy to bear the monetary wage at the time of making the decisions. He argued from judgments delivered in the period 1931 to 1950 that the Court was dealing with "the capacity of the economy to pay a real wage". The Commission stated that "even if, contrary to the opinion of the Court in 1956, during that period [1931–1950] the Court had been considering the capacity to pay a real wage ..................... the fact is that in 1953 and 1956, the issue on those occasions having been expressly raised and fought, the Court held that capacity to pay cannot be measured by a price index".

The argument of the unions' counsel continued "that it is a 'plain and inevitable principle' that the capacity of the community to pay wages alters with the general level of prices and that the "C" Series index approximately measures the general level of prices and therefore approximately measures the capacity of the economy to pay".

The Commission rejected both sections of the unions' argument and the claim for restoration of automatic quarterly adjustments was refused.

(ii) Should there be an increase in the Basic Wage and, if so, of what Amount? The Commission reaffirmed the principles used to determine the basic wage in the 1953 and 1956 judgments of the Court and accepted as correct the decision of the Court in 1956 to increase the then existing basic wages by 10s. This led the Commission to a comparison of the state of the national economy at the time of the 1956 and 1957 basic wage inquiries.

The Commission stated that "in assessing the highest basic wage that the community could afford to pay to employees covered by Federal Awards, account has been taken of the fact that somewhere about half the wage earners in Australia are entitled under State Awards to a basic wage, not fixed in relation to the capacity of the community to pay.....".

The Commission considered all aspects of the economy and in particular the indicators of oversea reserves, oversea balances, rural industries, production and productivity other than rural, investment including company profits, competitive position of secondary industry, employment, retail trade, the relaxed policy of import restrictions and the reasons of the government for such relaxation, and above all the change for the better in Australia's trading position and her strengthened reserves and decided that the basic wages in federal awards should be increased.

The Commission decided that the increase to the six capital cities basic wage should be 10s. a week for adult males.

(iii) Should the increase be of a Uniform Amount? The historical background of differential rates of basic wage for respective cities and towns was examined by the Commission and it acknowledged that the federal basic wage had two components. The first and greater component differs for each capital city and is based on the "C" Series retail price index numbers for the June quarter, 1953, and the second component, common to all places, is the 10s, awarded by the Court in 1956.

On the question of whether the increase should be of a uniform amount the alternatives open to the Commission appeared to be "either to follow what the Court did in 1956, or to recalculate the inter-capital-city differentials of the newly-fixed standard basic wage according to the latest "C" Series index numbers". The Commission decided to grant

an increase of a uniform amount, and stated, "The immediate reason impelling the Commission to its decision is the evidence given in these proceedings by the Acting Commonwealth Statistician, in the course of which he expressed emphatically the opinion that the relative levels of living costs in Australian capital cities are not, and cannot be, measured by retail price index numbers in current circumstances; also that changes in relative living costs in this sense are a matter for consideration quite apart from retail price index numbers, at the same time conceding that some of the price index data could assist materially in measuring relative levels of living costs in Australian capital cities".

In the judgment delivered on 29th April, 1957 the Commission rejected the claims made by the unions and granted a uniform increase of 10s. a week in the basic wage for adult males to come into effect from the first pay-period to commence on or after 15th May, 1957. As a result of this decision the basic wage for adult females was increased by 7s. 6d., with proportionate increases for juniors of both sexes and for apprentices. The Commission also advised that it approved an annual review of the basic wage and would be available for this purpose in February, 1958. However, although favouring an annual review of the basic wage, the Commission did not consider that "it would be proper for it, nor would it wish, to curtail the existing right of disputants to make an application at whatever time they think it necessary to do so."

(xi) Rates Operative, Principal Towns. The basic wage rates of the Commonwealth Conciliation and Arbitration Commission for adult males and females, operative as from the beginning of the first pay-period commencing on or after 15th May, 1957, were as shown in the following table:—

COMMONWEALTH	BASIC	WAGE:	WEEKLY	RATES (a).	MAY.	1957.
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City or Town.		Rate of Wage.				a: =	Rate of Wage.				
		Males.		Females.		City or Town.	Males.		Females.		
		s. d.		s. d.				5.	d.	s.	d.
New South Wales-				1		South Australia—				}	
Sydney		263	0	197	0	Adelaide		251	0	188	0
Newcastle		263	0	197	0	Whyalla and	Iron				
Port Kembla—Wollon-					- 1	Knob (d)		256	0	192	0
gong		263	0	197	0	Five Towns(b)		250	0	187	6
Broken Hill		267	0	200	0						
Five Towns(b)		262	θ	196	6	Western Australia-	-			ļ	
						Perth		256	0	192	0
Victoria		[		ł		Kalgoorlie		263	0	197	0
Melbourne		255	0	191	0	Geraldton		269	0	201	6
	• • •	255	0	191	ŏ	Five Towns(b)		257	0	192	6
Geelong Warrnambool	• •	255	Ö	191	o						
Mildura	• •	255	ŏ	191	Ö	Tasmania—		ĺ		l	
	• •		6	196	0	Hobart		262	0	196	6
Yallourn (c)	• • •	261	0	190	ñ	Launceston		258	0	193	6
Five Towns(b)	• •	255	U	191	U	Queenstown		253	0	189	6
		!				Five Towns(b)		260	0	195	0
Queensland—		1				1				1	
Brisbane		238	0	178	6	Thirty Towns (b)		256	0	192	0
Five Towns(b)		239	0	179	0	Six Capital Cities	(A)	256	0	192	0

<sup>(</sup>a) Operative from the beginning of the first pay-period commencing on or after 15th May, 1957 female rates are 75 per cent. of male rates. (b) Weighted average. (c) Melbourne rate plus 6s. 6d. loading for males; 75 per cent. of male rate for females. (d) Adelaide rate plus 5s. for males; 75 per cent. of male rate for females.

The rate for provincial towns, other than those mentioned above, is 3s. less than that for their respective capital cities.

The following table shows the movements of this wage in all State capital cities and the six capital cities as a whole during the years 1939 to 1957.

BASIC WAGE: WEEKLY RATES(a), CAPITAL CITIES, PRESCRIBED BY COMMON
WEALTH CONCILIATION AND ARBITRATION COMMISSION (b) FOR
ADULT MALES.

Date Op	erative.(	c)	Sydn	ey.	Me bour		Brisb	ane.	Adela	ide.	Pers	h.	Hob	art.	Si Capi	
			s.	d.	<i>s</i> .	d.	s.	d.	s.	d.	s.	d.	s.	d.	5.	d.
September,	1939		81	.0	8-1	0	76	0	78	0	77	0	77	0	79	Đ´
**	1941		89	0	88	0	84	0	84	0	85	0	85	0	87	0
->>	1942		97	0	97	0	91	0	93	0	91	0	92	0	95	0
"	1943	••	99	0	98	0	.93	0	94	0	94	0	95	0	97	0
,,	1944		99	0	98	0	93	0	93	.0	94	0	94	0	96	0
,,	1945		99	0	98	0	93	0	93	0	94.	0	94	0	96	0
,,	1946		101	0	99	.0	94	0	95	0	95	0	97	0	98	0
December,	1946	• •	108	0	106	0	101	0	102	0	102	0	103	0	105	.0
November,	1947		112	0	109	0	105	0	106	0	106	0	107	0	109	0
,,	1948		122	0	120	0	115	0	116	0	116	0	118	0	119	0
,,	1949		132	0	130	0	125	0	126	0	129	0	128	0	129	0
"	1950		146	0	143	0	135	0	137	0	139	0	139	0	142	0
December,	1950		165	0	162	0	154	0	158	0	160	0	160	0	162	0
November,	1951		207	0	199	0	185	0	195	0	197	0	199	0	200	0
November,	1952		237	0	228	0	216	0	.229	0	228	0	.230	0	231	0
February, I	953		238	0	229	0	215	0	225	0	229	0	232	0	231	.0
May, 1953			241	0	232	0	21.7	0	.228	0	231	0	239	0	234	·O
August, 195	3 (d)		.243	0	235	0	218	0	231	0	236	0	242	0	236	0
June, 1956		[	253	0	245	0	228	0	.241	0	246	0	252	0	246	:0
May, 1957 (	(e)	!	263	0	255	.0	238	0	251	0	256	0	262	0	256	0

(a) Rates include prosperity loadings where applicable. (b) Prior to 30th June, 1956, Commonwealth Court of Conciliation and Arbitration. (c) Rates operative from the beginning of the first pay-period in the month indicated, unless otherwise stated. (d) Automatic adjustment discontinued (see p. 171). (e) Operative from the beginning of the first pay-period commencing on or after 15th May, 1957.

3. Australian Territories.—In the Australian Capital Territory the rates payable as from the beginning of the first pay-period commencing on or after 15th May, 1957, were £12 18s. for adult males and £9 13s. 6d. for adult females.

In the Northern Territory there are two basic wages operating, one in respect of areas north of the 20th parallel of South Latitude, generally referred to as the "Darwin" rate and the other in respect of areas south of that parallel and extending down to the 26th parallel (the "Port Augusta" rate).

The basic wage rates payable as from the beginning of the first pay-period commencing on or after 15th May, 1957, were:—"Darwin" rate, adult males, £13 15s., adult females, £10 6s.; "Port Augusta" rate, adult males, £13 2s., adult females, £9 16s. 6d.

In addition to the above rates special loadings were prescribed in Northern Territory awards following the fixation of the new basic wage rates operative from November, 1951.

- 4. Basic Wage Rates for Females.—Reference should be made to Labour Report No. 44, (pp. 72-78) for an account of the fixation of minimum rates and basic wages for adult females by the Commonwealth Court of Conciliation and Arbitration. At the end of the 1949-50 Basic Wage Inquiry the Commonwealth Court of Conciliation and Arbitration, by a majority decision, fixed a new basic weekly wage for adult females at 75 per cent. of the corresponding male rate from the beginning of the first pay-period commencing in December, 1950.
- 5. State Basic Wages.—(i) New South Wales. The first determination under the New South Wales Industrial Arbitration Act of a standard "living" wage for adult male employees was made on 16th February, 1914, by the Court of Industrial Arbitration. A Board of Trade established in 1918, with power to determine the "living" wage for adult male and female employees in the State, made numerous declarations from 1918 to 1925, but ceased to function after the Industrial Arbitration (Amendment) Act 1926 transferred its powers to the Industrial Commission of New South Wales as from 15th April, 1926.

The adult male rate was determined on the family unit of a man, wife and two children from 1914 to 1925; a man and wife only in 1927, with family allowances for dependent children; and a man, wife and one child in 1929, with family allowances for other dependent children. With the adoption in 1937 of the Commonwealth basic wage, however, the identification of a specified family unit with the basic wage disappeared.

A table showing the variations in the living wages determined by the industrial tribunals of New South Wales up to 27th April, 1937 was published in earlier issues of the Official Year Book (see No. 37, page 481). From that date until November, 1955 the rates adopted followed the Commonwealth basic wage (see below).

Shortly after the Commonwealth Court of Conciliation and Arbitration announced its judgment in the 1937 Basic Wage Inquiry, the Government of New South Wales amended the Industrial Arbitration Act to make the State basic wage agree with the Commonwealth rate ruling in New South Wales, and to adopt, as far as practicable, the general principles of operation laid down by the Commonwealth Court.

The principle of supplementing wages by a payment in respect of dependent children under fourteen years of age was operative in New South Wales from July, 1927 until superseded by the Commonwealth Government Scheme operative from 1st July, 1941. A brief account of the main features of the system was given in Official Year Book No. 37, pp. 485-6.

Further amendments to the Industrial Arbitration Act were made in 1950 to give effect to the new rates declared by the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry.

Differential basic wage rates for country areas (except Broken Hill) and for employees under Crown awards were eliminated by an amendment of the Industrial Arbitration Act in 1951.

The decision of the Commonwealth Court of Conciliation and Arbitration in September, 1953, to discontinue the system of automatic adjustment of the basic wage consequent on changes in the "Court" series retail price index numbers was considered by the New South Wales Industrial Commission. On 23rd October, 1953, it certified that there had been an alteration in the principles of fixation of the basic wage, and instructed that the automatic adjustment clause be deleted from awards, etc., within its jurisdiction.

As a result, the basic wages applicable for the State (excluding Broken Hill) and operative from the beginning of the first pay-period commencing in August, 1953, remained unchanged at £12 3s. a week for adult males and £9 2s. for adult females until November, 1955.

In October, 1955, the Industrial Arbitration Act 1940-1955 was amended to provide for the automatic adjustment of the existing basic wage each quarter, in accordance with the movements in the Commonwealth Statistician's retail price index numbers. The first adjustment, based on the index number for the September quarter, 1955, represented the amount which would have been added to the basic wage if quarterly adjustments had not been suspended, and was made payable from the beginning of the first pay-period in November, 1955. The rates then payable were £12 13s. for adult males and £9 9s. 6d. for adult females.

Automatic quarterly adjustments were made for each subsequent quarter and the State basic wage payable in New South Wales (except Broken Hill) from the first pay-period in November, 1957 was £13 10s. for adult males and £10 2s. 6d. for adult females.

(ii) Victoria. There is no provision in Victorian industrial legislation for the declaration of a State basic wage. Wages Boards constituted from representatives of employers, employees and an independent chairman, for each industry group or calling, determine the minimum rate of wage to be paid in that industry or calling. In general, these Boards have adopted a basic wage in determining the rate of wage to be paid.

By an amendment to the Factories and Shops Act in 1934, Wages Boards were given discretionary power to include in their determinations appropriate provisions of relevant Commonwealth Awards. A further amendment to this Act in 1937 made it compulsory for Wages Boards to adopt such provisions of Commonwealth Awards. The 1937 Act, as amended, also gave Wages Boards power to adjust wage rates, "with the variation from time to time of the cost of living as indicated by such retail price index numbers published by the Commonwealth Statistician as the Wages Board considers appropriate". The Wages Boards thus adopted the basic wages declared by the Commonwealth Court of Conciliation and Arbitration and followed that Court's system of adjusting the basic wage in accordance with variations in retail price index numbers.

After the Commonwealth Court of Conciliation and Arbitration discontinued the system of automatic adjustment of the Commonwealth basic wage in September, 1953, a number of Wages Boards met in November, 1953, and deleted references to these adjustments.

However, an amendment to the Factories and Shops Act in November, 1953 required Wages Boards to provide for the automatic adjustment of wage rates in accordance with variations in retail price index numbers. From 1st July, 1954 the Factories and Shops Acts 1928–1953 were replaced by the Labour and Industry Act 1953, which was, in general, a consolidation of the previous Acts and retained the requirement providing for the automatic adjustment of wages in accordance with variations in retail price index numbers.

An amendment to the Labour and Industry Act proclaimed on 17th October, 1956 deleted the automatic adjustment provision and directed Wages Boards in determining wage rates to take into consideration relevant awards of, or agreements certified by, the Commonwealth Conciliation and Arbitration Commission. As a result of this legislation the last automatic quarterly adjustment of the basic wage made was based on the variation in retail price index numbers for the June quarter, 1956, when rates of £13 3s. for adult males and £9 17s. for adult females became payable from the beginning of the first pay-period in August, 1956.

(iii) Queensland. The first formal declaration of a basic wage (£4 5s. for adult males) by the Queensland Court of Industrial Arbitration was gazetted on 24th February, 1921. Prior to this declaration the rate of £3 17s. a week for adult males had been generally recognized by the Court in its awards as the basic or living wage. The Queensland Industrial Conciliation and Arbitration Act provides that any basic wage declared must at least maintain an employee, his wife and family of three children in a fair and average standard of comfort.

The rates declared by the Queensland Court at various dates were shown in the table on page 89 of Labour Report No. 44.

From 21st April, 1942, the Queensland Industrial Court adopted the practice of making quarterly declarations of the basic wage on the basis of variations in the "C" Series retail price index number for Brisbane.

The Queensland Industrial Court granted increases of 7s. and 5s. to the basic wages for adult males and adult females respectively, payable from 23rd December, 1946, following the "interim" basic wage judgment of the Commonwealth Court of Conciliation and Arbitration announced earlier in December, 1946.

Following the decision of the Commonwealth Court of Conciliation and Arbitration to increase the male and female basic wages from December, 1950, the Queensland Industrial Court conducted an inquiry as to what change, if any, should be made to the State basic wage for Queensland. The Industrial Court granted an increase of 15s. weekly to both adult males and adult females, operative from 7th December, 1950. The new male rate was identical with the Commonwealth basic wage for the Brisbane metropolitan area. The basic wage payable to adult females was approximately 66 per cent. of the male rate.

In January, 1953, the Queensland Industrial Court departed from the practice established in 1942 of varying the basic wage in accordance with quarterly variations in the "C" Series of retail price index numbers. If the practice had been continued, a reduction of one shilling would have been made in the basic wage for adult males from January, 1953. The Court was not satisfied, however, that the movement in the "C" Series index for Brisbane for the December quarter, 1952 was a true representation or reflex of the economic position for Queensland as a whole and so declined to make any alteration to the then existing basic wage. Quarterly adjustments were made for the next four quarters and the basic wage became £11 5s. for adult males from 1st February, 1954.

Commencing in March, 1954, a Basic Wage Inquiry was conducted by the Court and in its judgment of 11th June, 1954 the Court stated that there would be no change in the basic wage rates declared for February, 1954.

At subsequent hearings consequent on the movement in the "C" Series of retail price index numbers for Brisbane in respect of the quarters ended 30th June, 30th September and 31st December, 1954 and 31st March, 1955, the Court again decided not to vary the existing basic wage rates. However, after considering the "C" Series index number for the quarter ended 30th June, 1955 and its relation to the index number for the March quarter, 1955, the Court announced that as these figures showed a continued upward trend of cost of living in 1955 the basic wage for adult males should be increased from £11 5s. the £11 7s. from 1st August, 1955. In this judgment the Court emphasized that it holds itself free whether or not to adjust the basic wage upwards or downwards in accordance with movements in the "C" Series of retail price index numbers.

The Court examined the movement in the "C" Series of retail price index numbers for each subsequent quarter and announced increases in the basic wage. The rates payable in the Southern Division (Eastern District) from 29th July, 1957, were £12 1s. for adult males and £8 2s. 6d. for adult females.

The rates shown above are applicable throughout the Southern Division (Eastern District), which includes the metropolitan area; allowances are added for the following divisions—Northern (Eastern District) 10s., Northern (Western District) 17s. 4d., Mackay 5s. 6d., and Southern (Western District) 7s. 4d. Half of these allowances are granted to females.

(iv) South Australia. The Industrial Code, 1920-1955 provides that the Board of Industry shall after public inquiry declare the "living wages" to be paid to adult male and female employees. The Board has power also to fix different rates to be paid in defined areas.

The family unit was not specifically defined in the Code, but the South Australian Industrial Court in 1920 decided that the average employee in respect of whom the living wage is to be declared is a man with a wife and three children.

The first declaration by the Board of Industry was made on 15th July, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. a week. A table showing the living wages declared from time to time was published on page 92 of Labour Report No. 44.

Following the "interim" increase in the "needs" basic wage of the Commonwealth Court of Conciliation and Arbitration announced on 13th December, 1946, the South Australian Government made a provision in the Economic Stability Act, 1946 for the declaration by the Governor of a living wage based on the Commonwealth basic wage for Adelaide. This action was taken because the Board of Industry had made a determination on 5th September, 1946 and under the Industrial Code was not able to make a further determination for six months.

The Industrial Code Amendment Act, 1949 made provision for the quarterly adjustment of the living wage in accordance with the variations in the Commonwealth basic wage for Adelaide. In effect this made the State living wage and the Commonwealth basic wage equal from the beginning of the first pay-period commencing in February, 1950. The prescribed adjustment to the female living wage was seven-twelfths of that made to the Commonwealth male basic wage. The Board of Industry retained power to amend the living wage but any new living wage was to be adjusted quarterly as above.

Following the decision of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry; the South Australian Industrial Code was amended to provide for declarations of the living wage by proclamation to prevent unjustifiable differences between the State and Commonwealth rates of wage. By proclamation dated 30th November, 1950, the South Australian living wage in the metropolitan area was made identical with the December, 1950, rates fixed by the Commonwealth Court of Conciliation and Arbitration for the metropolitan area of South Australia. The female basic wage, which had been approximately 54 per cent. of the male basic wage, was increased to 75 per cent. of the corresponding male rate.

When the Commonwealth Court of Conciliation and Arbitration discontinued quarterly adjustments to Commonwealth basic wages in September, 1953, the South Australian living wage also ceased to be varied quarterly and since that time has remained the same as the Commonwealth basic wage for Adelaide. Following the basic wage inquiries conducted by the Commonwealth Court of Conciliation and Arbitration in 1955–56 and by the Commonwealth Conciliation and Arbitration Commission in 1956–57, Commonwealth basic wages were increased on each occasion by 10s. a week for adult males and 7s. 6d. a week for adult females. Similar increases were made to the South Australian living wage by proclamation of the Governor to make the rates payable identical with the Commonwealth basic wage for Adelaide. The rates operative from 20th May, 1957, were £12 11s. for adult males and £9 8s. for adult females.

(v) Western Australia. The Industrial Arbitration Act 1912–1952 provides that the Court of Arbitration may determine and declare a basic wage at any time on its own motion and must do so when requested by a majority of industrial unions or by the Western Australian Employers' Federation, with the limitation that no new determination shall be made within twelve months of the previous inquiry.

The term "basic wage" is defined in the Act as "a wage which the Court considers to be just and reasonable for the average worker to whom it applies". In determining what is just and reasonable, the Court must take into account not only the "needs of an average worker" but also the "economic capacity of industry" and any other matters the Court deems relevant.

The Act provides that the Court of Arbitration may make adjustments to the basic wage each quarter if the statement supplied by the State Government Statistician showing the "C" Series retail price index numbers and monetary equivalents in terms of the State basic wages indicates that there has been a variation of 1s. or more a week compared with the previous quarter. These adjustments apply from the dates of declaration by the Court.

The first declaration of the basic wage by the Court of Arbitration, after the authority to fix one was vested in the Court in 1925, was made on 11th June, 1926. The family unit is not specifically defined in the Act, but it has been the practice of the Court to take as a basis for its calculations a man, his wife and two dependent children. Since that date the principal inquiries have been those of 1938, 1947, 1950 and 1951. A table showing annual and special declarations of the basic wage by the Court of Arbitration will be found in Labour Report No. 44, p. 95.

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry, the Western Australian Court of Arbitration resumed an inquiry which had been adjourned, to ascertain what change should be made in the State basic wage rates. In its judgment of 7th December, 1950, the Court decided that the basic wage should be increased by £1 a week for adult males and by 15s. a week for adult females. As the result of a subsequent inquiry, the basic wage for adult females was increased from 1st December, 1951 to 65 per cent. of the corresponding male rate. This was subject to the condition that the increase in the basic wage should be offset by the reduction in or deletion of existing margins between the basic wage and the total wage as specified by the appropriate award or determination.

Following the decision of the Commonwealth Court of Conciliation and Arbitration, in September, 1953, to discontinue quarterly adjustments to Commonwealth basic wages, the Western Australian Court of Arbitration exercised its discretionary power and declined to make any adjustments to the basic wage from November, 1953 to the June quarter, 1955.

However, from 9th August, 1955, the Western Australian Court decided to increase the adult male basic wage by 5s. 11d. a week for Perth and to make corresponding increases for other areas. No further change was announced in the basic wage until January, 1956, and for each subsequent quarter the Court has varied the State basic wages after considering the official statement supplied by the State Government Statistician.

The rates payable in the metropolitan area in November, 1957 were £13 12s. 9d. for adult males and £8 17s. 3d. for adult females.

(vi) Tasmania. A State basic wage is not declared in Tasmania. Wages Boards are constituted for a number of industries, from representatives of employers and employees and an independent chairman, and determine the minimum rate of wage payable in each industry. In general these Boards have adopted the basic wages of the Commonwealth Court of Conciliation and Arbitration in determining the rate of wage to be paid.

The Wages Board Act gives Wages Boards power to adjust their wage rates in accordance with variations in cost of living as indicated by retail price index numbers published by the Commonwealth Statistician. When the Commonwealth Court discontinued the system of automatic adjustments of the basic wage in September, 1953, the Chairman of the Wages Boards stated he was of the opinion that automatic adjustment clauses should be deleted from all Wages Boards determinations. Before Wages Boards met to consider this matter, the wage rates for all determinations were automatically adjusted upwards from the beginning of the first pay-period commencing in November. By early December, 1953, all Wages Boards had met and deleted the automatic adjustment clause from determinations and cancelled the adjustment increases payable from November.

Automatic quarterly adjustments in accordance with movements in retail price index numbers were reintroduced by Wages Boards in February, 1956 and the rate payable from the first pay-period in February restored the basic wage to the level it would have reached if quarterly adjustments had not been discontinued in 1953. Following a rise in the retail price index number for the March quarter, 1956, a further basic wage increase was payable from the first pay-period in May, 1956.

The Employers' Federation of Tasmania sought a conference under section 77 of the Wages Boards Act 1920 to consider an application to adopt the basic wage promulgated by the Commonwealth Court of Conciliation and Arbitration on 25th May, 1956 and for the deletion of automatic quarterly adjustment of the basic wage from determinations of Wages Boards. As a result of this application, a conference of organized bodies of employers and employees was convened by the Chief Secretary on 22nd June, 1956, to enable a discussion to take place on the advisability or otherwise of adopting the request of the Employers' Federation, so that the Chairman of Wages Boards could be fully informed at a representative gathering prior to the meeting of individual Wages Boards.

At the conclusion of the conference the Chairman of the Wages Boards stated he was of the opinion that the adjustments should be suspended for a period in an endeavour to achieve some measure of stability. He also indicated that any Wages Board was competent by agreement between the representatives of employers and employees or majority decision to adopt the Commonwealth Court's basic wage or any other method of fixing the basic wage.

The majority of Wages Boards decided to suspend automatic quarterly adjustment after adopting the increase based on retail price index numbers for the June quarter, 1956 and payable from the first pay-period in August, 1956. The basic wage prescribed for Hobart by most Wages Boards was still unchanged in November, 1957, the rate being £13 12s. for adult males and £10 4s. for adult females.

(vii) State Basic Wage Rates. The "basic" wage rates of State industrial tribunals, operative in November, 1956 and November, 1957, are summarized in the following table:—

	Nove	nber, 195	6.	November, 1957.					
State.	Date of Operation.	Males.	Females.	Date of Operation.	Males.	Females.			
New South Wales—		s. d.	s. d.		s. d.	s. d.			
Metropolitan and Country, excluding Broken Hill	Nov., 1956 Nov., 1956	274 0 272 0	205 6 204 0	Nov., 1957 Nov., 1957	270 0 269 0	202 6 202 0			
Victoria(b)	Aug., 1956	263 Ŏ	197 Ŏ	Aug., 1956	263 0	197 0			
trict), including Brisbane Southern Division (Western Dis-	29.10.56	241 0	162 6	29.7.57	241 0	162 6			
trict)	29.10.56 29.10.56	248 4 246 6	166 2 165 3	29.7.57 29.7.57	248 4 246 6	166 2 165 3			
Northern Division (Eastern District)  Northern Division (Western Dis-	29.10.56	251 0	167 6	29.7.57	251 0	167 6			
trict)	29.10.56 4.6.56	258 4 241 0	171 2 180 6	29.7.57 20.5.57	258 4 251 0	171 2 188 0			
Western Australia— Metropolitan Area South-West Land Division	29.10.56 29.10.56	265 2 262 11	172 4 170 11	19.7.57 19.7.57	272 9 269 11	177 3 175 5			

STATE BASIC WAGES-WEEKLY RATES.

Aug., 1956

Aug., 1956

### § 5. Wage Margins.

On 5th November, 1954 the Commonwealth Court of Conciliation and Arbitration delivered a judgment\* which in effect became a general determination of the basis upon which all relevant wage and salary margins should be assessed. This became known as the Metal Trades Case, 1954.

General principles of marginal rate fixation had previously been enunciated by the Court in the Engineers' Case of 1924, the Merchant Service Guild Case of 1942 and the Printing Trades Case of 1947, and the Court adopted these insofar as they were applicable to current circumstances.

" Margins" were defined as-

Goldfields and other areas

Tasmania(b)

<sup>(</sup>a) Where dates are not quoted wage rates operate from the beginning of the first pay-period commencing in the month shown. (b) No basic wage declared. Rates shown are those adopted by most Wages Boards. (c) The 'living wage' declared for the metropolitan area is also adopted for country areas, except at Whyalla where a loading of 5s. a week is generally payable.

<sup>&</sup>quot;minimum amounts awarded above the basic wage to particular classifications of employees for the features attaching to their work which justify payments above the basic wage, whether those features are the skill or experience required for the performance of that work, its particularly laborious nature, or the disabilities attached to its performance."

<sup>\*</sup> Commonwealth Arbitration Reports, Vol. 80, p. 3

A brief account of the Metal Trades Case is as follows:-

The Amalgamated Engineering Union, the Electrical Trades Union and other employee organizations which were parties to the Metal Trades Award, 1952 filed applications during 1953 for increased margins for all workers covered by this award.

The applications came on for hearing before Mr. Conciliation Commissioner Galvin, who decided that they raised matters of such importance that, in the public interest, they should be dealt with by the Commonwealth Court of Conciliation and Arbitration. On 16th September and 6th October, 1953, the Conciliation Commissioner, pursuant to section 14A of the Conciliation and Arbitration Act, referred these applications to the Court.

The actual claims of the trade unions were that the marginal rate of 52s, a week payable to a fitter in the metal trades should be increased to 80s, a week (86s, for certain electrical trades) with proportionate increases for other award occupations. The margins then current, with a few exceptions, had been in existence since 1947. The employees\* claims were in the nature of a test case to determine the attitude of the Court to applications for increased margins.

The Metal Trades Employers' Association and other respondents to the Metal Trades Award had counter-claimed that existing margins for skilled tradesmen should remain unaltered, while those paid to partly skilled or unskilled workers should be reduced.

The Court decided to take the Commissioner's two references together, and the matter came on for hearing before the Full Arbitration Court (Kelly C.J., Kirby, Dunphy and Morgan JJ.) in Melbourne on 13th October, 1953.

In a judgment delivered on 25th February, 1954 the Court held that a prima facie case had been made for a re-assessment of margins but that the economic situation at that time, particularly in regard to the level of costs, did not permit of such a comprehensive review. The Court decided that to avoid the creation of new disputes, to save expense and to obviate procedural difficulties, it would not reject the claims but adjourn them until 9th November, 1954.

On 25th and 26th August, 1954, summonses were filed by the employees' organizations for orders that proceedings in this case be brought forward and the hearing was resumed on 5th October, 1954.

In a judgment delivered on 5th November, 1954 the Court made an order re-assessing the marginal structure in the Metal Trades Award by, in general, raising the current amount of margin to two and a half times the amount of the margin that had been current in 1937. However, in cases in which the result of that calculation produced an amount less than the existing margin, the existing margin was to remain unaltered. In effect, this decision increased the margin of a fitter from 52s. a week to 75s. a week, increased similarly margins of other skilled occupations, and made no increase in margins of what may generally be described as the unskilled or only slightly skilled employees under the Metal Trades Award.

At the end of its judgment the Court stated that, while its decision in this case related immediately to one particular industry, it was expected to afford general guidance to all authorities operating under the Conciliation and Arbitration Act or under other legislation which provided for tribunals having power to make reference, or being subject to appeal, to the Court, where the wage or salary may properly be regarded as containing a margin. The Court added observations for the guidance of these and of other tribunals "which may regard decisions of this Court as of persuasive authority".

Extracts from the judgment were set out in some detail in Labour Report No. 44.

#### E. EMPLOYMENT AND UNEMPLOYMENT.

#### § 1. Employment.

1. Total Occupied Persons.—(i) General. The total number of occupied persons in Australia is obtained from the results of each population Census. Figures obtained from the 1933, 1947 and 1954 Censuses are shown below.

(ii) Australia. The figures in the table below are divided into three categories:—
(a) defence forces; (b) all persons fully occupied as employers, or as self-employed in businesses or on farms; and (c) wage and salary earners employed, or occupied as casual, part-time, intermittent or seasonal workers. Unemployed wage earners are excluded.

All unpaid "helpers" in non-rural industry have been included with wage and salary earners. Male unpaid "helpers" in rural industry have been included with employers and self-employed persons, as it is considered that the majority of these are sons or other close relatives of farmers working in de facto partnership, or as learners with the farm owner. Unpaid female "helpers" on farms are fairly numerous. Generally they are occupied mainly in home duties, and, with all other women occupied in unpaid home duties, have been excluded from the category of occupied persons.

TOTAL OCCUPIED PERSONS: AUSTRALIA, CENSUSES, 1933, 1947 AND 1954.

30th June.	Defence Forces.	Employers and Self-employed.			Wa	ige and Sala Earners.	ary	Total	Total Occupied Persons
		Rural Industry.	Other In dustries.	Total.	Rural Industry.	Other In- dustries.	Total.	Occupied Civilians.	including Defence Forces. (a)
				M	ALES.				
1933 1947 1954	5.8 53.2 (b): 50.9	293.5 278.9 279.2.	249.0 286.8 316.9	542.5 565.7 596.1	200.1 148.2 154.2	989.8 1,659.4 2,020.3	1,189.9 1,807.6 2,174.5	1,732.4 2,373.3 2,770.6	1,738.2 2,426.5 2,821.5
				Fen	AALES.				
1933 1947 1954	0.8	15.2 13.8 19.6	56.3 55.8 62.1	71'.5' 69.6 81.7	3.2 8.1 7.6	(c) 446.6 (d) 659.9 735.4	449.8 668.0 743.0	521.3 737.6 824.7	521.3 738.4 826.7
				Per	RSONS.				
1933 1947 1954	5.8 54.0 52.9	308.7 292.7 298.8	305.3 342.6 379.0	614.0 635.3 677.8	203.3 156.3 161.8	1,436.4 2,319.3 2,755.7	1,639.7 2,475.6 2,917.5	2,253.7 3,110.9 3,595.3	2,259.5 3,164.9 3,648.2

<sup>(</sup>a) Includes those serving outside Australia. (b) Excludes approximately 10,300 males undergoing full-time National Service Training at the time of the Census. With the exception of full-time students these persons have been included in the figures of occupied civilians. (c) Includes females in private domestic service:—106,700 in 1933, 40,200 in 1947 and 29,600 in 1954. (d) Includes an estimate of 40,400 part-time workers considered to be under-enumerated at the Census.

The numbers of males in the defence forces shown in the foregoing table include personnel serving outside Australia, namely, 13,843 in 1947 and 5,903 in 1954, who were not recorded in the Censuses taken in those years.

During the fourteen years from 1933 to 1947 the number of persons actually occupied at work increased by 905,400, or by an average of 64,700 persons per annum, whilst during the seven years from 1947 to 1954 the increase amounted to 483,300 or 69,000 per annum. Practically all of the increase in the number of occupied persons during the years 1947 to 1954 was due to the growth of the total available work force. During the previous intercensal period (1933 to 1947) the increase in the number of persons occupied comprised approximately 400,000 persons who had been unemployed in 1933 and approximately 500,000 growth in the total available work force.

The total numbers of employers, self-employed and wage and salary earners of both sexes classified at the Census as engaged in agricultural, pastoral and dairying industries declined from 512,000 in 1933 to 460,600 in 1954. There was very little movement in the figures between 1947 and 1954.

The proportion of male employers and self-employed in industries other than rural declined from 20.1 per cent. of occupied civilian males in these industries in 1933 to 14.7 per cent. in 1947, and to 13.6 per cent. in 1954. The corresponding proportion of female employers and self-employed declined from 11.2 per cent. of all occupied females in non-rural industries in 1933 to 7.8 per cent. in 1947, and remained constant at 7.8 per cent. in 1954. The increase in the number of male employers and self-employed in non-rural industries during the years 1947 to 1954 averaged only 4,300 per annum. The average increase during the same period in the number of male wage and salary earners in these industries was 51,600 per annum.

(iii) States. The following table shows the total numbers of occupied males and females in each State and Territory at the Censuses of 1947 and 1954, classified as defence forces, employers and self-employed persons, and wage and salary earners.

TOTAL OCCUPIED PERSONS: STATES AND TERRITORIES, CENSUSES, 1947 AND 1954.

			('000.)								
-y.			ar	nd			Occupie	otal d Persons g Defence es. (a)			
	June, 1947.	June, 1954.(b)	June; 1947.	June, 1954.	June, 1947.	June, 1954.	June, 1947.	June, 1954.			
			Males.								
Terri-	23.1 15.9 5.9 2.6 3.4 0.8 0.8 0.7 53.2	21.4 15.0 6.6 2.3 3.1 0.8 0.7 1.0 50.9	197.5 158.1 96.9 51.8 39.8 20.1 1.0 0.5	207.3 167.1 99.7 55.5 44.3 20.2 1.1 0.9 596.1	728.1 490.5 252.0 153.3 116.6 57.8 4.0 5.3	833.7 596.9 307.4 194.1 156.1 71.9 5.8 8.6 2,174.5	948.7 664.5 354.8 207.7 159.8 78.7 5.8 6.5 2,426.5	1.062.4 779.0 413.7 251.9 203.5 92.9 7.6 10.5 2,821.5			
rerri-	0.1  	0.5 0.8 0.2 0.1 0.1 0.1 0.1	25.4 22.5 10.2 5.2 4.3 1.8 0.1 0.1 69.6	29.0 25.3 12.5 7.0 5.6 2'.1 0.1	268.6 202.0 83.9 52.9 39.2 18.9 0.7 1.8	290.6 227.0 93.1 59.9 46.6 21.7 1.3 2.8 743.0	294.3 224.9 94.2 58.1 43.5 20.7 0.8 1.9 738.4	320.1 253.1 105.8 67.0 52.3 23.9 1.5 3.0 826.7			
		:	Persons.								
rerri-	23.4 16.3 6.0 2.6 3.4 0.8 0.8	21.9 15.8 6.8 2.4 3.2 0.9 0.8	222.9 180.6 107.1 57.0 44.1 21.9 1.1 0.6	236.3 192.4 112.2 62.5 49.9 22.3 1.2	996.7 692.5 335.9 206.2 155.8 76.7 4.7	1,124.3 823.9 400.5 254.0 202.7 93.6 7.1 11.4	1,243.0 889.4 449.0 265.8 203.3 99.4 6.6	1,382.5 1,032.1 519.5 318.9 255.8 116.8 9.1			
	Cerri-	y. June, 1947.  23.1 15.9 2.6 0.8     Terri 0.7    0.8	Defence Forces. (a)  June, 1947. June, 1954.(b)  23.1 21.4 15.9 15.0 2.6 2.6 0.8 0.7 0.8 0.7 0.7 1.0 53.2 50.9  0.4 0.8 0.7 1.0 0.1 0.8 0.8 0.9 0.8 0.8 0.8 0.8 0.8 0.9 0.8 0.8 0.7 0.7 1.1	(*000.)  Defence Forces. (a)  June.   June.   June.   1947.    1947.   1954.(b)   1947.    1947.   1954.(b)   1947.    15.9   15.0   158.1   158.1   159.1   1	(*000.)    Defence Forces (a)   Employers and Self-employed:   June, 1947.   June, 1947.   1954.   1947.   1954.	Defence Forces.	('000.)    Defence Forces. (a)   Employers and Self-employed:   Wage and Salary Earners.	Defence Forces.   Employers and Self-employed:   Wage and Salary Earners.   Occupie including Forc			

full-time National Service Training at the time of the Census. See also footnotes to previous table.

The occupied population of Australia (including defence forces but excluding unemployed, pensioners, retired, persons of independent means and dependants) increased from 1947 to 1954 by 15.3 per cent. The percentage increase in each State and Territory was as follows:—New South Wales, 11.2; Victoria, 16.0; Queensland, 15.7; South Australia, 20.0; Western Australia, 25.8; Tasmania, 17.5; Northern Territory, 37.9; and Australian Capital Territory, 60.7.

2. Wage and Salary Earners in Civilian Employment.—(i) Australia and States. Estimates are made monthly of wage and salary earners in employment (excluding employees in rural industry and female private domestics), based on Pay-roll Tax returns and supplementary returns of government employment. Pay-roll Tax returns cover only a small proportion of wage earners on rural holdings, and practically no private domestic servants. As a result, monthly estimates are not prepared for wage and salary earners in these industries. The following table shows for each State and for Australia as a whole the trend in that section of wage and salary earning employment which it is possible to estimate monthly. Figures are shown as at June, 1933 (Census) and July, 1939 (based on the National Register). From July, 1941 (commencement of Pay-roll Tax returns) the estimates are available for each month, and the table shows the level in June in each of the years 1953 to 1957. Estimates for recent months are published in the Monthly Review of Business Statistics and the Monthly Bulletin of Employment Statistics.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT.(a)

(Excluding Rural Wage Farners, Female Private Domestics, Personnel in Defence Forces and National Service Trainees in Camp.)

('000.)

	New South Wales.	Vic- toria.	Queens- land.	South Aus- tralia.	Western Aus- tralia.	Tas- mania.	Aus- tralia. (b)
	''	М	ALES.		' <u> '</u>		
	379.8	288.1	139.3	80.3	70.0	28.9	989.8
	529.9	357.5	172.8	106.7	82.9	37.4	1,293.1
	745.2	536.8	259.8	171.3	133.5	62.3	1,922.0
٠.	771.3	556.8	1 1		139.1	63.6	1,990.3
							2,049.5
٠.							2,081.7
••	810.1	585.8	283.6	186.4	138.4	66.0	2,084.7
	·	Fer	MALES.		`	`	·
•••	125.5	118.0	40.3	25.9	20.5	9.1	339.9
	168.0	142.9	53.2	34.0	26.2	11.6	437.1
	269.8	209.2	85.8	52.5	41.4	20.2	682.3
	284.3	222.1	88.6	56.6	43.4	21.2	719.7
	297.4	232.4	92.1	59.8	44.3	21.8	751.7
	305.9	238.5	93.7	62.5	45.1	23.2	773.1
٠.	309.3	240.8	96.0	62.3	44.5	22.9	780.2
		PE	RSONS.		<u> </u>	<u> </u>	
	505.3	406 1	179 6	106.2	90.5	38.0	1,329.7
							1,730.2
							2,604.3
		778.9	1				2,710.0
		808.6					2,801.2
	1,114.4	821.7	376.1	250.4	185.6	88.9	2,854.8
	1,119.4	826.6	379.6	248.7	182.9	88.9	2,864.9
		South Wales.  379.8 529.9 745.2 771.3 794.2 808.5 810.1  125.5 168.0 269.8 284.3 297.4 305.9 309.3  505.3 697.9 1,015.0 1,055.6 1,091.6 1,114.4	South Wales.   Victoria.	South Wales.   Vicinal Vicin	South Wales.   Vicinal land.   Australia.	South Wales.   Vic- land.   Australia.   Australia.	Name

<sup>(</sup>a) New series. See note (b) on page 192. Figures from June, 1953 to June, 1957 are subject to revision. (b) Includes the Australian Capital Territory and the Northern Territory.

(ii) Industrial Groups. The following table shows the estimated number of male and female wage and salary earners in civilian employment (excluding employees in rural industry, female private domestics, personnel in the defence forces and National Service trainees in camp) classified according to main industrial groups, and, in addition shows government and private employment separately. Further details of government employment are given in para. 3 below.

# WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRIAL GROUPS, AUSTRALIA.(a)

(Excluding Rural Wage Earners, Female Private Domestics, Personnel in Defence Forces and National Service Trainees in Camp.)

('000.)

	Industrial Group.	July, 1939.	June, 1953.	June, 1954.	June, 1955.	June, 1956.	June, 1957.
--	-------------------	----------------	----------------	----------------	----------------	----------------	----------------

#### MALES.

Mining and Qua	rrying			52.2	58.0	58.7	58.3	57.3	56.3
Manufacturing, e	etc.(b)			456.1	761.6	798.7	826.2	842.1	844.8
Building and Con		tion		149.7	193.2	205.7	211.8	214.6	207.3
Transport(c)				158.2	235.7	238.7	244.7	245.9	245.1
Communication				27.7	59.4	61.4	64.0	64.5	67.9
Property and Fir	ance			47.1	56.4	57.9	59.6	61.7	64.0
Retail Trade				} 212.6	£ 125.0	128.4	129.2	129.9	129.4
Wholesale and O	ther C	commerce		212.6	134.6	140.4	147.5	151.0	150.0
Public Authority	Activ	ity, n.e.i.		31.8	97.9	97.5	99.2	100.6	101.7
Health		•		17.8	25.5	25.9	26.0	26.8	27.1
Education				22.1	35.4	36.7	38.7	40.8	43.4
Personal Service	٠.			37.0	51.6	52.1	54.3	54.4	54.7
Other $(d)$				80.8	87.7	88.2	90.0	92.1	93.0
Total(b)				1,293.1	1,922.0	1,990.3	2,049.5	2,081.7	2,084.7
Government(e)				349.8	567.8	581.4	599.1	604.9	609.5
Private(b)	٠.	••	• •	943.3	1,354.2	_1,408.9	1,450.4	1,476.8	1,475.2
Total(b)				1,293.1	1,922.0	1,990.3	2,049.5	2,081.7	2,084.7
				1 . 1					

#### FEMALES.

Mining and Quarry Manufacturing, etc. Building and Consti Transport(c)	(b) ruction	::	0.3 169.0 1.2 5.2	0.9 218.4 4.3 18.3	1.0 239.0 4.7 18.7	1.1 245.7 4.9 19.7	1.2 249.9 5.1 20.7	1.2 250.8 5.3 20.4
Communication .			7.4	17.9	17.8	18.7	19.4	19.7
Property and Finan	ce		13.5	32.4	34.7	38.1	41.8	43.5
Retail Trade .		٠. ,٦	101.4	£ 109.9	115.3	121.6	122.9	121.3
Wholesale and Othe		را ۰۰		<b>ኒ 39.1 '</b>	42.3	45.0	46.3	46.8
Public Authority Ac	ctivity, n.e.i.		10.0	27.4	27.3	28.6	29.1	29.2
Health		/	34.0	68.8	70.8	73.5	77.6	79.4
Education .		]	32.0	43.3	44.9	47.9	50.5	53.8
Personal Service .			43.0	65.8	67.0	69.6	70.2	69.5
Other $(d)$ .		••	20.1	35.8	36.2	37.3	38.4	39.3
Total(b)		•••	437.1	682.3	719.7	751.7	773.1	780.2
Government(e) .		••	55.2	112.0	114.5	122.8	129.8	132.8
Private(b)	• ••	•• ]_	381.9	570.3	605.2	628.9	643.3	647.4
Total(b)		•• '	437.1	682.3	719.7	751.7	773.1	780.2

Note.—For footnotes see next page.

## WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRIAL GROUPS, AUSTRALIA(a)—continued.

	('000.)													
Industrial Group	р.	July, 1939.	June, 1953.	June, 1954.	June, 1955.	June, 1956.	June, 1957.							
		Pe	RSONS.											
Manufacturing, etc.(b) Building and Construction Transport(c) Communication Property and Finance Retail Trade Wholesale and Other Communication Health Education Personal Service		52.5 625.1 150.9 163.4 35.1 60.6 314.0 41.8 51.8 54.1 80.0 100.9	117.4	59.7 1,037.7 210.4 257.4 79.2 92.6 243.7 182.7 124.8 96.7 81.6 119.1 124.4	192.5 127.8 99.5	58.5 1,092.0 219.7 266.6 83.9 103.5 252.8 197.3 129.3 129.3 124.6 130.5	57.5 1,095.6 212.6 265.5 87.6 107.5 250.7 196.8 130.9 106.5 97.2 124.2 132.3							
Total(b)		1,730,2	2,604.3	2,710.0	2,801.2	2,854.8	2,864.9							
Government(e) Private(b)	: :: ::	405.0 1,325.2	679.8 1,924.5	695.9 2,014.1	721.9 2,079.3	734.7 2,120.1	742.3 2,122.6							
Total(b)		1,730.2	2,604.3	2,710.0	2,801.2	2,854.8	2,864.9							

(a) Figures for June, 1953 to June, 1957 are subject to revision.

(b) The manufacturing employment figures published in this table comprise (i) the series showing actual monthly employment in factories as recorded at successive annual Censuses of Factories (see Chapter VII) and (ii) persons who are outside the scope of the factory employment figures as defined and published in (ii) persons who are outside the scope of the factory employment figures as defined and published in Chapter VII, including those persons engaged in selling and distribution. The series referred to in (i) above replaces the Pay-roll Tax series of estimated employment included in the "manufacturing" figures shown in previous issues of the Official Year Book. Adoption of this new series entails adopting also new series for "Total Private Employment" and "Total Employment" for males, females and persons. (c) Includes road transport; shipping and stevedoring; rail and air transport. (d) Includes forestry, fishing and trapping; law and order; religion and social welfare; other professional; entertainment, sport and receation. (e) Includes employees of Commonwealth, State, Semi-Government and Local Government authorities. See para. 3 (i) below.

Estimates for recent months are published in the Monthly Bulletin of Employment Statistics.

A graph showing wage and salary earners in civilian employment in the main industrial groups appears on p. 174.

(iii) Factories. Actual mid-monthly factory employment derived from the results of annual factory censuses is published in the Bulletin Secondary Industries, issued by this Bureau.

Additional tables regarding employment in factories may be found in Chapter VII.—Manufacturing Industry.

An index of factory employment in Australia, published in the *Monthly Review of Business Statistics*, shows that employment in factories reached a new post-war peak in March, 1957. For the year 1956-57, the index showed the level of employment in factories to be 94 per cent. higher than the average factory employment for the three years ended June, 1939.

3. Government Employees.—(i) States and Territories. The numbers of civilian employees of Commonwealth Government, State and Semi-Government and Local Government authorities in each State and Territory at June, 1957 are shown in the following table. These include all employees of government authorities on services such as railways, tramways, banks, post office, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia.

#### CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES(a): JUNE, 1957.

State	Commonwealth.			State and Semi-Government.			Local	Governi	nent.	Total.		
Territory.	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.
I.S.W	56,151 50,321 18,191 17,118 9,082 4,564 2,796 7,343	3,644 2,197 1,309 675 2,422	65,498 23,000 20,762 11,279 5,873 3,471 9,765	54,469 38,593 37,822 13,928	25,195 8,002 9,864 6,790 3,963	124,352 62,471 48,457 44,612 17,891	26,733 13,221 17,215 3,148 3,392 2,145	2,888 1,766 907 313 328 174	18,122 3,461 3,720 2,319	89,875 58,859 50,296 20,637 2,796 7,343	42,138 13,718 13,821 9,315 5,446 675 2,422	59,611 26,083 3,471 9,765
Aust.	165,566	45,612	211,178	378,055	80,825	458,81	80	65,854	80 65,854 6,376	80 65,854 6,376 72,230	80 65,854 6,376 72,230 609,475	80 65,854 6,376 72,230 609,475 132,813

(a) See explanation above.

(ii) Australia. The following table shows at June in each of the years 1953 to 1957, in comparison with 1939, the number of civilian employees of Commonwealth, State and Semi-Government and Local Government authorities.

### CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES(a): AUSTRALIA.

June	Commonwealth.			State and Semi-Government.			Local Government.			Total.		
	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.	Males.	Fe- males.	Persons.
1939(b) 1953	56,099 159,002 156,604 160,840 162,314 165,566	41,571 41,579 44,291 46,114	67,863 200,573 198,183 205,131 208,428 211,178	363,095 373,238 377,077	65,129 67,466 72,728 77,587		59,641 61,643 65,026 65,558	5,315 5,493 5,771 6,138	64,956 67,136 70,797 71,696	349,802 567,739 581,342 599,104 604,949 609,475	112,015 114,538 122,790 129,839	721,894 734,788

(a) See explanation above.

(b) July.

### § 2. Unemployment.

The total number of persons unemployed has been recorded only at the dates of the various Censuses. The following table sets out the number of unemployed at each Census from 1933 to 1954. The percentage of unemployed at each date to all wage and salary earners, comprising those estimated to be in employment and those unemployed, is also shown.

### UNEMPLOYMENT (ALL CAUSES): AUSTRALIA, CENSUSES, 1933, 1947 AND 1954.

Date.			and Salary E Unemployed. ('000.)		Proportion of Wage and Salary Earners Unemployed. (Per Cent.)				
	  -  -	Males.	Females.	Persons.	Males.	Females.	Persons.		
June, 1933(a)		405.4	75.8	481.2	25.4	14.5	22.7		
June, 1947(b)		66.6	16.9	83.5	3.5	2.5	3.2		
June, 1954(b)	1	41.0	14.0	55.0	1.8	1.9	1.8		

<sup>(</sup>a) As recorded at the Census. In addition there was a considerable number of youths and young women of working ages who had never been employed.

(b) Persons in the work force who were not at work at the time of the Census.

In the following table males and females "not at work" are classified according to cause for the Census years 1933, 1947 and 1954. In 1947 there was a change in the form of the questionnaire which probably resulted in some variation in response. Prior to 1947, persons who were "unemployed" were requested to furnish particulars of the cause and duration of unemployment, but from 1947 onwards the enquiry was broadened to include all persons (usually engaged in industry, business, trade, profession or service) who were out of a job and "not at work" at the time of the Census for whatever reason, including any not normally associated with unemployment.

CAUSES OF UNEMPLOYMENT: AUSTRALIA, CENSUSES, 1933, 1947 AND 1954.

	Year.	Unable to Secure Em- ployment.	Tempo- rarily Laid Off.	Illness.	Accident.	Industrial Dispute.	Other and Not Stated.	Total.
				Males	ı.			
1933 1947 1954		 374,569 17,314 9,089	(a) 12,458 4,056	18,083 14,639 10,894	4,702 2,985 2,571	1,595 475 316	6,483 (b)18,743 (b)14,088	405,432 66,614 41,014
		 		Female	es.		•	-
1933 1947 1954		 62,630 2,254 3,369	(a) 2,449 1,267	9,193 4,396 3,939	434 280 291	95 24 15	3,465 (b) 7,512 (b) 5,119	75,817 16,915 14,000

<sup>(</sup>a) Not available.

Details of the number of persons receiving unemployment and sickness benefits and the payments made may be found in Chapter XV.—Welfare Services.

#### § 3. Commonwealth Employment Service.

Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the Re-establishment and Employment Act 1945 (sections 47 and 48). In brief, the main function of the Service is to assist people seeking employment to obtain positions best suited to their training, experience, abilities and qualifications; and to assist employers seeking labour to obtain employees best suited to the demands of the employers' particular class of work.

The organization and functions of the C.E.S. accord with the Employment Service Convention 1948 and Recommendation 1948 of the International Labour Organization, which were respectively ratified and adopted by Australia in December, 1949.

The C.F.S. functions within the Employment Division of the Department of Labour and National Service, on a four-tiered decentralized basis. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State, with 121 District Offices in suburban and the larger provincial centres and 340 agents in the smaller country centres. The District Offices are distributed as follows: New South Wales, 46; Victoria, 30; Queensland, 19; South Australia, 8; Western Australia, 12; Tasmania, 4; Northern Territory, 1; Australian Capital Territory, 1.

The C.E.S. includes specialized facilities for young people, persons with physical and mental handicaps, ex-service personnel, migrants and certain types of highly skilled tradesmen, rural workers and persons with professional and managerial qualifications.

Vocational guidance is provided, free of charge, in each State, other than New South Wales, by a staff of qualified psychologists. In New South Wales a similar service is provided by officers of the New South Wales Department of Labour and Industry. Vocational guidance is available to any person, but is provided particularly for young people, ex-servicemen and the physically handicapped.

<sup>(</sup>b) The majority of these persons were resting between jobs or changing jobs.

The C.E.S. has responsibilities in the administration of unemployment and sickness benefits provided under the Social Services Act 1947–1957, and of re-employment allowances provided under the Re-establishment and Employment Act 1945–1956 for certain classes of discharged members of the forces. All applicants for benefits or allowances must register at a District Employment Office, which is responsible for certifying whether or not suitable employment can be offered them. Moreover, as agents for the Department of Social Services, the C.E.S. offices handle the claims for unemployment and sickness benefits to various stages.

The Service is responsible for placing in employment migrant workers sponsored by the Commonwealth under the Commonwealth Nomination and similar schemes. This includes arranging for them to move to their initial employment and for their admission, if necessary, to Commonwealth migrant hostels. Assistance to obtain employment is provided to other migrants as required. From the inception of the various free and assisted schemes, including the Displaced Persons Scheme, to the end of July, 1957, more than 170,000 British and European migrant workers had been placed in employment by the C.E.S.

Since 1951, the Service has been responsible for recruiting experts for the Colombo Plan, the United Nations Expanded Programme of Technical Assistance and other international technical assistance assignments. The principal spheres in which experts have been supplied are agriculture, education, engineering, geology, health and economic and scientific research and development.

In association with its placement activities, the Service carries out regular surveys of the labour market in all areas and industries and supplies detailed information to interested Commonwealth and State Government Departments and instrumentalities and to the public. It also advises employers, employees and others on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

The C.E.S. is responsible for the medical examination and interview of young men for training under the National Service Act 1951-1957, which is administered by the Department of Labour and National Service. The Department also administers the provisions of the Act relating to the protection of the rights of National Service trainees in relation to their civil employment.

The Service completed its eleventh year of operation in May, 1957. During the year ended June, 1957 there were 648,433 new registrations of applicants for employment, of whom 408,121 were referred to employers and 290,396 placed in employment. In the same period 381,076 new vacancies were notified. Vacancies unfilled at the end of June, 1957 numbered 18,447.

Prior to the setting up of the Commonwealth Employment Service, State Labour Exchange Organizations existed in several States but they have been superseded. Details of the organization and administration of the State Exchanges were given in *Labour Report* No. 30, p. 133.

### § 4. Industrial Disputes.

1. General.—Information with regard to the collection of particulars and the methods of tabulation of industrial disputes involving stoppage of work is given in the *Labour Report*.

Particulars of all disputes in progress during the year are included in the annual figures whether the dispute commenced in that year or was in progress at the beginning of the year. Consequently, details of "the number of disputes" and "workers involved" in disputes which commenced in the previous year and were still in progress during the current year will be duplicated in the figures for both years. The number affected is given in a footnote so that allowance can be made in comparing annual figures.

2. Industrial Groups.—(i) Year 1956. The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1956, classified according to industrial groups.

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## INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): INDUSTRIAL GROUPS, AUSTRALIA, 1956.(b)

				Wor	kers Invo	ived.	Working	Esti-
Class.	Industrial Group.	Nu be		Directly.	In- directly. (c)	Total.	Days Lost.	Loss in Wages. (£.)
I. II. III. IV. V. VII. VIII. IX. XI. XIII. XIV.	Engineering, Metal Works, etc. Food. Drink, etc. Clothing, Textiles, etc. Books, Printing, etc. Other Manufacturing Building (ii) Other Mining, Quarries, etc. Railway and Tramway Services Air and Other Land Transport. (i) Stevedoring (ii) Shipping, etc. Pastoral, Agricultural, etc. Domestic, Hotels, etc.	2	61 48 3 2 50 81 65 5 40 17 298 6 5	8,281 18,075 1,717 1,217 7,540 20,764 124,626 7,889 36,322 3,008 171,457 2,710	2,930 3,049 2,650 461 2,005 899 1,234	11,211 21,124 1,717 1,217 10,190 21,225 126,631 7,889 37,221 4,242 171,457 466 2,796	180,382 44,236 3,916 1,234 54,949 188,354 12,633 33,836 6,149 480,056 1,621 16,342	693,262 136,503 11,266 4,092 188,636 259,582 683,710 69,840 101,317 23,918 1,678,774 47,564
	Total	1,3	306	414,590	13,393		1,121,383	<u> </u>

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more: (b) Two disputes in New South Wales and one in Victoria commenced in 1955 and were still in progress at the beginning of 1956. Particulars of these disputes have been included in statistics of disputes for both 1955 and 1956. (c) Persons thrown out of work at the establishments where the stoppages occured but not themselves parties to the dispute.

## INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK)(a): INDUSTRIAL GROUPS, AUSTRALIA, 1957.(b)

			Worl	cers Invol	veď.		Estî- mated	
Class.	Industrial Group.	Num- ber.	Directly.	In- directly. (c)	Total.	Working Days Lost.	Loss in Wages.	
I. III. IV. V. VI. VII. VIII.	Wood, Furniture, etc. Engineering, Metal Works, etc. Food, Drink, etc. Clothing, Textiles, etc. Books, Printing, etc. Other Manufacturing Building  (i) Coal-mining (ii) Other Mining, Quarries, etc. Railway and Tramway Services Air and Other Land Transport (i) Sevedoring	72 33 1 1 58 50 518 7 35 17 273	32,488 110,162 3,138 6,925 23,637	4,788 159 81 3,630 74 284 603	12,093 11,506 242 169 16,674 32,562 110,446 3,741 6,930 23,637 114,060	33,769 2,178 338 48,358 45,907 206,977 5,209 5,586 24,665	123,504 5,691 382 186,657 162,153 761,109 30,356 17,244 119,102	
XI. XII. XIII. XIV.	(ii) Shipping, etc. Pastoral, Agricultural, etc. Domestic, Hotels, etc. Miscellaneous	3	168	6	871 174 3,938	3,860 429	13,605	
	Total	1,103	325,995	11,048	337,043	630,213	2,308.622	

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Two disputes, one in New South Wales and the other in Western Australia, commenced in 1956 and were still in progress at the beginning of 1957. Particulars of these disputes have been included in statistics of disputes for both 1956 and 1957. (c) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

<sup>(</sup>ii) Year 1957. The following table gives for Australia as a whole particulars of industrial disputes which were in progress during 1957, classified according to industrial groups.

A graph showing, for the years 1948 to 1957, the working days lost as a result of industrial disputes in the main industrial groups will be found on p. 175.

3. States and Territories.—The following table gives particulars of the number of industrial disputes in each State and Territory, together with the number of workers involved, and the losses in working days and wages caused by disputes which were current during each of the years 1939 and 1955 to 1957.

INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK)(a): STATES AND TERRITORIES.

			Wo	orkers Involv	ed.	Working	Estimated
State or Territory.	Year. Nun	Number.	Directly.	Indirectly.	Total.	Days Lost.	Loss in Wages. (£.)
New South Wales {	1939 <sup>-</sup> 1955 1956 1957	386 1,072 878 761	139,301 260,353 219,458 253,041	9,230 13,678 6,796 5,950	148,531 274,031 226,254 258,991	410,183 673,325 611,279 505,910	419,330 2,230,935 2,199,764 1,860,101
Victoria {	1939 1955 1956 1957	10 66 54 47	1,989 33,255 35,594 8,728	2,287 2,283 453	2,169 35,542 37,877 9,181	27,313 138,507 111,665 13,444	19,946 435,356 386,139 45,576
Queensland	1939 1955 1956 1957	5 274 269 221	373 83,026 112,409 43,123	3,626 2,973 4,611	375 86,652 115,382 47,734	1,870 99,318 238,812 95,300	1,753 328,046 815,592 348,422
South Australia	1939 1955 1956 1957	2 43 21 13	170 23,969 18,527 6,274	129 7	175 24,098 18,527 6,281	1,880 66,881 74,666 3,703	1,416 203,182 259,636 12,571
Western Australia	1939 1955 1956 1957	7 16 14 14	1,108 9,504 9,780 5,352	145 345 1,341	1,253 9,849 11,121 5,352	14,100 9,582 31,944 3,068	9,578 32,704 111,504 10,801
Tasmania	1939 <sup>-</sup> 1955 1956 1957	48 48 45 36	53 13,204 15,969 7,236	 240 	53 13,444 15,969 7,236	166 20,387 46,907 5,330	93 70,927 172,206 18,294
Northern Territory	1939 1955 1956 1957	2 12 24 9	234 1,013 2,770 2,183	40 2 	274 1,015 2,770 2,183	3,642 2,740 5,197 2,428	3,600 8,551 18,194 9,241
Australian Capital Territory	1939 1955 1956 1957	 1 1 2	 16 83 58	27	16 83 85	144 913 1,030	620 4,026 3,616
Australia	1939 1955 1956 1957	416 1,532 1,306 1,103	143,228 424,340 414,590 325,995	9,602 20,307 13,393 11,048	152,830 444,647 427,983 337,043	459,154 1,010,884 1,121,383 630,213	455,716 3,310,321 3,967,061 2,308,622

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Persons thrown out of work at the establishments where the stoppages occurred but not themselves parties to the dispute.

Detailed information on industrial disputes is given in the Labour Report.

4. Duration.—The following table gives particulars of industrial disputes during 1956 and 1957 in the three groups "Coal-mining", "Stevedoring" and "Other Industries", classified according to duration.

DURATION OF INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK)(a): AUSTRALIA.

	1956.				1957.			
Duration.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.
	Nu	MBER O	f' Dispu	TES:				
1 day and less	463	214	101	778	342	216	113	671
2 days and more than 1 day	100	45	63	208	93	31	44	168
3 days and more than 2 days	34	11	27	72	34	13	48	95
Over 3 days and less than I week	16:	1.1	37	64 <sup>-</sup>	111	. 8	35	54
1 week and less than 2 weeks	36	8	64	108	19	. 3	43	65
2 weeks and less than 4 weeks	12	9.	18	39	7	1 1	[ 18 ]	26
4 weeks and less than 8 weeks	] 4		26	30	11	1	8.	20
8 weeks and over		١	1 7	7	1		3 '	4
Total	665	298	343	1,306	518	273	312	1,103

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more.

### DURATION OF INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): AUSTRALIA—continued.

	]	19	956.		1957.						
Duration.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.			
Workers Involved.											
1 day and less 2 days and more than 1 day 3 days and more than 2 days Over 3 days and less than 1 week 1 week and less than 2 weeks 2 weeks and less than 4 weeks 4 weeks and less than 8 weeks 8 weeks and over  Total	14,369 5,067 2,359 4,176 4,629 227	117,352 16,930 1,754 1,478 6,028 27,915	12,143 5,696 8,723 13,181 2,806 2,330 2,105	296,067 43,442 12,517 12,560 23,385 35,350 2,557 2,105	17,578 3,896 2,197 3,531 3,952 9,906 240	6,924 8,158 2,976 345 540 3,849	5,350 3,904 7,281 7,713 2,483	241,96 29,855 15,955 12,45- 11,589 6,97: 16,911 1,336			
	Wo	RKING :	Days L	ost.							
1 day and less 2 days and more than 1 day 3 days and more than 2 days Over 3 days and less than 1 week 1 week and less than 2 weeks 2 weeks and less than 4 weeks 4 weeks and less than 8 weeks 8 weeks and over	95,770 26,622 12,670 8,765 23,929 24,902 5,696	25,673 4,550 5,531 41,882	20,709 12,977 35,973	239,142 73,004 30,197 50,269 134,678 394,049 60,317 139,727	31,271 10,662 6,961 12,872	11,802 17,953 10,300 1,745 7,234 33,113	8,522 12,210 23,621 46,214 23,633	186,126 51,595 40,825 40,882 60,831 41,095 121,960 86,899			
· Total	198,354	480,056	442,973	1,121,383	206,977	128,532	294,704	630,213			

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more.

5. Causes.—(i) General. In issues of the Official Year Book prior to No. 40 the causes of industrial disputes were classified in some detail for all industries combined. As from 1950 a new classification was introduced and stoppages are now analysed in three separate groups, "Coal-mining", "Stevedoring" and "Other Industries". This dissection has been made because the pattern of the disputes in coal-mining and stevedoring differs significantly from that in other industries.

Under this classification, causes are grouped under four main headings:—(1) Wages, Hours and Leave; (2) Physical Working Conditions and Managerial Policy; (3) Trade Unionism; (4) Other Causes. The first group is restricted to disputes involving general principles relating to wages, hours and leave; minor questions regarding the claims to pay or leave by individual employees are included under managerial policy. The second group comprises disputes regarding physical working conditions and general questions of managerial policy, which term covers those arising from disciplinary action, the promotion of employees, the employment of particular individuals, personal disagreements between employees and supervisory staff and disputes arising from the computation of wages, leave, etc., in individual cases. The third group includes stoppages over employment of non-unionists, inter-union and intra-union disputes, disputes over recognition of union activities, and sympathy stoppages in support of employees in another industry. The last group comprises disputes by way of protest against situations not arising from the usual relationship of employer and employee, e.g., political matters, and cases (mainly occurring in the coalmining industry) where the cause of the stoppage is not officially made known to the management.

As the items included under these headings differ somewhat from those included under the similar headings used for classifying causes of disputes in years prior to 1950, figures for 1950 and subsequent years are not strictly comparable with those for earlier years.

(ii) Industry Groups, 1956. The following table shows particulars of industrial disputes for 1956 and 1957 classified according to cause in three industry groups:—

## CAUSES OF INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): AUSTRALIA.

		19	56.			19	57.				
Cause of Dispute.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.	Coal- mining.	Steve- doring.	Other Indus- tries.	All Indus- tries.			
	Nu	MBER OI	DISPU	TES.							
Wages, Hours and Leave	5	21	81	107	5	7	63	75			
Physical Working Conditions and	275	200		500							
Managerial Policy	375			792	299	178		674			
Trade Unionism	66		25	106	33	12	25	70			
Other	219			301	181			284			
Total	665	298	343	1,306	518	273	312	1,103			
Workers Involved.											
Wages, Hours and Leave Physical Working Conditions and	1,467	61,288	67,771	130,526	273	857	61,578	62,708			
Managerial Policy	57.288	52,700	39,220	149,208	51,853	67,922	32,088	151,863			
Trade Unionism	11,795			19,816	3,709	3,504		13,612			
Other	56,081			128,433	54,611	41,777		108,860			
Total	126,631		129,895				112,537	337,043			
			DAYS L				,				
Wages, Hours and Leave	1,467	392,795	273,702	667,964	502	1,409	179,928	_ 181,839			
Physical Working Conditions and	1							-			
Managerial Policy	115,804		129,570		121,582			321,422			
Trade Unionism	18,053			40,844	6,178	2,537		19,460			
Other	63,030					18,760		107,492			
Total	198,354	480,056	442,973	1,121,383	206,977	128,532	294,704	630,213			

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more.

(iii) Years 1939 and 1953 to 1957. The following table gives particulars of industrial disputes according to causes for the years 1939 and 1953 to 1957.

### CAUSES OF INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): AUSTRALIA. (b)

(INVOLVI	NG SI	OPPAGE	OF WOR	(K) (a): A	USTRALI	A. (b)	
Cause of Dispute.		1939.	1953.	1954.	1955.	1956.	1957.
		Num	BER OF DIS	SPUTES.			<del></del>
Wages, Hours and Leave		96	105	100	201	107	75
Physical Working Cond	itions			0.55			
and Managerial Policy	• •	197	896	975	887	792	674
Trade Unionism	• •	50	187	160	172	106	70
Other		73	271	255	272	301	284
Total	1	416	1,459	1,490	1,532	1,306	1,103
		Wor	RKERS INVO	LVED.			
Wages, Hours and Leave		29,290	89,443	42,923	139,522	130,526	62,708
Physical Working Cond	itions				i .		-
and Managerial Policy	1	56,783	218,809	214,060	184,449	149,208	151,863
Trade Unionism	l	18,651	26,176	45,437	37,998	19,816	13,612
Other		48,106	161,618	67,654	82,678	128,433	108,860
Total	!	152,830	496,046	370,074	444,647	427,983	337,043
		Wor	KING DAYS	Lost.			
Wages, Hours and Leave		128,525	208,776	136,738	467,591	667,964	181,839
Physical Working Cond	itions	· ·	1 1	,			,
and Managerial Policy		189,510	657.835	413,118	398,147	295,633	321,422
Trade Unionism		54,749	58,038	278,332	62,103	40,844	19,460
Other	- ::	86,370	126,181	73,451	83,043	116,942	107,492
Total	1	459,154	1,050,830	901,639	1,010,884	1,121,383	630,213

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Owing to the use of a new classification, figures for 1953 to 1957 are not strictly comparable with those for 1939.

<sup>6.</sup> Results.—In issues of the Official Year Book prior to No. 40, tables were included showing analyses of the results of industrial disputes over a period of years. This tabulation was discontinued because of the difficulty of obtaining the details necessary to make a classification in precise terms of the results of industrial disputes.

7. Methods of Settlement.—(i) Year 1956. The following table shows particulars of industrial disputes for 1956 classified according to method of settlement, in three industry groups:—

## INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): METHODS OF SETTLEMENT, AUSTRALIA, 1956.(b)

121 5 2 2	5	113	239
5 2		1	239
2	••	_	
			•
1		72 4	74
	1	23	24
56			56
!	5	1	(
•••	• •	••	••
1	37	l	31
		2	
4//	249	127	85
	107	343	1,30
VED.			
10.968	616	16 005	27,58
534		32	56
[			
199			
	• •	15,992	
1,620		15,992 1,969	
	::		
1,620	26		3,58 2,70
		2,674	3,58 2,70 7,80
1,620	26 943	1,969	2,70 7,80 98
1,620		2,674	3,58 2,70 7,80
1,620		1,969 2,674 42	2,70 7,80 98:
7,808	943	2,674	2,70 7,80 98:
7,808	 943  8,660 	1,969 2,674 42 	2,70 7,80 98:  8,67
7,808	 943  8,660	1,969 2,674 42	2,70 7,80 98:
	477 664 VED.	VED. 10,968 534 616	2 249 127 343 VED.

26

1,978

9,940

466,084

479,629

29,271

127,142

197,202

60

22,022

238

364

442,973 1,119,804

238,130

22,048

29,271 2,216

10,000

831,356

364

4. Commonwealth and Commonwealth-Statelegislation
(a) Industrial Tribunals under—
(i) Conciliation and Arbitration Act
(ii) Coal Industry Acts
(iii) Stevedoring Industry Act
(iv) Other Acts

8. By other methods
Total ...

(b) By reference to Commonwealth Government officials

5. By filling places of workers on strike or locked out...

6. By closing down establishment permanently

7. By resumption without negotiation

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) As there are usually disputes in progress at the end of each year, totals in the above table will not necessarily agree with those shown in preceding tables.

(ii) Year 1957. The following table shows particulars of industrial disputes for 1957 classified according to method of settlement, in three industry groups:—

## INDUSTRIAL DISPUTES (INVOLVING STOPPAGE OF WORK) (a): METHODS OF SETTLEMENT, AUSTRALIA, 1957.(b)

WIETHOUS OF SETTLEMENT	, AUSIK	ALIA, 193		,
Method of Settlement.	Coal- mining.	Steve- doring.	Other Industries.	Ali Industri <b>es</b> .
Number of D	ISPUTES.			
By private negotiation	67	8	104 5	179 9
<ol> <li>State legislation—         <ul> <li>(a) Under State Conciliation, etc., legislation</li> <li>(b) By reference to State Government officials</li> <li></li> </ul> </li> </ol>	2		60	62 1
(b) By reference to State Government officials 4. Commonwealth and Commonwealth-State legislation— (a) Industrial Tribunals under— (i) Conciliation and Arbitration Act		1	41	42
(ii) Coal Industry Acts (iii) Stevedoring Industry Act	26	5	2	42 28 5
(iv) Other Acts (b) By reference to Commonwealth Government officials		44		' ' 44
<ul><li>5. By filling places of workers on strike or locked out</li><li>6. By closing down establishment permanently</li></ul>				
7. By resumption without negotiation	417 1 518	$\frac{214}{273}$	$-\frac{93}{7}$	724 9 1,103
Workers Inv			1 312	1,103
1 Deministration		5 700	17.026	30,464
By private negotiation	6,858 824	5,780	17,826 338	1,162
<ul> <li>(a) Under State Conciliation, etc., legislation</li> <li>(b) By reference to State Government officials</li> <li>4. Commonwealth and Commonwealth-State legislation—</li> </ul>	405 33	! ::	11,783	12,188
(a) Industrial Tribunals under— (i) Conciliation and Arbitration Act (ii) Coal Industry Acts	2,736	20	6,001 64	6,021 2,800
(iii) Stevedoring Industry Act (iv) Other Acts (b) By reference to Commonwealth Government	::	6,133	::	6,133
officials 5. By filling places of workers on strike or locked out	] ::	7,124 	::	7,124
6. By closing down establishment permanently 7. By resumption without negotiation 8. By other methods	99,577	94,942 61	75,258 1,267	269,777 1,341
Total	110,446	114,060		
Working Day	····			
By private negotiation	17,890 11,541	7,972 	129,579 1,639	155,441 13,180
<ol> <li>State legislation—         <ul> <li>(a) Under State Conciliation, etc., legislation</li> <li>(b) By reference to State Government officials</li> </ul> </li> </ol>	936 268		45,986	46,922 268
Commonwealth and Commonwealth-State legislation—     (a) Industrial Tribunals under—     (i) Conciliation and Arbitration Act		40	39,930	39,970
(ii) Coal Industry Acts (iii) Stevedoring Industry Act	10,093	41,862	109	10,202 41,862
(iv) Other Acts (b) By reference to Commonwealth Government officials		 5,578		 5,578
<ol> <li>By filling places of workers on strike or locked out.</li> <li>By closing down establishment permanently</li> </ol>		• • •		
7. By resumption without negotiation 8. By other methods	165,898 351 206,977	73,063 17 128,532	75,769 1,692 294,704	314,730 2,060 630,213
Total		120,332		6) As there

<sup>(</sup>a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) As there are usually disputes in progress at the end of each year, totals in the above table will not necessarily agree with those shown in preceding tables.

### F. WORKERS' COMPENSATION LEGISLATION.

A conspectus of the principal provisions of Workers' Compensation Acts in force in Australia at 30th June, 1957 will be found in Labour Report No. 44, pp. 142-149.

#### G. LABOUR ORGANIZATIONS.

#### § 1. Labour Organizations in Australia.

- 1. Registration.—(i) Under Trade Union Acts. In earlier issues of the Official Year Book (see No. 39, p. 448) reference was made to the registration of trade unions under the Trade Union Acts. In general the available information is inadequate for statistical purposes.
- (ii) Under State Industrial Legislation. Information with regard to registrations of employers' associations and trade unions under the various State Industrial Arbitration Acts will be found in earlier issues of the Official Year Book (see No. 39, p. 448).
- (iii) Under the (Commonwealth) Conciliation and Arbitration Act. Under Part VIII. of the Conciliation and Arbitration Act 1904–1956 any association of employers in any industry who have, or any employer who has, employed, on an average taken per month, not less than 100 employees during the six months preceding application for registration, or any association of not less than 100 employees in any industry, may be registered.\* Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1956 the number of employers' organizations registered under the provisions of the Conciliation and Arbitration Act was 58. The number of unions of employees registered at the end of 1956 was 154, with a membership of 1,470,112, representing 81 per cent. of the total membership of all trade unions in Australia.
- 2. Particulars regarding Trade Unions.—(i) Types. The trade unions in Australia are very diverse in character, and range from the small independent association to the large interstate organization, which, in its turn, may be a branch of an international body. Broadly speaking, there are four distinct classes of labour organizations:—(i) the local independent; (ii) the State; (iii) the interstate; and (iv) the Australasian or international; but a number of variations occur from each of these classes. The schemes of organization of interstate or federated unions vary greatly in character. In some unions the State organizations are bound together under a system of unification with centralized control, while in others the State units are practically independent and self-governing, the federal bond being loose and existing only for one or two specified purposes.
- (ii) Number and Membership. Returns showing membership by States as at 31st December each year are obtained for all trade unions and employee organizations. The affairs of single organizations are not disclosed in the published results and this has assisted in securing complete information. The Bureau is indebted to the secretaries of trade unions for their co-operation in supplying information. The following table shows the position at the end of 1939, 1955 and 1956.

TRADE UNIONS: NUMBER AND MEMBERSHIP.

State or	Number of Separate Unions.			Num	ber of Mer	Percentage Increase in Membership.(a)			
Territory.	1939.	1955.	1956.	1939.	1955.	1956.	1939.	1955.	1956.
New South Wales	200	235	237	358,391	731,960	736,152	3.4	-0.1	0.6
Victoria	149	160	162	216,803	446,372	441,286	0.8	2.9	-1.1
Queensland	114	130	135	180,653	305,509	314,782	6.5	0.1	3.0
South Australia	117	138	140	67,282	146,422	147,728	8.7	-0.8	0.9
Western Australia	141	154	157	67,833	111,959	110,447	0.1	2.2	1.4
Tasmania	79	101	101	22,062	51,401	52,708	4.8	2.2	2.5
Northern Territory	4	20	23	761	2,440	2,352	5.6	12.5	-3.6
Australian Capital		1		i				i	1
Territory	15	32	33	1,685	5,799	5,953	9.6	-2.9	2.7
Australia	(b) 380	(b) 372	(b) 375	915,470	1,801,862	1,811,403	3.4	0.8	0.5

(a) On preceding year. (b) Without intersta

(b) Without interstate duplication. See letterpress below.

Note.—Minus sign (-) denotes decrease.

<sup>•</sup> Under the Public Service Arbitration Act an association of less than 100 employees may be registered as an organization, provided that its members comprise at least three-fishs of all persons engaged in that industry in the Service. Such organizations are included in the figures shown below.

In the preceding table, under the heading "Number of Separate Unions", a union reporting members in a State is counted as one union within that State. The figures by States do not add to the Australian total (shown in the last line) because a union represented in more than one State is included in the figure for each State in which it is represented, but is counted only once in the Australian total.

Because of the difficulties involved, the collection of statistics relating to the number of branches of trade unions appearing in issues of the Official Year Book prior to No. 39

was discontinued.

(iii) Classification in Industrial Groups. The following table shows the number of unions and members thereof in Australia at the end of each of the years 1939, 1955 and 1956. Compared with that in 1939, membership in 1956 had increased by 98 per cent.

TRADE UNIONS: INDUSTRIAL GROUPS, AUSTRALIA.

	19	39.	19	55.	19	56.
Industrial Group.	No. of Unions.	No. of Members.	No. of Unions.	No. of Members.	No. of Unions.	No. of Members.
Manufacturing—	4	27,990		47 670	6	46,081
I. Wood, Furniture, etc II. Engineering, Metal Works,	-	27,990	6	47,678	0	40,001
etc	22	99,731	15	266.897	15	267,141
III. Food, Drink, Tobacco, etc.	35	80,328	37	106,865	35	105,230
IV. Clothing, Textiles, etc	12	68,847	7	107,618	7	105,064
V. Books, Printing, etc	8	22,303	6	41,514	6	42,464
VI. Other Manufacturing	37	52,074	36	85,023	38	83,537
VII. Building	28	45,651	29	134,224	29	145,448
VIII. Mining, Quarrying, etc	13	48,812	13	46,641	13	47,081
IX. Railway and Tramway Services	29	105,938	25	146,401	25	145,791
X. Air and Other Land Transport	6	19,488	9	66,627	10	60,293
XI. Shipping, etc	21	28,760	14	41,612	14	39,328
XII. Pastoral, Agricultural, etc	. 5	40,276	3	66,224	. 3	64,717
XIII. Domestic, Hotels, etc	18	13,177	12	37,722	12	38,209
XIV. Miscellaneous—		į l				1
(i) Banking, Insurance and	••				••	
Clerical	20	39,013	19	114,218	20	110,734
(ii) Public Service	50	89,848	62	203,437	63	209,497
(iii) Retail and Wholesale (iv) Municipal, Sewerage and	8	36,290	12	71,583	12	72,635
Labouring.	11	46,552	10	83.572	10	86,231
(v) Other Miscellaneous	53	50,392	57	134,006	57	141,927
Total	380	915,470		1,801,862		1,811,408

<sup>(</sup>a) Without interstate duplication. See letterpress above.

(iv) Number of Members and Proportion of Wage and Salary Earners. The following table shows the estimated percentages of wage and salary earners in employment who are members of trade unions. As current estimates of wage and salary earners in employment do not include employees engaged in rural industry or females in private domestic service the percentages have been calculated on figures obtained by adding to the end of year estimates the number of employees in rural industry and females in private domestic service recorded at the 1947 and 1954 Censuses. For this reason, and also because the membership of trade unions includes some persons not in employment, the percentages shown in the table must be regarded as approximations.

TRADE UNIONS: NUMBER OF MEMBERS AND PROPORTION OF TOTAL WAGE AND SALARY EARNERS, AUSTRALIA.

	Year.		Nun	ber of Meml	bers.	Proportion of Total Wage and Salary Earners. (Per cent.)				
			Males.	Females.	Persons.	Males.	Females.	Persons.		
1939			778,336	137,134	915,470	52	24	44		
1952			1,354,248	283,294	1,637,542	67	40	60		
1953			1,381,103	298,655	1,679,758	67	40	60		
1954			1,448,223	339,281	1,787,504	68	44	62		
1955			1,464,016	337,846	1,801,862	68	43	61		
1956			1,470,606	340,802	1.811.408	67	43	61		

(v) Interstate or Federated Trade Unions. The following table gives particulars of the number and membership of interstate or federated unions in 1956:—

INTERSTATE OR FEDERATED TRADE UN	NIONS(a):	AUSTRALIA.	1956.
----------------------------------	-----------	------------	-------

		Union	s Operatin	g in—		Total.
Particulars.	2 States.	3 States.	4 States.	5 States.	6 States.	10tar.
Number of Unions , , , Members	14 33,864	8 61,257	22 142,799	33 425,861	66 928,870	143 1,592,651

<sup>(</sup>a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory and in the Australian Capital Territory.

The number of organizations operating in two or more States increased from 72 in 1912 to 143 in 1956, and the ratio of the membership of such organizations to the total membership of all organizations rose from 65 to 88 per cent. during the same period.

3. Central Labour Organizations.—In each of the capital cities and in a number of industrial centres elsewhere, delegate organizations, consisting of representatives from a group of trade unions, have been established. Their revenue is raised by means of a per capita tax on the members of each affiliated union. In most of the towns where such central organizations exist, the majority of the local unions are affiliated with the central organization, which is usually known as the Labour or the Trades Hall Council. In Western Australia a unified system of organization extends over the industrial centres throughout the State. In this State there is a provincial branch of the Australian Labour Party, having a central council and executive, and metropolitan and branch district councils, with which the local bodies are affiliated. The central council, on which all district councils are represented, meets periodically. In the other five States, however, the organization is not so close, and, while provision usually exists in the rules of the central council at the capital city of each State for the organization of district councils or for the representation of the central council on the local councils in the smaller industrial centres of the State, the councils in each State are generally independent bodies.

The table below shows the number of metropolitan and district or local labour councils, together with the number of unions and branches of unions affiliated therewith in each State at the end of the year 1956:—

CENTRAL LABOUR ORGANIZATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1956.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Total.
Number of Councils Number of Unions and	-11	9	13	6	10	5		1	55
Branch Unions affiliated	290	262	161	141	399	103	••	22	1,378

The figures given in the preceding table concerning the number of unions do not necessarily represent separate unions, since the branches of a large union may be affiliated with the local trades councils in the several towns in which they are represented.

A Central Labour Organization, now called the Australian Council of Trade Unions, came into being during 1927. The Council was created to function on behalf of the trade unions of Australia, and was founded at an All-Australian Trade Union Congress held in Melbourne in May, 1927. The Australian Council of Trade Unions consists of affiliated unions and affiliated Metropolitan and/or State Labour Councils and Provincial Councils. The Metropolitan or State Labour Council in each State is the State Branch of the Australian Council of Trade Unions and has the right to appoint one representative to act on the executive of the Council. In addition to the representatives of the State Branches of

the A.C.T.U., six delegates are elected by and from Congress, one from each of the following industry groups of unions:—Building, Food and Distributive Services, Manufacturing, Metal, Services, Transport. To this Executive is added the four officers, namely, President, two Vice-Presidents, and Secretary, who are elected by and from the Australian Congress of Trade Unions.

The objectives of the Australian Council of Trade Unions are the socialization of industry, i.e., production, distribution and exchange, and the utilization of the resources of Australia for the benefit of the people—ensuring full employment, with rising standards of living, real security and full cultural opportunities for all.

The methods to be adopted are:—the closer organization of the workers by the transformation of the Australian trade union movement from the craft to an industrial basis, by grouping of unions in their respective industries and by the amalgamation of unions with a view to the establishment of one union in each industry; the consolidation of the Australian Labour Movement, with the object of unified control, administration and action; the centralized control of industrial disputes; educational propaganda among unions; political action to secure satisfactory working-class legislation.

The Australian Council of Trade Unions is the first interstate body in Australia with authority to deal with industrial matters of an interstate character affecting the trade union movement generally. It is also the body responsible for submitting to the Commonwealth Government the names of persons suitable for selection as the Australian workers' delegate to the annual International Labour Conference.

Between the trade union and the central organization of unions may be classed certain State or district councils organized on trade lines, and composed of delegates from separate unions whose members' interests are closely connected because of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the iron, steel, or brass trades, or with the building trades, may be so classed.

#### § 2. International Labour Organization.

The International Labour Organization (I.L.O.) was established on 11th April, 1919 as an autonomous institution associated with the League of Nations. Its original constitution was adopted as Part XIII. of the Treaty of Versailles and formed part of other treaties of peace. During the years between its establishment and the outbreak of the 1939-45 War, the I.L.O., with headquarters at Geneva, played a leading role in promoting the improvement of labour conditions throughout the world.

In 1940, in order to ensure that the I.L.O. should be able to continue to function freely, a working centre was established at Montreal, Canada. In 1946 the Organization became the first of the specialized agencies of the United Nations. Under the terms of agreement, the United Nations recognizes the I.L.O. as a specialized agency having responsibility in the field defined by its constitution, which embraces labour conditions, industrial relations, employment organization, social security and other aspects of social policy. The Organization has three basic parts. These are the International Labour Conference, its highest authority, which as a rule meets annually; the Governing Body, its executive council, which usually meets four times each year; and the International Labour Office, which provides the secretariat of the Organization. The Conference is composed of delegations from the Member States of the Organization. In October, 1957, there were 79 Member States, each of which is entitled to be represented by four delegates—two Government, one representing employers and one representing workers, together with their advisers. The Governing Body consists of the representatives of twenty governments and ten employers' and ten workers' representatives. Of the twenty government representatives, half are from the ten countries of major industrial importance and ten are elected by the remaining governments. Particulars are given in Labour Report No. 44 of the proceedings of International Labour Conferences up to the 39th Session, held in Geneva in June, 1956.

#### H. COMPARATIVE INDEX NUMBERS.

In order to show the relative movements of certain price and related data, the following table of annual and quarterly index numbers for the six capital cities combined has been compiled with a common base 1911 = 1,000.

### COMPARATIVE INDEX NUMBERS FOR THE SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capital Cities, 1911 = 1,000 (a).)

			I	Retail Pri	ce Index	Number	s.				
Period.		Groo	i and teries.	Rent (4 and 5 R'med Houses)	Cloth-	Miscel- laneous.	Series Price	"C" Retail Index.	Nomi- nal Wage Rates, Adult Males.	Ra	" Wage tes. (d)
Year— 1911 1914 1921 1928 1932 1938		1, 1, 1, 1,	000 144 902 761 425 584 657	1,000 1,082 1,410 1,743 1,336 1,540 1,577	e1,000 1,140 1,883 1,507 1,215 1,253 1,271	e1,000 1,140 1,537 1,537 1,458 1,463 1,465	1, 1, 1, 1,	000 140 680 675 377 488 526	1,000 1,081 1,826 1,963 1,639 1,799 1,846	1, 1, 1,	000 948 087 172 190 209 210
1949 1950 1951 1952 1953 1954 1955	50 2,81 51 3,6 52 4,5 53 4,7 54 4,7		2,492 2,800 3,649 4,516 4,723 4,776 5,027		3,019 3,455 4,156 4,657 4,872 4,865 4,894	2,037 2,184 2,555 2,980 3,126 3,139 3,168	2, 3, 3, 3,	349 589 124 645 820 860 970	3,210 3,596 4,495 5,241 5,539 5,632 5,773	1, 1, 1, 1,	367 389 439 438 450 459 454
1956 1957 Quarter— 1956—	.: ::	A 5,227 5,315	B 5,514 5,311	2,166 2,256	4,930 5,075	3,403 3,611	A 4,130 4,259	B 4,226 4,257	6,049 6,253	A 1,465 1,468	B 1,431 1,469
March June September December		5,098 5,225 5,302 5,282	5,232 5,461 5,800 5,562	2,142 2,158 2,174 2,189	4,903 4,910 4,928 4,977	3,253 3,367 3,460 3,532	4,044 4,115 4,167 4,192	4,090 4,195 4,334 4,286	f 5,895 f 6,013 f 6,090 f 6,197	1,458 1,461 1,461 1,478	1,441 1,433 1,405 1,446
March June September December	 	5,315 5,322 5,340 5,284	5,331 5,359 5,319 5,234	2,218 2,245 2,271 2,288	5,024 5,070 5,087 5,119	3,556 3,605 3,634 3,649	4,226 4,256 4,278 4,275	4,231 4,268 4,271 4,256	f 6,187 f 6,264 6,273 6,286	1,464 1,472 1,466 1,470	1,462 1,468 1,469 1,477

<sup>(</sup>a) The index numbers given in the separate columns of the table cannot be compared with each other in order to show, for example, the relative cost of food and groceries and rent, since the cost in 1911 in each group or combination of groups is made equal to 1,000. (b) Indexes in columns "A" exclude, and those in columns "B" include, the price movement of potatoes and onions. See para. 5 on p. 149. (c) See footnote (c) on p. 151. (d) Index of nominal weekly wage rates for adult males divided by the "C" Series retail price index number. (e) Taken back from true base (November, 1914 = 1,000) by means of the Food and Rent (All Houses) Index.

#### CHAPTER VII.

#### MANUFACTURING INDUSTRY.

#### § 1. General.

1. Introduction.—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given owing to the fact that prior to 1906 the necessary statistics were not collected by the several States on a definite and uniform basis. A standard classification of manufacturing industries was formulated at a conference of Australian Statisticians in 1902 and adopted by all States in 1906. Figures on this basis were prepared for 1907 and subsequent years.

Prior to the federation of the Australian States in 1901, the manufacturing industry in Australia was primarily engaged in the production of goods for local use, mainly of food commodities, furniture, bricks, clothing made from imported materials, printing, the repair rather than the manufacture of machinery, and the preliminary treatment of primary products, such as wool-scouring and sawmilling.

After federation, steady expansion of the manufacturing industry resulted from the removal of interstate trade barriers and the operation of a uniform protective tariff. This expansion was quickened as a result of the demands created by the 1914–18 War, the curtailment of imports, and the rapid growth of spending power within the community. New and more advanced development took place, iron and steel works and many related and subsidiary industries were established, extensive manufacture of machinery was begun, and a wide range of high-grade products—textiles, metal manufactures, electrical goods, etc.—was added to the list of commodities made in Australia.

A check was made to this expansion by the world-wide economic depression of 1929-33, but in 1933 returning general prosperity and the opportunities opened to local manufacturers by import restrictions, together with depreciation of Australian currency, gave renewed stimulus to manufacturing enterprise. As economic conditions improved, the tariff, revenue duties and primage were reduced, but without materially prejudicing the progress of local manufactures.

When war broke out in September, 1939, Australia became a major source of supply for British countries east of Suez and in meeting these demands, as well as those arising locally because of interruption of oversea importations, existing manufacturing industries expanded, and new enterprises were developed rapidly for the production of all classes of munitions, aircraft, ships, many new kinds of machinery and metal manufactures, scientific equipment, textiles, chemicals, etc. The outbreak of war with Japan, the basing of Allied armed forces in Australia, and Australian responsibilities for supplies in the South-west Pacific Area, gave added impetus to these developments, and manufacturing in Australia outstripped all previous levels.

The cessation of war production and the transition of industry to a peace-time basis temporarily retarded progress, but from 1945-46 onward there was renewed expansion of the manufacturing industries to which an inflow of capital from overseas contributed.

2. Decentralization of Manufacturing Industries.—Following upon a report by the Secondary Industries Commission, the Commonwealth Government called a conference of Commonwealth and State Ministers in August, 1945, to formulate a national policy for the decentralization of secondary industries. It was agreed that the State Governments should seek to promote decentralization along the lines appropriate to each, providing necessary services, assistance and concessions to the full extent of State resources. The Commonwealth undertook to collaborate in all matters of Commonwealth industrial policy

affecting the development and location of industry, to investigate in association with the States the prospects of developing secondary industries in selected areas, to advise the States of developments desirable for defence purposes, and to provide financial assistance for projects of national importance where the cost would be great relative to the State's resources.

The Commonwealth has assisted decentralization by allocating to private industry munitions and other defence buildings in decentralized areas and accommodating migrants in provincial centres with prospects of development. Oversea firms contemplating establishment in Australia are encouraged to select locations in rural areas or the less industrialized States.

- 3. Commonwealth Division of Industrial Development.—The functions of the Division of Industrial Development include the encouragement of industrial development, the exercising of Commonwealth responsibilities for the decentralization of industry, the promotion of industrial efficiency (especially the study of technical, production and managerial problems and the dissemination and application of new knowledge and methods), the encouragement of the development of technological institutes and the publication of studies of the structure and operation of Australian manufacturing industries. The Division was attached to the Ministry of National Development when formed in March, 1950, to plan the development of national resources and to promote decentralization and regional development in conjunction with the States, but was transferred to the Department of Trade in January, 1956.
- 4. Customs and Excise Tariffs and Bounties on Manufactures.—Particulars of Australian customs and excise tariffs, and the constitution and functions of the Australian Tariff Board in relation to matters affecting the industrial development of Australia, are given in Chapter X.—Trade.

Bounties are paid by the Commonwealth Government to encourage local manufacture of certain products. The statutory provisions usually fix a term of operation of the bounty, provide for payment at a rate varying according to changes in the corresponding customs duty, specify the annual maximum amount of bounty payable, and require the bounty to be withheld or reduced if a manufacturer's net profit in production of the commodity exceeds a certain rate or if rates of wages and conditions of employment in production of the commodity do not conform to prescribed standards.

- 5. Scientific Research and Standardization.—(i) The Commonwealth Scientific and Industrial Research Organization. The function of this Organization, reference to which also appears in Chapter XXX., is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research student-ships and fellowships, to make grants in aid of pure scientific research, to establish industrial research associations in various industries, to provide for testing and standardization of scientific equipment, to conduct an information service relating to scientific and industrial matters, and to act for Australia in liaison with other countries in matters of scientific research.
- (ii) The Standards Association of Australia. This Association, which is referred to also in Chapter XXX., acts as the national standardizing organization of Australia and issues standard specifications for materials and codes of practice. Specifications and codes are prepared and revised periodically in accordance with the needs of industry, and standards are evolved and accepted by general consent.
- (iii) The National Association of Testing Authorities. The National Association of Testing Authorities organizes national testing facilities throughout Australia to serve private and governmental needs. Laboratories may register voluntarily in respect of tests within their competence and the Association ensures the maintenance of their standards of testing. It is expected that there will be general acceptance of certificates of tests issued in the name of the Association by the registered laboratories.

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6. Definitions in Factory Statistics.—The statistics relating to factories have been compiled from tabulations made by the several State Statisticians from returns supplied to them annually by manufacturers in accordance with the Statistical Acts of the States. A return must be supplied in respect of every factory, which is defined for this purpose as an establishment where four or more persons are employed or where power (other than manual) is used in any manufacturing process. This definition includes factories in educational and charitable institutions, reformatories, and other public institutions (except penitentiaries) but does not cover smallgoods makers, laundries, farriers, photography studios, florists and seedsmen, or most abattoirs. It should be noted that details relating to small establishments not classified for statistical purposes as factories are not included in the figures contained in this chapter.

If a manufacturing business is conducted in conjunction with any other activity, particulars relating to the manufacturing section only are included in the statistics. Where two or more industries are conducted in the same establishment, a separate return is obtained for each industry if practicable.

Manufacturers are requested to state in their returns particulars as to the number, age, wages, etc., of their employees, the value of premises and equipment, the horse-power of machinery, the value, and in most cases the quantities, of raw materials and fuel used, and quantities and values of principal materials and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income or expenditure of factories nor to show the profits or losses of factories collectively or individually.

The average number of persons employed is quoted on two different bases: the average during the period of operation and the average over the whole year. Of these, the former is simply the aggregate of the average number of persons employed in each factory during its period of operation (whether the whole or only part of the year). This average is used only in respect of details relating to classification according to the number of persons employed. The latter, which is used in all other instances, is calculated by reducing the average number working in the factories (irrespective of period of operation) to the equivalent number working for a full year.

Working proprietors are included in all employment figures other than those relating to monthly employment and age dissections, but salaries and wages paid in all cases exclude drawings by working proprietors.

The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture and includes the amount received for repair work, work done on commission and receipts for other factory work. The basis of valuation of the output is the selling value of the goods at the factory, exclusive of all delivery costs and charges and excise duties, but inclusive of bounty and subsidy payments to the manufacturer of the finished article.

The value of production is the value added to raw materials by the process of manufacture. It is calculated by deducting from the value of factory output the value (at the factory) of the materials used, containers and packing, power, fuel and light used, tools replaced, and materials used in repairs to plant (but not depreciation charges).

In the process of manufacture, many goods are treated in several industries, the output of one becoming the raw materials of another, so that such commodities are counted more than once in the aggregate value of output and of raw materials. Examples are raw sugar passing from the mills to the refinery, metals from the smelters which become raw materials in establishments concerned in the production of metal goods, and timber from the saw-mills used in furniture factories and in joinery. On the other hand, the aggregate value of production is assessed without duplication, the value added by each industry being taken into account once only. For this reason, the value of production, and not the value of the output, is used as a measure of activity in the manufacturing industries as a whole.

In the special case of Government factories and workshops, the value of output is, in most cases, estimated by adding 10 per cent. to the value of materials and fuel used and other factory costs, including salaries and wages paid.

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7. Classification of Factories.—In the compilation of statistical data relating to factories in Australia, a standard classification of manufacturing industries, formulated at a conference of Australian Statisticians in 1902 and revised from time to time, was used until the year 1929-30. A new classification was introduced in 1930-31, and this in turn was revised and extended (principally in respect of the placement and composition of sub-classes) in accordance with decisions of the Statisticians' Conference, 1945.

Owing to limitations of space, details published in general tables in this chapter are confined either to the sixteen classes of industry or to total factory activity. Particulars of certain of the sub-classes shown below are published in the latter portion of this chapter and full details for all sub-classes may be found in the Bulletin Secondary Industries, published annually.

The principal classes and sub-classes in the current classification of factories are as follows:—

#### CLASSIFICATION OF FACTORIES.

CLASS I.—TREATMENT OF NON-METALLIFEROUS MINE AND QUARRY PRODUCTS.

Coke Works.
Briquetting and Pulverized Coal.
Carbide.
Lime, Plaster of Paris, Asphalt.
Fibrous Plaster and Products.
Marble, Slate, etc.
Cement, Portland.
Asbestos Cement Sheets and Mouldings.
Other Cement Goods.
Other.

CLASS II.—BRICKS, POTTERY, GLASS, ETC. Bricks and Tiles. Earthenware, China, Porcelain and Terracotta. Glass (other than Bottles). Glass Bottles. Other.

CLASS III.—CHEMICALS, DYES, EXPLOSIVES, PAINTS, OILS, GREASE.

Industrial and Heavy Chemicals and Acids. Pharmaceutical and Toilet Preparations. Explosives (including Fireworks). White Lead, Paints and Varnish. Oils, Wegetable. Oils, Mineral. Oils, Animal. Boiling-down, Tallow-refining. Soap and Candles. Chemical Pertilizers. Inks, Polishes, etc. Matches. Other.

### CLASS IV.—Industrial Metals, Machines, Conveyances.

Smelting, Converting, Refining, Rolling of Iron and Steel.
Foundries (Ferrous).
Flant, Equipment and Machinery, etc.
Other Engineering.
Extracting and Refining of other Metals; Alloys.
Electrical Machinery, Cables and Apparatus.
Construction and Repair of Vehicles (10 groups).
Ship and Boat Building and Repairing, Marine Engineering (Government and Other).
Cuttery and Small Hand Tools.
Agricultural Machines and Implements.
Non-Ferrous Metals—
Rolling and Extrusion.
Founding, Casting, etc.
Iron and Steel Sheets.
Sheet Metal Working, Pressing, and Stamping.
Pipes, Tubes and Fittings—Ferrous.
Wire and Wire Nettings—Ferrous.

Stoves, Ovens and Ranges. Gas Fittings and Meters.

Lead Mills.

CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued. Sewing Machines.

Arms, Ammunition (excluding Explosives).
Wireless and Amplifying Apparatus.
Other Metal Works.

CLASS V.—PRECIOUS METALS, JEWELLERY, PLATE. Jewellery. Watches and Clocks (including Repairs). Electroplating (Gold, Silver, Chromium, etc.).

### CLASS VI.—Textiles and Textile Goods (NOT Dress).

Cotton Ginning.
Cotton Spinning and Weaving.
Wool—Carding, Spinning, Weaving.
Hosiery and Other Knitted Goods.
Silk, Natural.
Rayon, Nylon and Other Synthetic Fibres.
Flax Mills.
Rope and Cordage.
Canvas Goods, Tents, Tarpaulins, etc.
Bags and Sacks.
Other.

### CLASS VII.—Skins and Leather (not Clothing or Footwear).

Furriers and Fur-dressing.
Woolscouring and Fellmongery.
Tanning, Currying and Leather-dressing.
Saddlery, Harness and Whips.
Machine Belting (Leather or other).
Bags, Trunks, etc.

#### CLASS VIII .- CLOTHING (EXCEPT KNITTED).

Tailoring and Ready-made Clothing.
Waterproof and Oilskin Clothing.
Dressmaking, Hemstitching.
Milinery.
Shirts, Collars, Underclothing.
Foundation Garments.
Handkerchiefs, Ties and Scarves.
Hats and Caps.
Gioves.
Boots and Shoes (not Rubber).
Boot and Shoe Repairing.
Boot and Shoe Accessories.
Umbrellas and Walking Sticks.
Dyeworks and Cleaning, etc.
Other.

#### CLASS IX .- FOOD, DRINK AND TOBACCO.

Flour-milling.
Cereal Foods and Starch.
Animal and Bird Foods.
Chaffcutting and Corn-crushing.
Bakeries (including Cakes and Pastry).
Biscuits.
Sugar-mills.

CLASS IX.-FOOD, DRINK AND TOBACCO-

Sugar-refining. ougar-renning. Confectionery (including Chocolate and Icing Sugar). Jam, Fruit and Vegetable Canning. Pickles, Sauces, Vinegar. Bacon Curing. Butter Factories.

Cheese Factories

Condensed and Dried Milk Factories.

Margarine. Meat and Fish Preserving. Condiments, Coffee, Spices. Ice and Refrigerating.

Salt. Aerated Waters, Cordials, etc.

Breweries Distilleries. Wine-making Cider and Perry. Malting. Bottling.

Tobacco, Cigars, Cigarettes, Snuff. Dehydrated Fruit and Vegetables.

Ice Čream. Sausage Casings. Arrowroot. Other.

CLASS X.—SAWMILLS, JOINERY, BOXES, ETC., WOOD TURNING AND CARVING.

Sawmills.
Plywood Mills (including Veneers).
Bark Mills. Joinery. Cooperage

Boxes and Cases.

Basketware and Wickerware (including Sea-grass Basketware and Wicketware (including Sea-grass and Bamboo Furniture).

Perambulators (including Pushers and Strollers).

Wall and Ceiling Boards (not Plaster or Cement).

Other. CLASS XI.-FURNITURE OF WOOD, BEDDING, etc.

Cabinet and Furniture Making including Billiard Tables and Upholstery.

Bedding and Mattresses (not Wire).

Furnishing Drapery.

CLASS XI.—FURNITURE OF WOOD, BEDDING, ETC.continued.

Picture Frames

CLASS XII.—PAPER, STATIONERY, PRINTING, BOOKBINDING, ETC.

Newspapers and Periodicals. Printing-Government. General, including Bookbinding. Manufactured Stationery. Stereotyping, Electrotyping.
Process and Photo Engraving.
Cardboard Boxes, Cartons and Containers. Paper Bags. Paper-making Pencils, Penholders, Chalks, Crayons. Other.

CLASS XIII.—RUBBER. Rubber Goods (including Tyres Made.)
Tyre Retreading and Repairing.

CLASS XIV.-MUSICAL INSTRUMENTS.

Gramophones and Gramophone Records. Pianos, Piano-Players, Organs. Other.

CLASS XV .- MISCELLANEOUS PRODUCTS. Linoleum, Leather-cloth, Oil-cloth, etc. Bone, Horn, Ivory and Shell. Plastic Moulding and Products. Brooms and Brushes. Optical Instruments and Appliances.
Surgical and Other Scientific Instruments and Appliances Photographic Materials, (including Developing and Printing). Toys, Games and Sports Requisites. Artificial Flowers.

CLASS XVI .-- HEAT, LIGHT, AND POWER. Electric Light and Power. Gas Works.

8. Factory Development since 1901-Australia.-The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table:-

Other.

#### FACTORIES: AUSTRALIA.

				Salaries			Value of-		
Year. Fac- tories.		Fac- tories.	Employ- ment.(a)	and Wages Paid.(b)	Materials and Fuel Used.	Output.	Pro- duction. (c)	Land and Build- ings.	Plant and Ma- chinery.
1901		No. 11,143 14,455 17,113 21,751 27,300 41,596 43,147 45,844 47,740 49,576 51,056	'000. 198 312 367 339 650 917 969 978 933 990	£'000. (d) 27,528 62,932 62,455 137,919 385,797 491,718 611,789 635,245 705,137 781,640	1,609,839 1,637,142 1,868,431	£'000. (d) 133,022 323,993 290,799 644,795 1,645,456 2,150,835 2,634,706 2,720,004 3,095,476 3,434,589	£'000. (d) 51,259 110,434 118,310 257,914 661,532 843,872 1,024,867 1,082,862 1,227,045 1,365,509	£'000. (d) 32,701 60,831 112,211 144,094 259,549 302,785 359,490 414,446 483,431 555,996	£'000. (d) 31,516 68,655 124,498 161,326 285,602 336,615 410,144 493,534 580,715 698,292
1955-56		52,406	1,060	853,469	2,264,946	3,763,710	1,498,764	655,582	803,540

<sup>(</sup>a) 1901 and 1911—average employment during period of operation. Later years relate to average employment over whole year. Working proprietors are included in all years. (b) Excludes drawings by working proprietors. (c) Value of output less value of materials and fuel, etc., used. (d) Not by working proprietors. available.

### § 2. Number of Factories.

1. Number of Factories in each State.—The following table shows the number of factories operating in each State in the years 1938-39 and 1951-52 to 1955-56:—

Tr A	CTORIES	. N	III	RER
re		, 1	CHAI	uen.

	Year.		N.S.W.	Vic.	Q'iand.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39			9,464	9,250	3,087	2,067	2,129	944	26,941
1951-52			18,144	14,758	4,918	3,245	3,267	1,512	45,844
1952-53			19,251	15,154	5,068	3,339	3,424	1,504	47,740
1953-54		٠,٠	20,199	15,533	5,199	3,577	3,523	1,545	49,576
1954-55			20,837	15,861	5,284	3,750	3.727	1,597	51,056
1955-56			21,602	16.053	5,378	3,908	3,871	1.594	52,406

2. Number of Factories in Industrial Classes.—(i) Australia. The next table shows the number of factories in Australia during 1938-39 and 1951-52 to 1955-56 classified in the industrial classes agreed upon by the Conference of Statisticians in 1930. Details of some of the principal industries included in the table will be found in § 11, page 243.

FACTORIES: NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938–39.	1951–52.	1952-53.	1953-54.	1954-55.	1955-56.
I. Treatment of Non-metalliferous Mine						
and Quarry Products	564	1,316	1,276	1,280	1,303	1,337
II. Bricks, Pottery, Glass, etc	471	601	623	639	662	666
III. Chemicals, Dyes, Explosives, Paints,	{	[ !	(	ĺ	f	1
Oils, Grease	666	1,049	1,090	1,099	1,124	1,139
IV. Industrial Metals, Machines, Convey-						
ances	7,255	14,513	15,672	16,868	17,842	18,860
V. Precious Metals, Jewellery, Plate	290	662	681	720	746	782
VI. Textiles and Textile Goods (not Dress)	611	1,246	1,270	1,336	1,356	1,362
VII. Skins and Leather (not Clothing or						
Footwear)	533	785	778	783	810	789
VIII. Clothing (except Knitted)	4,314	6,989	7,036	7,260	7,370	7,390
IX. Food, Drink and Tobacco	5,202	7,033	7,248	7,379	7,433	7,468
X. Sawmills, Joinery, Boxes, etc., Wood			5 700	6 760	2045	5005
Turning and Carving	2,822	5,546	5,790	5,769	5,845	5,895
XI. Furniture of Wood, Bedding, etc.	1,149	2,052	2,157	2,180	2,200	2,203
XII. Paper, Stationery, Printing, Book-	1.016	2.004	2 121	2 170	2,224	2,303
binding, etc XIII. Rubber	1,816 299	2,084 430	2,121 446	2,179 465	495	513
XIII. Rubber XIV. Musical Instruments	34	68	69	75	79	84
VV Mination Delicate		1,039		1.095	1,119	1,188
XV. Miscellaneous Products	413	1,039	1,035	1,093	1,119	1,100
Total, Classes I. to XV	26,439	45,413	47,292	49,127	50,608	51,979
XVI. Heat, Light and Power	502	431	448	449	448	427
Grand Total	26,941	45,844	47,740	49,576	51,056	52,406

Although not the best index of manufacturing activity, the number of factories affords some indication of the development of secondary industries. Except for the two war years 1941-42 and 1942-43, when there were decreases, the number of factories increased each year from 1931-32 to 1955-56. In the latter year the number of factories in Australia reached the record total of 52,406 or nearly 95 per cent. more than in 1938-39.

(ii) States, 1955-56. The following table shows the number of factories in each State classified according to the nature of the industry:—

FACTORIES: NUMBER IN INDUSTRIAL CLASSES, 1955-56.

Class of Industry.	N.S.W.	Vic.	·Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
L Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	445	447	100	171	121	62	1,337
II. Bricks, Pottery, Glass, etc	327	151	57	61	53	53 17	666
III. Chemicals, Dyes, Explosives,	32.	151	) "	0.	, 33	17	000
Paints, Oils, Grease	563	344	70	76	63	23	1,139
IV. Industrial Metals, Machines,			1		1 55		.,
Conveyances	7,852	5,573	1,912	1,591	1,484	448	18,860
V. Precious Metals, Jewellery,		-			1 1		
Plate	357	255	42	54	68	6	782
VI. Textiles and Textile Goods	100			1	!		
(not Dress)	490	738	29	48	42	15	1,362
VII. Skins and Leather (not Cloth-	367	293	52	38	31	8	789
ing or Footwear) VHI. Clothing (except Knitted)	3,472	2,528	535	366	417	72	7,390
IX. Food, Drink and Tobacco	2,736	2,043	1,044	720	620	305	7,468
X. Sawmills, Joinery, Boxes, etc.,	2,730	2,043	1,011	120	020	303	7,400
Wood Turning and Carving	2,299	1,431	839	335	494	497	5,895
XI. Furniture of Wood, Bedding,	_,,	1,.01				171	0,000
etc	803	691	302	158	173	76	2,203
XII. Paper, Stationery, Printing,					l i		-
Bookbinding, etc	981	838	:189	147	117	31	2,303
XIII. Rubber	195	146	73	49	32	18	513
XIV. Musical Instruments	36	31	5	6	6	• • • • •	84
XV. Miscellaneous Products	563	455	56	43	56	15	1,188
Total Classes I. to XV	21,486	15,964	5,305	.3,863	3,777	1,584	51,979
XVI. Heat, Light and Power	. 116	89	73	45	94	10	427
Grand Total	21,602	16,053	5,378	3,908	3,871	1,594	52,406

### § 3. Classification of Factories according to Number of Persons Employed.

- 1. General.—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors). Prior to 1945–46 there was no dissection of the "over 100 employees" group, but for that and subsequent years this group was subdivided into the seven size groups shown in the table below.
- 2. States, 1955-56.—The following table shows, for each State, the number of factories classified according to the average number of persons employed:—

FACTORIES: CLASSIFICATION ACCORDING TO SIZE OF FACTORY, 1955-56.

Size of (Persons			N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			1	Number o	<b>F FA</b> CTOR	ues.			
Under 4			8,646	5,693	1,822	1,316	1,844	667	19,988
4			1,771	1,229	525	354	179	143	4,201
5 to 10			5,148	3,915	1,502	1,022	992	416	12,995
11 to 20			2,775	2,260	675	562	387	169	6,828
21 to 50		•.•	1,911	1,754	501	378	300	120	4,964
51 to 100			693	608	168	152	105	46	1,772
101 to 200			363	325	103	63	36	17	907
201 to 300			109	116	48	22 !	19	4	318
301 to 400			49	44	10	12	1	4	120
401 to 500			32	27	5	-8	4	2	78
501 to 750			43	50	9	6	2	2	112
751 to 1,000			28	11	6	4	1		50
Over 1,000	• •		34	21	4	9	1	4	73
Total		••	21,602	16,053	5,378	3,908	3,871	1,594	52,406

The relative importance of large and small factories is illustrated by a classification of the average number of persons employed according to the size of factory in which they work:—

FACTORIES: CLASSIFICATION OF PERSONS EMPLOYED ACCORDING TO SIZE OF FACTORY, 1955-56.

	Factory employed)		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	Avı	ERAC	е Пимві	R EMPLO	YED DURIN	og Perior	Workei	).	
Under 4			16,447	11,116	3,778	2,753	3,739	1,359	39,192
4			7,084	4,916	2,100	1,416	716	572	16,80
5 to 10			35,802	27,408	10,503	7,109	6,676	2,881	90,379
11 to 20			40,436	33,006	9,927	8,117	5,743	2,483	99,71
21 to 50			59,240	55,581	15,465	12,175	9,730	3,686	155,87
51 to 100			48,100	42,758	11,736	10,852	7,467	3,201	124,11
101 to 200			51,071	46,084	14,563	8,948	4,980	2,435	128,08
201 to 300			26,476	28,206	11,712	5,596	4,585	982	77,55
301 to 400			16,896	15,341	3,606	4,251	319	1,319	41,73
401 to 500			14,032	12,092	2,312	3,495	1,745	925	34,60
501 to 750			26,301	31,080	5.338	3,455	1,281	1,391	68,84
751 to 1,000	1		23,956	9,495	5,342	3,444	841		43,07
Over 1,000	••		71,295	39,609	6,942	21,478	2,846	6,363	148,53
Total	••		437,136	356,692	103,324	93,089	50,668	27,597	1,068,50
Average per	Factory		20.24	22.22	19.21	23.82	13.09	17.31	20.3

<sup>3.</sup> Australia, 1938-39 and 1951-52 to 1955-56.—In the following table, factories in Australia are classified according to the number of persons employed in conformity with the practice prior to 1945-46.

FACTORIES: CLASSIFICATION ACCORDING TO NUMBER OF PERSONS EMPLOYED, AUSTRALIA.

			Est	ablishme	nts Emplo	ying on tl	ne Averag	<del>-</del>		
		20 and	under.	21 to	100.	101 and	upwards.	Total.		
	Year.	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed,	Es- tablish- ments.	Persons em- ployed.	Es- tablish- ments.	Persons em- ployed.	
1938-39		21.002	120 505	4012	170.071	946	272.022	26,941	572 400	
Number Average	per establish-	21,982	129,505	4,013	170,971	940	272,022	20,941	572,498	
ment 1951-52—	per establish-		5.89	••	42.60	• • •	287.55		21.25	
Number		37,634	224,763	6,635	271,611	1,575	489,579	45,844	985,953	
Average	per establish-	07,007		0,000	1	1,010	! '	,	, , , , , , ,	
ment	·		5.97		40.94	i ••	310.84	• • •	21.51	
1952–53— Number		40,066	230,549	6,234	257,099	1,440	453,657	47,740	941,305	
Average	per establish-		5.75		41.24	• • •	315.04		19.72	
1953-54— Number		41 621	226 727	6,403	265,830	1,542	494,564	49,576	997,121	
Average	per establish-	41,631	236,727	0,403	203,630	1,542	454,504	49,370	997,121	
ment 1954-55	• • • • • • • • • • • • • • • • • • • •		5.69		41.52		320.73		20.11	
Number		42,835	241,233	6,603	273,257	1,618	524,307	51,056	1,038,797	
Average	per establish-	, , , , , , , , , , , , , , , , , , , ,	'		1		l		1 ' '	
ment	••	••	5.63	••	41.38	•••	324.00	••	20.35	
1955–56— Number		44,012	246,087	6,736	279,991	1,658	542,428	52,406	1,068,506	
Average	per establish-	77,012	270,007	0,750	2.,,,,,,	1,050	5, 720	32,100	1,000,500	
ment			5.59		41.57	٠	327.16		20.39	

### § 4. Power Equipment in Factories.

1. General.—Since 1936-37, statistics of power equipment in factories relate to the "rated horse-power" of engines ordinarily in use and engines in reserve or idle, omitting obsolete engines. In addition, particulars of the power equipment of Central Electric Stations are collected in greater detail. To avoid duplication, it is essential that some distinction should be made between Central Electric Stations and other classes of industries. In the following tables, Central Electric Stations have been treated separately from other factories.

In para. 2 below, 428 factories are shown in 1955-56 as using no power other than manual, the distribution of these factories among the various industries being as follows:—Fibrous Plaster and Products, 24; Galvanized Ironworking, Tinsmithing, 14; Tailoring and Ready-made Clothing, 103; Dressmaking, 10; Millinery, 7; Bakeries, 38; Cabinet and Furniture Making, 8; all other industries, 224.

2. Rated Horse-power of Engines in Factories other than Central Electric Stations.— The following table shows the number of factories using power-driven machinery, those using manual labour only, and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1955-56:—

FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1955-56.

		Numbe	r of Establishm	ents.	Rated Ho of Engines	rse-power and Motors.
State.		Using Power.	Other.	Total.	Ordinarily in Use.(b)	In Reserve or Idle (omitting obsolete).
New South Wales		21,517	7	21,524	1,842,794	317,411
Victoria		15,938	58	15,996	1,268,055	157,887
Queensland		5,161	160	5,321	475,798	65,354
South Australia		3,808	58	3,866	335,690	44,024
Western Australia		3,644	137	3,781	223,670	31,899
Tasmania		1,578	8	1,586	233,655	32,413
Australia		51,646	428	52,074	4,379,662	648,988

<sup>(</sup>a) Includes Gas Works but excludes Central Electric Stations. (b) Excludes motors driven by electricity generated in factories not classified as Central Electric Stations.

3. Rated Horse-power of Engines and Electric Motors Ordinarily in Use.—(i) According to Type, States. Particulars of the types and the total rated horse-power of engines, etc., ordinarily in use in each State are given below:—

FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, 1955-56.

•		Stea	ım.	Intern	al Combu	stion.		Motors of Electr	iriven by	
State.		Recipro- cating.	Tur- bine.	Gas.	Petrol or Other Light Oils.	Heavy Oils.	Water.	Pur- chased.	Own Genera- tion. (c)	Total. (b)
N.S.W. Victoria Queensland S. Australia W. Australia Tasmania	::	86,118 24,757 90,344 8,199 12,122 1,607	125,685 71,185 51,665 9,350 10,609	1,864	27,650 12,669 5,675	30,472 18,428 17,916 11,078 11,867 553	1,288	172,009	54,145 79,676	335,690
Australia		223,147	268,497	8,746	112,944	90,314	1,641	3,674,373	243,800	4,379,662

<sup>(</sup>a) Includes Gas Works but excludes Central Electric Stations. column (c).

<sup>(</sup>b) Excludes particulars in

(ii) According to Type, Australia. In the following table, details of the total rated horse-power of the various types of engines in use are given for Australia for the years 1938-39, and 1951-52 to 1955-56.

FACTORIES(a): TYPES AND TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, AUSTRALIA.

		Stea	ım.	Intern	al Combu	stion.	İ	Motors o Electi	riven by	
Year.		Recipro- cating.	Tur- bine.	Gas.	Petrol or Other Light Oils.	Heavy Oils.	Water.	Pur- chased.	Own Genera- tion. (c)	Total.
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56	•••	268,409 232,512 232,570 237,533 225,192 223,147	84,149 149,435 171,824 170,914 202,162 268,497	32,916 13,684 10,268 8,457 7,407 8,746	17,971 122,704 109,172 109,919 103,954 112,944	55,799 160,142 150,342 109,293 93,465 90,314	1,826 1,666 1,771	1,017,912 2,764,321 2,913,521 3,135,395 3,398,135 3,674,373	205,729 214,617 255,917 226,625	1,478,772 3,444,624 3,589,363 3,773,282 4,032,010 4,379,662

<sup>(</sup>a) Includes Gas Works but excludes Central Electric Stations: column (c).

(iii) In Classes of Industry, 1955-56. The next table shows the total rated horse-power of engines and electric motors ordinarily in use in the various classes of industry in each State.

FACTORIES(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE(b), 1955-56.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalli-							
ferous Mine and Quarry	0.00001		10000	10.010	16.440	45.040	
Products	84,771	58,666	16,556	19,210 8,857	16,442 11,322	15,248	210,893
II. Bricks, Pottery, Glass, etc	47,508	31,878	8,384	8,837	11,322	2,052	1:10,001
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease	133,096	123,382	10,069	19,723	39,887	9,858	336,015
IV. Industrial Metals, Machines,	133,070	123,362	10,000	17,723	32,007	9,030	330,013
Conveyances	907,885	386.448	102,036	156,438	51,787	57 072	1,661,666
V. Precious Metals, Jewellery,	207,000	200,110	102,000	100,.00	03,.0.	37,072	1,001,000
Plate	5,125	5,421	460	1,163	631	60	12,860
VI. Textiles and Textile Goods (not				1	! ]		12,000
Dress)	53,888	99,275	6,366	8,002	2,629	5,759	175,919
VII. Skins and Leather (not Cloth-					1		
ing or Footwear)	18,756					506	52,070
VIII. Clothing (except Knitted)	23,227	29,143	4,179	3,332	2,250	1,064	
IX. Food, Drink and Tobacco	208,543	192,584	201,795	53,396	37,101	19,429	712,848
X. Sawmills, Joinery, Boxes, etc.,	176046	100.001	01 000	20.400	45 071	40.404	
Wood Turning and Carving	176,046	122,831	91,222	32,122	46,271	40,431	508,923
XI. Furniture of Wood, Bedding,	17 542	17 606	0 166	6,246	4,200		
etc Deinting	17,542	17,686	8,166	0,240	4,200	1,615	55,455
XII. Paper, Stationery, Printing, Bookbinding, etc.	68,998	88,901	9,389	14,213	5,563	79,716	266,780
WIII Dubban	47,929	52,757		3,461		323	
WIN Must al Tantauganta	2,276		47				2,874
XV. Miscellaneous Products	21,921		658			411	53,959
Av. Miscellaneous Froducts		20,255					33,737
Total, Classes 1. to XV	1,817,511	1,257,219	473,522	333,326	222,458	233,544	4,337,580
XVI. Gas Works	25,283	10,836	2,276	2;364	1,212	111	42,082
Grand: Total	1,842,794	1,268,055	475,798	335,690	223,670	233,655	4,379,662

<sup>(</sup>a) Excludes Central Electric Stations. (b) Excludes motors driven by electricity generated in factories not classified as Central Electric Stations.

<sup>(</sup>b) Excludes particulars in

4. Capacity of Engines and Generators installed in Central Electric Stations.—(i) According to Type, Australia. Particulars of the type and the capacity of engines and generators installed in Central Electric Stations in Australia in 1955-56 are given in the following table:—

CENTRAL ELECTRIC STATIONS: POWER EQUIPMENT, AUSTRALIA, 1955-56.

	Capacity of Engines and Generators.									
Particulars.	Steam.		Intern	al Comb						
	Recipro- cating.	Turbine.	Gas.	Petrol or Other Light Oils.	Heavy Oils.	Water.	Total.			
Engines installed Rated H.P.	5,540	4,461,798	9,201	12,112	334,437	900,013	5,723,101			
Generators installed— Kilowatt capacity— Total installed kW Effective capacity ,,	4,062 3,674	3,247,097 2,985,789	5,895 4,420	8,394 6,579	226,747 208,820	647,855 646,035	4,140,050 3,855,317			
Horse-power equivalent— Total installed H.P. Effective capacity "	5,445 -4,924	4,352,668 4,002,391	7,902 5,925	11,252 8,819	303,950 279,919	868,437 865,997	5,549,654 5,167,975			

Note.—The number of establishments classified as Central Electric Stations in 1955-56 was 332.

(ii) States. Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1955-56 are given in the next table.

CENTRAL ELECTRIC STATIONS: NUMBER AND POWER EQUIPMENT, 1955-56.

Particulars	•		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Central Electric Station	15	No.	78	57	57	42	90	.8	332
Engines installed	Rated	H.P.	2,341,111	1,332,095	655,964	(a)	359,751	(a)	5,723,101
Generators installed— Kilowatt capacity— Total installed Effective capacity		kW "	1,660,800 1,534,128		483,413 369,190	(a) (a)	260,606 249,155	(a) (a)	4,140,050 3,855,317
Horse-power equival Total installed Effective capacity	ent—	H.P.	2,226,269 2,056,468	1,325,349 1,295,196	648,006 494,892	(a) (a)	349,337 333,987	(a) (a)	5,549,654 5,167,975

(a) Not available for publication.

#### § 5. Employment in Factories.

1. Number Employed.—(i) General. All persons employed in the manufacturing activities of a factory, including proprietors who work in their own business and "outworkers" (see para. 4 (ii), page 221), are counted as factory employees, while those employed in selling and distributing, such as salesmen, travellers, collectors, carters employed solely on outward delivery of manufactured goods and retailing storemen, are excluded. Prior to 1945–46, the occupational grouping collected was (i) working proprietors; (ii) managers and overseers; (iii) accountants and clerks; (iv) enginedrivers and firemen; (v) workers in factory, skilled and unskilled; (vi) carters and messengers; and (vii) persons working regularly at home for the establishment. This grouping did not record separate details for technical staff (e.g., chemists, draftsmen, etc.) and supervisory staff and in 1945–46 the set-up on the collection form was amended to obtain the following groupings:—(i) Working proprietors; (ii) managerial and clerical staff including salaried managers and working directors; (iii) chemists, draftsmen and other laboratory and research staff; (iv) foremen and overseers; (v) skilled and unskilled workers; (vi) carters (excluding delivery only), messengers and persons working regularly at home.

Prior to the year 1928-29, average employment in factories was computed by dividing the sum of the number employed each week by the number of weeks worked. The figures therefore represented the average number employed over the period worked, which, for many factories, was less than a full year. Commencing with the year 1928-29, the figures represent the equivalent average number employed over a full year of fifty-two weeks. The classification of factories according to the number of persons employed (see § 3, p. 213), however, is still based on the old method, but for all other purposes the average number engaged over the full year is used.

(ii) Australia. Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for years 1938-39 and 1951-52 to 1955-56 in the following table:—

FACTORIES: EM	IPLOYMENT,	AUSTRALIA.
---------------	------------	------------

		Males.			Females.		Persons.			
Year.	Number Em-			Number Em-	Increase on Preceding Year.		Number Em-	Increase on Preceding Year.		
	ployed.	Number	Per Cent.	ployed.	Number	Per Cent.	ployed.	Number	Per Cent.	
1938–39 1951–52 1952–53 1953–54 1954–55	412,591 741,971 723,404 758,508 788,691 811,847	3,989 15,920 -18,567 35,104 30,183 23,156	2.19 -2.50 4.85 3.98	152,515 235,546 209,857 231,034 242,391 248,651	1,957 - 7,321 - 25,689 21,177 11,357 6,260	1.30 - 3.02 -10.91 10.09 4.92 2.58	565,106 977,517 933,261 989,542 1,031,082 1,060,498	8,599 - 44,256 56,281 41,540	0.89 -4.53 6.03 4.20	

Note.-Minus sign (-) indicates decrease.

(iii) States. The following table shows, for the same years, (a) the average number of persons employed in manufacturing industries in each State; (b) for each State, the percentage of the total number employed in factories in Australia; and (c) the number so employed per ten thousand of mean population in each State and Australia.

FACTORIES: EMPLOYMENT.

	_					<u> </u>		
Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	Av	erage Nu	MBER EMPL	OYED DUR	NG FULL	YEAR (52 V	Weeks).	
1938–39		228,781	201,831	54,110	43,371	23,211	13,802	565,106
1951-52		405,994	324,143	94,349	83,907	45,097	24,027	977,517
1952-53		380,213	310,759	93,123	80,483	45,188	23,495	933,26
1953-54		402,595	331,277	98,119	85,503	47,459	24,589	989,542
1954-55		419,810	346,648	100,293	89,565	49,314	25,452	1,031,08
1955–56	• •	433,081	355,185	102,473	92,589	50,108	27,062	1,060,49
		1	Percentag	e of Aust	ralian To	OTAL.		·
1938-39		40.48	35.72	9.58	7.67	4.11	2.44	100
1951-52		41.53	33.16	9.65	8.58	4.62	2.46	100
1952-53		40.74	33.30	9.98	8.62	4.84	2.52	100
195354		40.68	33.48	9.92	8.64	4.80	2.48	100
1954-55		40.71	33.62	9.73	8.69	4.78	2.47	100
1955-56		40.84	33.49	9.66	8.73	4.73	2.55	100

FACTORIES: EMPLOYMENT-continued.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
		PER 10	,000 OF P	OPULATION.	•		
1938–39	 836	1,078	537	729	497	581	81
1951–52	 1,208	1,409	773	1,150	763	801	1,14
1952-53	 1,112	1,315	746	1,074	737	761	1,06
1953–54	 1,182	1,367	754	1,088	753	795	1,11
1954–55	 1,213	1,393	757	1,109	746	813	1,13
1955-56	 1,229	1,385	758	1,110	750	848	1,13

<sup>2.</sup> Rates of Increase, 1938-39 and 1951-52 to 1955-56—The percentage increase on the average number of persons employed in the preceding year is shown below for each State:—

FACTORIES: ANNUAL PERCENTAGE INCREASE OF PERSONS EMPLOYED.

N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
 1.74	0.02	3.82	-1.62	0.34	4.80	1.06
 -0.24	2.32	-0.24	1.10	2.99	0.84	0.89
 -6.35	-4.13	-1.30	-4.08	0.20	-2.21	-4.53
 5.89	6.60	5.36	6.24	5.03	4.66	6.03
 4.28	4.64	2.22	4.75	3.91	3.51	4.20
 3.16	2.46	2.17	3.38	1.61	6.33	2.85
	1.74 -0.24 -6.35 . 5.89 . 4.28	1.74 0.02 0.24 2.32 6.35 -4.13 5.89 6.60 4.28 4.64	1.74 0.02 3.82 0.24 2.32 -0.24 6.35 -4.13 -1.30 5.89 6.60 5.36 4.28 4.64 2.22	1.74 0.02 3.82 -1.62 0.24 2.32 -0.24 1.10 6.35 -4.13 -1.30 -4.08 5.89 6.60 5.36 6.24 4.28 4.64 2.22 4.75 2.46 2.17 2.38	1.74 0.02 3.82 -1.62 0.34 0.24 2.32 -0.24 1.10 2.99 6.35 -4.13 -1.30 -4.08 0.20 5.89 6.60 5.36 6.24 5.03 4.28 4.64 2.22 4.75 3.91	1.74 0.02 3.82 -1.62 0.34 4.80 0.24 2.32 -0.24 1.10 2.99 0.84 6.35 -4.13 -1.30 -4.08 0.20 -2.21 5.89 6.60 5.36 6.24 5.03 4.66 4.28 4.64 2.22 4.75 3.91 3.51

NOTE.—Minus sign (-) indicates decrease.

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA.

Class of Industry.	1938–39.	1951-52.	1952–53.	1953-54.	1954–55.	1955–56.
I. Treatment of Non-metalliferous Mine				ļ <del></del>		
and Quarry Products	10,343	19,365	18,752	18,748	20,560	20,893
II. Bricks, Pottery, Glass, etc	15,709	20,912	19,571	21,708	22,549	
III. Chemicals, Dyes, Explosives, Paints,	]					,
Oils, Grease	19,816	38,248	36,139	37,988	41,324	44,718
IV. Industrial Metals, Machines, Convey-			!			,
ances	177,677	389,252	376,398	397,713	422,124	444,274
V. Precious Metals, Jewellery, Plate	3.726	5,953	5,398	5,970	6,029	
VI. Textiles and Textile Goods (not Dress)	46,082	63,548	60,087	69,482	69,046	
VII. Skins and Leather (not Clothing or	,		1		1	55,555
Footwear)	10,767	14,324	14,126	14,676	14,502	13,810
VIII. Clothing (except Knitted)	86,092	116,705	105,681	112,520	112,802	
IX. Food, Drink and Tobacco	83,846	122,734	120,668	123,073	125,934	
X. Sawmills, Joinery, Boxes, etc., Wood	02,010	,	120,000	,	122,50	120,.20
Turning and Carving	30,739	59,664	56,984	58,932	61,153	61,914
XI. Furniture of Wood, Bedding, etc.	15,287	22,156	20,353	20,975	21,342	
XII. Paper, Stationery, Printing, Book-	15,20.		20,555	20,5.5		21,500
binding, etc	39.913	56,455	53,219	56,119	59,777	62,713
XIII. Rubber	7,502	14,021	12,288	14,962		
VIV Musical Instruments	451	1,581	1.267	1.575	1,623	
XV. Miscellaneous Products	7,727	18,176	17,240	19,565	19,962	
m . 1 dl . 1 . 111	555,677	963,094	918,171			1,044,300
•					I	
XVI. Heat. Light and Power	9,429	14,423	15,090	15,536	16,030	16,198
Grand Total	565,106	977,517	933,261	989,542	1,031,082	1,060,498

<sup>3.</sup> Persons Employed in Classes of Industry.—(i) Australia. The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1938-39 and 1951-52 to 1955-56:—

(ii) States. Particulars of the numbers employed in each industrial class are shown in the following table for each State:—

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1955-56.

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metalli-				:			
ferous Mine and Quarry Products	8,006	6,492	1,825	1,971	1,865	734	20,893
II. Bricks, Pottery, Glass, etc	11,655	5,893	1,295	2,109	1,590	372	22,914
III. Chemicals, Dyes, Explosives,	1.1,000	0,000	1,250	2,102	1,070	0,2	,
Paints, Oils, Grease	19,891	16,577	1,769	3,243	2,782	456	44,718
IV. Industrial Metals, Machines,	· 1	_		1	1 1		
Conveyances	197,730	132,270	35,215	50,705	19,410	8,944	444,274
V. Precious Metals, Jewellery,					1		l <u>.</u>
Plate	2,314	2,562	327	421	249	21	5,894
VI. Textiles and Textile Goods	22 222	36,895	2,098	2.464	899	2,677	60 256
(not Dress) VII. Skins and Leather (not Cloth-	23,323	30,093	2,090	2,464	1 699	2,077	68,356
inn on Continues	5,569	4,941	1,288	1,289	652	71	13,810
VIII. Clothing (except Knitted)	45,143	46,889	8,592	5,514	3,799	883	110,820
IX, Food, Drink and Tobacco	39,400	38,427	26,726	10,802	6,618	4,520	126,493
X. Sawmills, Joinery, Boxes, etc.	1		'			•	
Wood Turning and Carving	20,701	15,428	10,678	4,810	6,535	3,762	61,914
XI. Furniture of Wood, Bedding,							
etc	8,301	6,263	3,048	2,017	1,393	486	21,508
XII. Paper, Stationery, Printing,	25.225		5 207	2004	2.500	2 5/7	62 712
Bookbinding, etc.	26,335	21,111 6,771	5,297 1,774	3,894	2,509 220	3,567 158	62,713 17,287
XIII. Rubber XIV. Musical Instruments	7,376 1,338	303	36	34	220	130	1,739
WW Missellanasus Desducts	9,179	9,827	591	763	419	188	20.967
Total, Classes I, to XV.	426,261	350,649	100,559	91,024	48,968	26,839	1,044,300
- · · · · · · · · · · · · · · · · · · ·				[			
XVI. Heat, Light and Power	6,820	4,536	1,914	1,565	1,140	223	16,198
Grand Total	433,081	355,185	102,473	92,589	50,108	27,062	1,060,498

4. Persons Employed According to Occupational Grouping.—(i) General. In the following table, the average number of persons employed in each State during 1955-56 are classified according to their occupational grouping. As mentioned previously, persons employed in factories are now classified on a basis different from that adopted prior to 1945-46. The nature of this change is indicated in para. 1 of this section (see p. 217).

FACTORIES: PERSONS EMPLOYED—OCCUPATIONAL GROUPING, 1955-56.

		Average Number of Persons Employed.							
State.		Working Pro- prietors.	Mana- gerial and Clerical Staff, etc.(a)	Chemists, Drafts- men, etc.	and	Workers in Factory (Skilled' and Un- skilled).	Carters (excluding Delivery only) and Messen- gers, etc. (b)	Total.	
New South Wales		16,053	50,325	6,024	18,426	339,969	2,284	433,081	
Victoria		14,056	38,287	5,511	15,262	279,848	2,221	355,185	
Queensland		4,677	9,764	911	3,790	82,848	483	102,473	
South Australia		2,732	10,826	1,467	4,062	73,112	390	92,589	
Western Australia		2,725	4,180	437	2,102	40,573	91	50,108	
Tasmania		998	2,651	459	1,212	21,590	152	27,062	
Total Males		36,432	71,497	13,544	41,540	644,322	4,512	811,847	
Total Females		4,809	44,536	1,265	3,314	193,618	1,109	248,651	
<b>Total Persons</b>	• •	41,241	116,033	14,809	44,854	837,940	5,621	1,060,498	

<sup>(</sup>a) Includes salaried managers and working directors.

<sup>(</sup>b) Includes persons working regularly

- (ii) Outworkers. The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and embraces only persons to whom work is given out by factories to be done at home. Owing to the amended employment groupings adopted in 1945-46, persons working regularly at home for factories are now included with carters, messengers and others and separate details are no longer available. The number of "outworkers" employed by factories in 1944-45 was 1,049.
- 5. Monthly Employment, 1938-39 and 1951-52 to 1955-56.—(i) Australia. The following table shows the number of persons (excluding working proprietors) employed in factories on the pay-day nearest to the 15th of each month for the year 1938-39 and on the last pay-day of the month in the later years.

FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA. (Excluding Working Proprietors.)

July

August

1938-39'. Month. 1951-52. 1952-53. 1953-54. 1954-55. 1955-56. MALES. 387,693 | 710,373 | 688,670 | 704,109 | 739,450 768,382 389.979 711,656 682,882 707,438 741,435 770,312 . . 391,576 712,284 680,026 710,246 743,638 771,715 714,424 716,300 393,977 679,901 71.5,3:38 746,139 774,071 . . . . 395,192 680,398 719,230 750,285 777,304 ٠. ٠. 394,438 708,848 678,174 716,202 747,230 772,509 . . 385,742 710,357 680,298 722,277 750,823 774,077 . . . . 709,453 392,056 689,012 727,754 755,456 778,552 . . . . 395,146 707,701 694,516 732,000 757,956 779,527 . . 697,202 702,571 731,923 391,005 760,139 780,418 . . . .

#### September October . . November . . December January . . February . . March April . . May 393,609 696,475 698,711 734,340 761,555 780,252 . . . . . . 390,963 694,871 | 701,500 | 738,002 | 763,488 777,968 June FEMALES. 147,282 | 212,322 214,644 July 243,646 | 201,464 | 231,222 238.883 August 149,294 244,629 200.393 232,603 240,857 . . . . ٠. 151,159 244,712 234,818 218,078 September 199,910 243,289 . . . . . . 236,930 152,473 | 245,285 | 201,107 222,255 October . . . . . . 244,840 224,672 238,146 November 152,806 | 242,831 | 201,346 244,582 . . . . . . December ... | 151,165 | 237,174 | 199,707 | 224,100 236,804 242,366 . . .. 141,853 228,838 231,186 201,596 236,664 240,574 January 229,047 209,939 242,008 242,573 February .. | 151,883 232,678 247.841 . . . . .. 154,854 225,487 213,470 236,354 247,209 March . . . . 239,460 238,450 152,614 216,845 211,725 234,175 April . . . . . . 244,588 150,693 212,036 211,392 232,333 243,989 May . . . . 238,529 242,548 June .. 148,601 207,163 211,551 232,009

			PE	RSONS.			
July		 •••	534,975	954,019	890,134	916,431	970,672 1,007,265
August		 	539,273	956,285	883,275	922,082	974,038 1,011,169
September		 	542,735	956,996	879,936	928,324	978,456,1,015,004
October		 	546,450	959,709	881,008	937,593	983,069 1,018,911
November		 	547,998	959,131	881,744	943,902	988,431 1,021,886
December	• •	 • •	545,603	946,022	877,881	940,302	984,034 1,014,875
January		 	527,595	941,543	881,894	951,115	987,487,1,014,651
February		 	543,939	938,500	898,951	960,432	997,464 1,026,393
March		 	550,000	933,188	907,986	968,354	1,000,529 1,026,736
April		 	543,619	919,416	908,927	966,098	999,599 1,025,006
May		 	544,302	908,511	910,103	966,673	1,000,005 1,024,241
June		 	539,561	. 902,034	913,051	970,011	1,002,017 1,020,516

(ii) States. Particulars of the numbers employed in each State on the last pay-day of each month in 1955-56 are shown in the following table:—

FACTORIES: MONTHLY EMPLOYMENT, 1955-56.

(EXCLUDING WORKING PROPRIETORS.)

Мо	nth.		N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
				М	ALES.				
July			309,781	242,423	82,643	72,723	40,554	20,258	768,38
August		• • •	310,780	243,763	82,344	72,459	40,698	20,268	770,31
September		• • • •	310,767	244,121	82,589	72,832	41,066	20,340	771,71
October			311,662	244,944	82,726	72,991	41.061	20,687	774,07
November	• •		311,002	246,012	82,720	73,389	41,294	20,852	777,30
December	• •	• •	312,894	245,609	77,487	73,787	41,298	21,434	777,30
December	••	•••	312,094	243,609	//,40/	/3,/6/	41,290	21,434	//2,30
January			313,779	246,977	75,886	74,555	41,172	21,708	774,07
February			315,787	247,619	77,784	74,554	41,136	21,672	778,55
March			315,402	248,679	78,286	74,860	40,808	21,492	779,52
April			316,400	248,606	78,721	74,474	40,543	21,674	780,41
May			316,316	247,551	80,375	73,870	40,468	21,672	780,25
June	• •		314,815	246,165	81,733	73,668	39,996	21,591	777,96
-				Fer	MALES.				
···			ſ	<u> </u>			1		<u> </u>
July			101,822	93,553	16,723	15,626	6,565	4,594	238,88
August .			102,862	93,971	17,283	15,694	6,543	4,504	240.85
September			104,477	94,749	17,193	15,819	6,603	4,448	243,28
October			105,158	95,032	17,579	16,005	6,644	4,422	244,84
November			105,070	95,266	16,983	16,055	6,750	4,458	244,58
December			103,448	93,833	17,013	16,706	6,598	4,768	242,36
January			101,824	93,742	16,319	16,961	6,567	5,161	240,57
February			104,108	97,927	17,338	16,791	6,647	5,030	247,84
March		• • •	103,268	98,116	17,281	16,618	6,743	5,183	247,20
April			103,031	96,680	16,356	16,302	6,776	5,443	244,58
		• • •		1 '			6,700		
May June		• • •	103,667	95,666	16,657	15,796	6,490	5,503 5,503	243,98 242,54
June	• •	• •	103,104	) 94,941	10,737	15,715	0,490	3,303	242,34
				PE	RSONS.				
July			411,603	335,976	99,366	88,349	47,119	24.062	1 007 26
	• •	••	411,603	337,734	99,627	88,153	47,119	24,852 24,772	1,007,26
August	• •	• •							1,011,16
September	• •	• •	415,244	338,870	99,782	88,651	47,669	24,788	1,015,00
October	• •	• •	416,820	339,976	100,305	88,996	47,705	25,109	1,018,91
November	• •	• •	418,554	341,278	99,256	89,444	48,044	25,310	1,021,88
December	• •	• •	416,342	339,442	94,500	90,493	47,896	26,202	1,014,87
January			415,603	340,719	92,205	91,516	47,739	26,869	1,014,65
February			419,895	345,546	95,122	91,345	47,783	26,702	1,026,39
March			418,670	346,795	95,567	91,478	47,551	26,675	1,026,73
April			419,431	345,286	95,077	90,776	47,319	27,117	1,025,00
May			419,983	343,217	97,032	89,666	47,168	27,175	1,024,24
June			417,979	341,106	98,470	89,381	46,486	27,094	1,020,51

6. Distribution of Employees According to Age.—The extension of statistics of employment in factories, decided upon at the Conference of Australian Statisticians held in 1945, permits of a distribution of employees (excluding working proprietors) into seven age-groups from 1945-46 onwards, instead of three as in previous years. The particulars are collected as at June. The numbers employed in each age-group on the last pay-day in June, 1955 and 1956, are given below:—

FACTORIES: DISTRIBUTION OF EMPLOYEES ACCORDING TO AGE, JUNE, 1955 AND 1956.

		LACEODING		3 PROPRIET	OK3.)		
Age Group.			June, 1955.			June, 1956.	
Age Gloup.		Males.	Females.	Persons.	Males.	Females.	Persons.
Under 16 years	•••	9,093	6,605	15,698	9,061	6,557	15,618
16 years		13,137	8,547	21,684	13,025	8,163	21,188
17 ,,		14,694	9,902	24,596	14,985	9,390	24,375
18		15,341	9,994	25,335	15,348	10,102	25,450
19 ,,		13,772	8,600	22,372	14,884	9,072	23,956
20 ,,		12,838	7,710	20,548	13,635	7,801	21,436
21 ,, and over		684,613	187,171	871,784	697,030	191,463	888,493
Total		763,488	238,529	1,002,017	777,968	242.548	1.020.516

The following table shows the age distribution in sexes for Australia in June, 1939, and 1952 to 1956.

FACTORIES: DISTRIBUTION OF EMPLOYEES IN JUNE, ACCORDING TO AGE, AUSTRALIA.

(EXCLUDING WORKING PROPRIETORS.)

		1	(EXCLU	DING WC	RKING PR	COPRIETOR	s.,		
In Jur	1 <b>e.</b>	Under 16 Years	16 Yéars.	17 Years.	18 Years.	19 Years.	20 Years.	21 Years and Over.	Total.
				Ŋ	MALES.			\ <u>-</u>	
1939(a)	•••	16,109	[		76,418			298,436	390,963
1952		9,079	11,505	12,608	12,255	11,711	11,537	626,176	694,871
1953		9,011	12,451						701,500
1954		9,294				12,971	12,426	660,899	738,002
1955		9,093		14,694	15,341	13,772	12,838	684,613	763,488
1956		9,061			15,348	14,884	13,635	697,030	777,968
				F	EMALES.				
1939(a)		15,497			56,273			76,831	148,601
1952		5,669	7,185	8,364	8,854	8,296	7,732	161,063	207,163
1953		6,874	8,303	9,072					211,551
1954		7,228	8,945						232,009
1955		6,605							238,529
1956		6,557	8,163	9,390	10,102	2' 9,072	7,801	191,463	242,548
				P	ERSONS.				
1939(a)		31,606	1		132,691			375,267	539,564
1952		14,748	18,690	20,972	21,109	20,007	19,269	787,239	902,034
1953		15,885				21,006	20,238	789,311	913,051
1954		16,522							970,011
1955		15,698		24,596		22,372	20,548		1,002,017
1956		15,618				23,956	21,436	888,493	1,020,516
		(-) D-1-	11- C 1- 41-		16 20 year		ble concest	-1	

<sup>(</sup>a) Details for individual ages 16-20 years not available separately.

### § 6. Sex Distribution in Factories.

1. Average Number of Males and Females Employed. The following table shows the average number of males and females employed in factories in each State for 1938-39 and 1951-52 to 1955-56:—

•				
DICTORIEC.	RAATEC	A NIT	THE NAME OF STREET	DAIDLOVED
FACTORIES:	MALES	AND	PEWALES	EMPLUIED.

State.	1938-39.	1951-52.	1952–53.	1953-54.	1954–55.	1955–56.
		Males.				
New South Wales	 167,172	304,808	291,704	305,040	316,673	327,106
Victoria	 136,218	233,699	228,724	240,698	251,675	258,006
Queensland	 43,941	77,673	77,627	81,425	83,290	85,123
South Australia	 35,406	68,045	67,114	70,657	73,714	76,144
Western Australia	 18,704	37,812	38,614	40,439	42,294	43,340
Tasmania	 11,150	19,934	19,621	20,249	21,045	22,128
Australia	 412,591	741,971	723,404	758,508	788,691	811,847
		FEMALE	S.			
New South Wales	 61,609	101,186	88,509	97,555	103,137	105,975
Victoria	 65,613	90,444	82,035	90,579	94,973	97,179
Oueensland	 10,169	16,676	15,496	16,694	17,003	17,350
South Australia	 7,965	15,862	13,369	14,846	15,851	16,445
Western Australia	 4,507	7,285	6,574	7,020	7,020	6,768
Tasmania	 2,652	4,093	3,874	4,340	4,407	4,934
Australia	 152,515	235,546	209,857	231,034	242,391	248,651

<sup>2.</sup> Rate of Variation for each Sex.—The percentages of increase or decrease on the average numbers of males and females employed in the preceding year are shown below for the years 1938-39 and 1951-52 to 1955-56:—

FACTORIES: ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED.

State.	1938–39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
		Males	•			
New South Wales	1.69	1.16	-4.30	4.57	3.81	3.29
Victoria	0.04	3.90	-2.13	5.24	4.56	2.52
Queensland	3.79	0.64	-0.06	4.89	2.29	2.20
South Australia	2.39	1.80	-1.37	5.28	4.33	3.30
Western Australia	0.30	4.02	2.12	4.73	4.59	2.47
Tasmania	4.40	2.47	-1.57	3.20	3.93	5.15
Australia	0.98	2.19	-2.50	4.85	3.98	2.94
		Female	s.			
New South Wales	1.88	- 4.23	-12.53	10.22	5.72	2.75
Victoria	-0.03	- 1.56	- 9.30	10.42	4.85	2.32
Queensland	3.96	- 4.14	- 7.08	7.73	1.85	2.04
South Australia	1.98	- 1.81	-15.72	11.05	6.77	3.75
Western Australia	3.06	- 1.71	9.76	6.78		<b>- 3.5</b> 9
Tasmania	6.51	- 6.40	- 5.35	12.03	1.54	11:96
Australia	1.30	- 3.01	-10.91	10.09	4.92	2.58

Note.—Minus sign (-) indicates decrease.

3. Masculinity of Persons Employed in Factories.—The extent to which females are employed in the factories of Australia may perhaps be more clearly shown by giving the masculinity of persons employed in each State. The following table shows particulars for the years 1938-39 and 1951-52 to 1955-56:—

FACTORIES:	MASCULINITY(a)	OF PERSONS	EMPLOYED.
------------	----------------	------------	-----------

	Үеаг.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938–39			271	208	432	445	415	420	271
1951-52			301	258	466	429	519	487	315
1952-53			330	279	501	502	587	506	345
1953-54			313	266	488	476	576	467	328
1954-55			307	265	490	465	602	478	325
1955-56		!	309	265	491	463	640	448	327

(a) Number of males per 100 females.

For a number of years prior to 1926-27, there were on the average 300 males employed in factories for every 100 females, but by 1932-33, as a result of the particularly severe effect of the depression on the heavier industries where males predominate in number, there were only 239 males employed to every 100 females. With the subsequent recovery of employment in the heavier industries, the proportion of males per 100 females increased to 271 in 1937-38 and 1938-39. The enlistment of men in the armed services and the expansion of industry and the consequential absorption of women brought about by the 1939-45 War caused a decrease in masculinity from 1938-39 to 1943-44. However, following the cessation of hostilities in 1945 and the return of servicemen to civilian life, the number of females employed in factories declined and masculinity increased. In 1955-56 there were 327 males to every 100 females employed in factories.

4. Employment of Females in Particular Industries.—(i) General. The majority of females in manufacturing industries are employed in four classes, namely:—IV., Industrial Metals, Machines, etc.; VI., Textiles; VIII., Clothing; and IX., Food, Drink and Tobacco. In 1955-56, these industries accounted for 78.45 per cent. of all females in factories. In two classes only did the number of females exceed the number of males, namely, in Class VI., Textiles, where there were 136 females to every 100 males and in Class VIII., Clothing, with 237 females per 100 males. The following tables show the average number of males and females employed in each of these classes in 1955-56:—

MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1955-56.

Class.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
		MALES.	·	<u></u>	<del>'</del>		
IV. Industrial Metals, etc. VI. Textiles and Textile Goods	175,042	117,687	33,127	45,440	18,573	8,503	398,372
VIII. Clothing (except Knitted) IX. Food, Drink and Tobacco All Other Classes	9,465 12,784 27,611 102,204	16,103 14,250 28,036 81,930	742 2,520 22,759 25,975	1,211 1,754 7,874 19,865	484 1,224 5,210 17,849	1,008 365 3,094 9,158	29,013 32,897 94,584 256,981
Total	327,106	258,006	85,123	76,144	43,340	22,128	811,847
		FEMALES	١.				
IV. Industrial Metals, etc VI. Textiles and Textile Goods (not Dress)	22,688	14,583	2,088 1,356	5,265 1,253	837 415	441 1,669	45,902 39,343
VIII. Clothing (except Knitted) IX. Food, Drink and Tobacco All Other Classes	32,359 11,789 25,281	32,639 10,391 18,774	6,072 3,967 3,867	3,760 2,928 3,239	2,575 1,408 1,533	518 1,426 880	77,923 31,909 53,574
Total	105,975	97,179	17,350	16,445	6,768	4,934	248,651

<sup>(</sup>ii) Females Employed in Clothing Manufacture. The employment of females in the several industries of Class VIII., Clothing—in which class the largest number of females is employed—and the relation of their number to that of the males so employed are shown in the following table.

<b>EMPLOYMENT</b>	IN C	OTHING	INDUSTRIES	REMININITY.	1955-56

	New	South V	Vales.	ļ	Victoria		Ot	her Stat	es.
Industry.	Males.	Fe- males.	Femininity.	Males.	Fe- males.	Feminity.	Males.	Fe- males.	Feminity.
Tailoring and Ready-made									
Clothing	3,075	14,353	467	2,969	7,376	248	1,150	3,664	319
Waterproof and Oilskin	1	1	İ	1	1	1	1	1	-
Clothing	119	666	560	137	355	259	12	61	508
Dressmaking, Hemstitching	209	2,044	978	1,291	8,034	622	159	2,900	1,824
Millinery	241	1,344	558	195	789	405	37	432	1,168
Shirts, Collars, Undercloth-	}	1	}	1	1	<b>,</b>	1	1	1
ing	440	3,935	894	771	5,591	725	164	1,785	1,088
Foundation Garments	120	1,338	1,115	185	1,496	809	22	170	773
Handkerchiefs, Ties and	Ī			i		1		ļ	
Scarves	156	984	631	92	388	422	32	121	378
Hats and Caps	575	609	106	229	205	90	28	121	432
Gloves	117	333	285	32	185	578	33	125	379
Boots and Shoes (not Rub-			İ	İ				,	1
ber)	3,474	3,669	106	5,349	5,590	105	1,889	1,526	81
Boot and Shoe Repairing	1,507	107	7	724	37	5	698	45	6
Boot and Shoe Accessories	198	94	47	381	225	59	47	8	17
Umbrellas and Walking	_	1		ļ		ł	!		
Sticks	57	109	191	27	75	278	16	46	288
Dyeworks and Cleaning (in-	l	i	ĺ		ļ	l	1	l	1
cluding Renovating and	_			1	ì	i	_	1	1
Repairing)	2,443	2,421	99	1,766	1,930	109	1,576	1,921	122
Other	53	353	666	102	363	356	••		•••
Total	12,784	32,359	253	14,250	32,639	229	5,863	12,925	220

(a) Number of females per 100 males.

### § 7. Child Labour in Factories.

- 1. Conditions of Child Labour.—The employment of young persons in factories in the States is regulated by Acts of Parliament, as is the case with the employment of female labour. The object of the restrictions imposed is to ensure, amongst other things, that a proper period shall be devoted to primary education, and that the early years of labour shall not exhaust the worker before the attainment of full growth.
- 2. Number of Children Employed, 1939, 1955 and 1956.—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The decline in the number of children employed from the peak of 33,553 reached in June, 1940, to 15,618 in June, 1956, was probably caused by several factors, including (i) the raising of the school leaving age in New South Wales and Tasmania, (ii) fewer children available for employment owing to the decline in the birth rate and (iii) the high level of employment which enabled parents to keep their children at school beyond the statutory leaving age.

The following table shows the number of children of each sex employed in manufacturing industries in June of the years mentioned.

FACTORIES: CHILDREN(a) EMPLOYED, JUNE.

		1939.			1955.		1956.			
State.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons	
New South Wales Victoria Queensland South Australia Western Australia Tasmania	5,759 6,167 1,790 1,296 705 392	7,084 5,005 1,334 1,053 521 500	12,843 11,172 3,124 2,349 1,226 892	2,579 2,908 1,754 855 876 121	1,982 2,381 1,124 723 319 76	4,561 5,289 2,878 1,578 1,195 197	2,538 2,888 1,749 872 901 113	1,860 2,338 1,199 723 361 76	4,398 5,226 2,948 1,595 1,262 189	
Australia	16,109	15,497	31,606	9,093	6,605	15,698	9,061	6,557	15,618	

(a) Under sixteen years of age.

3. Industries Employing Child Labour.—The distribution of children employed in factories in June, 1956 and the proportion of children employed to total employees are given in the following table according to the class of industry:—

FACTORIES: CHILDREN(a) EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1956.

Class of Industry.	Children	Employed.		nployees.	Proportion (per cent.) of Children Employed to Total Employees.	
	Males.	Females.	Males.	Females.	Males.	Females.
Industrial Metals, Machines, Conveyances Textiles and Textile Goods (not Dress) Clothing (except Knitted) Food, Drink and Tobacco Sawmills, Joinery, Boxes, etc. Furniture of Wood, Bedding, etc. Paper, Stationery, Printing, Bookbind-	4,186 499 546 1,023 729 473	775 1,256 2,575 722 82 64	387,352 28,775 27,344 87,760 53,788 15,569	45,090 39,156 75,780 29,499 3,014 3,604	1.08 1.73 2.00 1.17 1.36 3.04	1.72 3.21 3.40 2.45 2.72 1.78
ing	722 883	550 533	45,123 132,257	17,022 29,383	1.60 0.67	3.23 1.81
Total	9,061	6,557	777,968	242,548	1.16	2.70

<sup>(</sup>a) Under sixteen years of age.

4. Apprenticeship.—In all the States, Acts are in force for the regulation of the age at which children may be employed in gainful occupations. Legislative provision is also made for the regulation of apprenticeship under the various State Factories Acts or Arbitration Acts. These Acts, while laying down general principles, leave to the wages tribunals the actual determination of the conditions under which apprentices may be employed.

### § 8. Salaries and Wages Paid and Value of Production.

Note.—In all tables relating to salaries and wages paid in factories the amounts drawn by working proprietors are excluded.

- 1. General.—The importance of the manufacturing industries of Australia is indicated by the fact that the total value of their output for 1955-56 was £3,763,710,000, of which £2,125,819,000 was the value of the materials used, including containers, etc., tools replaced and repairs to plant and buildings, and £139,127,000 the value of the power, fuel and light used. The difference between the sum of the last two amounts and the value of output, namely, £1,498,764,000, represents the value of production as defined by the Conference of Statisticians at Sydney in 1925, i.e., "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production." The total amount of salaries and wages paid in factories in 1955-56 was £853,469,000. This figure, which excludes amounts drawn by working proprietors, was the highest ever recorded and shows an increase of £71,829,000 or 9.19 per cent. on that for the previous year.
- 2. Salaries and Wages Paid.—(i) In Classes of Industry, 1955-56. The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table.

<sup>(</sup>b) Excludes working proprietors.

FACTORIES: SALARIES AND WAGES PAID, 1955-56. (£'000.)

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-	,	;					
ous Mine and Quarry Pro-			1 400	1 724	1 510	600	10 405
ducts	7,587	5,654	1,408	1,724	1,510	602	18,485
II. Bricks, Pottery, Glass, etc	10,413	5,122	985	1,843	1,336	323	20,022
III. Chemicals, Dyes, Explosives,	18,437	15,317	1,358	2,891	2,705	461	41,169
Paints, Oils, Grease IV. Industrial Metals, Machines,	10,437	13,317	1,356	2,091	2,703	401	41,109
Conveyances	176,950	116,851	25,173	44,519	14,769	7,493	385,755
V. Precious Metals, Jewellery,	170,930	110,051	23,173	77,519	14,705	1,433	365,755
Plate	1,698	1,971	193	322	154	13	4,351
VI. Textiles and Textile Goods	1,000	2,5.1	1,75				1,551
(not Dress)	16,023	25,783	1,156	1,771	602	1,681	47,016
VII. Skins and Leather (not Cloth-	20,		,,,,,,	1 -1		-,	,,
ing or Footwear)	4,366	3,944	899	1,082	504	57	10,852
VIII. Clothing (except Knitted)	26,112	28,286	4,066	2,983	1 805	506	63,758
IX. Food, Drink and Tobacco	30,305	30,651	21,224	7,850	4,771	3,410	98,211
X. Sawmills, Joinery, Boxes, etc.,	•		1	1	1 ' 1		1
Wood Turning and Carving	15,938	11,712	7,113	3,732	4,653	2,745	45,893
XI. Furniture of Wood, Bedding,	•	1		1	1		
etc	6,202	4,458	1,766	1,402	866	297	14,991
XII. Paper, Stationery, Printing,							
Bookbinding, etc	22,477	18,384	3,828	3,137	1,929	3,501	53,256
XIII. Rubber	6,935	6,328	1,281	915	165	143	15,767
XIV. Musical Instruments	1,137	240	23	22	18	1100	1,440
XV. Miscellaneous Products	7,229	7,348	379	529	247	126	15,858
Total, Classes I. to XV.	351,809	282,049	70,852	74,722	36,034	21,358	836,824
XVI. Heat, Light and Power	7,214	4,895	1,608	1,515	1,173	240	16,645
	359,023	286,944	72,460	76,237	37,207	21,598	853,469

<sup>(</sup>ii) Totals and Averages, 1938-39 and 1951-52 to 1955-56.—The following table shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each of the years indicated. The figures exclude working proprietors and the amounts drawn by them:—

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES PAID.

	Year.		N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	Aust.
<del></del>			Тот	AL AMOU	T PAID (	(£'000).			
1938-39			44,606	36,027	10,887	8,169	4,574	2,480	106,743
1951-52			263,652	202,586	51,906	53,558	25,384	14,703	611,789
1952-53			265,910	210,878	57,59h	56,546	28,344	15,976	635,24
1953-54			293,586	236,037	63,433	63,110	31,590	17,381	705,13
1954-55			326,615	262,750	68,300	70,373	34,738	18,864	781,640
1955-56			359,023	286,944	72,460	76,237	37,207	21,598	853,469
			Av	ERAGE PE	R EMPLOY	EE (£).	<u>' </u>	`	
1938-39			201.77	185.64	210.78	195.57	207.90	188.31	196.3
1951-52			673.13	650.79	576.57	656.54	594.67	637.29	650, 6
1952-53			728.14	709.15	649.94	724.52.	664.59	707.89	710.2
1953-54			7.58 . 65	743.29	678.35	761.27	703.26	734.60	742.6
1954-55			804.43	790.00	714.83	810.32	74417	771.27	789.3
1955-56			860.91	841.16	740.93	848.43	785.23	828.65	837.3

In comparing the figures in the preceding table, regard should be paid to the nature of certain industries which are carried on to a greater extent in some States than in others. In Victoria, for instance, a large number of hands is employed in Class VIII., Clothing, comprising a relatively high percentage of women and children. The highest average wages per employee in 1955-56 were paid in New South Wales, South Australia and Victoria, in that order.

The average earnings per employee rose annually from 1938-39 to 1943-44 when a level of £291 was attained as a result of war-time conditions. In 1944-45, the average dropped to £285 and remained at this level in 1945-46. From 1945-46, average earnings rose each year and in 1955-56 reached a record level of over £837.

<sup>(</sup>iii) Total and Average Earnings of Males and Females, 1938-39 and 1951-52 to 1955-56. Particulars for these years are given in the table on the following page.

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES.

					·			
Year:	ŀ	N.S.W.	Vic.	Q'land:	S. Aust.	W: Aust:	Tas.	Aust.
	-		TOTAL A	MALES.	D (£'000).			
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56		38,272 220,885 224,745 245,749 274,467 302,880	29,006 163,688 171,897 190,573 213,377 234,784	9,920 46,087 51,519 56,608 61,125 64,918	7,488 47,194 50,594 56,299 62,942 68,213	4,129 22,870 25,756 28,684 31,748 34,236	2,234 13,056 14,249 15,320 16,736 19,146	91,049 513,780 538,760 593,233 660,395 724,177
			AVERAGE P	ER MALE E	MPLOYEE (£	).		
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56	::	239.24 756.84 807.77 844.05 906.61 967.45	224.47 736.68 793.11 833.71 891.40 955.00	238.59 625.91 701.45 733.34 773.47 802.89	220.95 716.25 779.90 824.49 883.13 925.47	235.49 643.68 711.80 754.20 797.80 839.62	212.09 687.09 761.21 791.86. 833.05 904.78	231.84 725.57 782.87 820.98 877.84 933.92
			TOTAL A	FEMALES				
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56		6,334 42,767 41,165 47,837 52,1481 56,143	7,021 38,898 38,981 45,464 49,373 52,160	967 5,819 6,072 6,825 7,175 7,542	681 6,364 5,952 6,811 7,431 8,024	2,514 2,588 2,906 2,990 2,971	246- 1,647 1,727 2,061: 2,128- 2,452	15,694 98,009, 96,485 111,904 121,245 129,292
		A	VERAGE PI	R FEMALE J	EMPLOYEE (	£).		
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56		103.66 428.40 473.28 499.19 514.94 540.06	108.25 436.60 483.46 510.96 529.63 547.42	96.00 354.96 400.48 418.23 431.68 445.22	86.44 405.70 451'.80 465.95 477.12 496.84	99.58 351.30 400.32 421.93 434.21 449.61	93.19 404.71. 448.58 477.84 487.12 500.06	103.92 422.04 467.79 493.10 509.56 530.23

(iv) Managers, Clerical Staff and Other Employees. A further analysis of salaries and wages paid is given in the following table for 1955-56 and shows the amounts paid to managerial and clerical staff including salaried managers and working directors, chemists, draftsmen and other laboratory and research staff, and those paid to other employees. As previously mentioned, amounts drawn by working proprietors are excluded in all cases:—

FACTORIES: SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1955-56.

Class of Industry.	Staff, C	s, Clerical hemists, nen, etc.	All Other Employees.		
	Males.	Females.	Males.	Females.	
	£'000.	£'000.	£'000.	£'000.	
I. Treatment of Non-metalliferous Mine and Quarry		i			
Products	2,157	349	15,868	111	
II. Bricks, Pottery, Glass, etc	1,630	403	17,333	656	
III. Chemicals, Dyes, Explosives, Paints, Oils, Grease.	8,910	1,887	26,406	3,966	
IV. Industrial Metals, Machines, Conveyances	52,634	10,886	308,183	14,052	
V. Precious Metals, Jewellery, Plate	478	167	3,259	447	
VI. Textiles and Textile Goods (not Dress)	4,223	1,758	22,257	18,778	
VII. Skins and Leather (not Clothing or Footwear)	1,238	249	7,856		
VIII. Clothing (except Knitted)	4,223	2,168	20,191	37,176	
IX. Food, Drink and Tobacco	12,055	3,391	69,865	12,900	
X. Sawmills, Joinery, Boxes, etc., Wood Turning and			1		
Carving	4,441	946	39,956	550.	
XI. Furniture of Wood, Bedding, etc	1,401	440	11,732		
XII. Paper, Stationery, Printing, Bookbinding, etc	6,669	2,209	37,808		
XIII. Rubber	2,181	492	11,608	1,486	
XIV. Musical Instruments	171.	68	1,040.	161	
XV. Miscellaneous Products	2,122	698	9,729		
Total, Classes 1. to XV	104,533	26,111	603,091	103,089	
XVI. Heat, Light and Power	1,584,	72	14,969	20	
Grand Total	106,117	26,183	618,060	103,109	
Average paid per employee	1,247.84	571.66	895.25	520.65	

3. Power, Fuel and Light Used.—(i) In Classes of Industry, 1955-56. The expenditure by factories on power, fuel and light, including the value of lubricants and water, is of considerable importance; in 1955-56 it amounted to a new high level of £139,127,000, an increase of £10,745,000 as compared with the previous year and over nine times the corresponding value in 1938-39. The following table shows the value of power, fuel and light, etc., used in the different classes of industry:—

FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED(a), 1955-56. (£'000.)

Class of Industry,	N.S.W.	Vic.	O'land.	S. Aust.	W. Aust.	Tas.	Aust.
Class of Industry.	11.5.11.	V 10.	Q land.	J. Aust.	W. Aust.	143.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-		1	ĺ				}
ducts	2,479	1,785	623	848	758	271	6,764
II. Bricks, Pottery, Glass, etc	3,415	1,997	354	550	574	140	7,030
III. Chemicals, Dyes, Explosives,							
Paints, Oils, Grease	4,611	3,530	268	816	1,838	132	11,195
IV. Industrial Metals, Machines, Conveyances	25,738	5,525	1,580	4,717	888	1,407	20.055
V. Precious Metals, Jewellery,	23,730	3,323	1,360	4,/1/	000	1,407	39,855
Plate	124	112	10	34	13	1	294
VI. Textiles and Textile Goods	1			"		•	2,74
(not Dress)	1,407	1,848	56	184	46	143	3,684
VII. Skins and Leather (not Cloth-							٠.
ing or Footwear)	406	411	66	129	62	4	1,078
VIII. Clothing (except Knitted) IX. Food, Drink and Tobacco	873	786 5,208	157	124	84 938	36 439	2,060 16,467
X. Sawmills, Joinery, Boxes, etc.,	5,915	3,208	2,721	1,246	936	437	10,407
Wood Turning and Carving	1.403	607	385	151	313	295	3,154
XI. Furniture of Wood, Bedding,							-,
etc	164	93	40	38	23	6	364
XII. Paper, Stationery, Printing,				i			
Bookbinding, etc	1,117	1,502	127	256	80	1,192	4,274
VIV Musical Instruments	948 70	888 12	143 (b)	(b)	(b) 18	17	2,111 82
XV. Miscellaneous Products	443	421	10	50	11	4	939
1111 Misserianous 110dans	143	721					
Total, Classes 1. to XV.	49,113	24,725	6,540	9,240	5,646	4,087	99,351
XVI. Heat, Light and Power	17,456	9,873	5,440	3,590	3,407	10	39,776
Grand Total	66,569	34,598	11,980	12,830	9,053	4,097	139,127

<sup>(</sup>a) Includes value of lubricants and water.

(ii) Values of Items, 1955-56. The following table shows the values of the various items of power, fuel and light used in factories in each State, during the year:—

FACTORIES: VALUE OF ITEMS OF POWER, FUEL AND LIGHT USED(a), 1955-56. (£'000.)

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal, Black		21,230	2,712	6,514	(b) 3,623	2,956	1,242	38,277
, Brown			7,025					7,025
Brown Coal Briquettes			2,347			1		2,347
Coke		12,587	1,138	397	2,479	178	218	16,997
Wood		449	680	431	394	420	195	2,569
Fuel Oil		6,055	7,704	1,232	2,279	1,829	433	19,532
Tar (Fuel)		830	238	6	98	15	21	1,208
Electricity		17,763	9,122	2,490	2,946	1,920	1,671	35,912
Gas		3,053	911	137	238	77	36	4,452
Other (Charcoal, etc.)	::	1,582	789	123	297	1,247	121	4,159
Water	::	1,923	1,172	285	250	210	80	3,920
Lubricating Oils	'	1,097	760	365	226	201	80	2,729
Total		66,569	34,598	11,980	12,830	9,053	4,097	139,127

<sup>(</sup>a) Includes value of lubricants and water. of Leigh Creek coal.

<sup>(</sup>b) Less than £500.

<sup>(</sup>b) Includes £1,028,000, the value of 417,000 tons

(iii) Quantities of Fuel Used, 1955-56. The following table shows the quantities of fuel used in factories in each State during the year:—

### FACTORIES: QUANTITIES OF FUEL USED, 1955-56.

Particulars.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal, Black Brown	'000 tons	5,394	411 8,551	1,544	(a) 840	586	249	9,024 8,551
Brown Coal Briquettes	"	2.051	487		261	22		487 2,527
Wood Fuel Oil	'000 gals.	208 96,956	377 132,901	255 15.820	159	330 27,127	98 5.650	1,427
Tar (Fuel)	,,	28,182	4,893	226	2,600	503	453	36,857

(a) Includes 417,000 tons of Leigh Creek coal.

(iv) Total Value, 1938-39 and 1951-52 to 1955-56. The next table shows the amounts expended on power, fuel and light during these years:—

FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED.(a) (£'000.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1938-39	7,652	4,000	1,423	1,018	1,169	438	15,700
1951-52	48,664	21,990	8,286	10,409	5,173	2,107	96,629
1952-53	53,630	25,626	9,624	11,806	6,175	2,476	109,337
1953-54	58,447	29,080	10,655	12,500	6,972	2,804	120,458
1954-55	60,925	31,767	11,620	12,897	8,046	3,127	128,382
1955-56	66,569	34,598	11,980	12,830	9,053	4,097	139,127

(a) Includes value of lubricants and water.

4. Value of Materials Used.—(i) In Classes of Industry, 1955-56. The value of materials used (which includes the value of containers, packing, etc., the cost of tools replaced and repairs to plant) in factories in Australia in 1955-56 reached £2,125,819,000, representing 56.5 per cent. of the value of the final output (see para. 5). The following table shows the value of the materials used in various classes of industry in each State:—

FACTORIES: VALUE OF MATERIALS USED, 1955-56. (£'000.)

		(- 000,					
Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	05 400	40.004	2 422	4 005	0.00	1 170	47.262
ducts	25,428	10,984	3,122	4,005	2,685	1,139	47,363
II. Bricks, Pottery, Glass, etc	9,090	5,216	604	1,831	826	210	17,777
III. Chemicals, Dyes, Explosives,	04.400	010	<b>5</b> 100	11 770	27.056		200 (21
Paints, Oils, Grease	84,426	77,018	7,169	11,739	27,856	1,413	209,621
IV. Industrial Metals, Machines,			44.000	05.440	40.00		
Conveyances	377,194	182,134	46,079	95,148	18,337	17,211	736,103
V. Precious Metals, Jewellery,			1	200	11		4000
Plate	1,794	2,660	102	260	75	5	4,896
VI. Textiles and Textile Goods	1		1				
(not Dress)	40,130	61,582	4,158	4,106	2,946	4,555	117,477
VII. Skins and Leather (not Cloth-	i		i				
ing or Footwear)	12,727	11,092	2,881	5,760	1,234	109	33,803
VIII. Clothing (except Knitted)	44,522	47,467	5,827	3,242	2,185	319	103,562
IX. Food, Drink and Tobacco	158,062	165,265	130,426	34,854	26,491	15,557	530,655
X. Sawmills, Joinery, Boxes, etc.,			1				
Wood Turning and Carving	37,268	24,671	14,643	10,683	7,474	5,684	100,423
XI. Furniture of Wood, Bedding,	1	ĺ	1				1
etc	12,423	8,634	3,545	2,646	1,769	438	29,455
XII. Paper, Stationery, Printing,	1		1	1			l
Bookbinding, etc	42,360	38,803	6,114	5,017	2,867	6,575	101,736
XIII. Rubber	19,366	17,457	4,001	1,454	302	189	42,769
XIV. Musical Instruments	2,007	262	12	5	2		2,288
XV. Miscellaneous Products	11,405	15,378	473	819	303	73	28,451
Total, Classes 1. to XV.	878,202	668,623	229,156	181,569	95,352	53,477	2,106,379
XVI. Heat, Light and Power	7,880	6,223	2,428	1,627	1,008	274	19,440
Grand Total	886,082	674,846	231,584	183,196	96,360	53,751	2,125,819

(ii) Total Amount, 1938-39 and 1951-52 to 1955-56. The following table shows the values of materials used in factories for these years:—

FACTORIES: VALUE OF MATERIALS USED. (£'000.)

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39		120,502	82,971	42,596	20,309	9,604	5,321	281,303
1951-52		647,291	477,617	150,427	139,198	58,652	40,025	1,513,210
1952-53	::	627,954	476,489	187,572	133,818	63,943	38,029	1,527,805
1953-54		721,311	548,111	211,451	152,590	72,468	42,042	1,747,973
1954-55		802,617	616,666	224,336	169,136	80,583	47,360	1,940,698
1955-56		886,082	674,846	231,584	183,196	96,360	53,751	2,125,819

5. Value of Output.—(i) In Classes of Industry, 1955-56. The value of the output of factories in the various classes in each State in 1955-56 is shown in the following table. It represents the selling value at the factory (excluding delivery costs and charges) of goods made or processed during the year, including by-products. In addition, it includes the amount received for other work done such as repair work, assembling and making up for customers. The difference between the sum of the values of the materials and of the power, fuel and light used, and the value of output is the real value of factory production (see para. 6).

FACTORIES: VALUE OF OUTPUT, 1955-56. (£'000.)

Class of Industry.	N.S.W.	Vic.	. Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	41,859	23,176	6,430	8,638	6.031	2,536	88,670
ducts II. Bricks, Pottery, Glass, etc	29,077	15,075	2,725	5,507	3,541	790	
III. Chemicals, Dyes, Explosives,		13,073	2,720	3,307	3,511	,,,,	50,715
Paints, Oils, Grease	143,943	120,507	11,356	19,779	41,790	2,604	339,979
IV. Industrial Metals, Machines,					أبمنينا		
Conveyances V. Precious Metals Jewellery.	682,366	361,813	88,146	163,947	41,191	33,857	1,371,320
V. Precious Metals, Jewellery, Plate	4,869	6,148	429	815	381	27	12,669
VI. Textiles and Textile Goods	7,00	0,140	727	615	301	21	12,000
(not Dress)	68,529	108,719	6,204	7,242	4,122	7,795	202,611
VII. Skins and Leather (not Cloth-							
ing or Footwear)	19,816		4,381	7,506	2,026	193	51,864
VIII. Clothing (except Knitted) IX. Food, Drink and Tobacco	88,343 231,758		12,495 173,738	7,895 49,340	5,171 36,992	1,116 22,398	208,090 744,920
X. Sawmills, Joinery, Boxes, etc.,	231,730	230,034	173,730	77,570	30,552	22,390	744,720
Wood Turning and Carving	66,674	45,143	27,118	16,908	15,239	10,988	182,070
XI. Furniture of Wood, Bedding,	ì						
etc.	22,540	16,648	6,407	4,925	3,251	944	54,715
XII. Paper, Stationery, Printing, Bookbinding, etc.	85,214	72,606	12.833	11,063	6,599	16,745	205,060
XIII. Rubber	30,147		6,628	3,087		450	
XIV. Musical Instruments	4,224		47	36			4,986
XV. Miscellaneous Products	24,475	29,132	1,090	1,867	734	262	57,560
Total, Classes I. to XV.	1,543,834	1,171,095	360,027	308,555	167,787	100,705	3,652,003
1777 Y							
XVI. Heat, Light and Power	50,953	30,297	11,617	8,407	7,359	3,074	111,707
Grand Total	1.594.787	1,201,392	371,644	316,962	175,146	103,779	3,763,710

(ii) Total, 1938-39 and 1951-52 to 1955-56. The following table shows the value of output in each State during these years:—

# FACTORIES: VALUE OF OUTPUT. (£'000.)

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39		218,420	152.967	63,321	35,005	19.549	11.158	500,420
1951-52	::	1,139,346	833,967	250,043	232,853	106,571	71.926	2,634,706
1952-53	• • •	1,139,326	860,147	295,405	234,813	119,310	71.003	2,720,004
1953-54		1,299,801	985,505	332,361	265,311	134,587	77.911	3.095,476
1954-55		1,446,669	1,100,656	356,017	293,061	149,585	88,601	3.434.589
1955-56		1.594.787	1,201,392	371,644	316,962	175,146	103,779	3.763.710

6. Value of Production.—(i) In Classes of Industry, 1955-56. The value of production for any industry was defined at the Conference of Statisticians at Sydney in 1925 as "the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production."

In accordance with this definition, it was agreed that a deduction consisting of the costs of raw material, containers, power, fuel, light, lubricants, water, tools replaced, repairs to plant and depreciation should be made from the "value of output". All these deductions with the exception of depreciation are included in the items "value of materials used" and "value of fuel used" as defined above. On account of the difficulty experienced in securing accurate figures for depreciation, it was agreed that no deduction should be made on this account for the present. The value of production as given in the following tables is obtained therefore, by deducting "value of materials used" and "value of fuel used" from the "value of output".

The figure thus calculated is, however, not the net value of production. The amount of depreciation, particulars of which are shown in § 9, para. 4, was recorded as £67,939,000 for 1955-56. Many miscellaneous expenses, such as taxation, insurance, advertising and other sundry charges, have not been taken into account. Therefore, it must not be inferred that when wages and salaries are deducted from the value of production the whole of the "surplus" is available for interest and profit.

The value of factory production, therefore, approximates "net value added" in the manufacturing process. It amounted in 1955-56 to £1,499 million to which Class IV., Industrial Metals, etc., with £595 million made the greatest contribution. The total value of production in 1955-56 showed an increase of £133 million (9.74 per cent.) over the figure for 1954-55 and £1,295 million over the value of production recorded in 1938-39.

The following table shows the value of production in 1955-56 in each State for the various classes of industry.

## FACTORIES: VALUE OF PRODUCTION, 1955-56. ('000.)

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	13,952	10,407	2,685	3,785	2,588	1.126	34,543
ducts II. Bricks, Pottery, Glass, etc	16,572	7,862	1,767			440	31,908
III. Chemicals, Dyes, Explosives,	10,372	7,802	1,707	3,120	2,141	440	31,300
D-1 0'1- C	54,906	39,959	3,919	7,224	12,096	1,059	119,163
IV. Industrial Metals, Machines,	34,900	39,537	3,717	1,224	12,090	1,039	119,103
Camusanana	279,434	174,154	40,487	64,082	21,966	15,239	595,362
V. Precious Metals, Jewellery,	215,454	177,107	40,407	04,002	21,700	10,239	373,302
Plate	2,951	3,376	317	521	293	21	7,479
VI. Textiles and Textile Goods	2,,,,,,	3,5.0	317	321		~.	.,.,,
(not Dress)	26,992	45,289	1,990	2,952	1,130	3,097	81,450
VII. Skins and Leather (not Cloth-	20,772	,	2,220	_,,,,	-,	-,	,
ing or Footwear)	6,683	6,439	1,434	1,617	730	80	16,983
VIII. Clothing (except Knitted)	42,948	44,817	6,511			761	102,468
IX. Food, Drink and Tobacco	67,781	60,221	40,591			6,402	
X. Sawmills, Joinery, Boxes, etc.,	,		,	,-	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,	'
Wood Turning and Carving	28,003	19,865	12,090	6,074	7,452	5,009	78,493
XI. Furniture of Wood, Bedding,		,	•			•	
etc	9,953	7,921	2,822	2,241	1,459	500	24,896
XII. Paper, Stationery, Printing,	'	-		1			
Bookbinding, etc	41,737	32,301	6,592	5,790		8,978	
XIII. Rubber	9,833	11,426	2,484	1,536	371	244	
XIV. Musical Instruments	2,147	377	35	31		• •	2,616
XV. Miscellaneous Products	12,627	13,333	607	998	420	185	28,170
Total, Classes I. to XV.	616,519	477,747	124,331	117,746	66,789	43,141	1,446,273
XVI. Heat, Light and Power	25,617	14,201	3,749	3,190		2,790	52,491
Grand Total	642,136	491,948	128,080	120,936	69,733	45,931	1,498,764

(ii) Total and Averages, 1938-39 and 1951-52 to 1955-56. The value of production and the amount per person employed and per head of population are shown in the following table. For Australia as a whole, the value of production per head of population increased from £29.34 per head in 1938-39 to £160.89 per head in 1955-56. For value per person employed, the increase was not quite so pronounced (from £360 per head in 1938-39 to £1,413 in 1955-56).

### FACTORIES: VALUE OF PRODUCTION.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
			V	LUE. (£'(	)00.)			
1938–39 1951–52 1952–53 1953–54 1954–55	::	90,266 443,391 457,742 520,043 583,127 642,136	65,996 334,360 358,032 408,314 452,223 491,948	19,302 91,330 98,209 110,255 120,061 128,080	13,678 83,246 89,189 100,221 111,028 120,936	8,776 42,746 49,192 55,147 60,956 69,733	5,399 29,794 30,498 33,065 38,114 45,931	203,417 1,024,867 1,082,862 1,227,045 1,365,509 1,498,764
			Per Par	SON EMPL	OYED. (£.)	)		
1938-39 1951-52 1952-53 1953-54 1954-55 1955-56	::	395 1,092 1,204 1,292 1,389 1,483	327 1,032 1,152 1,233 1,305 1,385	357 968 1,055 1,124 1,197 1,250	315 992 1,108 1,172 1,240 1,306	378 947 1,089 1,162 1,236 1,392	391 1,240 1,298 1,345 1,497 1,697	360 1,048 1,160 1,240 1,324 1,413
		1	Per Head	OF POPUL	ATION. (	£.)		
1938-39 1951-52 1952-53 1953-54 1954-55	::	33.00 132.12 133.84 152.70 168.56 182.20	35.25 145.28 151.55 168.53 181.75 191.80	19.14 74.79 78.64 84.78 90.59 94.69	22.98 114.14 119.00 127.50 137.50 144.93	18.80 72.31 80.28 87.44 93.93 104.23	22.72 99.79 98.72 106.85 121.78 143.90	29.34 120.02 123.79 137.86 150.22 160.89

645,295 3,763,710

7. Value of Output and Cost of Production.—As the total value of the output for Australia for 1955-56 was recorded as £3,763,710,000, there remained, after payment of £2,125,819,000 for the value of the materials used, £853,469,000 for salaries and wages and £139,127,000 for power, fuel and light, a balance of £645,295,000 to provide for all other costs and overhead expenses such as rent, interest, insurance, pay-roll tax, income tax, depreciation, etc., as well as drawings by working proprietors and profit. The following table gives corresponding particulars for each State for the year 1955-56:—

FACTORIES: VALUE OF OUTPUT AND COST OF PRODUCTION, 1955-56.

State.		Materials Used. (a)	S Power, Fuel Salaries and Light.		Balance. (Output less Materials, Fuel and Wages.)(c)	Total Value of Output.					
Value and Cost, etc. (£'000.)											
New South Wales Victoria Queensland South Australia Western Australia Tasmania		886,082 674,846 231,584 183,196 96,360 53,751	66,569 34,598 11,980 12,830 9,053 4,097	359,023 286,944 72,460 76,237 37,207 21,598	283,113 205,004 55,620 44,699 32,526 24,333	1,594,787 1,201,392 371,644 316,962 175,146 103,779					

 <sup>(</sup>a) Includes the value of containers, packing, etc., also the cost of tools replaced and repairs to plant.
 (b) Includes lubricants and water.
 (c) See paragraph preceding this table.

139,127 853,469

.. 2,125,819

Australia

### § 9. Value of Land, Buildings, Plant and Machinery.

1. General.—The following statement shows the value of land and buildings and of plant and machinery used in connexion with manufacturing industries during the year 1955-56:—

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY(a), 1955-56.  $(\mathfrak{L}'000.)$ 

							<del></del>
Value of—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Land and buildings	260,268	214,921	52,602	48,353	32,859	46,579	655,582
Plant and machinery	298,913	258,295	85,777	63,596	56,534	40,425	803,540
Total	559,181	473,216	138,379	111,949	89,393	87,004	1,459,122

<sup>(</sup>a) Includes estimated value of rented premises and plant.

The values recorded in this section are generally the values apportioned in the books of the individual firms after allowance has been made for depreciation, but they include estimates of the capital value of premises and plant rented. The totals shown in the table consequently do not represent the actual amount of capital invested in the items specified.

2. Value of Land and Buildings.—(i) Total for Australia. The following table shows for Australia as a whole, the approximate value of land and buildings occupied in connexion with manufacturing industries for 1938-39, and 1951-52 to 1955-56.

<b>FACTORIES:</b>	VALUE	OF LAND AND	BUILDINGS(a),	AUSTRALIA.
		(.000°£)		

Class of Industry.	1938-39.	1951–52.	1952–53.	1953-54.	.1954–55.	:1955–56.
I. Treatment of Non-metalliferous						
Mine and Quarry Products	2,779	6,905	7.431	8,091	-9,103	11,228
II. Bricks, Pottery, Glass, etc	2,953	6,761	7,723	8,535	9,849	11,301
III. Chemicals, Dyes, Explosives,	1	·		•		,
Paints, Oils, Grease	7,377	25,262	30,996	36,931	44,658	61.863
IV. Industrial Metals, Machines,	1		,		, ,	! '
Conveyances	34,841	117,513	137,724	159,325	184,934	218,667
V. Precious Metals, Jewellery, Plate	633	2,037	2,311	2,523	2,888	3,233
VI. Textiles and Textile Goods (not	ĺ		'	1	1	! '
Dress)	6,000	20,845	22,482	25,443	29,651	31,931
VII. Skins and Leather (not Clothing	i "	1	1		"	1
or Footwear)	2,096	5,382	5,734	6,072	6,452	6,288
VIII. Clothing (except Knitted)	10,624	24,768	26,359	28,584	31,163	33,920
IX. Food, Drink and Tobacco	33,273	68,916	78,278	86,625	94,070	108,335
X. Sawmills, Joinery, Boxes, etc.,		1	1	1	1	. ,
Wood Turning and Carving	4,107	14,505	16,361	18,297	21,225	23,141
XI. Furniture of Wood, Bedding, etc.	2,533	6,812	7.256	8,069	8,981	9,915
XII. Paper, Stationery, Printing, Book-		1	1	· .	1	
binding, etc.	10,639	24,691	27,284	30,444	34,156	40,256
XIII. Rubber	1,676	4,620	5,530	6,668	7,430	8.581
XIV. Musical Instruments	105	380	398	468	528	621
XV. Miscellaneous Products	:1,433	6,266	6,705	7,570	8,299	9,946
Total, Classes I. to XV	721,069	335,663	382,572	433,645	493,387	579,226
XVI. Heat, Light and Power	-9;851	23,827	31;874	49,786	62,609	76,356
Grand Total	:130,920	359,490	414,446	483,431	555,996	655;582

<sup>(</sup>a) Includes estimated value of rented premises.

# FACTORIES: VALUE OF LAND AND BUILDINGS(a), 1955-56. (£'000.)

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	4 400	2 200				~ .	
ducts	4,122	3,309	837	824	1,520	616	11,228
II. Bricks, Pottery, Glass, etc	5,634	2,624	717	913	1,202	211	11,301
III. Chemicals, Dyes, Explosives,	40 500				1 1	201	
Paints, Oils, Grease	30,629	21,737	1,258	2,596	4,652	991	61,863
IV. Industrial Metals, Machines,					1		l
Conveyances	97,372	70,716	13,554	19,745	9,623	.7,657	218,667
V. Precious Metals, Jewellery,		1			l _ i		
Plate	1,165	1,538	112	230	167	21	3,233
VI. Textiles and Textile Goods	1			1	1 1		
(not Dress)	11,079	18,079	.676	863	565	669	.31,931
VII. Skins and Leather (not Cloth-	ł	į	ŀ	Į.	1		1
ing or Footwear)	2,581	.2,468	290	58.7	244	.118	6,288
VIII. Clothing (except Knitted)	14,691	13,239	2,308	1,733	1,500	449	33,920
IX. Food, Drink and Tobacco	35,113	35,345	18,303	8,644	6,976	3,954	108,335
X. Sawmills, Joinery, Boxes, etc.,	1 '	1	'	1		,	
Wood Turning and Carving	9,360	6,154	2,238	2,309	1,930	1,150	23,141
XI. Furniture of Wood, Bedding,	1			1	'	•	1
etc	3,823	3,367	1,057	745	716	207	9,915
XII. Paper, Stationery, Printing,	.,	.,	-,,		'		{
Bookbinding, etc.	16,781	14,462	2,281	1,904	1,259	3,569	40,256
XIII. Rubber	3,345	3,570	856	417	7,277	116	8,581
XIV. Musical Instruments	417	166	6	12	20		621
XV. Miscellaneous Products	4.443	4,644	209	341	225	84	9,946
1.2 ** 1.1.2.00********************************	1,115	1,01	200				) -,,,,
Total, Classes 1. to XV	2/0 555	201 419	44.702	11.062	20 976	70 9/3	579,226
Total, Classes 1. 10 AV	240,555	201,418	44,702	41,863	30,876	19,812	3/9,220
XVI. Heat, Light and Power	19,713	13,503	7,900	6,490	1,983	26,767	76,356
a						46.550	655.500
Grand Total	260,268	214,921	52,602	48,353	32,859	46,579	655,582

(a) Includes estimated value of rented premises.

<sup>(</sup>ii) In Classes of Industry in States, 1955-56. The following table gives particulars of the various classes of industry in each State.

(iii) Totals in each State. The following table shows the value of land and buildings in each State for the years 1938-39 and 1951-52 to 1955-56:—

FACTORIES:	VALUE	OF	LAND	AND	BUILDINGS.(a)
		(£'	000.)		

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39 1951-52 1952-53 1953-54 1954-55	57,353 153,662 176,576 196,724 221,519 260,268	42,026 119,465 135,324 158,389 186,324 214,921	12,299 28,610 34,720 40,003 46,187 52,602	8,711 28,507 31,904 36,579 42,133 48,353	6,814 16,747 20,960 24,739 30,230 32,859	3,717 12,499 14,962 26,997 29,603 46,579	130,920 359,490 414,446 483,431 555,996 655,582

(a) Includes estimated value of rented premises.

Prior to 1929-30, the increase in the value of land and buildings was uninterrupted, rising from £23 million in 1903 to £118 million in 1929-30, a growth of £95 million in 27 years. During the three years ended 1932-33, there was a decline of £12 million to £105.8 million, but since that year the value has risen annually and it stood at £655.6 million in 1955-56.

3. Value of Plant and Machinery.—(i) Total for Australia, 1938-39 and 1951-52 to 1955-56. The following table shows for Australia the approximate value of plant and machinery used in factories.

FACTORIES: VALUE OF PLANT AND MACHINERY(a), AUSTRALIA. (£'000.)

Chan a C.T. Aust	1	1051.50	1052.53	1052.51	1054.55	1055 56
Class of Industry.	1938–39.	1951-52.	1952-53.	1953–54.	1954–55.	1955–56.
L Treatment of Non-metalliferous		44.544	1 4 4 4 4 7 7	45.000	20.505	20.510
Mine and Quarry Products	7,028	11,911	16,155	17,829	20,625	23,512
II. Bricks, Pottery, Glass, etc. III. Chemicals, Dyes, Explosives,	3,145	7,461	8,811	9,741	11,000	12,319
Paints, Oils, Grease	6,754	30,559	39,024	53,528	97,508	125,016
IV. Industrial Metals, Machines,	1 .,,,,		05,021	00,020	2.,000	120,010
Conveyances	33,038	112,940	131.857	148.178	168,651	202,286
V. Precious Metals, Jewellery, Plate	197	955	1,012	1,002	1.094	1,219
VI. Textiles and Textile Goods (not					,	
Dress)	6,658	23,973	25,030	27,567	29,658	31,155
VII. Skins and Leather (not Clothing	'	, - i				
or Footwear)	973	3,642	3,894	4,034	4,153	4,225
VIII. Clothing (except Knitted)	2,557	10,403	11,181	12,363	13,452	14,340
IX. Food, Drink and Tobacco	32,101	66,712	77,512	90,624	101,700	115,904
X. Sawmills, Joinery, Boxes, etc.,						
Wood Turning and Carving	3,907	15,869	17,851	19,002	21,827	23,626
XI. Furniture of Wood, Bedding, etc.	728	2,483	2,692	2,870	3,186	3,388
XII. Paper, Stationery, Printing, Book-					10.00	
binding, etc.	9,188	33,613	38,129	41,866	46,129	51,405
XIII. Rubber	1,368	4,171	4,875	5,677	6,843	8,971
XIV. Musical Instruments	12	302	305	458	444	509
XV. Miscellaneous Products	758	4,674	5,075	5,968	6,614	7,459
Total, Classes I. to XV	108,412	329,668	383,403	440,707	532,884	625,334
XVI. Heat, Light and Power	35,250	80,476	110,131	140,008	165,408	178,206
Grand Total	143,662	410,144	493,534	580,715	698,292	803,540

(a) Includes estimated value of rented plant and machinery.

Except for the years 1930-31 to 1933-34, when decreases were recorded, there has been a continuous increase in the value of plant and machinery in factories in Australia. The increase in 1955-56 of £105.2 million over 1954-55 extended over all industrial classes. The greatest increase occurred in Class IV., Industrial Metals, Machines, Conveyances.

(ii) Totals in each State. The following table shows the value of plant and machinery in each State during the years 1938-39 and 1951-52 to 1955-56. During 1955-56 increases occurred in all States, New South Wales showing the largest increase, £40.3 million.

FACTORIES: VALUE OF PLANT AND MACHINERY.(a) (£'000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39	 62,693 166,437 207,733 233,022 258,596 298,913	38,627 128,934 147,365 181,058 226,347 258,295	18,095 41,290 51,670 64,160 76,367 85,777	9,750 32,177 40,111 46,788 52,145 63,596	8,095 20,716 24,035 28,195 54,958 56,534	6,402 20,590 22,620 27,492 29,879 40,425	143,662 410,144 493,534 580,715 698,292 803,540

(a) Includes estimated value of rented plant and machinery.

(iii) Value according to Class of Industry, 1955-56. The following table shows the value of plant and machinery used in factories in each State during 1955-56 according to class of industry.

FACTORIES: VALUE OF PLANT AND MACHINERY(a), 1955-56. (£'000.)

							,
Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro- ducts	11,030	4,586	2,330	2,876	2,049	641	23,512
II, Bricks, Pottery, Glass, etc	6,229	2,854	995	798	1,234	209	12,319
III. Chemicals, Dyes, Explosives,	0,22	2,054	),,,	//0	1,254	207	12,317
Paints, Oils, Grease	43,506	46,930	1,901	5,654	24,348	2,677	125,016
IV. Industrial Metals, Machines,	,	10,500	1,501	,,,,,,	2.,210	_,	120,010
Conveyances	104,347	53,270	9,350	20,545	5,778	8,996	202,286
V. Precious Metals, Jewellery,		* * * * * * * * * * * * * * * * * * *	, , , , , , ,		1 .,		
Plate	480	544	37	100	50	8	1,219
VI. Textiles and Textile Goods	ŀ	Į			!!		1
(not Dress)	10,459	17,951	943	556	411	835	31,155
VII. Skins and Leather (not Cloth-							i
ing or Footwear)	1,728	1,469	370	426	195	37	4,225
VIII. Clothing (except Knitted)	5,412	6,165	1,137	873	560	193	14,340
IX. Food, Drink and Tobacco	32,323	32,253	34,719	7,868	5,528	3,213	115,904
X. Sawmills, Joinery, Boxes, etc., Wood Turning and Carving	0.207	5,228	2 574	1 721	2 200	2,596	22.000
XI. Furniture of Wood. Bedding.	8,207	3,226	3,574	1,731	2,290	2,390	23,626
etc	1,193	1.056	462	348	256	73	3,388
XII. Paper, Stationery, Printing,	1,193	1,050	402	340	230	13	3,300
Bookbinding, etc.	15,386	20,581	2,843	2,607	1,558	8,430	51,405
XIII. Rubber	2,870	4,846	616	402	145	92	8,971
XIV. Musical Instruments	413	89	3	1 1	] 3		509
XV. Miscellaneous Products	2,876	4,045	112	319	80	27	7,459
Total, Classes I. to XV	246,459	201,857	59,392	45,104	44,485	28,027	625,334
XVI. Heat, Light and Power	52,454	56,428	26,385	18,492	12,049	12,398	178,206
Grand Total	298,913	258,295	85,777	63,596	56,534	40,425	803,540

(a) Includes estimated value of rented plant and machinery.

<sup>4.</sup> Depreciation of Land and Buildings and Plant and Machinery, 1955-56.—The following table shows the allowance made for the depreciation of land and buildings and plant and machinery used in connexion with the manufacturing industries in each State as recorded by factory proprietors at the annual census of factory production.

FACTORIES: ALLOWANCE FOR DEPRECIATION OF LAND AND BUILDINGS AND PLANT AND MACHINERY, 1955-56.

(£'000.)

Class of Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of Non-metallifer-							
ous Mine and Quarry Pro-	1,204	412	255	332	1.55	20	2 200
II. Bricks, Pottery, Glass, etc.	618	306	134		155	28	2,386
III. Chemicals, Dyes, Explosives,	010	300	134	94	121	28	1,301
Paints, Oils, Grease	2 700	3.586	242		0.500	440	
IV. Industrial Metals, Machines,	3,700	3,300	242	625	2,532	418	11,103
1v. industrial Metals, Machines,	0.740	F 100	055				40
Conveyances V. Precious Metals, Jewellery.	9,740	5,199	955	2,387	530	955	19,766
Plate	32	43		_			
	32	43	3	6	3	• •	87
	1 050	2005	٠				
(not Dress)	1,052	2,005	74	70	47	91	3,339
VII. Skins and Leather (not Cloth-	٠.,	100	یہ ا	ے م	ا مد		
ing or Footwear)	116	106	24	36	12	.1	295
VIII. Clothing (except Knitted)	471	479	82	55	48	22	1,157
IX. Food, Drink and Tobacco	2,789	3,334	2,827	663	505	330	10,448
X. Sawmills, Joinery, Boxes, etc.							
Wood Turning and Carving	757	510	318	171	208	318	2,282
XL Furniture of Wood, Bedding,				l	1	_	
etc	99	71	43	27	23	3	266
XII. Paper, Stationery, Printing,							
Bookbinding, etc.	1,290	2,142	249	183	165	687	4,716
XIII. Rubber	742	630	125	72	25	13	1,607
XIV. Musical Instruments	41	. 8	••	••		•• .	49
XV. Miscellaneous Products	307	603	10	30	10	2	962
Total, Classes I. to XV.	22,958	19,434	5,341	4,751	4,384	2,896	59,764
XVI. Heat, Light and Power	5,141	255	1,254	562	732	231	8,175
Grand Total	28,099	19,689	6,595	5,313	5,116	3,127	67,939

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1938-39 and 1951-52 to 1955-56.—The following table summarizes the recorded totals for Australia, in this section, and also includes particulars of additions and replacements.

FACTORIES: VALUE OF LAND AND BUILDINGS, PLANT AND MACHINERY, AUSTRALIA.

(£'000.)

v			lues as at une.(a)		nd Replace- ring year.		on allowed year.
Year.		Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.	Land and Buildings.	Plant and Machinery.
1938–39		130,920	143,662	5,578	17,781	1,911	8,736
1951-52	• • • • • • • • • • • • • • • • • • • •	359,490	410,144	37,702	96,370	3,634	30,479
1952-53		414,446	493,534	48,006	119,790	4,683	33,039
1953-54		483,431	580,715	55,668	128,453	5,673	41,524
1954-55		555,996	698,292	58,311	170,762	6,568	49,916
1955-56		655,582	803,540	82,808	156,535	8,030	59,909

<sup>(</sup>a) Includes estimated value of rented premises, plant and machinery.

### § 10. Principal Factory Products.

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau and in the bulletin Secondary Industries.

The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1954 to 1956. A more complete list, together with values, where available, is published in the bulletin Secondary Industries.

### QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA.

Artic	le.		Unit of Quantity.	1953-54.	1954-55.	1955-56.
Acid— Nitric Sulphuric Aerated and Carbonated	i Waters		Ton '000' gals. '000 sq. yds.	11,501 731,897 56,624 26,074	11,777 835,146 59,648 28,077	14,216 896,472 60,852 26,679
Asbestos Cement Buildin	ng Sneets	••	000 sq. yas.	20,074	20,077	20,079
Bacon and Ham Bags, Leather, Fibre, etc.	·.— ··	••	'000 1ь.	75,379	78,820	75,641
Handbags— Leather			No.	957,810	935,001	848,144
Plastic			,,	470,379	591,485 125,298	848,144 800,217 122,228
Other			**	134,873	125,298	122,22
	•• ••		**	137,316 1,165,399	104,993     1,241,906	102,338 1,311,676
	· · · · ·		"	2,902	1.348	1,20
All other			.,	253,590	335,575	292,042
Baking Powder			1b.	771,227	701,395	617,10
Bath Heaters— Electric			No.	19,045	17,886	17,076
O			10.	27,360 42,325 156,509 89,387	27,626	27.56
	••			42,325	27,626 41.191	27,560 40,532
Bathing Suits			Doz.	156,509	222,473 117,414	228,089
Baths, C.I.P.E.	• • • • • • • • • • • • • • • • • • • •		No.	89,387	117,414	104,998
Baths, C.I.P.E. Batteries, Wet Cell type Beer (excluding Waste B	eer)		'000 "gals.	1,398,985 208,557	1,501,788 221,679	1,403,12° 227,490
Door (everaging trace p			'000 lb.	150,475	150,816	158,55
Blankets			'000	1,202	1,532	1,554
Boots, Shoes and Slippe			1000 1	10.500	17.001	40.00
	•• ••		'000 pairs	18,582 1,895	17,901 1,980	18,000 1,809
C11'	 		,,,	8,633	7.324	7,97
			Ton (2,000 lb.)	274.307	7,324 272,455	277,638
Brassieres			Doz.	416,889	404,893 838,579 19,715	421,142
	••	• •	'000 Gross	801,998 18,539	838,579	840,343
	· · · · · · · · · · · · · · · · · · ·			82,257	86,531	19,862 87,594
	:: ::	::	Ton	156,117	188,010	205,79
Candles			Cwt.	8,611	10,369	10,011
Cardigans, Sweaters, etc.			Doz.	996,701	1,029,250	1,051,285
Cement, Portland	 		Ton.	1,700,127 49,043	1,919,802 45,178	2,034,554 38,68
Cigarettes			'000' 1ь.	18,303	22,859	27,16
Cleansing and Scouring				-	- 1	
Soap based (Incl. San	d Soap)		Cwt.	121,232	115,350	105,04
Other Cloth—		• •	,,	(c)	43,823	72,23
Cotton			'000 sq. yds.	33,618	34,424	40,15
Woollen and Worsted	(d)		**	35,027	31,067	30,27
Coke—			77	2 010 404	2.046.700	0.050.40
A41	•• ••	• •	Ton	2,010,404 943,344	2,046,790 1,099,859	2,058,426 1,031,13
Confectionery—	•• ••	••	"	273,377	1,055,655	1,031,13.
Chocolate			'000 lb.	62,599	56,994	62,40
			,,	76,872	81,506	83,069
Coppers— Electric			No.	29,935	28,381	27.074
Gas	· • · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •	190.	28,047	27,400	27,075 27,480
Townson (-11 4	•• ••	::		85,300 3,967	86,487	68,827
Cordials and Syrups		• •	'000' gals.	3,967	4,537	4,590
Corsets and Corselets	otione	• •	Doz.	155,408	141,265	156,83
Cosmetic Creams and Le Face Creams			Cwt.	5,412	5,110	4,70
Hand Creams and Lot	tions	• • • • • • • • • • • • • • • • • • • •	Cwi.	4,800	6,175	7.14
Other Skin Creams an		::	1	9,102	8,221	6,06
Custard Powder		• •	'000 1ь.	6,155	5,535	5,94
Cycles, Assembled	•• ••	• •	No.	85,063	91,125 {	89,03

<sup>(</sup>a) Includes Kitbags. (b) Excludes Tooth and Industrial Metal and Bristle. (c) Not available. (d) Includes Mixtures.

# QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA—continued.

Dynamos				- 1	731	KALIA—com	/sec4.		
Alternators		Art	icle.				1953–54.	1954–55.	1955–56.
Electricity	Dynamos— Alternators					No.			
Engines   Direct	Generators			••		, ,,		8,473	
Marine	Enamels, Nat	ural and	Synthetic	::			13,707 2,699	15,172 3,642	
Marine	Diesel, other	er than M	larine	••		No.	3,787	2,667	2,757
Domestic   Gal.   103,804   116,577   118,642   116,1571   130,951   131,9	Marine Other (a)		: <i>:</i>						
Face Powder	Domestic	• •	· 	••			103,804	116,577 270,348	118,642 319,591
Fats, Edible	Face Powder					F		1	
Other   Common   Plaster Sheets   Common   Com	Fans, Electric Fats, Edible—	- • •	••				1	1	127,659
Fibrous Plaster Sheets Fish, Timed (including Fish Loaf) Floor boards— Australian Timber Australian Timber Australian Timber Cont. Inported Timber Troil Juics—Natural Floor, Self-raising Flour, Self-raising Flour, Wheaten (b) Floor boards— Australian Timber Ton (2000 lb.) Floor Self-raising Flour, Wheaten (b) Floor boards— Furil Juics—Natural Floor Floor boards— Dress— Dress— Leather Doz. pairs Dress— Leather Dox, all types Ploy Floor	Other	• •	••			1	357,802 264,267	291,989	360,833
Australian Timber   000 super. ft.   110,536   115,640   118,502   119,000   119,501   119,000   119,501   119,000	Fibrous Plaste Fish, Tinned	er Sheets (including			• •	'000 sq. yds. '000 lb.	16,185	17,784	18,125
Flour, Self-raising	Australian '	Timber					110,536	115,640	118,502
Flour, Wheaten (b)	Flour, Self-rai	ising				Cwt.	1,116,278	1,102,480	1.090.005
Dress	Flour, Wheate Fruit Juices—	en (b) Natural				Ton (2,000 lb.) '000 gals.	1,609,058	1,553,019 2,874	1,571,305
Doz. pairs	Gloves—	••	••	••		Mill. cubic ft.	42,100	43,465	44,578
Other Work, all types         " 112,892 269,408 269,408 293,874         52,035 269,408 293,874           Golf Clubs         Doz.         15,563         14,861         12,781           Handkerchiefs—Mer's Women's More's More's More's More's	Leather					Doz. pairs	12,113	6,454	4,115
Handkerchiefs— Men's Men's Momen's Men's Momen's Mes, Numer's Mes, Rubber—Garden Other Plastic—Garden Men's Plastic—Garden Men's Mother	Other			• •			112.892	58,749	52,035
Men's	Golf Clubs	/pes	::			Doz.	15,563		
Women's	Handkerchiefs	s <del></del>							
Hats and Caps.   1000 lin. ft.   530,521   510,382   483,817   Other   Other   7,111   9,716   9,449   9,449   14,893   25,475	Men's Women's	• •	• •				1,234,162	1,313,327	1,181,261
Hose, Rubber—Garden	Hats and Cap	s					530,521	510.382	483.817
Plastic—Garden	Hose, Rubber	-Garder	1				5,420	5,071	3,131
Ton	Plastic-	-Garden					29,887	24,893	25,475
Ce Cream	īce					Ton	877 803	766 557	601 027
Pig Iron   3000 tons   1,827   1,869   1,911     Steel Ingots   2,117   2,209   2,320     Blooms and Billets   1,921   1,953   2,111     Irons, Electric (Hand, Domestic)   No.   229,910   278,777   327,536     Jams   1000 lb.   85,687   81,699   84,096     Jelly Crystals   11,028   11,799   12,793     Kalsomine   3,396   3,089   1,918     Lacquer, Clear and Colours   Gal.   1,306,661   4,476,489   1,498,695     Lard   Cwt.   40,973   40,472   42,446     Lard   Cwt.   40,973   40,472   42,446     Letric   No.   21,922   25,418   18,861     Petrol   9,849   29,423   77,929     Hand   9,849   29,423   77,929     Hand   9,849   29,423   77,929     Hand   9,849   29,423   77,929     Hand   9,849   29,423   77,929     Hand   1000 lb.   1,546   1,433   1,213     Sole and Belting   7000 sq. ft.   55,087   54,069   55,126     Sold by Weight   7000 lb.   297   208   132     Sole and Belting   7000 sq. ft.   56,811   25,641   23,833     Harness, Skirt, etc.   7000 lb.   1,546   1,433   1,213     Sole and Belting   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   700 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Hydrated   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural   7000 sq. ft.   7,843   7,103   3,389     Lime—Agricultural	Ice Cream						13,678	14,796	16,018
Steel Ingots					•	*000 tons	1 827	1 869	1.911
Blooms and Billets   No.   229,910   278,777   327,536	Steel Ingots		::				2,117	1 2.209 ⊧	2,320
Jams   1000 lb.   85,687   81,699   84,096   Jelly Crystals   11,028   11,799   12,793   12,793   11,028   11,799   12,793   12,793   12,793   12,793   12,793   13,396   3,089   1,918   1,918   1,498,695   1,			) omestic)	• •		No.	1,921	1,953	2,111
Lacquer, Clear and Colours   Gal.   1,306,661   4,476,489   1,498,695   Lard		(manu, 1	Jomesuc)		••			l .	
Lacquer, Clear and Colours   Gal.   1,306,661   4,476,489   1,498,695   Lard   Cwt.   40,973   40,472   42,446		::			::		85,687 11,028	81,699 11,799	84,096 12,793
Lard Cwt. 40,973	Kalsomine	• •		••		,,	3,396	3,089	1,918
Lawn Mowers—  Electric   No.   21,922   25,418   18,861   Petrol   " 9,849   29,423   77,929   Hand   " 85,867   106,005   106,712   Leather—  Dressed from Hides—Sold by Measurement Sold by Weight   "000 lb.   297   208   132   200 sq. ft.   55,087   54,069   55,126   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   132   200 sq. ft.   297   208   23,883   1,213   200 sq. ft.   297   208   23,883   23,891   23,893   23,891   23,893   23,891   23,893   23,891   23,893   24,891   23,893   2	Lard				-		1,306,661 40,973		
Petrol	Lawn Mowers					No	21.022	25.419	19 961
Dressed from Hides—Sold by Measurement   1000 sq. ft.   1297   208   132   208   132   208   132   208   208   132   208   2	Petrol	• •	-				9,849	29,423	77,929
Dressed from Hides—Sold by Measurement Sold by Weight   '000 sq. ft.   '000 sq. ft.   '297   208   112   122   123   124   1		• •					85,867	106,005	
Dressed from Skins		n Hides—	Sold by N	leasurer		'000 sq. ft.	55,087	54,069	55,126
Sole and Belting     38,675     35,001     33,701       Upholstery     7,843     7,103     3,389       Lime—Agricultural     Ton     108,746     111,170     123,338       Hydrated     44,047     48,644     54,172       Quick     123,774     128,639     117,578       Linseed Oil—extracted from Local Crushing from treatment of Unrefined from Local Crushing from treatment of Unrefined tuning Oil     33,84     338     438     1,448       Lubricating Oil     tons     57,003     64,465     67,531	Dressed from	n Skins	-	_		'000 sq. ft.			23.883
Upholstery	Harness, Ski	rt, etc.		• •		'000 lb.	1 546	1,433	1,213
Hydrated	Uphoistery	ung				'000 sa. ft	38,675 7.843	7 103	3.389
Hydrated	Lime—Agricul	tural					108,746	111,170	123,338
Linseed Oil—extracted from Local Crushing from treatment of Unrefined tons 57,003 64,465 67,531		ed.		••		,,	44,047	48,644	54,172
Trom treatment of Unrefined 3,946 3,539 2,631 4 57,003 64,465 67,531	Linseed Oil-e	xtracted	from Loca	 il Crush	ing	'000' gais.	338	438	1,448
	fr	om treat	ment of	Unrefin	red		3,946	3,539	2,631
				or Cuala		, ,		1	

(a) Excludes Motor Car, Motor Cycle, Tractor and Aero Engines.

(b) Includes Wheatmeal for Baking and Sharps.

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## QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA—continued.

AUSI	KALIA-conti	nuea.		
Article.	Unit of Quantity.	1953-54.	1954-55.	1955-56.
Malt, Barley	'000 bus.	7,078	7,517	7,782
Margarine— Table	'000 lb.	21,866	21,972	26,552
Other	No.	49,939 262,930 418,811	49,171 315,741 476,395	43,443 296,494
Mattresses—Wire	"	418,811	476,395	501,133
Soft Filled, etc	1	30/,110	380,463	363,167
Meat, Tinned	'000 lb.	161,113	165,394	157,969
Milk— Concentrated (Whole)	,,	43,599 94,944	22,560 86,225 59,269 13,914 127,709	31,038 99,368 67,361
Condensed	**	68,643	59,269	99,368 67,361
Mops, Floor	Gross	68,643 11,964	13,914	1 13,768
	No.	114,878 43,077	127,709	139,098 94,953
Motor Spirit (including Benzol)	'000 gals.	182,319	62,408 412,955	617,356
Motors, Electric	No.	972,887	1,183,066	1,116,840
Nails	Ton Doz.	22,008 588,730	24,214	25,058
Neckties	Ton	60,406	491,455 73,608	516,835 79,015
Oatmeal (including Rolled Oats)	Cwt.	400,095	322,985	79,015 365,980
Paint—Qil	'000 gals,	5,180 31,930	6,098	6,553
Water Peanut Butter and Paste	'000 lb.	4,313	28,955 4,627	24,388 4,736
Perambulators	No.	153,048	155,433	160,374
Pickles	'000 pints	6,896	6,765	7,721
Pigments—Colours ground in oil	Cwt.	19,047 172,807	17,592 184,853	20,025 165,300
White Lead	**	13		
Other, including Dry Colours	1	337,794	389,185	369,613
Plywood, A inch basis	'000 sq. ft. Ton (2,000 lb.)	161,581 335,890	186,604 315,028	300,699 332,564
Fruit Preserved (b) Vegetables Preserved	'000 1ь.	338,562 40,265	319,235 51,116	304,299 77,822
Pyjamas— Men's and Boys' (Suits only)	Doz.	273 423	339 556	279,734
Women's and Girls' (inc. Nightdresses)	,,	273,423 322,010	339,556 343,464 18,361	359,780
Racquet Frames (all types)	1	1 22.224	18,361	16,651
Refrigerators—Commercial	No.	1,442	1,656	1,756
Domestic Rice (Cleaned)	Cwt.	274,487 904,207	280,577 916,702	247,360 1,166,027
Ropes and Cables (excluding Wire)	1	115,182	125,727	128,873
Rugs	'000	138	141	142
Sauce	'000 pints	25,711 61,205 108,382	28,482 72,377 103,553	28,668
Sausage Casings	Cwt.	61,205	72,377	79,769
Sauce. Sausage Casings Semolina Shirts (Men's and Boys')	Doz.	1,240,069	1,410,573	129,536 1,309,501
Sink fleaters	No.	24,907	23,799	24,842
Soap and Detergents—	Cwt.	215 971	242 741	227.040
Soap—Personal Toilet Household	1	315,871 622,607	342,741 747,487	327,949 744,109
Industrial (Incl. Wool Scouring) (c)	,,	622,607 (d) 286,705	172,998	197,590
Extracts and PowdersHousehold	,,	821,612	926,156	822,988
Detergents—Personal Toilet	"	68,629	81,338	87,455 6,000
Household	"	11 1	7,932 99,225	92.806
Industrial	,,	\ (e) \	19,777	22,499
Extracts and Powders— Household			اء دا	34,698
Industrial	"	[] [	<b> } 44,369 {</b>	39,131
Socks and Stockings-			-	-
Men's, Youths' and Boys' Women's, Maids' and Girls'	Doz. pairs	<b>}</b> 5,258,153	1,664,072 2,421,538	1,559,865 2,303,543
Infants' and Babywear (including Anklets)			1,126,949	1,063,380
Soup—Tinned	'000 pints	25,509	27,616	35,316
Dry-Mix Spades and Shovels	'000 lb. Doz.	2,800 25,322	2,893	3,771
Starch—Edible	Cwt.	334,298	32,058 357,557	33,873 391,766
Inedible		90,339	92,004	96,929
Steel, Structural, Fabricated	Tön	137,557	162,793	218,124
Stoves, Ovens and Ranges— Domestic Cooking—				
Electric (f)	No.	81,508	85,589	92,258
Gas	,,	43,040	58,758	57,097
Solid Fuel	Ton	50,376 1,254,387	49,758 1,327,546	47,300 1,171,713
Refined	,,	449,015	481,639	482,660
Sulphate of Ammonia	,,	70,811	78,434	75,321
Superphosphate	,, ,	1,771,196	1,960,605	2,125,803
<del></del>	<u> </u>	·		

<sup>(</sup>a) Includes Malted Milk and Infants' and Invalids' Foods. (b) Includes Canned Apple, all types. (c) Includes industrial flakes and chips. (d) Includes soft and liquid not separately described. (e) Not available. (f) Includes Stovettes, Cookers, etc.

### QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA—continued.

A -	ticle.			Unit of	1953-54.	1954–55.	1955–56.
AI	ucie.			Quantity.	1955-54.	1934-33.	1933–36.
Talcum Powder Tallow—	••	••	••	Cwt.	30,183	30,454	35,824
Edible				,,	388,222	507,477	681,057
Inedible	• •	••	• •	,,	1,101,114	1,126,770	1,346,145
Television Sets		• •		No.	•••		(a) 2,636
Tiles, Roofing—							52.500
Cement	• •	• •	• •	'000	44,651	53,720	53,782
Terracotta	• •	• •	• •	,,	63,782	63,934	64,746
Timber— From Native Logs—							
Hardwood	_			'000 super. ft.	1,157,124	1,184,992	1,180,936
Softwood	• •	••	• •		242,974		
From Imported Los	···	••	• •	,,	242,914	264,296	268,785
Hardwood	; <del></del>			ļ	20,627	28,748	27,894
Softwood	••	••	• •	. "	20,027	20,740	27,074
Toasters, Electric (Do	mestic)	••		No.	156,909	156,037	173,549
Tobacco	шезису	••	••	'000 іь.	23,400	21,466	18,836
Tomato Juice		• • •	• • •	Gal.	622,314	1,237,714	1,208,758
Towels	••	::	• •	Doz.	659,987	666,403	767,751
Transformers and Con	verters—		• •	Doz.	035,567	000,403	707,731
Above 20 k.v.a.				No.	2,949	3.099	3,462
Below 20 k.v.a.	• •		• •		309,901	375,717	628,147
Twine (all types)			• • •	Cwt.	107,629	116,059	133,694
Tyres, Pneumatic-	• •	• •	• • •		107,000	,,	100,05
Motor Car and Mot	or Cycle			No.	2,214,041	2,737,172	2,907,492
Truck and Omnibus				,,,	509,663	587,739	544,807
All Other (excl. Bicy		••		,,	165,868	190,365	184,273
Umbrellas					430,422	478.144	570,156
Underwear				'000' doz.	4,239	4,328	4,460
Vacuum Cleaners (Do	mestic)			No.	57.275	59,968	55,674
Varnishes				'000 gals.	3,135	3,188	4,167
Washing Machines, He	ousehold.	Electric		No.	146,259	166,312	165,558
Weatherboards-	,		•••	-,,-	,	100,512	,
Australian Timber				'000 super. ft.	24,880	23,529	23,910
Imported Timber				] - ;	3,271	3,264	2,150
Wheatmeal(b)	• • • • • • • • • • • • • • • • • • • •	• • •	• • • •	Ton (2,000 lb.)	137,732	128,863	110,635
Wheelbarrows (Metal)	::	• • • • • • • • • • • • • • • • • • • •		No.	78,874	84,631	73,031
Wireless-		• •			,-,-		,
Cabinets—					1	j	
Wood				٠,,	85,061	86,210	(c) 101,454
Other				, ,,	304,452	310,684	281,685
Receiving Sets (inclu	ding Rac	liograms)		,,	438,978	456,034	458,012
Wool Scoured—	-	• ,	- 1	"	·	•	, .
For Sale		·		'000 ГБ.	40,536	40,994	38,808
For use in own work	:S			,,	38,246	37,610	40,875
On Commission	••			",	57,785	57,643	65,025
Wool Tops	••			"	32,755	30,886	35,640
Yarn(d)			- 1				
Cotton				.,	38,102	41,493	40,543
Woollen	••		1	",	19.868	19,790	20,033
Worsted				"	26,077	22,897	23,180
Zinc Oxide (See Pigme	nts)		Ì				

(a) Production commenced late in 1955-56. Number produced in 1956-57 was 126,498.
(b) Excludes Wheatmeal for Baking included with Flour.
(c) Includes Television Cabinets.
(d) Including mixtures predominantly of the fibre mentioned.

### § 11. Individual Industries.

1. General.—Particulars in pp. 212-239, §§ 2-9 afford a general view of the magnitude of industries in the sixteen groups adopted by the Conference of Statisticians in 1930. While it is not possible, within the limits of this work, to give a detailed account of each industry, particular industries dealt with hereunder are of special importance because of the employment which they provide for labour and capital or for other features of special interest. Where there are only one or two establishments in a particular industry in the State or the Commonwealth, details of activities are not published, but are combined with some other factory group so that operations of individual concerns will not be disclosed.

The statistics in the following tables should be read in the light of the following definitions.

Factory. A factory is taken to be a manufacturing establishment in which four or more persons are employed or in which power, other than manual, is used.

Average Number of Persons Employed. All persons employed in the manufacturing activities of a factory are counted as factory employees, including working proprietors and "out-workers". The average number of persons employed means, in general, the average number over the whole year and not the average over the period worked.

Value of Materials Used. This item includes the value, in the usual sense, of the materials used, stores used, containers, tools replaced, and materials used in repairs to plant.

Value of Fuel, etc., Used. This item includes also the cost of power and light used, of lubricants and of water.

Value of Output. The amounts given under this heading represent the selling value, at the factory, of goods made or processed during the year, including by-products, also the value of other work done.

Value of Production. The value of production is obtained by deducting "Value of materials used" and "Value of fuel used", as defined above, from the "Value of output". This method of valuing factory production has been adopted by the Statistical offices throughout Australia.

Rated Horse-power of Engines Used. Statistics of power used in factories other than Central Electric Stations relate to the "rated horse-power" of engines ordinarily in use.

For more detailed definitions see § 1, par. 6 of this chapter, page 209.

Details of some of the principal articles produced in factories in Australia during the years 1953-54 to 1955-56 are shown in the table in the preceding pages (§ 10).

2. Portland Cement and Cement Goods.—The manufacture of Portland Cement and Cement goods is an important industry included in Class I. Particulars for the three industries under this general heading are shown for 1955-56 and for a series of years in the following table.

## PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS.

ATISTRATIA	1955-56.

. Items.	Portland Cement.	Asbestos Cement Sheets and Mouldings.	Other Cement Goods.	Total.	
Number of factories			14	459	489
Number of persons employed		. 3,223	2,668	5,276	11,167
Salaries and wages paid	£'00	3,048	2,509	4,487	10,044
Value of power, fuel, etc., used	£'00	0 4,357	246	189	4,792
Value of materials used	£'00	6,353	5,154	10,492	21,999
Value of production	£'00	7,097	4,057	8,306	19,460
Total value of output	£'00		9,457	18,987	46,251
Value of land and buildings	£'00		1.043	2,254	6,128
Value of plant and machinery	£'00		1,642	2,683	15,542
Horse-power of engines ordinarily in			9,971	14,995	108,715

### Australia.

Items.	1938–39.	1951-52.	1952-53.	1953-54.	1954–55.	1955~56.
Number of factories		559	504	479	480	489
Number of persons employed	3,932	9,851	9,352	9,304	10,444	11,167
Salaries and wages paid £'000		6,469	6,942	7,435	8,704	10,044
Value of power, fuel, etc., used £'000		2,418	3,436	3,950	4,445	4,792
Value of materials used £'000		12,698	14,303	16,013	19,418	21,999
Value of production £'000		11,169	12,197	14,198	17,009	19,460
Total value of output £'000	4,489	26,285	29,936	34,161	40,872	46,251
Value of land and buildings £'000		3,466	3.890	4,206	4,726	6,128
Value of plant and machinery £'000		6.455	10,018	10,796	13.208	15,542
Horse-power of engines ordinarily in		1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,	,	, ,
use h.p.		81,691	91,880	89,260	95,870	108,715

3. Chemicals, Drugs and Medicines.—In 1945-46, the classification of factories was amended to provide for the separate tabulation of factories engaged in the production of Industrial and Heavy Chemicals and Acids and those engaged in producing Pharmaceutical and Toilet Preparations, which previously had been combined. Details for each of these industries are given in the next two tables for 1955-56 with comparative figures for previous years. However, it should be noted that in order to avoid the publication of confidential information, particulars relating to Industrial and Heavy Chemicals include details for the Explosives industry.

# INDUSTRIAL AND HEAVY CHEMICALS AND ACIDS (INCLUDING EXPLOSIVES). 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	137	81	16	10	13	$\overline{}$	258
Number of persons employed	6,092	6,577	299	829	(a)	(a)	14,107
Salaries and wages paid £'000	6,230	6,021	238	823	(a)	(a)	13,574
Value of power, fuel, etc.,					' '-'	(/	10,000
used £'000	1,924	796	57	582	(a)	(a)	3,462
Value of materials used £'000	19,412	12,104	379	1,130	(a)	(a)	33,506
Value of production £'000	15,988	10,697	516	2,238	(a)	(a)	29,895
Total value of output £'000	37,324	23,597	952	3,950	(a)	(a)	66,863
Value of land and buildings £'000	8.224	6,564	186	733	(a)	(a)	15,987
Value of plant and machi-	· 1	,		, , , , ,	()	()	10,50
nery £'000	15.096	9,748	193	1,577	(a)	(a)	27,125
Horse-power of engines ordinarily				_,	, (3)	(3)	,,
in use h.p.	47,665	43,514	1.830	5,420	(a)	(a)	101,527

### AUSTRALIA.

Items.			1945-46.	1951-52.	1952–53.	1953–54.	1954–55.	1955–56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ording in use	   arily	£'000 £'000 £'000 £'000 £'000 £'000	165 10,228 3,450 618 6,007 6,627 13,252 11,697 10,964 69,399	219 11,504 8,539 2,110 21,097 17,180 40,387 8,828 12,507 76,890	229 11,253 8,928 2,210 19,538 16,879 38,627 11,923 19,612	234 11,765 9,907 2,757 25,158 20,643 48,558 13,389 23,573	248 13,032 11,833 3,043 29,004 25,095 57,142 14,190 25,607	258 14,107 13,574 3,462 33,506 29,895 66,863 15,987 27,125

(a) Not available for publication; included in total for Australia.

### PHARMACEUTICAL AND TOILET PREPARATIONS.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories		61	5	13	2	3	206
Number of persons employed	3,271	2,435	118	486	(a)	(a) (a)	6,400
Salaries and wages paid £'000	2,270	1,937	65	310	(a)	(a)	4,635
Value of power, fuel, etc.,	1	1		ı			
used £'000	83	145	1	28	(a)	(a)	259
Value of materials used £'000	. 7,137	4,936	296	1.088	(a)	(a)	13,565
Value of production £'000	10,190	4.229	154	562	(a) [	(a)	15,279
Total value of output £'000	17,410	9,310	451	1,678	(a)	(a)	29,103
Value of land and buildings £'000	1 2,817	3,476	34	344	(a)	(a)	6,830
Value of plant and machi-		.,			( )	,	-,
nery £'000	1.038	1,453	17	152	(a)	(a)	2,686
Horse-power of engines ordinarily		.,	1		( )	<b>(</b> )	-,
in use h.p.	3,923	8,712	79	1,437	(a)	(a)	14,301

### Australia.

Items.		1945–46.	1951–52.	1952–53.	1953–54.	1954–55.	1955~56.							
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery	£'000 £'000 £'000 £'000 £'000	215 5,514 1,699 57 5,402 4,790 10,249 1,534 598	208 6,149 3,433 150 9,877 10,314 20,341 3,332 1,286	206 5,363 3,468 197 9,784 10,188 20,169 3,931 1,569	208 6,012 3,898 238 12,017 12,969 25,224 4,755 1,793	210 6,233 4,255 223 12,729 14,380 27,332 6,022 2,129	206 6,400 4,635 259 13,565 15,279 29,103 6,830 2,686							
Horse-power of engines ordinar in use	ily h.p.	6,324	10,618	12,238	12,777	13,592	14,301							

<sup>(</sup>a) Not available for publication; included in the total for Australia.

<sup>4.</sup> White Lead, Paints and Varnish.—The following table shows particulars of this industry for each State during 1955-56 and for Australia for a series of years.

### WHITE LEAD, PAINTS AND VARNISH.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	82	55	17	13	10	1	178
Number of persons employed	3,186	1,651	323	528	(a)	(a)	5,804
Salaries and wages paid £'000	3,014	1,499	250	446	(a)	(a)	5,300
Value of power, fuel, etc., used£'000	261	77	16	24	(a)	(a)	384
Value of materials used £'000	12,145	6,708	1,739	2,355	(a)	(a)	23,504
Value of production £'000	6,485	3,596	1,117	1,332	(a)	(a)	12,874
Total value of output £'000	18,891	10,381	2,872	3,711	(a)	(a)	36,762
Value of land and buildings £'000	2,499	1,918	260	650	(a)	(a)	5,563
Value of plant and machinery £'000	1,338	1,287	245	334	(a)	(a)	3,261
Horse-power of engines ordinarily	1				` '	` '	
in use h.p.	13,672	7,553	1,418	1,744	(a)	(a)	25,050
		ATISTDAT	T.A.				-

#### AUSTRALIA

Items.	1938-39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Number of factories	102	158	175	174	175	178
Number of persons employed	2,271	5,141	4,622	4,934	5,322	5,804
Salaries and wages paid £'000	535	3,378	3,346	3,757	4,636	5,300
Value of power, fuel, etc., used £'000	45	303	258	337	376	384
Value of materials used £'000	2,275	16,623	14,657	18,603	21,553	23,504
Value of production £'000	1,585	8,112	8,583	9,891	11,980	12,874
Total value of output £'000	3,905	25,038	23,498	28,831	33,909	36,762
Value of land and buildings £'000	761	3,213	3,669	4,066	5,089	5,563
Value of plant and machinery £'000	324	1,842	2,113	2,230	2,892	3,261
Horse-power of engines ordinarily in	1		•		·	
use h.p.	7,696	21,412	22,769	22,719	24,178	25,050

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia.

5. Soap and Candle Factories.—The following table shows particulars of factories in the Soap and Candle industry in each State for 1955-56 and for Australia for a series of years:—

### SOAP AND CANDLES.

1955-56.

	1 1		1	1	. —		1
Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	44	28	9	5	3	3	92
Number of persons employed	1,997	674	284	132	(a)	(a)	3,167
Salaries and wages paid £'000	1,832	663	191	115	(a)	(a)	2,858
Value of power, fuel, etc., used£'000	191	178	19	11	(a)	(a)	406
Value of materials used £'000	6,764	4,089	668	291	(a)	(a)	12,057
Value of production £'000	5,159	2,115	544	166	(a)	(a)	8,147
Total value of output . £'000	12,114	6,382	1,231	468	(a)	(a)	20,610
Value of land and buildings £'000	657	840	106	82	(a)	(a)	1,743
Value of plant and machinery £'000	1,032	1,723	141	62	(a)	(a)	3,001
Horse-power of engines ordinarily				i			
in use h.p.	5,675	3,310	874	543	(a)	(a)	10,711

### (a) Not available for publication; figures are included in the total for Australia.

### Australia.

Items.	1938–39.	1951-52.	1952-53.	1953-54.	1954-55.	1955–56.
Number of factories	65	88	89	89	91	92
Number of persons employed	2,620	3,440	3,028	3.058	2,962	3,167
Salaries and wages paid £'000	501	2,555	2,460	2,544	2,589	2,858
Value of power, fuel, etc., used £'000	76	453	475	427	420	406
Value of materials used . £'000	1,568	8,384	8,846	10.214	11.941	12,057
Value of production £'000	1.886	4,638	6,324	6,732	7,425	8,147
Total value of output £'000	3,530	13,475	15,645	17,373	19,786	20,610
Value of land and buildings £'000	666	1,301	1,487	1,565	1,619	1,743
Value of plant and machinery £'000	577	1,693	1,985	2,244	2,653	3,001
Horse-power of engines ordinarily in	1	,,0,0	1,,,,,	_,_,	_,,,,,,	1 2,001
use h.p.	5,267	8,769	8,606	8,795	8,676	10,711
Materials used-	} -,20.	.,,,,,	1 0,000	, 0,	, ,,,,,	
Tallow cwt.	535,511	1,134,935	1,024,772	1,120,828	1 151 146	1.162,578
Alkeli for Soan (a)	194,869	403,241	386,176	377,451	421,401	390.757
Coconut oil—refined and unrefined	25 1,005	100,211	, ,,,,,	27.,.51	121,101	350,757
cwt.	138,954	113,203	95,825	86,576	93,498	83,346
Articles produced—	130,554	115,205	75,025	00,510	75,476	05,540
Soon (evel Sand Soon)	908,797	1,263,981	1,179,871	1,225,183	1 263 226	1,269,648
Cleansers and Scourers (incl. Sand	300,137	1,203,701	1,175,071	1,225,105	1,203,220	1,202,046
Soap) cwt.	123,702	124,432	123,429	121,232	115,350	105,046
Coon Extracts and Dawdoos	191,232	929,310	885,158	890,241	1,007,494	910,443
Candles made	28,649	16.931	14,256	8,611	10,369	10,011
Candles made ,,	20,047	1 10,731	1 1-1,230	3,011	1 10,505	10,011

(a) Includes Soda Ash.

Note.—Preliminary figures of production in 1956-57 were Soap, 1,219,000 cwt.; Soap Extracts and Powders. 866,000 cwt.; and Cleansers and Scourers 77,000 cwt.

6. Chemical Fertilizers.—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in each State during 1955-56 and for Australia for a series of years. Details of the consumption, imports and exports of fertilizers will be found in Chapter XXII.—Agricultural Production.

### CHEMICAL FERTILIZERS. 1955-56.

Items.

N.S.W. Vic. O'land, S. Aust, W. Aust, Tas.

	1		<b>Q</b> 1411-41	0.110011		1 43.	Aust.
Number of factories	15	9	8	8	6	8	54
Number of persons employed	1,016	1,459	(a)	983	977	(a)	4,911
Salaries and wages paid £'000	1.035	1,506	(a)	948	884	(a)	4,809
Value of power, fuel, etc., used£'000	426	231	(a)	103	145	(a)	939
Value of materials used £'000	3,825	7,108	(a)	5,203	5.009	(a)	24,098
Value of production £'000	1,889	3,320	(a)	1,845	2,407	(a)	10,267
Total value of output £'000	6,140	10,659	(a)	7,151	7,561	(a)	35,304
Value of land and buildings £'000	2,720	816	(a)	600	1,868	(a)	7,033
Value of plant and machinery £'000	2,675	1,261	(a)	3,319	2,165	(a)	11,645
Horse-power of engines ordinarily	ł ' I				1	1	•
in use h.p.	16,625	14,697	(a)	8,786	7,684	(a)	58,044
	`A	USTRAL	IA.		<u></u> !		
T4	1	00   105	4 50 40		252 24		

Items.	1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Number of factories		49	51	51	53	54
Number of persons employed .		4,325	4,483	4,531	4,735	4,911
Salaries and wages paid £'00	0 601	3,361	3,759	3,988	4,372	4,809
Value of power, fuel, etc., used £'00	0 114	589	786	842	852	939
Value of materials used £'00	3,231	20,297	21,100	20,521	21.519	24,098
Value of production £'000		5,998	7,255	8,109	8.794	10,267
Total value of output £'000		26,884	29,141	29,472	31,165	35,304
Value of land and buildings £'000		4,244	4,794	6,067	6,512	7,033
Value of plant and machinery £'000		5,804	6,218	8,067	9,270	11,645
Horse-power of engines ordinarily in		, , , , ,	,	,	,	}
use h.p		38,220	39,850	41,644	47,595	58,044

- (a) Not available for publication; figures are included in the total for Australia.
- 7. Iron and Steel Works and Engineering.—(i) General. In 1945-46, the classification of factories was amended to provide for the tabulation in four separate groups of those industries previously included under Iron and Steel, and Engineering. The first group (Smelting, Converting, Refining and Rolling of Iron and Steel) covers blast furnaces, steel works and rolling mills. The second group, Foundries (Ferrous), covers those engaged in the founding of iron and steel. The third group (Plant, Equipment and Machinery including Machine Tools) covers those industries engaged in the production of boilers, engines, machines and machinery, machine tools, structural steel fabrications, steel furniture, etc. The fourth group (Other Engineering) includes jobbing and general engineers, not elsewhere included. Detailed statistics for the four groups mentioned are shown in the following tables.
- (ii) Smelting, Converting, Refining and Rolling of Iron and Steel. In the following table particulars are shown for each State for 1955-56 and for Australia in selected years for the group Smelting, Converting, Refining and Rolling of Iron and Steel.

SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of factories	(b) 14	11		(b) 2			(b) 28
Number of persons employed	18,873	1,633	1	(a)	(a)		20,805
Salaries and wages paid £'000	20,124	1,636		(a)	(a)		22,037
Value of power, fuel, etc., used £'000	16,013	376	1	(a)	(a)		17,864
Value of materials used £'000	99,367	1,514		(a)	(a)		101,416
Value of production £'000	41.031	2,259		(a)	(a)		44,269
Total value of output £'000	156,411	4,149	[	(a)	(a)		163,549
Value of land and buildings £'000	5,839	581		(a)	(a)		6,457
Value of plant and machinery £'000	28,194	793	1	(a)	(a)		29,154
Horse-power of engines ordinarily	, ,			` '			1
in use h.p.	350,649	9,410	I	(a)	(a)		363,751

AUSTRALIA.

Items.			1945–46.	1951–52.	1952–53.	1953–54.	195455.	1955-56.
Number of factories			27	30	32	33	33	(b) 28
	• •	• • •				16.688	17.842	20.805
Number of persons employed			10,413	14,192	16,188			
Salaries and wages paid		£'030	4,164	11,904	14,455	15,609	18,238	22,037
Value of power, fuel, etc., used		£,000	2,777	11,186	14,085	15,430	15,670	17,864
Value of materials used		£,090	19,134	53,342	76,983	88,802	94,928	101,416
Value of production		£,000	7,393	20,311	27,336	27,995	34,381	44,269
Total value of output		£,000	29,304	84,839	118,404	132,227	144,979	163,549
Value of land and buildings		£'000	2,197	4,064	5,278	6,508	6,615	6,457
Value of plant and machinery		£'000	5,669	14,992	20,753	24,279	26,394	29,154
Horse-power of engines ordinarily	in u	ıse h.p.	198,317	<sup>1</sup> 218,857	248,440	287,618	339,135	363,751

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) The reduction in the number of establishments is due to combined returns being furnished where formerly separate returns were submitted for Blast Furnaces, Steel Furnaces and Rolling Mills operated by the one establishment.

Particulars of the production of pig-iron and steel will be found on page 241 and in Chapter XXVII.—Mineral Industry.

(iii) Foundries (Ferrous). Particulars covering those industries classified as founding of iron and steel are shown for each State for 1955-56 and for Australia in selected years in the following table:—

FOUNDRIES—FERROUS. 1955-56.

. Items.	N.S.W.	Víc.	Q'land,	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	89	220	22	24	18	<del></del>	373
Number of persons employed	2,831	2,849	683	547	524		7,434
Salaries and wages paid £'000	2,635	2,614	525	490	442		6,706
Value of power, fuel, etc., used £'000	314	317	44	106	137		918
Value of materials used . £'000	1,922	2,294	521	314	345		5,396
Value of production £'000	3,739	3,815	826	628	644		9,652
Total value of output £'000	5,975	6,426	1,391	1,048	1,126		15,966
Value of land and buildings £'000	1,247	1,605	385	191			3,564
Value of plant and machinery £'000	996	1,452			141		3,234
Horse-power of engines ordinarily	1	-,			1		i ´
in use h.p.	11,019	10.914	3,235	3,026	2,544		30,738

### AUSTRALIA.

Items.			1945–46.	1951-52.	1952-53.	1953–54.	1954–55.	1955-56.
Number of factories			312	365	373	357	368	373
Number of persons employed			5,344	7,243	6,584	6,611	7,099	7,434
Salaries and wages paid		£'000	1,612	5,252	4,989	5,129	6,116	6,706
Value of power, fuel, etc., used		£'000	161	633	642	702	796	918
Value of materials used		£'000	1,210	4,331	4,026	4,057	4,881	5,396
Value of production		£'000	2,341	7,622	7.337	7,469	8,983	9,652
Total value of output		£'000	3.712	12,586	12.005	12,228	14,660	15,966
Value of land and buildings		£'000	988	1,736	2,144	2,299	2,623	3,564
Value of plant and machinery		£'000	619	1,574	1,923	2,123	2,342	3,234
Horse-power of engines ordinaril	y in	use h.p.	13,381	25,107	24,467	25,415	26,451	30,738

(iv) Plant, Equipment and Machinery (including Machine Tools). The next table shows particulars for this group for each State during 1955-56 and for Australia in selected years.

PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS). 1955–56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	1,037	635	131	162	92	5	2.062
Number of persons employed	26,725	23,231	6,436	9,033	3,069	205	2,062 68,699
Salaries and wages paid £'000	25,068	21,388	4,820	7,914	2,503	179	61,872
Value of power, fuel, etc., used £'000	972	842	209	434	109	4	2,570
Value of materials used . £'000	38,978	31,625	5,853	13,596	3,149	309	93,510
Value of production £'000	40,528	34,355				241	98,574
Total value of output £'000	80,478	66,822	13,183	26,736	6,881	554	194,654
Value of land and buildings £'000	14,568	12,211	1,760		1,824	188	34,019
Value of plant and machinery £'000	10,605	9,736	1,645	2,756	1,372	147	26,261
Horse-power of engines ordinarily	) ' )		]	}	] [	J	
in use h.p.	89,091	73,671	17,933	25,919	10,697	569	217,880

### Australia.

Items.			1945-46.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Number of factories			1.038	1.684	1.787	1,911	1.980	2,062
Number of persons employed			46,123	64,066	60,140	60,840	64,588	68,699
Salaries and wages paid	• •	£'000	14,259	45,434	45,414	47,620	54.561	61.872
Value of power, fuel, etc., used		£'000	605	1.937	2.095	2,219	2,378	2,570
Value of materials used		£'000	16,455	68,943	63,134	68,288	80,462	93,510
Value of production		£'000	21,044	71.810	70,790	75,997	87,040	98,574
Total value of output		£'000	38,104	142,690	136,019	146,504	169,880	194,654
Value of land and buildings		£'000	7,227	19,383	22,332	25,259	28,687	34.019
Value of plant and machinery		£'000	7,046	17,870	19,784	21,335	23,548	26,261
Horse-power of engines ordinarily	in use		101,810	196,664	197,031	198,300	201,626	

(v) Other Engineering. Details covering jobbing and general engineering works not elsewhere included are shown for each State for 1955-56 and for Australia in selected years in the following table.

### OTHER ENGINEERING. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	787	845	158	179	158	93	2,220
Number of persons employed	6,356	9,991	1,592	3,815	989	1,702	24,445
Salaries and wages paid . £'000	5,283	8,680	1,069	3,335	701	1,409	20,477
Value of power, fuel, etc., used	,	-,	•	1	1		
£'000	191	285	34	103	33	52	698
Value of materials used £'000	5,740	11,224	1,242	3,973	822	1,533	24,534
Value of production £'000	8,958	14,260	1,707	4.726	1,153	2,145	32,949
Total value of output £'000	14,889	25,769	2,983	8,802	2,008	3,730	58,181
Value of land and buildings £'000	3,671	5,609	654	1,921	517	833	13,205
Value of plant and machinery £'000	2,364	4,287	537	1,317	294	564	9,363
Horse-power of engines ordinarily	1		j	1	1		
in use h.p.	17,489	32,076	4,142	12,202	3,045	9,292	78,246

Australia.											
Items.			1945-46.	1951–52.	1952-53.	1953-54.	195455.	1955-56.			
Number of factories			963	1,853	1,975	2,041	2,128	2,220			
Number of persons employed			13,112	20,398	20,005	20,981	22,540	24,445			
Salaries and wages paid		£'000	3,634	13,124	13,804	15,100	17,491	20,477			
Value of power, fuel, etc., used		£'000	162	413	460	530	599	698			
Value of materials used		£'000	3,599	14,268	14,041	16,427	20,834	24,534			
Value of production		£'000	5,432	20,681	21,551	23,755	28,025	32,949			
Total value of output		£'000	9.193	35,362	36,052	40,712	49,458	58,181			
Value of land and buildings		£'000	2,369	7,021	8,285	9,900	11,289	13,205			
Value of plant and machinery		£'000	2.091	5.434	6,366	7,044	8.070	9,363			
Horse-power of engines ordinarily	in use		26,095	56,397	59,024	62,774	66,406	78,246			

8. Extracting and Refining of Non-ferrous Metals: Alloys.—The following table shows particulars of establishments engaged in metal extraction and ore reduction including secondary recovery of metals, but excluding blast furnaces engaged in production of pig iron from iron ore, for each State during 1955-56 and for Australia for a series of years. It should be noted that as "Ore Beneficiation and Concentration", formerly included as part of this section of Manufacturing Industry, was transferred to the Mining Industry in 1952-53 details for that and later years are not comparable with those for 1951-52 and earlier years.

EXTRACTING AND REFINING OF NON-FERROUS METALS: ALLOYS. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	25	21	5	2		3	56
Number of persons employed	1,332	306	532	(b)	1 1	(b)	7,029
Salaries and wages paid. £'000	1.446	301	636	(b) (b)	l I	(b) (b)	7,434
Value of power, fuel, etc., used	1 1		i	` ′	1	• 1	•
£'000	493	42	684	(b)	۱ ۱	(b)	3,753
Value of materials used . £'000	14,703	2,989	17,026	(b) (b) (b)	!	(b) (b)	70,000
Value of production £'000	2,430	713	2,849	(b)	l I	(b)	17,787
Total value of output £'000	17,626	3,744	20,559	(6)		(b) (b)	91,540
Value of land and buildings £'000	808	221	953	(b) (b)	l i	(b)	6,155
Value of plant and machinery £'000	1,260	144	1,272	(b)	!	(b)	13,367
Horse-power of engines ordinarily	i ' i		•	1	1	`-'	•
in use h.p.	8,134	67.1	20.712	(b)		(b)	79,696

			AUSTRAL	IA.				
Items.			1938–39.	1951–52.	1952-53. (c)	1953–54. (c)	1954-55. (c)	1955-56. (c)
Number of factories			42	67	59	59	62	56
Number of persons employed			5.532	7.812	6.958	6,592	6.782	7,029
Salaries and wages paid	• •	£'000	1,613	6,515	6,085	6,069	6,432	7,434
Value of power, fuel, etc., used		£'000	598	3,130	2.803	3.063	3,253	3,753
Value of materials used		£'000	16,844	71,097	44,481	53,711	62,859	70,000
Value of production		£'000	3,892	27,496	14,163	12,648	14.148	17,787
Total value of output		£'000	21.334	101.723	61,447	69,422	80.260	91,540
Value of land and buildings		£'000	1.177	2,075	2,669	2,743	3.044	6.155
Value of plant and machinery		£'000	3,526	4,936	4,371	5,390	6.019	13,367
Horse-power of engines ordinarily	in use	h.p.	54,450	81,567	70,424	65,067	66,280	79,696

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<sup>(</sup>a) In Western Australia the majority of the plants are worked at the mines and are therefore not included. (b) Not available for publication; figures are included in the total for Australia. (c) See text above table.

<sup>9.</sup> Electrical Machinery, Cables and Apparatus.—The following table shows particulars of this industry for each State during 1955-56 and for Australia for a series of years.

Items.

ELECTRICAL	MACHINERY,	<b>CABLES</b>	AND	APPARATUS.
	1955	5–56.		

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	530	354	67	67	66	15	1,099
Number of persons employed .	29,588	10,069	1,643	1,555	797	189	43,841
Salaries and wages paid . £'000	25,305	8,268	1,191	1,176	581	142	36,663
Value of power, fuel, etc. used £'000	1,373	342	31	34	19	9	1,808
Value of materials used £'000	52,846	17,339	2,557	1,366	749	272	75,129
Value of production £'000	40,195	12,031	1,906	1,620	958	326	57,036
Total value of output £'000	94,414	29,712	4,494	3,020	1,726	607	133,973
Value of land and buildings £'000	13,344	5,054	500	532	413	149	19,992
Value of plant and machinery £'000	9,849	3,060	436	282	130	97	13,854
Horse-power of engines ordinarily			l ,		ļ j	,	
in use h.p.	56,148	18,328	5,111 i	1,960	1,374	358	83,279
		AUSTRAL	IA.				
Items.		1938–39.	1951–52.	1952–53.	1953–54.	1954-55.	1955–56.
Number of factories	<del></del>	360	928	965	1.028	1,064	1,099
Number of persons employed		10,666	36,772	31,949	38,377	42,007	43,841
Salaries and wages paid	£'000	2,031	24,277	22,903	28,969	33,403	36,663
Value of power, fuel, etc., used	£'000	105	976	991	1,391	1,651	1,808
Value of materials used	£'000	3,195	40,704	36,668	58,237	69,962	75,129
Value of production	£'000	3,655	38,244	38,633	49,032	54,637	57,036
Total value of output	£'000	6,955	79,924	76,292	108,660	126,250	133,973
Value of land and buildings	£'000	1,627	9,631	11,270	13,829	16,885	19,992
Value of plant and machinery	£'000	897	6,957	8,168	9,709	11,915	13,854
Horse-power of engines ordinarily in	use h.p.	12,043	62,814	66,512	74,088	81,058	83,279

10. Railway and Tramway Workshops (Government and Local Authority).—The railway and tramway workshops, which form an important part of Class IV., are chiefly owned by State Governments and Local Authorities. Workshops (fourteen in 1955-56) controlled by non-public bodies are not included in the figures below:—

TRAMCARS AND RAILWAY ROLLING STOCK.(a) 1955-56.

Vic. | Q'land. | S. Aust. | W. Aust.

		i	1			Į.	
Number of factories	42	22	13	15	26	7	125
Number of persons employed	15,443	7,363	6,542	4,395	3,700	914	38,357
Salaries and wages paid £'000	14,232	6,581	4,793	3,900	2,947	706	33,159
Value of power, fuel, etc., used £'000	435	207	127	151	113	28	1,061
Value of materials used £'000	7,736	4,946	2,869	2,615	1,734	655	20,555
Value of production £'000	16,705	8,835	5,694	4,677	3,509	984	40,404
Total value of output £'000	24,876	13,988	8,690	7,443	5,356	1,667	62,020
Value of land and buildings £'000	5,850	1,883	753	1,424	502	664	11,076
Value of plant and machinery £'000	8,865	1,115	1,023	1,718	1,018	333	14,072
Horse-power of engines ordinarily	43,387	21,391	17,278	20,536	10.933	2.250	116 775
in use h.p.	<del></del>	<del>,</del>	<del></del>	20,330	10,933	3,250	116,775
		AUSTRAL	IA.				
		1		)	)	}	1
Items.		1020 20		1050 50	1000 64		
		1330-33.	1951-52.	1952-53.	1953-54.	1954-55	1955-56.
							1955-56.
Number of factories	<del></del>	117	126	123	124	123	125
Number of factories Number of persons employed		27,310	126 38,499	123 39,073	124 39,262	123 38,599	125 38,357
Number of persons employed Salaries and wages paid	£'000	27,310 6,721	126 38,499 26,281	123 39,073 28,002	124 39,262 28,425	123 38,599 30,777	125 38,357 33,159
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used	£'000 £'000	27,310 6,721 226	126 38,499 26,281 812	123 39,073 28,002 907	124 39,262 28,425 994	123 38,599 30,777 1,025	125 38,357 33,159 1,061
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used	£'000 £'000 £'000	27,310 6,721 226 4,976	126 38,499 26,281 812 15,151	123 39,073 28,002 907 16,706	124 39,262 28,425 994 17,093	123 38,599 30,777 1,025 18,818	125 38,357 33,159 1,061 20,555
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production	£'000 £'000 £'000	27,310 6,721 226 4,976 8,021	126 38,499 26,281 812 15,151 31,375	123 39,073 28,002 907 16,706 33,875	124 39,262 28,425 994 17,093 34,354	123 38,599 30,777 1,025 18,818 37,505	125 38,357 33,159 1,061 20,555 40,404
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output	£'000 £'000 £'000 £'000	117 27,310 6,721 226 4,976 8,021 13,223	126 38,499 26,281 812 15,151 31,375 47,338	123 39,073 28,002 907 16,706 33,875 51,488	124 39,262 28,425 994 17,093 34,354 52,441	123 38,599 30,777 1,025 18,818 37,505 57,348	125 38,357 33,159 1,061 20,555 40,404 62,020
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings	£'000 £'000 £'000 £'000	117 27,310 6,721 226 4,976 8,021 13,223 6,737	126 38,499 26,281 812 15,151 31,375 47,338 8,786	123 39,073 28,002 907 16,706 33,875 51,488 9,279	124 39,262 28,425 994 17,093 34,354 52,441 9,730	123 38,599 30,777 1,025 18,818 37,505 57,348 10,524	125 38,357 33,159 1,061 20,555 40,404 62,020 11,076
Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output	£'000 £'000 £'000 £'000 £'000 £'000	117 27,310 6,721 226 4,976 8,021 13,223	126 38,499 26,281 812 15,151 31,375 47,338	123 39,073 28,002 907 16,706 33,875 51,488	124 39,262 28,425 994 17,093 34,354 52,441	123 38,599 30,777 1,025 18,818 37,505 57,348	125 38,357 33,159 1,061 20,555 40,404 62,020

<sup>(</sup>a) Government and Local Authority only.

A railway workshop in the Northern Territory is chiefly engaged in making repairs to rolling stock, etc., no new goods being manufactured. Particulars of this establishment are not included in any of the tables in this chapter.

11. Motor Vehicles.—The industries catering for the motor trade are included in Class IV., Industrial Metals, Machines and Conveyances. In the table below a summary is given of the principal statistics for 1955-56 for each branch of industry associated with the motor trade of Australia.

### MOTOR VEHICLES: CONSTRUCTION, ASSEMBLY, REPAIRS, ETC., AUSTRALIA. 1955-56.

Items.			Construc- tion and Assembly.	Repairs.	Motor Bodies. (a)	Motor Acces- sories.	Total.
Number of factories			70	8.075	1,344	218	9,707
Number of persons employed			18,148	52,751	25,822	9,238	105,959
Salaries and wages paid		£'000	17,931	35,667	22,368	8,016	83,982
Value of power, fuel, etc., used		£'000	804	1,098	766	521	3,189
Value of materials used		£'000	30,091	36,928	50,263	9,651	126,933
Value of production		£'000	25,750	54,669	32,755	13,285	126,459
Total value of output		£'000	56,645	92,695	83,784	23,457	256,581
Value of land and buildings		£'000	10,043	39,772	11,365	5,055	66,235
Value of plant and machinery		£'000	7,704	10,909	8,119	5,658	32,390
Horse-power of engines ordinari	y in i	ise h.p.	45,844	56,876	69,409	30,834	202,963

(a) Includes motor body repairing, panel beating, duco spraying, etc.

In the next table similar details are shown on a State basis for 1955-56 and for Australia for selected years for these industries combined.

### MOTOR VEHICLES: CONSTRUCTION, ASSEMBLY, REPAIRS, ETC. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	4,039	2,476	1,195	854	868	275	9,707
Number of persons employed	35,021	35,176	10,068	17,291	6,414	1,989	105,959
Salaries and wages paid . £'000	26.636	29,850	6,382	15,142	4,585	1,387	83,982
Value of power, fuel, etc., used £'000	1,021	1,197	198	558	182	33	3,189
Value of materials used . £'000	34,549	46,422	6,683	31,189	6,632	1,458	126,933
Value of production £'000	43,193	41,462	11,983	20,635	7,087	2,099	126,459
Total value of output £'000	78,763	89,081	18,864	52,382	13,901	3,590	256,581
Value of land and buildings £'000	26,190	21,846	5,088	7,198	4,204	1,709	66,235
Value of plant and machinery £'000	10,670	11,530	1,742	6,548	1,520	380	32,390
Horse-power of engines ordinarily		,	´	, ,	'		, -
in use h.p.	56,200	83,694	11,616	36,883	12,507	2,063	202,963

#### AUSTRALIA.

Items.			1945-46.	1951–52.	1952-53.	1953-54.	1954–55.	1955-56.
Number of factories Number of persons employed			3,592 39,706	6,587 82,123	7,422 82,609	8,302 89,913	8,993 98,343	9,707 105,959
Salaries and wages paid Value of power, fuel, etc., used Value of materials used	£'	000 000 000	10,582 395 12,143	51,799 1,610 70.967	54,666 1,987 74,405	62,454 2,477 94,173	73,073 2,798 108,119	84,082 3,189 126.933
Value of production Total value of output	£'	000	15,818 28,356	78,808 151,385	86,305 162,697	101,054 197,704	112,541 223,458	126,459 256,581
Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily	£'	000 000	9,878 3,758 56,117	30,799 14,982 126,228	38,718 20,129 139,253	45,835 23,397 146,930	55,451 26,073 160,001	66,235 32,390 202,963

The table below shows the production and imports of motor bodies for 1938-39 and 1951-52 to 1956-57:—

### PRODUCTION AND IMPORTS OF MOTOR BODIES(a): AUSTRALIA.

	1938–39.	1951–52.	1952-53.	1953–54.	1954–55.	1955–56.	1956–57. (b)
Motor Bodies(a)— Made No. Assembled from Panels imported	79,436	98,470	90,822	114,878	127,709	139,098	125,548
or made elsewhere No. Imported (d) No.	(c) 532	29,205 101,628	21,566 7,568	43,077 26,874	62,408 37,924	94,953 19,041	74,329 7,062

(a) Excludes sidecars. (b) Preliminary—subject to revision. (c) Not available. (d) Includes bodies on complete vehicles imported.

12. Agricultural Machines and Implements.—Owing to the extensive agricultural activities conducted in Australia and the demand for modern mechanized farm equipment, the manufacture of agricultural implements constitutes an important branch of Australian

industry. The articles manufactured include a wide range of implements for tillage, seeding and planting, and the harvesting of crops. Other farm machinery made includes windmills, chaff-cutters and machinery used in the dairying industry.

The following table shows details of establishments classified as agricultural implement works in each State for 1955-56 and for Australia for a series of years.

### AGRICULTURAL MACHINES AND IMPLEMENTS.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	129	84	45	36	30		324
Number of persons employed	2,155	6,338	1,437	1,641	367		11,938
Salaries and wages paid. £'000 Value of power, fuel, etc., used	1,851	5,868	998	1,357	290	••	10,364
£'000	88	430	50	92	10		670
Value of materials used £'000	1,963	8,403	964	1,550	202		13,082
Value of production £'000	2,627	8,280	1,437	1,899	407		14,650
Total value of output £'000	4,678	17,113	2,451	3,541	619		28,402
Value of land and buildings £'000	1,846	2,312	608	651	357		5,774
Value of plant and machinery £'000	956	2,689	416	500	112		4,673
Horse-power of engines ordinarily		1					!
in use h.p.	7,657	20,311	5,553	5,402	955		39,878

### Australia.

Items.			1938-39.	1951–52.	1952-53.	1953-54.	1954–55.	1955–56.
Number of factories			161	257	270	293	308	324
Number of persons employed			6,563	12,481	11,608	11,930	12,182	11,938
Salaries and wages paid		£'000	1,373	9,044	8,838	9,473	10,206	10,364
Value of power, fuel, etc., used		£'000	82	555	600	637	695	670
Value of materials used		£'000	1,485	13.521	11,103	12,988	13.572	13.082
Value of production		£'000	1,836	13.051	12,787	13.924	14,558	14,650
Total value of output		£'000	3,403	27,127	24,490	27,549	28,825	28,402
Value of land and buildings		£'000	997	3,320	3,701	3,918	5,038	5,774
Value of plant and machinery		£'000	911	3,365	3.526	3,627	4,282	4,673
Horse-power of engines ordinari	y it	use h.p.	13,346	34,598	37,372	39,843	39,858	39,878

13. Wireless and Amplifying Apparatus.—The introduction of wireless broadcasting in 1923 gave rise to a new industry in Australia. Early statistical details of the industry are not available as they were grouped together with other electrical apparatus. In 1930-31, a new classification of factories was adopted and "Wireless Apparatus" was shown as a separate industry. The industry is confined mainly to New South Wales and Victoria, but is becoming increasingly important in South Australia. The number of broadcast listeners' licences increased from a third of a million in 1930-31 to over 2,100,000 at 30th June, 1957 and this increase reflects the advancement of the industry during that period. At the 30th June, 1957, 74,000 television viewers' licences had been issued. During the 1939-45 War, considerable expansion took place in the industry to meet the requirements of the fighting services and apart from a slight drop in output in 1945-46, and in 1952-53 this expansion has continued.

### WIRELESS AND AMPLIFYING APPARATUS: AUSTRALIA.

Items.			1938–39.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of materials used Value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily Wireless receiving sets made(a) Television receiving sets made	   in	£'000 £'000 £'000 £'000 £'000 £'000 £'000 use h.p. No.	72 4,828 754 23 1,356 1,123 2,502 558 305 2,710 163,821	141 8,733 5,361 184 8,487 7,023 15,694 1,586 980 12,055 358,379	149 6,912 4,707 179 7,661 6,042 13,882 1,713 969 10,596 298,955	162 8,125 5,751 199 9,782 7,454 17,435 2,011 1,132 9,274 438,978	175 8,550 6,398 205 10,076 8,624 18,905 2,300 1,242 8,930 456,034	181 9,171 7,051 231 10,363 8,907 19,501 3,428 1,761 9,624 458,012 2,636

<sup>(</sup>a) Including radiograms and car radios.

Note.—There were 368,500 wireless receiving sets (including radiograms) and 126,600 television receiving sets made in 1956-57.

- 14. Cotton.—(i) General. Cotton has been grown in Australia since 1860, but never on a very large scale. The average annual quantity of unginned cotton produced during the five years ended 1938-39 was 18 million lb. and slightly over 3.5 million lb. in the five years ended 1955-56. Arising out of the development in the local manufacture of cotton materials and the further expansion following the outbreak of war in 1939, plans were completed for an extension of the area devoted to the cultivation of this crop. The downward trend which commenced with the war in the Pacific persisted until recent years but production has recently risen and in 1954-55 amounted to 3,597,000 lb. The growing of cotton, which is restricted to Queensland, is referred to in some detail in Chapter XXII.—Agricultural Production.
- (ii) Ginning. The ginning and marketing of cotton is controlled by the Queensland Cotton Board. The Board operates ginneries and processes by-products. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly (in 1956-57) from India, Pakistan, Brazil, Mexico, Peru and the United States of America.
- (iii) Spinning and Weaving. The post war expansion in the spinning and weaving section of the cotton industry marks an important stage in its development. New factories have been established and Australia is now producing an extensive range of cotton goods, including duck and canvas from cotton or flax, denims, drill, etc., tyre cord and tyre cord fabric. The number of establishments engaged in cotton spinning and weaving in Australia and other particulars of the industry are shown in the following table for the years 1938-39, and 1951-52 to 1955-56.

### COTTON SPINNING AND WEAVING: AUSTRALIA.

Items.		1938-39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily	£'000 £'000 £'000 £'000 £'000 £'000 £'000	33 3,589 493 50 1,357 2,386 704 736 9,128	94 8,840 5,297 554 20,803 9,272 30,629 3,695 4,214 32,285	93 7,673 5,090 551 14,747 8,126 23,424 3,951 4,370 36,517	96 9,470 6,602 690 18,083 10,809 29,582 4,104 4,411 33,201	96 9,582 6,845 706 18,505 11,343 30,554 5,078 4,355 34,356	97 9,598 7,297 703 18,571 11,877 31,151 5,719 4,637 34,657

15. Wool Carding, Spinning and Weaving.—The importance of this industry is emphasised by the fact that Australia is the world's chief source of wool and the development of the woollen industry since its establishment at an early period in Australian history is of singular interest. The production consists chiefly of woollen cloth and tweed, worsted cloth, rugs, blankets and yarn, all of which have acquired a reputation for purity and durability.

WOOL CARDING, SPINNING AND WEAVING.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used £'000 Value of materials used . £'000 Value of production . £'000 Total value of output . £'000 Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p.	49 6,585 4,361 11,500 6,956 18,871 2,583 3,139	7,634 716 20,365 12,642 33,723 4,363	472 33 1,451 812 2,296 195	384 41 1,032 726 1,799 39	(a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	(a) (a) (a) (a) (a) (a) (a) (a)	145 21,899 14,409 1,345 39,532 24,082 64,959 7,713 10,673

<sup>(</sup>a) Not available for publication, figures are included in total for Australia.

### WOOL CARDING, SPINNING AND WEAVING-continued.

#### Australia.

Items.			1938-39. (a)	1951–52.	1952–53.	1953–54.	1954-55.	1955–56.
Number of factories Number of persons employed Salaries and wages paid	::	£'000	90 19,608 2,888	181 21,244 11,543	171 19,729 12.028	164 22,619 14,382	151 21,844 13,945	145 21,899 14,409
Value of power, fuel, etc., used Value of materials used	• • • • • • • • • • • • • • • • • • • •	£'000 £'000	393 7,331	1,057 44,064	1,175 34,655	1,329 45,033	1,288 38,938	1,345 39,532
Value of production Total value of output Value of land and buildings		£'000 £'000	4,791 12,515 2,380	16,272 61,393 6.161	19,226 55,056 6,242	23,237 69,599 6,894	21,898 62,124 7,369	24,082 64,959 7,713
Value of plant and machinery Horse-power of engines ordinarily	y in us	£'000	3 370 42,944	7,881 69,232	8,183 67,911	9,086 68,715	10,053 66,817	10,673 71,752
Woollen and worsted cloth (b)(c Blankets and rugs (b)	) '000	sq. yds. '000	31,768 1,279	29,790 1,382	29,400 1,035	35,027 1,340	31,067 1,673	30,279 1,800

<sup>(</sup>a) Includes Woolscouring Works in Victoria and Tasmania and Woolscouring Works and Fellmongeries in South Australia. (b) Includes production in other industries. (c) Includes mixtures.

16. Hoisery and Other Knitted Goods.—Details for each State for 1955-56 and for Australia for a series of years are shown in the following table:—

#### HOSIERY AND OTHER KNITTED GOODS.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	207	429	6	10	9	3	664
Number of persons employed	7,337	15,105		102		84	23,409
Salaries and wages paid £'000	4,734	9,883	317	44	97	42	15,117
Value of power, fuel, etc., used £'000 Value of materials used £'000	218 10.391	452 19,680	1,413	63	221	54	687 31,822
Value of production £'000	8,704	17,695	539	77	164	57.	27,236
Total value of output £'000	19,313	37,827	1,960			114	59,745
Value of land and buildings £'000	2,745	6,257	178	38	83	38	9,339
Value of plant and machinery £'000	2,230	5,612	230		45	15	8,159
Horse-power of engines ordinarily in use h.p.	6,329	12,930	600	191	195	70	20,315

### AUSTRALIA.

Items.		1938–39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
Number of factories  Number of persons employed Salaries and wages paid  Value of power, fuel, etc., used Value of materials used  Value of production  Total value of output  Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily	    £'000 £'000 £'000 £'000 £'000 £'000 £'000	313 18,159 2,332 133 4,284 3,809 8,226 1,962 1,931 8,884	548 21,342 11,179 480 24,517 18,028 43,025 5,602 5,894 19,677	587 20,694 11,641 588 23,939 21,164 45,691 6,329 6,038 17,997	645 23,937 14,277 684 30,372 26,155 57,211 7,253 7,201 18,478	661 24,614 15,117 656 31,317 27,535 59,508 8,643 7,917 20,884	664 23,409 15,117 687 31,822 27,236 59,745 9,339 8,159 20,315

The following quantities of yarn were used in these establishments during 1955-56:—Worsted or woollen, 8,210,946 lb.; wool or worsted and cotton, 175,841 lb.; wool or worsted and rayon, 672,393 lb.; wool or worsted and nylon, 62,980 lb.; other wool or worsted mixtures, 171,147 lb.; cotton, 10,067,639 lb.; mercerised cotton, 451,797 lb.; cotton and rayon, 19,429 lb.; rayon, spun, 1,202,420 lb.; rayon filament, 4,390,778 lb.; silk, 31,808 lb.; nylon, spun, 553,929 lb.; nylon filament, 2,454,549 lb.; other yarns, 770,794 lb. Production of garments and stockings is shown in § 10 (see p. 240).

17. Tanning, Currying and Leather Dressing.—(i) Details of Industry. In Class VII. the most important industry is tanning. Formerly the production of tanneries in Australia was confined to the coarser sorts of leathers, but there are now very few kinds which cannot be produced locally, and an export trade has been built up in some varieties.

### TANNING, CURRYING AND LEATHER DRESSING.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	68	40	13	10	5	<u> </u>	137
Number of persons employed	1,811	2,127	621	216	(a)	(a)	4,972
Salaries and wages paid £'000	1,724	1.933	463	185	(a)	(a)	4,468
Value of power, fuel, etc., used £'000	179	167	35	21		(a)	415
Value of materials used £'000	4,553	4,186	1,529	500	(a) (a)	(a)	11,180
Value of production £'000	2,191	2,667	648	354	(a)	(a)	6,082
Total value of output £'000	6,923	7,020	2,212	875	(a)	(a)	17,677
Value of land and buildings £'000	880	1,053	105	90	(a)	(a)	2,176
Value of plant and machinery £'000	909	866	240	158	(a)	(a)	2,231
Horse-power of engines ordinarily					''	.,	-,
in use h.p.	12,914	12,281	3,628	1,658	(a)	(a)	31,590

(a) Not available for publication; figures are included in the total for Australia.

### AUSTRALIA.

Items.	1938-39.	1951-52.	1952-53.	1953–54.	1954–55.	1955-56.
Number of factories  Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of production Total value of output Value of land and buildings Value of land and buildings Value of loant and machinery £'00	4,375 920 88 0 2,983 0 1,522 0 4,593 0 814	143 5,274 3,889 352 8,796 5,912 15,060 1,857 1,703	141 5,240 4,163 382 9,488 5,983 15,853 1,983 1,832	142 5,445 4,464 417 10,477 6,672 17,566 2,055 1,990	140 5,393 4,518 408 10,675 6,743 17,826 2,219 2,128	137 4,972 4,468 415 11,180 6,082 17,677 2,176 2,231
Horse-power of engines ordinarily in use h.r		28,980	30,314	31,182	31,708	31,590

(ii) Materials Used and Articles Produced. The quantities of materials used and leather produced in tanneries in each State in 1955-56 are shown in the following table:—

TANNERIES: MATERIALS USED AND PRODUCTION, 1955-56.

Particular	s.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust,
Materials used—			ļ- <del></del>					-,
Hides (cattle)—		l <u>.</u>	1					
Yearling	No.	115,013					(a)	186,703
Light Hides(b)	,,	323,736				(a)	(a)	1,202,994
Heavy Hides(c)	,,	419,661	463,665	194,125	64,834	(a)	(a)	1,205,284
Skins—		1				1		
Calf	. ,,	664,610			3,805	, (a)	(a)	1,130,545
Goat	. ,	377,436	(a)	(a)				408,425
Sheep, including	Pelts ,,	2,185,380			(a)	(a)		3,454,146
Marsupial	,,	98,616	24,225	(a)	(a)			113,657
Bark used—	.,	1				1		
Wattle	tons	3,222	4,832	846	328	(a)	(a)	9,253
Mallet and Othe	r ,,	(a)	900	(a)		280		1,238
Tanning extract (ve	g.) used	2,532	2,901	1,884	(a)	835	(a)	8,441
Articles produced—		1 1	′		` ` `	i E	• •	•
Leather made—		l	)			1 1		1
Sole and Belting	lb.	10.503.923	13,586,938	5.824.003	(a)	2,741,422	(a)	33,701,455
Harness, etc.	,,	255,939		544,352	(a)	(a)		1,212,909
T Inhalasan	sq. ft.	(a)	2,959,905	(a)	(a)	(a)		3,389,431
Dressed and U	nner from		_,,.	(-7	()	[ (-) [		-,,
Hides-	pp	ļ				]		
Sold by Mea	surement-	į				! ;		
D-4 " 4	. sq. ft.	(a)	2,179,294		(a)	i i		3,105,934
All Other	•		20,093,084			(a)	(a)	52,020,181
	/eight "(all	10,010,000	20,033,00	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	0,,	(4)	(**)	,,
kinds)	. lb.	(a)	(a)	(a)	(a)	(a)	(a)	131,705
Dressed from ski		(4)	. (6)	()	(12)	(4)	(4)	
Calf	6	4,043,984	2,623,625	870,557	(a)	(a)	(a)	7,566,642
Cont	-	(a)	(a)	(a)				1,801,192
Sheen	. ,,,,	9.080.539		(a) 1	(a)	(a)	• • •	13.951.357
Moraunial	. ,, ,,	168,309	117,553	(a)	(a)	(a)		475.160
Maisupiai ,	. ,, ,,	100,309	117,555)	(4)	(4)	(6)	• •	475,100

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. 45 lb. (c) Over 45 lb.

18. Tailoring and Ready-made Clothing.—Statistics showing the distribution of this industry between States in 1955-56 and for Australia for a series of years are shown in the following table:—

TAILORING AND READY-MADE CLOTHING.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	965	614	130	104	122 825	17 202	1,952
Number of persons employed Salaries and wages paid £'000	17,428	10,345 6,245	2,212 994	1,575	359	103	32,587 18,261
Salaries and wages paid £'000 Value of power, fuel, etc.,	9,792	0,243	994	708	339	103	10,201
used £'000	209	130	21	. 20	1 11	2	393
Value of materials used £'000	19,401	12,976	1,969	950	573	72	35,941
Value of production £'000	15,461	9,957	1,695	1,097	588	142	28,940
Total value of output £'000	35,071	23,063	3,685	2,067	1,172	216	65,274
Value of land and buildings £'000	4,960	2,981	561	555	352	75	9,484
Value of plant and machinery £'000	1,472	987	124	120	36	7	2,746
Horse-power of engines ordinarily in use h.p.	4,763	3,123	504	427	177	23	9,017

Australia.
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Items.		1938–39.	1951–52.	1952–53.	1953–54.	1954–55.	1955-56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily in us	£'000 £'000 £'000 £'000 £'000 £'000 £'000	1,177 26,499 3,168 72 4,947 4,812 9,831 3,176 356 2,607	1,998 36,226 16,132 329 30,078 23,719 54,126 7,398 2,431 11,093	1,961 32,209 15,681 363 28,767 23,581 52,711 7,573 2,469 10,693	1,963 33,264 17,215 380 33,598 26,076 60,054 8,251 2,523 9,339	1,985 33,384 17,968 390 34,237 28,031 62,658 8,917 2,663 9,198	1,952 32,587 18,261 393 35,941 28,940 65,274 9,484 2,746 9,017

19. Dressmaking and Millinery Establishments.—Particulars of dressmaking and millinery establishments in Australia for the years 1938-39 and 1951-52 to 1955-56 are shown in the following table:—

### DRESSMAKING AND MILLINERY: AUSTRALIA.

Items.			1938-39.	1951-52.	1952–53.	1953–54.	1954-55	1955-56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery	::	£'000 £'000 £'000 £'000 £'000	869 16,398 1,653 33 2,610 2,592 5,235 2,052 189	1,423 20,912 8,412 149 12,123 12,700 24,972 4,588 1,032	1,405 18,913 8,490 170 11,746 13,193 25,109 4,726 1,065	1,433 19,197 9,230 187 13,634 14,392 28,213 5,033 1,108	1,411 18,014 8,975 176 13,109 14,501 27,786 5,256 1,123	1,410 17,675 9,063 177 13,029 14,585 27,791 5,788 1,174
Horse-power of engines ordinaril	y in u	se h.p.	1,732	4,899	4,790	4,858	4,740	4,697

20. Shirts, Collars and Underclothing.—Particulars of this industry are shown below for each State for 1955-56 and for Australia for a series of years:—

### SHIRTS, COLLARS AND UNDERCLOTHING.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W Aust.	Tas.	Aust.
Number of factories	. 165	178	20	22	17		404
	. 4,375	6,362	930	(a) (a)	522	(a)	12,686
Salaries and wages paid £'00	00   2,453	3,634	410	(a)	235	(a) (a)	6,957
Value of power, fuel, etc.,		1	l	1		()	,,,,,,
used £'00	0 44	60	6	(a)	4	(a)	119
Value of materials used £'00	0 6.475	8,321	667	(a) (a)	398	(a)	16,112
Value of production £'00	0 3,904	6,122	641	(a)	349	(a)	11,328
Total value of output £'00	0 10,423	14,503	1,314	(a) (a)	751	(a)	27,559
Value of land and buildings £'00		1,542	163	(a)	103	(a)	2,999
Value of plant and machi-		1 '				()	_,-,-
nery £'00	00 434	577	60	(a)	46	(a)	1,146
Horse-power of engines ordinari					, "	(4)	1,110
in use h.		2.811	260	(a)	180	(a)	4,881

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia.

### SHIRTS, COLLARS AND UNDERCLOTHING—continued.

#### Australia. 1938-39, 1951-52, 1952-53, 1953-54, 1954-55. Items. 1955-56 Number of factories 404 12,745 6,702 106 12,686 6,957 119 Number of persons employed Salaries and wages paid ... 11,081 12,640 9,657 11,156 £'000 5,361 4,397 76 1,143 5,684 92 £.000 Value of power, fuel, etc., used Value of materials used 15,020 £'000 2.651 12.333 9.670 12.077 iiź Value of production 1,761 10,927 4,435 • 946 231 21,546 2,417 905 26,053 2,719 1,053 17,270 Total value of output £'000 21,130 Value of land and buildings £'000 2,091 885 2,151 846 2,999 1,146 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p. 1,874 5,189 4,779 4,320 4,468 4.881

21. Boots and Shoes.—(i) Details of Industry. The boot and shoe factories hold an important place both in regard to employment afforded and extent of output. The following tables refer to boot and shoe factories as distinct from those devoted to repairing, except in Tasmania, where it has been necessary to include details of boot and shoe repairing, in order to avoid disclosure of confidential information for that State. Factories engaged in the manufacture of sand shoes, goloshes and gum, etc., boots of rubber are not included here, being classified under Rubber Goods, see para. 38, page 268.

### BOOTS AND SHOES.

					·		
Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Aust,
Number of factories	186	226	30	21	10	21	494
Number of persons employed	7,143	10,939	1,511	1,206	607	151	21,557
Salaries and wages paid £'000	4,856	7,270	863	841	382	98	14,310
Value of power, fuel, etc.,		•		i	l i		•
used £'000	83	114	12	14	8	2	233
Value of materials used £'000	6,661	12,055	1,335	1.098	521	142	21,812
Value of production £'000	7,244	10.291	1,051	1,266	487	141	20,480
Total value of output £'000	13,988	22,460	2,398	2,378	1,016	285	42,525
Value of land and buildings £'000	1,344	1,818	217	260	162	45	3,846
Value of plant and machi-	-,-	-,			102	1,5	5,510
nery £'000	832	2,033	307	328	128	18	3,646
Horse-power of engines ordinarily	00-	-,		220			0,010
in use h.p.	4 673	9,348	898	945	495	126	16,485

#### Australia. Items. 1945-46. 1951-52. 1952-53. 1953-54. 1954-55., 1955-56. Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used ... 540 22,775 12,405 172 383 18,264 4,408 75 20,920 12,430 197 22,953 22,323 21,537 £'000 14,215 225 14,241 227 14,310 233 £'000 £'000 7,520 17.668 20,508 21.020 6,472 14,067 1,518 1,222 17,162 35,392 3,310 2,402 Value of production £'000 17,162 19,444 19,640 35,027 3,227 2,653 40,887 3,733 3,380 42,525 3,846 3,646 Total value of output £'000 40,177 £'000 3,491 3,152 16,679 Value of land and buildings Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p. 9,678 18,573 17,488 16,485

(ii) Quantity and Value of Production. The number and value of boots, shoes and slippers made in factories producing boots and shoes in each State are shown for 1955-56 in the following table. Particulars relating to the output of sand shoes, goloshes and gum, etc., boots of rubber are not included:—

### BOOT AND SHOE FACTORIES: OUTPUT, 1955-56.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Boots, shoes and sandals Slippers	pairs £ pairs £				(a) 68,951	551,871 772,590 408,081 253,980	(a) (a) 	19,815,829 35,988,412 7,977,146 4,478,174

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia.

Preliminary figures for 1956-57 were—Boots, Shoes and Sandals, 21,234,000 pairs; and Slippers, 7,852,000 pairs.

<sup>(</sup>a) Includes details of boot and shoe repairing.

22. Flour-milling.—(i) Details of Industry. The following table shows the position of the flour-milling industry in each State for the year 1955-56 and for Australia for a series of years:—

### FLOUR-MILLING.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	51	35.	11	24	20	10	151
Number of persons employed	1,621	1,254	(a)	445	510	(a)	4,548
Salaries and wages paid. £'000	1,594	1,093	(a)	379	434	(a)	4,073
Value of power, fuel, etc., used					1		
£'000	363	165	(a)	88	116	(a)	835
Value of materials used £'000	20,417	15.314	(a)	5,402	6,402	(a)	54,498
Value of production £'000	3,354	1,843	(a)	575	723	(a)	7,575
Total value of output £'000	24,134	17,322	(a)	6,065	7,241	(a)	62,908
Value of land and buildings £'000	2.013	1,230	(a)	291	789	(a)	5,211
Value of plant and machinery £'000	2,199	1.289	(a)	467	608	(a)	5,405
Horse-power of engines ordinarily	,	-,	()			```	-,
in use h.p.	17,790	14,394	(a)	4,129	5,689	(a)	47,786

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia.

#### Australia.

Items.			1938–39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56
Number of factories Number of persons employed			172 3,783	162 4.681	158 4,892	157 4,602	151 4,528	151 4,548
Salaries and wages paid		£'000 £'000	896 231	3,466 730	3,884 866	3,847 847	3,851 805	4,073 835
Value of power, fuel, etc., used Value of materials used		£,000	10,573	45,576	51,373	53,946	54,436	54,498
Value of production Total value of output		£,000	2,091 12,895	7,313 53,619	8,296 60,535	8,134 62,927	7,311 62,552	7,575 62,908
Value of land and buildings Value of plant and machinery		£'000	2,091 1,814	3,606 4,106	3,912 4,531	4,260 4,921	4,533 5,060	5,211 5,405
Horse-power of engines ordinarily	y in use	h.p.	27,795	41,824	44,781	52,545	46,566	47,786

<sup>(</sup>ii) Production of Flour and By-products. The production of flour by the mills in each State (including other than flour mills) for the years 1938-39 and 1951-52 to 1956-57 was as follows:—

# FLOUR-MILLING: PRODUCTION OF FLOUR. (a) (Tons of 2,000 lb.)

Үеаг.	 N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938–39	 547,162	436,829	84,314	146,262	138,583	19,582	1,372,732
1951-52	 578,686	559,224	124,703	206,856	223,936	27,745	1,721,150
1952-53	 543,693	592,465	132,839	201,685	227,269	28,349	1,726,300
1953-54	 603,575	473,842	138,524	164,907	197,654	30,556	1,609,058
1954-55	 586,549	455,906	157,904	143,840	178,851	29,969	1,553,019
1955-56	 571.084	454,628	169,793	154,327	193,490	27,983	1.571.305
1956-57 (b)	 608,443	500,329	169,114	165,986	184,860	28,834	1,657,566

<sup>(</sup>a) Includes wheatmeal for baking and sharps.

In addition, 610,000 tons (2,000 lb. per ton) of bran and pollard were produced in 1955-56 and 631,000 tons in 1956-57. The total quantity of wheat ground in flour mills was 72,329,000 bushels in 1955-56 and 76,844,000 bushels in 1956-57.

<sup>(</sup>b) Preliminary, subject to revision.

23. Bakeries.—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below. It should be noted, however, that the details refer only to establishments coming within the definition of a factory as explained at the beginning of this section. For that reason, the tables do not give complete details of the industry, as a large number of bakeries, etc. not coming within the definition are excluded. This is true of all other industries covered by the statistics of manufacturing production, but, in view of the omission of such a large number of establishments in this instance, special mention is deemed necessary.

#### BAKERIES (INCLUDING CAKES AND PASTRY).

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Aust.
Number of factories Number of persons employed Salaries and wages paid £'000 Value of power, fuel, etc., used £'000 Value of materials used . £'000	1,576 7,497 4,533 866 13,687	1,075 5,553 3,294 589 10,007	2,183 1,100 217	1,603 944 164	559 109	158 1,640 1,181 145 5,009	3,878 19,543 11,611 2,090
Value of production £'000 Total value of output £'000 Value of land and buildings £'000 Value of plant and machinery £'000	13,687 10,375 24,928 6,374 3,494	7,476 18,072 4,767 2,975	2,702 6,892 1,275	2,097 5,319 1,291	1,326 3,521	2,442 7,596 1,316	37,820 26,418 66,328 15,865 9,461
Horse-power of engines ordinarily in use h.p.	9,856	6,953	2,855	2,925	1,797	5,149	29,535

#### Australia.(a)

Items.			1938–39.	1951–52.	1952-53.	1953-54.	1954–55.	1955-56.
Number of factories Number of persons employed Salaries and wages paid . Value of power, fuel, etc., used Value of materials used . Value of production . Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinaril	    y in us	£'000 £'000 £'000 £'000 £'000 £'000 £'000 se h.p.	1,958 11,715 1,993 306 6,651 4,509 11,466 4,960 1,478 10,855	3,347 18,332 8,571 1,486 26,451 18,624 46,561 10,789 5,082 22,248	3,534 18,405 9,368 1,694 29,672 21,788 53,154 12,145 6,073 23,792	3,687 18,758 9,954 1,805 32,829 23,107 57,741 13,617 7,158 26,462	3,800 19,125 10,648 1,902 35,899 23,582 61,383 14,352 8,373 27,815	3,878 19,543 11,611 2,090 37,820 26,418 66,328 15,865 9,461 29,535

<sup>(</sup>a) Includes confectionery in Tasmania.

24. Sugar-mills.—(i) General. Sugar-cane is grown in New South Wales and Queensland and particulars of area, yield, etc., are given in extended detail in Chapter XXII.—Agricultural Production.

The products of the sugar-mill are raw sugar and molasses, the former being sent to the refineries in different parts of Australia for further treatment. Particulars of cane crushed and sugar produced embodied in the following table refer to the quantities treated during the years ended 30th June, irrespective of the season in which the cane was grown; consequently the figures relating to cane crushed and sugar produced may differ slightly from those given in Chapter XXII.—Agricultural Production, which relate to harvest years.

(ii) Details for States. The following table shows details of the operations of sugar mills in New South Wales and Queensland for the years 1938-39 and 1951-52 to 1955-56:—

	SU	UGAR-MI	LLS.			
Items.	1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955–56.
	Nev	v Sоитн \	WALES.	<u>'</u>		
Number of factories Number of persons employed Cane crushed . tons Raw sugar produced (94 net titre) tons	3 212 337,038 45,106	3 176 321,388 41,060	3 138 125,714 14,272	3 156 263,249 34,004	3 187 222,313 26,301	3 152 284,539 36,028
	1	 Queenslai	1D.	<u> </u>		
Number of factories Number of persons employed Cane crushed tons Raw sugar produced (94 net titre) Sold to distilleries'000 gals Used as fodder Used as manure Run to waste Burnt as fuel Sold or used for other purposes'000 gals Total molasses disposed of'000 gals	33 4,419 5,432,193 775,064 8,276 4,237 3,293 3,749 3,749 232 20,286	31 5,612 5,005,172 704,341 12,557 5,900 5,484 37 1,005 324 25,307	31 6,495 6,841,536 934,614 15,774 5,887 7,499 76 934 426 30,596	31 7,358 8,751,063 1,220,383 23,323 5,486 11,466 168 183 516 41,142	31 7,272 9,864,304 1,301,245 23,167 5,753 10,501 233 1,079 473 41,206	31 7,044 8,616,163 1,135,685 22,772 5,285 10,637 185 1,519 588 40,986

- 25. Sugar-refining.—The establishment of the sugar-refining industry considerably antedates the establishment of the sugar-milling industry, the raw material operated on in the earlier years coming chiefly from Mauritius and the East. In 1955-56, there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia. The total quantity of raw sugar treated amounted to 503,268 tons for a yield of 482,660 tons of refined sugar.
- 26. Confectionery.—The figures for 1955-56 for each State and for Australia for a series of years are shown hereunder:—

### CONFECTIONERY. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories  Number of persons employed Salaries and wages paid £'000 Value of power, fuel, etc., used £'000 Value of materials used . £'000 Value of production £'000 Total value of output . £'000 Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p.	92 2,948 2,114 7,648 4,482 12,371 1,363 1,604	10,449 1,556	19 260 117 10 549 166 725 111 54	18 335 178 20 413 277 710 205 129	7 325 179 16 409 308 733 89 65	(a) (a) (a) (a) (a) (a) (a) (a) (a) (a)	226 7,183 4,805 473 15,583 8,932 24,988 3,324 3,612 29,156
	A	USTRALI <i>A</i>	(b)				
Items.		1938–39.	1951-52	1952-53	1953-54.	1954–55.	1955-56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily in	£'000 £'000 £'000 £'000 £'000 £'000 £'000	148 7,256 1,041 107 3,102 2,418 5,627 1,423 1,364 16,154	250 7,361 4,006 371 11,997 7,801 20,169 2,428 2,704 26,887	256 6,873 4,084 436 12,554 7,910 20,900 2,510 2,872 26,002	249 6,976 4,382 444 13,857 8,307 22,608 2,650 3,039 28,763	238 7,069 4,516 447 14,917 8,320 23,684 2,964 3,368 27,374	226 7,183 4,805 15,583 8,932 24,988 3,324 3,612 29,156

<sup>(</sup>a) Not available for publication. Included with Bakeries.

<sup>(</sup>b) Excludes Tasmania.

27. Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.—(i) Details of Industry. The following table shows particulars of factories included in this class for each State for 1955-56 and for Australia for a series of years:—

JAM, FRUIT AND VEGETABLE CANNING, PICKLES, SAUCES, VINEGAR. 1955–56.

		1903-30	).				
Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories  Number of persons employed Salaries and wages paid Value of power, fuel, etc., used £'000 Value of materials used £'000 Value of output £'000 Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use  h.p.	55 2,790 2,098 230 7,689 4,131 12,050 1,722 1,564 9,563	60 4,475 3,621 370 14,533 7,221 22,124 5,090 4,696 20,239	16 1,775 1,367 77 5,241 2,074 7,392 707 514 2,863	20 1,128 816 52 2,153 1,089 3,294 495 464 1,968	9 139 86 6 306 173 485 134 43	23 1,271 936 67 2,401 1,415 3,883 726 802 3,597	183 11,578 8,924 802 32,323 16,103 49,228 8,874 8,083 38,508
Items.		1938–39.	1951–52	. 1952-53	1953–54.	1954-55.	1955–56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily in	£'000 £'000 £'000 £'000 £'000 £'000 £'000 use h.p.	123 6,476 1,149 97 4,800 2,334 7,231 1,382 721 7,873	201 13,152 7,793 672 28,286 13,623 42,581 5,031 4,425 29,792	204 10,845 9,391 636 27,228 12,662 40,526 6,025 5,095 30,241	197 11,101 7,870 660 28,875 14,992 44,527 6,137 5,404 31,721	184 11,061 7,945 699 29,708 15,312 45,719 6,193 5,496 32,661	183 11,578 8,924 802 32,323 16,103 49,228 8,874 8,083 38,508

<sup>(</sup>ii) Production. During the 1939-45 War, production of jams increased greatly and an output of 171 million lb. was attained in 1943-44. Production afterwards decreased, but attained a new record of 198.5 million lb. in 1947-48. It dropped to 84.1 million lb. in 1955-56. Preliminary figures for 1956-57 show production as being 91.2 million lb.

The peak output of preserved fruit occurred in 1953-54 with 338.6 million lb. compared with the previous highest level of 256.1 million lb. attained in 1951-52. Production in 1955-56 was 304.3 million lb. and preliminary figures for 1956-57 show production as being 297.6 million lb.

There has also been a marked development in the production of canned vegetables. In 1938-39, output totalled 10.3 million lb. but, as a result of the war-time demand by the armed services, production reached the record level of 119.1 million lb. in 1944-45. However, it has since declined and in 1955-56 amounted to 77.8 million lb. Preliminary figures for 1956-57 show production as being 97.2 million lb.

The following table shows the total quantity and value of jams, pickles, sauces and other items manufactured in each State in 1955-56:—

JAMS, PRESERVED FRUIT AND VEGETABLES, PICKLES AND SAUCES: 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Jams	22,970 41,122 48,201 276 31,124 2,314 51,534	33,000 127,984 229,135 166 31,071 1,065 339,272	11,473 80,255 11,092 1,990 (a) (a) (a)	6,111 31,070 9,112 256 1,573 1,208 32,114	(a) 8,199 208 (a) (a) 24,558	(a) 23,868 122,884 120 (a)	84,096 304,299 428,623 3,016 77,822 4,944 450,106
Tomato Paste, Puree, etc., '000 pints Tomato Juice '000 gals. Pickles '000 pints Chutney " " Sauces " " Soup (canned) " " Soup, Dry Mix '000 lb.	654 96 3,844 514 11,554 5,063 3,059	1,057 725 2,214 449 12,122 29,879 571	(a) 479 1,794 (a) (a)	(a) (a) (a) (a) (2,128 (a) (a)	(a) (a) 128 (a) (a) (a) (a)	(a) (a)	1,934 1,209 7,721 1,592 28,668 35,316 3,771

<sup>(</sup>a) Not available for publication. Figures are included in the total for Australia. quantities made and used in the works producing them.

<sup>(</sup>b) Including

28. Bacon-curing.—(i) Details of Industry. The table hereunder shows particulars. of factories engaged in bacon-curing in each State for 1955-56 and for Australia for a series. of years :-

#### BACON-CURING. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	31	15	9	13	4	10	82
Number of persons employed	663	776	1,189	420	267	99	3,414
Salaries and wages paid . £'000	569	666	878	374	184	83	2,754
Value of power, fuel, etc., used £'000	81	75	83	58	. 33	9	339
Value of materials used £'000	5,175	4,469	6,124	2,310	2,104	632	20,814
Value of production £'000	1,352	1,091	1,698	467	209	180	4,997
Total value of output £'000	6,608	5,635	7,905	2,835	2,346	821	26,150
Value of land and buildings £'000	504	593	654	317	113	127	2,308
Value of plant and machinery £'000 Horse-power of engines ordinarily	250	301	454	244	49	31	1,329
in use h.p.	2,113	3,014	4,578	1,946	878	490	13,019

Items.			1938–39.	1951–52.	1952–53.	1953~54.	1954–55.	1955–56.
Number of factories Number of persons employed Salaries and wages paid Value of power, fuel, etc., used Value of materials used Value of production Total value of output Value of land and buildings Value of plant and machinery Horse-power of engines ordinarily	y in use	£'000 £'000 £'000 £'000 £'000 £'000 £'000	76 2,047 480 77 3,768 865 4,710 750 357 9,389	83 2,838 1,895 251 16,269 3,907 20,427 1,356 724 10,700	85 2,994 2,225 292 18,836 4,026 23,154 1,635 917 11,636	85 2,975 2,270 298 19,448 4,410 24,156 1,737 955 11,685	84 3,201 2,517 322 18,318 5,715 24,355 1,956 1,100 11,791	82 3,414 2,754 339 20,814 4,997 26,150 2,308 1,329 13,019

<sup>(</sup>ii) Quantity of Production. The number of pigs cured and the quantity of bacon and ham and lard produced in factories in each State for 1955-56 are shown in the following table :-

#### BACON-CURING FACTORIES: PIGS CURED AND PRODUCTION, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Pigs killed for bacon and ham— For curing on own account For curing on commission Pork and green bacon used	206,798 10,381	152,608 1,991	240,608 836	70,125 818	} 88,214	33,161	{ 790,846 14,694
for— Curing on own account					] !		
'000 lb.	1,569	2,773	(a)	724	(a)		5,939
Curing on commission							
'000 lb.	3,991		(a)	(a)	(a)	**	4,113
Sugar used ton	50	23	134	19	30	13	269
Finished bacon and ham made (b)—							
On own account '000 lb.	18,647	14,832	20,169	7,314	7,220	2,148	70,330
On commission ,,	4,711	239	204	92	17	48	5.311
Green bacon and ham ,,	(a)	1,628	546	543	774	(a)	4,353
Lard produced cwt.	3,196	6,832	20,484	4,452	6,113	1,369	42,446

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) Includes smoked bacon and ham, cooked ham (not smoked) made for retail sale, and canned bacon and ham.

Bacon and ham and other pig products are dealt with more fully in Chapter XXIV.— Farmyard, Dairy and Bee Products.

29. Butter, Cheese and Condensed and Dried Milk.—(i) Details of Industry. The following table shows particulars of butter, cheese and condensed and dried milk factories in each State for 1955-56 and for Australia for a series of years.

# BUTTER, CHEESE AND CONDENSED AND DRIED MILK. 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	77	130	85	42	18	23	375
Number of persons employed	2,542	5,443	1.675	815	292	352	11,119
Salaries and wages paid . £'000	2,128	5,035	1,275	600	230	300	9,568
Value of power, fuel, etc., used £'000	712	1,522	266	115	65	61	2,741
Value of materials used £'000	19,389	50,252	23,846	5,765	3,302	4,329	106,883
Value of production £'000	3,611	10,678	2,423	1,023	496	662	18,893
Total value of output £'000	23,712	62,452	26,535	6,903	3,863	5,052	128,517
Value of land and buildings £'000	3,212	5,161	1,673	628	227	287	11,188
Value of plant and machinery £'000	3,886	6,168	2,575	702	338	254	13,923
Horse-power of engines ordinarily			·	1	] ]		,
in use h.p.	29,953	37,239	23,439	6,898	2,345	2,308	102,182

#### AUSTRALIA.

Items.	1938–39.	1951–52.	1952–53.	1953-54.	1954-55.	1955–56.
Number of factories		399	384	380	379	375
Number of persons employed Salaries and wages paid £'000		10,473	10,641	10,580	10,567	11,119
		7,186	8,098	8,416	8,680	9,568
Value of power, fuel, etc., used £'000		1,837	2,339	2,396	2,423	2,741
Value of materials used £'000		68,038	97,291	94,020	100,706	106,883~
Value of production £'000		12,535	14,350	15,914	15,394	18,893
Total value of output £'000	33.095	82,410	113.980	112,330	118.523	128.517
Value of land and buildings £'000	2.880	6,585	7,571	9,365	10,037	11,188
Value of plant and machinery £'000		8,569	10,250	12,083	12,553	13,923
Horse-power of engines ordinarily in		ĺ	[		[	
use h.p.	45,059	77,439	84,428	94,863	98,442	102,182

(ii) Quantity and Value of Production. The next table shows the quantities and values of butter, cheese and condensed milk produced and the quantities of milk used in their production during 1955-56. These details are restricted to factory production and therefore exclude farm output.

## BUTTER, CHEESE AND CONDENSED MILK, ETC., FACTORIES: PRODUCTION, 1955-56.

		1755-5					
Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	MA	TERIALS	Used.				
Whole Milk used in manufacture of	184,285	422,116	215,992	35,449	33,461	46,304	027.607
Butter '000 gal. Cheese	7,405	29,757	16.884	27,467	33,461 (a)	46,304 (a)	937,607 83,790
Condensed, Dried and other Milk	7,405	25,757	10,007	27,407	(4)	(4)	65,790
Products '000 gal.	16,925	65,427	3,302	(a)	(a)	(a)	91,721
Sugar ton	(a)	14,636	(a)		(a)	(a)	17,014

#### PRODUCTION.

Butter	Ton. 41,066	Ton. 90,608	Ton. 48,189	Ton. 8,562	Ton. 7,404	Ton. 9.962	Ton. 205,791
Cheese (Green Weight)	3,379	13,996	7,579	12,633	763	331	38,681
Condensed Milk (Sweetened and	, , , , ,	,		,			,
Unsweetened)	(a)	40,824	1		(a)	٠	44,360
Concentrated—		,		1	()		,
Whole Milk	(a)	(a)	(a)	:	(a)	(a)	13,856
Skim Milk	(a) (a)	(a)	(a)		(a)		2,322
Powdered Full Cream Milk-	(-)	()	,,		()		-,
Spray	h d	10,809	1) (			ر ا	16,481
Roller	} (a) {	280	(a)	(a)	••	1	730
Infants' and Invalids' Foods (in-	ا دا	-00				4	,,,,
cluding Malted Milk and Milk	)		,			j	
Sugar (Lactose))	(a)	(a)				(a)	12,861
Powdered Skim Milk-	(4)	(4)		• • •	• •	(4)	12,001
Spray	8.207	12,908	in .			r	21,362
Roller	2,885	6,068	(a)	(a)	(a)	(a) {	9,530
Buttermilk and Whey Powder	648	2,754	1,298	(a)	(a)	9	4,990
Cocein	(a)	(a)	(a)				9,367
Ice Cream Mix—	( <sup>u</sup> )	(4)	(4)	•••	••	•••	2,307
Douglas	(a)	(a)	] ]	(a)	(a)	j	488
Tiquid	(a)	(a)	(a)	-	٠,	• • •	2,832
Processed Cheese, Cheese Paste and	(4)	(4)	(4)	••	••	• • •	2,032
Cheese Spreads(b)	(a)	(a)	(a)				13,892
Cheese Spreads(b)	<u>(a)</u>	(a)	(4)	<u> </u>		<u> </u>	13,892

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) The cheese used in the manufacture of these products is included in Cheese (Green Weight) made as shown above.

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXIV.—Farmyard, Dairy and Bee Products.

30. Meat and Fish Preserving.—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Works have been established at the seaports for the purpose of handling beef, lamb and mutton for export, and insulated space for the carriage of chilled and frozen produce is provided by shipping companies trading between Australia and other parts of the world. The substitution of chilled for frozen meat exported is referred to in Chapter XXIII.—Pastoral Production. In recent years, there has been considerable expansion in the canning of meat and fish.

#### MEAT AND FISH PRESERVING. 1955-56.

Items. N.S.W. Vic. Q'land. S. Aust. W. Aust. Tae Aust. Number of factories Number of persons employed
Salaries and wages paid £'000
Value of power, fuel, etc , used £'000
Value of materials used . £'000 240 165 6,659 1 136 715 535 230 1,015 80 21 757 124 3.280 33.084 .08î 628 209 Value of production £'000 853 249 Total value of output Value of land and buildings £'000 142 Value of plant and machinery £'000 169 Horse-power of engines ordinarily 1 016 .. ... 1 070 22 000

	Australia										
Items.	1938-39.	1951–52.	1952–53.	1953-54.	1954-55.	1955-56.					
Number of factories Number of persons employed Salaries and wages paid . £'000 Value of power, fuel, etc., used £'000 Value of materials used . £'000 Value of production . £'000 Total value of output . £'000 Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p.	32 4,093 1,180 134 6,351 1,601 8,086 1,966 1,325	87 7,386 5,222 742 33,828 8,751 43,321 3,990 2,623 34,510	98 8,771 6,820 972 47,637 12,126 60,735 4,562 2,786 33,328	11,374 59,060	114 9,432 8,327 1,110 46,642 12,182 59,934 5,403 3,409 35,600	116 9,550 8,704 1,119 46,359 14,345 61,823 5,934 4,118 33,086					

Particulars of the quantities and values of beef, mutton and lamb preserved by cold process exported from Australia over a series of years will be found in Chapter XXIII.—Pastoral Production.

31. Breweries.—(i) Details of Industry. The following table gives particulars of breweries in each State for the year 1955-56 and for Australia for a series of years. It should be noted, however, that the data shown are not strictly comparable throughout, owing to the inability or failure of some breweries to furnish a separate return for each branch of activity. Consequently the figures for some States include details of employment, wages, output, etc., not connected with the brewing of beer, although associated with it. These extraneous activities include cooperage, malt works, aerated waters, etc.

### BREWERIES.

		1,00			, ,		
Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	8	6	6	3	3		28
Number of persons employed	1,918	2,651	844	(a)	(a)	(a)	6,835
Salaries and wages paid £'000	1,972	2,596	692	(a)	(a)	(a)	6,588
Value of power, fuel, etc., used £'000	532	357	177	(a)	(a) (a)	(a)	1,396
Value of materials used . £'000	8.418	7,543	1,922	(a)	(a)	(a)	22,437
Value of production £'000	5,544	3,936	2,101	(a)	(a)	(a)	15,224
Total value of output (b) £'000	14,494	11,836	4,200	(a)		(a)	39,057
Value of land and buildings £'000	2,999	2,573	2,570		(a) (a)	(a)	10,099
Value of plant and machinery £'000	4,365	3,448	1,841	(a)	(a)	(a)	12,917
Horse-power of engines ordinarily	, ,	.,	,		''	,	,
in use h.p.	17,176	11,654	7,290	(a)	(a)	(a)	44,908

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) Excludes Excise Duty.

### BREWERIES—continued.

#### AUSTRALIA.

Items.	1938-39.	1951-52.	1952-53.	1953-54.	1954–55.	1955–56.
Number of factories	34	31	32	31	30	28
Number of persons employed	3,698	5,914	5,904	6,193	6,791	6,835
Salaries and wages paid £'000	1,215	4,564	5,030	5,325	6.272	6,588
Value of power, fuel, etc., used £'006		1,145	1,388	1,366	1,369	1,396
Value of materials used £'000		11,739	16,452	19,975	20,810	22,437
Value of production £'000		10,298	11,458	13,048	14,855	15,224
Total value of output(a) £'006		23,182	29,298	34,389	37,034	39,057
Value of land and buildings £'000		5,715	6,480	7,256	8.307	10,099
Value of plant and machinery £'000		4,832	5,870	7,681	10,295	12,917
Horse-power of engines ordinarily in		,,,,,,	.,	1 .,,,,,,	,	,,
use h.p		30,181	32,754	38,803	42,359	44,908

(a) Excludes Excise Duty.

(ii) Production, Consumption, Materials Used. The quantity of ale, beer and stout brewed fell from 73.7 million gallons in 1928-29 to 49.8 million gallons in 1931-32, but thereafter increased each year to 109.2 million gallons in 1941-42. Under the Control of Liquor Order which operated between March, 1942 and March, 1946, the production of beer was restricted and consequently annual output remained static at about 100 million gallons from 1942-43 to 1944-45. Thereafter production increased, and in 1956-57 amounted to over 220 million gallons.

The average annual consumption of ale, beer and stout prior to the economic depression of the early thirties exceeded 11 gallons per head of the population: it dropped to 7.32 gallons in 1931-32, increased to 13.76 gallons in 1941-42 and declined again to about 13 gallons during the period of control. The consumption per head had increased to 22.88 gallons by 1956-57.

The table below shows the quantities of materials used and the quantity and value of ale, beer (excluding waste beer) and stout brewed in each State during 1955-56:—

BREWERIES: MATERIALS USED AND PRODUCTION, 1955-56.

	Part	iculars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
				MATERIA	ALS USED		·		
Malt Hops Sugar	::	'000 bus. '000 lb. ton	2,547 2,168 21,911	2,161 1,214 13,191	741 522 4,361	(a) (a) (a)	(a) (a) (a)	(a) (a) (a)	6,820 4,887 46,289
		ALE, BEE	R AND STO	UT BREW	ED (EXC	LUDING V	VASTE BEE	R).	
Quanti Value (		'000 gals. £'000	93,297 14,337	68,510 11,729	22,933 4,178		(a) (a)	(a) (a)	227,496 38,528

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) Excludes Excise Duty.

32. Wineries and Distilleries.—The following table shows particulars of the operations of Wineries and Distilleries for each State during 1955-56 and for Australia for a series of years.

#### WINERIES AND DISTILLERIES.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	28	29	5	71	22		155
Number of persons employed	215	333	172	1,122	66,		1,908
Salaries and wages paid £'000	206	265	147		32		1,532
Value of power, fuel, etc., used £'000	97	80	72	116	3.		368
Value of materials used . £'000	865	671	357	3,048	133		5,074
Value of production £'000	538	574	292	1,389	97'		2,890
Total value of output £'000	1,500	1,325	721	4,553	233		8,332
Value of land and buildings £'000	426	310	122	1,325	71		2,254
Value of plant and machinery £'000	415	274	357	1,005	48		2,099
Horse-power of engines ordinarily				.,,			
in use h.p.	1,437	2,435	590	6,370	327		11,159

#### WINERIES AND DISTILLERIES-continued.

#### AUSTRALIA.

Items.	1938–39.	1951-52.	1952-53.	1953-54.	1954–55.	1955-56.
Number of factories		158	167	164	158	155
Number of persons employed		2,277	2,021	1,981	2,022	1,908
Salaries and wages paid £'000	246	1,416	1,431	1,475	1,506	1,908 1,532
Value of power, fuel, etc., used £'000	58	383	333	365	387	368
Value of materials used £'000		7,076	5,464	5,721	4,885	5,074
Value of production £'000	811	3,118	3,198	3,254	2,846	2,890
Total value of output £'000	2,290	10,577	8,995	9,340	8.118	8,332
Value of land and buildings £'000		1,920	2,104	2,284	2,312	2,254
Value of plant and machinery £'000	916	1,774	1.913	2,108	2,170	2,099
Horse-power of engines ordinarily in		.,	,	, , , , , , , , , , , , , , , , , , , ,	,	
use h.p		11,038	10,995	11,275	11,054	11,159

33. Tobacco, Cigars and Cigarettes.—Particulars of establishments in which the manufacture of tobacco, cigars or cigarettes was carried on during 1955-56 are shown below for each State and for Australia for a series of years. There are no such factories in South Australia or Tasmania.

#### TOBACCO, CIGARS AND CIGARETTES.

1955-56.

Items.			N.S.W.	Vic.	Q'land.	W. Aust.	Aust.
Number of factories		<del></del>	14	12	5	2	33
Number of persons employed			2,371	2,125	(a)	(a)	4,622
Salaries and wages paid		£'000	1.972	1,678	(a)	(a)	3,728
Value of power, fuel, etc., used		£'000	74	50	(a)	(a)	128
Value of materials used		£'000	17.374	13,613	. (a)	(a)	31,227
Value of production		£'000	4.763	4,394	(a)	(a)	9,244
Total value of output(b)		£'000	22,211	18,057	(a)	(a)	40,599
Value of land and buildings		£'000	581	1,064	(a)	(a)	1,867
Value of plant and machinery		£'000	1,110	1,450	(a)	(a)	2,784
Horse-power of engines ordinaril	v in t		7,228	3,083	(a)	(a)	10,778

#### Australia.

Items.	1938-39.	1951–52.	1952–53.	1953–54.	1954-55.	1955–56.
Number of factories	30	36	37	36	34	33
Number of persons employed	5,544	4,971	4,704	4,757	4,707	4,622
Salaries and wages paid £'000	1,096	2,932	3,204	3,417	3,516	3,728
Value of power, fuel, etc., used £'000	34	126	144	151	158	128
Value of materials used £'000	7,081	19,419	22,416	26,835	28,825	31,227
Value of production £'000	2,685	5,206	7,078	8,341	9,745	9,244
Total value of output(b) £'000	9,800	24,751	29,638	35,327	38,728	40,599
Value of land and buildings £'000	1,042	1,598	1,741	1,822	1,504	1,867
Value of plant and machinery £'000	943	1,284	1,458	1,917	2,190	2,784
Horse-power of engines ordinarily in						
use h.p.	4,610	5,862	6,028	6,919	8,466	10,778
Leaf used—						
Australian (stemmed) '000 lb.	4,489	3,664	4,222	4,866	4,482	5,204
Imported (stemmed) '000 lb.	16,011	26,131	28,410	33,076	36,053	37,399
Tobacco made '000 lb.	16,305	21,615	22,334	23,400	21,466	18,836
Cigars made '000 lb.	238	175	129	143	151	132
Cigarettes made '000 lb.	6,731	11,749	13,879	18,303	22,859	27,162

<sup>(</sup>a) Not available for publication; figures are included in the total for Australia. (b) Excludes Excise Duty.

For many years the production of locally-grown leaf was comparatively small, and manufacturers were dependent on imported leaf for the supply of their raw materials. Increased import duties stimulated local production, and the quantity of Australian leaf used by manufacturers rose from 1.2 million lb. in 1929–30 to over 3 million lb. in 1930–31. During the 1939–45 War, about 4.7 million lb. of Australian-grown leaf was used annually, and the 1955–56 usage was 5.2 million lb. For further information see Chapter XXII.—Agricultural Production.

Imports of tobacco during 1955-56 comprised—manufactured tobacco, 276,374 lb.; cigars, 54,414 lb.; cigarettes, 971,436 lb.; unmanufactured tobacco, 45,814,570 lb. and in 1956-57 were 236,314 lb., 256,170 lb., 464,076 lb. and 40,765,547 lb. respectively.

34. Sawmills, etc.—The most important industry in Class X. is sawmilling. Because of difficulties associated with the classifying of sawmills into forest and town mills, they have been combined in the following table, together with plywood and veneer mills.

#### SAWMILLS AND PLYWOOD AND VENEER MILLS.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories  Number of persons employed Salaries and wages paid Value of power, fuel, etc., used £'000 Value of materials used £'000 Value of production £'000 Total value of output £'000 Value of land and buildings £'000 Value of plant and machinery £'000	1,065 10,855 7,997 633 22,438 14,409 37,480 4,041 4,633	640 7,949 6,159 444 14,601 10,546 25,591 2,548 3,536	11,563 9,783 21,671	2,283 1,808 80 6,984 3,172 10,236	3,367 274 5,707 5,642 11,623 1,051	355 2,743 2,010 182 4,325 3,490 7,997 603 2,050	3,025 37,102 27,086 1,938 65,618 47,042 114,598 11,136 16,201
Horse-power of engines ordinarily in use h.p.	116,152	85,360	79,091	19,948	37,430	33,022	371,003

#### AUSTRALIA.

Items.	1938-39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Number of factories Number of persons employed Salaries and wages paid . £'000 Value of power, fuel, etc., used Value of materials used . £'000 Value of production . £'000 Value of land and buildings Value of plant and machinery £'000 £'000	1,639 19,056 3,626 225 8,441 5,762 14,428 2,029 2,777		34,541 21,367 1,547 46,585	1 639 53,908 39,799 95,346	3,033 36,631 25,530 1,805 61,073 45,319 108,197 10,321 14,896	1,938 65,618 47,042 114,598 11,136
Horse-power of engines ordinarily in use h.p.	89,843	310,387	332,736	336,951	359,786	371,003

The sawmill output of native timber, which declined from 740 million super. feet in 1925–26 to the abnormally low figure of 237 million super. feet during the depth of the depression, recovered to 717 million super. feet in 1938–39 and by 1956–57 had risen to 1,434 million super. feet. Further reference is made to the sawmilling industry in Chapter XXV.—Forestry.

35. Cabinet and Furniture Making and Upholstery.—These industries constitute the principal manufactures in Class XI. The following table shows particulars for each State in 1955-56:—

#### CABINET AND FURNITURE MAKING AND UPHOLSTERY, 1955-56.

Items	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories  Number of persons employed Salaries and wages paid £'000 Value of power, fuel, etc., used £'000 Value of materials used £'000 Value of production £'000	547 5,348 4,210 117 7,161 6,482	527 4,555 3,303 72 4,805 5,476	238 2,350 1,369 32 2,299 2,090	1,481 1,036 28 1,737 1,548	1,102 679 18 1,157 1,084	60 414 243 5 311 384	1,642 15,250 10,840 272 17,470 17,064
Total value of output £'000 Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p.	13,760 2,510 737 14,755	10,353 2,331 735 15,303	4,421 745 323 7,087	3,313 509 263 5,000	529 181	700 175 53 1,402	34,806 6,799 2,292 46,957

36. Printing Works.—Printing and bookbinding rank high in importance among the industries of Australia, and in 1955-56 afforded employment for 38,899 employees, and paid £32,694,000 in salaries and wages, while the value of output amounted to £105,857,000. The first table below gives particulars of establishments engaged in general printing in each

State for 1955-56. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping and Government printing works. Establishments producing newspapers and periodicals are shown separately in the second table to follow:—

#### GOVERNMENT AND GENERAL PRINTING WORKS, 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust	Tas.	Total.
Number of factories	549	516 8,707	103	-87	71	21	1,347
Number of persons employed	9,989	8,707	2,245	1,649	1,366	597	24,453
Salaries and wages paid £'000	8,280 265	7,043 182	1,507 37	1,227 30		438	19,421 551
Value of power, fuel, etc., used £'000 Value of materials used £'000	12,082	9,191	1.594		1,083	501	25,792
Value of production £'000	14,061	11,506		1,889	1,682	649	32,075
Total value of output . £'000	26,408	20,879	3,919			1,159	58,418
Value of land and buildings £'000	4,631	4,852	797	621	554	260	11,715
Value of plant and machinery £'000	5,324	5,490	886	951	648	261	13,560
Horse-power of engines ordinarily in use h.p.	15;672	12,867	2,395	2,040	1,858	835	35 667

#### NEWSPAPERS AND PERIODICALS, 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories Number of persons employed Salaries and wages paid £'000 Value of power, fuel, etc., used £'000 Value of materials used . £'000 Value of production £'000 Total value of output . £'000	183 6,412 5,909 248 10,192 10,740 21,180	112 3,508 3,393 118 7,049 5,676 12,843	59 2,209 1,769 69 2,680 3,051 5,800	34 1,170 1,098 34 1,962 1,974 3,970	23 738 698 36 1,292 1,441 2,769	5 409 406 6 316 555 877 217	416 14,446 13,273 511 23,491 23,437 47,439
Value of land and buildings £'000 Value of plant and machinery £'000 Horse-power of engines ordinarily in use h.p.	5,644 4,871 17,783	1,372 2,854 10,406	1,444	680	747	120 692	9,414 10,716 40,305

37. Paper Making.—Although the paper manufacturing industry has been established in Australia for many years, it was not until the manufacture of paper pulp from indigenous timber commenced in 1938-39 that any marked development occurred.

Plants producing pulp from eucalypt timber are operating in Victoria and Tasmania, whilst in South Australia pulp is being produced from locally-grown softwoods. The production of pulp rose from 6,000 tons in 1938–39 to 88,000 tons in 1946–47. It remained at about this level until 1949–50 but has since increased steadily to a total of 186,000 tons in 1955–56.

The number of factories operating in 1955-56 comprised four in New South Wales, seven in Victoria, one in Queensland, South Australia, and Western Australia and three in Tasmania. In Tasmania, newsprint, writing and printing papers are produced, and in the other States wrappings, other papers and boards. Particulars for this industry are shown in the following table.

PAPER MAKING, INCLUDING PULP MILLS: AUSTRALIA.

Items.	1938–39.	1951-52.	1952-53.	1953–54.	1954–55.	1955–56. (a)
Number of factories Number of persons employed Salaries and wages paid . £'000 Value of power, fuel, etc., used Value of materials used . £'000 Value of production . £'000 Total value of output . £'000 Value of land and buildings Value of plant and machinery Horse-power of engines ordinarili use h.p.	1,961 467 201 1,096 1,005 2,302 850 1,713 31,548	16 7,237 5,852 1,610 14,558 12,623 28,791 6,820 12,961 112,469	17 6,441 5,338 1,649 12,637 11,085 25,371 7,324 15,263	18 7,179 6,130 2,048 15,198 15,451 32,697 8,106 16,810	20 7,611 7,095 2,560 17,474 18,294 38,328 8,255 18,050 157,948	17 7,480 7,813 2,735 18,963 17,330 39,028 9,312 18,640

<sup>(</sup>a) Excludes several establishments ,previously included, engaged in processing but not manufacturing paper.

<sup>38.</sup> Rubber Goods.—The following table shows particulars of this industry for each State during 1955-56 but excludes establishments engaged primarily in the retreading and repairing of tyres.

#### RUBBER GOODS, 1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust
Number of factories Number of persons employed	40 6,405	54 6,122	12 1,261	655	(a) 2	(a) 1	117 14,480
Salaries and wages paid £'000	6,189	5,819	944	640	] (a) ]	(a)	13,616
Value of power, fuel, etc., used £'000	853	816	97	63	(a)	(a)	1,831
Value of materials used £ 000	17,878	16,170	3,341	899	(a)	(a)	38,329
Value of production £'000 Total value of output £'000	8.057 26,788	10,267 27,253	1 850 5,288	1,006 1,968	(a) (a)	(a) (a)	21,211 61,371
Value of land and buildings £'000 Value of plant and machi-	2,253	2,949	448	125	(a)	(a)	5,841
nery £'000	2,232	4,405	298	204	(a)	(a)	7,156
Horse-power of engines ordinarily in use h.p.	45,021	50,882	7,842	2,805	(a)	(a)	106,720

(a) Not available for publication; figures are included in the total for Australia.

39. Electric Light and Power Works.—(i) Details of Industry. The increased demand for electrical energy has been responsible for considerable development in electric light and power works during recent years. For further information on this subject see Chapter VIII.—Electric Power Generation and Distribution. Particulars of the industry for each State during the year 1955-56 and for Australia for a series of years are shown below:—

#### ELECTRIC LIGHT AND POWER WORKS.

1955-56

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	78.	57	57	42	90	8	332
Number of persons employed	5,348	3,007	1,513	(a)	949	(a)·	12,111
Salaries and wages paid . £'000'	5,622	3,315	1,287	(a)	1,000	(a)· (a)·	12,497
Value of power, fuel, etc.,			1		',		
used' £'000	15,477	9,737	5,405	(a)	3,302	(a) (a) (a)	37,479 <sup>,</sup>
Value of materials used £'000	1,693	341	1,416	(a) (a)	368	(a)	4,090
Value of production £'000	20,707	11,397	2,982	(a)	2,664	(a)	43,219
Total value of output £'000	37,877	21,475	9,803	(a)	6,334	(a).	84,788
Value of land and buildings £'000	18,336	12,845	7,592	(a) (a)	1,838	(a)	73,688
Value of plant and machi-	· '	1	1		1 1	• •	
nery £'000	46,338	49,071	24,658	(a).	10,469	(a)	158,377
Generators installed Kilowatt					1 " [		
capacity '000 kW	1,661	989	483.	(a)	261	(a)	4,140

ΑU	ST	RAI	JIA.

Items.		1938-39.	1951-52.	1952-53.	1953-54.	1954-55.	1955-56.
Number of factories		395	331	349	351	351	332
Number of persons employed		6,508	10.381	10.891	11,395	11,927	12,111
Salaries and wages paid	£'000	1.977	8,178	9,675	10,308	11,457	12,497
Value of power, fuel, etc., used	£'000	3,239	28,724	32,205	35,083	36,548	37,479
Value of materials used	£2000	530	3.481	3.296	4,800	4,170	4,090
Value of production	£'000:	8,714	18,065	24.582	30,098	37,568	43,219
Total value of output	£'000	12,483	50,270	60.083	69,981	78,286	84,788
Value of land and buildings	£'000	8,388	21,641	29,531	47,369	60,120	73,688
Value of plant and machinery	£'000	27,751	66,630	94,169	122,773	146,273	158,377

(a) Not available for publication: figures are included in the total for Australia.

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 217.

(ii) Production. The increase in the production of electric light and power in each of the States since 1938-39 is shown in the following table:—

# ELECTRIC LIGHT AND POWER WORKS: ELECTRICITY PRODUCED. (Million kWh.)

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1938-39		1,948	1,223	387	256	307	567	4,688
1949-50		3,758	2,706	972	594	417	1 062	9 509
1951-52		4,628	2,964	1,242	788	530	1,145	11,297
1952-53		4 868	3,193	1,349	822	569	1.244	12,045
1953-54		5,450	3,693	1,511	955	627	1.471	13,707
1954-55		5.951	4,152	1,658	1,119	703	1,589	15,172
1955-56		6,505	4,628	1,786	1,204	753	1,794	16.670
1956-57(a)		6,993	4,991	2,032	1,356	786	2,216	18,374

(a) Preliminary-subject to revision.

40. Gas-works.—(i) Details of Industry. Gas-works are in operation in the majority of important towns in Australia. The following table shows particulars of gas-works in each State for the year 1955-56 and for Australia for a series of years:—

#### GAS-WORKS.

1955-56.

Items.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of factories	38	32	16	3	4		95
Number of persons employed	1,472	1,529	401	(a)	191	(a)	4,087
Salaries and wages paid £'000	1.592	1,580	321	(a)	173	(a)	4,148
Value of power, fuel, etc.,	]	•	ì	1	! ]		
used £'000	1.979	135	35	(a)	105	(a)	2,297
Value of materials used £'000	6,188	5,882	1,011	(a)	640	(a)	15,350
Value of production £'000	4 9 1 0	2,805	767	(a)	280	(a)	9,272
Total value of output £'000	13.077	8,822	1,813	(a)	1.025	(a)	26,919
Value of land and buildings £'000	1,376	659	308	(a)	144	(a)	2,748
Value of plant and machinery £'000	6,115	7,357	1,727	(a)	1,580	(a)	19,828
Horse-power of engines ordinarily	-,		1	` ′	1 1	``'	
in use h.p.	25,283	10,836	2,276	(a)	1,212	(a)	42,082

#### AUSTRALIA.

Items.	1938–39.	1951–52.	1952–53.	1953-54.	1954–55.	1955–56
Number of factories	107	100	99	98	97	95
Number of persons employed	2,931	4,042	4,199	4,141	4,103	4,087
Salaries and wages paid £'000	785	3,207	3,553	3,767	3,882	4,148
Value of power, fuel, light, etc.,	1	1	! '	· ·	1	,
used £'000	251	1,777	2,080	2,244	2,291	2,297
Value of materials used £'000	1.872	13,401	15,576	15,249	15,187	15,350
Value of production £'000	2.694	7,165	8.473	8,121	9,103	9,272
Total value of output £'000	4.817	22,343	26,129	25,614	26,581	26,919
Value of land and buildings £'000	1,463	2,186	2,342	2,416	2,488	2,748
Value of plant and machinery £ 000	7,498	13,846	15,962	17,235	19,134	19,828
Horse-power of engines ordinarily in	1			,		,
use h.p.	17,905	28,427	29,514	30,055	33,389	42,082

- (a) Not available for publication; figures are included in the total for Australia.
- (ii) Coal Used and Production. The following table shows details for 1955-56:--

#### GAS-WORKS: COAL USED AND PRODUCTION, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Coal used '000 tons Gas produced million cubic ft. Gas sold Coke produced (b) '000 tons	947	657	200	(a)	56	(a)	2,031
	21,984	14,468	3,055	(a)	1,471	(a)	44,578
	18,841	12,394	2,676	(a)	1,270	(a)	38,361
	482	344	84	(a)	22	(a)	1,031

(a) Not available for publication; figures are included in the total for Australia. (b) In addition, 2,058,426 tons of metallurgical coke were made in Coke Works in 1955-56.

Since 1938-39, when the output of gas was 21 thousand million cubic feet, production has increased each year and reached nearly 47 thousand million cubic feet in 1956-57.

#### CHAPTER VIII.

#### ELECTRIC POWER GENERATION AND DISTRIBUTION.

This chapter is divided into three major parts. A.—Introduction, which deals briefly with the resources, generation and distribution and future developments, of electric power in Australia; B.—The Snowy Mountains Hydro-electric Scheme; and C.—The origins, development, present situation and new projects of electrical systems in each Australian State and Territory. A Statistical Summary is appended.

It should be noted that the information contained in the chapter relates to situations existing and projects contemplated in 1957 and that it may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

#### A. INTRODUCTION.

1. Distribution of Population and Location of Power Resources.—The geographical pattern of electric power generation and distribution in Australia has been affected by two main influences—the distribution of population, with a resulting distribution of industry, and the location of fuel and water resources.

The Australian population increased between 1939 and 1957 by approximately 2,675,000 to reach a total of 9,643,000. The two principal centres of population and industry, the metropolitan areas of Sydney and Melbourne, make the greatest demands for electric power and their growth has been associated with the development of large deposits of coal located relatively close to the source of demand. This, together with the fact that the major water resources are also located in the south-eastern portion of the Commonwealth, materially influences the distribution of industrial population and the location of major electric power stations.

By far the most important source of energy used in the production of electric power in Australia is coal. At 30th June, 1956, thermal power equipment represented 78 per cent., hydro plant 16 per cent. and internal combustion equipment 6 per cent. of the total installed generating capacity.

Most of Australia is poorly supplied with water, only 15.2 per cent. receiving an annual rainfall of 30 inches or over. This is confined largely to Tasmania and to the narrow coastal strip on the east coast. The possibility of establishing large hydro or steam stations in inland areas is, therefore, strictly limited by the lack of sufficient water for feed and condensing purposes.

The only region on the mainland of Australia where land is high enough to receive reliable winter snowfall, and from which, therefore, reasonably constant water supplies throughout the year can be expected, is the mountain chain which stretches from the high plateaux of south-eastern New South Wales through to the north-eastern highlands of Victoria. The hydro-electric potential of this area is considerable, and plans have been formulated to develop more than 3,000,000 kW within the next 25 years. The two major construction projects in this area are the Snowy Mountains and Kiewa schemes. Other hydro-electric potential does exist on the mainland on the rivers of the coastal areas of New South Wales and Queensland, but the amount there available is only a small proportion of the potential of the Alpine region. In Tasmania, hydro-electric resources have been estimated at about 50 per cent. of the total Australian hydro-electric potential. Whereas on the mainland the chief source of energy is coal, water occupies this position in Tasmania.

2. Electric Power Generation and Distribution.—(i) Ownership of Undertakings. At the beginning of this century, Australia's electrical undertakings were carried on mainly by private enterprise, but some measure of governmental control was exercised through various electric light and power Acts. This legislation was designed to provide standards of safety, and to define the scope and obligations of the private organizations engaged in producing electric power for sale. A trend towards public ownership commenced during the 1914-18 War and became more pronounced after the 1939-45 War. By 1957, all major generating stations supplying the public were, in varying degrees, under the control of State statutory organizations, constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies within the various States. There are, however, still a large number of small private and municipal enterprises generating power

for supply to country towns, although central authorities are extending supply to these places wherever practicable. In many areas, however, it has been and remains the practice for central authorities to sell power in bulk to local distributing organizations who undertake local reticulation.

In addition to the private, local government and statutory organizations who generate and/or distribute electricity for sale, there are numerous firms generating power for use in their own establishments, particularly those engaged in mining pursuits remote from the main centres of population. This chapter, however, is concerned mainly with the activities of central electric stations, and the power regularly produced for such internal consumption is, in any case, a relatively small proportion of total power produced.

(ii) Power Production and Generating Capacity. In the period between 1938-39 and 1956-57, production of electric power in Australia increased by almost 300 per cent. from 4,688 to 18,377 million kilowatt hours.

Since the 1939-45 War, industry and commerce have expanded rapidly, many new houses have been built and the population has increased by approximately 20 per cent. These factors, together with extension of electricity supplies to rural areas and the increased use of domestic electric appliances, have all contributed to bring about a position where the greatly increased demand for power cannot be satisfied by the existing installed capacity of central generating stations.

At 30th June, 1956, installed generating capacity in Australia totalled approximately 4.14 million kW compared with 1.62 million kW in 1939, an increase of about 156 per cent. In 1955-56, each kW of installed capacity produced an average of 4,027 kWh compared with an average of 3,000 kWh in 1938-39. These figures are based on Commonwealth totals; figures for the States vary, depending on such factors as the distribution of demand, number of consumers, and type of equipment employed.

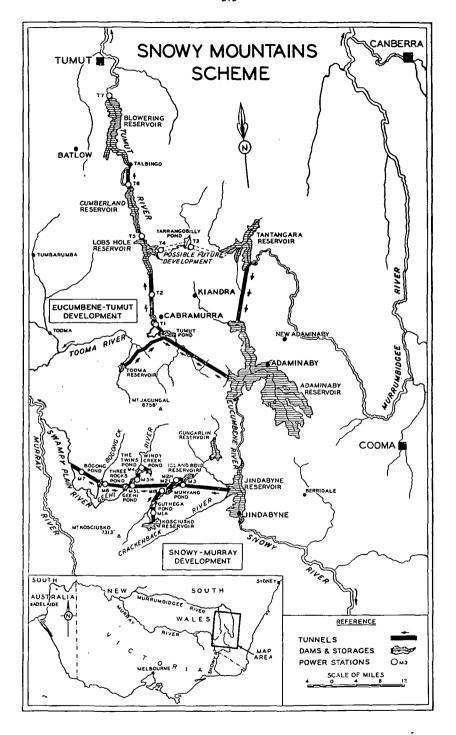
3. Future Developments.—Each central authority has embarked upon constructional programmes to overcome the lag between supply and demand. Industrial and commercial expansion, however, has continued on a high level, and several projects have been commenced or planned in various parts of the Commonwealth for suburban and main railway line electrification. Other fields directly connected with the demand for power, such as house building, must also be taken into account.

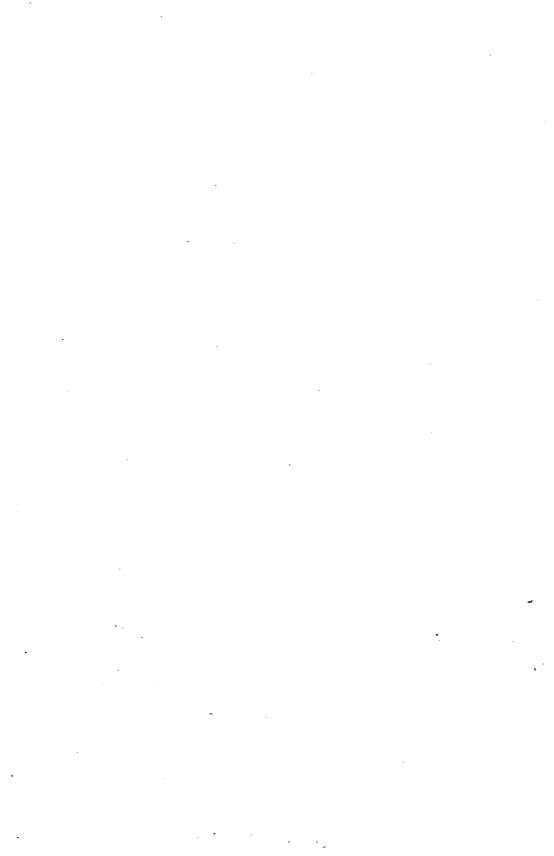
An important factor to be considered in respect of future development is the increasing relative importance of the generation of electric power from water resources.

#### B. SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME.\*

- 1. Geography of Area.—The Snowy country in south-eastern New South Wales is the only part of the continent in which any altitudes exceed 7,000 feet, and in which there is a substantial area over the altitude of 6,000 feet. The precipitation which results from the presence of this barrier on the line of the prevailing winter depressions of Antarctic origin amounts to as much as 120 inches a year in the vicinity of Mt. Kosciusko, the highest point in Australia. The drainage from the snowfields is practically all to three systems—those of the Murray and Murrumbidgee Rivers, which flow inland, and that of the Snowy, which flows southwards to Bass Strait.
- 2. Description of Scheme.—(i) General. The proposals at present being implemented by the Snowy Mountains Hydro-electric Authority fall into two groups, Tumut Development and Snowy-Murray Development, each having its associated plans for hydro-electric power production. The features described hereunder may be identified by reference to the map on page 273. It should be remembered that, as the final designs for practically every element of the Scheme have not yet been completed, and in many cases will not be completed for some years, any figures which are now quoted in respect of those elements will undoubtedly be subject to modification in the future.
- (ii) Tumut Development. The central feature of this part of the Scheme is diversion to, and regulation of, the waters of the Tumut River, a stream which is at present completely unregulated but contributes approximately half of the flow of the Murrumbidgee River at Gundagai below the existing main storage on the Murrumbidgee at Burrinjuck. To the Tumut will be diverted the waters of the Eucumbene, a major tributary of the Snowy, and the headwaters of the Tooma, a tributary of the Upper Murray. The headwaters of the Murrumbidgee itself will also be diverted to the Tumut, principally to secure desirable electric power.

<sup>•</sup> See also Chapter IX.—Water Conservation and Irrigation, Division A, §3, para. 4 of this issue and special detailed article in Official Year Book No. 42, pp. '1103-1130.





A major dam is being constructed on the Eucumbene River at Adaminaby, creating an ultimate usable storage of 3.5 million acre feet, and from here, water will be conveyed by a 14-mile tunnel to Tumut Pond, on the upper reaches of the Tumut River, where it will be joined by the waters from the Tooma, diverted by aqueducts and tunnels. From Tumut Pond, the water will be conveyed by another tunnel to power station T1 with an installed capacity of 320,000 kW and by a further tunnel to power station T2 with a capacity of 280,000 kW thence discharging into a smaller storage at Lob's Hole also on the Tumut River.

Between the foot of the Lob's Hole storage and the top of the Blowering storage will be power stations T5 and T6. The total capacity of these stations will be 410,000 kW.

The Blowering storage with its capacity of about 800,000 acre feet, is an adjunct to the Snowy Mountains Hydro-electric Scheme and will be required for the regulation both of the Tumut waters and of the waters diverted into the Tumut. This regulation is essential if the waters impounded are to be fully utilized for irrigation purposes. At the foot of the Blowering Dam will be the last of the Tumut Power stations, T7, with a capacity of some 60,000 kW, but this station will operate only when water is released for irrigation. The State of New South Wales will be responsible for the construction of the Blowering works.

The waters of the Upper Murrumbidgee will be brought from a major storage at Tantangara holding 200,000 acre feet, through 9 miles of tunnel, to the Adaminaby storage and will augment the flow through power stations T1, T2, T5, T6, and T7 on the Tumut River.

The total extra new water which will reach the Murrumbidgee is expected to average 528,000 acre feet per annum.

(iii) Snowy-Murray Development. Investigation of this section of the Scheme is not as far advanced as that for the Tumut Development and considerable modifications may be made to the lay-out proposed by the Commonwealth and States Snowy River Committee. In the original lay-out the central feature of this part of the Scheme is the diversion of the waters of the Upper Snowy itself from a major dam to be constructed at Jindabyne on that river, a little below its junction with the Eucumbene and the Crackenback Rivers. This reservoir will have a storage capacity of approximately 1,100,000 acre feet and from it a tunnel approximately 28 miles in length will run right through the Great Dividing Range finally discharging into Swampy Plains River, not far above its junction with the Murray proper.

Into this tunnel will be collected a considerable quantity of water from the very high altitude country of the Kosciusko area and from a number of smaller tributaries of the Murray. The collection from the Kosciusko area commences at the Kosciusko Reservoir at an altitude of 5,765 feet, not many miles below the source of the Snowy. A tunnel will convey water from this reservoir to power station M.1.A. with an installed capacity of 60,000 kW and thence to a pond on the Snowy River, at its junction with the Guthega River.

From the Guthega Pond, a further tunnel and penstock lead to station M.1.B. with a capacity of 60,000 kW (ultimate capacity 90,000 kW), which discharges into a pond at the junction of the Munyang and Snowy Rivers. Construction of this part of the scheme has been completed. Munyang Pond will discharge into a tunnel leading to station M.2.L., with installed capacity of 60,000 kW. This station also receives the flow of a tributary of the Snowy River via station M.2.H. From station M.2.L., the water discharges into a reservoir at Island Bend on the main stream of the Snowy.

From the Island Bend reservoir, a vertical shaft, 1,100 feet deep, will lead to the main tunnel from Jindabyne reservoir previously referred to, passing on its way through power station M3 with installed capacity of 265,000 kW. Into this main tunnel will also be collected waters from the Upper Murray tributary streams previously mentioned.

Of these, the most important is the Windy Creek-Geehi River series. A pond on Windy Creek, a small tributary of the Geehi, situated at an altitude of over 5,000 feet, will provide water through a tunnel to station M4 with an installed capacity of 75,000 kW thence by aqueducts and tunnel to station M5.H. with an installed capacity of 40,000 kW discharging into the M5.L. Intake Pond on the Geehi River.

A vertical shaft will lead this water into the main tunnel, passing through station M5.L. with an installed capacity of 20,000 kW. The combined waters thus collected into the main tunnel will pass through station M6 with an installed capacity of 540,000 kW and then discharge into a pond on Bogong Creek, another of the Upper Murray tributaries. At this point, the water is still at an altitude of nearly 2,000 feet, and the main tunnel will thence continue to station M7 with a capacity of 540,000 kW.

From M7 the total collected waters will flow into the Swampy Plains River at a point some seven miles, in a direct line, above its confluence with the Murray. It will be necessary, however, to provide a further storage on the Murray for the proper regulation of these waters for irrigation purposes.

The total water flowing to the Murray from these works will amount on the average to 722,000 acre feet per annum, but since 280,000 acre feet which now reach the Murray from the Tooma will be, as indicated previously, diverted to the Tumut, the total extra water actually reaching the Murray will be, on the average, 442,000 acre feet per annum.

An integral part of each development is the construction of hundreds of miles of aqueducts to collect and divert water from the many streams in the area into storages and tunnels.

3. Utilization of Power.—The total capacity of all stations in the Scheme will be of the order of 3,000,000 kW. By comparison, the present total installed capacity of all the generating stations in the Commonwealth is over 4,000,000 kW.

If, however, the demand for power continues to increase as expected, the major source of power must still be thermal stations. The operation of the whole Scheme is dependent on the appropriate development and integration of these stations, as otherwise there would be a serious loss in ultimate economy; all economic estimates therefore postulate that thermal capacity will be expanded so as to preserve an appropriate ratio.

It has been estimated with a reasonable degree of probability that the power available from the Scheme will save coal to the order of five million tons annually.

The first call on the power generated under the Snowy Scheme will be by the Commonwealth Government for supply to the Australian Capital Territory of power which it needs in that area, particularly for certain projects with defence significance, and no indication can be given at present as to how great that call will be. It is not likely, however, to amount to more than a relatively small fraction of the total power available, and it has been agreed that the balance will be divided between the States of New South Wales and Victoria in a proportion of two-thirds to New South Wales and one-third to Victoria.

The first power station in the scheme, M.1.B., the Guthega Project, is now producing power. A 132,000 volt transmission line extends from the power station via Cooma to the Australian Capital Territory where it feeds into the main New South Wales transmission network. The construction of the Eucumbene-Tumut diversion tunnel, Tumut Pond Dam, and Power Station T1 is in progress. The construction of the Adaminaby Dam is being supervised by the Public Works Department of New South Wales on behalf of the Snowy Mountains Authority and a contract for this work was let in May, 1956, to a group of American engineering contractors who were already engaged on the construction of the Eucumbene-Tumut tunnel and Tumut Pond Dam for the Authority. Construction of the embankment has been sufficiently advanced to permit closure of the diversion tunnel gates, and storage of water in the reservoir commenced during June, 1957. Power Station T1 will enter the New South Wales network via a 330,000 volt transmission line early in 1959.

#### C. STATES AND TERRITORIES.

#### § 1. New South Wales.

- 1. General.—In Official Year Book No. 39, an account was given in some detail of the origin and development of electricity generation and distribution in New South Wales, describing in particular the growth of the systems of the Sydney County Council, the Department of Railways, the Electric Light and Power Supply Corporation Ltd., the Southern Electricity Supply and the Clarence River County Council (now the Northern Rivers County Council). A description was also given of the legislation which constituted The Electricity Authority of New South Wales and The Electricity Commission of New South Wales as well as legislation existing prior to their constitution. At present, the three main Acts governing electricity supply in New South Wales are:—
  - (i) The Local Government Act 1919 which lays down the various rights and responsibilities of local government bodies in the establishment and operation of electricity trading undertakings.
  - (ii) The Electricity Development Act 1945-1957 which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

- (iii) The Electricity Commission Act 1950-1954 which constituted The Electricity Commission of New South Wales as the major generating authority and not subject to the provisions of the Electricity Development Act.
- 2. Organization.—(i) The Electricity Commission of New South Wales.—The Commission, which was constituted under the Electricity Commission Act 1950, consists of five members of whom one is a full-time Chairman. In its administration, the Commission is directly responsible to the Minister for Local Government.

When the Commission was established, 93 per cent. of the State's power requirements were generated by four bodies—the Sydney County Council, the Department of Railways, Southern Electricity Supply (a division of the Department of Public Works) and the privately-owned Electric Light and Power Supply Corporation Ltd. The Electricity Commission Act 1950 and the Electricity Commission (Balmain Electric Light Company Purchase) Act 1950 provided for the acquisition of the power stations and main transmission lines of those bodies. The transfer of the power stations and transmission lines of all these undertakings has now been effected. On 1st July, 1956, the Commission acquired the power station and bulk supply system of the Tamworth City Council, which supplied in bulk to a number of distributing bodies in the north of the State.

The main function of the Commission is the generation and transmission of electricity which it sells in bulk to distribution authorities (mainly local government bodies) throughout a large part of the State, to the government railways and tramways and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources. An important exception is the hydro-electric potential of the Snowy Mountains region which is being developed by the Snowy Mountains Hydro-electric Authority, a Commonwealth Government body.

(ii) Other Electricity Supply Authorities. The retail sale of electricity to the public is, in general, carried out by separate electricity supply authorities—municipal and shire councils, electricity county councils (consisting of a grouping of shire and/or municipal councils) or private franchise holders. At 1st September, 1957, there were 96 of these supply authorities throughout the State of which 31 also generated part or whole of their power requirements. The majority of country power stations are small oil engine plants which are becoming increasingly costly to operate. Consequently, they are gradually being closed down as the main transmission network is extended further afield.

Over the past few years, there has been a distinct trend towards the consolidation of supply areas, many of which have been regarded as being too weak individually to form satisfactory areas for distribution. Generally these consolidations have taken the form of a county district consisting of a number of neighbouring shire and municipal areas grouped for electricity supply purposes only and administered by a county council of representatives elected by the constituent shire and municipal councils.

It is interesting to note that of the 230 shires and municipalities in New South Wales, 179 are included in one or other of the 35 electricity county districts. Twenty-eight of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council which at 30th June, 1957, was supplying 386,976 consumers in the Sydney Metropolitan Area. Unlike the other county councils, which are constituted under the provisions of the Local Government Act 1919, the Sydney County Council was specially constituted under the Gas and Electricity Act 1935.

(iii) The Electricity Authority of New South Wales.—The Electricity Authority was constituted under the Electricity Development Act 1945-1957, for the stated purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. The Authority, which is a regulatory body only, consists of seven members of whom one is a full time Chairman. Like the Commission, it is responsible to the Minister for Local Government.

The main functions of the Authority are as follows :--

(a) Distribution. Under the Act the approval of the Authority is required, inter alia, for the establishment or acquisition of an electricity trading undertaking by a local government council, for the granting or renewing by such a council of electricity franchise agreements or corresponding agreements with other councils, and for the giving or taking of bulk supplies of electricity. It also has power to formulate proposals for the establishment of county councils.

In exercising these powers, the Authority is mainly concerned to see that distributing authorities are sufficiently strong to provide an economical, efficient and satisfactory service. Its most important activities in this regard are in investigating supply areas and in making recommendations to the Minister for the consolidation of such areas into county districts. Many of the new county districts referred to earlier have been formed largely as a result of the Authority's advice.

(b) Rural Electrification. The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing

very rapidly (see para, 4, page 280).

(c) Safety. The Electricity Development Act 1945-1957 contains provisions for the making of regulations relating to most aspects of safety and these powers are being used more and more extensively. Safety regulations now in force cover such matters as inspection of consumer's installations, licensing of electricians and electrical contractors, approval of electrical appliances, safety of linesmen and overhead line construction.

(d) Generation and Transmission. The approval of the Authority is required for the establishment or extension of power stations and main transmission lines (with the exception of those of the Electricity Commission). The Authority may, for example, refuse approval for the establishment of a new power station if it is more economical and in the general interest for the supply authority concerned to purchase in bulk from another body.

3. Generation and Transmission.—(i) General. Except in the Snowy Mountains district and in one or two other areas, New South Wales is lacking in major water power potential and for the generation of electricity the State is, therefore, mainly dependent on steam power stations. During the year ended 30th June, 1956, coal-fired stations generated 93 per cent. of the State's energy requirements, hydro-electric stations 5 per cent. and internal combustion plants 2 per cent.

The proportion of power generated in hydro-electric stations will increase considerably in the future with the development of the Snowy Mountains Scheme by the Commonwealth Government. Nevertheless, coal-fired steam power stations will continue to supply the

greater part of requirements for the foreseeable future.

(ii) Major Generating Stations. In New South Wales, the generation of electricity has followed the general world trend towards large centralized power stations supplying large areas through inter-connected transmission networks. The greater part of the coal-fired generating plant is now concentrated within the bounds of the major coal-fields, where the big industrial centres and most of the population are also located.

As at 1st July, 1957, the major power stations within the main inter-connected system and their installed capacities were as follows:—Steam—Bunnerong "A" and "B" (Sydney), 375,000 kW; Pyrmont "A" and "B" (Sydney), 220,000 kW; White Bay (Sydney), 122,000 kW; Ultimo (Sydney), 80,000 kW; Balmain (Sydney), 107,000 kW; Port Kembla, 64,500 kW; Zarra-street (Newcastle), 65,500 kW; Tallawarra (Lake Illawarra), 120,000 kW; Lake Macquarie, 100,000 kW; Wallerawang (near Lithgow), 30,000 kW; Lithgow, 27,000 kW; Maitland, 20,000 kW; Penrith, 20,000 kW; Liverpool, 20,000 kW. Hydro—Hume (near Albury), 25,000 kW; Burrinjuck (near Yass), 20,000 kW. There were also various other steam, hydro and internal combustion stations aggregating 46,150 kW. The total installed capacity of the main inter-connected system was 1,462,150 kW.

It will be seen, therefore, that the greater part of the State's generating plant is concentrated within a hundred mile radius of Sydney—that is, at Sydney itself (five stations), Port Kembla, Newcastle, Mailand, Penrith and Lithgow. The largest single station

outside this area is located at Tamworth, capacity 27,000 kW.

(iii) Interconnected Network. Over 90 per cent. of electricity consumers in New South Wales are now supplied through the main inter-connected systems. In this network, transmission lines operating mainly at 132,000, 66,000 or 33,000 volts interconnect the various power stations and distribute power to load centres throughout most of the south-eastern portion of the State and the north coast region. At 30th June, 1957, there were in service 915 circuit miles of 132 kV lines (including 65 built for future 330 kV operation) and about 1,600 circuit miles of 66 kV lines. The total installed capacity of the interconnected systems, which includes an aggregated capacity of 62,555 kW for various stations, including the Northern Rivers and Bega Valley County Districts linked with the main system was 1,524,705 kW (as at 1st July, 1957).

(iv) Separate Systems and Total State Installed Capacity. There are a number of separate systems and isolated plants which have not yet been interconnected with the main network and which at 1st July, 1957, had an aggregate installed capacity of 107,000 kW. The most notable are the Tamworth and Muswellbrook Coal Company systems. The Tamworth system (27,000 kW), now taken over by the Commission, supplies power to an extensive district in the north of the State through 66,000 volt and 33,000 volt transmission lines. Both the Tamworth and Muswellbrook systems are to be interconnected with the main system in the near future. Some councils along the Victorian border receive bulk supplies from Victorian authorities.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants was 1,631,705 kW (as as 1st July, 1957).

(v) Future Development. Construction is proceeding on new major power stations on the coalfields at Lake Macquarie, near Newcastle (330,000 kW), Tallawarra, near Port Kembla (320,000 kW), and Wallerawang, near Lithgow (240,000kW). These stations are linked with Sydney by 132,000 volt transmission lines, and extensive additions are also planned to the 132,000 volt system to supply increasing loads at various metropolitan and country centres. Sections of a superimposed 330,000 volt system, which will eventually extend from the Snowy Mountains area to Armidale in the north west, are also under construction. A hydro-electric power station on the Hume Reservoir of 50,000 kW capacity, connected to the New South Wales network through a 132,000 volt transmission line between Hume and Wagga Wagga is in part operation and is almost complete. Plans provide for the construction of a hydro-electric power station on the Warragamba Dam of 50,000 kW capacity to be connected to the 132 kV Sydney metropolitan network.

In addition to the power stations mentioned above, which are under construction or planned for the system controlled by the Electricity Commission, a number of local government bodies have plans in hand for the development of independent power stations. Of these the more important are as follows:—The Northern Rivers County Council is extending a steam power station at Koolkhan (near Grafton). Plans provide for an installed capacity of 25,000 kW. The first three units, totalling 17,500 kW, were in operation at 30th June, 1956. The North-West County Council is proceeding with the establishment of a 12,000 kW steam power station on the Ashford coal-field. The New England County Council and the Bega Valley County Council are extending small hydro-electric power stations on the Oakey River (near Armidale), and Georges Creek (near Bega) respectively.

(vi) Hydro-electricity. The greater part of the hydro-electric potential of New South Wales is concentrated in the Snowy Mountains Area (see Snowy Mountains Hydro-electric Scheme, p. 272). Apart from this area, there are in operation the first of two 25,000 kW units to be installed at the new hydro-electric station at the Hume Dam, the 20,000 kW station at the Burrinjuck Dam, and the 7,500 kW station at the Wyangala Dam. The output of all these stations is dependent on the release of water for irrigation.

Of the remaining hydro installations, the largest is that of the Northern Rivers County Council on the Nymboida River, a tributary of the Clarence. This station has a capacity of 4,600 kW.

The New England County Council has constructed a 2,500 kW hydro scheme near Armidale on the Oakey River, a tributary of the Macleay River, and plans to increase the capacity to 5,000 kW.

The Mullumbimby Municipal Council has in operation two 150 kW hydro units on Wilson's Creek, a tributary of the Richmond River.

The Bega Valley County Council operates a hydro-electric scheme at Brown Mountain, utilizing the headwaters of the Bemboka River. This installation now has a capacity of 1,900 kW and work is in progress on extensions to provide for two further 1,000 kW units.

The Clarence Gorge Scheme is a proposal for combined flood mitigation and hydroelectric generation on the Clarence River about 40 miles from Grafton and 240 miles from Newcastle. In February, 1955, the Clarence Advisory Committee which was set up by the New South Wales Government to report on the scheme recommended, because of economic reasons, against the construction of a dam at the Clarence Gorge either solely for flood mitigation or for the dual purpose of hydro-electric power generation and flood mitigation.

There are also possibilities of relatively large scale developments on the Shoalhaven and Macleay Rivers. Investigations have been made by the New South Wales Government but no concrete proposals have as yet been adopted.

Generally, apart from the Snowy Mountains area, hydro-electric developments are not favourable in New South Wales when compared with coal-fired steam power stations.

4. Rural Electrification.—When The Electricity Authority of New South Wales was constituted in 1946, one of its first tasks was the devising of a scheme for subsidizing the cost of rural electrification. At that time only 16,000 New South Wales farms were being served with electricity—less than one-third of those within reasonable reach of public electricity supply systems. In August, 1946, a subsidy scheme was approved by the Government and put into immediate operation. Under this scheme, local electricity suppliers receive subsidies from the Electricity Authority towards the cost of new rural lines. The amount of subsidy is based on the estimated cost of a proposed extension and the number of consumers able to be served by the new lines. In order that the funds available for subsidy purposes might be used to the best possible advantage, the scheme is designed to encourage local electricity supply authorities to construct the more economic extensions first. This has been achieved by fixing a limit to the cost eligible for subsidy. Originally this limit was £250 per consumer when averaged over the cost of the whole extension but the limit was raised to £400 in December, 1953. Some subsidy is paid on higher cost extensions but the excess over an average of £400 is not subsidized.

Between August, 1946, and June, 1957, about 23,800 miles of new distribution lines in rural areas were erected at a cost of over £15,700,000. These lines served 33,700 farms and 23,000 other rural consumers. At 30th June, 1957, the Electricity Authority was committed to the payment of almost £7,165,000 in subsidies of which nearly £2,933,000 had actually been paid. At that time the percentage of farms connected had been raised from 22 per cent. (in 1946) to 69 per cent.

#### § 2. Victoria.

- 1. General.—In Official Year Book No. 39, a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballaarat up to the time of transfer of control of electricity undertakings in those cities to the State Electricity Commission of Victoria. An account is also given of the events culminating in the establishment of the Commission in 1919, and of the early developments in the Commission's undertakings.
- 2. State Electricity Commission of Victoria.—(i) Power and Fuel Authority. Since it began operating in 1919, the State Electricity Commission has expanded and co-ordinated the production and supply of electricity on a State-wide basis to the point where its system now generates almost all the electricity produced in Victoria and serves about 97 per cent. of the population through a supply net-work covering more than three-quarters of the populated area of the State.

Development of Victoria's State electricity system is based on the development of Victoria's extensive brown coal resources for both power and fuel in the Latrobe Valley in eastern Gippsland, with supplementary development of the hydro-electric potential of north-eastern Victoria. Sixty-five per cent. of the State's electricity is generated from brown coal, either used in its raw state or manufactured into higher quality fuel in the form of brown coal briquettes. Ninety-six per cent. of the brown coal and all the briquette fuel are supplied by undertakings which the Commission itself owns and operates. Output of brown coal in 1956-57 from the three open cuts at Yallourn, Yallourn North and Morwell totalled 9,859,549 tons, of which 6,682,629 tons were used in the Commission's own power stations, and 2,418,843 tons were manufactured into 617,989 tons of brown coal briquettes, 29 per cent. of the briquette output being then used for electricity production in metropolitan and provincial steam power stations.

The two functions—generation of electricity and production of fuel—are closely integrated. Apart from the large proportion of brown coal and briquette fuel directly consumed in the power stations, the actual process of briquette manufacture results also in large-scale generation of electricity, since the steam needed for processing the raw coal in the briquette factory is first used to operate turbo-generators in associated power plant which functions as part of the briquette works.

(ii) Status and Powers. Constituted by Act of the Victorian Parliament, the State Electricity Commission is a semi-government authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is

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to co-ordinate and extend on an economic basis the supply of electricity throughout Victoria. For this purpose, it is vested with power to erect, own and operate power stations and other electrical plant and installations, supply electricity retail to individual consumers or in bulk to any corporation or public institution, acquire and operate electricity undertakings, develop, own and operate brown coal open cuts and briquetting works, and develop the State's hydro-electric resources. From its own revenues, which it controls, the Commission must meet all expenditure in the operation of its power, fuel and subsidiary undertakings, and all interest and other charges incurred in the service of its loans and other capital commitments.

The Commission is the controlling authority for all electrical undertakings in Victoria. It is responsible for the registration of electrical contractors, the licensing of electrical mechanics, the control of installation methods and material and the testing and approval of electrical equipment and appliances. Incidental to its main operations, the Commission owns and operates the tramway systems in Ballaarat and Bendigo. For the accommodation of its employees at Yallourn, the Commission owns and administers the town of Yallourn and owns large housing settlements in the surrounding area. In the Kiewa hydro-electric works area, it owns the two townships of Mount Beauty and Bogong.

(iii) Electricity Supply. At 30th June, 1957, consumers in Victoria served by the State system totalled 761,806. Outside the State system, there were 23,052 other consumers served by local country undertakings. The system supplies all the Melbourne metropolitan area and nearly 1,300 other centres of population.

The Commission sells electricity retail in all areas except part of the metropolitan area, where it sells in bulk to eleven municipal undertakings which operate as local retail supply authorities under franchises granted before the Commission was established. Bulk supply is also being provided at present to several New South Wales municipalities and irrigation settlements bordering the River Murray. Rural electrification is now more than four-fifths completed, the over-all plan to extend the State system to all populated regions of Victoria having made rapid progress during recent years. Consumers served by the State system outside the Melbourne metropolitan area (306,426) have more than doubled, and the number of farms connected to supply (35,852) has more than trebled in the past 10 years. More than two-thirds of the new consumers annually connected to supply are outside the metropolitan area. New farm connexions average about 2,500-3,000 a year.

The Commission's retail consumers totalled 590,906 at 30th June, 1957. Retail supply is administered through the metropolitan branch, seven extra-metropolitan branches (namely Ballaarat, Eastern Metropolitan, Geelong, Gippsland, Midland, North Eastern and South Western) and the North Western Region, which comprises Bendigo branch and the two sub-branches based on Mildura and Horsham (Wimmera) respectively. At 30th June, 1957, there were branch and district supply offices in 75 towns in Victoria.

(iv) Electricity Production. Electricity generated in the State system totalled 4,763 million kWh in 1956-57 or 99 per cent. of all the electricity generated in Victoria. The system comprises 22 steam, hydro and diesel power stations with a total installed generator capacity at 30th June, 1957, of 1,136,599 kW. Eighteen of these power stations, totalling 1,109,195 kW, are interconnected, and feed electricity into a common pool for general supply. The major power station in this interconnected system is the brown coal burning power station at Yallourn, which alone generates 44 per cent. of Victoria's electricity. Other power stations in the interconnected system comprise steam stations in Melbourne (Newport, Richmond and Spencer Street), Geelong (two stations) and Ballaarat (two stations); hydroelectric stations at Kiewa (two stations) and Eildon, and on the Rubicon and Royston Rivers (four stations), near Eildon; and three diesel stations at Shepparton, Warrnambool and Hamilton. All are Commission owned, except Spencer Street power station, which remains the property of the Melbourne City Council, although operated as a unit in the inter-connected system. Also linked with the Victorian interconnected system is the hydro station completed in 1957 at Hume Dam on the River Murray. This power station is operated by the Electricity Commission of New South Wales. Output and operating costs are shared equally by Victoria and New South Wales.

In meeting the total demand on the system, which fluctuates throughout the day and from month to month, each group of stations in the interconnected system, whether steam, hydro or diesel, is assigned a predetermined function dependent upon the availability of power from each group and the over-all economics of generation. The various stations are utilized in a combination that will most economically meet the system load at a given time. This procedure results in an arrangement of the system on the following general times:—

(a) Yallourn power station, owing to the low cost of extraction and ample supply of raw brown coal, is a base load station, and is operated continuously at its maximum economic capacity.

- (b) Metropolitan and provincial steam stations and provincial diesel stations situated close to load centres are designed to operate as peak load stations to assist in meeting the heavy, short period load. Pending the completion of extensions to Yallourn power station, a substantial proportion of the base load on the system is carried by Newport power station.
- (c) Hydro stations are operated in accordance with the availability of water.

  They are designed to effect, where possible, a saving of the more expensive fuels used in the metropolitan and provincial thermal stations.

Commission power stations not yet connected with the rest of the State system comprise the two steam stations (Redcliffs and Mildura) serving the Mildura region, and two local diesel stations at Horsham and Murtoa which have been acquired as the first step in a large-scale plan to extend the State electricity system to the Wimmera. The stations at Horsham and Murtoa are being connected to the State system in 1958.

- (v) Transmission and Distribution. The electrical transmission and distribution system n the State supply network at 30th June, 1957, comprised 24,871 miles of transmission and distribution power lines, 11 terminal receiving stations and over 15,000 distribution substations. Main transmission is by 220 kV, 132 kV and 66 kV power lines which supply the principal distribution centres and also provide inter-connexion between the power stations. The 220 kV system connects Yallourn and Kiewa with metropolitan terminal stations. From Yallourn also, there are four 132 kV transmission lines to Melbourne. The 66 kV lines radiate from Melbourne to Geelong and Warrnambool, Ballaarat and Bendigo, and also to Benalla and other main centres in the North East. Further 66 kV lines radiate from Yallourn to main centres in Gippsland.
- (vi) Future Development. In conformity with its dual responsibility for producing and supplying Victoria's electricity and producing a large proportion of the State's solid fuel, the Commission's developmental programme is in two parts, which are, however, closely dependent one upon the other. The major part of this programme is for the development of the brown coal undertakings at Yallourn and Morwell in the Latrobe Valley and the erection of a large new brown coal burning power station at Hazelwood near Morwell; and the second and lesser part for the development of the hydro undertaking at Kiewa and construction of a high voltage transmission line for the supply of power to be purchased from the Snowy Mountains Hydro-electric Authority. At the same time, the commission will continue its programme of rural electrification, extension of the State system (particularly in western and north western Victoria) and reinforcement of supply by the establishment of a 220 kV power transmission grid designed ultimately to eneircle central Victoria, linking all principal power stations and all major centres of distribution.

Yallourn power station is being greatly enlarged. One 100,000 kW extension was completed late in 1956. A second 100,000 kW extension is being built. One of its two 50,000 kW generators came into service in 1957 and the extension is due for completion in 1958. A third extension of 240,000 kW capacity is due for completion in 1962. Enlargement of the power station will require a corresponding expansion in production of brown coal at Yallourn. New dredger plant will increase annual output at the Yallourn open cut to over 12 million tons. in 1963. This will complete the Yallourn power generation development, except for the eventual replacement of 175,000 kW of old plant with one generating unit of about 200,000 kW capacity.

At Morwell, six miles from Yallourn, the Commission is developing a second brown coal power and fuel project. The new project will comprise a large brown coal open cut and a major new power station which will operate in association with a large new briquetting plant. Some of the electricity generated at Morwell will be needed to operate the briquette works, but most of the output of the power station will be transmitted through Yallourn to metropolitan terminal stations; for general supply through the State network. The power station and two units of the briquetting works are now being built, and the power station will start generating electricity in 1959. In 1961, electricity output for general supply will be 91,000 kW, and briquette production will be over 1,500,000 tons per annum. Annual output of brown coal at the Morwell open cut will increase progressively to about six million tons in 1962.

In order to make the best possible use of the new brown coal open cut already in the initial stages of production at Morwell the Commission is now planning to build at Hazelwood, south of Morwell, a large new brown coal burning power station of 800,000 to 1,000,000 kW capacity in units of 200,000 kW each or larger, the first to be in service not later than 1964.

(vii) Hydro electricity. The new hydro station built to operate on the waters of the greatly enlarged Eildon Reservoir was completed in 1957. The electrical installation consists of two large generating sets, each of 60,000 kW capacity, and two small generating sets, totalling 16,000 kW transferred from Sugarloaf power station, the original power station which was demolished when the new Eildon Dam was built. As the primary purpose of Eildon Reservoir is to provide water for irrigation, generation of electricity will be mainly governed by irrigation requirements, but provision has been made for limited operation of the power station in winter when electricity requirements are at their heaviest and there is no irrigation demand for water. Similar considerations apply to the newly completed Hume hydro station. Since it also operates on water released for irrigation, no regular output of electricity can be expected during the non-irrigation months in the winter. At the Kiewa hydro-electric undertaking, where two stations, totalling 87,600 kW capacity, are now in service, work is in progress on a third power station of 96,000 kW capacity. which is due to have the first of its six generators operating in 1960 and the remainder in service by the beginning of 1962. Work is also in progress on the construction of Rocky Valley Reservoir, which is designed to provide the main high level storage for the operation of the Kiewa power stations.

Connexion with the Snowy Mountains undertaking will be made by a new high voltage transmission line which will feed into the Victorian system via Dederang, near Kiewa. It will operate at 330 kV. Two sections of the 220 kV transmission grid (Yallourn-Melbourne and Kiewa-Eildon-Melbourne) are in service and interconnected. Extensions of this new grid are due for completion as follows:—Geelong to Colac (1957); Geelong to Melbourne (1958); Kiewa to Shepparton (1958); Shepparton to Bendigo (1959). Temporarily the Melbourne-Colac line and the Shepparton-Bendigo line will operate at 66kV. They will be activated at 220 kV at a later date. Eventually the 220 kV grid will be continued from Bendigo via Ballaarat to connect with the Melbourne-Geelong-Colac section at Geelong, and will also extend along the Murray Valley to Redcliffs, near Mildura.

3. Local Country Electricity Undertakings.—At 30th June, 1957, there were 41 independent electricity undertakings in country centres in Victoria generating and distributing their own local supply. Most of these undertakings were in the far south west, west and north west of the State. Under the State Electricity Commission's rural electrification programme, almost all the independent local country undertakings will ultimately be acquired and absorbed into the State system. For the year 1956-57, the total production of the independent undertakings was 43 million kWh. The number of consumers at 30th June, 1957, was 23,052. The operation of the independent undertakings is governed by the Electric Light and Power Act, 1928, which the State Electricity Commission administers.

#### § 3. Queensland.

1. General. In Official Year Book No. 39, an account is given of the growth of electricity generation in Queensland, with particular reference to the City Electric Light Co. Ltd. of Brisbane (now the Southern Electric Authority of Queensland), the Brisbane City Council and the Toowoomba Electric Light and Power Co. Ltd.

The first of these organizations supplies a large part of Brisbane's electric power requirements and a considerable rural area in the south-east corner of the State from a modern power station at Bulimba, a suburb of Brisbane. Capacity is 95,000 kW at Bulimba "A" plus 10,000 kW, "packaged plant" at Abermain (near Ipswich) and 90,000 kW at a new generating station known as "Bulimba B". The output from a 3,200 kW hydroelectric unit installed at Somerset Dam near Brisbane is fed into the Southern Electric Authority system. With these plants 613 million kWh were generated in 1955-56 while the total number of the Authority's consumers at 30th June, 1956 was 104,025.

The Brisbane City Council's electrical undertaking and power production in 1955-56 had an installed capacity of 135,000 kW plus a 10,000 kW "packaged" plant erected at Tennyson, units purchased and generated amounted to 548 million kWh, and there were 121,090 consumers connected. Since 30th June, 1955, 30,000 kW of plant at a new power station at Tennyson has been commissioned by the Council.

The Toowoomba Electric Light and Power Co. Ltd., which commenced operations in 1905, has now been absorbed by the Southern Electric Authority of Queensland.

The generation and distribution of electric power in Queensland had, until the last decade, tended to lag behind developments in this field in other States of Australia. The comparatively slow growth in the production and consumption of electricity can be attributed to some extent to the absence, prior to 1938, of a central statutory authority constituted to undertake the functions of co-ordinating, unifying and controlling the production and transmission of electric power. In addition, Queensland's vast area, coupled

with a low population density, made large-scale rural electrification, elsewhere than in the south-eastern portion of the State, which surrounds the major centres of industry and population, an uneconomic proposition.

Before establishment of the Regional Electricity Boards in 1945, no attempts had been made to unify or co-ordinate electricity supplies outside of South Eastern Queensland, and rural electrification, apart from reticulation within certain townships, was practically unknown.

- 2. Royal Commission on Generation and Distribution of Electric Power in Queensland, 1936.—On 5th December, 1935, the Queensland Government appointed a Royal Commission to inquire into and make recommendations on matters relating to the generation and distribution of electric power in Queensland. An account of the results of its investigations and of the alternative proposals put before it will be found on p. 1182 of Official Year Book No. 39.
- 3. The State Electricity Commission of Queensland.—In 1937, the State Government legislated to constitute a State Electricity Commission (legislation administering the generation and distribution of electricity in Queensland prior to the establishment of the Commission is referred to on p. 1181 of Year Book No. 39), which commenced to function during January, 1938, and to it was passed administration of the Electric Light and Power Acts 1896–1938. The Commission's main powers were to secure a proper and efficient supply of electric power, review tariffs, grant licences to supply electricity, secure the safety of the public, and control and advise electrical undertakings generally. It was thus a controlling authority as distinct from an operating authority. In addition, the Commission was empowered to co-ordinate the industry's development throughout Queensland. Between 1938 and 1956, the number of private companies was reduced by absorption and acquisition from 21 to two, while publicly owned undertakings, after amalgamation into Regional Authorities, and the development of 24 new schemes for small Western Queensland towns, totalled 53.

By agreement with the Commission in 1939, the City Electric Light Co. Ltd. became the co-ordinating authority for the provision of electricity in an area of some 10,062 square miles, extending from the New South Wales-Queensland border to Gympie, north of Brisbane. The Company acquired the undertakings at Boonah, Beaudesert, Gympie, Coolangatta, Ipswich, Nambour, Southport, Redcliffe and the Somerset Dam supply and transmission line to Brisbane. Certain restrictions were placed on the Company's dividend rate, namely limitation to the rate on Commonwealth bonds plus 2 per cent. During 1940, a similar agreement was made with the Toowoomba Electric Light and Power Co. Ltd. for the supply of electricity in the Toowoomba, Warwick, Killarney and Allora districts, subsequently being extended to cover a comprehensive area of 9,324 square miles, including Stanthorpe and other districts. Transmission line extensions since that year have made supply available to a number of adjacent districts on the Darling Downs. The City Electric Light Co. Ltd. was converted to a public authority as from 1st February, 1953 by the Southern Electric Authority of Queensland Act of 1952 (see para. 5, page 285).

Amending legislation, passed by the Queensland Parliament in March, 1948, changed the constitution of the State Electricity Commission from a body corporate to a corporation sole. On 1st July, 1948, a Commissioner for Electricity Supply was appointed in lieu of the previous Commission of four Commissioners. Since its inception in 1938, the Commission has made considerable progress in its task of developing the State's power resources and promoting a more widespread use of electric power. The degree of utilization of electrical energy in Queensland now compares favourably with other States in the Commonwealth.

4. Regional Electricity Boards.—With a view to facilitating the control and development of electricity supply in areas of low population density or those having a predominantly primary producing economy, the Government, in 1945, passed the Regional Electric Authorities Act. This legislation, as later amended, provides for the creation of regions of electricity supply and the constitution of Regional Electricity Boards. The Act provided for transfer to the Boards of local authority electricity undertakings in their regions, and for acquisition by the Boards of privately owned undertakings when purchasing rights fell due. Each Board comprises representatives of local authorities in the region and a representative of the Commission. Financial operations of the Boards are under the control of the Commission.

Soon after passage of the Regional Electric Authorities Act, four regions were defined and four Regional Boards constituted, namely, Wide Bay, Capricornia, Townsville and Cairns. A fifth Board, entitled South Burnett, became an operating authority in October,

1947, but on 1st July, 1951 was absorbed in the Wide Bay Regional Board and the organization is now known as the Wide Bay-Burnett Regional Electricity Board. As power was to be obtained from the Wide Bay Regional Board's station at Howard, the Commission decided that development of the two regions could be planned more effectively by a single authority.

As from 1st March, 1957, a further Regional Board became operative, covering the areas of Mackay, Sarina, Proserpine and adjacent rural areas under the name of Mackay Regional Electricity Board.

Supply throughout this Region will be provided from the central generating station at Mackay and accelerated electrical development of this area is being undertaken. The Townsville Regional Electricity Board's area was extended in July 1957 to include that of the Bowen electricity undertaking. The local authority areas of Thursday Island and Cook were included in the Cairns Regional Electricity Board's area from 1st July, 1956 and 1st July, 1957 respectively.

Activities of the original four Regional Boards in 1955-56 and 1956-57 compared with operations of the stations located in regions in 1945-46, and totals for Queensland as a whole are shown in the following table:-

		QUEENSLAND: REGIONAL OPERATIONS.												
Region.		194:	5–46.	195	5–56.	1956-57.								
		Units Generated.	No. of Consumers.	Units Generated.	No. of Consumers.	Units Generated.	No. of Consumers.							
			m.kWh		m.kWh		m.kWh							
Wide Bay-Bur	nett		13.7	11,467	60.8	25,034	71.8	26,624						
Capricornia			19.5	11,196	89.5	19,038	107.6	19,718						
Townsville			25.8	11,612	90.8	21,536	104.2	23,325						
Cairns	••	• •	22.7	9,722	80.7	17,067	89.9	18,620						
Total	••	• •	81.7	43,997	321.8	82,675	373.5	88,287						
Queensland			487.0	194,429	1,582.9	335,609	(a)	b 349,00 <b>0</b>						

(a) Not available.

(b) Estimated.

Generator capacity of the four existing Regional Boards installed at 30th June, 1957 was :-Wide Bay-Burnett, 37,500 kW; Capricornia, 37,500 kW; Townsville, 38,980 kW; Cairns, 18,829 kW; total, 132,809 kW.

5. Creation of Southern Electric Authority of Queensland .- A further major step in electrical progress, comparable with that taken when the agreements with the City Electric Light Co. Ltd. and Toowoomba Electric Light and Power Co. Ltd. were first entered into, was taken by the passing of the Southern Electric Authority of Queensland Act of 1952. This Act constituted the City Electric Light Co. Ltd. as a public authority to be known as the Southern Electric Authority of Oueensland.

Two Government representatives are included on the Board of the new Authority, whose establishment prepares the way for the complete amalgamation, in due course, of the electrical undertakings serving the south-eastern Queensland area of supply.

An important advantage gained by the creation of this Authority is that on 30th June. 1968, acquisition of the Authority by the State Government can be effected without the necessity of a cash payment, as the Government will have the power to convert the Authority's existing stock to inscribed stock. Furthermore, the replacement of the City Electric Light Co. Ltd. by the Southern Electric Authority as a public body relieves electricity consumers in the Authority's area of supply from the burden of taxation which has hitherto been payable by the City Electric Light Co. Ltd., but will not need to be met by the new Authority. An agreement has been signed between the State Government and the Southern Electric Authority giving effect to the principles contained in the new legislation.

As from 1st July, 1954, the Southern Electric Authority acquired the Toowoomba Electric Light and Power Co. Ltd., thus bringing this company's area of supply under its control. The Southern Electric Authority is now responsible for the electrical supply and development of a consolidated area of 19,386 square miles.

6. Hydro-electricity.—Behind the coastal plain of the Cairns-Ingham area is an extensive plateau, the elevation ranging from 2,000 to 3,000 feet, although isolated peaks exceed 4,000 feet. The short coastal streams which rise on the plateau descend rapidly into deep gorges, which they have cut through the old divide. With heavy monsoonal rainfall on their catchments and concentrated fall, these streams represent a considerable potential source of power, but storage, which can in most cases be provided, is essential to control the very variable flow.

The Barron Falls scheme, 14 miles north-west of Cairns, came into operation in 1935. The installed plant operates under a head of 410 feet and comprises three 2,000 h.p. turbines each connected to a 1,320 kW generator. Average rainfall varies from 80-150 inches along the ranges to less than 35 inches in the western portion of the catchment. There is extreme variation from year to year, resulting in great fluctuation of stream flow which, at Kuranda, has varied from a maximum of 117,000 cusecs in 1911 to a minimum of 30 in 1915. Storage to regulate the flow is possible but has not yet been provided. During periods of low flow the supply of electricity is supplemented by fuel plants at Cairns, Atherton and Innisfail. Power is distributed over 22,000 volt transmission lines serving the tableland and extending southward along the coast to Tully.

A small hydro-electric scheme on the Mossman River, 5 miles from Mossman, North Queensland, comprises two 120 h.p. turbines operating under a head of 200 feet.

The development of a hydro-electric power scheme at Tully Falls has now reached an advanced stage, the initial plant installation of 36,000 kW being commissioned in September, 1957. Work is in hand on the installation of a further two 18,000 kW sets, making a total installation of 72,000 kW. Water controlled by Koombooloomba Dam at present under construction on the upper Tully River is diverted, a short distance above Tully Falls, through a tunnel and steel penstocks to an underground power station in the gorge at the foot of the falls operating with Pelton driven generators under a head of 1,485 feet. Power is transmitted to the load centres at Cairns and Innisfail by means of 132 kV transmission lines. Future automatic power plants upstream and downstream from Tully Falls will consist of two 7,500 kW sets under 405 feet head and one 5,400 kW set under 230 feet head. The combined peak load for the three plants will be 69,000 kW. Interconnexion of the Tully scheme with the Townsville area, previously supplied by a thermal station, was completed in 1957 by the provision of a 160 mile duplicate 132 kV transmission line. On present estimates, power from the Tully scheme will be sufficient to supply the inter-connected area until 1965, when additional power will be required. A full investigation by the State Electricity Commission of the electricity supply industry in North Queensland is proceeding and the terms of reference include the survey of additional hydro-electric projects.

Other northern schemes which have been investigated include Freshwater Creek (3,900 kW); North Johnstone-Russell Rivers (32,000 kW); Beatrice-North Johnstone Rivers (9,000 kW); South Johnstone River (25,000 kW); extension of Barron Falls scheme (22,000 kW); Herbert River (90,000 kW). The total potential of the plateau region is therefore about 250,000 kW at 50 per cent. load factor.

In the vicinity of Townsville, the Commission, acting on behalf of the Burdekin River Authority, investigated the proposed hydro-electric development of the Burdekin. The Scheme envisaged a power plant immediately below the Burdekin Falls Dam which will operate under an average head of 225 feet. This scheme was linked with a plan to conserve the waters of the river for irrigation and flood mitigation, and surveys undertaken indicate that approximately 80,000 kW could be generated.

South of the Burdekin River, no appreciable hydro-electric development is practicable. A plant of 3,200 kW capacity has been installed to utilize the outflow from Somerset Dam on the Stanley River a few miles above its confluence with the Brisbane River.

7. New Capacity.—(i) Regions. To provide for development of the electric power resources in the regions, the State Electricity Commission formulated a ten-year programme divided into two five-year periods. In the first, it was planned to erect main transmission systems to connect existing power stations located within the regions and supplement generating capacity by the construction of new stations. Work on this section of the plan in the original Regional Board areas is now virtually complete. In the second, the transmission system will be extended to more sparsely settled areas, the ultimate purpose being the provision of "ring" transmission lines throughout each region and interconnexion between the regions.

A number of new generating stations have been commissioned as follows:—Wide Bay (Burnett Region), of which 15,000 kW was placed in service during September, 1951,

and 7,500 kW in 1954, while a further set of 15,000 kW was installed in 1957. Rockhampton (Capricornia Region) of which 22,500 kW was placed in service during September, 1952 and a further 15,000 kW in May, 1956, with a further 15,000 kW at present in process of installation; and Townsville (Townsville Region) of which 22,500 kW was commissioned in July, 1953, and a further 15,000 kW in January, 1956. Plans are in hand for the installation of a further 15,000 kW at Rockhampton and Townsville. Each of these stations will have an ultimate capacity of 52,500 kW and be steam-operated. In the Cairns Region, construction is well advanced on the Tully Falls hydro-electric scheme and two 18,000 kW turbo alternator sets were commissioned in September, 1957, with a further two 18,000 kW sets to follow shortly afterwards. The scheme is designed for an ultimate installed capacity of 92,400 kW. To augment existing capacity and to cover demands prior to the operation of Tully Falls, the Cairns Regional Board had installed twenty-one diesel units with a total capacity of 14,485 kW.

The Tully Falls scheme (see para 6, page 286) is planned to link with the Townsville Regional Electricity Board's system for the purpose of marginal supply, and construction of this inter-connexion was completed by the close of 1957. Investigations are being carried out into the development of a further hydro-electric scheme on the Barron River which, when constructed, would add about 30,000 kW to the available hydro-electric generation capacity in the area.

At Mackay, where supply was first given in 1924, a Regional Electricity Board has now been constructed and a 66 kV transmission line to Proserpine is under construction. The generating capacity of this Regional Board is 9,500 kW, and a further 2,750 kW unit is being installed. At Bowen, the Town Council, which established the service in 1952, has now transferred its area to the Townsville Regional Electricity Board, and transmitted supply will eventually be provided to this area. During 1935, a small (3,800 kW) power house—Australia's first underground hydro station—was placed in service at Barron Falls near Cairns. When the Cairns Regional Board was established during 1946, operation of the station passed to the Board's control and now comprises part of its generating plant, totalling 18,829 kW, supplying an area of approximately 91,000 square miles.

(ii) Western Queensland. In Western Queensland, where a number of small isolated generating stations supply power to some of the larger towns, the Commission has evolved a plan to increase and modernize existing capacity. It involves installation of small internal combustion units ranging in size from 100 kW to 600 kW according to the load likely to be experienced, and conversion from direct to alternating current supply. The Government is assisting the scheme by subsidy—a feature of electrical development in Queensland. In general, the assistance provided comprises subsidies of up to one-third of capital cost on annual loan charges, with special subsidies of up to 50 per cent. for authorities in isolated areas.

In addition to improving supplies to the larger western towns, a scheme has been devised for electricity supplies for smaller towns in the western districts, where consumers range from 50 to 200. Subsidies of 65 and 60 per cent. will apply in those cases where the number of consumers supplied is less than 100 and 200, respectively. This plan is now being implemented and at 30th June, 1957, 27 townships in the west of Queensland had been provided with the amenities of electricity. In addition, investigations of the possibility of supply have been carried out at a number of other small centres. The power is being supplied by small oil driven generating sets with automatic controls which can be run with a minimum of operating attendance.

Coal-burning gas producers have been successfully commissioned for public electricity supply purposes in the West. They have been installed at Longreach, Clermont, Dalby, Blackall and Barcaldine and further extensions of their use in Western Queensland is predicted, as lower tariffs and more efficient production of electricity should follow their use

(iii) South-eastern Queensland. To increase the availability of electric power in the south-eastern area of the State, the two major generating authorities, in conjunction with the Commission, have power station projects under construction which are designed to place in service, by 1958, new generating units totalling 400,000 kW. The Southern Electricity Authority is developing a station known as Bulimba "B" on a site adjacent to Bulimba "A". 90,000 kW had been installed to 30th June, 1957, with a further 30,000 kW to be commissioned during 1957-58 and the ultimate capacity may reach 180,000 kW. At Tennyson in the Brisbane area, the Brisbane City Council has constructed a new power station with an initial capacity of 60,000 kW which may be ultimately increased to 180,000 kW. At 30th June,

1957, generating plant of 60,000 kW was in service at this new station. To supplement capacity pending operation of these projects, "packaged" generating units totalling 20,000 kW were obtained from overseas and commissioned early in 1953, one 10,000 kW set having been installed at Tennyson and another 10,000 kW set at Abermain near Ipswich.

The power stations of the two major generating authorities at New Farm and Bulimba are interconnected at 33,000 volts.

#### § 4. South Australia.

1. General.-An account referring to the companies generating electric power in South Australia prior to the establishment of the Adelaide Electric Supply Co. Ltd., and describing the development of that company's activities, was given in Official Year Book No. 39. Also included in the account was some reference to the early measures of public control over electricity supply in South Australia and the extent to which they were applied, and also to the inquiries into the activities of the Adelaide Electric Supply Co. Ltd. in 1932 and 1935.

Following upon an inquiry instituted by the Government in 1943, relative to measures for increasing electricity supply to the metropolitan area and country districts, the Electricity Act 1943 was passed which, inter alia, established the South Australian Electricity Commission. However, until the State assumed full responsibility for the supply of electric power, this body was not able to do much more than exercise the formal functions conferred on it by the Act.

- 2. The Electricity Trust of South Australia.—Early in 1946, a Bill was passed transferring the assets of the Adelaide Electric Supply Co. Ltd. to the newly formed public authority, the Electricity Trust of South Australia, which became responsible for unification and co-ordination of the major portion of the State's electricity supplies. This legislation provided that the Trust should take over the powers vested in the South Australian Electricity Commission under the 1943 Act, which, after establishment of the Trust, would cease to exist. In addition to the powers specified in the Adelaide Electric Supply Company's Acts 1897-1931, the Trust may, inter alia, supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other persons who generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other persons, and give or receive supplies of electricity in bulk.
- 3. Capacity and Production.—There are three main categories of organizations generating electric power in South Australia, namely :--(a) Governmental, which include the Electricity Trust; (b) Local Authorities, e.g., municipal and district councils, and Renmark Irrigation Trust; and (c) Other, including individuals and firms primarily engaged in generating power for sale, firms generating power primarily for their own use but supplying outside consumers, and firms generating power for their own use.

In 1955-56, total installed capacity in South Australia was 320,869 kW, a decrease of 9,409 kW on the year before. The units generated totalled 1,204 million kWh compared with 1,199 million kWh in the previous year.

Of the total installed capacity, the Electricity Trust of South Australia operated plant with a capacity of 269,660 kW. It is thus the most important authority supplying electricity in the State. There were approximately 241,300 ultimate consumers of electricity, of whom 216,424 were supplied by the Trust. Its major steam stations were Osborne "A" (79,000 kW), Osborne "B" (120,000 kW) and Port Augusta "A" (60,000 kW) while the balance of the capacity controlled consists of house sets and regional stations at Port Lincoln and Mount Gambier.

No hydro-electric potential exists in South Australia. Steam generating units comprise 95 per cent. of installed capacity and the balance, 5 per cent., is internal combustion equipment. Until recently, all fuel consumed in the thermal stations was obtained from sources outside the State, and at times power restrictions were necessary owing to the inadequacy of supplies.

4. Leigh Creek and other New Capacity.-With a view to reducing the dependence on external sources of fuel, steps have been taken to produce local coal and to install plant to use it. Fairly extensive deposits of low-grade sub-bituminous coal are obtainable at Leigh Creek, about 360 miles north of Adelaide. Under the Electricity Trust of South Australia Act Amendment Act 1946, the Trust was given authority to develop Leigh Creek coal for use in its own undertakings and also for sale to other consumers. Production from the Leigh Creek field commenced in 1944 and in the year ended 30th June, 1956, 436,577 tons of coal were sold. Of this amount, the Electricity Undertaking used 375,126 tons.

In order to cope with the rapidly increasing demand for power, the Electricity Trust is installing two additional 30,000 kW units at Osborne "B" Power Station. These will complete the "B" station which will then have a total capacity of 180,000 kW. Another major work under construction is the power station at Port Augusta with an ultimate capacity of 90,000 kW. This power station, which was commissioned in June, 1954, is located at Port Augusta because of its proximity to the Leigh Creek coalfield and will use Leigh Creek coal exclusively. A new standard guage railway line connecting Leigh Creek with Port Augusta was constructed by the Commonwealth Railways Department. The power station is inter-connected with the Metropolitan Area by two transmission lines which will also supply power at intermediate points. The Trust is to construct a second power station at Port Augusta to be known as Port Augusta "B". This station will have a capacity of 180,000 kW making the combined capacity at Port Augusta 270,000 kW. In addition, the Trust is building steam power stations at Port Lincoln and Mt. Gambier to replace existing diesel stations. The station at Port Lincoln will have a capacity of 5,000 kW and will burn fuel oil while the station at Mt. Gambier will have a capacity of 16,800 kW and will burn either wood waste or fuel oil.

5. The Municipal Tramways Trust.—On 30th June, 1956, the Municipal Tramways Trust power station ceased operations and all power required for traction purposes is now supplied from the Electricity Trust system through converter stations and a 5,500 kW frequency changer. The installed capacity of the power station has been reduced from 19,100 kW to 9,000 kW and will only be used in case of emergency.

#### § 5. Western Australia.

- 1. General.—Electrical undertakings in Perth and Fremantle formerly owned by the Perth City Council, the Western Australian Government Electricity Supply, the Fremantle Municipal Tramways and Electric Lighting Board and other metropolitan municipal and road board supply authorities have now been taken over by the State Electricity Commission of Western Australia. For information on the early history of electricity supply in the metropolitan area, see Official Year Book No. 39, p. 1189.
- 2. Metropolitan Undertaking.—Statistics relating to activities of the Metropolitan undertaking are shown in the following comparative table.

WESTERN AUSTRALIA: METROPOLITAN UNDERTAKING. (Including Bunbury Power Station).

	1938-39.	1955–56.	1956				
Plant capacity		•••	· · ·	kW	57,000	179,000	$\begin{cases} a & 4 \\ b & 16 \end{cases}$
Maximum load				kW	33,000	127,000	11
Units generated			Million	ı kWh	137	517	•
Coal used per unit g	enerated			lb.	2.77	1.56	
Coal used	• •			tons	168,722	361,164	35

(a) 40 cycles. (b) 50 cycles.

As a result of a separate inquiry conducted at the same time as the early investigations into the proposed new station at South Fremantle, a recommendation was made favouring conversion of the East Perth 40 cycle system to the British and Australian Standard Frequency of 50 cycles per second. The recommendation was adopted and implemented by making the frequency of generation at South Fremantle 50 cycles and installing at East Perth a frequency changer able to convert 25,000 kW of energy from one frequency to the other. Change-over of consumers' plant is nearing completion and only the city area and some inner suburban districts remain on 40 cycles.

3. Kalgoorlie.—In Kalgoorlie, the Municipal Council supplies approximately 3,800 consumers with either direct or alternating current. A diesel station of 1,825 kW generating capacity provides direct current to the limit of its capacity. Alternating current is purchased from Kalgoorlie Power Corporation and retailed by the Council to some consumers, while portion is passed through a rectifier to convert it to direct current. Primarily established to supply power to the gold mines, the Kalgoorlie Electric Power and Lighting Corporation operates a steam station of 11,000 kW and maintains a 22kV line of 21 miles to the Celebration mine. Alternating current is also supplied to about 1,400 consumers. The Corporation's undertaking generates approximately 35 million kWh per annum and boilers are fired by Collie coal.

4. General Pattern of Electricity Supply.—The pattern of the generation and distribution of electric power in Western Australia consisted until recently of a number of isolated systems each supplying a particular area. Except in the metropolitan area and in the area embraced by the South-West Power Scheme (See para 6, below), where in both cases electricity supply is in the hands of the State Electricity Commission of Western Australia, local authorities are generally responsible for the supply of electricity for domestic and industrial purposes. In the area between the Great Southern Railway from Northam to Albany and the west coast, however, the State Electricity Commission has now constructed transmission lines to give central station supply to the towns and their surrounding rural areas. In addition, there are several mining companies which generate electricity for use in their mines. In order to cater for the expected growth in demand, capacity of the State's major generating stations is being increased.

The system in the Metropolitan area has been inter-connected with the Bunbury area by means of a 132,000 volt transmission line.

The main load centre of the State is, of course, the Perth-Fremantle area into which is concentrated the major portion of the State's population and industry. The interconnexion between the Metropolitan and Country systems is, however, expected to lead to a gradual decentralization of load.

- 5. The State Electricity Commission of Western Australia.—(i) Origin and Aims. In order to ensure an organized and co-ordinated future growth of electricity generation and distribution throughout the State, the Government introduced a Bill in 1945 to establish the State Electricity Commission, which, together with an Electricity Bill, became law early in 1946. Under these Acts, the Commission was given power, inter alia, to secure the ultimate co-ordination of all State or other electrical undertakings in the State, to construct and operate power stations and transmission lines and purchase as a going concern and carry on the undertaking of any supply authority. Under the Electricity Act, which should be read in conjunction with, and is subject to the State Electricity Commission Act, no person or organization is permitted to construct or extend an electricity supply undertaking without consent from the Commission. Local authorities are empowered to operate and construct power stations and other works associated with the supply of electricity, provided that authority is first obtained from the Commission and any proposals are not inconsistent with the Commission's plans.
- (ii) New Projects. Since its inception in 1946, the Commission has proceeded with the task of increasing generating capacity in an endeavour to cater for a greatly increased demand for power. Long-range plans were formulated to inter-connect the south-western portion of the State with the Perth-Fremantle system. One of its most important and immediate problems was to increase the capacity of the generating equipment serving Perth and Fremantle. During the 1939-45 War years, it became evident that the growth of demand for electric power would necessitate provision of additional generating equipment in the metropolitan area as soon as possible. Accordingly, the Government Electricity Supply authority commenced design work for a new station of 50,000 kW capacity. Contracts were let in 1945 and construction commenced on a site selected at South Fremantle, on the coast south of Fremantle proper. Responsibility for completion of this project was given to the Commission under the Act of 1946. As it was considered that an even larger station would be required, provision was made for the installation of two additional units giving an ultimate capacity of 100,000 kW. Steam is furnished by eight boilers designed to use pulverized coal from Collie, which is located about 120 miles from the station. At the end of 1954, four units had been placed in service and the output was being fed into the metropolitan

At the East Perth power station, a new 30,000 kW unit has been commissioned and an additional boiler installed. A 25,000 kW unit, commissioned in 1938 (generating 40 cycles) is also available at this station. Older plant with a total capacity of 24,000 kW is also installed, but the usefulness of this plant for standby purposes will be reduced as the 40 cycles load in the metropolitan area is converted to 50 cycles.

6. South-west Development.—At the request of the Government, the Electricity Advisory Committee in 1945 submitted a report recommending, amongst other things, that a National Power Scheme for the south-west be proceeded with. The plan provided for acquisition of the existing Collie power station and installation of additional generating capacity, construction of a power station at Bunbury and inter-connexion of the south-west scheme with the metropolitan system. On 12th October, 1946, the State Electricity Commission acquired the Collie power station, which prior to 1946 was owned and operated by the Collie Power Company Limited. At the date of acquisition, the station's installed capacity was 5,000 kW, comprising two steam units. The capacity of the station was increased to 12,500 kW in 1952.

Since 1950, the Commission has acquired a number of electrical undertakings from municipal bodies and private organizations in the south-west area and is proceeding with arrangements for the purchase of others. In August, 1951, the first portion of the South-

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West Power Scheme was officially opened at Collie and many of the south-west towns have now been connected by transmission line to the Collie Power Station. When completed, a system of power lines will reticulate electricity over an area of approximately 1,800 square miles. The first 30,000 kW unit and associated boilers at Bunbury Power Station have been placed in service. Work is proceeding as programmed on two similar units and tenders have been called for a fourth unit to give the Station an ultimate capacity of 120,000 kW. The first section was officially declared open on 23rd August, 1957.

Diesel stations of 4,400 kW capacity at Albany serve the towns of Albany, Denmark, and Mount Barker in the extreme south of the State.

### § 6. Tasmania.

1. General.—A considerable part of the water catchment in Tasmania is at high level, with a substantial natural storage available, and this has made it possible to produce energy at lower cost than elsewhere in Australia, or in most other countries. Other contributing factors to the low costs are that rainfall is distributed fairly evenly throughout the year, with comparatively small yearly variations. The cheap power has led to the establishment in Tasmania of several large electro-chemical works with high load factor, and as a consequence the system load factor is also very high and at present is 61 per cent.

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Official Year Book No. 39, pp. 1192-3.

2. The Hydro-Electric Commission.—(i) Present System. In 1929, the Government passed the Hydro-Electric Commission Act, under which was established the Hydro-Electric Commission and which vests in the Commission, with some minor exceptions, the right to use the waters of the State of Tasmania and authorizes it to develop and reticulate electric power for all purposes. In 1930, this corporate body took over the State hydro-electric undertaking and the business of the Hydro-Electric Department.

The first project undertaken by the Commission was the Shannon Power Development which utilizes 258 feet of the difference in level between the Great Lake (Miena Dam) and Waddamana forebay. A small earthen dam diverts the outflow from the Great Lake through 2½ miles of canal and then by two pipelines to the Shannon Power Station, where 10,500 kW was added to the system in 1934. After passing through Shannon Power Station the water discharges into the Waddamana canals to be used again at the Waddamana Power Stations.

In 1933, it was decided to proceed with the Tarraleah Power Development. In this scheme, the waters of the River Derwent are picked up near Butler's Gorge by a canal and conveyed 14 miles to the pipeline forebay 982 feet above the power station on the Nive River where three 15,000 kW generators were placed in service in 1938. Shortly afterwards two more 15,000 kW units were added and a sixth machine installed in 1951 brought the total installed capacity at Tarraleah Power Station to 90,000 kW. Storage is provided at Lake St. Clair and at Lake King William, an artificial lake created by the 200-ft. high Clark Dam across the Derwent at Butler's Gorge. In the Butler's Gorge Power Station at the foot of the dam, a single 12,200 kW generator was installed in 1951. To increase the security of the system and to permit variable seasonal loading of Tarraleah station, a second canal from Clark Dam to Tarraleah was completed in 1955.

Early in 1939, it was decided to make full use of the Great Lake storage by increasing the peak capacity at Waddamana. War conditions impeded progress, but by the end of the war two 12,000 kW generators had been installed in a new power station, Waddamana "B", adjacent to the original station Waddamana "A". A third unit installed in 1946 and a fourth in 1949 brought the total to 48,000 kW. To enable a full peak capacity to be maintained at both Waddamana stations a duplicate of the original Waddamana canal was constructed during 1947-48.

Between 1930 and 1948, the generating capacity of the system was increased by 121,500 kW but the demand for power continued to increase rapidly and it was obvious that a greatly accelerated construction programme would have to be undertaken. Construction of the Tungatinah Power Development was started in 1948 and the Trevallyn Power Development in 1949.

The Tungatinah scheme draws water from three separate catchment areas located on the Central Plateau between the Great Lake (Shannon-Waddamana) and Lake St. Clair (Butler's Gorge-Tarraleah) catchments and control of practically the whole run-off from the Central Plateau has now been effected.

The principal catchment utilized by the Tungatinah scheme is drained by the Nive River. A 120-ft. high dam at Pine Tier diverts the waters of the Nive through 6½ miles of canal system to the first of a chain of four artificial lakes, created by dams constructed across the outlets from natural marshes and linked by large open cuts. From the southernmost lake, a tunnel and then five steel pipelines lead to the five 25,000 kW generators in

Tungatinah Power Station, 1,005 feet below on the Nive River just upstream from Tarraleah station on the opposite bank of the river. Power was first generated at Tungatinah in mid-1953 with a capacity of 125,000 kW. Water from the smaller Clarence River catchment is brought into one of the lakes in the Tungatinah system by means of a woodstave pipeline 5½ miles in length and the third catchment area utilized is the Lake Echo-Dee River catchment. Regulation of this catchment has been achieved by construction of a dam at Lake Echo to provide the main storage reservoir for the Tungatinah scheme, construction of the Lake Echo Power Station (one 32,400 kW generator) to utilize 568 feet of the difference in level between Lake Echo and Dee Lagoon, and the diversion of water from Dee Lagoon through 2 miles of tunnel to the main Tungatinah system.

The Trevallyn Power Development, the first constructed by the Commission outside the Central Plateau region, was undertaken primarily to meet the requirements of the aluminium industry. The waters of the South Esk River are diverted through 2 miles of tunnel and pipeline to a power station on the Tamar River near Launceston. Three 20,000 kW generators were installed in mid-1955 and a fourth unit has since brought the total capacity of Trevallyn Power Station to 80,000 kW.

(ii) New Capacity. The Hydro-Electric Commission is still engaged in the most progressive construction programme in its history. Since 1948, the generating capacity of the system has been increased by 274,600 kW to a total of 447,100 kW and present construction is planned to bring this total to 575,800 kW by 1960. There will still remain very considerable resources for future development as it is considered that at least 2,400,000 kW can be economically developed.

The Wayatinah Power Development, now under construction, will comprise two power stations and headworks to utilize water which is in the main already regulated and which has been used several times. The volume of water available is much larger and the head smaller than in the case of other major stations. All the water which has passed through Tarraleah or Tungatinah stations will be diverted, by a weir across the Nive River below Tarraleah, through 4 miles of tunnel and then steel pipes to Wayatinah "A" Power Station lower down on the Nive River where 83,700 kW will be installed by 1960.

A dam across the River Derwent, just below its junction with the Nive, will create a small lake into which will flow all the water from Wayatinah "A" plus water collected by the Derwent below Clark Dam. One mile of tunnel and one mile of pipeline will lead the water to Wayatinah "B" Power Station on the Derwent three-quarters of a mile below its junction with the Florentine River. The lower station, Wayatinah "B", was constructed first and completed in 1957. Installed capacity is 32,250 kW.

There is every indication that the demand for power in Tasmania will continue to increase. The Commission is conducting extensive surveys and investigation of other schemes with a view to further construction after the completion of the present programme.

3. Power Usage by Secondary Industry.—The abundant and comparatively cheap supplies of electricity and other natural resources attracted to Tasmania a number of important secondary industries for which energy costs constitute a significant proportion of the total cost of production. Some of the more important organizations and their continuous power demands when plant is operating are as follows:—Electrolytic Zinc Company of Australasia Ltd., 73,000 kW; Australian Aluminium Production Commission, 30,000 kW; Australian Newsprint Mills Ltd., 19,000 kW; Associated Pulp and Paper Mills Ltd., 14,500 kW; Australian Commonwealth Carbide Company Ltd., 7,800 kW; and Goliath Portland Cement Company Ltd., 1,800 kW.

#### § 7. Commonwealth Territories.

- 1. Internal Territories.—(i) General. The electricity supply undertakings at Canberra in the Australian Capital Territory and at Darwin, Katherine, Tennant Creek and Alice Springs in the Northern Territory are operated by the Commonwealth Government.
- (ii) Australian Capital Territory. Supply was first established at Canberra during 1915. The Department of the Interior owns steam stand-by plant of 2,100 kW capacity which is operated in conjunction with the New South Wales Electricity Commission's generating equipment. The major portion of the territory's power requirements are supplied in bulk from the New South Wales inter-connected system. Total population served with electricity at 30th June, 1957 was 38,000 and the total number of ultimate consumers was 11,354. Rapidly increasing domestic, government, and commercial load will absorb appreciable amc unts of power from the Snowy Scheme.

(iii) Northern Territory. At Darwin, supply was established by the Town Council in October, 1934, but later, during April, 1937, responsibility for generation and supply was placed in the hands of the Northern Territory Administration. The power station

is equipped with diesel generating plant of 5,390 kW capacity. Two new 970 kW diesel sets were installed in 1955-56 and an additional 1,380 kW diesel set was installed during 1957, making a total capacity of 6,770 kW. At Alice Springs, the Power Station is equipped with diesel generating plant of 1,462 kW capacity, two 230 kW diesel sets being installed in 1956-57. An additional 520 kW diesel set will be installed during 1957-58, making a total capacity of 1,982 kW.

At Katherine, the power station is equipped with small diesel generating plant of 450 kW capacity and the diesel station at Tennant Creek was closed down in 1957, supply for the township being purchased in bulk from Peko Mines No Liability.

The total number of ultimate consumers served was 3,317 in 1956-57.

In 1956-57, the Department of Works selected a site on the water front of Darwin for a 15 megawatt steam driven generating set. This steam station is being designed to supply Darwin and suburbs when the present diesel station has reached its maximum economical capacity. No construction work has yet been undertaken on the project.

2. External Territories—Papua and New Guinea.—Responsibility for the operation and establishment of electrical undertakings in Papua and New Guinea is vested in the Administration of the Territory of Papua and New Guinea, whose headquarters are located at Port Moresby. The total generating capacity of the diesel engine driven generating sets amounts to 6,805 kW and of the hydro operated sets 3,132 kW. The generating capacity of the power plants at the main centres is—Port Moresby, diesel 2,504 kW, hydro, 3,000 kW; Rabaul, 1,320 kW; Lae, 660 kW; Madang, 410 kW; Samarai, 356 kW; Kavieng, 197 kW; Wewak, 70 kW; Lorengau, 50 kW; Goroka, hydro, 100 kW; Aiyura, hydro, 30 kW; and 309 kW distributed among outstations where generating capacity is between 5 kW and 60 kW. The new hydro-electric scheme at Rouna Falls, 22 miles from Port Moresby, is now completed and in full operation. The townships of Wau and Bulolo are still supplied by the Bulolo Gold Dredging Co., which operates a hydro-electric plant of 5,500 kW. This power is produced mainly to supply alluvial dredges and, in addition, now supplies power to the plywood mill at Bulolo.

The number of ultimate consumers served was 3,584 in 1955-56 and 4,258 in 1956-57. Vast hydro-electric potential exists in New Guinea and it has been estimated at 15,000,000 kW, but because of the island's location, absence of large load centres and lack of industrialization, only a small proportion could, at present, be economically developed.

In 1950, it was announced that the Commonwealth Government had joined with British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A new company was formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth holds 51 per cent. of the shares and has a controlling interest on a board of five members. The agreement for the formation and operation of the Company is administered by the Commonwealth Department of Supply, except in matters requiring compliance with the law of New Guinea, when responsibility for administration rests with the Department of Territories. Surveys and comprehensive investigations are in progress.

The following hydro-electric schemes are now in operation:—Port Moresby—at Rouna on the Laloki River, generating sets have been established with an initial capacity of 3,000 kW, with provision for expansion to 5,000 kW as stage 2, and to 9,000 kW as stage 3. The power station came into operation in January 1957. The present project utilizes only portion of the power available from the Laloki River and the economic ultimate development will be of the order of 40,000 kW. At Aiyura, a 30 kW hydro-electric station, for the Agricultural Experimental Station, was brought into operation in August, 1956.

At Goroka, one 100 kW hydroset is now in operation and a second 100 kW set is on order with provision for a further 200 kW.

Stream gauging and other preliminary investigations for hydro-electric schemes have been carried out at Lae, Rabaul, Madang, Wewak and Highlands Stations.

There are possibilities for major hydro-electric development in the following localities:—Rouna Falls (near Port Moresby), Upper Snake and Busu-Erap-Leron (near Lae), Upper Ramu (near Markham-Ramu divide—80 miles from Lae) and Hathor Gorge (on Purari River) with an estimated average power of 100,000 kW, 150,000 kW, 2 million kW, 250,000 kW, and 3 million kW respectively. These have estimated run-offs of 1,400; 6,000; 12,000; 1,000; and 75,000 cusees respectively.

In an area of 150,000 square miles of the Eastern New Guinea mainland, the power potential has been estimated at 150 kW per square mile which compares favourably with potentials of 170 kW per square mile for Switzerland and 95 kW per square mile for Norway.

#### D. STATISTICAL SUMMARY, 1950-51 AND 1955-56.

The following table shows statistics for each State separately and for the six States combined for 1950-51 and 1955-56 and relates to :—(i) the numbers and installed capacity of central electric generating stations, (ii) the values of production and output and the

average numbers of persons employed in the generating side of the electricity supply industry and (iii) the amount of electricity generated in both years and the number of ultimate consumers of electricity in 1955-56.

For further statistics of the electricity supply industry (years 1938-39 and 1951-52 to 1955-56), see Chapter VII.—Manufacturing Industry.

#### CENTRAL ELECTRIC STATIONS.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust:	W. Aust.	Fas.	Total.
		1950	0-5%.	!	<u>-</u> <u>-</u>		
Generating Stations—							
Government . No. Local Authority Companies	10 41 39	11 33 25	 36 9			1	46 161 147
Total	90,	69	45	34	113	3	354
Installed Capacity of Gene- rators—	·						
Steam '000 kW Hydro	945, 33	568 53	208	(a) (a)	103	(a) (a)	2,020 284
Internal combustion ,,	64	22	34	(a)	43	(a)	174
Total	1,042	643	246	(a)	146	(a)	2,478
Persons employed(b) No. Value of output(c) £'000	4,076 18,949	2,453 8,301	1,023 4,448	(a) (a)	1,023 2,827	(a) (a)	9,815 38,761
Value of output(c) £'000 Value of production(d) ,	7,763	3,141	1,207	(a) (a)	858	(a)	14,790
Electricity generated(e) Million kWh	4,251	2,876	1,115	713	470	1,078	10,503
		195	5–56.		<del>'</del>	<del></del>	
Generating Stations— Government No.	22	17		7	11	6	64
Local Authority ,, Companies ,,	32 24	20 20	52 4	16 19	37 42	2	157 111
Total	78	57.	57	42	90	8	332
Installed capacity of Gene- rators—	·'						
Steam '000 kW	1,463 98	831 117	442	(a) (a)	210	(a) (a)	3,251 648
Internal combustion ,,	100	41	34	(a)	51	(a)	241
Total	1,661	989	483	(a)	261	(a)	4,140
Persons employed(b) No.	5,348 <sub>1</sub> 37,877	3,007	1,513	(2)	949	(a)	12,111
Value of output(c) £'000 Value of production(d) ,	37,877 20,707	21,475 11,397	9,803 2,982	(a) (a)	6,334 2,664	(a) (a)	84,788 43,219
Electricity generated (e) Million kWh	6,505	4,628	1,786		753	1,794	16,670
Ultimate consumers(f) No.	999,165	751,461	335,609	241,300	133,920	105,292	2,566,747

<sup>(</sup>a) Not available for publication; included in the total for Australia.

(b) Average employment, in generating station, over whole year including working proprietors.

(c) Value, at generating station, of electricity produced plus certain earnings.

(d) Value added to materials and fuel in the process of generation.

(e) Total generated including that generated by factories for their own use.

(f) Approximate figures supplied by the electricity authority in each State.

An "ultimate consumer" is a person, business, undertaking, etc., that has contracted to receive electric power from a public or private organization supplying this service. The number of ultimate consumers is not synonymous with the number of persons served with electricity because one ultimate consumer may embrace three or four persons, e.g., in a household.

#### CHAPTER IX.

#### WATER CONSERVATION AND IRRIGATION.

# A. RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS. § 1. Introduction.

Official Year Book No. 37, pp. 1096-1141, contained a special article "The Conservation and Use of Water in Australia" prepared by Mr. Ulrich Ellis of Canberra. In subsequent issues, much of Mr. Ellis's article of a statistical nature has been advanced, as has the general information on the more important developments in this field, but for details of general, descriptive and historical matter reference should be made to the original article. Appended to the special article (pp. 1140-41) was a bibliography of selected books, reports, papers, etc., dealing with the development of the water resources of Australia and their conservation.

For further details on geographical and climatic features determining the Australian water pattern, reference should be made to Chapter II.—Physiography; on water supply and sewerage in metropolitan areas, cities and towns to Chapter XIX.—Local Government; and on the generation of hydro-electric power to Chapter VIII.—Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States was published on pp. 1073-9 of Official Year Book No. 40.

A map showing the extent of known artesian basins throughout Australia is shown on page 307 of this Year Book.

#### § 2. Water Resources and their Utilization.

- 1. Surface Supplies.—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. At present, therefore, it is impossible to estimate, with any degree of reliability, the total average annual flow of Australian streams, but it would probably amount to only a small figure in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 148; Mississippi, 474; and the ten main rivers of the United States of America, 900 (in the aggregate).
- 2. Major Dams and Reservoirs.—The table below lists existing major dams and reservoirs together with those under construction or projected as at June, 1957.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.		Location.	Capacity (Acre feet).	Height of Wall (Feet)	Remarks.
		Existing D	AMS AND	Reservoir	s.
Eildon	••	Upper Goulburn River, Victoria	2,750,000	250	Earthen embankment 3,300 feet long. Storage for irrigation and for the generation of electricity.
Hume	••	Murray River near Albury	1,452,000	140	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. Being increased to 2,500,000 acre feet. Hydro-electric power being developed.
Miena	••	Great Lake, Tas-	(a)948,500	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck	• •	Murrumbidgee River, New South Wales	837,000	264	Storage for irrigation and pro- duction of hydro-electric power.
Somerset	• •	Stanley River, Queensland	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station.
Lake Victoria	••	Murray River near South Australian border, in New South Wales	551,700	••	Natural storage for irrigation in South Australia.
Lake St. Clair	••	Central Highlands, Tasmania	(a)412,200		Improved natural storage for Tarraleah hydro-electric power station

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—continued.

Name.		Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
		EXISTING DAMS	AND RESER	VOIRS—cor	itinued.
Lake Echo	••	Lake Echo, Tasmania	(a)412,200	60	Storage for Lake Echo and Tur gatinah hydro-electric powe stations.
Waranga Wyangala	•••	Goulburn River, Victoria Lachlan River, New South Wales	333,400 303,900	190	Sattons.  Earthen embankment, 23,800 fe long. Irrigation storage.  Storage for domestic, stock an irrigation purposes and fo generation of hydro-electrons.
Rocklands		Glenelg River, Vic-	272,000		Part of Wimmera-Mallee dome tic and stock water supp
Clark		Derwent River, Tas-	(a)253,400	200	system. Serves Tarraleah hydro-electr
Avon	••	mania Avon River, New South Wales	173,800	232	power station. Part of Sydney water supply.
Lake Brewster	••	Lachlan River, near Hillston, New South Wales	123,900	••	Storage of rural water supplie for the lower Lachlan.
Cairn Curran	••	Loddon River, Vic-	120,600		Storage for irrigation.
Glenmaggie	••	Gippsland, Victoria	106,000	100	Storage for irrigation. Being increased to 154,300 acre fee
	AMS	AND RESERVOIRS U	INDER CON	STRUCTION	OR PROJECTED.
Burdekin Falls	• •	Burdekin River, North Queensland	6,584,000	150	Projected for generation of hydroelectric power, irrigation are
Adaminaby	••	Eucumbene River, New South Wales	3,500,000	390	flood mitigation. Under construction as part of Snowy Mountains Hydro electric Scheme. Storage
Menindee Lakes I ject	Pro-	Darling River near Menindee, New South Wales	2,000,000	••	water commenced June, 195 Part of Darling River water conservation scheme—under construction.
Warragamba	••	Warragamba River, New South Wales	1,694,900	373	Under construction for Sydne water supply. Also provid for generation of hydro-ele
Jindabyne	• •	Snowy River, New South Wales	1,100,000	274	tricity and flood mitigation. Projected as part of Snov Mountains Hydro-electr Scheme.
Burrendong	••	Macquarie River, near Wellington, New South Wales	914,000	193	Under construction for rur water supplies.
Blowering	• •	Tumut River, New South Wales	800,000	300	Projected as part of Snov diversion scheme.
Warkworth	••	Wollombi Brook (Hunter Valley).	400,000	100	Projected as a flood mitigation dam for the Hunter Valley.
Keepit	••	New South Wales Namoi River, near Gunnedah, New South Wales	345,000	176	Under construction for run water supplies.
Arthurs Lakes	••	near Great Lake,	(a) 339,000	50	Projected as part of Great Lal hydro-electric power develo
Tinaroo Falls	••	Tasmania Barron River, North Queensland	320,000	133	ment Under construction for irrigation purposes in the Marceba-Dir
Glenbawn	••	Hunter River, near Scone, New South	293,000	251	bulah area. Under construction as part Hunter Valley conservation
Tantangara	••	Wales Murrumbidgee River, New South Wales	200,000	150	work. Projected as part of Snov Mountains Hydro-electr
Wellington	••	Collie River, Western Australia	150,000	110	Scheme. Existing dam to be enlarged for supply of water to irrigation districts and to agricultur areas and towns.
Koombooloomba	••	Tully River, North Queensland	146,000	123	Under construction for hydr electric and possibly irrigation
Upper Yarra	••	Yarra River, Victoria	110,000	270	purposes. Under construction for Melbour water supply.

- 3. Irrigation.—(i) History. For some brief remarks on the history of irrigation in Australia referring to the efforts of the Chaffey Brothers and to the Victorian Irrigation Act in 1886 see issues of the Official Year Book prior to No. 39. Trends in irrigation practice in more recent years were described in Official Year Book No. 37, p. 1009.
- (ii) Extent and Nature of Irrigated Culture. About half of Australia's irrigated acreage is in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In those areas served by the Murray and its tributaries, irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes. Approximately half of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where vegetables, orchards, fodders, and pastures are served. Large scale irrigation schemes have not been developed in Tasmania or the Northern Territory although reference is made on page 328 to investigations at present being carried out in the Northern Territory to determine the availability of irrigation water for rice production.

The following table shows the area of land irrigated in each State during the years 1952-53 to 1956-57:—

## AREA OF LAND UNDER IRRIGATED CULTURE.

				(Atres	·/				
Season.	N.S.W.	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1952–53 1953–54 1954–55 1955–56 1956–57	494,900 540,243 616,264 379,611 525,236	821,025 863,563 634.334	139,414 136,019	62,062 69,452 70,987	34,247, 36,130 37,164		151		1,614,071 1,739,526 1,207,613

(a) Source: Water Conservation and Irrigation Commission. Water Supply Commission.

(b) Source: State Rivers and

The next table shows the area of land irrigated in each State during 1956-57 according to the nature of irrigated culture.

#### AREA OF LAND UNDER IRRIGATED CULTURE, 1956-57.

(Acres.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Rice Vegetables Fruit Vineyards Sugar-cane Hops Cotton Other Crops (in-	50,417 18,481 18,144 12,547 (c)	17,410 31,732	1 2600	16,984 24,664	5,137	1,117 773  1,330	 69  	 196 6  	50,417 82,090 } 160,802 57,158 1,330 407
cluding Fodder and Fallow land)	100,901	83,689	(d)29,790	3,038	1,627	1,469	24	474	221,012
Total, Crops	200,490	179,424	116,111	56,411	15,247	4,689	168	676	573,216
Pastures	324,746	e 675,758	5,561	(f)19,707	23,320	7,421		209	1,046,722
Total	525,236	855,182	121,672	66,118	38,567	12,110	168	885	1,619,938

(a) Source: Water Conservation and Irrigation Commission.
(b) Source: State Rivers and Water Supply Commission.
(c) Included in Other Crops.
(d) Includes Tobacco, 6,350 acres.
(e) Excludes lucerne fed off, included in "Other Crops".
(f) Includes lucerne for pasture.

(iii) Research. :Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research:Organization, often in collaboration. Special attention is being given to the following:—high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle; growth problems affecting plants and trees; the prevention of evaporation from water storages; and the potability of saline waters for stock.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations:—Merbein (Victoria)—horticultural problems, particularly of the dried vine fruits industry; Griffith (New South Wales)—the influence of irrigation on plant-life (using horticultural trees as test plants), irrigation methods, land drainage and soil structure; Deniliquin (New South Wales)—pastures; and the Kimberley Research Station (Western Australia)—tropical crops and pastures. In the maintenance of Merbein and Griffith Stations, the Commonwealth is assisted, financially and otherwise, by the New South Wales Water Conservation and Irrigation Commission, by the Dried Fruits Export Control Board and by private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established. Research is also conducted in the field of water percolation in relation to soil structure.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. The objectives are:—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organization; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

- 4. Preservation of Catchments.—Since water conservation commences on the catchments, it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimize the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years, efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.
- 5. Sub-surface Supplies.—(i) General. While a more or less complete general; picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies (artesian, sub-artesian and ground water), in view of their importance as the basis of settlement over large areas of Australia.

The extent of the artesian basins—particularly the Great Artesian Basin—has been fairly accurately determined, while the use of sub-artesian supplies is extensive and more development is possible. The shallower ground-water supplies, however, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed to any degree, except in a few localities.

(ii) Artesian and Sub-artesian Supplies. Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent. A map of Australia showing the extent of the known artesian basins appears on page 307 of this Year Book.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 670,000 square miles, comprising about 430,000 in Queensland, 80,000 in New South Wales, 120,000 in South Australia and 40,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal:—

PRINCIPAL WATER-BEARING BASINS: AUSTRALIA.

Name.	State.	Geological Age of Chief Aquifers.	Approxi- mate Area.	Depth to Pressure Water.
			Square Miles.	Feet.
Great Artesian	Queensland, New South Wales, South Australia and Northern Territory	Pliocene-Permian	670,000	Up to 7,000
Desert and Fitzroy Murray	Western Australia Victoria, New South Wales: and South Australia	Cainozoic-Palaeozoic Miocene-Oligocene	160,000	100 to 1,500 100 to 900
Eucla	Western Australia, South Australia	Pliocene-Miocene	68,000	300 to 2,000
Barkly	Northern Terri- tory, Queensland	Cretaceous, Cambrian and Upper Pre- cambrian	57,000	150 to 1,000
North-west	Western Australia	Tertiary Permian	40,000	230 to 4,000
South-west	Western Australia	Recent, Jurassic	10,000	200 to 2,500
Pirie-Torrens	South Australia.	Recent, Pleistocene	4,000	Up to 600
East Gippsland	Victoria	Pleistocene-Oligocene	2,500	200 to 1,800
Adelaide	South Australia	Recent, Oligocene	-,	
Basins of Ord- Victoria Region	Northern Terri- tory, Western Australia	Mainly Cambrian and Permian	Unknown	Unknown

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has been stated to exceed 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but it is unsuitable for plant life, while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground-water supplies.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, but it is now considered that while many of the bores will ultimately cease to flow, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by sandstone outcrops. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or "bore drains" and the careless use of water. (For greater detail on this subject see Official Year Book No. 37, pp. 1103-4.)

(iii) Ground Water. Ground water supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes. Two of the most important of these supplies are in New South Wales. The Hunter District Water Board pumps 15 million gallons a day for general use from the Tomago coastal sands near Newcastle and at Botany, Sydney, private industry pumps 5 million gallons a day for its own use from similar sands.

Recent exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day.

#### § 3. National and Interstate Aspects.

1. General.—As the Commonwealth Constitution makes special reference to water problems, both the Commonwealth and the State Governments have an interest in the control and conservation of water. The main responsibility for control of water resources resides in the individual State governments, but as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945, national aspects of water conservation and use were emphasized. The report recommended that to obviate lack of co-ordination, an all-Australian plan, having the assent of the various governments be adopted, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

In 1946, a conference between the Commonwealth and States agreed to revive the Irrigation Production Advisory Committee first established under the authority of the Australian Agricultural Council in 1938. Its functions are:—(a) to prepare for the consideration of the Australian Agricultural Council or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary.

2. Murray River Scheme.—(i) General. The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (980 miles), the Darling (1,700 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,506,000 acre feet; Murrumbidgee River, 2,280,000 acre feet; Goulburn River (including Broken River), 2,502,000 acre feet; Darling River, 2,224,000 acre feet; and Ovens River, 1,169,000 acre feet. Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, fat lambs, poultry, eggs and pigs.

For a brief summary of the historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia, see issues of the Year Book prior to No. 39. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(ii) River Murray Waters Agreement. Under the Agreement, construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in lockages and evaporation losses other than in the lakes at the Murray mouth, together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Official Year Book No. 40 (p. 1065) and earlier issues.

At a Conference of Ministers held in July, 1949, to consider the diversion of the Snowy River, it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 400,000 acre feet per annum would be added to the Murray River (see para. 4, Snowy Mountains Hydro-electric Scheme, page 303) and that a storage of not less than 1,500,000 acre feet should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and found that an increase in capacity of 500,000 acre feet in storage on the Upper Murray River above Albury was the maximum that was economically justifiable for the regulation for irrigation purposes of the waters of the Upper Murray River and of waters added from the Snowy River. The Commission agreed that this increase could best be provided by increasing the size of the Hume Reservoir from its previously designed capacity of 2,000,000 acre feet to 2,500,000 acre feet, but if additional storages for hydro-electric purposes become justified in the future further increases would best be provided at some other site. It subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for this enlargement of the Hume Reservoir to 2,500,000 acre feet. A conference of Ministers considered the recommendation in July, 1954 and agreed to the enlargement. In addition, it was agreed that the Commission should be given power to construct regulators and to carry out such other work on the River Murray between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7th April, 1955.

The total estimated quantity of water diverted from the Murray and its tributaries (under the River Murray Agreement, in 1955-56 for irrigation and other purposes, including impounding in dams, was as follows (in acre feet):—New South Wales, 1,008,000; Victoria, 3,108,000; South Australia, 190,500; a total of 4,306,500 acre feet. Owing to the floods in the latter half of 1956 the quantity of water diverted in 1956-57 was considerably less than that for the preceding year.

(iii) River Murray Works. One of the major works of the Murray River Scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 110 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately one mile. Work is now in progress on the enlargement of the reservoir to its recently approved capacity of 2,500,000 acre feet.

The Yarrawonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction and the other below the Lachlan Junction.

The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage, with a capacity of 551,700 acre feet and a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. Work has recently been completed on the enlargement of the inlet channel to Lake Victoria to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 837,000 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 2,750,000 acre feet; Waranga (Goulburn), 333,400 acre feet. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems. No storages exist on the Murray in South Australia.

3. New South Wales-Queensland Border Rivers Agreement.—The New South Wales-Queensland Border Rivers Agreement came into effect on 1st July, 1947. The Agreement provides for the construction of certain works on parts of those portions of the Severn, Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland, for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Commission to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir in the Macintyre River at Goondiwindi and the existing weir in the Barwon River at Mungindi. The costs of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharged from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

The Water Conservation and Irrigation Commission of New South Wales, which is the constructing authority for the dam, carried out investigations of several dam sites on the Dumaresq River near Mingoola Station Homestead which is approximately 39 miles from Tenterfield. Foundation drilling supplemented by a geophysical survey carried out by the Commonwealth Bureau of Mineral Resources disclosed unfavourable foundation conditions at all sites, the depth of alluvium overlying sound rock exceeding 150 feet in all cases. In an endeavour to obtain more economical storages, investigations were extended to tributary streams and superficially suitable sites have been located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. It is now intended to do exploratory drilling of the tributary sites.

The Irrigation and Water Supply Commission of Queensland is the constructing authority for the new weirs and regulators. The construction of Bonshaw and Cunningham Weirs on the Dumaresq River was completed in January, 1953 and June, 1954 respectively.

Investigations are proceeding and designs are being prepared for a weir and regulator on the Barwon River at the offtake of the Boomi River and construction of a low level weir to establish a pumping pool at Glenarbon on the Dumaresq River has been authorized. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission. Until a dam has been constructed, it is unlikely that any weirs, other than those referred to above, will be required.

The catchments for the border streams (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland) and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

4. Snowy Mountains Hydro-electric Scheme.\*—(i) General. Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament in July, 1949 passed the Snowy Mountains Hydro-electric Power Act setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme will be constructed in two parts, the first being known as the Snowy-Murray Development where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne to the Swampy Plains River in the Murray Valley, and the second as the Tumut Development, in which water will be diverted by tunnel from a dam at Adaminaby on the Eucumbene River, a tributary of the Snowy, to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of seven major dams (with a total storage capacity of approximately 7 million acre feet), fifteen power stations, more than 80 miles of large diameter tunnels, and over 330 miles of racelines at high elevations.

Latest estimates indicate that the total cost will be approximately £419 million. The scheme is the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) Snowy Mountains Hydro-electric Power Act 1949. The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner, who is assisted by two Associate Commissioners. The functions of the Authority are defined in the Act as follows:—(a) to generate electricity by means of hydro-electric works in the Snowy Mountains area and (b) to supply electricity so generated to the Commonwealth for defence purposes and for consumption in the Australian Capital Territory. The general powers of the Authority as defined in the Act are as follows:—For the purpose of performing its functions the Authority shall have power to construct, maintain, operate, protect, manage and control works—(a) for the collection, diversion and storage of water in the Snowy Mountains Area; (b) for the generation of electricity in that area; (c) for the transmission of electricity generated by the Authority; and (d) incidental or related to the construction, maintenance, operation, protection, management or control of any of the works specified above. The Act provides that the Authority may sell to a State, or to an authority of a State, electricity generated by the Authority which is not immediately required by the Commonwealth for defence purposes or for consumption in the Australian Capital Territory.

See also Chapter VIII.—Electric Power Generation and Distribution, p. 272.
 For more detailed information see special article by the Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson) which appeared in Chapter XXIX.—Miscellaneous, of Official Year Book No. 42.

(iii) The Authority's Objectives and Programme. The two basic objectives are the production of electricity and the diversion of water inland.

The first power station, at Guthega, came into service in April, 1955. Additional generating capacity is scheduled to become available progressively.

By the end of 1959, the Snowy Scheme will supply the Murrumbidgee River with approximately 300,000 acre feet per annum of additional water and by 1962 this amount will have increased to 500,000 acre feet per annum. Ultimately the scheme will provide approximately 1,818,000 acre feet per annum of additional regulated water of which 1,020,000 acre feet will go to the Murrumbidgee and 798,000 acre feet per annum to the Murray.

The New South Wales Department of Public Works, on behalf of the Authority, is supervising the construction of the Adaminaby Dam, for which a contract was let in May, 1956. Construction of the dam was sufficiently advanced to permit closure of the diversion tunnel gates on 22nd June, 1957 and the waters of the Eucumbene River are now being stored for later use through the Tumut Power Stations. The Department of Main Roads and the Snowy River Shire are reconstructing over 90 miles of existing roads. Construction is now in progress on the 14 mile Eucumbene–Tumut Tunnel, Tumut Pond Dam, the 8,000 feet pressure tunnel leading to Station T1, and on Station T1 itself. Designs for the Tooma–Tumut Diversion, the T2 Project and the Murrumbidgee–Eucumbene Diversion were sufficiently advanced to permit the calling of tenders for these works before the end of 1957.

#### B. STATES AND TERRITORIES.

#### § 1. Australian Local Pattern of Water Conservation and Use.

The foregoing sections deal with water conservation and irrigation in Australia generally and with national and interstate projects. The following survey indicates the local pattern of water resources and the steps taken by the State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria, almost every form of water scheme is in operation. In New South Wales, major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

#### § 2. New South Wales.

- 1. General.—(i) Rainfall and History. In issue No. 37 of this publication (p. 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme and river improvement works.

Under the Water Act, the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947, see page 302 of this Chapter.

2. Schemes Summarized.—(i) Location and Type. The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam and Lake Brewster on the Lachlan, a tributary of the Murrumbidgee. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, Flood Control and Irrigation Districts and River Improvement Districts. There are five Irrigation Areas:—The Murrumbidgee Irrigation Areas consisting of 451,251 acres served with water through a channel system stemming from the river at Berembed Weir; the Coomealla Irrigation Area of 34,693 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,549 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee; and the Tullakool Irrigation Area of 18,006 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) below.

(ii) Works. The capacities of the main storages (in acre feet) are :-

Murray:—Half share of Hume Reservoir, weirs and locks to Wentworth (835,420); Stevens Weir, Edward River (7,165).

Murrumbidgee:—Burrinjuck Dam (837,000); Berembed Weir (10,000); Redbank Weir (7,360); Maude Weir (6,740).

Lachlan: —Wyangala Dam (303,900); Lake Brewster (123,900); Lake Cargelligo (29,435); Jemalong Weir (2,200).

Water from the Hume Reservoir is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for rice and other cereals and for pastures in the Tullakool Irrigation Area, for domestic and stock supply and irrigation in the Berriquin, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. Balance storages at Lake Cargelligo and at Lake Brewster conserve water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplied the districts of Jemalong and Wylde's Plains, serving an area of 224,556 acres. Proposals for future development include provision of a head storage on the Belubula River.

The approximate total length of channels (including main canals) constructed by the Water Conservation and Irrigation Commission in New South Wales is 2,957 miles. The approximate length of drains and escape channels is 860 miles, and the total length of pipe lines is approximately 50 miles, making a grand total of 3,867 miles of channels and pipe lines, etc.

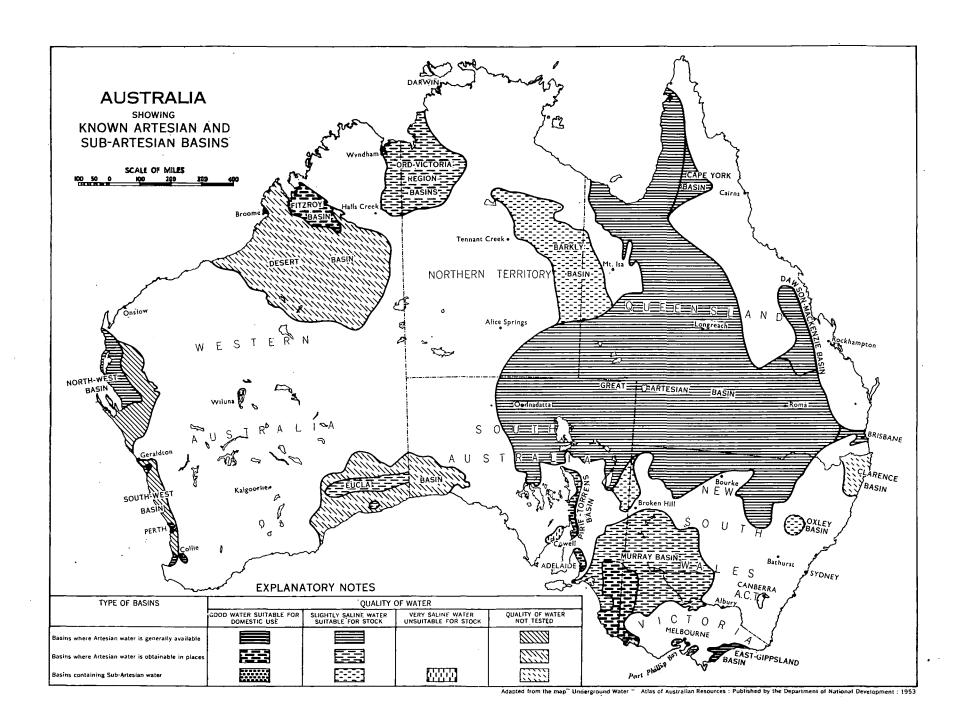
(iii) Extent of Systems and Nature of Irrigated Culture. The following table shows the areas of the various irrigation systems and particulars of the areas under irrigated culture in New South Wales during 1956-57.

## AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: NEW SOUTH WALES, 1956-57.

(Acres.)

		,				A	rea und	er Irrigate	d Cultu	ire.			
System, etc.		Total Area.		Other Cer- eals	Luc-	Other Fod-	Pas	ures.	Vine-	Orch-	Vege	Fal- low Land and	
		 	Rice.	Grown for Grain.	erne. (a)	der Crops.	Sown.	Nat- ural.	yards.	Orch- ards. (c)	tables.	Mis- cel- lan- eous.	Total.
Irrigation Areas— Murrumbidgee (v the Areas)		451,251	30,182	2,511	2,911	1,190	61,704	1,934	4,660	12,144	4,108	20,589	141,933
Lands adjacent plied under a ment	gree-	(4)		4	92	2	2 522	10	1	77.	6	41	3,730
Coomealia Curlwaa	•••	(d) 34,693 10,549	• • •	:: 1	9 24		3,533	::	4,261 579	829 1,031	10 10	::	5,109 1,680
Hay Tullakool	::	6,806 18,006	840	160	42 80	59	1,083 4,215	50	::	:: ;	!	630	1,234 5,925
Total		e 521,305	31,022	2,675	3,158	1,287	70,535	1,994	9,502	14,081	4,134	21,223	159,611
Irrigation Districts- Benerembah	-	112,818	4,974	1,335	410	150	17,187	60		!	219	3,656	27,991
Tabbita	• •	10,745	350	1	20		1,120		• • •	!	40	90	1,620 6,200
Wah Wah Berriquin	• •	571,358 779,564	• •	2331	385 30,317	250	4,140 120,153	100 1,290	•••		15	1,325 3,030	158,126
Wakool	• • •	493,730	6,700	3,321 350	1,510	470	47,020	1,060	::	•• !	50	850	58,010
Denimein	• • •	147,005	3.396		1,103	522	9,269	3,836	- :: i	12		100	18,425
	ylde's		-,		-,		-,=05	2,000				!	
Plains	•••	224,556		1,325	3,352	322	7,113	2,985		ا ا		925	16,022
Gumly Deniboota	••	345 306,907	3,975	26 50	63 212	·i10	3,825	35 4,082	::			544	199 12,798
Total	••	2,647,028	19,395	6,594	37,372	1,824	209,827	13,448	• • •	31	380	10,520	299,391
Flood Control Distr.		375,000		i				(f)94,118					(ƒ)94,118
Medgun	::	272,800						(f)61,760	-:-		::		(f) 61,760
Total	••	647,800			••			f 155,878		·	••		f 155,878
Irrigation Trusts—									==0	120			900
Pomona Blairmore	• •	1,580 315	• •		• •	••	• • •		770	130	• •	• • •	(d)
Bringan	• •	4,933	•	• • •	• •	ا ۱۰۰	• •	::	• •				ίď
Bungunyah-Kora	leigh	1,810	::	1 ::	• •	50	• • •	· · ·	996	72	80		1,198
Glenview	٠	661		::	60			320		70			450
Goodnight	• •	1,167							550	41	5	8	, 604
Bama	••	3,446		<u> </u>						·	••		(d)
Total	••	13,912			60	50	••	320	2,316	313	85	8	(e) 3,152
Water Trusts—Don and stock supplies Licensed Diversion.		2,914,831			٠								
To irrigate	•••	(d)			11,196	4,398	25,970	2,652	729	3,719	13,882	(h) 536	63,082
Grand Total(	e)	(d)	50,417	9,269	51,786	7,559	306,332	174,292	12,547	18,144	18,481	32,287	i 681,114

<sup>(</sup>a) Includes grazing and cutting. (b) Perennial and annual self-seeding. Perennial amounted to 39,183 acres. (c) Citrus and deciduous. Deciduous amounted to 6,825 acres of which 6,144 acres were in the Murrumbidgee Irrigation Area. (d) Not available. (e) Incomplete. (f) Area irrigable; details of area actually irrigated are not available. (g) Excludes domestic and stock supplies for which particulars are not available. (h) Tobacco. (f) Includes Flood Control Districts; but excludes some Irrigation Trusts for which information is not available.



3. Murrumbidgee Irrigation Areas.—(i) Description. These areas comprise about a third of the State's irrigated acreage and in 1956-57, together with lands adjacent supplied under agreement, received 318,388 acre feet of the total water allocated within the State for stock, domestic supply and irrigation (1,112,236 acre feet). They are served by the Burrinjuck Dam (capacity 837,000 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where the average annual rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembed Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate approximately 857 miles and drainage channels 785 miles. In addition, approximately 374 miles of supply channels run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control.

The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations and was sparsely populated. Population was 12,000 in 1923, 15,000 in 1929, 20,000 at the 1947 Census and 24,000 at the 1954 Census. At the 1954 Census the population of the Yanco district (with Leeton as the centre) was 10,000 and the population of the Mirrool Area (with Griffith as the centre) was 14,000.

- (ii) Administration. The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1957, was 377,248 acres, including 38,918 held for short lease grazing, agriculture, etc.
- (iii) Production. Since the inauguration of the scheme in 1912 the volume of production from the area has greatly increased. Numbers of new crops are grown while the volume of the major products of the area prior to the scheme, such as wool and livestock for slaughtering, has expanded considerably. The principal products to-day are: wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans and root vegetables.

Rice growing was initiated on the Murrumbidgee Irrigation Areas in 1924 and has since become the most important crop grown in the area. In 1956-57, the total area sown in the Murrumbidgee Irrigation Areas was 30,182 acres and the total quantity of water delivered for the rice crops was 154,672 acre feet.

In a normal season, the water supplied for rice represents about one-half of the total delivered on the Murrumbidgee Irrigation Areas.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle about 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). The annual sales turnover of the Leeton cannery in recent years has exceeded £2,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. Other Irrigation Areas.—The Curlwaa, Coomealla, Hay and Tullakool Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for the operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,549 acres of which 7,754 acres were occupied at 30th June, 1957. Production consists of dried vine fruits, deciduous fruits and fodder crops.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 34,693 acres of which 30,948 acres were occupied at 30th June, 1957. Production consists of vine and citrus fruits. An extension of the Coomealla Irrigation Area has been completed in recent years to provide irrigation farms for ex-servicemen and 100 ex-servicemen have been placed on the new farms.

Tullakool Area, formerly part of the Wakool Irrigation District, comprises 18,006 acres of which 14,396 acres are occupied. Production consists of fat lambs, wheat and rice.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which, 6,240 acres are occupied. Production comprises dairy products, fat lambs, sheep, wool and fodders.

5. Irrigation Districts.—These Districts are set up under the Water Act for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts in that the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following are the districts or provisional districts constituted and the areas of land benefited:—Murray River—Wakool District (completed) 493,730 acres, Berriquin Provisional District (completed) 779,564 acres, Deniboota Provisional District (first section completed) 306,907 acres, Denimein Provisional District (completed) 147,005 acres, Jernargo Provisional District (certain portions of which have been included in Berriquin District) 4,505 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; Murrumbidgee River (completed)—Benerembah District 112,818 acres, Tabbita District 10,745 acres, Wah Wah Provisional District 571,358 acres, Gumly Provisional District 345 acres; Lachlan River (completed)—Jemalong and Wylde's Plains District 224,556 acres.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1957, the total length of completed canal and channels in Berriquin District was 870 miles, including Mulwala Canal 75 miles, Berrigan channel 22 miles, subsidiary channels 729 miles, escape channels 33 miles and cross drainage channels 11 miles. Off-take capacity of the Mulwala Canal is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be completed.

Wakool, with 384 miles of channel, contains 292 holdings and the area developed by irrigation comprises about one acre in 9 of the total area. The total area irrigated in 1956-57 was 58,010 acres and water supplied was 103,554 acre feet. Crops comprised fodders, pastures, rice, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Total irrigated acreage was 158,126 at 30th June, 1957. Sheep and wheat growing are the main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1956-57 season for irrigation, etc. was 94,184 acre feet, and the area irrigated was 35,811 acres, including rice and other cereals, pastures, and fodder crops.

For the same season, 23,260 acre feet of water were supplied from the Lachlan River to irrigate a total area of 16,022 acres within the Jemalong and Wylde's Plains Districts.

6. Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.—
The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed, they are handed over to trustees to administer.

The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted (the area in acres of each district is shown in parentheses)—Murray River—Tuppal Creek (78,080), Bullatale Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,980), Minnie Bend Flood Prevention (2,190); Murrumbidgee River—Yanco, Colombo and Billabong Creeks (1,001,210); Lachlan River—Torriganny, Muggabah and Merrimajeel Creeks (170,240) Condobolin West Weir (4,480), Marrowie Creek (292,640), Ulonga (71,655), Micabil Weir (11,500); Miscellaneous—Algudgerie Creek (9,760), Nidgery Weir (46,880), Great Ana Branch of Darling River (967,339), Collarenebri town water supply (117)—making in all a total area of 2,914,831 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parentheses):—Hunter River—Blairmore (315); Murray River—Bama (3,446), Goodnight (1,167), Bungunyak-Koraleigh (1,810), Glenview (661), Bringan (4,933); Darling River—Pomona (1,580)—making in all a total area of 13,912 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres), the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 50 holdings. Another district, Medgun (272,800 acres) near Moree in the North-West is also in operation. There are 20 holdings in the district and the area benefited by controlled floodings is approximately 61,800 acres.

7. River and Lake, and Farm Water Supplies.—During recent years, the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and also financial assistance, are made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

8. Underground Water.—Extensive use is made of artesian, sub-artesian, and shallow underground water. Fractured Palaeozoic rocks in the South-east corner of the State provide useful supplies of ground water usually at depths of 50-250 feet. Eighty thousand square miles in the northern and western portions are covered by the Great Artesian Basin. Eighty-one Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover about 5 million acres and water is distributed through approximately 7,400 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1957, was 1,036 and the estimated total daily flow from 581 flowing bores was 59 million gallons. The estimated flow in 1914-15 was 99 million gallons a day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet), which also has the greatest flow, namely 1,115,000 gallons a day. Of the total number of bores sunk, 238 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Districts.

Since 1912, the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1957, the total constructed by the Commission's plants was 4,714 and their average depth was 304 feet.

9. Future Programme.—The programme of post-war development already in hand includes the provision of eighteen dams and storages, eight diversion weirs, and flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie, while legislation has been passed authorizing the construction of a flood control dam at Warkworth in the Hunter Valley and a storage dam at Blowering on the Tumut River. In the case of Burrendong Dam, work has been temporarily suspended in order to enable the Water Conservation and Irrigation Com-

mission to concentrate its available resources on the speedy completion of works having higher priority. The Menindee Lakes storage project—part of the scheme for conserving the waters of the Darling River—has been recommenced, while Glenbawn Dam on the Hunter River is substantially complete. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. The total estimated capacity of all proposed new storages is 5,500,000 acre feet. At 30th June, 1957 work was in hand to begin construction of a diversion weir at Gogeldrie on the Murrumbidgee River from which water will be supplied to a new irrigation area (Coleambally) on the south side of the river containing not less than 800 new irrigation farms. Later, development will extend to a new area on the north side of the river.

10. Hydro-electricity.—A survey of the use of water for power generation in New South Wales may be found in the previous chapter (see page 279).

#### § 3. Victoria.

- 1. General.—(i) Rainfall. Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. The passing of the Irrigation Act of 1886 put the control of surface waters under the Crown, provided for the establishment of Irrigation Trusts and marked the beginning of irrigation development. In 1905, the Water Act established the State Rivers and Water Supply Commission and gave it control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally constituted Waterworks Trusts or local governing bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and local governing bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

2. Systems Summarized.—(i) Works. Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 4,962,550 acre feet (including Victoria's share of the Hume Reservoir). By means of channels, bores, etc., one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 105,000 acres in 1906 to 855,200 acres in 1956–57 and irrigation channels supply 2,150,000 acres.

The Commission controls 38 large reservoirs and 240 subsidiary storages. The capacities of the principal storages in acre feet within the various systems at 30th June, 1957 were as follows:—

Goulburn System:—Eildon Reservoir, 2,750,000; Goulburn Weir, 20,700; Waranga Basin, 333,400; Total, 3,104,100; Murray-Loddon System:—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 835,420; Cairn Curran, 120,600; Kow Swamp, Laanecoorie, Kerang-North-West Lakes, Lake Boga and Lake Cullulleraine, 148,210; Total, 1,071,230; Wimmera-Mallee:—Rocklands, 272,000; Total, 538,900; Maffra-Sale:—Glenmaggie, 106,040; Coliban:—62,730; Werribee:—34,900; Mornington Peninsula:—5,800; Otway:—1,080; Miscellaneous:—4,770; Total:—4,962,550.

Irrigation channels extend 5,000 miles, domestic and stock channels 9,500 miles and

Irrigation channels extend 5,000 miles, domestic and stock channels 9,500 miles and drainage and flood protection channels 2,000 miles, a total of 16,500 miles. In addition, the Commission controls 1,200 miles of piping, comprising 250 miles of mains and 950 miles of reticulation. Farm holdings served with water total 37,500 and another 7,000 holdings are in drainage or flood protection districts. Urban districts with a reticulated water supply number 282, of which 131 are served by the Commission's channels and pipelines and 151 are supplied by Trusts under the supervision of the Commission. The total number of persons served by a reticulated water supply is approximately 675,000 or 70 per cent. of the State's population outside Greater Melbourne.

To 30th June, 1957, the net capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £93,979,000, two-thirds of which was in respect of irrigation.

Of this net capital liability, at 30th June, 1957, £81,649,000 was borne by the State and £12,330,000 was borne by the water users. Waterworks Trusts and local governing bodies had a net capital liability of £9,130,000 at 30th June, 1957, of which £3,978,000 was borne by the State and £5,152,000 by the Authorities.

(ii) Extent of Systems and Nature of Irrigated Culture. Although the area irrigated is less than 2 per cent. of the State, it yields approximately 15 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation systems and the areas under irrigated culture during 1956-57.

### AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA, 1956-57.

(Acres.)

						Area u	ınder Irr	igated C	ulture.			
System.		Total Area.		Luc-	Other	Pasti	ıres.	Vine-	Orch-	Market	Fallow and	ł
			Cereals.	erne. (a)	Fodder Crops.	Sown.	Nat- ural.	yards.	ards.	Gar- dens.	Miscel- lan- eous.	Total.
Goulburn		1,257,268	1,256	13,217	6,075	293,524	26,018	199	14,740	2,702	4,957	362,688
Yarrawonga Weir		377,591 267,324 35,730	103	3,161 23,173 236	2,008 422 60		32,517 3,159 76	6,373 38 24,223	1,148 3,536 1,493	939	2,152 72 269	
Total		680,645	2,726	26,570	2,490	205,575	35,752	30,634	6,177	3,160	2,493	315,577
	::	(b) 19,735 148,094	349 71	1,546 1,891	687 448		4,372 2,427	8	3,726 640	1,263 5,211	637 1,286	
D		(c) 45,000	2,983	7,852	2,287	43,828	9,041	15,752	6, <del>44</del> 9	5,074	3,868	97,134
Grand Total		2,150,742	7,385	51,076	11,987	598,148	77,610	46,593	31,732	17,410	13,241	855,182

- (a) Includes lucerne for both hay and pasture.

  Mildura Irrigation Trust only.
- (b) Area of Campaspe District only.
- (c) Area of First
- (iii) Production. The influence of irrigation on Victorian production has been considerable, the value of production from irrigation districts as estimated by the Commission having risen from £500,000 in 1905-6 to about £42 million in 1955-56. The major products of irrigated farms are: dairy products, livestock for slaughtering, wool, vine fruits, fresh and canning orchard fruits and vegetables.
- 3. Goulburn System.—This comprises the Eildon and Waranga Reservoirs, the Goulburn Weir and over 2,570 miles of distributary channels. The total capacity of these storages was 3,104,100 acre feet at 30th June, 1957. The Eildon Reservoir (capacity 2,750,000 acre feet) which was completed in June, 1955, is the largest dam in Australia and the largest earthen dam in the Southern Hemisphere. The enlargement of Eildon means that when the necessary distributary works are completed, the area at present irrigated from the Goulburn River can be practically doubled to 600,000 acres.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, and where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District. Following completion of Eildon Reservoir, the latter channel was duplicated to Waranga Basin.

Two main outlet channels issue from the Waranga Reservoir; one serves the Western part of the Rodney district, while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 196,000 acres east of the Goulburn; 602,000 acres between the Goulburn and Campaspe; 380,000 acres between the Campaspe and Loddon; and 80,000 acres west of the Loddon—a total of 1,258,000 acres.

The main products of the Goulburn districts are dairy products, fruit, wool and fat lambs. The development of the fruit canning industries is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—normally represents about two-thirds of Australia's total production of canned peaches, pears and apricots.

4. Murray River System.—The waters of the River Murray are used to supply an area of more than 700,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, except Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, which is served from Yarrawonga Weir, comprises 267,000 acres with 550 miles of distributary channels. This district lies west of Yarrawonga between the River Murray and Broken Creek, its main products being dairying, fat lambs and deciduous fruit. A major post-war development has been a Soldier Settlement Scheme involving 60,000 acres. With the exception of the necessary drainage works, which are under construction, this project is complete.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 377,600 acres through 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Robinvale Irrigation District, between Swan Hill and Mildura is a soldier settlement project established after the 1939–45 War. Set up on modern lines, the 3,000 acres irrigated annually are showing good yields of fruit. About ninety per cent. of the area is devoted to dried vine fruits, and the remainder to orchards.

Red Cliffs Irrigation District comprising 13,600 acres, of which, at present, 11,650 acres are irrigated, ranks first in importance among Victoria's pumping schemes. A system of main and distributary channels supplies every holding in the district. The district, originally set aside for soldier settlement, has been subdivided into 700 blocks. The area is planted mainly with vines and citrus. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 9,200 acres and contains over 300 holdings averaging about 30 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply 51,200 acres forming part of the Millewa Waterworks District,

Nyah Irrigation District is supplied with water diverted from the Murray by a highlift pumping plant, serving 3,840 acres in about 200 holdings devoted mainly to vineyards.

- 5. First Mildura Trust District.—The First Mildura Irrigation Trust—the only Irrigation Trust operating in Victoria—controls an area of 45,000 acres, of which 15,000 acres are irrigated. Of this area, some 80 per cent, is used for the production of vine fruit and the bulk of the remainder for citrus and other fruit. The Trust area produces approximately 15,000 tons of raisins, currants and sultanas each year. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels.
- 6. Wimmera-Mallee System.—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Grampians storages with a capacity of 538,900 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 72,000 acre feet of water is distributed through 6,500 miles of open channels and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. About 10,000 farmers' tanks are served. In addition

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forty-seven towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storage, 3,500 acres are irrigated for soft fruits and pastures. With the completion of the Rocklands Reservoir, this irrigation area is being extended to 7,000 acres.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditure to remove this sand drift before the annual water distribution can be made. This expenditure can be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country have resulted in marked savings in maintenance costs.

7. Private Water Supplies.—The Rural Finance Corporation Act 1949 gave farmers assistance in establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

The control of private diversions from the streams is an important function of the State Rivers and Water Supply Commission. About 10 per cent. of irrigation production in the State comes from private diverters, mainly around the River Murray. In recent years, there have been substantial increases in the areas licensed, the total increase over the past ten years being approximately 50 per cent. At present 4,500 private diverters are licensed annually.

A Farm Water Supplies Branch set up by the State Rivers and Water Supply Commission advises farmers on farm water supply matters even if finance is not required. Comprehensive booklets prepared by this Branch have been widely circulated to landholders.

8. River Improvement, Flood Protection and Drainage.—The largest drainage work undertaken by the State Rivers and Water Supply Commission is Koo-wee-rup-Cardinia Flood Protection District embracing 80,000 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth £3 million per year.

The Rivers and Streams Fund, established in 1931 from the rentals on river frontage reserves, gave an impetus to river improvement, but development accelerated rapidly after the 1948 River Improvement Act.

Under this Act, the formation of River Improvement Trusts is facilitated, assistance being granted by the State Government to supplement funds raised locally, and the importance of river improvement work is expected to continue to grow.

9. Underground Resources.—Due to inadequate information as to their extent, the underground waters of Victoria have not as yet been greatly utilized. The first stage of a comprehensive survey of these resources by the Victorian State Rivers and Water Supply Commission, which is responsible for the location, investigation and development of subterranean waters, has been completed and published recently. It provides records of bores in the Mallee, Wimmera and Glenelg regions, and a description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and elsewhere.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies from suitable for domestic purposes in much of the South-western part of the basin to saline and suitable for stock in the rest of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

10. Future Programme.—With the completion of the Eildon and Cairn Curran Reservoirs, storage capacity in Victoria has risen from 172,000 acre feet in 1902 to nearly 5,000,000 acre feet in 1957. In the near future, as a result of the enlargement of the Glenmaggie and Hume Reservoirs, a further increase of 600,000 acre feet of storage capacity will become available.

The most important work at present facing the Commission is the enlargement of the Goulburn Channel System to enable full advantage to be taken of the additional water now available from Eildon Reservoir. A new channel of 1,500 cubic feet capacity from the Goulburn Weir to Waranga Reservoir, duplicating the channel already there was completed in 1956-57 at a cost of £2,000,000. Approximately half the work was done on other contracts worth £2,750,000 and the channel construction programme generally is being completed as funds become available.

It will be possible to develop the present districts progressively before the whole operation is completed and in the meantime, the water already stored in the Eildon Reservoir will provide a valuable safeguard against any possible drought.

11. Hydro-electricity.—Details of hydro-electricity potential and utilization in Victoria may be found in the previous chapter (see page 283).

#### § 4. Queensland.

- 1. General.—(i) Rainfall. Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122. (See also Chapter II.—Physiography, page 45 of this Year Book).
- (ii) Administration. The administration of irrigation and water supply in Queensland is under the control of a Commissioner of Irrigation and Water Supply. For a description of the development of the present administration see Official Year Book No. 42 and earlier issues.
- (iii) Water Utilization in Queensland. Queensland's predominant interest in the field of water conservation is the provision of stock and domestic water supplies in its great pastoral areas which contain nearly half of the Commonwealth's cattle and a seventh of the sheep. But in addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meat works and markets has received much attention in later years.

The State's agricultural crops differ from those of other States in that a large proportion are tropical. Sugar-cane is the greatest individual crop, representing in value approximately 50 per cent. of total agricultural production. Approximately 16 per cent. of the sugar-cane acreage is irrigated and represents some 50 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase annual production of this crop greatly by means of development under irrigation. The area of tobacco irrigated during 1955-56 represented 88 per cent. of the total plantings of this crop in the State.

2. Great Artesian Basin.—(i) General. Western Qucensland beyond the 20 inch rainfall belt is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores and, where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 430,000 square miles or about two-thirds of the total State area of 670,500 square miles. Statistics of bores and flow as at 30th June, 1957, are:—Artesian bores drilled, 2,525; artesian bores still flowing, 1,627; total depth drilled, 3,596,000 feet; deepest bore, 7,009 feet; total estimated flow, 211 million gallons a day. The average depth of artesian bores is 1,425 feet. Some 9,000 sub-artesian bores, within the Great Artesian Basin, have been registered in Queensland. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are:—pressure, 1-2 feet/head, total flow, 1\frac{1}{2}-2 per cent. per annum.

The greater part of the artesian discharge is distributed by open earth channels totalling some 16,000 miles in length. Most of the water flowing along these channels is lost by soakage and evaporation and less than 10 per cent. is actually used by stock. The amount of soakage depends largely on the permeability of the earth and the rate of evaporation varies from season to season, but the shape and maintenance of the drains constitute further factors. The effective utilization of this water could be increased by the use of piping to overcome the loss by soakage and evaporation occurring in open earth channels.

Although artesian beds underlie such a large area of the State, only 80,000 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores are not economical watering facilities, because of depth, limited area to be watered, and difficult terrain for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

Though the number of bores has gradually increased over the years, the total flow of all bores has declined since the peak flow of 351 million gallons per day was recorded in 1914. By 1938, the flow was only 230 million gallons per day. The decline gave rise to the fear that supplies were giving out and that the basin was seriously threatened. In 1939, the Queensland Government appointed a committee to ascertain the nature and structure of the Great Artesian Basin with particular reference to the problem of diminishing supply. In its final report, presented in 1954, the majority of the Committee found that the output will continue to decline during the next sixty years when the flow from the remaining flowing bores will be of the order of 110 million gallons per day. At this stage the discharge from windmills, springs and other leakages and the underflow past the Queensland borders will be of the order of 20 million gallons per day. The total discharge of the order of 130 million gallons per day will be in equilibrium with the recharge of the basin. Numbers of bores on higher ground will cease to flow during the next sixty years and the area served by flowing bores will contract by perhaps 20 per cent.

A programme of strict conservation, involving the restriction of bore flows and improved bore drains, would result in smaller shrinkage of the area served by flowing bores and would actually cost less than the installation and maintenance of pumps or other watering facilities which would be required to provide alternative water supply as additional bores ceased to flow because of a policy of non-restriction. On the other hand, strict conservation would not increase the amount of water ultimately available as perennial flowing supply and would in fact decrease the amount of water passed from intake beds to aquifers within the basin, by flattening the hydraulic gradient. The benefit from strict conservation was not considered sufficiently great, nor sufficiently concrete to warrant implementation.

The quality of artesian water from the greater part of the basin is such that it is not suited for prolonged use for irrigation on most soils. Moreover, artesian supplies are not sufficient for both large scale irrigation and stock-watering. Practically the whole of the final steady-rate discharge from flowing bores will be needed for the watering of stock.

- (ii) Bore Water Areas. The constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at a cost beyond individual capacity and to conserve artesian supplies by fully utilizing the flows from the existing bores on the land resumed for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by Local Boards or by the Commissioner of Irrigation and Water Supply, acting as a Board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1956-57 are:—Areas constituted, 63; administered by Commissioner, 56; administered by Local Boards, 7; area benefited, 4,232,671 acres; average rate per acre, 0.95d.; number of flowing bores, 55; total flow, 25,524,000 gallons per day; drains served, 2,822 miles.
- 3. Other Basins.—Two major areas marginal to the Great Artesian Basin in Queensland carry artesian water. One occurs on the western slopes of Cape York Peninsula and the other in the Dawson-Mackenzie River Basin. A small area in which flowing wells occur (the Gatton Basin) extends from Gatton to the coast.

Sub-artesian water supply from the Barkly Basin which extends into western Queensland from the Northern Territory, is referred to in the section dealing with the Northern Territory.

4. Stock Route Watering.—During 1935; a scheme was inaugurated to water adequately stock routes in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einasleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944, a: co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent; whose duty was, inter alia, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes through-

out the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1957, 409 facilities had been completed and at 30th June, 1957, 77 facilities were under construction or investigation.

5. Irrigation.—(i) General. Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. In addition to the Theodore Irrigation Area on the Dawson River, orthodox projects served by a channel system are being developed at Clare, Millaroo and Dalbeg, all on the Burdekin River, Gibber Gunyah on the Dawson River and St. George on the Balonne River. Construction of the Clare, Millaroo and Dalbeg irrigation works was completed during the year ended 30th June, 1957, but a small amount of drainage work requires to be completed. Works were virtually completed in the Gibber Gunyah Area and construction of the St. George Area was advanced sufficiently to permit opening of 10 farms. A start has been made on construction of part of the main channel system within the Mareeba-Dimbulah Irrigation Area. Because of the large variations in-both monthly and annual river flows, major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar cane, most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1957.

AREA OF LAND UNDER IRRIGATED CULTURE: QUEENSLAND, 1956-57.(a	AREA	OF LAND	UNDER	IRRIGATED	CULTURE:	QUEENSLAND,	1956-57.(a
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1	<del>-</del>	No. of		A	rea unde	r Irrigate	d Culture	e (Acres).		· · · ·
Division.		Irri- gators.	Vege- tables.	Fruit.	Sugar- cane.	To- bacco.	Cot- ton.	Other Crops.	Pas- tures.	Total.
Southern Queensland Central Queensland Northern Queensland	::	4,259 340 1,479	20,566 719 3,811	2,950 115 595	11,949 45,209	1,988 1 4,361	5 326 76	20,082 • 2,825 533	4,326 526 709	61,866 4,512 55,294
Total	:	6,078	25,096	3,660	57,158	6,350	407	23,440	5,561	121,672

(a) Year ended 31st March, 1957.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land:—1906, 9,922 acres; 1916, 10,886 acres; 1926, 24,250 acres; 1935-36, 44,283 acres; 1945-46, 68,347 acres; 1955-56, 136,019 acres.

The pattern of irrigation in Queensland is unlike that in southern States; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn "irrigation season" of the temperate southern irrigated lands is not applicable, and that round-the-year irrigation is required throughout most of the State, the timing and duration of the summer "wet" season being too variable to enable a definite non-irrigation season to be fixed.

(ii) Lockyer Valley. West of Brisbane and within 30 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The Valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation. Despite a mean annual rainfall of 30

inches the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. Of this area, only about 30 per cent. is under irrigation, the number of pumps operating from wells and open water exceeding 550 and 600 respectively. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage such development is fostered by the Southern Electric Authority of Queensland. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems, an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) Burdekin River. The Burdekin River, which enters the sea between Townsville and Bowen, is a major factor in the life of North Queensland. In most years, heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disabilities. On the other hand, the fertile Delta Area with its underground water supplies at shallow depth has contributed greatly to the agricultural prosperity of North Queensland. Present development is confined to the Delta Area. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies in the dry periods. Sugar is the main irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, up to 1,000 acre feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station controlled by the Townsville Regional Electricity Board. Around Ayr, on the north side of the river, electric power from the mains of the Townsville Regional Electricity Board is now being adopted in place of the individual internal combustion engines previously used. At both Home Hill and Ayr, water for domestic supply is raised by a windmill on each property.

In 1940, the Burdekin River Trust was formed to safeguard the sugar areas of the Delta from erosion and floods. An Irrigation Research Station has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation, is being investigated by the various interested Government Departments under the general supervision of the Burdekin River Authority. The development envisaged includes a dam storing 6,584,000 acre feet, which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobaccogrowing, dairying and cattle-fattening, with sorghum, sunflowers, peanuts, cotton and sugarcane as other possible forms of production. The projected scheme, together with the high-level railway bridge at present under construction, will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural and industrial production.

The Clare Irrigation Area, constituted in 1949, the Millaroo Irrigation Area, constituted in 1952, and the Dalbeg Irrigation Area, constituted in 1953, are at present being developed for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 12,000 acres and obtain irrigation waters from central pumping stations drawing initially on the unregulated flow of the Burdekin. A temporary storage of 6,700 acre feet capacity has been constructed about 79 miles upstream from the mouth of the Burdekin. To 30th June, 1957, 73 farms had been opened for selection in the Clare Area, 60 in the Millaroo Area and 45 in the Dalbeg Area.

(iv) Dawson Valley. The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of 70,000 acres. Storage for the scheme was to be provided by a dam of 2,000,000 acre feet capacity at Nathan Gorge. Much investigational and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of this work. However, the initial step in construction had been completed, comprising a weir on the river at Theodore and irrigation works to serve an area of 3,500 acres supplied from a central

pumping station. Two additional weirs have since been built, giving a total storage of 9,000 acre feet. Pasture, vegetables, cotton, fruit and dairy products are the principal produce. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development. Construction of works to serve some 2,400 acres at Gibber Gunyah, adjacent to the existing Theodore Area, was virtually completed at 30th June, 1957, and allotment of farms had commenced.

(v) Mareeba-Dimbulah Area. The existence of large areas of sandy soils suitable for tobacco production in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah has led to large-scale investigations into possible irrigation development in the area. Surveys indicate that 40,000 acres of land suitable for irrigated culture, including 32,000 acres suitable for tobacco, are available. In 1955-56, some 3,026 acres of high-grade tobacco were grown. Seven weirs of combined capacity of 2,600 acre feet have been completed on a number of streams to store water for irrigation.

During 1952, a report on the utilization of waters of the Barron and Walsh Rivers was prepared and the establishment of an irrigation undertaking approved by the Queensland Government. The projected undertaking provides for construction of a major storage at Tinaroo Falls on the Barron River to store 320,000 acre feet, and construction of irrigation works to serve 78,000 acres commanded by this storage. In each case, construction has commenced. Further development by construction of a second storage at Nullinga on the Walsh River has been deferred for the present. Tobacco will be the basic crop while peanuts, vegetables, maize, cotton and stock fattening also appear suitable.

- (vi) Border Rivers Project. The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of the Dumaresq-Barwon Border Rivers Commission on which each State is represented. For information on the project see page 302.
- (vii) Balonne River. The St. George Irrigation Area has been constituted and construction of works to serve some 11,000 acres is in progress. Water supply for the area will be obtained by pumping from the combined weir and road bridge on the Balonne River at St. George.
- 6. Bureau of Investigation.—Under the Land and Water Resources Development Act of 1943, a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture, under the chairmanship of the Co-ordinator-General of Public Works. Among notable works carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State and the detailed investigation of the agricultural and pastoral potentialities of many regions.

7. Channel Country.—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding, a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn-off of fat cattle by artificial storage.

At 30th June, 1952, 41 watering facilities, at an estimated cost of £277,000, had been proposed under a Commonwealth-State agreement for stock routes through, and in the approaches to, the Channel Country. By 30th June, 1957, 28 had been completed, while two sub-artesian bores and one excavated tank were under construction.

8. Hydro-electricity.—An outline of Hydro-electricity Schemes operating in Queensland is given in the previous chapter (see page 286).

#### § 5. South Australia.

- 1. General.—(i) Rainfall. Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to "divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under, or on, any land entered upon for the purpose of supplying water to the inhabitants of any water district".
- (iii) Methods of Catchment and Conservation. Early steps were taken to vest all running streams, springs and "soaks" in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and "rainsheds" have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,751,269. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.
- 2. Irrigation.—In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. Including land allotted for War Service Land Settlement purposes, the Department of Lands administers in the Murray Valley an area of 32,729 acres of irrigable high land together with 9,434 acres of reclaimed swamp and 167,223 acres of non-irrigable land in the irrigation areas and 29,731 acres of land temporarily leased and reserved for commonage or other purposes, amounting in all to 239,117 acres. In addition, the Renmark Irrigation Trust controls 20,557 acres, of which more than 9,500 are irrigated. Water used for irrigation purposes in 1956-57 in the high land irrigation areas controlled by the Department of Lands, excluding War Service Land Settlement areas in course of development, was approximately 100,000 acre feet. No water was applied to the reclaimed areas during the 1956-57 season because of inundation by the floodwaters of the River Murray The swamps were de-watered however, by 30th June, 1957. In the Renmark area, 28,200 acre feet of water were used for irrigation in 1956-57. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lexias, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes, and citrus fruits. Before irrigation, these semi-arid lands were of little productive value.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of channel for reticulation to 9,550 acres.

The following tables show the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government-controlled reclaimed swamp districts near the mouth of the Murray, which are devoted to dairying.

# AREA OF LAND UNDER IRRIGATED CULTURE, 1956-57. IRRIGATION AREAS ADMINISTERED BY THE DEPARTMENT OF LANDS AND THE RENMARK IRRIGATION TRUST. (Acres.)

Vine Tree Citrus Sown Lucerne. Total. Area. Pastures. Fruits. Fruits. Fruits. Areas Administered by the Department of Lands. Orchard Land-958 7,522 5,304 1,260 Berri Cadell 600 141 113 854 ٠. 509 3,625 1.930 1,186 Waikerie . . . . 3,929 160 184 4,273 Cobdogla .. . . . . Moorook .. 341 131 208 680 . . . . Kingston .. 239 77 233 549 . . . . 341 536 877 Mypolonga.. . . Chaffey-Ral Ral Divi-795 55 12 862 sion . . 2,372 3,732 19,242 Total .. 13,138 War Service Land Settlement-1,108 Cooltong Division 380 245 483 6,299 3,063 2,176 Loxton area 1,060 Loveday Division 235 47 22 304 . . . . Total .. 3,678 1,352 2,681 7,711 Reclaimed Swamp Land-a Monteith ... Mypolonga... ٠. . . . . . . . . Wall Burdett ٠. . . ٠. . . ٠. ٠. Mobilong ... . . . . . . . . ٠. . . . . Long Flat ... ٠. . . . . . . . . . . Neeta ٠. . . . . . . ٠. . . Pompoota ... . . . . ٠. . . . . . . . . Cowirra ٠. . . . . Jervois Total .. . . . . . . Renmark Irrigation Trust. 7,330 950 1,270 Renmark Irrigation Trust 9,550

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges. Further developments currently being undertaken include the construction of a main pipeline and pumping stations for

<sup>(</sup>a) No water was applied to these lands during 1956-57. See text.

<sup>3.</sup> Water Supply Schemes.—(i) Summary. Water conservation and distribution works in South Australia have cost £51,264,226 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1956-57 is as follows:—Length of water mains, 5,934 miles; capacity of storages, 35,092 acre feet; approximate population served, 300,000; area served, approximately 5,000,000 acres; total capital cost, £27,237,093.

pumping water from the River Murray to Adelaide and, by means of a branch pipeline, to Warren Reservoir. Another reservoir (South Para Reservoir), to supplement the Warren and Barossa Reservoirs, is also being constructed on the South Para River. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

- (ii) Morgan-Whyalla Water Supply Scheme. For particulars of the construction and works of the main 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. A 19-mile branch-line has also been constructed to Jamestown. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.
- 4. Underground Water.—The occupied portion of South Australia is, on the whole, well endowed with underground water and the extent of the several artesian basins is reasonably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. However, deep boreholes have been drilled by the government to provide watering places along stock routes, and pastoralists rely largely on supplies from non-pressure aquifers at shallower depths. Marree township is supplied from this source, its deepest bore being 575 feet.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east of the State, especially for farms, but also for township supplies to Mount Gambier, Naracoorte, Bordertown, Pinnaroo, Penola, Lamaroo, Coonalpyn, Nangwarry, Mount Burr, Kingston (S.E.), Parilla and Karoonda. The deepest bore in this Basin is 415 feet. Towns elsewhere which are supplied from bores include Mount Barker, Port Lincoln, St. Kilda, Peterborough, Warooka and Willunga.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 30 drills. The whole of the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne and considerable tracts of previously undeveloped country in the Upper South-east, Kangaroo Island and Yorke Peninsula have been found to have usable water and are now being opened up.

Ground water resources surveys are undertaken continuously by Departmental geologists, the results being published in various bulletins, reports and investigations issued from time to time.

- 5. Farm Water Schemes.—While the Department of Mines and Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs on the Murray River.
- 6. South-Eastern Drainage.—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

#### § 6. Western Australia.

- 1. General.—(i) Rainfall. Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37. (See also Chapter II.—Physiography, page 45 of this Year Book.)
- (ii) Administration. Irrigation districts are administered by the Minister for Water Supply, Sewerage and Drainage under the Rights in Water and Irrigation Act 1914–1951, and he is advised by an Irrigation Commission representing the local irrigationists and governmental technical and financial branches. Water supplies in country areas in Western Australia coming under the provisions of the Water Boards Act 1904–1954 and the Country Areas Water Supply Act 1947–1954 (which are administered by the Minister for Water Supply, Sewerage and Drainage) are controlled either by the local authority or by the Water Supply, Sewerage and Drainage Department. Those controlled by the Water Supply, Sewerage and Drainage Department (except for some water supplies to country towns still under the provisions of the Water Boards Act) form the Country Areas Water Supply, consisting of the Goldfields and Agricultural Water Supply (formerly the Goldfields Water

Supply) the Great Southern Towns Water Supply and water supplies to country towns. Also controlled by the Water Supply, Sewerage and Drainage Department are individual water supplies serving isolated mines, stock routes, and agricultural areas: these works are done under the provisions of the Public Works Act 1902–1956. The Water Supply, Sewerage and Drainage Department is divided into metropolitan and country parts. The country part is combined with the Public Works Department. The Minister for Works is also the Minister for Water Supply, Sewerage and Drainage. Water rights over water flowing in streams and watercourses are vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. Irrigation.—(i) South-West. The main irrigation areas are situated along the South-Western Railway between the towns of Waroona (70 miles from Perth) and Dardanup (116 miles from Perth).

The Water Supply, Sewerage and Drainage Department controls three irrigation districts—Waroona, Harvey and Collie—the total area irrigated in these districts during 1956-57 being 24,724 acres and the total water used approximately 75,000 acre feet. The total of acre waterings (that is, the number of acres watered multiplied by the average number of waterings) was 141,714. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the Collie Irrigation District.

The Waroona Irrigation District (10,302 acres) is supplied from Drakes Brook Dam (1,854 acre feet capacity) and Samson Brook Dam (6,624 acre feet), the Harvey Irrigation District (36,823 acres) from the Harvey Weir (8,370 acre feet) and Stirling Dam (44,160 acre feet), and the Collie Irrigation District (36,020 acres) from the Wellington Dam (29,440 acre feet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1952-53 to 1956-57 illustrates the growth of these irrigation schemes.

IRRIGATION,	WESTERN	AUSTRALIA	:	ACRE	WATERINGS(a).
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Year.		Pasture.	Fodder.	Potatoes.	Vege- tables.	Orchard.	Flax, Broom Millet, and Preparation of Ground.	
1952–53		95,491	2,235	4,185	2,588	1,070	536	106,105
1953-54		98,645	3,435	4,405	3,003	1,072	115	110,675
1954–55		112,659	3,268	2,363	3,294	845	121	122,550
1955-56		108,468	3,599	1,834	3,452	946	127	118,426
1956–57	••	129,502	3,757	3,995	3,317	1,024	119	141,714

<sup>(</sup>a) Number of acres watered multiplied by average number of waterings.

(ii) General. In 1956-57 the total area irrigated in Western Australia was 38,567 acres made up of vegetables (7,990 acres) fruit (5,137 acres) vineyards (493 acres) pastures (23,320 acres) and other crops (1,627 acres).

An area of approximately 500 acres of Gascoyne River flats adjacent to Carnarvon has been under irrigated cultivation for a considerable period. The principal crop has been bananas but others such as beans and tomatoes, are also grown. For this agriculture a total of over 220 acre feet of water per week is drawn from river underflow.

Following successful experimental work, commercial production of rice is currently being developed, requiring irrigation water to be diverted from the Fitzroy River. The first stage of this work involving the deepening and grading of an anabranch of the Fitzroy River 25 miles to the rice growing area where a natural storage of 2,000 acre feet existed, was carried out by the Public Works Department in 1956.

The Ord River in the Kimberley Division of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 inches in the north. The hottest months (December to March) are also the months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam to conserve 3,000,000 acre feet of water, equipped with a hydro-electric plant, which might supply irrigation water for an area of 100,000 acres, if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. The economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

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3. Water Supply Schemes.—(i) Goldfields and Agricultural Water Supply. Western Australia has one of Australia's most spectacular water supply schemes, and a brief account of its development will be found on page 1134 of Official Year Book No. 37, and an account in greater detail on page 576 of Official Year Book No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields and has a capacity of 55,767 acre feet and a catchment of 569 square miles. The water passes through 346 miles of main, mostly steel and 30 inches in diameter, aided by seven pumping stations and one booster pumping station.

Maximum pumping capacity from No. 1 Pumping Station at Mundaring Weir is nominally 15.9 million gallons per day. The total capacity of all receiving, regulating, standby and service tanks along the main pipe line is 154 million gallons which includes three standby reservoirs at Kalgoorlie having a combined capacity of 60 million gallons.

Hundreds of miles of branch pipe lines have been laid to mining areas, agricultural areas and country towns, a notable one being the Norseman extension of 101 miles. The system serves some 72 towns and water is reticulated to about 2,000,000 acres of mixed farming lands. The total length of pipe lines is 2,578 miles and the number of services is 20,647. The total quantity of water pumped from Mundaring in 1956-57 was 3,076 million gallons. The total cost of the scheme to the end of 1956-57 was £11,410,906.

District water supply schemes established for the purpose of supplying certain country towns and mixed farming lands have been absorbed into the Goldfields and Agricultural Water Supply Scheme. For further particulars see Official Year Book No. 37, page 1135.

- (ii) Comprehensive Water Supply Scheme. A comprehensive water supply scheme to supplement water supplies to the goldfields, agricultural areas, and country towns, authorized in 1947 as a joint work between the Commonwealth and State and estimated to cost £10,000,000 is at present (1957) under construction in two main parts. The northern section is an enlargement and extension of the Goldfields and Agricultural Water Supply Scheme. The southern section is the Great Southern Towns Water Supply Scheme. Linked with Wellington Dam (initially an irrigation work on the Collie River) by 80 miles of 30-inch diameter pipe through two pumping stations to Narrogin, it will eventually supplement the existing water supplies to country towns along the Great Southern Railway, north to Brookton and south to Katanning. The raising of the impounding wall of Wellington Dam to increase its storage to about 150,000 acre feet is also in progress.
- (iii) Country Towns Water Supplies. Country towns supplied by schemes otherwise than above comprise those in the remaining agricultural and mining areas, including the North-West and Kimberley Divisions. Sixty separate reticulated water supplies serve country towns. Of these, 50 are controlled by the Public Works Department and the remainder by the Local Authority.
- (iv) Catchments. The water supplies to these country schemes come from stream flow, dams, tanks, wells and bores. Three types of catchment peculiar to this State deserves special mention, namely, rock catchments, which consist of mostly clear granite out-cropping rock, from which the overall run-off from rain amounts to approximately 40 per cent.; bituminous catchments, which are areas which have been sealed with emulsified bitumen—some hundreds of acres have been so treated and yield a run-off of approximately 80 per cent. of the rainfall; and roaded catchments, where selected areas of a catchment are cleared, graded and formed into roads to assist in obtaining additional rainfall run-off.
- 4. Underground Water.—Individual farmers, orchardists, market gardeners and others pump ground water from wells and bores, using windmills, engines or electric power. Water is also obtained from artesian and sub-artesian bores. The Public Works Department hires out to local authorities boring plants which are then hired out to farmers to assist their boring operations. In addition the Public Works Department operates its own boring plants and contracts with private firms in connexion with water supply works.

#### § 7. Tasmania.

- 1. General.—(i) Rainfall. Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37. (See also Chapter II.—Physiography, page 45 of this Year Book.
- (ii) Main Purposes of Conservation and Utilization. Owing to Tasmania's fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for

domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare, but progressive landowners are beginning to take advantage of modern plant, such as bulldozers, to provide small excavated storages on their properties. Underground water is of poor quality, but a small quantity which has been exploited to a limited extent only by bores and windmills exists over an area in the Midlands. Geological conditions do not appear to favour the utilization of underground water except on a minor scale.

- (iii) Administration. The State does not own all natural waters, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. Under the provisions of an Act passed in 1944, the Water, Sewerage and Drainage Board was constituted to consider the financial and technical practicability of all water supply schemes constructed by local authorities, other than the cities of Hobart and Launceston. Legislation was also enacted during 1952 empowering Local Authorities to take water from specific sources of supply and to construct waterworks. The Act does not cover irrigation, which is practised to a limited extent only by private interests. Provision has been made in the Act for the protection of riparian rights, but there is no general legislation for the control of water courses.
- 2. Hydro-electricity. \*—Tasmania depends entirely on water for power development. The Hydro Electric Commission, the authority controlling the generation of electricity in Tasmania, conducts a continuous survey of the water power resources of the State assisted by modern methods such as aerial photography and geophysical exploration.

Most of the water potential is located on the Central Plateau with an area of about 1,500 square miles at an altitude of from 2,000 to 4,000 feet and subject to rainfall of from 30 inches a year in the east to 80 inches on the western perimeter. On the plateau are a large number of lakes which provide the means for storage at low cost. These include Great Lake with an area of 58 square miles, Lake St. Clair and Lake Echo, each more than 12 square miles, and others of smaller area. Parliamentary approval has recently been given for the Commission to proceed with the development of the waters of the Great Lake through a 300,000 kW underground power station at the foot of the Western Tiers some 10 miles from Cressy. The power station will operate under a head of 2,750 feet and will utilize the existing Great Lake storage which is to be supplemented by water pumped from an additional storage which will be created at Arthurs Lakes some four miles to the east of the southern end of the Great Lake.

The Derwent River and its tributaries which flow south-easterly carry off by far the greater part of the water which falls on the plateau and these rivers are therefore the most abundant source of power. They have been the cheapest to develop to date and most of the existing generating stations are located on them.

The three main rivers running westerly from the plateau—the Arthur, Pieman and Gordon—have only a small portion of their catchment areas at high level, but they run through regions of high rainfall and their power potentials are considerable. However, because of inaccessibility and climate, development of these rivers may be rather expensive and has been deferred in favour of more convenient schemes.

Rivers draining from the plateau towards the north and north-west coast, including the Emu, Forth and Mersey, have small catchments at high levels and no natural storages.

Two other important water power sources, independent of the Central Plateau, are the South Esk River in the north and the Huon River in the south. A power station at Trevallyn, near Launceston, utilizes water from the South Esk. The Huon has a large low-level catchment in the high-rainfall area near the west coast. Storage could be provided on this river at a reasonable cost and, because of its proximity to Hobart, a future power station would have considerable value for peak load development.

3. Industrial.—Three principal industrial schemes have been installed privately. Australian Newsprint Mills Ltd. pump approximately 6 million gallons a day from the Derwent River at Lawitta for the Boyer Mills. Associated Pulp and Paper Mills Ltd. pump several million gallons a day from the Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Heybridge. In addition the State has constructed a regional water scheme to serve the Australian Aluminium Production Commission's plant at Bell Bay on the River Tamar and to supply several Municipalities with bulk water for domestic and industrial purposes.

<sup>\*</sup> See also Chapter VIII.—Electric Power Generation and Distribution, p 291.

A second regional water scheme draws water from the River Derwent at Lawitta to provide domestic and industrial supplies in five southern Municipalities. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake, Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State which is largely unsettled. Diversion to the eastern side of the watersheds is not regarded as practicable.

4. Irrigation.—There are no State irrigation projects, but preliminary inquiries as to the possibility of establishing one in the Coal River Valley have been made. Legislation is before Parliament to give a new Commission extensive powers for river control and for the design of irrigation projects. All systems operating are privately owned, and with one exception (at Bushy Park) are single-farm units. At Bushy Park, a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies. Irrigation as practised in Tasmania, was applied in 1956-57 to 12,110 acres devoted to: hops (1,330 acres); fruit (773 acres); pastures (7,421 acres); green fodder, etc. (877 acres); and other crops (1,709 acres).

#### § 8. Northern Territory.

- 1. Climate and Topography.—Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II.—Physiography, and a brief outline of contour and physical characteristics in Chapter V.—The Territories of Australia.
- 2. Administration.—Under the Control of Waters Ordinance 1938–1955 of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed. There is a Water Use Branch in the Northern Territory Administration under the control of a Director. The functions of the Branch include systematic stream gauging, collection of data on surface and underground water supplies, planning of water use for irrigation and town water supplies, flood prevention and control.
- 3. Underground Water.—The marked seasonal rainfall over the whole of the Northern Territory is one of the basic factors affecting the pastoral industry which provides the bulk of the Territory's income. The inadequacy of surface water during the dry season underlines the importance of underground water supplies in the Territory where most of the cattle population is dependent on underground supplies for three to five months each year.

Rainfall is one of the factors controlling cattle population but geological features, controlling both soils and the storage of underground water, are even more important. In the northern-most portion of the Territory, which receives from 25 to 60 inches of seasonal rainfall per year, surface water supplies are, in general, adequate for the pastoral industry. Despite this, however, this area has a comparatively low carrying capacity for cattle and the pastoral industry is concentrated more in inland areas where feed retains more nutritive value in the winter despite dry conditions.

South from this well-watered northern-most portion, the Territory becomes progressively drier, with an annual average rainfall of only five inches at the margins of the Simpson Desert in the south-east corner. In the lighter rainfall areas, the search for potable underground water becomes exacting but, in general, the regions providing the best pastures—the Ord-Victoria Region, the Barkly Tablelands and smaller areas in the Alice Springs district—provide also sub-surface conditions suitable for the storage of water. This comes about largely because, in these areas, both pasture and water are related to flat lying or gently folded limestones or volcanics of Upper Proterozoic or Cambrian age, overlying the basement of older, more tightly folded, metamorphic rocks and granites which crop out over wide areas within the Territory.

In the Ord-Victoria Region, probably the best grass lands overlie volcanic rocks and extend over some 10,000 square miles. Ground water is obtained in shallow bores averaging 70 to 80 feet in depth and producing small supplies which range up to 1,500 gallons per hour. For the most part, water is stored in joints, faults or cracks in the rocks although

in places sub-artesian conditions pertain and, on the whole, selection of bore sites is difficult. There are also small sedimentary basins in the region, some of which yield sub-artesian, and in places, artesian water and provide areas of good pastures.

The Barkly Tablelands, which extend into Western Queensland, overlie flat-lying limestone, sandstone and shale of the Barkly Basin. In most places, underground water is under pressure (sub-artesian) but no flowing bores are known. Sandstones and beds of limestone with fractures and solution cavities provide a number of aquifers within the Basin. The hydraulic surface (to which pressure water will rise in bores) ranges between 500 and 600 feet above sea level and adequate supplies for the watering of stock are available at depths ranging from 150 to 400 feet from the surface. The water from over 90 per cent. of the bores is suitable for stock and over 50 per cent. of it is suitable for human consumption. Investigations by the Commonwealth Bureau of Mineral Resources indicate that underground water supplies will be more than sufficient for the future development of the pastoral industry on the Tablelands.

A review is being made of the information available concerning the number of bores and wells sunk in the Territory. Preliminary information shows that in 1956-57, some 1,190 bores and 190 wells were registered. Of the 1,190 bores, 621 were on pastoral properties (33 being provided by the Government by way of assistance to pastoralists), 25 on Native Reserves, 8 for town water supplies and 6 for mining fields. It is not known how many of 341 registered bores drilled originally for defence and road construction purposes are still in use but it is probable that most of them have been abandoned.

The number of stock route bores established by the Government for watering some 2,500 miles of stock routes, is 160 which represents on the average one every 16 miles.

Regional surveys by the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization from 1947 to 1955 have established the existence of the valuable Barkly Basin of 57,000 square miles in the eastern part of the Territory and extensions of the Gulf Basin in the north-western part.

4. Irrigation.—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (12,700 acre feet), which serves Darwin with a reticulated supply. Hydrological investigations are being carried out by the Administration and a public company to determine the supply of water and the best methods of control and use in the potential rice growing areas of the Territory. Agricultural activity in the Territory is not extensive.

The Katherine River appears to offer irrigation potentialities on the levee soil below the township. The river passes through a gorge upstream under conditions which appear suitable for dam construction. The Administration and the Commonwealth Scientific and Industrial Research Organization are investigating the potentialities of the area for agricultural production. For particulars of these see p. 1138 of Official Year Book No. 37.

#### § 9. Papua and New Guinea.

- 1. Rainfall.—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 231 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua).
- 2. General.—For a general description of these territories see Chapter V.—The Territories of Australia, p. 125, of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet. However, complete data regarding water resources are not available.

The largest rivers in the Territory include the Fly (a description of which is given in Chapter XXVI. of Year Book No. 40), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles) and the Markham (110 miles).

The main water conservation interest in New Guinea at present is the hydro-electric potential which is extensive. An outline of schemes at present in operation is given in the previous chapter.

#### CHAPTER IX.

#### WATER CONSERVATION AND IRRIGATION.

# A. RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS. § 1. Introduction.

Official Year Book No. 37, pp. 1096-1141, contained a special article "The Conservation and Use of Water in Australia" prepared by Mr. Ulrich Ellis of Canberra. In subsequent issues, much of Mr. Ellis's article of a statistical nature has been advanced, as has the general information on the more important developments in this field, but for details of general, descriptive and historical matter reference should be made to the original article. Appended to the special article (pp. 1140-41) was a bibliography of selected books, reports, papers, etc., dealing with the development of the water resources of Australia and their conservation.

For further details on geographical and climatic features determining the Australian water pattern, reference should be made to Chapter II.—Physiography; on water supply and sewerage in metropolitan areas, cities and towns to Chapter XIX.—Local Government; and on the generation of hydro-electric power to Chapter VIII.—Electric Power Generation and Distribution, of this issue.

A series of maps showing the location of major dams and reservoirs and the various irrigation schemes operating in each of the States was published on pp. 1073-9 of Official Year Book No. 40.

A map showing the extent of known artesian basins throughout Australia is shown on page 307 of this Year Book.

#### § 2. Water Resources and their Utilization.

- 1. Surface Supplies.—Though river gaugings have been recorded over considerable periods in some parts of Australia, records elsewhere are intermittent, of short duration, or non-existent. At present, therefore, it is impossible to estimate, with any degree of reliability, the total average annual flow of Australian streams, but it would probably amount to only a small figure in comparison with the flow of rivers in other continents, some examples of which, expressed as mean annual discharges in millions of acre feet, are: Nile, 72; Danube, 228; Amazon, 1,780; Volga, 148; Mississippi, 474; and the ten main rivers of the United States of America, 900 (in the aggregate).
- 2. Major Dams and Reservoirs.—The table below lists existing major dams and reservoirs together with those under construction or projected as at June, 1957.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA.

Name.		Location.	Capacity (Acre feet).	Height of Wall (Feet)	Remarks.
		Existing I	AMS AND	Reservoir	s.
Eildon	••	Upper Goulburn River, Victoria	2,750,000	250	Earthen embankment 3,300 feet long. Storage for irrigation and for the generation of electricity.
Hume	••	Murray River near Albury	1,452,000	140	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. Being increased to 2,500,000 acre feet. Hydro-electric power being developed.
Miena	• •	Great Lake, Tas-	(a)948,500	40	Regulates water to Waddamana hydro-electric power station.
Burrinjuck	• •	Murrumbidgee River, New South Wales	837,000	264	Storage for irrigation and pro- duction of hydro-electric power.
Somerset	• •	Stanley River, Queensland	735,000	173	Brisbane-Ipswich water supply, flood mitigation and small hydro-electric power station.
Lake Victoria		Murray River near South Australian border, in New South Wales	551,700	••	Natural storage for irrigation in South Australia.
Lake St. Clai	r	Central Highlands, Tasmania	(a)412,200		Improved natural storage for Tarraleah hydro-electric power station

#### MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—continued.

Name.		Location.	Capacity (Acre feet).	Height of Wall (Feet).	Remarks.
		EXISTING DAMS	AND RESER	VOIRS—cor	itinued.
Lake Echo	••	Lake Echo, Tasmania	(a)412,200	60	Storage for Lake Echo and Tur gatinah hydro-electric powe stations.
Waranga Wyangala	•••	Goulburn River, Victoria Lachlan River, New South Wales	333,400 303,900	190	Sattons.  Earthen embankment, 23,800 fe long. Irrigation storage.  Storage for domestic, stock an irrigation purposes and fo generation of hydro-electrons.
Rocklands		Glenelg River, Vic-	272,000		Part of Wimmera-Mallee dome tic and stock water supp
Clark		Derwent River, Tas-	(a)253,400	200	system. Serves Tarraleah hydro-electr
Avon	••	mania Avon River, New South Wales	173,800	232	power station. Part of Sydney water supply.
Lake Brewster	••	Lachlan River, near Hillston, New South Wales	123,900	••	Storage of rural water supplie for the lower Lachlan.
Cairn Curran	••	Loddon River, Vic-	120,600		Storage for irrigation.
Glenmaggie	••	Gippsland, Victoria	106,000	100	Storage for irrigation. Being increased to 154,300 acre fee
	AMS	AND RESERVOIRS U	INDER CON	STRUCTION	OR PROJECTED.
Burdekin Falls	• •	Burdekin River, North Queensland	6,584,000	150	Projected for generation of hydroelectric power, irrigation are
Adaminaby	••	Eucumbene River, New South Wales	3,500,000	390	flood mitigation. Under construction as part of Snowy Mountains Hydro electric Scheme. Storage
Menindee Lakes I ject	Pro-	Darling River near Menindee, New South Wales	2,000,000	••	water commenced June, 195 Part of Darling River water conservation scheme—under construction.
Warragamba	••	Warragamba River, New South Wales	1,694,900	373	Under construction for Sydne water supply. Also provid for generation of hydro-ele
Jindabyne	• •	Snowy River, New South Wales	1,100,000	274	tricity and flood mitigation. Projected as part of Snov Mountains Hydro-electr Scheme.
Burrendong	••	Macquarie River, near Wellington, New South Wales	914,000	193	Under construction for rur water supplies.
Blowering	• •	Tumut River, New South Wales	800,000	300	Projected as part of Snov diversion scheme.
Warkworth	••	Wollombi Brook (Hunter Valley).	400,000	100	Projected as a flood mitigation dam for the Hunter Valley.
Keepit	••	New South Wales Namoi River, near Gunnedah, New South Wales	345,000	176	Under construction for run water supplies.
Arthurs Lakes	••	near Great Lake,	(a) 339,000	50	Projected as part of Great Lal hydro-electric power develo
Tinaroo Falls	••	Tasmania Barron River, North Queensland	320,000	133	ment Under construction for irrigation purposes in the Marceba-Dir
Glenbawn	••	Hunter River, near Scone, New South	293,000	251	bulah area. Under construction as part Hunter Valley conservation
Tantangara	••	Wales Murrumbidgee River, New South Wales	200,000	150	work. Projected as part of Snov Mountains Hydro-electr
Wellington	••	Collie River, Western Australia	150,000	110	Scheme. Existing dam to be enlarged for supply of water to irrigation districts and to agricultur areas and towns.
Koombooloomba	••	Tully River, North Queensland	146,000	123	Under construction for hydr electric and possibly irrigation
Upper Yarra	••	Yarra River, Victoria	110,000	270	purposes. Under construction for Melbour water supply.

- 3. Irrigation.—(i) History. For some brief remarks on the history of irrigation in Australia referring to the efforts of the Chaffey Brothers and to the Victorian Irrigation Act in 1886 see issues of the Official Year Book prior to No. 39. Trends in irrigation practice in more recent years were described in Official Year Book No. 37, p. 1009.
- (ii) Extent and Nature of Irrigated Culture. About half of Australia's irrigated acreage is in Victoria, and about two-thirds is situated along the Murray and its tributaries (including the Murrumbidgee) in the three States of New South Wales, Victoria and South Australia. In those areas served by the Murray and its tributaries, irrigation water is used extensively for vines, orchards, pastures, fodders, and for domestic and stock purposes. Approximately half of Queensland's irrigated acreage is devoted to sugar cane. Western Australia's small irrigated acreage is confined to areas in the south-west where vegetables, orchards, fodders, and pastures are served. Large scale irrigation schemes have not been developed in Tasmania or the Northern Territory although reference is made on page 328 to investigations at present being carried out in the Northern Territory to determine the availability of irrigation water for rice production.

The following table shows the area of land irrigated in each State during the years 1952-53 to 1956-57:—

# AREA OF LAND UNDER IRRIGATED CULTURE.

				(ACICS	·/				
Season.	N.S.W.	Vic. (b)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1952–53 1953–54 1954–55 1955–56 1956–57	494,900 540,243 616,264 379,611 525,236	821,025 863,563 634.334	146,282 139,414 136,019	62,062 69,452 70,987	34,247, 36,130 37,164		151		1,614,071 1,739,526 1,207,613

(a) Source: Water Conservation and Irrigation Commission. Water Supply Commission.

(b) Source: State Rivers and

The next table shows the area of land irrigated in each State during 1956-57 according to the nature of irrigated culture.

# AREA OF LAND UNDER IRRIGATED CULTURE, 1956-57.

(Acres.)

Crop.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Rice Vegetables Fruit Vineyards Sugar-cane Hops Cotton Other Crops (in-	50,417 18,481 18,144 12,547 (c)	17,410 31,732	1 2600	16,984 24,664	5,137	1,117 773  1,330	 69  	 196 6  	50,417 82,090 } 160,802 57,158 1,330 407
cluding Fodder and Fallow land)	100,901	83,689	(d)29,790	3,038	1,627	1,469	24	474	221,012
Total, Crops	200,490	179,424	116,111	56,411	15,247	4,689	168	676	573,216
Pastures	324,746	e 675,758	5,561	(f)19,707	23,320	7,421		209	1,046,722
Total	525,236	855,182	121,672	66,118	38,567	12,110	168	885	1,619,938

(a) Source: Water Conservation and Irrigation Commission.
(b) Source: State Rivers and Water Supply Commission.
(c) Included in Other Crops.
(d) Includes Tobacco, 6,350 acres.
(e) Excludes lucerne fed off, included in "Other Crops".
(f) Includes lucerne for pasture.

(iii) Research. :Comprehensive programmes of research and investigation are being pursued by State water and agricultural authorities and the Commonwealth Scientific and Industrial Research:Organization, often in collaboration. Special attention is being given to the following:—high water tables due to the application of water; surface accumulation of salt and other soil changes associated with irrigation; methods of applying water efficiently; increasing density of stock on irrigated pastures which leads to the spread of such diseases as foot rot and fluke in sheep, and mastitis and contagious abortion in cattle; growth problems affecting plants and trees; the prevention of evaporation from water storages; and the potability of saline waters for stock.

The Commonwealth Scientific and Industrial Research Organization maintains the following research stations:—Merbein (Victoria)—horticultural problems, particularly of the dried vine fruits industry; Griffith (New South Wales)—the influence of irrigation on plant-life (using horticultural trees as test plants), irrigation methods, land drainage and soil structure; Deniliquin (New South Wales)—pastures; and the Kimberley Research Station (Western Australia)—tropical crops and pastures. In the maintenance of Merbein and Griffith Stations, the Commonwealth is assisted, financially and otherwise, by the New South Wales Water Conservation and Irrigation Commission, by the Dried Fruits Export Control Board and by private organizations.

The Soils Division of the Organization has made detailed surveys of more than a million acres since 1927, with less detailed reconnaissance surveys over many millions of acres. The Division works closely with State authorities. The keynote of soil investigations is relationship between soil and land use, and there is an increasing tendency to seek such surveys before irrigation districts are established. Research is also conducted in the field of water percolation in relation to soil structure.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the State Department of Agriculture, the Commonwealth Scientific and Industrial Research Organization, the Rural Bank of New South Wales, the Soil Conservation Service of New South Wales and certain farmers' organizations (including Extension Groups). Finance is provided by these authorities on an agreed basis. The objectives are:—to enable the agricultural extension services to the farmers in the defined sub-region to be continued and developed; to provide a system for advising on local agricultural policy and organization; to provide means for farmer opinion to have due weight in the consideration of regional agricultural administration and policy; to achieve a unified approach to sub-regional extension in all branches of agriculture; to advise on the research needs of the sub-region and the co-ordination of the agricultural research of the various rural institutions working therein; to achieve close liaison between research and extension; and to conduct research in extension methods.

- 4. Preservation of Catchments.—Since water conservation commences on the catchments, it is becoming increasingly recognized that anything which interferes with catchment efficiency affects the quantity of water available for all purposes. Active steps are being taken to counteract soil erosion, to conserve soil generally, and to minimize the effects of floods, overstocking, bush fires, and the destruction of vegetative cover. All States and the Commonwealth have initiated forestry policies which provide for reafforestation and the preservation of catchments. In recent years, efforts to counteract soil erosion have been intensified and there is some evidence of a more unified approach to catchment, water, forestry, and land use factors regarded as parts of a single problem.
- 5. Sub-surface Supplies.—(i) General. While a more or less complete general; picture of the available and potential surface water resources exists, much remains to be done with regard to the location and development of sub-surface supplies (artesian, sub-artesian and ground water), in view of their importance as the basis of settlement over large areas of Australia.

The extent of the artesian basins—particularly the Great Artesian Basin—has been fairly accurately determined, while the use of sub-artesian supplies is extensive and more development is possible. The shallower ground-water supplies, however, particularly along alluvium valleys and coastal sandbed areas, have not been investigated and developed to any degree, except in a few localities.

(ii) Artesian and Sub-artesian Supplies. Pressure water, variable in quantity and quality, either artesian or sub-artesian, is obtainable in many parts of Australia, the various artesian basins extending over approximately one-third of the continent. A map of Australia showing the extent of the known artesian basins appears on page 307 of this Year Book.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 670,000 square miles, comprising about 430,000 in Queensland, 80,000 in New South Wales, 120,000 in South Australia and 40,000 in the Northern Territory. Of the numerous defined major and minor water-bearing basins in Australia, the following are the principal:—

PRINCIPAL WATER-BEARING BASINS: AUSTRALIA.

Name.	State.	Geological Age of Chief Aquifers.	Approxi- mate Area.	Depth to Pressure Water.	
			Square Miles.	Feet.	
Great Artesian	Queensland, New South Wales, South Australia and Northern Territory	Pliocene-Permian	670,000	Up to 7,000	
Desert and Fitzroy Murray	Western Australia Victoria, New South Wales: and South Australia	Cainozoic-Palaeozoic Miocene-Oligocene	160,000	100 to 1,500 100 to 900	
Eucla	Western Australia, South Australia	Pliocene: Miocene	68,000	300 to 2,000	
Barkly	Northern Terri- tory, Queensland	Cretaceous, Cambrian and Upper Pre- cambrian	57,000	150 to 1,000	
North-west	Western Australia	Tertiary Permian	40,000	230 to 4,000	
South-west	Western Australia	Recent, Jurassic	10,000	200 to 2,500	
Pirie-Torrens	South Australia.	Recent, Pleistocene	4,000	Up to 600	
East Gippsland	Victoria	Pleistocene-Oligocene	2,500	200 to 1,800	
Adelaide	South Australia	Recent, Oligocene	-,		
Basins of Ord- Victoria Region	Northern Terri- tory, Western Australia	Mainly Cambrian and Permian	Unknown	Unknown	

More than 3,000 artesian bores have been constructed within the Great Artesian Basin and the daily free discharge from all bores continuing to flow in Australia has been stated to exceed 350 million gallons, of which the loss by evaporation and seepage has been estimated at more than 90 per cent. Sub-artesian bores and wells throughout Australia number more than 200,000.

Artesian water generally is good stock water, but it is unsuitable for plant life, while in certain areas sub-artesian waters are suitable for all uses including irrigation. In some districts a considerable amount of irrigation is carried out from shallow ground-water supplies.

In common with other countries possessing artesian supplies, Australia has been faced with the problem of flow diminution. It was recognized early that flows were diminishing as more bores were drilled, but it is now considered that while many of the bores will ultimately cease to flow, many will not cease, but will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by sandstone outcrops. Diminution in flows from artesian bores has emphasized the need to eliminate wastage as much as possible, and investigations have been made regarding wasteful methods of distribution of artesian water by open channels or "bore drains" and the careless use of water. (For greater detail on this subject see Official Year Book No. 37, pp. 1103-4.)

(iii) Ground Water. Ground water supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes. Two of the most important of these supplies are in New South Wales. The Hunter District Water Board pumps 15 million gallons a day for general use from the Tomago coastal sands near Newcastle and at Botany, Sydney, private industry pumps 5 million gallons a day for its own use from similar sands.

Recent exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day.

### § 3. National and Interstate Aspects.

1. General.—As the Commonwealth Constitution makes special reference to water problems, both the Commonwealth and the State Governments have an interest in the control and conservation of water. The main responsibility for control of water resources resides in the individual State governments, but as political boundaries sometimes intersect river valleys and catchments, co-operation between governments has been necessary to develop resources in certain cases. Specific examples of Commonwealth-State and interstate co-operation and approach are given in the following sections.

In the Report on Irrigation, Water Conservation and Land Drainage presented to the Commonwealth Government by the Rural Reconstruction Commission in 1945, national aspects of water conservation and use were emphasized. The report recommended that to obviate lack of co-ordination, an all-Australian plan, having the assent of the various governments be adopted, and that the Commonwealth should endeavour to promote interstate co-operation and co-ordinated development generally.

In 1946, a conference between the Commonwealth and States agreed to revive the Irrigation Production Advisory Committee first established under the authority of the Australian Agricultural Council in 1938. Its functions are:—(a) to prepare for the consideration of the Australian Agricultural Council or any Committee of Ministers appointed by the Council, conclusions formed from investigations to be carried out by Commonwealth and State Officers into the various agricultural industries which it is possible to develop on irrigated lands; (b) to undertake long-term co-ordination of land utilization in irrigable areas served by the River Murray and its tributaries, this involving co-ordination of all available lands and the carrying out of such supplementary investigations as may prove necessary.

2. Murray River Scheme.—(i) General. The Murray River and its tributaries form the largest river system in Australia. The catchment is approximately 414,000 square miles, or one-seventh of the area of the Australian continent, comprising five-sixths of New South Wales, over one-half of Victoria, one-sixth of Queensland and one-fortieth of South Australia. The Murray proper is 1,600 miles long. Its main tributaries are the Murrumbidgee (980 miles), the Darling (1,700 miles), and the Goulburn (280 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,506,000 acre feet; Murrumbidgee River, 2,280,000 acre feet; Goulburn River (including Broken River), 2,502,000 acre feet; Darling River, 2,224,000 acre feet; and Ovens River, 1,169,000 acre feet. Irrigated production in the River Murray basin is mainly in the form of wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, fat lambs, poultry, eggs and pigs.

For a brief summary of the historical events leading up to the River Murray Agreement (1915) by the Governments of the Commonwealth, New South Wales, Victoria, and South Australia, see issues of the Year Book prior to No. 39. The Agreement provided for the construction of works, the allocation of the water between the three States, and the appointment of a Commission to implement the Agreement. The Commission comprises four Commissioners, representing the Commonwealth and the three States respectively. The Commonwealth representative presides.

(ii) River Murray Waters Agreement. Under the Agreement, construction works are carried out by the States (who are also responsible for maintenance) subject to the approval and direction of the Commission. The Agreement provides that the minimum quantity of water to be allowed to pass for supply to South Australia in each year shall be sufficient to fill Lake Victoria storage once, and with the aid of water returned from Lake Victoria, to maintain certain specified flows in the lower river varying from 47,000 acre feet per month in the winter months to 134,000 acre feet per month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. These flows are to meet domestic and stock requirements in South Australia, losses of water in lockages and evaporation losses other than in the lakes at the Murray mouth, together with 603,000 acre feet per annum for diversion from the Murray for irrigation in South Australia. The flow at Albury is shared equally by New South Wales and Victoria, and each of these States has full control of its tributaries below Albury, subject in each case to the fulfilment of the South Australian allocation. For a brief outline of the operation of the Agreement prior to 1949 see Official Year Book No. 40 (p. 1065) and earlier issues.

At a Conference of Ministers held in July, 1949, to consider the diversion of the Snowy River, it was decided that, by diversion of streams in the Snowy Mountains area, an average of approximately 400,000 acre feet per annum would be added to the Murray River (see para. 4, Snowy Mountains Hydro-electric Scheme, page 303) and that a storage of not less than 1,500,000 acre feet should be provided in order to give additional regulation of the Murray River itself as well as to provide for regulation of the diverted waters. Hydro-electric potentialities would also affect the size of the storage.

The River Murray Commission investigated the position and found that an increase in capacity of 500,000 acre feet in storage on the Upper Murray River above Albury was the maximum that was economically justifiable for the regulation for irrigation purposes of the waters of the Upper Murray River and of waters added from the Snowy River. The Commission agreed that this increase could best be provided by increasing the size of the Hume Reservoir from its previously designed capacity of 2,000,000 acre feet to 2,500,000 acre feet, but if additional storages for hydro-electric purposes become justified in the future further increases would best be provided at some other site. It subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for this enlargement of the Hume Reservoir to 2,500,000 acre feet. A conference of Ministers considered the recommendation in July, 1954 and agreed to the enlargement. In addition, it was agreed that the Commission should be given power to construct regulators and to carry out such other work on the River Murray between Tocumwal and Echuca as it considered necessary to reduce the losses from the regulated flow in that stretch of the river. The amended Agreement was ratified in the Parliaments of the Commonwealth and the three States and was proclaimed on 7th April, 1955.

The total estimated quantity of water diverted from the Murray and its tributaries (under the River Murray Agreement, in 1955-56 for irrigation and other purposes, including impounding in dams, was as follows (in acre feet):—New South Wales, 1,008,000; Victoria, 3,108,000; South Australia, 190,500; a total of 4,306,500 acre feet. Owing to the floods in the latter half of 1956 the quantity of water diverted in 1956-57 was considerably less than that for the preceding year.

(iii) River Murray Works. One of the major works of the Murray River Scheme is the Hume Reservoir, situated just below the junction of the Murray and Mitta Mitta Rivers, 10 miles above Albury, forming a lake of 33,000 acres. The design comprises a mass concrete spillway and outlet works extending 1,000 feet and an earthen embankment 110 feet high extending for 4,000 feet across the river flats. The length of the total structure is approximately one mile. Work is now in progress on the enlargement of the reservoir to its recently approved capacity of 2,500,000 acre feet.

The Yarrawonga Diversion Weir was completed in 1939 to raise the river level so that water could be diverted by gravitation into main channels constructed on either side of the river. Between the Yarrawonga Weir and the Murray mouth, thirteen weirs and locks have been built. Two flood diversion weirs have been constructed on the Murrumbidgee—one between Hay and the Lachlan Junction and the other below the Lachlan Junction.

The Mulwala Canal, served by the Yarrawonga Weir, has an off-take capacity of 2,500 cubic feet per second, and will serve 1,500,000 acres of land in New South Wales. The Yarrawonga Channel, on the Victorian side, has an off-take capacity of 1,250 cubic feet per second, and is designed to serve 270,000 acres. Only a portion of both these areas will be irrigated.

Adjoining the river in New South Wales and 35 miles from the Murray-Darling Junction, Lake Victoria storage, with a capacity of 551,700 acre feet and a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. Work has recently been completed on the enlargement of the inlet channel to Lake Victoria to permit greater diversion of periodical flood flows of short duration.

Five barrages across channels near the Murray River mouth connecting Lake Alexandrina with the sea were completed in 1940 to prevent ingress of salt water to Lakes Alexandrina and Albert and to the lower river, thereby increasing the productivity of adjacent lands. The structures maintain a sufficiently high level for 50 miles up river to permit watering by gravitation of a considerable area of reclaimed river flats. The total distance across the barrages and intervening islands is 15 miles.

In addition to the works carried out under the auspices of the Commission, the separate States have constructed thousands of miles of distribution channels and have provided a number of storages on the tributaries, thereby contributing very materially to the large amount of irrigation development in the Murray Basin. The total capacities of such main storages are: New South Wales—Burrinjuck (Murrumbidgee), 837,000 acre feet; Wyangala (Lachlan), 303,900 acre feet; Victoria—Eildon (Goulburn), 2,750,000 acre feet; Waranga (Goulburn), 333,400 acre feet. More details of these and other State works on Murray tributaries will be found in the sections dealing with State systems. No storages exist on the Murray in South Australia.

3. New South Wales-Queensland Border Rivers Agreement.—The New South Wales-Queensland Border Rivers Agreement came into effect on 1st July, 1947. The Agreement provides for the construction of certain works on parts of those portions of the Severn, Dumaresq, Macintyre and Barwon Rivers which constitute part of the boundary between New South Wales and Queensland, for the furtherance of water conservation, water supply and irrigation in those States.

The works to be constructed comprise a dam on the Dumaresq River at a site to be selected by the Commission to give a storage basin with a capacity as large as is reasonably practicable and not less than six nor more than twelve weirs as may be found necessary to meet the requirements of irrigation along the rivers. Provision is also made for the construction of not more than four regulators in the effluents from the barrier rivers and for the taking over of the existing weir in the Macintyre River at Goondiwindi and the existing weir in the Barwon River at Mungindi. The costs of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharged from the Dumaresq storage, whether by regulated or unregulated flow, shall be available to the two States in equal shares.

The Water Conservation and Irrigation Commission of New South Wales, which is the constructing authority for the dam, carried out investigations of several dam sites on the Dumaresq River near Mingoola Station Homestead which is approximately 39 miles from Tenterfield. Foundation drilling supplemented by a geophysical survey carried out by the Commonwealth Bureau of Mineral Resources disclosed unfavourable foundation conditions at all sites, the depth of alluvium overlying sound rock exceeding 150 feet in all cases. In an endeavour to obtain more economical storages, investigations were extended to tributary streams and superficially suitable sites have been located on Pike Creek and the Mole River. A geophysical survey was made at each of these sites and preliminary comparative estimates prepared to determine the relative economy of providing one large storage at Mingoola or two smaller storages on the tributaries. It is now intended to do exploratory drilling of the tributary sites.

The Irrigation and Water Supply Commission of Queensland is the constructing authority for the new weirs and regulators. The construction of Bonshaw and Cunningham Weirs on the Dumaresq River was completed in January, 1953 and June, 1954 respectively.

Investigations are proceeding and designs are being prepared for a weir and regulator on the Barwon River at the offtake of the Boomi River and construction of a low level weir to establish a pumping pool at Glenarbon on the Dumaresq River has been authorized. The existing Goondiwindi and Mungindi Weirs are being maintained, operated and controlled by the Queensland Irrigation and Water Supply Commission. Until a dam has been constructed, it is unlikely that any weirs, other than those referred to above, will be required.

The catchments for the border streams (2,000 square miles) extend to the granite areas in the vicinity of Tenterfield (New South Wales) and Stanthorpe (Queensland) and elevation rises to 3,000 feet. Average rainfall is 30 inches. The catchments and the areas suitable for irrigation are approximately equal in each State. Climatic conditions are such that it is necessary to supplement rainfall from April to October by irrigation to stabilize and increase production. The capacity of the area to grow lucerne and tobacco under irrigation has already been demonstrated. Other possible development of the area includes irrigation of cotton, root crops, cereals, and citrus fruit, and expansion of the fat stock industry.

4. Snowy Mountains Hydro-electric Scheme.\*—(i) General. Following a comprehensive investigation into both the water and power potential of the Snowy River waters by a Technical Committee representative of the Commonwealth and the States of New South Wales and Victoria in 1947 and 1948, and the submission by the committee of reports in 1948 and 1949, the Commonwealth Parliament in July, 1949 passed the Snowy Mountains Hydro-electric Power Act setting up an Authority to implement the proposals agreed upon.

The basis of the proposals is to impound the Snowy River waters at high elevations and, by diverting them into tunnels passing under the Alps, to use their potential power for the generation of electricity and then to discharge them into the Murray and Murrumbidgee River systems for use in the irrigation areas.

The scheme will be constructed in two parts, the first being known as the Snowy-Murray Development where the water is to be diverted by tunnel from a large dam across the Snowy River at Jindabyne to the Swampy Plains River in the Murray Valley, and the second as the Tumut Development, in which water will be diverted by tunnel from a dam at Adaminaby on the Eucumbene River, a tributary of the Snowy, to the Tumut River, a tributary of the Murrumbidgee. The whole scheme will involve the construction of seven major dams (with a total storage capacity of approximately 7 million acre feet), fifteen power stations, more than 80 miles of large diameter tunnels, and over 330 miles of racelines at high elevations.

Latest estimates indicate that the total cost will be approximately £419 million. The scheme is the greatest engineering and developmental work ever undertaken in Australia and one of the major engineering projects of the world.

(ii) Snowy Mountains Hydro-electric Power Act 1949. The Snowy Mountains Hydro-electric Authority is constituted by a Commissioner, who is assisted by two Associate Commissioners. The functions of the Authority are defined in the Act as follows:—(a) to generate electricity by means of hydro-electric works in the Snowy Mountains area and (b) to supply electricity so generated to the Commonwealth for defence purposes and for consumption in the Australian Capital Territory. The general powers of the Authority as defined in the Act are as follows:—For the purpose of performing its functions the Authority shall have power to construct, maintain, operate, protect, manage and control works—(a) for the collection, diversion and storage of water in the Snowy Mountains Area; (b) for the generation of electricity in that area; (c) for the transmission of electricity generated by the Authority; and (d) incidental or related to the construction, maintenance, operation, protection, management or control of any of the works specified above. The Act provides that the Authority may sell to a State, or to an authority of a State, electricity generated by the Authority which is not immediately required by the Commonwealth for defence purposes or for consumption in the Australian Capital Territory.

See also Chapter VIII.—Electric Power Generation and Distribution, p. 272.
 For more detailed information see special article by the Commissioner, Snowy Mountains Hydro-electric Authority (Sir William Hudson) which appeared in Chapter XXIX.—Miscellaneous, of Official Year Book No. 42.

(iii) The Authority's Objectives and Programme. The two basic objectives are the production of electricity and the diversion of water inland.

The first power station, at Guthega, came into service in April, 1955. Additional generating capacity is scheduled to become available progressively.

By the end of 1959, the Snowy Scheme will supply the Murrumbidgee River with approximately 300,000 acre feet per annum of additional water and by 1962 this amount will have increased to 500,000 acre feet per annum. Ultimately the scheme will provide approximately 1,818,000 acre feet per annum of additional regulated water of which 1,020,000 acre feet will go to the Murrumbidgee and 798,000 acre feet per annum to the Murray.

The New South Wales Department of Public Works, on behalf of the Authority, is supervising the construction of the Adaminaby Dam, for which a contract was let in May, 1956. Construction of the dam was sufficiently advanced to permit closure of the diversion tunnel gates on 22nd June, 1957 and the waters of the Eucumbene River are now being stored for later use through the Tumut Power Stations. The Department of Main Roads and the Snowy River Shire are reconstructing over 90 miles of existing roads. Construction is now in progress on the 14 mile Eucumbene–Tumut Tunnel, Tumut Pond Dam, the 8,000 feet pressure tunnel leading to Station T1, and on Station T1 itself. Designs for the Tooma–Tumut Diversion, the T2 Project and the Murrumbidgee–Eucumbene Diversion were sufficiently advanced to permit the calling of tenders for these works before the end of 1957.

#### B. STATES AND TERRITORIES.

#### § 1. Australian Local Pattern of Water Conservation and Use.

The foregoing sections deal with water conservation and irrigation in Australia generally and with national and interstate projects. The following survey indicates the local pattern of water resources and the steps taken by the State Governments to bring about their development. It will be seen that water policies in the various States tend to assume a distinctive and characteristic pattern closely allied with climatic conditions and specific local needs.

In Victoria, almost every form of water scheme is in operation. In New South Wales, major emphasis at present is on irrigation and stock development in the dry areas along the Murray and Murrumbidgee Rivers, though a substantial scheme of intensive irrigation is being conducted in the Murrumbidgee Irrigation Areas. In Queensland, up to the present, the predominant emphasis has fallen on water (mainly underground sources) for stock, and the development of small irrigation schemes in sub-humid and humid areas, especially to stabilize sugar production.

Apart from regular irrigation practices along the Murray River, South Australian authorities are vitally concerned with reticulated supplies for rural areas and towns. Western Australia has developed unique rock catchments and piped supplies for agricultural areas and towns in dry districts. Tasmanian interest appertains to hydro-electric generation almost exclusively. The Northern Territory is primarily concerned with stock supplies and the safeguarding of long stock routes.

## § 2. New South Wales.

- 1. General.—(i) Rainfall and History. In issue No. 37 of this publication (p. 1110) information on the pattern of rainfall and the history of irrigation in New South Wales preceded the description of water conservation and use in that State, but it has now been omitted. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. The Water Conservation and Irrigation Commission of New South Wales consists of three members appointed by the Governor. The operations of the Commission cover water conservation, control of irrigation areas, establishment, operation and maintenance of works for domestic and stock water supply, irrigation districts, flood control districts, sub-soil drainage districts, constitution of water trusts, the issue of licences for private irrigation, artesian and shallow boring, assistance under the provisions of the farm water supplies scheme and river improvement works.

Under the Water Act, the right to the use and flow, and the control of water in all rivers and lakes which flow through, or past, or are situated within, the land of two or more occupiers, is vested in the Commission for the benefit of the Crown. A system of licences operates for the protection of private works of water conservation, irrigation, water supply, drainage, and prevention of inundation.

For particulars of the New South Wales-Queensland Border Rivers Agreement ratified by Acts of both States in 1947, see page 302 of this Chapter.

2. Schemes Summarized.—(i) Location and Type. The bulk of irrigated land is along the Murray and its tributary the Murrumbidgee. Smaller areas are served by the Wyangala Dam and Lake Brewster on the Lachlan, a tributary of the Murrumbidgee. None of the other rivers is regulated by large head storages, though weirs and dams have been provided for town supplies, etc., in many places, and head storages have been commenced on the Macquarie, Namoi and Hunter Rivers. Substantial use is made of artesian and sub-artesian water in pastoral areas.

New South Wales legislation provides for the constitution and control of various schemes having different characteristics and including Irrigation Areas, Irrigation Districts, Water Trust Districts, Flood Control and Irrigation Districts and River Improvement Districts. There are five Irrigation Areas:—The Murrumbidgee Irrigation Areas consisting of 451,251 acres served with water through a channel system stemming from the river at Berembed Weir; the Coomealla Irrigation Area of 34,693 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,549 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,806 acres, supplied with water pumped from the Murrumbidgee; and the Tullakool Irrigation Area of 18,006 acres supplied from the Edward River at Stevens Weir. All these areas are administered by the Commission, and details of the various schemes are given in sub-section (iii) below.

(ii) Works. The capacities of the main storages (in acre feet) are :-

Murray:—Half share of Hume Reservoir, weirs and locks to Wentworth (835,420); Stevens Weir, Edward River (7,165).

Murrumbidgee:—Burrinjuck Dam (837,000); Berembed Weir (10,000); Redbank Weir (7,360); Maude Weir (6,740).

Lachlan: —Wyangala Dam (303,900); Lake Brewster (123,900); Lake Cargelligo (29,435); Jemalong Weir (2,200).

Water from the Hume Reservoir is used for domestic and stock purposes, to provide bulk supplies for country towns, for the irrigation of vines, fruits and fodder in the Curlwaa and Coomealla areas, for rice and other cereals and for pastures in the Tullakool Irrigation Area, for domestic and stock supply and irrigation in the Berriquin, Wakool and Denimein Districts, and for water trusts for domestic and stock purposes and/or irrigation.

The Wyangala Dam is 30 miles upstream from Cowra in the Central West. It has a catchment of 3,200 square miles. Water from the dam, supplemented by the unregulated flow of the Belubula River, provides for domestic and stock purposes along the full length of the river (over 700 miles) and also for irrigation by land holders operating licensed pumps. The towns of Cowra, Forbes, Condobolin, Hillston and Booligal are supplied. Balance storages at Lake Cargelligo and at Lake Brewster conserve water during periods of high flow for release as required. Water from the Lachlan, diverted at Jemalong Weir, supplied the districts of Jemalong and Wylde's Plains, serving an area of 224,556 acres. Proposals for future development include provision of a head storage on the Belubula River.

The approximate total length of channels (including main canals) constructed by the Water Conservation and Irrigation Commission in New South Wales is 2,957 miles. The approximate length of drains and escape channels is 860 miles, and the total length of pipe lines is approximately 50 miles, making a grand total of 3,867 miles of channels and pipe lines, etc.

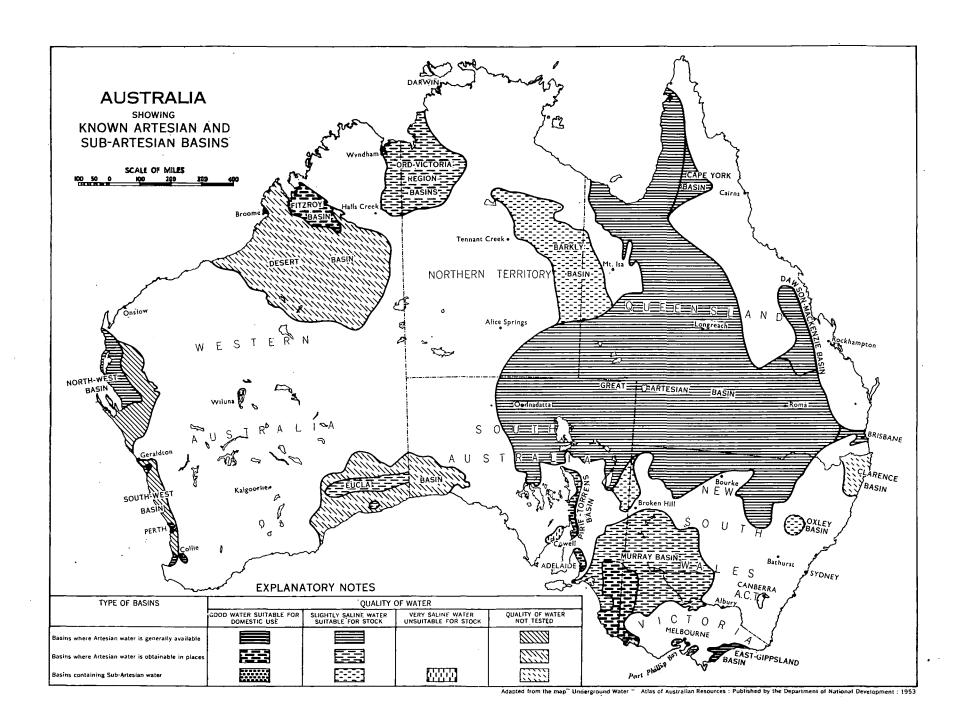
(iii) Extent of Systems and Nature of Irrigated Culture. The following table shows the areas of the various irrigation systems and particulars of the areas under irrigated culture in New South Wales during 1956-57.

# AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: NEW SOUTH WALES, 1956-57.

(Acres.)

		,				A	rea und	er Irrigate	d Cultu	ire.			
System, etc.		Total Area.		Other Cer- eals	Luc-	Other Fod-	Pas	ures.	Vine-	Orch-	Vege-	Fal- low Land and	
		 	Rice.	Grown for Grain.	erne. (a)	der Crops.	Sown.	Nat- ural.	yards.	Orch- ards. (c)	tables.	Mis- cel- lan- eous.	Total.
Irrigation Areas— Murrumbidgee (v the Areas)		451,251	30,182	2,511	2,911	1,190	61,704	1,934	4,660	12,144	4,108	20,589	141,933
Lands adjacent plied under a ment	agree-	(4)		4	92	2	2 522	10	1	77.	6	41	3,730
Coomealia Curlwaa	•••	(d) 34,693 10,549	• • •	:: 1	9 24	36	3,533	::	4,261 579	829 1,031	10 10	::	5,109 1,680
Hay Tullakool	::	6,806 18,006	840	160	42 80	59	1,083 4,215		::	:: ;	!	630	1,234 5,925
Total		e 521,305	31,022	2,675	3,158	1,287	70,535	1,994	9,502	14,081	4,134	21,223	159,611
Irrigation Districts- Benerembah		112,818	4,974	1,335	410	150	17,187	60		!	219	3,656	27,991
Tabbita	• •	10,745	350	1	20		1,120			!	40	90	1,620 6,200
Wah Wah Berriquin	• •	571,358	• •	2331	385	250	4,140	100 1,290	• • •		15	1,325 3,030	158,126
Wakool	• •	779,564 493,730	6,700	3,321 350	30,317 1,510	470	120,153 47,020	1,060		!	50	850	58,010
Denimein	• •	147,005	3.396		1,103	522	9,269	3,836	- :: i	12		100	18,425
	ylde's	117,005	5,570	1 .0.	2,100		,,,,,,	2,030				!	
Plains		224,556		1,325	3,352	322	7,113	2,985				925	16,022
Gumly Deniboota	••	345 306,907	3,975	26 50	63 212	·i10	3,825	35 4,082		19	56	544	199 12,798
Total		2,647,028	10 305	6 504	37,372	1 824	209.827	13,448		 31	380	10,520	299,391
Flood Control Distr													
Lowbidgee		375,000	١					(f)94,118	ا ا		1	٠. ١	(f)94,118
Medgun	•••	272,800	:: 					(f)61,760 ———					(f) 61,760 
Total	••	647,800			••		••	f 155,878					f 155,878
Irrigation Trusts-		4.500				[			770	130	İ		900
Pomona Blairmore	• • • • • • • • • • • • • • • • • • • •	1,580 315	• • •	• • •	• •		••	• • •	, 770	130			(d)
Bringan	•••	4,933		::	• •	ا ۱۰۰	• • •	· ::	•••	,			ίď
Bungunyah-Kora	leigh	1,810		] ::	• • • • • • • • • • • • • • • • • • • •	50			996	72	80		1,198
Glenview		661		i i	60			320		70		ا ا	450
Goodnight	• •	1,167			• •			•••	550	41	5	8	604
Bama	••	3,446		l		•••					•••		(d)
Total		13,912			60	50	••	320	2,316	313	85	8	(e) 3,152
Water Trusts—Doi and stock supplies Licensed Diversion	5	2,914,831								٠			
To irrigate	•••	(d)			11,196	4,398	25,970	2,652	729	3,719	13,882	(h) 536	63,082
Grand Total	(e)	(d)	50,417	9,269	51,786	7,559	306,332	174,292	12,547	18,144	18,481	32,287	i 681,114

<sup>(</sup>a) Includes grazing and cutting. (b) Perennial and annual self-seeding. Perennial amounted to 39,183 acres. (c) Citrus and deciduous. Deciduous amounted to 6,825 acres of which 6,144 acres were in the Murrumbidgee Irrigation Area. (d) Not available. (e) Incomplete. (f) Area irrigable; details of area actually irrigated are not available. (g) Excludes domestic and stock supplies for which particulars are not available. (h) Tobacco. (f) Includes Flood Control Districts; but excludes some Irrigation Trusts for which information is not available.



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3. Murrumbidgee Irrigation Areas.—(i) Description. These areas comprise about a third of the State's irrigated acreage and in 1956-57, together with lands adjacent supplied under agreement, received 318,388 acre feet of the total water allocated within the State for stock, domestic supply and irrigation (1,112,236 acre feet). They are served by the Burrinjuck Dam (capacity 837,000 acre feet), 40 miles north-west of Canberra, on the Murrumbidgee. The catchment above the dam is 5,000 square miles. The river rises on the high plateau north of Mount Kosciusko where the average annual rainfall exceeds 60 inches. Flow for the irrigation districts is supplemented by unregulated flow below the dam from the Tumut River. The dam also provides town supplies for Gundagai, Wagga, Narrandera, Hay, Balranald, and for towns served by the South-West Tablelands scheme.

Domestic and stock water and water for irrigation are supplied for the Irrigation Districts of Tabbita, Benerembah and Wah Wah and the Flood Control and Irrigation District of Lowbidgee. Flood flows are relied on to serve the Lowbidgee district and water is not released from the dam for that purpose. For the other undertakings, however, water is stored during the winter and spring freshets, fed by melting snows, and is released during the September-April irrigation season. It passes along the river channel to Berembed Weir, 240 miles westward, where it is diverted to the main canal with an off-take capacity of 1,600 cubic feet per second. The main canal has been completed to beyond Griffith, 96½ miles from the off-take. Reticulation channels aggregate approximately 857 miles and drainage channels 785 miles. In addition, approximately 374 miles of supply channels run through adjacent irrigation districts in which the water supply is operated and maintained by the Commission, but land transactions are not under its control.

The land on which the Murrumbidgee Irrigation Areas are situated originally comprised large sheep stations and was sparsely populated. Population was 12,000 in 1923, 15,000 in 1929, 20,000 at the 1947 Census and 24,000 at the 1954 Census. At the 1954 Census the population of the Yanco district (with Leeton as the centre) was 10,000 and the population of the Mirrool Area (with Griffith as the centre) was 14,000.

- (ii) Administration. The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission under freehold or perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1957, was 377,248 acres, including 38,918 held for short lease grazing, agriculture, etc.
- (iii) Production. Since the inauguration of the scheme in 1912 the volume of production from the area has greatly increased. Numbers of new crops are grown while the volume of the major products of the area prior to the scheme, such as wool and livestock for slaughtering, has expanded considerably. The principal products to-day are: wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans and root vegetables.

Rice growing was initiated on the Murrumbidgee Irrigation Areas in 1924 and has since become the most important crop grown in the area. In 1956-57, the total area sown in the Murrumbidgee Irrigation Areas was 30,182 acres and the total quantity of water delivered for the rice crops was 154,672 acre feet.

In a normal season, the water supplied for rice represents about one-half of the total delivered on the Murrumbidgee Irrigation Areas.

Co-operation is a prominent feature in the Murrumbidgee Areas. Co-operative organizations in the Mirrool section handle about 300,000 bushels of fruit per year (compared with 54,600 in 1927-28). The annual sales turnover of the Leeton cannery in recent years has exceeded £2,000,000. Settlers and government agencies co-operate extensively in all matters relating to irrigation practice.

4. Other Irrigation Areas.—The Curlwaa, Coomealla, Hay and Tullakool Irrigation Areas follow the same administrative pattern as the Murrumbidgee Areas—that is, land transactions are administered by the Water Conservation and Irrigation Commission which also is responsible for the operation and maintenance of works to supply water at rates determined by the Commission.

Curlwaa Area, on the Murray near Wentworth, consists of 10,549 acres of which 7,754 acres were occupied at 30th June, 1957. Production consists of dried vine fruits, deciduous fruits and fodder crops.

Coomealla Area, 9 miles upstream from Curlwaa, comprises 34,693 acres of which 30,948 acres were occupied at 30th June, 1957. Production consists of vine and citrus fruits. An extension of the Coomealla Irrigation Area has been completed in recent years to provide irrigation farms for ex-servicemen and 100 ex-servicemen have been placed on the new farms.

Tullakool Area, formerly part of the Wakool Irrigation District, comprises 18,006 acres of which 14,396 acres are occupied. Production consists of fat lambs, wheat and rice.

Hay Area, on the lower Murrumbidgee, consists of 6,806 acres, of which, 6,240 acres are occupied. Production comprises dairy products, fat lambs, sheep, wool and fodders.

5. Irrigation Districts.—These Districts are set up under the Water Act for (a) domestic and stock water supply and (b) irrigation. They differ from water trusts in that the cost of the works is not required to be repaid over a period, but annual charges are made by the State for water supplied to landholders. The following are the districts or provisional districts constituted and the areas of land benefited:—Murray River—Wakool District (completed) 493,730 acres, Berriquin Provisional District (completed) 779,564 acres, Deniboota Provisional District (first section completed) 306,907 acres, Denimein Provisional District (completed) 147,005 acres, Jernargo Provisional District (certain portions of which have been included in Berriquin District) 4,505 acres, Barramein Provisional District (domestic and stock supply only—works not yet commenced) 88,651 acres; Murrumbidgee River (completed)—Benerembah District 112,818 acres, Tabbita District 10,745 acres, Wah Wah Provisional District 571,358 acres, Gumly Provisional District 345 acres; Lachlan River (completed)—Jemalong and Wylde's Plains District 224,556 acres.

Since the completion of the Hume Reservoir, several such districts have been established along the Murray to utilize the New South Wales share of the storage. Water is not available for the whole of the 5,000,000 acres adjacent to the Murray in New South Wales, and therefore the schemes are based on "extensive" irrigation—that is, water rights are allotted to holdings on the basis that only a portion of each holding (one acre in three, five or ten, according to the district, etc.) will be irrigated, but additional water, when available, may be obtained by landholders. "Water right" means right to such a quantity annually of water, 12 inches deep, as will cover an area of one acre.

Water to serve Berriquin and Wakool Districts is diverted through a main canal which will be 100 miles long when completed. At 30th June, 1957, the total length of completed canal and channels in Berriquin District was 870 miles, including Mulwala Canal 75 miles, Berrigan channel 22 miles, subsidiary channels 729 miles, escape channels 33 miles and cross drainage channels 11 miles. Off-take capacity of the Mulwala Canal is 5,000 acre feet per day. Ultimately the water will serve Deniboota and other districts for which works have yet to be completed.

Wakool, with 384 miles of channel, contains 292 holdings and the area developed by irrigation comprises about one acre in 9 of the total area. The total area irrigated in 1956-57 was 58,010 acres and water supplied was 103,554 acre feet. Crops comprised fodders, pastures, rice, cereals and vegetables, but sheep raising is the main industry.

Considerable subdivision has occurred within the Berriquin District and the proportion of the total area developed for irrigation is higher than in the case of Wakool. Total irrigated acreage was 158,126 at 30th June, 1957. Sheep and wheat growing are the main industries. The fat lamb industry is well developed and expanding. Dairying is making headway, and a butter factory has been established at Finley.

In the Benerembah, Tabbita and Wah Wah Districts, supplied from the channels of the Murrumbidgee Irrigation Areas, the quantity of water supplied during the 1956-57 season for irrigation, etc. was 94,184 acre feet, and the area irrigated was 35,811 acres, including rice and other cereals, pastures, and fodder crops.

For the same season, 23,260 acre feet of water were supplied from the Lachlan River to irrigate a total area of 16,022 acres within the Jemalong and Wylde's Plains Districts.

6. Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.—
The Water Act provides for the constitution of Trust Districts for domestic and stock water and irrigation and empowers the Commission to construct, acquire or utilize necessary works. When the works are completed, they are handed over to trustees to administer.

The trustees are elected by the occupiers of the land and act with a representative of the Commission. They are empowered to levy and collect rates covering the cost of the works repayable to the Crown by instalments and also the cost of operation and maintenance of the works. The rates are struck according to the area of land which benefits. The following water trusts—other than irrigation—have been constituted (the area in acres of each district is shown in parentheses)—Murray River—Tuppal Creek (78,080), Bullatale Creek (68,320), Little Merran Creek (157,440), Poon Boon (32,980), Minnie Bend Flood Prevention (2,190); Murrumbidgee River—Yanco, Colombo and Billabong Creeks (1,001,210); Lachlan River—Torriganny, Muggabah and Merrimajeel Creeks (170,240) Condobolin West Weir (4,480), Marrowie Creek (292,640), Ulonga (71,655), Micabil Weir (11,500); Miscellaneous—Algudgerie Creek (9,760), Nidgery Weir (46,880), Great Ana Branch of Darling River (967,339), Collarenebri town water supply (117)—making in all a total area of 2,914,831 acres. Thirteen of these trusts have been formed for the provision of water for domestic and stock purposes, one for a town supply and one for flood prevention.

Irrigation Trusts are established under the same Act and are administered by trustees in a similar way. The following are the Trust Districts (area in acres is shown in parentheses):—Hunter River—Blairmore (315); Murray River—Bama (3,446), Goodnight (1,167), Bungunyak-Koraleigh (1,810), Glenview (661), Bringan (4,933); Darling River—Pomona (1,580)—making in all a total area of 13,912 acres.

The Lowbidgee Provisional Flood Control and Irrigation District (375,000 acres), the first of its kind, was constituted in 1945. Its purpose is to provide flood irrigation for pasture lands on the lower Murrumbidgee by water diverted from the Maude and Redbank Weirs. There are 50 holdings. Another district, Medgun (272,800 acres) near Moree in the North-West is also in operation. There are 20 holdings in the district and the area benefited by controlled floodings is approximately 61,800 acres.

7. River and Lake, and Farm Water Supplies.—During recent years, the numbers of licences and permits issued to individuals to draw water from rivers and lakes for irrigation have increased substantially, especially along the coastal streams in sub-humid districts where the value of supplementary irrigation is becoming more recognized as a means of stabilizing production in lean months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

The Farm Water Supplies Act was passed in 1946. Technical advice and assistance, and also financial assistance, are made available to aid individual farmers and groups of farmers to provide and improve water supplies for domestic, stock and irrigation purposes by means of wells, bores, excavated tanks, weirs or dams.

8. Underground Water.—Extensive use is made of artesian, sub-artesian, and shallow underground water. Fractured Palaeozoic rocks in the South-east corner of the State provide useful supplies of ground water usually at depths of 50-250 feet. Eighty thousand square miles in the northern and western portions are covered by the Great Artesian Basin. Eighty-one Bore Water Trusts and twelve Artesian Wells Districts have been constituted. The Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts settlers maintain the drains. Bore Trusts and Artesian Districts cover about 5 million acres and water is distributed through approximately 7,400 miles of open earth drains. The number of artesian bores giving a flowing or pumping supply at 30th June, 1957, was 1,036 and the estimated total daily flow from 581 flowing bores was 59 million gallons. The estimated flow in 1914-15 was 99 million gallons a day for 372 bores. The deepest bore is Boronga No. 2 (4,570 feet), which also has the greatest flow, namely 1,115,000 gallons a day. Of the total number of bores sunk, 238 have been installed by the Government in connexion with public watering places, Bore Water Trusts or Artesian Wells Districts.

Since 1912, the Government has assisted settlers in shallow boring operations for which repayments are required over a period. To 30th June, 1957, the total constructed by the Commission's plants was 4,714 and their average depth was 304 feet.

9. Future Programme.—The programme of post-war development already in hand includes the provision of eighteen dams and storages, eight diversion weirs, and flood mitigation and river protection works in various parts of the State. Construction has been commenced on head storages at Keepit on the Namoi, Glenbawn on the Hunter and Burrendong on the Macquarie, while legislation has been passed authorizing the construction of a flood control dam at Warkworth in the Hunter Valley and a storage dam at Blowering on the Tumut River. In the case of Burrendong Dam, work has been temporarily suspended in order to enable the Water Conservation and Irrigation Com-

mission to concentrate its available resources on the speedy completion of works having higher priority. The Menindee Lakes storage project—part of the scheme for conserving the waters of the Darling River—has been recommenced, while Glenbawn Dam on the Hunter River is substantially complete. The Hunter River development concerns an exceptionally fertile coastal valley, forming the hinterland to Newcastle, where the annual rainfall is not heavy and variations from month to month are considerable. This is the first coastal scheme initiated in New South Wales. The total estimated capacity of all proposed new storages is 5,500,000 acre feet. At 30th June, 1957 work was in hand to begin construction of a diversion weir at Gogeldrie on the Murrumbidgee River from which water will be supplied to a new irrigation area (Coleambally) on the south side of the river containing not less than 800 new irrigation farms. Later, development will extend to a new area on the north side of the river.

10. Hydro-electricity.—A survey of the use of water for power generation in New South Wales may be found in the previous chapter (see page 279).

#### § 3. Victoria.

- 1. General.—(i) Rainfall. Particulars of the rainfall pattern of Victoria were given on page 1117 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. The passing of the Irrigation Act of 1886 put the control of surface waters under the Crown, provided for the establishment of Irrigation Trusts and marked the beginning of irrigation development. In 1905, the Water Act established the State Rivers and Water Supply Commission and gave it control of all irrigation, rural domestic and stock supplies, town water supplies and flood protection and drainage undertakings outside the Metropolitan area, with the exception of the irrigation area operated by the First Mildura Irrigation Trust and the town water supplies operated by locally constituted Waterworks Trusts or local governing bodies.

The operations of the First Mildura Irrigation Trust and the various Waterworks Trusts and local governing bodies, as well as the various Sewerage Authorities which control sewerage undertakings in country towns, are also subject to general supervision by the Commission.

2. Systems Summarized.—(i) Works. Since 1902, when a great drought emphasized the need for a concerted attack on water problems, the total capacity of water storages has increased from 172,000 to 4,962,550 acre feet (including Victoria's share of the Hume Reservoir). By means of channels, bores, etc., one-fourth of the State is artificially supplied for stock and domestic purposes. Large areas, which would be largely unproductive without water, are now contributing to the State's wealth. The area actually irrigated has increased from 105,000 acres in 1906 to 855,200 acres in 1956–57 and irrigation channels supply 2,150,000 acres.

The Commission controls 38 large reservoirs and 240 subsidiary storages. The capacities of the principal storages in acre feet within the various systems at 30th June, 1957 were as follows:—

Goulburn System:—Eildon Reservoir, 2,750,000; Goulburn Weir, 20,700; Waranga Basin, 333,400; Total, 3,104,100; Murray-Loddon System:—Half share of River Murray Commission storages including Hume, Yarrawonga, Torrumbarry, Euston, Mildura and Wentworth, 835,420; Cairn Curran, 120,600; Kow Swamp, Laanecoorie, Kerang-North-West Lakes, Lake Boga and Lake Cullulleraine, 148,210; Total, 1,071,230; Wimmera-Mallee:—Rocklands, 272,000; Total, 538,900; Maffra-Sale:—Glenmaggie, 106,040; Coliban:—62,730; Werribee:—34,900; Mornington Peninsula:—5,800; Otway:—1,080; Miscellaneous:—4,770; Total:—4,962,550.

Irrigation channels extend 5,000 miles, domestic and stock channels 9,500 miles and

Irrigation channels extend 5,000 miles, domestic and stock channels 9,500 miles and drainage and flood protection channels 2,000 miles, a total of 16,500 miles. In addition, the Commission controls 1,200 miles of piping, comprising 250 miles of mains and 950 miles of reticulation. Farm holdings served with water total 37,500 and another 7,000 holdings are in drainage or flood protection districts. Urban districts with a reticulated water supply number 282, of which 131 are served by the Commission's channels and pipelines and 151 are supplied by Trusts under the supervision of the Commission. The total number of persons served by a reticulated water supply is approximately 675,000 or 70 per cent. of the State's population outside Greater Melbourne.

To 30th June, 1957, the net capital expenditure on irrigation, rural water supply, country town water supply, and flood protection and drainage works amounted to £93,979,000, two-thirds of which was in respect of irrigation.

Of this net capital liability, at 30th June, 1957, £81,649,000 was borne by the State and £12,330,000 was borne by the water users. Waterworks Trusts and local governing bodies had a net capital liability of £9,130,000 at 30th June, 1957, of which £3,978,000 was borne by the State and £5,152,000 by the Authorities.

(ii) Extent of Systems and Nature of Irrigated Culture. Although the area irrigated is less than 2 per cent. of the State, it yields approximately 15 per cent. of Victoria's rural production. The following table shows the areas of the various irrigation systems and the areas under irrigated culture during 1956-57.

# AREAS OF SYSTEMS AND OF LAND UNDER IRRIGATED CULTURE: VICTORIA, 1956-57.

(Acres.)

					Area u	ınder Irr	igated C	ulture.			
System.	Total Area.		Luc-	Other Fodder Crops.	Pastures.		Vine-	Orch-	Market		
		Cereals.	erne. (a)		Sown.	Nat- ural.	yards.	ards.	Gar- dens.	Miscel- lan- eous.	Total.
Goulburn	1,257,268	1,256	13,217	6,075	293,524	26,018	199	14,740	2,702	4,957	362,688
Murray— Torrumbarry Weir Yarrawonga Weir By Pumping	267,324	103	3,161 23,173 236	422	139,879 65,359 337	32,517 3,159 76	6,373 38 24,223	1,148 3,536 1,493	939	2,152 72 269	
Total	680,645	2,726	26,570	2,490	205,575	35,752	30,634	6,177	3,160	2,493	315,577
Loddon and other North- ern Systems Southern Systems Mildura and Private	(b) 19,735 148,094		1,546 1,891	687 448		4,372 2,427	8	3,726 640		637 1,286	
Diversions	(c) 45,000	2,983	7,852	2,287	43,828	9,041	15,752	6,449	5,074	3,868	97,134
Grand Total	2,150,742	7,385	51,076	11,987	598,148	77,610	46,593	31,732	17,410	13,241	855,182

- (a) Includes lucerne for both hay and pasture.
  Mildura Irrigation Trust only.
- (b) Area of Campaspe District only.
- (c) Area of First
- (iii) Production. The influence of irrigation on Victorian production has been considerable, the value of production from irrigation districts as estimated by the Commission having risen from £500,000 in 1905-6 to about £42 million in 1955-56. The major products of irrigated farms are: dairy products, livestock for slaughtering, wool, vine fruits, fresh and canning orchard fruits and vegetables.
- 3. Goulburn System.—This comprises the Eildon and Waranga Reservoirs, the Goulburn Weir and over 2,570 miles of distributary channels. The total capacity of these storages was 3,104,100 acre feet at 30th June, 1957. The Eildon Reservoir (capacity 2,750,000 acre feet) which was completed in June, 1955, is the largest dam in Australia and the largest earthen dam in the Southern Hemisphere. The enlargement of Eildon means that when the necessary distributary works are completed, the area at present irrigated from the Goulburn River can be practically doubled to 600,000 acres.

Water from Eildon Reservoir flows down the Goulburn for 150 miles to the Goulburn Weir, which raises the summer level of the river about 45 feet to 408 feet above sea level, and where water is diverted to two main channels. The eastern main channel conveys water to four irrigation districts surrounding Shepparton and the western main channel fills Waranga Basin in addition to supplying the eastern portion of the Rodney Irrigation District. Following completion of Eildon Reservoir, the latter channel was duplicated to Waranga Basin.

Two main outlet channels issue from the Waranga Reservoir; one serves the Western part of the Rodney district, while the other serves districts as far west as Boort, and continuing to Beulah East, about 230 miles by channel from Waranga Basin or some 400 miles from Eildon, supplements the Wimmera-Mallee system.

Districts served comprise 196,000 acres east of the Goulburn; 602,000 acres between the Goulburn and Campaspe; 380,000 acres between the Campaspe and Loddon; and 80,000 acres west of the Loddon—a total of 1,258,000 acres.

The main products of the Goulburn districts are dairy products, fruit, wool and fat lambs. The development of the fruit canning industries is an index of the results of irrigation policy. Annual production from the Shepparton, Kyabram and Mooroopna canneries, together with that of city canneries—from Goulburn Valley fruit—normally represents about two-thirds of Australia's total production of canned peaches, pears and apricots.

4. Murray River System.—The waters of the River Murray are used to supply an area of more than 700,000 acres between Yarrawonga and Merbein, and channels totalling 1,450 miles are in service. The districts between Yarrawonga and Swan Hill, except Tresco, are supplied by gravitation and those down the river (Red Cliffs, Merbein, Nyah and Mildura) are supplied by pumping.

The Murray Valley Irrigation District, which is served from Yarrawonga Weir, comprises 267,000 acres with 550 miles of distributary channels. This district lies west of Yarrawonga between the River Murray and Broken Creek, its main products being dairying, fat lambs and deciduous fruit. A major post-war development has been a Soldier Settlement Scheme involving 60,000 acres. With the exception of the necessary drainage works, which are under construction, this project is complete.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves an area of 377,600 acres through 846 miles of supply channels. The weir raises the level of the river some 16 feet and enables water to be diverted throughout the year.

Robinvale Irrigation District, between Swan Hill and Mildura is a soldier settlement project established after the 1939–45 War. Set up on modern lines, the 3,000 acres irrigated annually are showing good yields of fruit. About ninety per cent. of the area is devoted to dried vine fruits, and the remainder to orchards.

Red Cliffs Irrigation District comprising 13,600 acres, of which, at present, 11,650 acres are irrigated, ranks first in importance among Victoria's pumping schemes. A system of main and distributary channels supplies every holding in the district. The district, originally set aside for soldier settlement, has been subdivided into 700 blocks. The area is planted mainly with vines and citrus. The average harvest is now 18,000 tons of raisins, currants and sultanas as well as large quantities of grapes for dessert and distillation.

Merbein Irrigation District comprises 9,200 acres and contains over 300 holdings averaging about 30 acres each. A reticulated pipe system supplies the town of Merbein, and the pumps also supply 51,200 acres forming part of the Millewa Waterworks District,

Nyah Irrigation District is supplied with water diverted from the Murray by a highlift pumping plant, serving 3,840 acres in about 200 holdings devoted mainly to vineyards.

- 5. First Mildura Trust District.—The First Mildura Irrigation Trust—the only Irrigation Trust operating in Victoria—controls an area of 45,000 acres, of which 15,000 acres are irrigated. Of this area, some 80 per cent, is used for the production of vine fruit and the bulk of the remainder for citrus and other fruit. The Trust area produces approximately 15,000 tons of raisins, currants and sultanas each year. The irrigation water is pumped from the River Murray and distributed through 168 miles of channels.
- 6. Wimmera-Mallee System.—The Wimmera-Mallee scheme is regarded as the most extensive domestic and stock supply system in the world. The main supply is drawn from the Grampians storages with a capacity of 538,900 acre feet. Supplementary water is drawn from the Goulburn channels and the Loddon River. The system serves an area of 11,000 square miles or nearly one-eighth of the State, which is largely devoted to wheat and pastoral industries. Without the artificial supply of water, development would be meagre.

Once a year, in the winter or spring, a volume of 72,000 acre feet of water is distributed through 6,500 miles of open channels and some 3,000 miles of farm channels. It is the responsibility of farmers to provide storages sufficient in size to meet their stock and domestic requirements for the ensuing year. About 10,000 farmers' tanks are served. In addition

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forty-seven towns with a total population of 40,000 obtain their water from the system. A total population of 80,000 depends upon the scheme. In the vicinity of Horsham and Murtoa, near the main storage, 3,500 acres are irrigated for soft fruits and pastures. With the completion of the Rocklands Reservoir, this irrigation area is being extended to 7,000 acres.

The northern part of the system is affected by sand drifting into the channels, particularly in years of dry weather conditions, and the Commission is involved in substantial annual expenditure to remove this sand drift before the annual water distribution can be made. This expenditure can be reduced by better farming methods, and efforts in this direction such as the sowing of rye-corn, and the use of compulsory powers to prohibit the fallowing of land or burning of stubble within three chains of channels in light sandy country have resulted in marked savings in maintenance costs.

7. Private Water Supplies.—The Rural Finance Corporation Act 1949 gave farmers assistance in establishing or improving domestic and stock water supplies on their farms. Water may be obtained from underground sources, from catchment and gully dams by diversion from existing streams and channels, by storage of sufficient water to meet a year's requirements and by installation of windmills or hydraulic rams.

The control of private diversions from the streams is an important function of the State Rivers and Water Supply Commission. About 10 per cent. of irrigation production in the State comes from private diverters, mainly around the River Murray. In recent years, there have been substantial increases in the areas licensed, the total increase over the past ten years being approximately 50 per cent. At present 4,500 private diverters are licensed annually.

A Farm Water Supplies Branch set up by the State Rivers and Water Supply Commission advises farmers on farm water supply matters even if finance is not required. Comprehensive booklets prepared by this Branch have been widely circulated to landholders.

8. River Improvement, Flood Protection and Drainage.—The largest drainage work undertaken by the State Rivers and Water Supply Commission is Koo-wee-rup-Cardinia Flood Protection District embracing 80,000 acres of a continuous depression along the seaboard of Westernport. Once useless, indeed a hindrance to communication, this area now yields primary products worth £3 million per year.

The Rivers and Streams Fund, established in 1931 from the rentals on river frontage reserves, gave an impetus to river improvement, but development accelerated rapidly after the 1948 River Improvement Act.

Under this Act, the formation of River Improvement Trusts is facilitated, assistance being granted by the State Government to supplement funds raised locally, and the importance of river improvement work is expected to continue to grow.

9. Underground Resources.—Due to inadequate information as to their extent, the underground waters of Victoria have not as yet been greatly utilized. The first stage of a comprehensive survey of these resources by the Victorian State Rivers and Water Supply Commission, which is responsible for the location, investigation and development of subterranean waters, has been completed and published recently. It provides records of bores in the Mallee, Wimmera and Glenelg regions, and a description of the Murray Artesian Basin. Investigations have also been made into the underground water resources of local areas such as Orbost Flats, Llowalong Estate on the Avon River and elsewhere.

The Murray Artesian Basin underlies an area of 107,250 square miles, of which 26,808 square miles are in Victoria, 28,269 square miles in South Australia and 52,173 square miles in New South Wales. The quality of the water varies from suitable for domestic purposes in much of the South-western part of the basin to saline and suitable for stock in the rest of the basin. Over 300 bores exist in Victoria, with an average daily flow of 3,000,000 gallons. Bores range in depth from 50 to 3,000 feet.

10. Future Programme.—With the completion of the Eildon and Cairn Curran Reservoirs, storage capacity in Victoria has risen from 172,000 acre feet in 1902 to nearly 5,000,000 acre feet in 1957. In the near future, as a result of the enlargement of the Glenmaggie and Hume Reservoirs, a further increase of 600,000 acre feet of storage capacity will become available.

The most important work at present facing the Commission is the enlargement of the Goulburn Channel System to enable full advantage to be taken of the additional water now available from Eildon Reservoir. A new channel of 1,500 cubic feet capacity from the Goulburn Weir to Waranga Reservoir, duplicating the channel already there was completed in 1956-57 at a cost of £2,000,000. Approximately half the work was done on other contracts worth £2,750,000 and the channel construction programme generally is being completed as funds become available.

It will be possible to develop the present districts progressively before the whole operation is completed and in the meantime, the water already stored in the Eildon Reservoir will provide a valuable safeguard against any possible drought.

11. Hydro-electricity.—Details of hydro-electricity potential and utilization in Victoria may be found in the previous chapter (see page 283).

## § 4. Queensland.

- 1. General.—(i) Rainfall. Particulars of the rainfall pattern of Queensland were given in Official Year Book No. 37, page 1122. (See also Chapter II.—Physiography, page 45 of this Year Book).
- (ii) Administration. The administration of irrigation and water supply in Queensland is under the control of a Commissioner of Irrigation and Water Supply. For a description of the development of the present administration see Official Year Book No. 42 and earlier issues.
- (iii) Water Utilization in Queensland. Queensland's predominant interest in the field of water conservation is the provision of stock and domestic water supplies in its great pastoral areas which contain nearly half of the Commonwealth's cattle and a seventh of the sheep. But in addition to the stabilization of water supplies in the pastoral areas and the provision of water along stock routes for travelling stock, the development of irrigated pastures on the eastern seaboard for fattening stock adjacent to meat works and markets has received much attention in later years.

The State's agricultural crops differ from those of other States in that a large proportion are tropical. Sugar-cane is the greatest individual crop, representing in value approximately 50 per cent. of total agricultural production. Approximately 16 per cent. of the sugar-cane acreage is irrigated and represents some 50 per cent. of the total irrigated area in Queensland. Queensland is Australia's major tobacco-producing State, and plans are in hand to increase annual production of this crop greatly by means of development under irrigation. The area of tobacco irrigated during 1955-56 represented 88 per cent. of the total plantings of this crop in the State.

2. Great Artesian Basin.—(i) General. Western Queensland beyond the 20 inch rainfall belt is predominantly pastoral and is mainly dependent for water supplies on artesian and sub-artesian bores and, where surface storage is not readily available, on excavated tanks. The Great Artesian Basin in Queensland corresponds approximately with the area lying west and south of the Great Dividing Range, excluding the Cloncurry Mineral Field and the Barkly Tableland. It comprises 430,000 square miles or about two-thirds of the total State area of 670,500 square miles. Statistics of bores and flow as at 30th June, 1957, are:—Artesian bores drilled, 2,525; artesian bores still flowing, 1,627; total depth drilled, 3,596,000 feet; deepest bore, 7,009 feet; total estimated flow, 211 million gallons a day. The average depth of artesian bores is 1,425 feet. Some 9,000 sub-artesian bores, within the Great Artesian Basin, have been registered in Queensland. Artesian pressure and flow are both steadily diminishing despite new bores drilled. The rate of diminution varies widely throughout the basin. Present general average rates of diminution are:—pressure, 1-2 feet/head, total flow, 1\frac{1}{2}-2 per cent. per annum.

The greater part of the artesian discharge is distributed by open earth channels totalling some 16,000 miles in length. Most of the water flowing along these channels is lost by soakage and evaporation and less than 10 per cent. is actually used by stock. The amount of soakage depends largely on the permeability of the earth and the rate of evaporation varies from season to season, but the shape and maintenance of the drains constitute further factors. The effective utilization of this water could be increased by the use of piping to overcome the loss by soakage and evaporation occurring in open earth channels.

Although artesian beds underlie such a large area of the State, only 80,000 square miles are primarily watered by bore drains. The remaining area is watered by artesian bores (with small or no flow and limited drains), sub-artesian bores, excavated tanks, dams and natural waterholes. In many districts, artesian bores are not economical watering facilities, because of depth, limited area to be watered, and difficult terrain for distribution of water by drains. High costs have restricted deep drilling. Very few new bores exceed 2,000 feet in depth, and a new bore greater than 3,000 feet in depth is exceptional.

Shallow sub-artesian supplies, of variable quality and volume, are available at depths less than 1,000 feet over a large area of the basin. These beds are not connected with the artesian beds. An essential practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

Though the number of bores has gradually increased over the years, the total flow of all bores has declined since the peak flow of 351 million gallons per day was recorded in 1914. By 1938, the flow was only 230 million gallons per day. The decline gave rise to the fear that supplies were giving out and that the basin was seriously threatened. In 1939, the Queensland Government appointed a committee to ascertain the nature and structure of the Great Artesian Basin with particular reference to the problem of diminishing supply. In its final report, presented in 1954, the majority of the Committee found that the output will continue to decline during the next sixty years when the flow from the remaining flowing bores will be of the order of 110 million gallons per day. At this stage the discharge from windmills, springs and other leakages and the underflow past the Queensland borders will be of the order of 20 million gallons per day. The total discharge of the order of 130 million gallons per day will be in equilibrium with the recharge of the basin. Numbers of bores on higher ground will cease to flow during the next sixty years and the area served by flowing bores will contract by perhaps 20 per cent.

A programme of strict conservation, involving the restriction of bore flows and improved bore drains, would result in smaller shrinkage of the area served by flowing bores and would actually cost less than the installation and maintenance of pumps or other watering facilities which would be required to provide alternative water supply as additional bores ceased to flow because of a policy of non-restriction. On the other hand, strict conservation would not increase the amount of water ultimately available as perennial flowing supply and would in fact decrease the amount of water passed from intake beds to aquifers within the basin, by flattening the hydraulic gradient. The benefit from strict conservation was not considered sufficiently great, nor sufficiently concrete to warrant implementation.

The quality of artesian water from the greater part of the basin is such that it is not suited for prolonged use for irrigation on most soils. Moreover, artesian supplies are not sufficient for both large scale irrigation and stock-watering. Practically the whole of the final steady-rate discharge from flowing bores will be needed for the watering of stock.

- (ii) Bore Water Areas. The constitution of Bore Water Areas was inaugurated in 1913 to aid pastoral settlement in districts where large flows were available at a cost beyond individual capacity and to conserve artesian supplies by fully utilizing the flows from the existing bores on the land resumed for closer settlement. Bores and drains are constructed from loan funds repayable over a period of years. The areas are administered by Local Boards or by the Commissioner of Irrigation and Water Supply, acting as a Board. Rates are levied to meet interest, redemption, maintenance and administration costs. Statistics for the year 1956-57 are:—Areas constituted, 63; administered by Commissioner, 56; administered by Local Boards, 7; area benefited, 4,232,671 acres; average rate per acre, 0.95d.; number of flowing bores, 55; total flow, 25,524,000 gallons per day; drains served, 2,822 miles.
- 3. Other Basins.—Two major areas marginal to the Great Artesian Basin in Queensland carry artesian water. One occurs on the western slopes of Cape York Peninsula and the other in the Dawson-Mackenzie River Basin. A small area in which flowing wells occur (the Gatton Basin) extends from Gatton to the coast.

Sub-artesian water supply from the Barkly Basin which extends into western Queensland from the Northern Territory, is referred to in the section dealing with the Northern Territory.

4. Stock Route Watering.—During 1935; a scheme was inaugurated to water adequately stock routes in the western portion of the State including main trunk routes connecting Eromanga to Burketown, Charleville to Normanton, and Clermont to Einasleigh, with branches to railheads, a total distance of 3,117 miles. Watering facilities were also provided on subsidiary routes. Under the Stock Routes and Rural Lands Protection Act of 1944, a: co-ordinating board was constituted, representative of Government departments and pastoral interests, under the direction of the Minister for Lands, and with an officer of that Department as superintendent; whose duty was, inter alia, to investigate and implement a long-range, co-ordinated plan for adequate watering of all stock routes through-

out the State. Natural waters are being supplemented by artificial facilities at intervals of about 9 miles. Construction is supervised by the Irrigation and Water Supply Commission and by local authorities. Completed facilities are vested in local authorities for control and maintenance. From 1935 to 30th June, 1957, 409 facilities had been completed and at 30th June, 1957, 77 facilities were under construction or investigation.

5. Irrigation.—(i) General. Irrigation as a means of stabilizing and increasing agricultural production is receiving growing attention in Queensland. In addition to the Theodore Irrigation Area on the Dawson River, orthodox projects served by a channel system are being developed at Clare, Millaroo and Dalbeg, all on the Burdekin River, Gibber Gunyah on the Dawson River and St. George on the Balonne River. Construction of the Clare, Millaroo and Dalbeg irrigation works was completed during the year ended 30th June, 1957, but a small amount of drainage work requires to be completed. Works were virtually completed in the Gibber Gunyah Area and construction of the St. George Area was advanced sufficiently to permit opening of 10 farms. A start has been made on construction of part of the main channel system within the Mareeba-Dimbulah Irrigation Area. Because of the large variations in-both monthly and annual river flows, major developments cannot be undertaken until large storage works are provided. Most irrigation in Queensland is performed by private farmers operating under licence, and obtaining water by pumping from streams or from natural underground storages. Where available, electricity is the most popular source of power for pumping; the principal areas supplied with electricity comprise the Burdekin Delta and the Lockyer Valley.

Furrow irrigation is used for cotton, sugar cane, most tobacco and some other crops. Spray irrigation is adopted to a considerable extent for fruit, vegetables, fodder crops and a small part of the tobacco. Spraying is well suited to the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Experimental use of the border check method in the irrigation of pasture and fodder crops has proved successful and may supersede other methods.

The following table shows for each division of the State the number of irrigators and the areas under irrigated culture for the year ended 31st March, 1957.

AREA OF LAND UNDER IRRIGATED CULTURE: QUEENSLAND, 1956-57.(a	AREA	OF LAND	UNDER	IRRIGATED	CULTURE:	QUEENSLAND,	1956-57.(a
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Division.		No. of Irri- gators.	Area under Irrigated Culture (Acres).									
			Vege- tables.	Fruit.	Sugar- cane.	To- bacco.	Cot- ton.	Other Crops.	Pas- tures.	Total.		
Southern Queensland Central Queensland Northern Queensland	::	4,259 340 1,479	20,566 719 3,811	2,950 115 595	11,949 45,209	1,988 1 4,361	5 326 76	20,082 • 2,825 533	4,326 526 709	61,866 4,512 55,294		
Total		6,078	25,096	3,660	57,158	6,350	407	23,440	5,561	121,672		

(a) Year ended 31st March, 1957.

The growth of irrigation is illustrated by the following figures for the total area of irrigated land:—1906, 9,922 acres; 1916, 10,886 acres; 1926, 24,250 acres; 1935-36, 44,283 acres; 1945-46, 68,347 acres; 1955-56, 136,019 acres.

The pattern of irrigation in Queensland is unlike that in southern States; the more important developments in tropical and sub-tropical areas are therefore discussed briefly in the sub-sections following. It should be noted that the spring to autumn "irrigation season" of the temperate southern irrigated lands is not applicable, and that round-the-year irrigation is required throughout most of the State, the timing and duration of the summer "wet" season being too variable to enable a definite non-irrigation season to be fixed.

(ii) Lockyer Valley. West of Brisbane and within 30 miles of that metropolitan market is the Lockyer Valley, which is portion of the Brisbane River Basin. The Valley comprises an extensive flood plain where heavy black alluvial soil thickly overlies gravels and sands carrying water suitable for irrigation. Despite a mean annual rainfall of 30

inches the variation is great, and irrigation is necessary for continuous agricultural production. Surveys suggest that some 60,000 acres of land highly suitable for irrigation are available. Of this area, only about 30 per cent. is under irrigation, the number of pumps operating from wells and open water exceeding 550 and 600 respectively. Over 60 per cent. of the farmers operate electric pumps for irrigation purposes and a special policy designed to encourage such development is fostered by the Southern Electric Authority of Queensland. The Irrigation and Water Supply Commission has constructed a number of small weirs on Lockyer Creek with a total storage of 1,370 acre feet. These also tend to augment and conserve underground supplies. To study local problems, an Irrigation Research Station was established at Gatton in 1946 by the Bureau of Investigation.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(iii) Burdekin River. The Burdekin River, which enters the sea between Townsville and Bowen, is a major factor in the life of North Queensland. In most years, heavy floods from a catchment twice the size of Tasmania cause extensive damage and traffic disabilities. On the other hand, the fertile Delta Area with its underground water supplies at shallow depth has contributed greatly to the agricultural prosperity of North Queensland. Present development is confined to the Delta Area. The average annual rainfall of this area is some 41 inches, but the major part falls in the months December to March. Consequently sugar growers and other farmers have tapped the underground water resources of the Delta to obtain supplies in the dry periods. Sugar is the main irrigated crop, though citrus, pineapples, vegetables and tobacco are also irrigated. The irrigated area is in excess of 30,000 acres, up to 1,000 acre feet of water being drawn daily from underground sources.

In the Home Hill-Inkerman areas on the south side of the Burdekin, water is obtained from shallow wells by electric pumps supplied from a local power station controlled by the Townsville Regional Electricity Board. Around Ayr, on the north side of the river, electric power from the mains of the Townsville Regional Electricity Board is now being adopted in place of the individual internal combustion engines previously used. At both Home Hill and Ayr, water for domestic supply is raised by a windmill on each property.

In 1940, the Burdekin River Trust was formed to safeguard the sugar areas of the Delta from erosion and floods. An Irrigation Research Station has recently been established to study the development of pastures and irrigated crops under local conditions.

A major multi-purpose scheme, involving irrigation, flood control and hydro-electric power generation, is being investigated by the various interested Government Departments under the general supervision of the Burdekin River Authority. The development envisaged includes a dam storing 6,584,000 acre feet, which would make water available for the irrigation of at least 250,000 acres. The principal industries anticipated are tobaccogrowing, dairying and cattle-fattening, with sorghum, sunflowers, peanuts, cotton and sugarcane as other possible forms of production. The projected scheme, together with the high-level railway bridge at present under construction, will change the Burdekin from a mixed blessing to one of the Commonwealth's greatest resources for agricultural and industrial production.

The Clare Irrigation Area, constituted in 1949, the Millaroo Irrigation Area, constituted in 1952, and the Dalbeg Irrigation Area, constituted in 1953, are at present being developed for tobacco production. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 12,000 acres and obtain irrigation waters from central pumping stations drawing initially on the unregulated flow of the Burdekin. A temporary storage of 6,700 acre feet capacity has been constructed about 79 miles upstream from the mouth of the Burdekin. To 30th June, 1957, 73 farms had been opened for selection in the Clare Area, 60 in the Millaroo Area and 45 in the Dalbeg Area.

(iv) Dawson Valley. The Dawson River, a 392-mile long tributary of the Fitzroy River, rises in the Carnarvon Range and joins the Mackenzie River to form the Fitzroy 50 miles west of Rockhampton. Lands bordering the river in its northerly course of about 170 miles before its confluence with the Mackenzie River are commonly termed the Dawson Valley. A scheme for the development of the Dawson Valley under irrigation was inaugurated in 1923, providing for the irrigation of 70,000 acres. Storage for the scheme was to be provided by a dam of 2,000,000 acre feet capacity at Nathan Gorge. Much investigational and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of this work. However, the initial step in construction had been completed, comprising a weir on the river at Theodore and irrigation works to serve an area of 3,500 acres supplied from a central

pumping station. Two additional weirs have since been built, giving a total storage of 9,000 acre feet. Pasture, vegetables, cotton, fruit and dairy products are the principal produce. Attention has recently been given to the former plans for the Valley and earlier work is now under close scrutiny as a prelude to future development. Construction of works to serve some 2,400 acres at Gibber Gunyah, adjacent to the existing Theodore Area, was virtually completed at 30th June, 1957, and allotment of farms had commenced.

(v) Mareeba-Dimbulah Area. The existence of large areas of sandy soils suitable for tobacco production in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah has led to large-scale investigations into possible irrigation development in the area. Surveys indicate that 40,000 acres of land suitable for irrigated culture, including 32,000 acres suitable for tobacco, are available. In 1955-56, some 3,026 acres of high-grade tobacco were grown. Seven weirs of combined capacity of 2,600 acre feet have been completed on a number of streams to store water for irrigation.

During 1952, a report on the utilization of waters of the Barron and Walsh Rivers was prepared and the establishment of an irrigation undertaking approved by the Queensland Government. The projected undertaking provides for construction of a major storage at Tinaroo Falls on the Barron River to store 320,000 acre feet, and construction of irrigation works to serve 78,000 acres commanded by this storage. In each case, construction has commenced. Further development by construction of a second storage at Nullinga on the Walsh River has been deferred for the present. Tobacco will be the basic crop while peanuts, vegetables, maize, cotton and stock fattening also appear suitable.

- (vi) Border Rivers Project. The development of the rivers constituting portion of the border between Queensland and New South Wales is under the authority of the Dumaresq-Barwon Border Rivers Commission on which each State is represented. For information on the project see page 302.
- (vii) Balonne River. The St. George Irrigation Area has been constituted and construction of works to serve some 11,000 acres is in progress. Water supply for the area will be obtained by pumping from the combined weir and road bridge on the Balonne River at St. George.
- 6. Bureau of Investigation.—Under the Land and Water Resources Development Act of 1943, a Bureau of Investigation has been set up for the co-ordinated investigation of land and water resources development.

The Bureau consists of representatives from the authorities controlling water resources, lands and agriculture, under the chairmanship of the Co-ordinator-General of Public Works. Among notable works carried out by the Bureau of Investigation since its inception has been the trial planting of irrigated pastures with a view to developing mixtures suited to the special conditions of each part of the State. Other valuable work has included the mapping of the ultimate land uses of the State and the detailed investigation of the agricultural and pastoral potentialities of many regions.

7. Channel Country.—Extensive investigations of the Channel Country fed by inland rivers in the south-western corner of the State have been made by the Bureau of Investigation. This country is intersected by shallow and irregular flood channels through which huge volumes of flood waters pass in favourable seasons; consequent on the flooding, a heavy growth of natural pastures is produced on the flooded lands, providing feed in quantities far in excess of that required for the normal stock population of the area. If the occurrence of flooding could be made more reliable by means of storages to create artificial floods, the pastoral resources of the area would be enormous. However, inquiries directed on these lines have revealed that little can be done to increase or stabilize the turn-off of fat cattle by artificial storage.

At 30th June, 1952, 41 watering facilities, at an estimated cost of £277,000, had been proposed under a Commonwealth-State agreement for stock routes through, and in the approaches to, the Channel Country. By 30th June, 1957, 28 had been completed, while two sub-artesian bores and one excavated tank were under construction.

8. Hydro-electricity.—An outline of Hydro-electricity Schemes operating in Queensland is given in the previous chapter (see page 286).

## § 5. South Australia.

- 1. General.—(i) Rainfall. Brief particulars of the climatic conditions in South Australia were given on page 1129 of Official Year Book No. 37. (See also Chapter II.—Physiography, p. 45 of this Year Book.)
- (ii) Administration. Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act provides for the construction of storages in non-reticulated areas and authorizes the Minister to "divert and impound the water from any streams or springs or alter their courses, and take water therefrom, or any other waters as may be found in, under, or on, any land entered upon for the purpose of supplying water to the inhabitants of any water district".
- (iii) Methods of Catchment and Conservation. Early steps were taken to vest all running streams, springs and "soaks" in the Crown. Since the Water Conservation Act was passed in 1886 more than 550 dams, tanks and "rainsheds" have been built or acquired by the State, in addition to 460 wells and 340 bores, at a total cost of £1,751,269. The rainsheds comprise timber frameworks roofed with galvanized iron to catch precipitation which is delivered to storage tanks. Rainshed catchments vary from a few hundred square feet to four acres, discharging water into tanks ranging in capacity from 2,000 to 500,000 gallons. Over most of the State extraordinary precautions are taken to counteract evaporation. Pipelines in preference to open channels are used to reduce seepage and evaporation. Meters are attached to practically all services to check usage by individual consumers.
- 2. Irrigation.—In South Australia, irrigation is almost exclusively confined to the Murray Valley. Except for that held in various lock pools, no water from the Murray is stored in South Australia. Water is either pumped on to the land or gravitated from the river. The upper Murray of South Australia and the Mildura area of Victoria formed the cradle of Australian irrigation. South Australian irrigation commenced with an agreement between the Government and the Chaffey brothers in 1887 whereby an area of land at Renmark was made available for the establishment of certain irrigation works. Including land allotted for War Service Land Settlement purposes, the Department of Lands administers in the Murray Valley an area of 32,729 acres of irrigable high land together with 9,434 acres of reclaimed swamp and 167,223 acres of non-irrigable land in the irrigation areas and 29,731 acres of land temporarily leased and reserved for commonage or other purposes, amounting in all to 239,117 acres. In addition, the Renmark Irrigation Trust controls 20,557 acres, of which more than 9,500 are irrigated. Water used for irrigation purposes in 1956-57 in the high land irrigation areas controlled by the Department of Lands, excluding War Service Land Settlement areas in course of development, was approximately 100,000 acre feet. No water was applied to the reclaimed areas during the 1956-57 season because of inundation by the floodwaters of the River Murray The swamps were de-watered however, by 30th June, 1957. In the Renmark area, 28,200 acre feet of water were used for irrigation in 1956-57. The production of the upper Murray areas is almost exclusively fruit and vines. Principal crops are sultanas, currants, lexias, apricots, peaches, nectarines, pears and figs (mainly for dried fruit), wine grapes, and citrus fruits. Before irrigation, these semi-arid lands were of little productive value.

Renmark Irrigation Trust is administered by a local board of management consisting of seven members. This area differs from other South Australian irrigation areas in that the land is freehold instead of leasehold, self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of channel for reticulation to 9,550 acres.

The following tables show the acreage devoted to various crops in the government-controlled and Renmark Irrigation Trust areas on the upper Murray, and in the government-controlled reclaimed swamp districts near the mouth of the Murray, which are devoted to dairying.

# AREA OF LAND UNDER IRRIGATED CULTURE, 1956-57. IRRIGATION AREAS ADMINISTERED BY THE DEPARTMENT OF LANDS AND THE RENMARK IRRIGATION TRUST. (Acres.)

Vine Tree Citrus Sown Lucerne. Total. Area. Pastures. Fruits. Fruits. Fruits. Areas Administered by the Department of Lands. Orchard Land-958 7,522 5,304 1,260 Berri Cadell 600 141 113 854 ٠. 509 3,625 1.930 1,186 Waikerie . . . . 3,929 160 184 4,273 Cobdogla .. . . . . Moorook .. 341 131 208 680 . . . . Kingston .. 239 77 233 549 . . . . 341 536 877 Mypolonga.. . . Chaffey-Ral Ral Divi-795 55 12 862 sion . . 2,372 3,732 19,242 Total .. 13,138 War Service Land Settlement-1,108 Cooltong Division 380 245 483 6,299 3,063 2,176 Loxton area 1,060 Loveday Division 235 47 22 304 . . . . Total .. 3,678 1,352 2,681 7,711 Reclaimed Swamp Land-a Monteith ... Mypolonga... ٠. . . . . . . . . Wall Burdett ٠. . . ٠. . . ٠. ٠. Mobilong ... . . . . . . . . ٠. . . . . Long Flat ... ٠. . . . . . . . . . . Neeta ٠. . . . . . . ٠. . . Pompoota ... . . . . ٠. . . . . . . . . Cowirra ٠. . . . . Jervois Total .. . . . . . . Renmark Irrigation Trust. 7,330 950 1,270 Renmark Irrigation Trust 9,550

Areas extending for a distance of 90 miles north of Adelaide are supplied from the Warren and Barossa Reservoirs in the Barossa Ranges. Further developments currently being undertaken include the construction of a main pipeline and pumping stations for

<sup>(</sup>a) No water was applied to these lands during 1956-57. See text.

<sup>3.</sup> Water Supply Schemes.—(i) Summary. Water conservation and distribution works in South Australia have cost £51,264,226 (exclusive of river control and irrigation works on the River Murray which are dealt with above). A summary of statistical information concerning country supplies in 1956-57 is as follows:—Length of water mains, 5,934 miles; capacity of storages, 35,092 acre feet; approximate population served, 300,000; area served, approximately 5,000,000 acres; total capital cost, £27,237,093.

pumping water from the River Murray to Adelaide and, by means of a branch pipeline, to Warren Reservoir. Another reservoir (South Para Reservoir), to supplement the Warren and Barossa Reservoirs, is also being constructed on the South Para River. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, with a connexion to the Warren system. Eyre Peninsula has, up to the present, been supplied from the Tod River Reservoir (9,167 acre feet) and three small reservoirs near the Franklin Harbour District, but demands have increased to such an extent in recent years that further sources of supply are necessary, and with this end in view a water-bearing area known as the Uley-Wanilla Basin has been developed, and water from it is now being used in the Tod River system.

- (ii) Morgan-Whyalla Water Supply Scheme. For particulars of the construction and works of the main 223-mile pipe line bringing water from the Murray at Morgan to Whyalla on Spencer Gulf see Official Year Book No. 37, page 1132. A 19-mile branch-line has also been constructed to Jamestown. The Morgan-Whyalla Water Supply Scheme forms part of the South Australian Country Water Supply system referred to above.
- 4. Underground Water.—The occupied portion of South Australia is, on the whole, well endowed with underground water and the extent of the several artesian basins is reasonably well known. There are also considerable areas, notably in the south-east of the State, in which ground water occurs. Quality varies widely, but a great deal is at least useful for watering stock, the major use to which it is put.

The deepest portion of the Great Artesian Basin (in the north-east) is not extensively developed because development costs are large in proportion to the carrying capacity of the arid land. However, deep boreholes have been drilled by the government to provide watering places along stock routes, and pastoralists rely largely on supplies from non-pressure aquifers at shallower depths. Marree township is supplied from this source, its deepest bore being 575 feet.

The use of the waters of the Murray Basin is essential to settlement in the Murray Mallee country and in the south-east of the State, especially for farms, but also for township supplies to Mount Gambier, Naracoorte, Bordertown, Pinnaroo, Penola, Lamaroo, Coonalpyn, Nangwarry, Mount Burr, Kingston (S.E.), Parilla and Karoonda. The deepest bore in this Basin is 415 feet. Towns elsewhere which are supplied from bores include Mount Barker, Port Lincoln, St. Kilda, Peterborough, Warooka and Willunga.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, for which the Government maintains about 30 drills. The whole of the Murray River Basin has been examined critically to ascertain the extent of land which could be used for lucerne and considerable tracts of previously undeveloped country in the Upper South-east, Kangaroo Island and Yorke Peninsula have been found to have usable water and are now being opened up.

Ground water resources surveys are undertaken continuously by Departmental geologists, the results being published in various bulletins, reports and investigations issued from time to time.

- 5. Farm Water Schemes.—While the Department of Mines and Engineering and Water Supply Department give assistance to individual farmers in the provision of supplies from underground sources, a great part of the farming areas derive water supply under pressure from the extensive distribution systems connected to various reservoirs on the Murray River.
- 6. South-Eastern Drainage.—For some information on the drainage schemes necessary for the disposal of surplus water in areas in the south-east of South Australia see Official Year Book No. 37, page 1133.

#### § 6. Western Australia.

- 1. General.—(i) Rainfall. Brief particulars of the climatic conditions in Western Australia were given on page 1133 of Official Year Book No. 37. (See also Chapter II.—Physiography, page 45 of this Year Book.)
- (ii) Administration. Irrigation districts are administered by the Minister for Water Supply, Sewerage and Drainage under the Rights in Water and Irrigation Act 1914–1951, and he is advised by an Irrigation Commission representing the local irrigationists and governmental technical and financial branches. Water supplies in country areas in Western Australia coming under the provisions of the Water Boards Act 1904–1954 and the Country Areas Water Supply Act 1947–1954 (which are administered by the Minister for Water Supply, Sewerage and Drainage) are controlled either by the local authority or by the Water Supply, Sewerage and Drainage Department. Those controlled by the Water Supply, Sewerage and Drainage Department (except for some water supplies to country towns still under the provisions of the Water Boards Act) form the Country Areas Water Supply, consisting of the Goldfields and Agricultural Water Supply (formerly the Goldfields Water

Supply) the Great Southern Towns Water Supply and water supplies to country towns. Also controlled by the Water Supply, Sewerage and Drainage Department are individual water supplies serving isolated mines, stock routes, and agricultural areas: these works are done under the provisions of the Public Works Act 1902–1956. The Water Supply, Sewerage and Drainage Department is divided into metropolitan and country parts. The country part is combined with the Public Works Department. The Minister for Works is also the Minister for Water Supply, Sewerage and Drainage. Water rights over water flowing in streams and watercourses are vested in the Crown unless specifically appropriated for irrigation purposes under the irrigation legislation.

2. Irrigation.—(i) South-West. The main irrigation areas are situated along the South-Western Railway between the towns of Waroona (70 miles from Perth) and Dardanup (116 miles from Perth).

The Water Supply, Sewerage and Drainage Department controls three irrigation districts—Waroona, Harvey and Collie—the total area irrigated in these districts during 1956-57 being 24,724 acres and the total water used approximately 75,000 acre feet. The total of acre waterings (that is, the number of acres watered multiplied by the average number of waterings) was 141,714. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the Collie Irrigation District.

The Waroona Irrigation District (10,302 acres) is supplied from Drakes Brook Dam (1,854 acre feet capacity) and Samson Brook Dam (6,624 acre feet), the Harvey Irrigation District (36,823 acres) from the Harvey Weir (8,370 acre feet) and Stirling Dam (44,160 acre feet), and the Collie Irrigation District (36,020 acres) from the Wellington Dam (29,440 acre feet).

The following table, which shows acre waterings supplied to crops in the irrigation districts of Harvey, Waroona and Collie during the seasons 1952-53 to 1956-57 illustrates the growth of these irrigation schemes.

IRRIGATION,	WESTERN	AUSTRALIA	:	ACRE	WATERINGS(a).
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Year.		Pasture.	Fodder.	Potatoes.	Vege- tables.	Orchard.	Flax, Broom Millet, and Preparation of Ground.	
1952–53		95,491	2,235	4,185	2,588	1,070	536	106,105
1953-54		98,645	3,435	4,405	3,003	1,072	115	110,675
1954–55		112,659	3,268	2,363	3,294	845	121	122,550
1955-56		108,468	3,599	1,834	3,452	946	127	118,426
1956–57	••	129,502	3,757	3,995	3,317	1,024	119	141,714

<sup>(</sup>a) Number of acres watered multiplied by average number of waterings.

(ii) General. In 1956-57 the total area irrigated in Western Australia was 38,567 acres made up of vegetables (7,990 acres) fruit (5,137 acres) vineyards (493 acres) pastures (23,320 acres) and other crops (1,627 acres).

An area of approximately 500 acres of Gascoyne River flats adjacent to Carnarvon has been under irrigated cultivation for a considerable period. The principal crop has been bananas but others such as beans and tomatoes, are also grown. For this agriculture a total of over 220 acre feet of water per week is drawn from river underflow.

Following successful experimental work, commercial production of rice is currently being developed, requiring irrigation water to be diverted from the Fitzroy River. The first stage of this work involving the deepening and grading of an anabranch of the Fitzroy River 25 miles to the rice growing area where a natural storage of 2,000 acre feet existed, was carried out by the Public Works Department in 1956.

The Ord River in the Kimberley Division of Western Australia traverses a tropical area served with monsoonal rains of irregular incidence and quantity, varying from 20 inches in the south to 30 inches in the north. The hottest months (December to March) are also the months of highest rainfall. Communications and population are sparse. The Western Australian Government is considering a proposal to build a dam to conserve 3,000,000 acre feet of water, equipped with a hydro-electric plant, which might supply irrigation water for an area of 100,000 acres, if investigations show that the climate and soil conditions are suitable for vegetables, tropical fruits and rice. The economic production of these and other crops, as well as the possible use of such irrigation areas for interim fattening of cattle, is being examined at the Kimberley Research Station on the Ord River.

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3. Water Supply Schemes.—(i) Goldfields and Agricultural Water Supply. Western Australia has one of Australia's most spectacular water supply schemes, and a brief account of its development will be found on page 1134 of Official Year Book No. 37, and an account in greater detail on page 576 of Official Year Book No. 6. Mundaring reservoir on the Helena River, 26 miles from Perth, is the source of water supplied to the Eastern Goldfields and has a capacity of 55,767 acre feet and a catchment of 569 square miles. The water passes through 346 miles of main, mostly steel and 30 inches in diameter, aided by seven pumping stations and one booster pumping station.

Maximum pumping capacity from No. 1 Pumping Station at Mundaring Weir is nominally 15.9 million gallons per day. The total capacity of all receiving, regulating, standby and service tanks along the main pipe line is 154 million gallons which includes three standby reservoirs at Kalgoorlie having a combined capacity of 60 million gallons.

Hundreds of miles of branch pipe lines have been laid to mining areas, agricultural areas and country towns, a notable one being the Norseman extension of 101 miles. The system serves some 72 towns and water is reticulated to about 2,000,000 acres of mixed farming lands. The total length of pipe lines is 2,578 miles and the number of services is 20,647. The total quantity of water pumped from Mundaring in 1956-57 was 3,076 million gallons. The total cost of the scheme to the end of 1956-57 was £11,410,906.

District water supply schemes established for the purpose of supplying certain country towns and mixed farming lands have been absorbed into the Goldfields and Agricultural Water Supply Scheme. For further particulars see Official Year Book No. 37, page 1135.

- (ii) Comprehensive Water Supply Scheme. A comprehensive water supply scheme to supplement water supplies to the goldfields, agricultural areas, and country towns, authorized in 1947 as a joint work between the Commonwealth and State and estimated to cost £10,000,000 is at present (1957) under construction in two main parts. The northern section is an enlargement and extension of the Goldfields and Agricultural Water Supply Scheme. The southern section is the Great Southern Towns Water Supply Scheme. Linked with Wellington Dam (initially an irrigation work on the Collie River) by 80 miles of 30-inch diameter pipe through two pumping stations to Narrogin, it will eventually supplement the existing water supplies to country towns along the Great Southern Railway, north to Brookton and south to Katanning. The raising of the impounding wall of Wellington Dam to increase its storage to about 150,000 acre feet is also in progress.
- (iii) Country Towns Water Supplies. Country towns supplied by schemes otherwise than above comprise those in the remaining agricultural and mining areas, including the North-West and Kimberley Divisions. Sixty separate reticulated water supplies serve country towns. Of these, 50 are controlled by the Public Works Department and the remainder by the Local Authority.
- (iv) Catchments. The water supplies to these country schemes come from stream flow, dams, tanks, wells and bores. Three types of catchment peculiar to this State deserves special mention, namely, rock catchments, which consist of mostly clear granite out-cropping rock, from which the overall run-off from rain amounts to approximately 40 per cent.; bituminous catchments, which are areas which have been sealed with emulsified bitumen—some hundreds of acres have been so treated and yield a run-off of approximately 80 per cent. of the rainfall; and roaded catchments, where selected areas of a catchment are cleared, graded and formed into roads to assist in obtaining additional rainfall run-off.
- 4. Underground Water.—Individual farmers, orchardists, market gardeners and others pump ground water from wells and bores, using windmills, engines or electric power. Water is also obtained from artesian and sub-artesian bores. The Public Works Department hires out to local authorities boring plants which are then hired out to farmers to assist their boring operations. In addition the Public Works Department operates its own boring plants and contracts with private firms in connexion with water supply works.

#### § 7. Tasmania.

- 1. General.—(i) Rainfall. Brief particulars of the rainfall pattern in Tasmania were given on page 1136 of Official Year Book No. 37. (See also Chapter II.—Physiography, page 45 of this Year Book.
- (ii) Main Purposes of Conservation and Utilization. Owing to Tasmania's fortunate rainfall position, scarcity of water is not a serious problem in normal seasons. Conservation of water for hydro-electric generation is the predominant interest, and conservation for

domestic and industrial purposes is more important than irrigation. Conservation of water on farms is not practised to the same extent as on the mainland, probably because running streams and good rainfall are on a more generous scale. Provision of artificial storages (apart from house tanks) is rare, but progressive landowners are beginning to take advantage of modern plant, such as bulldozers, to provide small excavated storages on their properties. Underground water is of poor quality, but a small quantity which has been exploited to a limited extent only by bores and windmills exists over an area in the Midlands. Geological conditions do not appear to favour the utilization of underground water except on a minor scale.

- (iii) Administration. The State does not own all natural waters, and consequently the subject of water rights is a difficult one. The Mines Department has power to grant certain rights for mining operations, and the Hydro-Electric Commission must approve the abstraction of water from any stream or lake of potential value for power generation. Under the provisions of an Act passed in 1944, the Water, Sewerage and Drainage Board was constituted to consider the financial and technical practicability of all water supply schemes constructed by local authorities, other than the cities of Hobart and Launceston. Legislation was also enacted during 1952 empowering Local Authorities to take water from specific sources of supply and to construct waterworks. The Act does not cover irrigation, which is practised to a limited extent only by private interests. Provision has been made in the Act for the protection of riparian rights, but there is no general legislation for the control of water courses.
- 2. Hydro-electricity.\*—Tasmania depends entirely on water for power development. The Hydro Electric Commission, the authority controlling the generation of electricity in Tasmania, conducts a continuous survey of the water power resources of the State assisted by modern methods such as aerial photography and geophysical exploration.

Most of the water potential is located on the Central Plateau with an area of about 1,500 square miles at an altitude of from 2,000 to 4,000 feet and subject to rainfall of from 30 inches a year in the east to 80 inches on the western perimeter. On the plateau are a large number of lakes which provide the means for storage at low cost. These include Great Lake with an area of 58 square miles, Lake St. Clair and Lake Echo, each more than 12 square miles, and others of smaller area. Parliamentary approval has recently been given for the Commission to proceed with the development of the waters of the Great Lake through a 300,000 kW underground power station at the foot of the Western Tiers some 10 miles from Cressy. The power station will operate under a head of 2,750 feet and will utilize the existing Great Lake storage which is to be supplemented by water pumped from an additional storage which will be created at Arthurs Lakes some four miles to the east of the southern end of the Great Lake.

The Derwent River and its tributaries which flow south-easterly carry off by far the greater part of the water which falls on the plateau and these rivers are therefore the most abundant source of power. They have been the cheapest to develop to date and most of the existing generating stations are located on them.

The three main rivers running westerly from the plateau—the Arthur, Pieman and Gordon—have only a small portion of their catchment areas at high level, but they run through regions of high rainfall and their power potentials are considerable. However, because of inaccessibility and climate, development of these rivers may be rather expensive and has been deferred in favour of more convenient schemes.

Rivers draining from the plateau towards the north and north-west coast, including the Emu, Forth and Mersey, have small catchments at high levels and no natural storages.

Two other important water power sources, independent of the Central Plateau, are the South Esk River in the north and the Huon River in the south. A power station at Trevallyn, near Launceston, utilizes water from the South Esk. The Huon has a large low-level catchment in the high-rainfall area near the west coast. Storage could be provided on this river at a reasonable cost and, because of its proximity to Hobart, a future power station would have considerable value for peak load development.

3. Industrial.—Three principal industrial schemes have been installed privately. Australian Newsprint Mills Ltd. pump approximately 6 million gallons a day from the Derwent River at Lawitta for the Boyer Mills. Associated Pulp and Paper Mills Ltd. pump several million gallons a day from the Emu River at Burnie, and Titan Products Pty. Ltd. reticulate water from Chasm Creek to their factory at Heybridge. In addition the State has constructed a regional water scheme to serve the Australian Aluminium Production Commission's plant at Bell Bay on the River Tamar and to supply several Municipalities with bulk water for domestic and industrial purposes.

<sup>\*</sup> See also Chapter VIII.—Electric Power Generation and Distribution, p 291.

A second regional water scheme draws water from the River Derwent at Lawitta to provide domestic and industrial supplies in five southern Municipalities. Potential sources capable of greater development without storage exist on the Derwent, South Esk, Huon, Lake, Mersey and Forth Rivers. There is also a great reserve of untapped permanent streams in the western half of the State which is largely unsettled. Diversion to the eastern side of the watersheds is not regarded as practicable.

4. Irrigation.—There are no State irrigation projects, but preliminary inquiries as to the possibility of establishing one in the Coal River Valley have been made. Legislation is before Parliament to give a new Commission extensive powers for river control and for the design of irrigation projects. All systems operating are privately owned, and with one exception (at Bushy Park) are single-farm units. At Bushy Park, a small system serves a group of properties. The larger proportion of the area under irrigation is watered by gravitational systems and the remainder comprises areas devoted to vegetables and served by municipal water supplies. Irrigation as practised in Tasmania, was applied in 1956-57 to 12,110 acres devoted to: hops (1,330 acres); fruit (773 acres); pastures (7,421 acres); green fodder, etc. (877 acres); and other crops (1,709 acres).

### § 8. Northern Territory.

- 1. Climate and Topography.—Some particulars of the climate and main topographical features of the Northern Territory were given on page 1138 of Official Year Book No. 37, and in this issue information on climatic conditions will be found in Chapter II.—Physiography, and a brief outline of contour and physical characteristics in Chapter V.—The Territories of Australia.
- 2. Administration.—Under the Control of Waters Ordinance 1938–1955 of the Northern Territory natural waters are vested in the Crown. Where a watercourse or lake forms a boundary of any land alienated by the Crown, the beds and banks are deemed to remain the property of the Crown (except in special cases) and diversion of water is prohibited except under conditions prescribed. There is a Water Use Branch in the Northern Territory Administration under the control of a Director. The functions of the Branch include systematic stream gauging, collection of data on surface and underground water supplies, planning of water use for irrigation and town water supplies, flood prevention and control.
- 3. Underground Water.—The marked seasonal rainfall over the whole of the Northern Territory is one of the basic factors affecting the pastoral industry which provides the bulk of the Territory's income. The inadequacy of surface water during the dry season underlines the importance of underground water supplies in the Territory where most of the cattle population is dependent on underground supplies for three to five months each year.

Rainfall is one of the factors controlling cattle population but geological features, controlling both soils and the storage of underground water, are even more important. In the northern-most portion of the Territory, which receives from 25 to 60 inches of seasonal rainfall per year, surface water supplies are, in general, adequate for the pastoral industry. Despite this, however, this area has a comparatively low carrying capacity for cattle and the pastoral industry is concentrated more in inland areas where feed retains more nutritive value in the winter despite dry conditions.

South from this well-watered northern-most portion, the Territory becomes progressively drier, with an annual average rainfall of only five inches at the margins of the Simpson Desert in the south-east corner. In the lighter rainfall areas, the search for potable underground water becomes exacting but, in general, the regions providing the best pastures—the Ord-Victoria Region, the Barkly Tablelands and smaller areas in the Alice Springs district—provide also sub-surface conditions suitable for the storage of water. This comes about largely because, in these areas, both pasture and water are related to flat lying or gently folded limestones or volcanics of Upper Proterozoic or Cambrian age, overlying the basement of older, more tightly folded, metamorphic rocks and granites which crop out over wide areas within the Territory.

In the Ord-Victoria Region, probably the best grass lands overlie volcanic rocks and extend over some 10,000 square miles. Ground water is obtained in shallow bores averaging 70 to 80 feet in depth and producing small supplies which range up to 1,500 gallons per hour. For the most part, water is stored in joints, faults or cracks in the rocks although

in places sub-artesian conditions pertain and, on the whole, selection of bore sites is difficult. There are also small sedimentary basins in the region, some of which yield sub-artesian, and in places, artesian water and provide areas of good pastures.

The Barkly Tablelands, which extend into Western Queensland, overlie flat-lying limestone, sandstone and shale of the Barkly Basin. In most places, underground water is under pressure (sub-artesian) but no flowing bores are known. Sandstones and beds of limestone with fractures and solution cavities provide a number of aquifers within the Basin. The hydraulic surface (to which pressure water will rise in bores) ranges between 500 and 600 feet above sea level and adequate supplies for the watering of stock are available at depths ranging from 150 to 400 feet from the surface. The water from over 90 per cent. of the bores is suitable for stock and over 50 per cent. of it is suitable for human consumption. Investigations by the Commonwealth Bureau of Mineral Resources indicate that underground water supplies will be more than sufficient for the future development of the pastoral industry on the Tablelands.

A review is being made of the information available concerning the number of bores and wells sunk in the Territory. Preliminary information shows that in 1956-57, some 1,190 bores and 190 wells were registered. Of the 1,190 bores, 621 were on pastoral properties (33 being provided by the Government by way of assistance to pastoralists), 25 on Native Reserves, 8 for town water supplies and 6 for mining fields. It is not known how many of 341 registered bores drilled originally for defence and road construction purposes are still in use but it is probable that most of them have been abandoned.

The number of stock route bores established by the Government for watering some 2,500 miles of stock routes, is 160 which represents on the average one every 16 miles.

Regional surveys by the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization from 1947 to 1955 have established the existence of the valuable Barkly Basin of 57,000 square miles in the eastern part of the Territory and extensions of the Gulf Basin in the north-western part.

4. Irrigation.—There are no large-scale water conservation projects in the Territory with the exception of the Manton Dam (12,700 acre feet), which serves Darwin with a reticulated supply. Hydrological investigations are being carried out by the Administration and a public company to determine the supply of water and the best methods of control and use in the potential rice growing areas of the Territory. Agricultural activity in the Territory is not extensive.

The Katherine River appears to offer irrigation potentialities on the levee soil below the township. The river passes through a gorge upstream under conditions which appear suitable for dam construction. The Administration and the Commonwealth Scientific and Industrial Research Organization are investigating the potentialities of the area for agricultural production. For particulars of these see p. 1138 of Official Year Book No. 37.

#### § 9. Papua and New Guinea.

- 1. Rainfall.—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 231 inches at Kikori (Papua) to about 70 inches near Marienburg (New Guinea) and 40 inches at Port Moresby (Papua).
- 2. General.—For a general description of these territories see Chapter V.—The Territories of Australia, p. 125, of this Year Book. Irrigation has not been developed on any organized basis owing to the availability of high rainfall and the nature of agricultural development.

The Territory of Papua and New Guinea is well served with large rivers deriving their water from heavy tropical rains and high mountains which rise to over 14,000 feet. However, complete data regarding water resources are not available.

The largest rivers in the Territory include the Fly (a description of which is given in Chapter XXVI. of Year Book No. 40), the Sepik (700 miles), the Ramu (450 miles), the Purari (300 miles) and the Markham (110 miles).

The main water conservation interest in New Guinea at present is the hydro-electric potential which is extensive. An outline of schemes at present in operation is given in the previous chapter.

#### CHAPTER X.

#### TRADE.

#### § 1. Introductory.

Constitutional Powers.—By the Commonwealth of Australia Constitution Act, section 51 (i.), the power to make laws with respect to trade and commerce with other countries was conferred on the Commonwealth Parliament. Under section 86 of the Constitution the collection and control of duties of customs and excise passed to the Executive Government of the Commonwealth on 1st January, 1901. Other references to trade and commerce are contained in sections 87 to 95 of the Constitution (see pp. 18-19).

#### § 2. Commonwealth Legislation affecting Oversea Trade.

1. General.—The principal Acts affecting oversea trade at present in force are: The Customs Act 1901–1957; Customs Tariff 1933–1956; Customs Tariff (Canadian Preference) 1931 and Customs Tariff (Canadian Preference) 1934–1956; Customs Tariff (Industries Preservation) Act 1921–1956; Customs Tariff (New Zealand Preference) 1933–1954; Customs Tariff (Papua and New Guinea Preference) 1936–1956; Customs Tariff (Federation of Rhodesia and Nyasaland Preference) 1956; Customs Tariff (Primage Duties) 1934–1950; Trading with the Enemy Act 1939–1952.

The Customs Act is the administrative Act under which the Department of Customs and Excise operates, while the Customs Tariffs provide the statutory authority for imposing the actual rates of duty operative from time to time.

2. The Customs Tariff.—(i) General. The first Commonwealth Customs Tariff was introduced by Resolution on 8th October, 1901, from which date uniform duties came into effect throughout Australia. The tariff has since been extensively amended. The Act at present in operation is the Customs Tariff 1933-1956.

The Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to imports from certain countries of the British Commonwealth. Duties are also imposed on some goods, generally of a luxury nature, for revenue purposes. Customs collections are a major source of revenue, but in its protective character the tariff has an important influence on the Australian economy.

Australia has three classes of tariff—the British Preferential Tariff, the Intermediate Tariff and the General Tariff.

(ii) British Preference. British Preferential Tariff rates of duty apply to goods the produce or manufacture of the United Kingdom, provided that such goods comply with the laws and statutory regulations for the time being in force affecting the grant of preference, and that the goods have been shipped in the United Kingdom to Australia and have not been transhipped, or, if transhipped, it is proved to the satisfaction of the Collector of Customs that

the intended destination of the goods, when originally shipped from the United Kingdom, was Australia. For the purpose of the preferential tariff the following goods are deemed by section 151A of the Customs Act 1901-1957 to be the produce or manufacture of the United Kingdom, provided the final process of their production or manufacture was performed in that country:—

- (a) Goods which are wholly produced or wholly manufactured in the United Kingdom from materials in one or more of the following classes—
  - (i) Materials wholly produced or wholly manufactured in the United Kingdom or in Australia;
  - (ii) Imported unmanufactured raw materials;
  - (iii) Imported manufactured raw materials as determined by the Minister.
- (b) Goods of the factory or works cost of which not less than seventy-five per cent. is represented—
  - (i) by labour or material of the United Kingdom; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.
- (c) Goods of a class or kind not commercially produced or manufactured in Australia and of the factory or works cost of which not less than twenty-five per cent. (or fifty per cent. if the Minister so determines) is represented—
  - (i) by labour or material of the United Kingdom; or
  - (ii) by labour or material of the United Kingdom and labour or material of Australia.

With the exception of a relatively small number of commodities which carry special rates of duty, the British Preferential Tariff has also been extended, as a result of separate trade agreements, to Canada and New Zealand and by tariff legislation to the Territory of Papua and New Guinea, and the abovementioned preference conditions apply mutatis mutandis to each of those countries, except that in respect of New Zealand the percentage content of goods under clause (b) of the said conditions is 50 per cent. of New Zealand and Australian labour and materials or 75 per cent. of New Zealand and United Kingdom or of New Zealand, Australian and United Kingdom labour and materials. In relation to specified goods, the British Preferential Tariff also applies to Ceylon, Ghana, the Federation of Malaya, and most of the British non-self-governing colonies, protectorates and trust territories.

- (iii) Intermediate Tariff. The Intermediate Tariff has been a feature of the Australian Tariff for a considerable number of years, although its effective application dates only from 1st January, 1937, consequent upon the conclusion of trade agreements with Belgium, Czechoslovakia and France in 1936. The countries to which the Intermediate Tariff applies include those countries with which Australia has concluded trade agreements (including tariff negotiations pursuant to the General Agreement on Tariffs and Trade) and countries which accord Australia reciprocal most-favoured-nation tariff treatment by reason of agreements between those countries and the United Kingdom. The Intermediate Tariff has also been extended to some countries to which Australia has no formal obligation to accord most-favoured-nation treatment. The countries and the particular tariff items to which the Intermediate Tariff applies are specified by Customs Proclamation.
- (iv) General Tariff. The General Tariff applies to goods other than those to which the British Preferential Tariff or Intermediate Tariff or special rates under trade agreements apply.
- 3. Primage Duties.—In addition to the duties imposed by the Customs Tariff, ad valorem primage duties at rates of 4 per cent., 5 per cent. or 10 per cent. are charged on some goods according to the type of goods and origin thereof under the Customs Tariff (Primage Duties) 1934-1950. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji and the Territory of Papua and New Guinea are exempt from primage duty.
- 4. Tariff Board.—The Tariff Board Act 1921-1953 provides for the appointment of a Tariff Board consisting of seven members, two of whom shall be administrative officers of the Department of Trade. Members of the Board are appointed for terms of not less than one year nor more than five years. The purpose of the Tariff Board is to assist the

Minister in the administration of matters relating to trade and customs. The more important matters which the Minister shall refer to the Board for inquiry and report include disputes arising out of the interpretation of any Customs or Excise Tariff; the necessity for new, increased or reduced duties; the necessity for granting bounties; any proposal for the application of the British Preferential Tariff to any part of the British Commonwealth or any foreign country; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff by charging unnecessarily high prices for his goods or acting in restraint of trade. The Minister may refer to the Board for inquiry and report the following matters:—The classification of goods under items of the Tariff that provide for admission under by-laws; the determination of the value of goods for duty; the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws of the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and any other matter affecting the encouragement of primary and secondary industries in relation to the Tariff.

Inquiries conducted by the Board relating to any revision of the Tariff, any proposal for a bounty, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff shall be held in public, and evidence in such inquiries shall be taken in public on oath, unless any witness objects to giving any evidence in public which the Board is satisfied is of a confidential nature, when the Board may take such evidence in private. Evidence taken by the Board in connexion with any inquiry under the Customs Tariff (Industries Preservation) Act 1921–1956 shall be taken in public on oath.

5. Industries Preservation.—The Customs Tariff (Industries Preservation) Act 1921–1956 provides that, after inquiry and report by the Tariff Board, special duties shall be collected in the following cases when the importation of the goods referred to might be detrimental to an Australian industry. In the case of goods sold for export to Australia at a price less than the fair market value for home consumption or at a price which is less than a reasonable price, a special dumping duty shall be collected equal to the difference between the price at which the goods were sold and the fair market value, or the difference between the price at which the goods were sold and a reasonable price. Similar provision is made for goods consigned to Australia for sale. With regard to goods exported to Australia at rates of freight less than the normal rate of freight the dumping freight duty shall be—on goods carried free—the amount payable as freight at the normal rate; and in the case of any other goods—an amount equal to the difference between the freight paid and the freight which would have been payable at the normal rate.

, The Act also provides for the collection of an emergency duty on goods which enter Australia under conditions which cause or threaten serious injury to Australian industries or to industries in a third country whose exports enter Australia under preferential tariff. The amount of emergency duty payable is the equivalent of the difference between the landed duty-paid cost of the goods and a reasonably competitive landed duty-paid cost.

- The Act provides that the Minister for Customs and Excise may publish a notice in the Gazette specifying the goods upon which the special emergency duties under this Act shall thereupon be charged and collected.
- 6. Trade Descriptions.—The Commerce (Trade Descriptions) Act 1905–1950 gives power to require the application of a proper trade description on certain prescribed goods imported into or exported from the Commonwealth. Goods which must bear a prescribed trade description upon importation into Australia are specified in the Commerce (Imports). Regulations. As regards exports from Australia, marking requirements are prescribed in regulations issued under the Act and relating to specified export commodities.
- 7. Import Controls.—(i) Customs (Import Licensing) Regulations. The Customs (Import Licensing) Regulations were first promulgated in December, 1939, and were made pursuant to sections 52 (g) and 56 of the Customs Act 1901-1957. New regulations embodying minor changes were implemented on 14th December, 1956. The regulations provide, inter alia, that the importation into the Commonwealth of any goods (not excepted from the application of the regulations) is prohibited unless—(a) a licence under these regulations to import the goods is in force and (b) the conditions and restrictions (if any) to which the licence is subject are complied with.

The regulations were at first applied only to imports from non-sterling sources, with the object of conserving non-sterling exchange and enabling priority in shipping space to be given to essential imports. However, with a subsequent decline in Australia's sterling balances in London and changes in the general war situation the restrictions were extended in December, 1941 to cover a wide range of imports from sterling countries. The position remained basically the same during the remainder of the war and in the immediate post-war period.

As Australia's external financial position improved, the restrictions were progressively relaxed until, by November, 1950, imports from most countries had been exempted from the application of the regulations and, with minor exceptions, the restrictions applied only to imports from the dollar area and Japan. This position obtained until March, 1952.

During 1951-52, following a fall in the price of wool and a large increase in the volume of imports (the product, in turn, of the wool boom of 1950-51), Australia incurred a substantial deficit on current account. Oversea reserves fell rapidly in the latter part of 1951 and early 1952, endangering Australia's external financial position to such a degree that it became necessary on 8th March, 1952 to apply the Customs (Import Licensing) Regulations to imports from all sources, with the exception of goods originating in Papua, New Guinea and Norfolk Island. By March, 1953, Australia's balance of payments had shown sufficient improvement to justify a general relaxation in the quantitative restrictions applying to goods from sources other than the dollar area and Japan, and as a consequence progressive relaxations were made operative during 1953 and the first half of 1954. The balance of payments position deteriorated rapidly from June, 1954 and, as a result, import licensing restrictions were intensified during the second half of 1954 and throughout 1955, but the decline in oversea funds continued. New and more stringent measures were therefore introduced, operative from 1st July, 1956, involving considerable variations in import licensing and aimed at creating a balance between receipts and payments in foreign currency.

Australia's trade position improved considerably during the second half of 1956 and import restrictions were progressively relaxed in the early part of 1957. A new basis of licensing was introduced as from 1st August, 1957. This involved import licensing replacement for 56 commodities, licensing being based, in general, on usage of exchange allocations for these items.

Prior to 22nd November, 1954, goods of Japanese origin were licensed on a basis quite separate from that of other non-dollar licensing. From that date until 7th July, 1957, goods of Japanese origin were, with certain exceptions, licensed for importation on the same basis as like goods originating in other non-dollar countries. Since then there has been no distinction between Japan and other non-dollar countries as regards import licensing.

Restrictions on imports from the dollar area have been maintained in varying degrees since their imposition in December, 1939 and, in general, the issue of licences for the importation of goods from the dollar area is restricted to goods of a high degree of essentiality, unavailable in adequate quantities from other countries. The goods imported from the dollar area are mainly capital goods, raw materials, semi-manufactures and other producer goods. All applications for licences are treated on the merits of each individual case.

- (ii) Customs (Prohibited Imports) Regulations. In addition to the Import Licensing Regulations which are imposed for balance of payments reasons, section 50 of the Customs Act provides that the Governor-General may, by regulation, prohibit the importation of goods into Australia. Prohibition by regulation may be exercised by—(a) prohibiting the importation of goods completely; (b) prohibiting the importation of goods from a specified place; (c) prohibiting the importation of goods unless specified conditions or restrictions are complied with. Lists of products subject to prohibition are set out in the Customs (Prohibited Imports) Regulations. Commodities the importation of which has been prohibited under the regulations include dangerous drugs, firearms, undesirable publications and articles deleterious to public health.
- 8. Export Control.—(i) Commodity Control. Section 112 of the Customs Act provides that the Governor-General may, by regulation, prohibit the exportation of goods from Australia and that this power may be exercised by—(a) prohibiting the exportation of goods absolutely; (b) prohibiting the exportation of goods to a specified place; and (c) prohibiting the exportation of goods unless prescribed conditions or restrictions are complied with Goods subject to this export control are listed in the Customs (Prohibited Exports) Regulations.

(ii) Monetary Control—Banking Act 1945-1953. As an integral part of the framework of exchange control, a control over goods exported from Australia is maintained under the provisions of Part III. of the Banking (Foreign Exchange) Regulations, to ensure that the full proceeds of such goods are received into the Australian banking system and that these proceeds are received in the currency and in the manner prescribed by the Commonwealth Bank of Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations to control the movement out of Australia of capital in the form of securities, gold and currency.

Provision is made in the regulations for the grant of export licences subject to such terms and conditions as are imposed. On the receipt in Australia by the Commonwealth Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Commonwealth Bank or to an agent of the Bank in payment for goods exported in accordance with a licence granted under the regulations, the Bank, or an agent of the Bank, pays the licensee, or such other person as is entitled to receive it, an amount in Australian currency equivalent to the foreign currency received. In addition to commercial transactions, exports by private individuals are controlled. Persons leaving Australia for overseas are required to obtain licences to cover their bona fide baggage, personal effects and household effects in any individual case where the gold content thereof exceeds £A50, or where jewellery and other articles of high intrinsic worth either exceed £A1,000 in value or have not been the personal property of the passenger for at least twelve months.

9. Trade Agreements.—(i) The United Kingdom. The original United Kingdom and Australia Trade Agreement (Ottawa Agreement) was signed on 20th August, 1932. Under this agreement, Australia secured preferences in the United Kingdom market for a wide range of Australian export commodities and in return incurred obligations in respect of tariff levels and the grant of preference to United Kingdom goods.

A new Trade Agreement, designed to replace the original agreement and correct the unbalance in benefits which had emerged in the 25 years of its operation, was signed in Canberra on 26th February, 1957. Briefly, the new agreement preserved security for Australian exports in the United Kingdom market, but lowered the obligatory margins of preference which Australia extends to the United Kingdom.

(ii) Canada. The existing trade agreement between Canada and Australia came into force on 3rd August, 1931. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are specified in the schedules to the agreement.

The Customs Tariff (Canadian Preference) 1931 and the Customs Tariff (Canadian Preference) 1934–1956 give effect to the agreement so far as Australia is concerned.

(iii) New Zealand. The existing trade agreement between Australia and New Zealand came into force on 1st December, 1933. The basis of the agreement is, generally, the mutual accord of British Preferential Tariff treatment. The exceptions to this general rule are listed in the schedules to the agreement.

The Customs Tariff (New Zealand Preference) 1933-1954 gives legislative effect to the provisions of the agreement.

- (iv) Federation of Rhodesia and Nyasaland. During June, 1955, a trade agreement was negotiated with the Federation. Australia's principal undertaking was to grant an exclusive tariff preference to the Federation on unmanufactured tobacco, a concession formerly accorded only to Southern Rhodesia, under a trade agreement now terminated. The Federation accorded preferential tariff treatment on a wide range of Australian export products, including wheat and powdered and condensed milk.
- (v) Japan. An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6th July, 1957, in Japan. Formal ratification took place in Canberra on 4th December, 1957, following approval of the agreement by the Commonwealth Parliament and the Japanese Diet. The agreement will remain in force until 5th July, 1960 and thereafter unless prior notice of termination is given by either Government.

The agreement provides that each country shall extend most-favoured-nation treatment to the other in respect of customs duties and similar charges and import and export licensing. Japan will not be entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories.

All Japanese goods are now entitled to the most-favoured-nation rate of duty on importation into Australia, whereas previously the general rate applied. The reductions involved have not been significant. Japan has also been placed on an equal basis with other non-dollar countries under the import licensing system. Prior to the agreement certain goods when of Japanese origin could be imported only within specified limits.

Australia received certain specific undertakings. Japan agreed:-

- (a) To accord Australian wool the opportunity of competing in the global quotafor wool for not less than 90 per cent. of the total foreign exchange allocation for wool each year and not to restrict the total foreign exchange allocation for wool beyond the extent necessary to safeguard Japan's external financial position and balance of payments;
- (b) to take no action to vary the present level of duty on wool imports from Australia for a period of three years from date of signature;
- (c) to admit Australian wheat and barley on a competitive and non-discriminatory basis;
- (d) to accord Australian sugar the opportunity of competing for not less than 40 per cent. of the total foreign exchange allocation for sugar;
- (e) to include Australia as a permitted source of supply for beef tallow and cattlehides on the Automatic Approval (licensing) list;
- (f) to admit Australian dried skim milk on a competitive and non-discriminatory basis:
- (g) to make reasonable provision for the import of Australian dried vine fruits (raisins, currants and sultanas) in each year of the three-year period.

It was agreed that before the end of the initial three-year period of the agreement the two Governments would explore the possibility of applying the General Agreement on Tariffs and Trade between the two countries.

Provision exists for either country to suspend obligations under the agreement to the extent and for such time as may be necessary to prevent serious injury to domestic producers as a result of imports of like or directly competitive products from the other country. The Australian Government has appointed an Advisory Authority whose function is to advise the Minister for Trade whether Australian industry is threatened with serious damage as a result of the agreement.

- (vi) Other Countries. Australia has entered into bilateral trade agreements with the Union of South Africa, Belgium, Brazil, Czechoslovakia, France, Greece and Switzerland. Summaries of the texts of these agreements were given in earlier issues of the Official Year Book. In 1951, Australia entered into a trade agreement with Israel under which each country undertook to accord most-favoured-nation tariff treatment to imports from the other. A similar agreement with Iceland was concluded in 1952.
- (vii) The General Agreement on Tariffs and Trade (G.A.T.T.). The General Agreement on Tariffs and Trade is an international trade agreement which has been in operation since 1st January, 1948. Australia was an original signatory of the Protocol of Provisional Application, by which Parts I. and III. of the Agreement are being provisionally applied. Part II. is being applied to the fullest extent not inconsistent with existing legislation at the date of signature of the Protocol.

In November, 1957 there were 37 contracting parties to the Agreement, comprising most of the world's larger trading nations.

Many of the Articles in Part II. of the General Agreement are similar to articles which were included in the Havana Charter for an International Trade Organization. Had the Charter come into force, Part II. of the General Agreement, containing general commercial policy provisions to prevent the circumvention of tariff concessions by other measures, would have been suspended.

Four series of tariff negotiations have been conducted under the provisions of the General Agreement. As a result of these negotiations, Australia has obtained tariff concessions on almost all the principal products of which she is an actual or potential exporter to the individual countries concerned. These concessions were a result both of direct negotiation by Australia and of negotiation by other countries—in the latter case, the benefits occur through the operation under the Agreement of the most-favoured-nation principle.

The contracting parties periodically hold plenary sessions to deal with questions arising out of the administration of the Agreement. The twelfth session was held at Geneva in October and November, 1957.

### § 3. Imperial Preference in the United Kingdom.

1. Preferential Tariff of the United Kingdom.—A brief summary of the preferential tariff of the United Kingdom in the years prior to 1931 was published in previous issues of the Official Year Book.

By 1931, the United Kingdom imposed duties on a fairly wide range of goods, provision being made in all cases for preferential treatment to Empire goods. The important preferences for Australia were those on sugar, dried fruit, wine, and jams and jellies. Even at this time, however, the United Kingdom adhered to the principles of free trade and by far the greater part of imports was free of duty.

In order to counteract the flood of dumping which followed the collapse of world trade in 1929-30, the United Kingdom introduced emergency tariff legislation in 1931. Ad valorem duties were imposed on almost all goods imported into the United Kingdom with the exception of certain raw materials, goods from Empire countries being exempt from these duties. These temporary measures were embodied in the Import Duties Act of March, 1932, by the enactment of which the United Kingdom finally abandoned free trade as a policy. This Act provided for the free entry for Empire goods pending the conclusion of some permanent agreement. The Ottawa Agreements Act of November, 1932 emerged from the Imperial Economic Conference held in Ottawa and embodied agreements concluded between the United Kingdom and the Dominions, Newfoundland and Southern Rhodesia. For the purpose of considering the present preferences enjoyed by Australia in the United Kingdom, it is expedient to regard the Import Duties Act and the Ottawa Agreements Act as complementary.

The Import Duties Act provided for the imposition of a general ad valorem duty of 10 per cent. on all imports with certain exceptions (i.e., those on the Free List and those already dutiable under previous enactments). Additional duties could be imposed and items on the Free List subjected to duty, and in fact the range of items subject to duties under this Act has been extended from time to time since its enactment.

The freedom of Empire goods from these duties was guaranteed under the Ottawa Agreements Act, which also provided for the imposition of new duties on imports from foreign, but not Empire, countries of a number of products of special interest to the Empire countries concerned. Whilst free entry was guaranteed to Empire producers on a wide range of products, the margins of preference thereby applicable were not bound, and the duties could be varied up or down by the United Kingdom Government without the consent of Empire countries. On a selected range of items, however, which are specified in the schedules to the Ottawa Agreements Act, the duties could not be varied by the United Kingdom without the consent of the other party to the respective agreement.

Since 30th October, 1947, Canada and the United Kingdom have, by an exchange of letters, recognized the rights of their respective Governments to reduce or eliminate the preferences they accord one another without prior consultation or consent.

In 1947 the United Kingdom and Australia adhered to the General Agreement on Tariffs and Trade, which prohibits increases in tariff preferences by either country. This rule, as is the case with the other provisions of the General Agreement, may be waived by a two-thirds majority of the signatories to the agreement.

2. The Australia-United Kingdom Trade Agreement.—The provisions and history of the original Australia-United Kingdom Agreement (Ottawa Agreement) were published in previous issues of the Official Year Book.

The major provisions of the current agreement (signed in Canberra on 26th February, 1957) which affect Australia's position in the United Kingdom market are as follows:—

- (a) Continued free entry for those Australian goods in which Australia has an active trade interest, and which were accorded free entry immediately prior to the new agreement.
- (b) A guaranteed minimum margin of preference in the United Kingdom Tariff on all items so treated in the previous agreement plus an extension of this guarantee to several items on which the margin of preference, although in force, was not bound to Australia. This latter group comprised currants, egg powder and egg pulp, jam, rice, tomato juice, pineapple juice and coconut oil. A selection of the items on which Australia receives a bound margin of preference and the extent of that preference is as follows (all values in sterling):—Butter (15s. a cwt.); cheese (15 per cent. ad val.); canned peaches, pears and apricots (12 per cent. ad val.); raisins (8s. 6d. a cwt.); eggs in shells (1s. to 1s. 9d. a great hundred (10 dozen)); milk powder (6s. a cwt.); sweetened condensed milk (5s. a cwt.); apples (4s. 6d. a cwt. in season); honey (7s. a cwt.); flour (10 per cent. ad val.); light wine (2s. a gallon); heavy wine (10s. a gallon at present duty rate).
- (c) All rights under the Ottawa Agreement in respect of meat are maintained.
- (d) Australia receives an assured wheat market of at least 750,000 tons f.a.q. wheat or flour equivalent annually. Any Australian high-protein wheat sold to the United Kingdom is not counted against this obligation.

- (e) There is provision for full consultation between the two Governments on such matters as agricultural production and marketing, transport and communication, the disposal of surpluses and restrictive business practices.
- (f) The two Governments declared their intention to introduce legislation which will enable them to enforce anti-dumping or countervailing duties where material injury is caused or threatened to the other party.
- (g) The agreement shall be the subject of re-negotiation between the two Governments in 1961.
- 3. Recent Developments affecting the Operation of the Trade Agreement.—The effect of increases in commodity prices in the post-war period has been to reduce the effective value of those preference margins which are expressed in terms of British currency ("specific margins"). The commodities affected are butter, eggs, canned apples, logan-berries, pineapples, tropical fruit salad, raisins, dried apricots, sugar, lactose, and wines. The following table shows, for selected items, how the ad valorem incidence of specific preference margins originally negotiated in 1932 and rebound in the 1957 agreement has been reduced by increases in the average value of the commodities on which they are granted.

IMPERIAL PREFERENCE: CHANGES IN VALUE OF PREFERENCES.

Ad Valorem Incidence of Specific Preferences Received by Australia in the United Kingdom.

G	Commodity.		Ad Valorem Incidence. (a) (Per cent.)				
		Preference Margin.	1938.	1947.	1954.	1956.	
Sugar, raw		£3 14s. 8d. a ton	35.8	12.2	9.4	8.7	
Butter		15s. a cwt	13.3	7.6	4.3	4.6	
Beef (frozen)		₹d. a lb	17.3	10.3	4.3	3.6	
Canned pineapple		5s. a cwt	21.4	5.5	2.9	3.5	
Currants		2s. a cwt	7.2	2.8	2.4	1.8	
Raisins	••	10s. 6d. a cwt. to 1947; 8s. 6d. a cwt. from 1948	31.2	13.1	9.7	8.0	
Honey	••	7s. a cwt. to 1938; 5s. a cwt. from 1939	19.0	6.8	5.4	3.8	
Milk, dried whole		6s. a cwt.	8.7	4.7	2.9	3.1	
Milk, dried skim		6s. a cwt.	20.1	7.4	7.0	7.3	
Apples		4s. 6d. a cwt	26.4	9.9	5.9	5.4	
Pears		4s. 6d. a cwt	19.5	6.7	5.3	4.9	

<sup>(</sup>a) The ad valorem incidence of a preference is calculated by expressing the specific margin of preference (in £ sterling a cwt., a ton, etc.) on a particular commodity as a percentage of the average unit value (in £ sterling a cwt., a ton, etc.) of United Kingdom imports of that commodity from all sources in the year concerned.

### § 4. Trade Commissioner Service.

In the interest of building and maintaining a high level of trade, Governments nowadays generally appoint commercial representatives in their main export markets, their duties including the collection of information about trade conditions, assisting exporters in their difficulties and promotion of trade generally.

Prior to 1929, Australian representation abroad was limited to the High Commissioner's Office in London, with a subsidiary agent in Paris, and the Office of the Commissioner-General for Australia in New York. Apart from the facilities afforded by those offices, the only form of oversea trade representation available to Australia was that of the United Kingdom Department of Overseas Trade, whose activities were naturally concerned with the development of United Kingdom rather than Dominion trade.

The growing importance of Australia's trade with Canada led to the appointment in 1929 of an Australian Trade Commissioner in that country. The part played by that official in the subsequent negotiations of the Trade Agreement with Canada, in the cultivation

of close and cordial relations with the Canadian authorities, and in general in focussing interest on Australia and Australian products, amply demonstrated the value of such appointments to both the Commonwealth Government and the Australian trading community.

The Trade Commissioners Act 1933 provided for the establishment of an Australian Government Trade Commissioner Service and by the beginning of the 1939-45 War posts had been established at Wellington, Batavia (now Djakarta), Shanghai, Tokyo, Cairo, Bombay, New York and Calcutta. The Trade Commissioner Service was further expanded in 1946 and in February, 1958 there were 27 Trade Commissioner posts in 20 countries.

The general advantages to be derived from the appointment of Trade Commissioners may be briefly stated as follows:—(a) fostering of goodwill, (b) correction and avoidance of misunderstandings, and (c) dissemination of knowledge concerning the respective countries. Particular facilities which they are able to afford to the trading community are (a) information as to present and prospective demand for goods, (b) information as to foreign and local competition, (c) advice as to best selling methods, (d) reports as to the standing of foreign buyers, (e) specification of articles in demand, (f) dealing with trade inquiries, (g) advice and assistance to commercial visitors regarding trade matters, (h) settlement of difficulties between exporters in Australia and buyers abroad, and (i) information as to foreign import requirements, customs duties, trade regulations, etc.

In addition to the foregoing trade functions, it is the duty of a Trade Commissioner to watch and advise the Government of any developments in his territory (which may include several countries) likely to affect trade and commerce with Australia, and other matters of economic interest to the home Government. He may be called upon to represent his Government at oversea conferences, and in certain countries where there is no diplomatic or consular mission (e.g., British West Indies, Hong Kong and the Federation of Rhodesia and Nyasaland), he is called upon to act as the Australian representative on official occasions.

Trade Commissioners usually enter the Service from either the commercial world or the Public Service, and applications for entry into the Service are called for periodically by public advertisement. In the more important posts it is the practice for the Trade Commissioner to share his duties with an Assistant Trade Commissioner, who is selected to be trained in the Service and qualify at a later stage for appointment as a Trade Commissioner. These staffing arrangements are designed to enable the Government to draw upon experienced and able executives in both private enterprise and the Public Service, and at the same time to build up a body of competent personnel to carry out a policy of vigorous expansion in the field of oversea trade.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade (as distinct from the diplomatic and consular services, administered by the Department of External Affairs), but in countries where there is an Australian diplomatic or consular mission it is the practice for Trade Commissioners to be attached to the mission and to hold an appropriate diplomatic or consular rank (Commercial Counsellor, Commercial Secretary or Commercial Attaché).

The oversea trade representation is shown in Chapter XXX.—Miscellaneous.

### § 5. Method of Recording Imports and Exports.

- 1. Source of Statistics.—Oversea trade statistics are compiled from documents obtained under the Customs Act 1901-1957 and supplied to this Bureau by the Department of Customs and Excise.
- 2. Customs Area.—The Customs Area, to which all oversea trade statistics issued by this Bureau apply, is the whole area of the Commonwealth of Australia. Non-contiguous territories are treated as outside countries, and trade transactions between Australia and these non-contiguous territories are part of the oversea trade of Australia. Such transactions are shown separately, i.e., the trade of Australia with each particular country is separately recorded and tabulated.
- 3. The Trade System.—There are two generally accepted systems of recording oversea trade statistics, namely, (a) special trade and (b) general trade, and statistics of both are published by the Bureau, although greater emphasis is placed on general trade. The Statistical Office of the United Nations defines the two systems as follows:—
  - (a) Special Trade. Special imports are the combined total of imports directly for domestic consumption and withdrawals from bonded warehouses or free zones for domestic consumption, transformation or repair. Special

- exports comprise exports of national merchandise, namely, goods wholly or partly produced or manufactured in the country, together with exports of nationalized goods. (Nationalized goods are goods which, having been included in special imports, are then exported.)
- (b) General Trade. General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. Direct transit trade and trans-shipment under bond are excluded. General exports are the combined total of national exports and re-exports of imported merchandise including withdrawals from bonded warehouse or free zone for re-export.

The tables which follow refer to general trade, except for those appearing in § 16, para. 2, which refer to imports cleared for home consumption.

- 4. Statistical Classification of Imports and Exports.—Statistics of oversea imports and exports from which the summary tables in this issue of the Official Year Book have been extracted were compiled according to the revised classification which came into operation on 1st July, 1945. This classification is designed to allow for the inclusion of items which become significant with varying trade conditions, and in 1956-57 provided for 2,264 import items and 1,072 export items.
- 5. The Trade Year.—From 1st July, 1914, the statistics relating to oversea trade have been shown according to the financial year (July to June). Prior to that date the figures related to the calendar year. A table is included in § 17 showing the total value of imports and exports in the calendar years 1953 to 1957 inclusive.
- 6. Valuation.—(i) Imports. The recorded value of goods imported from countries beyond Australia as shown in the following tables represents the amount on which duty is payable or would be payable if the duty were charged ad valorem. Since 15th November, 1947, the value for duty of goods imported into Australia has been the f.o.b. value in Australian currency instead of the British currency f.o.b. value plus 10 per cent.

Section 154 (1) of the Customs Act 1901-1957 provides that "when any duty is imposed according to value, the value for duty shall be the sum of the following:—

- (a) (i) the actual money price paid or to be paid for the goods by the Australian importer plus any special deduction, or
  - (ii) the current domestic value of the goods, whichever is the higher; and
- (b) all charges payable or ordinarily payable for placing the goods free on board at the port of export."
- "Current domestic value" is defined as "the amount for which the seller of the goods to the purchaser in Australia is selling or would be prepared to sell for cash, at the date of exportation of those goods, the same quantity of identically similar goods to any and every purchaser in the country of export for consumption in that country." All import values shown throughout this and other chapters of this issue of the Official Year Book are therefore uniform f.o.b. values at port of shipment in Australian currency.
- (ii) Exports. Since 1st July, 1937, the following revised definitions of f.o.b. values have been adopted for exports generally:—
  - (a) Goods sold to oversea buyers before export—the f.o.b. port of shipment equivalent of the price at which the goods were sold (e.g., as regards wool, the actual price paid by the oversea buyer plus the cost of all services incurred by him in placing the wool on board ship).
  - (b) Goods shipped on consignment—the Australian f.o.b. port of shipment equivalent of the current price offering for similar goods of Australian origin in the principal markets of the country to which the goods were dispatched for sale (as regards wool, the f.o.b. port of shipment equivalent of the current price ruling in Australia will normally provide a sufficient approximation to the f.o.b. port of shipment equivalent of the price ultimately received).

Exporters are required to show all values in terms of Australian currency, and to include the cost of containers.

An account of the bases of valuation in operation prior to 1st July, 1937 was given on page 469 of Official Year Book No. 39.

- 7. Inclusions and Exclusions.—(i) Ships' and Aircraft Stores. Prior to 1906, goods shipped in Australian ports on oversea vessels as ships' stores were included as exports. From 1906, ships' and aircraft stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores (including bunker coal and oil) shipped each year since 1952-53 is shown on page 336.
- (ii) Outside Packages. Outside packages (containers, crates, etc.) have always been included as a separate item in the tabulation of imports but, except for those received from the United Kingdom, a classification according to country of origin has been available only since 1950-51. For exports, however, the value recorded for each item includes the value of the outside package.
- (iii) Trade on Government Account. Imports and exports on Government account are treated as normal transactions and are an integral part of oversea trade transactions.
- (iv) Currency. Notes and coins of base metal are included in the oversea trade statistics at their commodity value only.
- (v) Gold Content of Ores and Concentrates. The value of ores and concentrates imported and exported includes the value of the gold content. The latter is not recorded separately for purposes of inclusion in imports and exports of gold.
  - (vi) Personal Effects. Migrants' effects are included in imports and exports.
- 8. Countries to which Trade is Credited.—(i) Imports. From 1st January, 1905, in addition to the record of the countries whence goods arrived directly in Australia, a record of the countries of their origin was kept, as it was considered that classification of imports according to country of origin was of greater interest and value than classification according to country of shipment. Up to and including the year 1920-21, imports continued to be classified both according to country of shipment and according to country of origin, but the former tabulation was discontinued as from the year 1921-22.
- (ii) Exports. In the export sections of tables in this chapter, "country" refers to country of consignment.
- 9. Pre-Federation Records.—In the years preceding Federation, each State independently recorded its trade, and in so doing did not distinguish other Australian States from foreign countries. As the aggregation of the records of the several States is necessarily the only available means of ascertaining the trade of Australia for comparison with later years, it is unfortunate that past records of values and the direction of imports and exports were not on uniform lines. Imports and exports for years prior to Federation may be found in issues of the Official Year Book prior to No. 41. On the introduction of the Customs Act 1901 the methods of recording values were made uniform throughout the States.

### § 6. Total Oversea Trade.

1. Including Gold.—The following table shows the total trade (including gold) of Australia with oversea countries from 1901 to 1956-57. To save space, the period 1901 to 1950-51 has been divided into five-year periods, and the figures shown represent the annual averages for the periods specified. Figures for the individual years were published in Official Year Book No. 40 and earlier issues, but it should be borne in mind that the figures for imports in issues prior to No. 37 were in British currency.

In this chapter the values in all tables of imports and exports are shown in Australian currency f.o.b. at port of shipment.

OVERSEA	TRADE	:	AUSTRALIA.
(Inc	CLUDING	G	OLD.)

orts.  35,689 16,825	Exports. 51,237	Total.			Imports.	Punners )	
	51 237		Total.   Imports(-). (£'000.)			Exports.	Total.
16,825		86,926		15,548		13.1	22.2
	(b) 69,336	116,161	+	22,511	11.0	16.3	27.3
66,737	74,504	141,241	+	7,767	13.8	15.4	29.2
1,577	115,066	206,643	+	23,489	17.4	21.9	39.3
24,404	134,545	258,949	+	10,141	21.1	22.9	44.0
9,337	131,382	250,719	+	12,045	18.6	20.5	39.1
73,798	120,958	194,756	+	47,160	11.1	18.1	29.2
23,553	157,610	281,163	+	34,057	17.8	22.7	40.5
1,514	163,955	375,469		47,559	29.1	22.4	51.5
						72.7	129.9
3,423	675,008	1.728,431	_	378,415	123.5	79.1	202.6
			+			99.7	158.6
						93.0	169.6
						85.2	178.0
						83.9	172.0
						104.2	179.6
	23,553 11,514 19,273 53,423 14,109 31,609 13,742 21,088	23,553 157,610 11,514 163,955 19,273 571,430 53,423 675,008 14,109 871,272 81,609 828,332 13,742 774,164 21,088 781,864	23,553 157,610 281,163 11,514 163,955 375,469 19,273 571,430 1,020,703 14,109 871,272 1,385,381 81,609 828,332 1,509,941 813,742 774,164 1,617,906 21,088 781,864 1,602,952	23,553	23,553     157,610     281,163     + 34,057       11,514     163,955     375,469     - 47,559       19,273     571,430     1,020,703     + 122,157       53,423     675,008     1,728,431     - 378,415       14,109     871,272     1,385,381     + 357,163       81,609     828,332     1,509,941     + 146,723       13,742     774,164     1,617,906     - 69,578       21,088     781,864     1,602,952     - 39,224	23,553	23,553

<sup>(</sup>a) The figures shown for the years 1901 to 1950-51 represent the annual averages for the periods covered. See text above. From 1914-15 onwards the particulars relate to financial years. (b) Prior to 1906, ships' stores were included in exports. For the value of such goods shipped on oversea vessels and aircraft during each of the years 1952-53 to 1956-57 see table on p. 356.

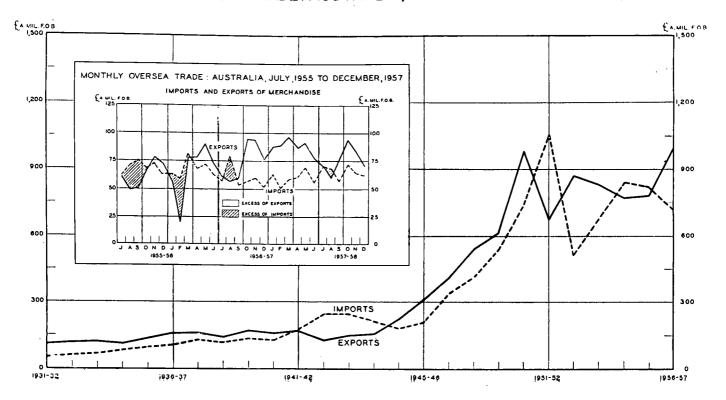
In issues of the Official Year Book prior to No. 23, fluctuations in the value of the oversea trade of Australia for earlier years were treated in some detail. The enhanced prices ruling for commodities and the peculiar conditions affecting Australian trade were responsible for the high value of imports in the years following the 1914–18 War, and these factors should be taken into consideration in making comparisons with earlier years. In the three years ended 1928–29, imports fell while exports were well maintained, but in 1929–30 both imports and exports declined substantially. The full effects of the economic depression are reflected in the greatly diminished trade figures for the period 1931–32 to 1935–36 and some years thereafter. The lowest level was recorded in 1931–32, when the total trade amounted to £137,538,000.

The outbreak of war in the Pacific in 1941 resulted in a substantial increase in the value of imports during the years 1941-42 to 1945-46. Since the end of the war the annual values of imports and exports have increased considerably, largely because of higher prices.

A graph showing the oversea trade of Australia from 1931-32 to 1956-57 appears on the next page.

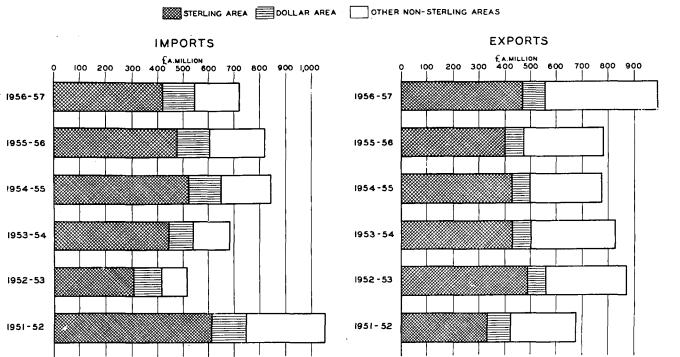
2. Excluding Gold.—The fluctuations in recent years in merchandise trade (including silver as merchandise) are shown more clearly in the following table, from which all gold movements have been excluded.

# OVERSEA TRADE: AUSTRALIA, 1931-32 to 1956-57



# OVERSEA TRADE ACCORDING TO MONETARY AREAS

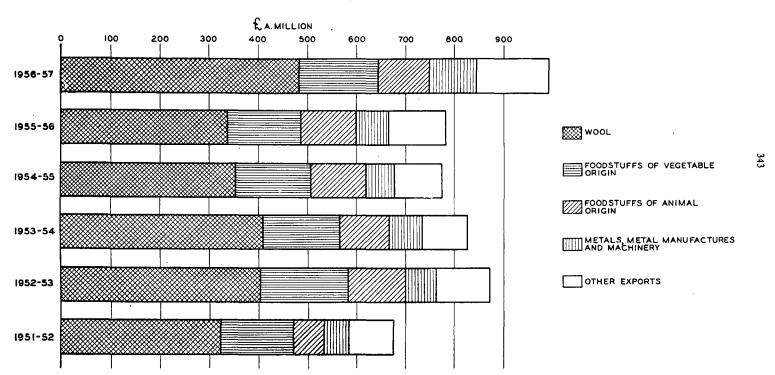
AUSTRALIA, 1951-52 TO 1956-57



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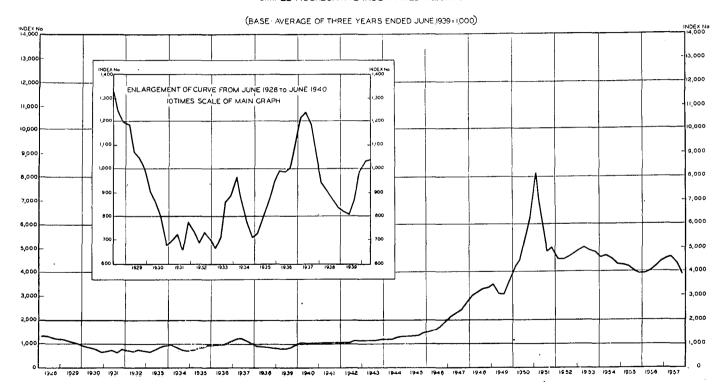
# EXPORTS OF PRINCIPAL COMMODITIES

AUSTRALIA, 1951-52 TO 1956-57



# EXPORT PRICE INDEX NUMBERS: AUSTRALIA, 1928 to 1957

#### SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS



### OVERSEA TRADE: AUSTRALIA.

(EXCLUDING GOLD.)

	Year.		,	Value. (£'000.	)	Value per	Head of Pop	ulation.(£)
	rear.		Imports.	Exports.	Total.	Imports.	Exports.	Total.
1952-53			510,513	850,874	1.361.387	58.4	97.5	155.9
1953-54			678,650	814,563	1,493,213	76.3	91.5	167.8
1954-55			841,018	760,446	1,601,464	92.5	83.7	176.2
1955-56			818,343	773,540	1,591,883	87.9	83.0	170.9
1956-57			716,720	979,078	1,695,798	75.2	102.7	177.9

# § 7. Direction of Oversea Trade.

1. According to Countries.—(i) Values. The following table shows the value of Australian imports and exports during each of the years 1954-55 to 1956-57, according to country of origin or consignment respectively.

# COUNTRIES OF ORIGIN OR CONSIGNMENT OF AUSTRALIAN IMPORTS AND EXPORTS: VALUES.

(EXCLUDING GOLD.) (£'000.)

Country.		Imports.	í I		Exports.	
Country.	1954–55.	1955–56.	1956–57.	1954–55.	1955–56.	1956-57.
Commonwealth Countries—						
United Kingdom	378,669	355,912	296,251	285,476	257,334	277,549
Australian Territories	5,795	6,859	7,422	12,979	15,102	16,013
Canada	23,840	23,306	22,157	10,503	10,911	10,681
Ceylon	19,516	8,632	9,863	8,723	8,687	10,582
India	26,057	23,469	24,509	19,428	12,159	28,580
Malaya, Federation of	12,797	16,229	10,875	8,410	9,337	9,088
New Zealand	7,601	8,254	11,593	37,787	40,920	50,945
Singapore	2,492	1,453	873	11,600	12,100	14,129
Other Commonwealth Countries	46,531	32,123	37,234	31,371	30,195	41,044
Total, Commonwealth Countries	523,298	476,237	420,777	426,277	396,745	458,611
Foreign Countries—			ŀ			
Arabian States	27,851	28,607	23,449	2.011	2,039	3,174
Belgium-Luxemburg	12,234	11,578	7,462	31,252	26,173	35,161
France	14,689	15,626	9,297	64,056	67,314	91,974
Germany, Federal Republic of	30,838	34,998	31,079	31,823	36,431	46,948
Indonesia	22,529	22,401	26,356	3,702	6,705	6,820
Italy	11,740	11,821	9,112	35,915	34,621	52,953
Japan	18,422	22,592	12,884	58,573	86,490	139,010
Netherlands	13,081	13,233	10,555	6,857	6,192	5,547
Sweden	13,516	12,048	11,510	3,241	3,483	2,440
United States of America	102,157	98,790	95,544	52,415	54,998	66,097
Other Foreign Countries	49,618	69,335	57,333	44,321	52,337	66,022
Total, Foreign Countries	316,675	341,029	294,581	334,166	376,783	516,146
Country unknown	1,045	1,077	1,362	3	12	4,321
Total	841,018	818,343	716,720	760,446	773,540	979,078

(ii) Proportions. In view of the fluctuations in the total values of imports and exports, it is somewhat difficult to ascertain from the preceding table the relative importance of the various countries in the trade of Australia. A better idea of the proportions of imports supplied by the various countries and of their relative importance as markets for Australian exports during the years 1954-55 to 1956-57 may be obtained from the following table.

# COUNTRIES OF ORIGIN OR CONSIGNMENT OF AUSTRALIAN IMPORTS AND EXPORTS: PROPORTIONS.

(EXCLUDING GOLD.)
(Per Cent. of Total.)

Country.		Imports.		Exports.			
Country.	1954–55.	1955-56.	1956-57.	1954-55.	1955–56.	1956-57.	
Commonwealth Countries—							
United Kingdom	45.03	43.49	41.33	37.54	33.27	28.35	
Australian Territories	0.69	0.84	1.04	1.71	1.95	1.64	
Canada	2.83	2.85	3.09	1.38	1.41	1.09	
Ceylon	2.32	1.05	1.38	1.15	1.12	1.08	
India	3.10	2.87	3.41	2.55	1.57	2.92	
Malaya, Federation of	1.52	1.98	1.52	1.11	1.21	0.93	
New Zealand	0.90	1.01	1.62	4.97	5.29	5.20	
Singapore	0.30	0.18	0.12	1.53	1.57	1.44	
Other Commonwealth Countries	5.53	3.93	5.20	4.12	3.90	4.19	
Total, Commonwealth Countries	62.22	58.20	58.71	56.06	51.29	46.84	
Foreign Countries-							
Arabian States	3.31	3.50	3.27	0.26	0.26	0.32	
Belgium-Luxemburg	1.45	1.42	1.04	4.11	3.38	3.59	
France	1.75	1.91	1.30	8.42	8.70	9.39	
Germany, Federal Republic of	3.67	4.28	4.34	4.19	4.71	4.80	
Indonesia	2.68	2.74	3.68	0.49	0.87	0.70	
Italy	1.40	1.44	1.27	4.72	4.48	5.41	
Japan	2.19	2.76	1.80	7.70	11.18	14.20	
Netherlands	1.55	1.62	1.47	0.90	0.80	0.57	
Sweden	1.60	1.47	1.60	0.43	0.45	0.25	
United States of America	12.15	12.07	13.33	6.89	7.11	6.75	
Other Foreign Countries	5.91	8.46	8.00	5.83	6.77	6.74	
Total, Foreign Countries	37.66	41.67	41.10	43.94	48.71	52.72	
Country unknown	0.12	0.13	0.19			0.44	
Total	100.00	100.00	100.00	100.00	100.00	100.00	

2. According to Monetary Areas.—The following table shows the trade of Australia according to monetary areas during the years 1955-56 and 1956-57.

The sterling area includes the United Kingdom, its colonies and dependencies, all other countries of the British Commonwealth (except Canada and the New Hebrides Condominium) and certain non-British countries of which the most important are Burma, Bahrain Islands, other Arabian States (excluding Saudi Arabia and Yemen) and Iceland.

The dollar area is comprised of the United States of America and dependencies, Canada, Mexico, other Central American countries, Bolivia, Colombia, Ecuador, Venezuela, the Philippines and Liberia.

The O.E.E.C. area consists of non-sterling members of the Organization for European Economic Co-operation, namely, Belgium, France, Italy, Norway, the Netherlands and Portugal together with their associated States and dependencies, Austria, Denmark, the Federal Republic of Germany, Greece, Luxemburg, Sweden, Switzerland, Trieste, Turkey and the New Hebrides Condominatum.

Of the remaining countries grouped under "other non-sterling", the more important as regards trade with Australia are Czechoslovakia, Finland, Poland, Spain, the Union of Soviet Socialist Republics, Egypt, Iran, Saudi Arabia, Japan, Indonesia, Thailand, Brazil and Chile.

OVERSEA TRADE OF AUSTRALIA ACCORDING TO MONETARY AREAS.
(INCLUDING GOLD.)
(£'000.)

	(£'000.)				
Monetary Area.				1955-56.	1956–57.
Sterling.					
Imports—				1	1
From-United Kingdom				355,912	296,251
Other Sterling Area Countries	• •	• •	• •	123,990	126,623
Total		• •	• •	479,902	422,874
Exports—					
To-United Kingdom				257,414	277,550
Other Sterling Area Countries		• •	• •	141,478	191,812
Total				398,892	469,362
Excess of Exports (+) or Imports (-)				-81,010	+46,488
Dollar.					
Imports—					
From—United States of America				98,790	95,544
Canada				23,305	22,157
Other Dollar Area Countries				4,432	4,804
Total				126,527	122,505
Exports—	• • •				
To-United States of America				55,004	66,111
Canada				10,911	10,681
Other Dollar Area Countries				7,481	9,342
Total				73,396	86,134
Excess of Exports (+) or Imports (-)				-53,131	-36,371
					: ",=:=
OTHER NON-STERLIN	NG.				
Imports— From—Countries of the O.E.E.C., inclu	dina dan	on donaios		125,823	108,960
Other Countries	iding depi	endencies	• •	88,836	64,652
· ·		••	• •	214,659	173,612
	• •	••	• •		1/3,012
Exports— To—Countries of the O.E.E.C., including	a dana-d	longiae		187,461	250,160
Other Countries	ig depend		••	122,115	187,649
T-4-1		• •	• • •	309,576	437,809
Excess of Exports (+) or Imports (-)	• •	• •	• • •	+94,917	+264,197
Excess of Exports (+) of Imports (-)				<del>+ 94,917</del>	+204,197
ALL MONETARY AR	EAS.				
Total Imports				821,088	718,991
	••	••		021,000	710,771
Total Exports	••			781,864	993,305
Excess of Exports (+) or Imports (-)			!	-39,224	+274,314

A graph showing the oversea trade of Australia according to monetary areas for the years 1951-52 to 1956-57 will be found on page 342.

### § 8. Trade with the United Kingdom.

1. Statistical Classes.—The following table shows, according to statistical classes, the value of imports into Australia of United Kingdom origin and of exports from Australia to the United Kingdom during each of the years 1954-55 to 1956-57.

TRADE	WITH	THE	UNITED	KINGDOM:	CLASSES.
			(£'000	)	

	(*	000.)					
		Imports.	;	Exports.			
Class.	1954–55.	1955-56.	1956-57.	1954-55.	1955–56.	1956–57.	
I. Animal foodstuffs, etc II. Vegetable foodstuffs; non-	1,599	1,408	1,031	80,362	80,161	64,764	
alcoholic beverages, etc III. Alcoholic liquors, etc	1,085 1,688	1,031 1,742	352 1,467	64,808 417	57,396 432	57,881 688	
IV. Tobacco, etc V. Live animals	2,219 154	875 224	417 138	4	22	76 8	
VI. Animal substances, etc	321 765	395 830	367 1,103	110,910 473	86,039 867	120,397 1,125	
VIII. Apparel, textiles, etc	66,061 6,009	51,672 883	41,560 1,327	253 633	194 2,218	199	
X. Pigments, paints and varnishes	2,783 483	3,145 485	3,454 463	17 3,704	27 4,633	3,859	
XII. Metals, metal manufactures	205,282	203,334	170,153	19,474	19,809	19,952	
XIII. Rubber and leather, etc	4,041 378	3,540	2,773	1,402	1,654	1,961	
XV. Earthenware, etc	10,115 21,643	8,495 22,644	6,732 20,217	285	15 282	14 318	
XVII. Jewellery, etc	3,179	2,914	1,892	45	60	70	
instruments XIX. Chemicals, medicinal products,	5,705	5,607	5,057	137	79	173	
essential oils, fertilizers  XX. Miscellaneous	14,430 (a)30,729	14,581 (a)31,739	14,398 (a)23,051	369 1,612	488 2,269	309 1,656	
XXI. Gold and silver; bronze specie		(4)51,155	(4)25,051	192	233	1,839	
	\ <u></u>	ļ <u>.</u>	ļ <u>.</u>				
Total	378,669	355,912	296,251	285,506	257,414	277,550	

<sup>(</sup>a) Includes outside packages.

# IMPORTS OF PRINCIPAL ARTICLES OF UNITED KINGDOM ORIGIN: AUSTRALIA. (£'000.)

Article.	1954-55.	1955–56.	1956-57.	Article.	1954–55.	1955-56.	1956-57.
Arms and ammunition, mili-				Motor vehicles, chassis,	50.742	56,004	25.704
tary, naval and air force	6,707	5,205	2 410	bodies and parts	58,743	56,004	35,704
stores	7,114	5,164	3,418	Optical, surgical and scien- tific instruments	4,012	4.025	2 720
Apparel			3,102		8,599		3,728
Carpets and carpeting	7,710	5,976	3,445	Paper, printing	0,399	8,848	7,381
Chemicals, medicinal pro- ducts, essential oils and				Piece-goods— Cotton and linen	21,097	14,565	10 070
C	14,430	14,581	14,398		7,038	4,544	12,279
		802	348	Silk and rayon			2,657
Cigarettes	2,137	3,314	2,334	All other piece-goods Prefabricated houses and	5,048	5,000	4,226
Crockery	4,500				533	900	225
Cutlery and platedware	2,160	2,052	1,643	Rubber and rubber manu-	233	806	325
Eiectrical cable and wire,	1.026	1 000	722		3,440	4 020	225
covered	1,826	1,828	722	factures		2,938	2,267
Electrical machinery and	20.004	05.000	24 222	Sewing silks, cottons, etc	2,249	2,095	2,427
appliances	20,824	25,980	24,222	Stationery and paper manu-	امديها	0.200	0.500
Glass and glassware	2,928	2,976	2,929	factures	8,422	9,208	8,790
Iron and steel—	10 124		12.00	Tools of trade	2,976	2,728	2,254
Plate and sheet	18,134	14,423	13,886	Vehicles and parts, other	4 572	4 776	
_Other	12,971	10,147	6,625	than motor vehicles	4,573	4,775	4,119
Linoleums	3,095	2,934	2,259	Yarns—	0.400		
Machines and machinery	<b>!</b>	İ	į	Cotton	3,198	2,446	2,763
(except dynamo elec-				Rayon	5,523	5,868	5,989
trical)—		2 40=		Other	492	474	479
Agricultural	3,202	3,487	2,097	All other articles(a)	75,151	73,900	61,069
Metal-working	5,745	5,401	6,585		i		
Motive-power	23,307	25,730	24,772			_	
Other	30,785	27,688	27,009	Total Imports	378,669	355,912	296,251

<sup>2.</sup> Imports of Principal Articles.—The following table shows the value of the principal articles imported into Australia from the United Kingdom during each of the years 1954-55 to 1956-57.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported to the United Kingdom during each of the years 1954-55 to 1956-57.

PRINCIPAL ARTICLES EXPORTED TO THE UNITED KINGDOM: AUSTRALIA. (Australian Produce.)

		(						
		Unit of		Quantity.		v	alue.(£'00	0.)
Article.		Quantity.	1954-55.	1955–56.	1956-57.	1954-55.	1955-56.	1956–57.
Barley		ton	91,349	71,897	59,950	2,322	1,441	1,269
Butter		***	54,485	72,420	62,553	20,767	24,464	20,085
Cheese	• •	1000".	18,098	13,630	13,934	3,666	2,231	2,382
Eggs in shell	• •	'000 doz.	16,642	12,902	6,852	2,697	2,115	1,238
Flour	••	ton(a)	80,832 45,944	67,079 37,549	80,735 24,322	2,261 5,341	1.767 4.763	
Fruit, dried	• •	ton '000 bus.	3,764	3,869	3,307	5,004	5,047	3,791 4,871
" # !	airtight	ooo bus.	3,704	3,005	3,307	3,004	3,047	4,0/1
" preserved in containers	_	ton	84,859	84,542	52,380	13,358	14,100	8,829
Gold		'000 fine oz.	2	5	22,300	30	80	
Hides and skins	• • • • • • • • • • • • • • • • • • • •				::	2,803	2,745	
Lead bullion		ton	40,818	29,812	53,531	6,133	4,639	8,338
,, pig		,,	77,398	85,089	54,541	9,495	11,368	7,481
Leather			)			1,231	1,642	1,921
Meats preserved by c	old pro-							
cess—						4.5 =00		
Beef and veal	• •	ton	98,139	112,347	115,391	16,708	17,247	17,007
Lamb	• •	**	39,075	32,683	19,634	9,293	6,967	3,754
Mutton	• •	**	8,608 1,890	10,757 450	6,830	931 446	1,342 128	867 64
Pork Meats, tinned	••	**	53,122	49,134	167 38,990	17,584	15,427	10,104
Milk and cream	• •	'000' 1ъ.	9,519	24,550	19.890	396	955	932
Silver bullion	••	'000 fine oz.	408	348	4,444	158	141	1,830
Sugar (cane)	• • •	ton	435.017	327,127	367,488	18,962	13,909	16,616
Tallow (unrefined)			3,200	11.445	9,153	263	884	707
Timber, undressed(b)		'000 super ft.	3,280	1.412	2,790	190	95	183
Wheat		ton	512,524	548,030	715,165	13,718	12,783	16,767
Wine		'000 gal.	865	896	1,308	410	422	675
Wool	'	'000 lb.	327,163	300,852	331,876	107,914		117,372
Zinc bars, etc	• •	ton	9,002	9,896	10,103	951	1,181	1,190
All other articles	••	••	•••	••		20,447	23,412	21,806
Total Exports tralian Prod	s (Aus-		••			283,479	254,383	275,035

(a) 2,000 lb.

(b) Excludes railway sleepers.

4. Imports from the United Kingdom and Competing Countries.—Since 1908, permanent resident Commissioners appointed by the British Board of Trade have been located in Australia for the purpose of advising manufacturers and merchants in the United Kingdom with regard to Australian trade affairs. From 8th August, 1907, the Commonwealth Customs Tariffs have provided preferential rates of customs duties on certain goods the produce or manufacture of the United Kingdom, with the object of assisting the British manufacturer to retain or improve his position in this market in relation to other countries. The main provisions in these Acts relating to preference are dealt with on previous pages in this chapter.

In an investigation into the relative position occupied by the United Kingdom in the import trade of Australia, the comparison must, of course, be restricted to those classes of goods which are produced or manufactured in the United Kingdom. Imports into Australia include many commodities, such as tea, rice, raw coffee, unmanufactured tobacco, petroleum products, copra, timber, etc., which the United Kingdom cannot supply. These items, in addition to others not available from that country, have therefore been omitted from the computation following.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, Germany, Japan and the United States of America. These countries have been selected as the principal competitors in normal times with the United Kingdom for the trade of Australia under the specified headings. Totals for each of the years 1954-55 to 1956-57 are shown in the following table.

IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS. (£'000.)

Nature of Imports.	Year.	United Kingdom.	France.	Federal Republic of Germany.	Japan.	United States of America.	All Countries.
Foodstuffs of animal origin	{ 1954-55	1,599	7	132	739	81	7,034
	1955-56	1,408	11	201	1,801	82	7,566
	1956-57	1,031	6	171	999	139	5,689
Yarns and manu- factured fibres, textiles and ap- parel	{ 1954–55 1955–56 1956–57	66,061 51,672 41,560	5,073 5,105 2,636	3,875 4,821 3,574	9,026 9,097 7,227	524 568 505	126,752 111,320 91,313
Metals, metal manu-	{ 1954–55	205,282	5,390	13,300	4,044	56,687	319,169
factures and	1955–56	203,334	6,274	15,995	7.202	54,986	322,068
machinery	1956–57	170,153	3,368	14,172	1,309	49,245	265,247
Rubber and leather and manufactures thereof, and sub- stitutes therefor	{ 1954–55 1955–56 1956–57	4,041 3,540 2,773	283 217 198	171 152 114	22 25 21	860 3.083 3,280	17,825 22,821 17,384
Earthenware, cem-	{ 1954–55	10,115	345	707	680	528	15,589
ent, china, glass	1955–56	8,495	419	889	1,218	475	14,291
and stoneware	1956–57	6,732	391	657	946	784	12,188
Pulp, paper and board; paper manufactures and stationery	{ 1954-55 1955-56 1956-57	21,643 22,644 20,217	221 238 46	816 859 784	1,464 242 164	1,528 1,504 1,962	46,410 44,225 42,078
Sporting material, toys, fancy goods, jewellery and timepieces	{ 1954–55 1955–56 1956–57	3,179 2,914 1,892	181 128 98	2,392 2,245 1,385	611 920 580	19 17 39	10,442 10,069 6,783
Optical, surgical and scientific in- struments, etc.; photographic goods, n.e.i.	{ 1954–55 1955–56 1956–57	5,705 5,607 5,057	148 134 79	1,691 1,686 1,338	139 292 241	1,682 1,864 2,146	10.770 10,803 9,990
Chemicals, medicinal and pharmaceutical products, essential oils and fertilizers	{ 1954-55	14,430	1,032	3,333	371	2,242	27,781
	1955-56	14,581	1,095	3,747	253	2,373	29,855
	1956-57	14,398	1,254	4,391	182	2,032	30,429
Total, competitive imports	{ 1954–55	332,055	12,680	26,417	17,096	64,151	581,772
	1955–56	314,195	13.621	30,595	21,050	64,952	573,018
	1956–57	263,813	8,676	26,586	11,669	60,132	481,101
Total imports (less bullion and specie) (a)	{ 1954–55	378,669	14,689	30,838	18,422	102,156	840,972
	1955–56	355,913	15,626	34,998	22,592	98,790	818,293
	1956–57	296,251	9,297	31,079	12,884	95,544	716,682

(a) Includes outside packages.

The principal classes of competitive imports are metals, metal manufactures and machinery (value £265,247,000 in 1956-57) and manufactured fibres, textiles and apparel (value £91,313,000 in 1956-57). The value of goods included in these two groups represented 74.1 per cent. of the total value of competitive commodities during 1956-57. In 1956-57 the United Kingdom supplied 54.8 per cent. of the total value of competitive goods.

### § 9. Trade with Eastern Countries.

1. Merchandise Trade according to Countries.—The values of imports from and exports to Eastern countries during the years 1954-55 to 1956-57 are shown in the following table. The principal commodities imported in 1956-57 according to countries of origin were:—Borneo (British)—crude petroleum, £13,157,000; Ceylon—tea, £8,732,000; India—bags and

sacks, £9,811,000, cotton and linen piece-goods, £4,036,000, hessian, £2,556,000 and cotton fibres, £643,000; Malaya—crude rubber. £6,720,000, timber, £1,268,000; Japan—metals and metal manufactures, £1,222,000, cotton and linen piece-goods, £5,654,000, other textiles, £1,141,000, tinned fish, £990,000; Indonesia—petroleum spirit, £3,419,000, kerosene, £3,641,000, crude petroleum, £10,761,000, residual and solar oil, £821,000, tea, £3,897.000.

MERCHANDISE TRADE WITH EASTERN COUNTRIES: AUSTRALIA. (£'000.)

		Imports.(a	2)		Exports.	
Country.	1954–55.	1955–56.	1956-57.	1954-55.	1955–56.	1956–57.
Ceylon Hong Kong India Malaya, Federation of Pakistan	15,522 19,516 2,369 26,057 12,797 2,253 2,492	9,801 8,632 2,775 23,469 16,229 2,006 1,453	15,224 9,863 2,806 24,509 10,875 1,200 873	927 6,552 5,535 19,428 8,410 2,947 11,600	1,042 6,257 5,927 12,159 9,337 1,816 12,100	1,027 9,819 9,412 28,580 9,088 6,744 14,129
Burma China (Mainland) Formosa	11 1,732 100	3 60 2,275 83	 14 2,115 45	1,788 2,705 546	2,040 2,701 828	2,467 6,438 575
Laos Vietnam Indonesia Japan Korea, Republic of Philippines	7 9 22,529 18,422 4 115	1 22,401 22,592 2 121	1 26,356 12,884 6 186	3 70 2 3,702 58,573 970 1,709	66 351 15 6,705 86,490 516 2,190	40 204 14 6,820 139,010 1,125 3,812
Macao Timor	58 . 76	 1 37 167	 24 242	 39 1,157	76 2 24 1,353	139 1 33 1,631
Total	. 124,069	112,109	107,224	126,732	151,995	241,108

<sup>(</sup>a) Includes outside packages.

The balance of trade with Eastern countries shows an excess of exports from Australia during each of the years 1954-55 to 1956-57.

2. Exports of Principal Articles.—The following table shows the value of exports (including re-exports) from Australia to Eastern countries for each of the years 1954-55 to 1956-57. The countries concerned in this trade are listed in the previous table.

TOTAL EXPORTS FROM AUSTRALIA TO EASTERN COUNTRIES. (£'000.)

Article.	1954–55.	1955–56.	1956-57.	Article.	1954–55.	1955–56.	1956–57
Animal (except marine) oils	2 221	1.007		Meats	3,726	3,556	5,380
and fats Army stores Butter	2,321 1,123 2,193	1,997 2,472 2,003	1,037	tures except zinc bars, etc.	2,729 6,731	3,553 6,512	22,596 6,910
Cheese	790 1,537	711	860	Sugar (raw)	5,741 51,287	3,343   71,704	3,913 115,657
Grain and cereals— Flour (wheaten), plain white	13,853	14,658	14,498	Zinc bars, blocks, etc Other merchandise	2,432 7,055	2,562 13,580	2,487 21,714
Wheat Other (prepared and un-	15,150	12,629	23,978	Total Merchandise	126,732	151,995	241,108
prepared)	5,091 1,263	7,275 1,381	9,489 2,155 814	Gold and silver; bronze specie	15,825	10,636	14,783
Leather Machines and machinery	791 2,919	647 2,016	3,416	Total Exports	142,557	162,631	255,891

# § 10. Oversea Trade at Principal Ports.

The following table shows the value of oversea imports and exports at the principal ports of Australia during the year 1956-57, and the totals for each State and Territory.

# OVERSEA TRADE AT PRINCIPAL PORTS, 1956-57.

New South Wales.   South Australia.   Port Adelaide, including Adelaide   Port Pirie   209   Port Lincoln   541   Wallaroo   265   Other   7,642   35,092   Port Kembla   2,744   8,591   Other   77   Total   54,407   Total   5	
New South Wales   New South	xports.
Adelaide   Adelaide	
Bay   303,997   247,985   Port Pirie   209   Port Lincoln   541   Wallaroo   265   Other   7,642   8,591   Other   7,642   7,744   8,591   Other   7,642   7,744   8,791   Other   7,642   7,744   8,791   Other   7,642   7,744   7	85,080
Newcastle, including Port   Stephens	27,295
Stephens   7,642   35,092   Other   77   Other   77   Other   765   Total   45,407   1	5,513
Port Kembla   2,744   8,591   Other   77   Total   Western Australia.	3,420
Total	1,616
Total     314,383   292,433     Western Australia.     System	
Victorial	22,924
Victorial	
Melbourne   229,500   232,955   Geraldton   39,447   Geraldton   152   Geraldton	
Melbourne         229,500         232,955         Geraldton         152           Geelong         24,790         18,646         Bunbury         226           Portland         656         4,151         Other.         387           Total         254,946         255,752         Total         40,212         1           Curenstand.           Brisbane         43,946         131,569         Launceston         9,714           Townsville         2,433         27,280         Burnie         2,322           Mackay         464         8,807         Devonport         1,068	88,309
Geelong	8,794
Portland	4,510
Total	6,686
Comparison   Com	08,299
QUEENSLAND.   Hobart   9,714	00,299
Brisbane	
Townsville 2,433 27,280 Burnie 2,322 Mackay	13,716
Townsville 2,433 27,280 Burnie 2,322 Mackay 464 8,807 Devonport	4,837
Mackay	3,004
	946
Callis 1,272 5,727 10tal 14,117 1	22,503
Dames 1 5 520 1	
Pockhampton 244 5 005 NORTHERN LERRITORY.	
Gladstone 509 3,297 Darwin 1,004	612
Maryborough 22 3,438 Australian Capital Territory.	
Other 16 69 Canberra 38	
	93,305

# § 11. Classified Summary of Australian Oversea Trade.

1. Statistical Classes.—(i) Imports and Exports. The following table shows, according to statistical classes, the value of Australian imports and exports during each of the years 1954-55 to 1956-57.

TOTAL OVERSEA TRADE, AUSTRALIA: CLASSES. (£'000.)

		Imports.			Exports.		
Class.	1954-55.	1955-56.	1956–57.	1954-55.	1955–56.	1956–57.	
I. Animal foodstuffs, etc. II. Vegetable foodstuffs; non-	7,034	7,566	5,689	112,546	113,366	101,944	
aicoholic beverages, etc	35,925	22,059	25,815	152,600		163,160	
III. Alcoholic liquors, etc	2,028	2,101	1,684	1,716	1,460		
IV. Tobacco, etc	17,316 693	16,215 727	14,235	348 1,031	518 1,188		
V. Live animals VI. Animal substances, etc	4,108	4,000	3,841	374,690	360,692	510,346	
VI. Animal substances, etc VII. Vegetable substances, etc	19,621	17.611	19,279	1,962	2,653		
VIII. Apparel, textiles, etc.	126,752	111,320	91,313	2,758	2,220	2,731	
IX. Oils, fats and waxes	96,918	99,640	95,546	6,588	14,053	17,331	
X. Pigments, paints and varnishes	5,900	5,937	6,516	922	977	1,087	
XI. Rocks, minerals, etc	8,234	7,293	5,638	17,052	22,677	31,604	
XII. Metals, metal manufactures	210 100	202.000	265 247	60.00	C4 404	25.50	
and machinery	319,169 17,825	322,068 22,821	265,247 17,384	59,108 3,196	64,494 3,279	97,500	
XIII. Rubber and leather, etc XIV. Wood and wicker, etc	17,459	17,881	17,137	2,316	2,985	3,925 3,737	
XIV. Wood and wicker, etc XV. Earthenware, etc	15,589	14,291	12,188	1,161	897	1,109	
XVI. Paper and stationery	46,410	44,225	42,078	2,560	2,661	2,842	
XVII. Jewellery, etc	10,442	10,069	6,783	570	547	674	
XVIII. Optical, surgical and scientific	1	1	ł		1	1	
instruments	10,770	10,803	9,990	1,253	1,053	1,112	
XIX. Chemicals, medicinal products,	07.701		20.400	40-4	5 100		
essential oils, fertilizers XX. Miscellaneous	27,781 (a)50,998	29,855 (a)51,811	30,429	4,374 11,290	5,196 21,161	5,590 21,770	
XXI. Gold and silver; bronze specie	2,770	2,795	(a)45,135 2,309	16,123	11,027	19,908	
2231. Cold and sixter, bronze specie	2,770		2,305			15,500	
· Total	843,742	821,088	718,991	774,164	781,864	993,305	

(ii) Exports—Australian Produce and Re-exports. In the following table the exports from Australia of (a) Australian produce and (b) re-exports are shown according to statistical classes for each of the years 1954-55 to 1956-57.

EXPORTS FROM AUSTRALIA: AUSTRALIAN PRODUCE AND RE-EXPORTS. (£'000.)

Class.	Aust	ralian Proc	duce.		Re-exports.	
Class.	1954–55.	1955–56.	1956–57.	1954–55.	1955-56.	1956–57.
I. Animal foodstuffs, etc.  II. Vegetable foodstuffs; non-	112,488	113,307	101,895	58	59	49
alcoholic beverages, etc	152,078 1,697	148,465 1,448	162,821 1,943	522 19	295 12	339 11
IV. Tobacco, etc V. Live animals	264 958	1,097	369 1,521	84 73	72 91	113 115
VI. Animal substances, etc VII. Vegetable substances, etc VIII. Apparel, textiles, etc	374,399 1,900 2,494	360,370 2,624 1,974	510,203 2,831 2,522	291 62 264	322 29 246	143 32 209
IX. Oils, fats and waxes X. Pigments, paints and varnishes	6,029 891	13,459 939	16,726 1,020	559 31	594 38	605 67
XI. Rocks, minerals, etc XII. Metals, metal manufactures and	16,861	22,440	31,422	191	237	182
machinery XIII. Rubber and leather, etc XIV. Wood and wicker, etc	55,193 3,172 2,185	60,299 3,252 2,928	93,123 3,855 3,638	3,915 24 131	4,195 27 57	4,377 70 99
XV. Wood and wicker, etc XV. Earthenware, etc XVI. Paper and stationery	1,136 2,444	847 2,546	1,078 2,674	25 116	50 115	31 168
XVII. Jewellery, etc. XVIII. Optical, surgical and scientific	460	487	587	110	60	87
instruments XIX. Chemicals, medicinal products, essential oils, fertilizers	4,178	747 5,008	873 5,371	383 196	306 188	239 219
XX. Miscellaneous XXI. Gold and silver; bronze specie	10,068	14,417	15,275 19,896	1,222	6,744 37	6,495 12
Total	765,883	768,090	979,643	8,281	13,774	13,662

2. Imports of Principal Articles.—The next table shows the quantity, where available, and the value of the principal articles imported into Australia during each of the years 1954-55 to 1956-57.

PRINCIPAL ARTICLES IMPORTED: AUSTRALIA.

Article.	Unit of	Quantity.			Value. (£'000.)		
Arricle.	Quantity.	1954-55.	1955–56.	1956–57.	1954–55.	1955-56.	1956-57.
Apparel—					4.450		277
Blouses, skirts, costumes, etc					1,178	704	377
Gloves	doz. prs.	510,301	495,562	332,871	1,627	1,358	892
Headwear	٠.		•••	••	939	920	741
Men's and boys' outer clothing			•••	••	722	637	270
Socks and stockings					1,143	537	331
Trimmings and ornaments					5,383	4,794	3,511
Other apparel and attire					2,591	2,519	1,510
Arms, explosives, military stores, etc.		i			9,463	6,155	4,606
Bags and sacks		1 '			11,643	10,184	10,088
Carpets and carpeting	i		• • •		8,606	7,134	4,484
Chemicals, drugs, fertilizers	١				27,781	29,855	30,429
Crockery, etc	١	١ ١	!		5,171	4,555	3,276
Electrical machinery and appliances		i '	l I		26,872	33,617	34,785
Fibres			١ ا		12,288	10,659	12,374
Glass and glassware	١				6,176	5,929	5,772
Iron and steel—	İ	i			-	i .	'
Pipes, tubes and fittings	cwt.	685,129	285,046	276,090	2,603	1,398	1,480
Plate and sheet	٠.,	6,670,808	4,471,564	3,231,512	29,583	21,302	18,080
Other	l .".	1	! ' . :		17,768	24.810	10,984
Machines and machinery (except	1						
dynamo electrical)—	ļ	(	: (				
Agricultural	١	1	٠ !		5,043	5,233	3,375
Metal-working	::	1 ::	- ::		8,635	12,963	11,230
Motive power	1 ::	! ::			41,221	43,475	38,494
Other	1 ::		• • • • • • • • • • • • • • • • • • • •		49,043	47.848	46,683

PRINCIPAL ARTICLES IMPORTED: AUSTRALIA—continued.

Article.	Unit of		Quantity.		v	alue. (£'00	00.)
Ai ucic.	Quantity.	1954-55.	1955-56.	1956–57.	1954–55.	1955–56.	1956–57.
Motor vehicles, chassis, bodies and							
parts	١	l	١		77,701	77,105	52,648
Oils—	1		, .		,	11,,,,,,,,,	1 2,010
Linseed	'000 gal.	3,636	2,383	2,292	1,386	1,247	1,586
Petroleum and shale		1	,	, ,,,,,,,,,	•	, ,	-,
Crude (a)	mill. gal.	927	1,588	2,103	28,552	44,260	58,090
Kerosene	'000 gal.	150,735	144,374	123,961	7,705	7,399	6,795
Lubricating (mineral)	,,	43,885	42,835	42,292	5,509	5,584	6,166
Petroleum and shale spirit	;;	603,715	455,577	193,274	34,052	27,766	12,577
Residual and solar	,	377,021	156,988	53,727	13,807	6,014	2,122
Paper, printing	<b>.</b>		i		19,218	16,768	16,235
Piece-goods						,	.,
Canvas and duck	'000 sg.		1	i	ľ	i	1
	yds.	8,211	7,982	7,962	1,398	1,264	1,108
Cotton and linen	1		l		42,919	35,156	32,125
Silk and rayon			l		14.875	14,085	7,729
Woollen and containing wool					1,703	1,438	1,036
All other piece-goods					8,760	9.155	6,929
Plastic materials		l	١		5,851	5,776	5,616
Prefabricated houses and buildings		I		::	880	808	479
Rubber and rubber manufactures					17.032	22,030	16,711
Stationery and paper manufactures					10,516	11,650	11,213
Tea	'000 lb.	65,212	46,326	61,504	21,743	11,196	14,723
Timber, undressed, including logs(b)	'000 sup.		,	,	,		,
,, 00-(,	ft.	331,346	322,792	313,366	13,271	14,111	13,440
Yarns		, , , , , ,	<b>-</b>	, ,		,	,
Cotton	'000 lb.	6,411	5,297	5,998	3,255	2,496	2,802
Rayon	,,	18,392	17,026	16,191	8,990	8,923	8,770
Woollen	",	157	138	123	207	184	171
Other	",	1,483	2,233	1,861	387	481	456
All other articles	ļ ",.				228,546	219,606	195,692
Total Imports		<del></del>		<u> </u>	843,742	821,088	718,991

<sup>(</sup>a) Includes once-run distillate. (b) Excludes undressed timber not measured in super. feet.

3. Exports of Principal Articles of Australian Produce.—The following table shows the quantities and values of the principal articles of Australian produce exported during each of the years 1954-55 to 1956-57.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE.

		Unit of		Quantity.		Value. (£'000.)		
Article.		Quantity.	1954–55.	1955–56.	1956–57.	1954–55.	1955-56.	1956–57.
Arms, ammunition, mili	tary, navai							
				:		3,299	3,067	1,568
		ton	421,174				10,471	12,745
		,,	62,507				28,966	25,824
		,,,	22,117	17,181	17,025		3,537	3,860
Chemicals, drugs, fertiliz	ers					4,178	5,008	5,371
Flour		ton(a)	605,619	666,793	749,712	20,305	19,703	21,669
Fruit-							1	
		ton	71,177		46,301		7,803	6,586
Fresh, including froze	n	'000 bus.	6,284			8,771	9,139	8,585
Preserved in airtight	containers	ton	96,337	93,359	59,818	15,245	15,469	10,078
Gold		'000 fine	1			·	1	i i
		oz.	864	532	908		8,323	14,227
Hides and skins		l	1 '			19,674	20,849	24,229
Lead, pig		ton	140,256	145.987	167,380	17,182	19,539	22,915
Machines and machine	ry (except					ì		
dynamo electrical)						8,789	7,492	7,934
Meats preserved by cold	process		ł					1
Beef and veal		ton	123,392	144,084	149,400	21,899	23,431	23,271
Lamb		,,	42,403	36,440	23,778	10,191	7,867	4,773
Mutton		,,	15,094		10.273	1,626	1,885	1,322
Pork		,,	2,908	1,104	642	781	364	271
Marta timead		1	62,963	58,286	50,103	20,559	18,224	13,174
Maille and assessed		'000 1ь.	105,285	127,278	132,880	8,306	8,915	9.645
O	••	ton	384,429			14,653	19,861	26,662
C (aa)	• • • • • • • • • • • • • • • • • • • •	,,	737,150	592,229	675,282	31,146	24,723	28,780
11/h an e		1	1.691,063	1,902,896	2,440,355	45,222	46,456	60,058
Wast (L)		'000 lb.		1,263,983		353,106	337,508	483,704
All salson successor						98,796	119,490	162,392
	(Australian						<del>-                                   </del>	
Dandanas	(1143) 4:14:	1			١	765.883	768,090	979,643

(a) 2,000 lb.

(b) Quantity in terms of greasy wool.

A graph showing exports in principal commodity groups in each of the years 1951-52 to 1956-57 will be found on page 343.

4. Imports of Merchandise and Bullion and Specie.—The table hereunder shows the value of imports into Australia during each of the years 1952-53 to 1956-57, grouped under the headings—Merchandise, and Bullion and Specie. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods.

IMPORTS OF MERCHANDISE AND BULLION AND SPECIE: AUSTRALIA.
(£'000.)

		Merchandise.			
Year.	 Free Goods.	Dutiable Goods.			Total Imports.
1952–53	 301,870	208,472	510,342	3,767	514,109
1953-54	 317,850	360,740	678,590	3,019	681,609
1954-55	 399,063	441,909	840,972	2,770	843,742
1955-56	 421,208	397,085	818,293	2,795	821,088
1956-57	 403,496	313,186	716,682	2,309	718,991

5. Exports of Merchandise and Bullion and Specie.—The next table shows the value of exports from Australia during each of the years 1952-53 to 1956-57, grouped under the headings—Merchandise, and Bullion and Specie. The exports of Australian produce and re-exports are shown separately.

EXPORTS OF MERCHANDISE AND BULLION AND SPECIE: AUSTRALIA. (£'000.)

		Merchandise.			Bul	ie.	Total	
Year.		Australian Produce.	Re-exports.	Total.	Australian Produce.	Re-exports.	Total.	Exports.
1952–53		840,634	7.864	848,498	22,657	117	22,774	871,272
1953-54	• •	803,635	8,231	811,866	16,422	44	16,466	828,332
1954-55	• • •	749,765	8,276	758,041	16,118	5	16,123	774,164
1955-56		757,100	13,737	770,837	10,990	37	11,027	781,864
1956-57		959,747	13,650	973,397	19,896	12	19,908	993,305

6. Imports and Net Customs Revenue.—The percentage of net Customs revenue, excluding primage, collected to the total value of all merchandise imported in each of the years 1952-53 to 1956-57 was as follows:—1952-53, 12.6 per cent.; 1953-54, 12.8 per cent.; 1954-55, 11.1 per cent.; 1955-56, 9.8 per cent.; and 1956-57, 9.0 per cent. Primage duty was in force during these years and if this is added to net Customs revenue the percentages become:—1952-53, 13.8 per cent.; 1953-54, 14 0 per cent.; 1954-55, 12.1 per cent.; 1955-56, 10.7 per cent.; and 1956-57, 9.6 per cent. The percentages of net Customs revenue, excluding primage, to the total value of dutiable goods only were: 1952-53, 31.0 per cent.; 1953-54, 24.0 per cent.; 1954-55, 21.1 per cent.; 1955-56, 20.2 per cent.; and 1956-57, 20.5 per cent. The calculations are based on Australian currency values and on the assumption that the value of clearances approximated to the value of imports during the same period.

# § 12. Ships' and Aircraft Stores.

Prior to 1906, goods shipped in Australian ports on board oversea vessels as ships' stores were included in the general exports. From 1906, ships' and aircraft stores have been specially recorded as such, and have been omitted from the export figures. The value of these stores during each of the years 1952-53 to 1956-57, with oils separate, is shown in the following table:—

VALUE OF STORES LOADED ON OVERSEA SHIPS AND AIRCRAFT: AUSTRALIA. (£'000.)

Item.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
Oils All Stores (including oils)	6,657	5,919	7,328	7,970	9,059
	11,696	10,266	13,181	13,539	14,208

In addition to oils, the principal items supplied to oversea ships and aircraft in 1956-57 were:—Meats, £1,591,684; fruit and vegetables, £491,347; eggs, £169,094; butter, £120,460; ale, porter, beer, etc., £172,352; sea food, £133,241; coal, £44,116; flour, £81,872; rice, £37,503; milk and cream, £39,713.

### § 13. Movement of Bullion and Specie.

1. Imports and Exports.—The following table shows the values of gold and silver bullion and specie and of bronze specie imported into and exported from Australia during each of the years 1954-55 to 1956-57.

IMPORTS AND EXPORTS, BULLION AND SPECIE: AUSTRALIA.  $(\pounds.)$ 

_				(~-)			_
			Imports.			Exports.	
Item.		1954–55.	1955-56.	1956-57.	1954–55.	1955–56.	1956–57.
Gold—Bullion Specie		2,720,834 2,948	2,745,143	2,270,632 66	13,716,622	8,323,118 80	14,225,889
Total		2,723,782	2,745,143	2,270,698	13,717,622	8,323,198	14,227,171
Silver—Bullion Specie		34,429 11,814	33,173 16,691	29,334 8,578	2,356,908 47,763	2,620,905 82,749	5,594,400 86,009
Total		46,243	49,864	37,912	2,404,671	2,703,654	5,680,409
Bronze—Specie	••		488	623	909	327	670
Total— Australian P duce Re-exports	 				16,117,547 5,655	10,990,312 36,867	19,896,015 12,235
Grand Total		2,770,025	2,795,495	2,309,233	16,123,202	11,027,179	19,908,250

2. Imports and Exports by Countries.—The next table shows the imports and exports of bullion and specie from and to various countries during the year 1956-57:—

IMPORTS AND EXPORTS OF BULLION AND SPECIE BY COUNTRIES: AUSTRALIA, 1956-57.

(£.)

		(£.)				
Country	1	Imports.			Exports.	
Country.	Bullion.	Specie.	Total.	Bullion.	Specie.	Total.
Commonwealth Countries—				}		
Australia (re-imported)	1	7,347	7,347	l i		
United Kingdom	1 '	98'	98	1,830,829	7,946	1,838,775
Australian Territories-	1			' '	,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
New Guinea	1,045,717		1,045,717	i	51,952	51,952
Papua	1,432	!	1,432	l i	13,372	
Ceylon				763,009		763,009
Hong Kong				14,019,624		14,019,624
India	1 !	62	62	'		
New Zealand	390;799	1,112	391,911	83,809	11,986	95,795
Pacific Islands (British)-	-  !		-		-	,
Fiji	861,743		861,743	135,279		135,279
Solomon Islands	275		275		140	140
Tonga	1 !				840	840
Pakistan	1 !	74				
Singapore	1 1	35	35			·
South Africa, Union of		34	34	<u> </u>	353	353
Total, Commonwealth						
Countries	2,299,966	8,762	2,308,728	16,832,550	86,589	16,919,139
Foreign Countries—				]		
Austria	1	49	49			
Belgium-Luxemburg		90	90	1		
Burma	1	54	54		• •	<u>,</u>
Finland		103	103			
Greece		62	62			1
Switzerland	1 !	56			• •	
United States of America		91	91	2,987,739	1,372	2,989,111
Total, Foreign Countries		505	505	2,987,739	1,372	2,989,111
Grand Total	2,299,966	9,267	2,309,233	19,820,289	87,961	19,908,250

# § 14. Exports According to Industries.

1. Classification.—The following table provides an analysis of the total recorded value of Australian exports for the three successive financial years ended June, 1957. This analysis is designed to show fluctuations in the value of exports of Australian produce dissected according to the main industry of their origin, although any such classification is necessarily arbitrary in some respects.

	ACCORDING TO	TAIDTICCOLTAI	CDOUDE
EVECTOR OF ALISTRALIAN PRODUCE.	ACCORDING TO	INDUSTRIAL	GRUUPS.

Industrial Group.		\	alue. (£'000		Proportion of Value of Exports of Australian Produce (excluding Gold). (Per cent.)			
		1954-55.	1955-56.	1956-57.	1954-55.	1955-56.	1956-57.	
Agriculture, Horticulture	and			-				
Viticulture-		72 200	77.030	01.455	9.6	10.2	ا م	
Unprocessed	• •	72,300 81.074	77,038 73,263	91,455 73,705	10.8	10.2 9.6	9.5 7.6	
Processed	• •	153.374	150,301	165,160	20.4	19.8	17.1	
	• •	133,374	130,301	100,100		' '		
Pastoral— Unprocessed		369,711	353,929	486,237	49.2	46.5	50.4	
Processed		69,031	71,579	81,192	9.1	9.4	8.4	
Total		438,742	425,508	567,429	58.3	55.9	58.8	
Dairy and Farmyard-								
Unprocessed		6,079	5,315	3,495	0.8	0.7	0.4	
Processed		43,139	45,827	44,344	5.7	6.0	4.6	
Total		49,218	51,142	47,839	6.5	6.7	5.0	
Mines and Quarries (other the Gold)—	han							
Unprocessed	٠	14,818	19.860	28,088	2.0	2.6	2.9	
Processed		34,737	40,708	51,404	4.6	5.4	5.3	
Total (a)		49,555	60,568	79,492	6.6	8.0	8.2	
Fisheries—								
Unprocessed		2,853	3,391	4,011	0.4	0.5	0.4	
Processed	• •	1,613	1,554	1,635	0.2		0.2	
Total	• •	4,466	4,945	5,646	0.6	0.7	0.6	
Forestry—			333	963	(A)	(b)	0.1	
Unprocessed Processed	• •	241 1,874	2,739	3,167	(b) 0.3	0 4	0.1	
Total		2,115	3.072	4,130	0.3	0.4	0.4	
Total Primary Produce—	• •	2,115	3.072	4,130				
Unprocessed		466,002	459,856	614,249	62.0	60.5	63.7	
Processed		231,468	235,670	255,447	30.7	31.0	26.4	
Total		697,470	695,526	869,696	92.7	91.5	90.1	
Manufactures		45,917	45,659	73,969	6.1	6.0	7.7	
Refined Petroleum Oils		2,100	7,272	10,097	0.3	1.0	1.0	
Unclassified	. • •	6,678	11,300	11,654	0.9	1.5	1.2	
Total Australian Produce ( cluding Gold)	(ex-	752,165	759,767	965,416	100.0	100.0	100.0	
Re-exports (excluding Gold)		8,281	13,774	13,662				
Gold Exports(a)	• •	13,718	8,323	14,227	<del>:</del>	<del></del>	<del></del>	
Total Recorded Value			3,525			<del></del> -	<del></del> -	
Exports		774,164	781,864	993,305				

<sup>(</sup>a) The value of refined newly-won gold was £16,939,351 in 1954-55, £16,192,638 in 1955-56 and £16,599,179 in 1956-57. (b) Less than 0.05 per cent.

2. Relative Importance of Industrial Groups.—In the year 1956–57, Australian produce (other than gold) exported amounted to approximately £965 million. Of this, £869 million or 90 per cent. was mainly produce of primary industries, comprising £614 million of unprocessed produce and £255 million of goods which had been processed in some degree before export. The values of the principal individual items of processed primary produce exported were:—Raw sugar, £28,182,000; flour, etc., £23,066,000; canned fruit, £10,078,000; dried fruit, £6,586,000; wool (scoured, tops, etc.), £57,977,000; canned meats, £11,478,000; butter, £25,824,000; milk (condensed, dried, etc.), £10,736,000; pig lead, £22,915,000; lead bullion, £8,338,000; zinc bars, blocks, etc., £4,666,000; copper ingots, £5,110,000; and undressed timber, £2,716,000.

The value of manufactures exported as classified above was £74 million, or approximately 8 per cent. of Australian produce (other than gold) exported in 1956-57. The values of principal individual items here included were:—Manufactures of metal, £43,299,000; implements and machinery, £7,934,000; drugs and chemicals, £4,270,000; and paper and stationery, £2,674,000.

The items enumerated indicate the arbitrariness of the line necessarily drawn between primary produce and manufactures in any classification of this kind. The value of processed

primary products exported includes some element of value added by the simpler processes of manufacture, while the value shown for manufactures exported necessarily includes the value of raw materials (primary produce) used in those manufactures.

Refined petroleum oils exported are shown separately, as they consist of imported crude oils refined in Australia and re-exported in the refined form. The values of principal individual items shown as "unclassified" in 1956-57 were:—Individual consignments of less than £50 in value, £4,486,000; and military equipment and stores and supplies for Australian projects overseas, £3,426,000.

### § 15. Australian Index of Export Prices.

- 1. General.—Over the past fifty years the exports of Australia have become increasingly diversified, but, although the proportion of highly manufactured exports has increased, it is still small in relation to total exports. Most of the exports still consist of basic products, such as wool, wheat, butter, etc.
- 2. Historical.—An annual index of export prices has been published by this Bureau since its inception.

The first index was compiled annually for the years 1901 to 1916–17. The method of computation was to select all those articles of export which were recorded by units of quantity, and to apply to the quantities of these export commodities actually exported during any year the average price per unit ruling in the year 1901 (adopted as the base year). The total value so obtained was divided into the total actual (recorded) value of these exports for that year. The quotient (multiplied by 1,000) thus obtained was the export price index number for that year.

The method was changed in 1918. A weight for all principal exports was calculated on the average quantities of exports for the nineteen and a half years from 1st January, 1897 to 30th June, 1916. To these weights were applied the "average unit export values" of each export in successive years, and a weighted aggregative index of "price" variations was derived. It was published for the years 1897 to 1929-30, and particulars of this index were last published in Official Year Book No. 24, page 147.

After the 1914-18 War, however, the relative importance of different exports changed considerably. In addition, the pattern of exports varied considerably from year to year.

3. Present Indexes.—For the reasons just mentioned, two new series of monthly export price indexes—one using fixed weights, the other changing weights—were published in 1937, computed back to 1928. These are the only export price indexes now published.

The data on which both series are based differ from those utilized in the old series of annual index numbers. The most important change was the use of actual (or calculated) export parities, based on actual price quotations, in place of the "unit-values" declared at the Customs.

The old index took no account of gold exports. The omission is natural and reasonable for countries which produce little or no gold. For gold-producing countries, although some exports of gold would be irrelevant (e.g., the Australian shipments of gold reserves during the depression), the exports of newly-produced gold should be taken into account. In the new series, therefore, gold is included, but the weight given to it is not the quantity exported but the quantity produced.

The two series are compiled monthly, and both relate to commodities which normally constitute about 80 per cent. of the total value of exports of merchandise and gold and silver production.

4. Monthly Index (Fixed Weights).—(i) General. This is a weighted aggregative index of price variations. It was computed back to 1928, with that year taken as base. It is now usually published on the base—average of three years ended June, 1939 = 100.

The purpose of this index is to provide comparisons, over a limited number of years, of the level of prices of those commodities normally exported from Australia, making no allowance for any benefit or disadvantage accruing from variations during the period in the relative proportions of the different kinds of exports.

(ii) Weights. The original weights (used for the period 1928 to 1936) were, in round figures, the average annual exports (production, in the case of gold) during the five years 1928-29 to 1932-33.

From July, 1936, the weights were revised, and are now based on the average annual exports (production, in the case of gold) during the three years 1933-34 to 1935-36. The break of continuity has been bridged by the usual method of splicing. Consideration is being given to adopting weights for a post-war period.

The weight adopted for wheat takes into account the wheat equivalent of flour exported, the weight allotted to greasy wool takes account of the greasy equivalent of scoured wool, tops, and wool on skins, whilst for some metals allowance is made for the metallic content of ores and concentrates exported.

The twenty items, together with the units of quantity and the weights or "quantity multipliers", are given in the following table.

EXPORT PRICE INDEX: COMMODITIES AND WEIGHTING SYSTEM. (FROM 1ST JULY, 1936.)

				:	Percent	age Distri Aggre	ibution of egate.	Total	
Item.			Unit of Quantity.	" Quantity Multipliers" (Weights).	Base I (1936–37 to		1956-57.		
					Excluding Gold.	Including Gold.	Excluding Gold.	Including Gold.	
Wool			lb.	975,000,000	49.05	45.63	61.17	59.46	
Wheat (a)			bushel	101,000,000	18.34	17.06	12.91	12.55	
Butter Metals—	• •	• •	cwt.	2,140,000	12.21	11.36	6.59	6.40	
Silver			oz.	7,300,000	0.68	0.64	1		
			(standard)	i	ĺ		l i		
Copper			ton	3,600	0.20	0.20	1 0 00	0.20	
Tin			٠,,	1,300	0.31	0.28	8.62	8.38	
Zinc			,,	99,000	2.05	1.90	11		
Lead			,,	208,500	4.10	3.81	j		
Meats							-		
Beef			lb.	182,000,000	2.56	2.38	ר		
Lamb			) ,,	138,000,000	3.56	3.31	5.67	5.50	
Mutton			,,	44,000,000	0.58	0.54	/3.6 ح	3.50	
Pork			,,	16,000,000	0.43	0.40	l j		
Sugar			ton	305,000	2.58	2.40	2.81	2.73	
Dried Fruit-	_		1		ļ				
Sultanas			,,	38,200	1.45	1.35	ן)		
Raisins			,,	3,000	0.12	0.11	} 1.33	1.30	
Currants			,,	13,400	0.37	0.35	<b>)</b>		
Tallow			cwt.	600,000	0.69	0.64	0.53	0.52	
Hides-				1	i !				
Cattle			lb.	28,000,000	0.64	0.59	} 0.37	0.36	
Calf			,,	1,800,000	0.08	0.07	0.57 ح	0.30	
Gold			fine oz.	937,000		6.98	• • •	2.80	
					100.00	100.00	100.00	100.00	

(a) Includes "wheat equivalent" of flour.

The percentage distributions of the "Total Aggregate" shown in the foregoing table are of importance, firstly, as showing their variations from time to time as the result of differential price movements as between the various commodities, and secondly, as regards the effect on the indexes as a whole of the percentage price variations in each commodity.

(iii) Prices. The adoption of current market prices (as distinct from the former average unit export values) in the present indexes permitted the use of standards for each commodity. All export parities are calculated from price quotations from the most reliable and representative sources available. In most cases, the prices used are those at which current sales are being effected.

(iv) Index Numbers. The following table shows export price index numbers for Australia for individual commodities, groups of commodities, and all groups combined for each financial year from 1936-37 to 1956-57 and monthly from July, 1956 to December, 1957.

#### EXPORT PRICE INDEXES: AUSTRALIA.

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each section: Average of three years ended June, 1939 = 100.)

					` 		live year	:	!	!		All G	roups.
Period.		Wool.	Wheat.	Butter.	Metals.	Meats. (b)	Sugar.	Dried Fruits. (c)	Tallow.	Hides.	Gold. (e)	Ex- cluding Gold.	In- cluding Gold.
Percentage D tribution of B Aggregate— (f) (g)	Dis- ase	45.63 49.05	17.06 18.34	11.36 12.21	6.83	6.63 7.13	2.40 2.58	1.81	0.64 0.69	0.66 0.72	6.98	100.00	100.00
1936–37 1937–38 1938–39 1939–40 1940–41	::	122 99 79 98 101	123 111 66 82 102	92 107 101 108 110	120 96 84 92 95	98 106 96 102 103	104 92 104 126 137	103 103 94 94 95	122 100 78 76 82	113 100 87 120 98	99 98 103 118 121	116 102 82 96 103	115 102 83 98 104
1941-42 1942-43 1943-44 1944-45 1945-46	::	101 117 117 117 117	105 106 116 154 213	110 114 114 147 147	101 100 113 129 196	109 112 113 122 123	137 152 159 172 213	106 112 121 128 137	114 119 123 151 161	133 145 151 147 152	120 119 119 120 122	105 114 117 130 148	106 114 117 130 146
1946-47 1947-48 1948-49 1949-50 1950-51	::	173 287 365 473 999	305 420 413 400 432	173 193 233 250 271	308 372 478 421 689	139 146 171 196 209	264 320 343 369 410	152 157 162 176 226	361 436 499 400 356	334 364 421 479 752	122 122 122 122 164 176	209 296 348 399 690	203 283 332 383 654
1951-52 1952-53 1953-54 1954-55 1955-56	::	564 616 615 538 464	436 445 411 357 324	291 313 325 313 320	811 504 450 511 562	263 314 338 344 355	464 501 479 445 450	302 297 287 267 286	451 358 321 349 353	486 369 336 218 238	184 186 179 178 178	495 505 496 450 414	473 483 474 431 397
1956–57	••	578	327	250	545	368	501	319	357	240	178	464	444
1956-57 July August September October November December		490 520 566 551 581 588	323 326 326 330 328 329	272 261 284 260 252 242	549 558 562 559 569 566	343 347 353 361 357 360	446 443 439 436 439 435	320 322 323 323 316 315	355 352 360 354 352 361	250 244 243 245 247 237	178 178 178 178 178 178	420 434 460 451 465 467	403 417 441 432 445 447
January February March April May June		596 611 596 618 626 596	332 335 327 321 319 322	227 222 218 224 256 284	570 557 555 548 495 451	385 388 372 382 398 373	439 473 568 620 631 642	311 (h) 309 309 (h) 321 327 329	359 360 359 357 359 362	226 234 248 234 238 239	178 178 178 178 178 178	472 479 471 483 488 473	451 458 451 462 467 452
1957-58 July August September October November December		(h) 596 551 543 498 483 445	331 342 344 350 352 359	278 274 274 257 232 225	445 448 441 423 409 372	351 345 333 337 337 338	577 622 571 541 488 481	325 326 330 334 341 343	347 357 364 362 364 365	240 239 242 236 244 243	178 178 178 178 178 178	470 450 445 420 407 386	450 431 426 403 391 372

<sup>(</sup>a) Non-ferrous—silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. Guaranteed minimum prices are used when operative. (c) Sultanas, raisins, currants. (d) Cattle hides, calf skins. (e) Where Australian gold has been sold on the oversea premium markets such price has been used in the index. (f) For "All Groups (including Gold)"—applicable from 1936-37. (g) For "All Groups (excluding Gold)"—applicable from 1936-37.

A graph showing index numbers for All Groups (including Gold) appears on p 344.

Reference to the group indexes in the table above shows the great fluctuations and the wide dispersion of prices of export commodities in recent years. In particular, very great movements upwards and downwards have occurred in the price of wool. Since wool is a predominant export and comprises 46 per cent. of the base aggregate of the index, fluctuations in wool prices obscure the movements affecting the other components in the All Groups index. For purposes of comparison, wool and "other groups" are shown separately below.

# EXPORT PRICE INDEX: WOOL AND "OTHER GROUPS", AUSTRALIA.

(Base of each section:—Average of three years ended June, 1939 = 100.)

		Group.				Group.	
Period.	Woo	Other Groups.	All Groups.	Period.	Wool.	Other Groups.	All Groups.
1945-46	11		146	1954–55—	( ) (22	220	160
1946–47	17		203 283	July	(a) 622 566	338	468 442
1947–48 1948–49	36		332	August September	566	339	442
1010 50	43		383	October	536	344	431
1949–50 1950–51	99		654	November	513	343	421
1951–52		397	473	December	532	348	432
1952–53	61		483	January	520	345	425
1953–54	61		474	February	528	342	427
1954–55	53		431	March	528	341	426
1955-56	46	342	397	April	520	340	422
1956-57	57	78 331	444	May	520	340	422
1951–52—				June	505	343	417
July	(a) 71	7 400	544	1955-56			
August	55		468	July	(a) 505	347	419
September	49		445	August	453	347	395
October	68		532	September	437	347	388
November	60		492	October	437	351	390
December	58		484	November	437	352	391
January	56		477	December	453	352	398
February	52		456 427	January	460	349	400
March April	47		432	February March	460 453	335	395 388
April May	54		457	March	468	325	390
June	56		463	May	498	323	403
34110			105	June	(a) 505	331	411
1952-53							122
July	(a) 56		465	1956–57—	400		
August	(a) 56		465	July	490	330	403
September October	55		457 469	August	520	330 336	417
October November	58		469	September October	566 551	332	441 432
December	61		486	November	581	331	445
January	61		486	December	588	329	447
February	62		487	January	596	330	451
March	65		500	February	611	330	458
April	67	1 363	503	March	596	329	451
May	70		516	April	618	331	462
June	64	1 363	490	May	626	333	467
1953-54				June	596	332	452
July	(a) 64	1 369	493	1957–58—		1	
August	(a) 63		488	July	(a) 596	327	450
September	62		484	August	551	331	431
October	63	4 363	486	September	543	328	426
November	63		485	October	498	323	403
December	61	- 1	473	November	483	314	391
January	60		468	December	445	310	372
February	58		455		l		
March	58		456				
April	(a) 59		461		]		
May	61		470				
June	62	2 346	472	1	!	1	ı

5. Monthly Index (Changing Weights).—This series was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. The fixed weights index numbers indicate satisfactorily the general trend of export prices, but take no account of the relative quantities actually sold at the different prices ruling during each month. The impact of the price movements on current sales is indicated more directly by the index numbers in the following table. In computing these, the "quantity multipliers" are the quantities actually exported in the months (or periods) to which the index numbers relate.

For any given month, the procedure is to multiply the price of each commodity in that month, and its price in the corresponding month of the previous year, by the quantity exported during the given month. A comparison of the resulting aggregates gives one possible measure of the change in prices over the period; i.e., the change assuming that the proportions of the different kinds of exports whose prices are to be measured were the same as their proportions in the given month. Another possible measure is given by assuming that the proportions of the different kinds of exports in the given month were the same as their proportions in the corresponding month of the previous year. Accordingly, the first step in the procedure is repeated, substituting the quantities exported during the corresponding month of the previous year.

The index numbers so obtained have been proved over a period of years to lie very close together. As it is convenient for practical reasons to have one single figure rather than two close alternatives, the two index numbers are multiplied together and the square root of the product extracted. This is taken to be the index number for the month, the prices of the corresponding month of the previous year being taken as base.

The index numbers for the whole or portion of a year, as compared with the corresponding period of the previous year, are computed in very much the same way. The process involves merely the cumulative addition of the aggregates computed for the individual months, and extraction of the index numbers as explained above.

Index numbers computed on this basis are shown in the following table for the months July, 1956 to December, 1957 and for trade year periods ending in those months:—

MONTHLY EXPORT PRICE INDEX (CHANGING WEIGHTS): AUSTRALIA.

(Base: Weighted Average Price Level in corresponding months of preceding year = 100.)

	Month.			with same	ed compared month of ng year.	Period of trade year ending in month stated compared with same period of preceding year.		
				Excluding Wool.	Including Wool.(a)	Excluding Wool.	Including Wool.(a)	
1956–57—								
July				99	99	99	99	
August			٠	96	101	98	100	
September				97	117	98	108	
October				97	116	97	111	
November				97	120	97	113	
December				97	127	97	116	
January	• •			96	123	97	117	
February				99	120	97	117	
March				103	122	98	118	
April				101	118	98	118	
May				99	117 '	98	118	
June	• •	• •	• •	98	111	98	117	
1957-58								
July				95	97	95	97	
August				103	104	99	101	
September				100	97	99	99	
October				98	93	99	97	
November				94	86	98	94	
December				95	82	98	92	

<sup>(</sup>a) For certain months a nominal price is used for wool as indicated in the preceding two tables.

Monthly export price index numbers are issued in the mimeographed publication Monthly Index of Australian Export Prices, in the Monthly Review of Business Statistics and in the Quarterly Summary of Australian Statistics.

### § 16. External Trade of Australia and other Countries.

- 1. Essentials of Comparison.—Direct comparison of the external trade of any two countries is possible only when the general conditions prevailing therein, and the system of record, are more or less identical. For example, in regard to the mere matter of record, it may be observed that in one country the value of imports may be the value at the port of shipment, while in another the cost of freight, insurance and charges may be added thereto. Again, the values of imports and exports in one may be declared by merchants, whereas in another they may be the official prices fixed from time to time by a commission constituted for the purpose. In later years, moreover, a very substantial difference in the value of imports would result from the different methods of converting the moneys of foreign countries, i.e., from the application of current rates of exchange or of the mint par. Lastly, the figures relating to the external trade of any country are also affected in varying degree by the extent to which they include transit or re-export trade. This class of trade represents a much greater proportion of the trade of Switzerland and Belgium than that of other countries. France and the United Kingdom also re-export largely, whereas in Canada, Australia and New Zealand the same class of trade represents a comparatively small proportion of the total.
- 2. "Special Trade" of Various Countries.—In the following table the figures, which are expressed in Australian currency, relate as nearly as possible to imports cleared for consumption in the various countries specified and to exports of their domestic products. It is to be noted, however, that these figures do not invariably denote the same thing throughout, since, in the United Kingdom and other manufacturing countries, raw or partly manufactured materials are imported as for home consumption and, after undergoing some process of manufacture or further modification, are re-exported as domestic production. Nevertheless, a comparison of this character reveals approximately the extent of the external trade which otherwise would not be manifest. The countries listed below are not necessarily all the important trading countries of the world, but those important countries for which comparable statistics are available.

IMPORTS CLEARED FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY): VARIOUS COUNTRIES, 1956.

	Trac	ie. (£A. Mil	lion).	Trade per Head of Population.(£A.)			
Country.	Imports Cleared. c.i.f.	Exports. f.o.b.	Total.	Imports Cleared.	Exports.	Total.	
United States of Amer	ica a 5,641.2	8,447.7	14,088.9	33.5	50.2	83.7	
United Kingdom	b 4,678.3	3,964.9	8,643.2	91.4	77.4	168.8	
Germany, Federal I	Re-		1				
public of	2,953.8	3,284.6	6,238.4	57.2	63.7	120.9	
Canada	a 2,590.9	2,207.9	4,798.8	161.1	137.3	298.4	
France	2,478.9	2,025.8	4,504.7	56.8	46.4	103.2	
Netherlands	1,657.0	1,277.6	2,934.6	152.2	117.3	269.5	
Belgium-Luxemburg	1,460.6	1,456.6	2,917.2	158.1	157.7	315.8	
Japan	c 1,441.9	1,116.4	2,558.3	16.0	12.4	28.4	
Italy	1,414.6	962.9	2,377.5	29.3	19.9	49.2	
Sweden	985.2	866.5	1,851.7	134.7	118.4	253.1	
Australia(d)	a 717.7	965.4	1,683.1	75.3	101.2	176.5	
Switzerland	788.3	643.7	1,432.0	156.4	127.8	284.2	
Denmark	585.2	496.0	1,081.2	131.0	111.1	242.1	
Norway	540.1	344.6	884.7	156.0	99.5	255.5	
Austria	434.8	379.0	813.8	62.3	54.3	116.6	
Indonesia	370.1	393.7	763.8	4.4	4.7	9.1	
Spain	342.4	197.1	539.5	11.7	6.7	18.4	
Egypt	238.4	182.6	421.0	10.2	7.8	18.0	
Chile	156.3	240.7	397.0	22.5	34.7	57.2	
Turkey	181.7	136.2	317.9	7.3	5.5	12.8	
Greece	207.1	84.8	291.9	25.8	10.5	36.3	

<sup>(</sup>a) f.o.b. (b) Covers goods imported less goods re-exported. (c) Covers goods imported as distinct from goods cleared for home consumption. (d) Year ended June, 1957.

### § 17. Oversea Trade in Calendar Years.

For the purpose of comparison with countries which record oversea trade in calendar years, the following table has been compiled to show Australian imports and exports for each of the calendar years 1953 to 1957:—

OVERSEA TRADE IN CALENDAR YEARS: AUSTRALIA. (£'000.)

	Year.		Mercha	andise.	Bullion an	d Specie.	Total.		
rear.		Imports.	Exports.	Imports.	Exports.	Imports.	Exports.		
1953			577,128	880,093	2,620	20,165	579,748	900,258	
1954			751,949	736,301	3,341	12,127	755,290	748,428	
1955			862,547	777,640	2,480	20,320	865,027	797,960	
1956			764,597	823,422	3,235	22,236	767,832	845,658	
1957(a)	)		751,328	982,875	2,509	13,855	753,837	996,730	

(a) Subject to revision.

# § 18. Excise.

Although excise goods have no immediate bearing on oversea trade, the rate of excise duty is in some cases related to the import duty on similar goods. Moreover, as the Excise Acts are administered by the Department of Customs and Excise, it is convenient to publish here the quantities of Australian produce on which excise duty has been paid. Particulars of Customs and Excise revenue are shown in Chapter XXI.—Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the yeers 1955-56 and 1956-57.

# QUANTITY OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA.

Article.	1955-56.	1956-57.	Article.		1955-56.	1956-57.
	proof gallons.	proof gallons.	Tobacco	::	1b. 19,170,733 780	lb. 18,801,253 485
Spirits— Brandy	708,194	669,681	Cigars— Hand-made		26.854	22,422
Gin	377,840	346,641	Machine-made		104,749	94,401
Whisky	424,683	406,825	Total Cias		131,603	116,823
Rum	622,737	569,282	Total Cigars		131,003	110,623
Liqueurs Other	74,928 28	71,540	Cigarettes— Hand-made Machine-made		26,403,131	30,035,376
Total Spirits			Total Cigarettes		26,403,234	30,035,376
(Potable)	2,208,410	2,064,005			60 papers or tubes.	60 papers or tubes.
Spirits for— Fortifying Wine	1,912,025	2,197,125	Cigarette Papers Tubes	and	122,828,573	124,806,584
Industrial or Scientific purposes	217,190	215,890	Coal		tons. 16,969,020	tons. 17,979,780
Manufacture of— Essences	101,089	100,532				
Scents and Toilet Preparations	71,548	67,176	Matches		gross boxes. 3,268,311	gross boxes. 3,306,858
Vinegar	120,210	135,230				
			Petrol	••	gallons. 540,419,499	gallons. 780,121,025
٥	gallons.	gallons.			doz. packs.	doz. packs.
Beer	217,044.984	210,600,580	Playing Cards	••	95,150	96,200

### § 19. Interstate Trade.

Prior to the federation of the Australian Colonies (now States), each Colony published statistics of its trade with the other Colonies. A similar record was continued by the Commonwealth Government under the provisions of the Constitution (section 93). On the expiry of the "book-keeping" period, these records were discontinued as from 13th September, 1910, and the last published statements were for the year 1909. Later, the Governments of Western Australia and Tasmania revived the records, and relevant statistics are available again for those States. A detailed collection for Queensland was re-introduced from July, 1953.

At the Conference of Statisticians held in January, 1928 it was resolved that efforts should be made in other States to record the interstate movement of certain principal commodities.

Interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania, prepared by the Deputy Commonwealth Statisticians in those States. The Deputy Commonwealth Statistician in South Australia publishes some figures for that State, made up from the records of Western Australia and Tasmania. The statistics of interstate trade for New South Wales and Victoria are very meagre. The Melbourne Harbor Trust publishes, in its annual report, the quantities of various commodities of interstate trade loaded and discharged in the Port of Melbourne. The trade with individual States is not disclosed.

### § 20. The Australian Balance of Payments.

1. Introduction.—Defining the balance of payments, the International Monetary Fund, in the second edition of its Balance of Payments Manual states "[It]... is a systematic record of all economic transactions during the period between residents of [a] country and residents of other countries." In a broad sense, therefore, statistics of the balance of payments summarize in money terms the economic relations existing between a national economy and the rest of the world, and are a pre-requisite to any attempt to examine the influence of external factors on the domestic economy.

The Australian economy is subject to large fluctuations in the level of export income and is affected in important respects by movements of oversea capital. As a result, balance of payments estimates have always assumed a particular importance in Australia. Between 1948–49 and 1955–56, for example, the value of exports was equivalent to almost 25 per cent. of national income, fluctuating between 30 per cent. of national income in 1950–51, the year of record wool prices, and 17 per cent. in 1955–56, a year of relatively low wool prices.

Official balance of payments estimates for Australia were first published for the years 1928-29 to 1930-31 as an appendix to Official Year Book No. 24. Prior to that the only estimates published by this Bureau related to the balance of trade, with some reference to

international transactions. Since 1930-31, estimates of the balance of payments have been published each year, except during the war period 1939 to 1945. From the first half of the year 1954-55, statistics of the balance of payments have been issued twice yearly in the mimeographed publication *The Australian Balance of Payments*. This, together with a printed volume *The Australian Balance of Payments*, 1928-29 to 1951-52 provides: (i) a description of the various items included in the official estimates, (ii) an indication of the sources from which the estimates are derived, and (iii) an explanation of the methods used in making them. The following paragraphs contain a brief description of the concepts adopted and a summary of the transactions for the years 1954-55 to 1956-57.

The form of the Australian balance of payments closely follows the pattern set out by the International Monetary Fund for the presentation of balance of payments statistics, although modifications have been introduced to accord with Australian conditions.

In the definitions adopted by the International Monetary Fund a basic distinction is drawn between "current" transactions and "capital" transactions. Current transactions consist of all transactions involving the transfer of ownership of goods or the rendering of services between residents of one country and residents of another country. Also included are items such as donations, reparations, etc. Capital transactions consist of all transactions involving the transfer of money, claims to money, and titles to investments, between residents of one country and those of another country.

This distinction is maintained in the Australian balance of payments accounts. Thus, transactions involving the transfer of the ownership of goods, i.e., imports and exports, and services, such as freight and insurance, investment income, etc. (customarily termed "invisibles"), are included in current account, while predominantly financial transactions are included in capital account.

By definition, and because of the method of constructing the accounts, the balance of payments on current account is always equivalent to the balance on capital account. In practice, however, there are "errors and omissions" in the estimates, including those which originate from factors such as the interval in time between the shipment of exports and the receipt of payment from overseas, and between the arrival of imports and the making of payment overseas. These cause discrepancies which are provided for by introducing a "balancing item" into the capital account. (See item 19 in the table on page 370).

2. Current Account.—The balance of payments on current account is constructed in the form of a series of credit and debit entries, the former comprising all transactions which result in receipts of foreign exchange and the latter all those resulting in payments thereof.

Within the current account the most important single relationship is the balance of trade—the difference between the value of exports and the value of imports. The balance of trade showed deficits of £85.5 million in 1954-55 and £47.2 million in 1955-56, and a surplus of £262.4 million in 1956-57.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT: AUSTRALIA. (£A. million.)

(:	£A. million.)		
Particulars.	1954-55.	1955–56.(a)	1956-57.(a)
CREDITS.			
1. Exports f.o.b	761.4	772.3	979.8
2. Gold Production(b)	16.2	15.6	15.9
3. Transportation—	10.2	20.0	15.7
(i) Freight Earnings of Australian			
Ships	5.8	6.6	7.0
(ii) Port Expenditure of Oversea	3.0	0.0	7.0
	56.0	59.1	67.0
Ships	61.8	65.7	<del></del>
4 Venning Travel		6.0	
4. Foreign Travel	5.7		8.5
5. Income from Investment	19.8	21.8	26.4
6. Government Transactions	7.2	9.5	10.3
7. Miscellaneous	9.2	9.5	8.3
8. Donations and Reparations—		i	
(i) Immigrants' Funds and House-			
hold Effects	13.1	14.2	15.7
(ii) Other	5.2	5.2	6.5
	18.3	19.4	22.2
9. Total Credits	899.6	919.8	1,145.4
	<del></del>		
DEBITS.			
10, Imports f.o.b	846.9	819.5	717.4
11. Transportation and Marine In-	040.9	017.3	111.4
•			
surance—	00 0	103.0	115.0
(i) Freight Payable Overseas	88.0		115.0
(ii) Other Transportation	15.3	15.7	15.2
(iii) Marine Insurance Premiums			
and Claims (net) (c)	2.6	2.4	1.8
	105.9	121.1	132.0
12. Foreign Travel	21.6	22.3	21.5
13. Income from Investment—			
(i) Public Authority Interest	18.3	18.0	17.7
(ii) I.B.R.D. and I.M.F. Interest			
and Charges	3.4	4.3	5.0
(iii) Direct Investment	37.7	37.0	40.0
(iv) Portfolio Investment	6.2	5.8	6.0
(v) Undistributed Income	30.7	39.9	45.0
	<b>———</b> 96.3	105.0	113.7
14. Government Transactions—			
(i) Defence Expenditure	14.9	11.5	5.0
(ii) Expenditure in Papua and			
New Guinea	9.5	11.3	11.5
(iii) Other	12.4	13.3	12.4
(III) Other	36.8	36.1	28.9
15. Miscellaneous	25.3	22.7	21.4
	23.3	22.1	21.4
16. Donations and Reparations—	12.0	16.5	10.0
(i) Personal Remittances	13.9	10.5	18.0
(ii) U.N.K.R.A., U.N.I.C.E.F.,	1 2.5	4.0	4.0
etc., and Colombo Plan	3.5	4.0	4.0
(iii) Other	8.2	7.8	8.9
	25.6	28.3	30.9
17. Total Debits	1,158.4	1,155.0	1,065.8
Balance on Current Account	-258.8	-235.2	79.6

<sup>(</sup>a) Preliminary. For revised figures see Appendix. (b) Includes gold sold on the premium market valued at the price obtained. (c) Total marine insurance premiums payable on Australian imports (whether payable in Australia or overseas) were £4.3 million in 1954-55, £4.2 million in 1956-56 and £3.6 million in 1956-57.

When invisible transactions are taken into consideration, the current account deficits in 1954-55 and 1955-56 were considerably greater than the trade deficits in those years, while the trade surplus in 1956-57 was greatly reduced. The large and fairly constant deficit in invisible transactions in the three years increased the deficits in 1954-55 and 1955-56 to £258.8 million and £235.2 million respectively, while the surplus in 1956-57 was reduced to £79.6 million. The most important of the invisible transactions are the transportation items, which appear in both debits and credits. The principal component on the debit side is freight payable overseas—mainly freight on imports into Australia (£88 million in 1954-55, £103 million in 1955-56 and £115 million in 1956-57)—and on the credit side, expenditure of oversea ships in Australian ports (£56 million in 1954-55, £59.1 million in 1955-56 and £67 million in 1956-57).

The item next in importance after the transportation items is "Income from investment". The debit entries under this item represent the payment of interest and dividends overseas, while the credit entries represent the receipt of interest and dividends by Australian residents. The item also includes undistributed income, for which, since no actual monetary payment is involved, a compensating entry showing an increase in the value of capital investment is made in capital account. Investment income debits were £96.3 million in 1954-55, £105 million in 1955-56 and £113.7 million in 1956-57. Credits in the same periods were £19.8 million, £21.8 million and £26.4 million respectively.

The remaining items are much smaller than these two groups. Government transactions debits in these years were in the vicinity of £30 million each year and credits were about £10 million. Debits on account of donations and reparations were also about £30 million, with credits of approximately £20 million a year.

One item of some conceptual importance is the total Australian gold production (less industrial absorption), which is shown as a credit entry. The view taken is that Australian gold production constitutes an immediate addition to Australia's international reserves, and an entry covering the item is included in current account. At the same time total exports are adjusted to exclude gold.

 Capital Account.—The capital account shows the annual movements in items which are regarded as Australian oversea assets and those which are regarded as Australian oversea liabilities.

On the assets side, by far the most important item is Australia's holdings of monetary gold and foreign exchange—the international reserves. International reserves decreased by £142.4 million in 1954-55 and by £73.3 million in 1955-56 and increased by £211.5 million in 1956-57.

On the liabilities side, the most important items are public authority debt and direct investment in Australian companies.

In recent years the principal component of public authority debt has been the movement in net borrowing from the International Bank for Reconstruction and Development, from which £23.6 million net of repayments was received in 1954-55, £17.9 million in 1955-56 and £3.1 million in 1956-57. Private investment in Australia, however, has been much greater. Including undistributed income, total identified investment in Australian companies was £100.4 million in 1954-55 and £111.2 million in 1955-56.

Since, as mentioned above, the balance on capital account is identical with the balance on current account, the movement in international reserves should reflect the combined movement of current and capital items. In practice there is always an unexplained residue which is included in the table below as the balancing item.

# BALANCE OF PAYMENTS ON CAPITAL ACCOUNT: AUSTRALIA. (£A. million.)

Particulars.	1954–55.	1955-56.(a)	1956–57.( <i>a</i> )
Increase in Assets.			
Direct Investment Overseas—     (i) Branches—			
(i) Unremitted Profits	1.2	0.4	1.0
(ii) Other	4.0	4.0	(b)
(ii) Subsidiaries—			
(i) Undistributed Profits	2.5	2.8	3.0
(ii) Other	1.0	1.5	(b)
2. Portfolio Investment Overseas	- 0.2	- 1.5	- 1.1
3. Private Investment in Foreign Government			0.1
Securities	••		- 0.1
4. Stocks and Balances Overseas of Australian Marketing Authorities	0.5	9.5	- 2.3
Marketing Authorities  5. Subscriptions to I.M.F., I.B.R.D. and I.F.C.	0.5	9.3	1.0
6. Other Official Transactions	- 0.4	- 9.9	-30.6
7. Monetary Gold Holdings	5 3	10.8	21.5
8. Foreign Exchange Holdings	-147.7	- 84.1	233.0
or I create michael I created			
9. Total Increase in Assets	-133.8	- 66.5	182.4
Increase in Liabilities.			
10. Public Authority Debt-			
(i) Commonwealth—Long-term	1.3	7.1	3.2
(ii) Commonwealth—Short-term	- 0.3	- 0.3	
(iii) I.B.R.D	23.6	17.9	3.1
(iv) States—Long-term	- 3.6	1.4	- 0.8
(v) States—Short-term	4.0		-32.6
(vi) Local Authorities	0.9	- 0.3	- 3.1
11. Other I.M.F. and I.B.R.D. Transactions	- 11.6		- 1.0
12. Public Debt Conversions	- 0.1	- 0.1	0.1
13. Australian Currency held by Foreign Banks	- 0.5	- 0.3	0.3
14. Direct Investment in Australian Companies—			
(i) Branches—		7.2	
(i) Unremitted Profits	4.6	7.2 12.6	8.0
(ii) Other (ii) Subsidiaries—	9.6	12.0	(b)
(i) Undistributed Profits	26.1	32.7	37.0
(ii) Other	54.9	50.9	(b)
15. Portfolio Investment in Australian Companies	5.2	7.8	(b)
16. Investment in Public Authority Securities Domiciled			(0)
in Australia	_ 2.9	- 50	(b)
17. Net Oversea Remittances of Life Offices Operating			``´
in Australia	- 6.7	- 1.1	-1.1
18. Adjusting Item for Papua and New Guinea Trans-			
actions	1.0	2.0	2.0
19. Balancing Item	19.5	36.2	87.7 
20. Total Increase in Liabilities	125.0	168.7	102.8
21. Net Increase in Assets	258.8	-235.2	79.6

<sup>(</sup>a) Preliminary. For revised figures see Appendix. (b) Not available, included in balancing item.

Note.—Minus of an elementary denotes decrease.

4. Regional Balance of Payments.—It is possible to make some dissection of the overall Australian balance of payments to show the balance of payments with various countries and monetary areas.

The tables shown below provide two such dissections. The first table provides a dissection of the balance of payments on current account for the main monetary areas in each of the years 1954-55 to 1956-57. The second table provides a more detailed dissection of the dollar balance of payments during the same period and includes not only transactions with the dollar area but all transactions involving dollars, irrespective of where they were made.

5. Balance of Payments on Current Account—Monetary Areas.—It has not yet been found feasible to prepare complete estimates of the balance of payments with various countries, since sufficient information on capital movements to and from those countries is not available in the detail required. As a result, the estimates in the following table refer only to current account transactions.

The table shows the balance on current account in each of the years 1954-55 to 1956-57 for the sterling area, the dollar area and other non-sterling countries.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT WITH VARIOUS COUNTRIES AND MONETARY AREAS( $\sigma$ ): AUSTRALIA.

(£A. million.)

		Sterlin	g Area.	I	Dollar Area	1.	Oti Non-s	<i>!</i>	
Particulars.	Gold Pro- duction.	United King- dom.	Other.	U.S.A.	Canada.	Other.	O.E.E.C.	Rest of World. (b)	Total.
1954-55. Exports f.o.b. Imports f.o.b. Invisibles (net)	16.2	288.6 -378.7 - 85.2	-141.6	52.7 -108.1 - 45.7	-23.8	6.4 -1.2 0.3		85.7 -71.2 -15.8	-846.9
Balance on Current	16.2	-175.3	- 31.2	-101.1	- 22.4	5.5	50.8	- 1.3	-258.8
Account			06.5		-118.0		49.	5	-236.6
1955-56.(c) Exports f.o.b Imports f.o.b Invisibles (net)	i5.6	257.1 -355.3 - 76.1	-128.1	- 98.7	-23.3	9.0 -4.4 -1.1	187.5 -125.8 - 15.0	121.4 -83.9 -22.5	772.3 -819.5 -188.0
Balance on Current Account	15.6		- 28.3 	- 89.5	-23.9 -109.9	3.5	46.7	15.0	-235.2
-	 			· -	109.9				
1956-57.(c) Exports f.o.b. Imports f.o.b. Invisibles (net)	 15.9	278.1 -296.0 - 56.4	175.6 -122.8 - 36.4	65.2 - 96.8 - 56.6		8.8 -4.7 -0.6	251.1 -100.5 - 12.3	190.3 -74.4 -29.4	979.8 -717.4 -182.8
Balance on Current Account	15.9	- 74.3	16.4	- 88.2	-18.5	3.5	138.3	86. 5	79.6
71000uit	13.9	57	1.9		-103.2		224	.8	13.0

<sup>(</sup>a) For a list of the countries included in each monetary area see page 346. agencies. (c) Preliminary. For revised figures see Appendix.

<sup>(</sup>b) Includes international

Note.—Minus sign (-) denotes debits; other items are credits.

In recent years Australia has usually been in deficit on current account with the rest of the sterling area and with the dollar area, and in surplus with all other countries. This pattern can be seen in each of the years shown in the table. As mentioned above, there was a total current account surplus of £79.6 million in 1956-57, following on two deficits of £258.8 million and £235.2 million in 1954-55 and 1955-56 respectively. Considered on a regional basis the change to a surplus was due primarily to a reduction in Australia's deficit with the rest of the sterling area and to an increase in her surplus with the "Other Nonsterling" countries. The balance on current account with the dollar area was relatively stable during these years in comparison with the magnitude of movements in other areas.

The table also shows some information as to the balance of payments with countries within each monetary area. The importance of the United Kingdom in Australia's international transactions is apparent, as also is the importance of other countries combined in the Organization for European Economic Co-operation. The increase in total value of exports to these countries in 1956-57 was largely responsible for the surplus noted above with "Other Non-sterling" countries in that year.

The dollar area is shown dissected into United States of America and Canada. However, the more detailed treatment of the balance of payments with the dollar area is set out in the table on p. 373.

6. Balance of Payments with the Dollar Area.—The results of Australia's dollar transactions in the three years 1954-55 to 1956-57 are shown in the following table. As mentioned previously, the table shows in addition to transactions with the countries of the dollar area, all Australia's transactions which directly involve the receipt or payment of dollars, and includes the receipts of dollars under loans from the International Bank for Reconstruction and Development, payments of subscriptions to international agencies, etc.

The table has four main sections. The first section (items 1-17) provides detail on current transactions and item 17 is immediately comparable with the current account balance for the dollar area shown in the previous table. The next section (items 18 and 19) brings current dollar transactions outside the dollar area into account. The third section (items 20-24) brings in capital transactions and the final dollar deficit is shown against item 25. The fourth section shows the sources from which the deficit was financed.

Traditionally, Australia has always been in overall deficit in her balance of payments with the dollar area. Prior to the 1939-45 War, however, sterling was convertible into all other currencies and Australia's dollar deficits could be offset against her surpluses of other currencies. However, the emergence of the dollar as a scarce currency after the war and the loss of the convertibility of sterling have prevented the free working of such a system and Australia, in common with most other countries outside the dollar area, has been forced to exercise strict control over dollar transactions. Since the war, Australia, as a member of the sterling area, has purchased her net requirements of dollars from the Sterling Area Central Reserves, which the United Kingdom holds in her capacity as banker for the sterling area.

The table shows that after all direct dollar transactions—current and capital—have been taken into account, Australia drew on the Sterling Area Central Reserves to the extent of £54 million in 1954–55, £40.2 million in 1955–56, and £23.3 million in 1956–57, in order to finance the remaining dollar deficit. The reduction in 1956–57 resulted from the sale to the United Kingdom of £25 million of gold. This amount was offset against total drawings.

7. Conclusion.—Construction of the estimates of the Australian balance of payments involves the systematic assembly of much intricate data, from a variety of sources of which the following are the more important:—(i) Statistics of exports and imports, obtained in the first place from Australian trade statistics; (ii) information on particular invisible and capital items, obtained by regular inquiry from private organizations and government departments; (iii) details of many important receipts and payments of foreign exchange, provided by the banking system; (iv) information on dividends remitted, undistributed income and movements of private investment in companies, provided by statistics of oversea investment collected by this Bureau; and (v) information on international reserves, supplied by the Commonwealth Bank.

# THE AUSTRALIAN BALANCE OF PAYMENTS. BALANCE OF PAYMENTS WITH THE DOLLAR AREA: AUSTRALIA.

#### (£A. million.)

Particulars.	1954–55.	1955-56.	1956-57.(a)
Current Account.		 	; [
1. Exports, f.o.b., to United States of America and Canada (excluding gold)	+ 63.2	+ 65.9	+ 75.9
2. Imports, f.o.b., from United States of America and Canada (excluding gold)	-131.9	122.0	-119.0
3. Trade balance with United States of America and	- 68.7	- 56.1	- 43.1
Canada	+ 5.2	+ 4.6	+ 4.1
5. Trade Balance with the Dollar Area	- 63.5	- 51.5	- 39.0
Other Current Transactions.	i		) !
6. Freight	- 14.5	- 18.5	- 20.1
7. Other transportation	- 1.2	- 1.2	- 1.2
8. Travel expenditure	- 1.5	- 1.6	$\begin{array}{c c} - & 2.2 \\ - & 2.3 \end{array}$
9. Business expenses of Australian firms	-2.5 $-2.6$	$\begin{array}{c c} - & 2.4 \\ - & 2.6 \end{array}$	-2.3
10. Film remittances	-12.9	- 11.6	- 12.9
12. Undistributed income (net)	- 16.4	- 19.1	- 21.6
13. Public authority interest	- 3.0	- 2.7	- 2.7
14. Other debits	- 7.2	- 6.7	- 7.7
15. Other credits	+ 7.3	+ 8.0	+ 9.1
16. Invisible Balance with the Dollar Area	- 54.5	- 58.4	- 64.2
17. Balance on Current Account with the Dollar Area	-118.0	-109.9	-103.2
(5 + 16)	+ 7.8	+ 6.2	+ 10.8
19. Dollar Deficit on Current Account (17 + 18)	-110.2	-103.7	_ 92.4
Capital Transactions Involving Dollars.	1	1	}
20. Public authority borrowing	+ 18.8	+ 26.6	+ 3.1
21. Undistributed income (see item 12)	+ 16.4	+ 19.1	+ 21.6
22. Other identified transactions	+ 24.6	+ 12.9	+ 23.9
23. Balancing item	+ 12.8	+ 6.7	5 + 23.5
24. Balance on Capital Transactions	+ 72.6	+ 65.3	+ 48.6
25. Total Dollar Deficit (-) (19 + 24)	-37.6	38.4	- 43.8
Dollar Financing.	! 		
26. Gold sales to the United Kingdom			+ 25.0
27. Dollars repaid to I.M.F. (net) (-) 28. Estimated drawings on Sterling Area Central Re-	- 11.6	• • •	
serves (+)	+ 54.0	+ 40.2	+ 23.3
29. Movement in Australian dollar balances (in-	1		— <b>4</b> .5
crease -)	- 4.8	<b>–</b> 1.8	- 4.3

<sup>(</sup>a) Preliminary. For revised figures see Appendix.

Note.—In current account, + indicates credit items and - indicates debit items. In investment account, + indicates net increases in liabilities or net decreases in assets; - indicates net decreases in liabilities or net increases in assets.

#### CHAPTER XI.

#### TRANSPORT AND COMMUNICATION.

Note.—Most of the statistics in this chapter cover the year 1956-57. More detailed figures for this and earlier years will be found in the annual bulletin, *Transport and Communication*.

#### PART I.—TRANSPORT.

#### A. SHIPPING.

#### § 1. Control of Shipping.

- 1. War-time Control.—An account of the action taken by the Commonwealth Government to control and regulate shipping throughout Australian waters during the 1939-45 War was given in Official Year Book No. 36, pp. 121-130.
- 2. Post-war Control and Developments.—A brief account of the post-war control of shipping and the establishment of the Australian Stevedoring Industry Board and the Australian Shipping Board will be found in Official Year Book No. 39, pp. 147-8.

The Maritime Industry Commission, established during the 1939-45 War under National Security legislation, was abolished on 19th December, 1952. Permanent legislation to cover many of the matters formerly dealt with by the Commission was enacted in 1952 in the form of amendments to the Navigation Act 1912-1950 (see p. 389).

As at 30th June, 1957, the Australian National Line operated 40 vessels totalling 153,704 gross tons, comprising thirteen "A" or River Class vessels of an average of 5,145 gross tons, five "B" Class vessels of an average of 3,923 gross tons, four "D" Class vessels of an average of 2,363 gross tons, two "D/A" Class vessels of an average of 2,407 gross tons, five "E" Class vessels of an average of 584 gross tons, two "Y" Class vessels of an average of 3,460 gross tons, two vessels engaged in the heavy trades of an average of 4,890 gross tons, and two vessels of an average of 7,399 gross tons, all of which were built in Australian yards, plus five vessels, totalling 18,514 gross tons, which were built overseas.

In the international sphere, ratification is still being awaited from one of 21 shipowning nations of a Convention establishing an Inter-Governmental Marítime Consultative Organization within the framework of the United Nations. The major objectives of this organization will be to provide machinery for co-operation among governments with shipping engaged in international trade, and to encourage the removal by governments of discriminatory action and unnecessary restrictions regarding such shipping.

This organization is designed to replace the United Maritime Consultative Council, which was established on a tentative basis after the expiry of the war-time United Maritime Authority and Combined Adjustment Board.

Up to 1st July, 1957, ratifications by twenty countries had been lodged, and there is a possibility of the remaining one ratifying in the near future, thus bringing the organization into force.

### § 2. System of Record.

In the system of recording statistics of oversea shipping, Australia is considered as a unit, and therefore only one entry and one clearance are counted for each voyage, without regard to the number of States visited (see also § 4, p. 381).

On arrival at, or departure from, a port in Australia, whether from or for an oversea country or from or for another port in Australia, the master or agent must "enter" the vessel with the Customs authorities at the port, and supply certain prescribed information in regard to the ship, passengers and cargo. At the end of each month the information so obtained is forwarded to this Bureau. This arrangement has been in operation since 1st July, 1924.

The volume of the vessel, as distinct from the cargo it carries, is recorded in net tons, i.e., the gross tonnage or internal cubic capacity less certain deductions on account of crew spaces, engine room, water ballast and other spaces not used for passengers or cargo. It is thus a rough measure of the capacity of the vessel for cargo or passengers. The unit of measurement is the ton register of 100 cubic feet.

The majority of cargo is recorded in terms of the ton weight of 2,240 lb. However, some additional cargo, mainly bulky commodities, is shipped and recorded on the basis of 40 cubic feet of space occupied representing one ton measurement.

From 1st July, 1914, trade and shipping statistics of Australia have been recorded for the financial years ending 30th June.

#### § 3. Oversea Shipping.

1. Total Movement.—The following table shows the number of entrances and clearances combined of oversea vessels at Australian ports, and the aggregate net tonnage, during each of the years 1952-53 to 1956-57:—

OVERSEA SHIPPING: ENTRANCES AND CLEARANCES (COMBINED) OF
VESSELS DIRECT, AUSTRALIA.

	<i>.</i>	<u>,                                      </u>			
Particulars.	1952–53.	1953–54.	1954-55.	1955-56.	1956-57.
Number of Vessels Net Tonnage '000 tons	4,041 17,571	4,127 17,733	4,505 20,003	4,882 22,324	5,290 23,659

The average net tonnage per vessel rose from 2,919 in 1921-22 to 4,472 in 1956-57.

Particulars of the total oversea movement of shipping for each year from 1822 to 1920-21 were published in Official Year Book No. 15, p. 507, and for each year from 1921-22 to 1950-51 in Official Year Book No. 40, p. 97.

2. Total Oversea Shipping, States.—The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels direct from and to oversea countries, and the aggregate net tonnage, during the year 1956-57.

OVERSEA SHIPPING:	<b>ENTRANCES</b>	AND	CLEARANCES	OF	VESSELS DIRECT,
	1	956-57	7.		

Particu	ıla <b>rs.</b>	N.S.W.	Vic.	QldL	S.A.	W.A.	Tas.	N.T.	Aust.
°C Clearances	No. 000 net tons No. 000 net tons	786 3,284 710 3,004	482 2,522 424 2,192	370 1,180 512 1,825	242 904 243 908	683 3,766 730 3,701	50 129 27 157	15 29 16 58	2,628 11,814 2,662 11,845

3. Shipping Communication with Various Countries.—A vessel arriving in Australia from overseas is recorded as coming from the country where the voyage commenced, irrespective of the number of intermediate ports of call. Similarly, a vessel leaving Australia is recorded as going to the country where the voyage is scheduled to terminate.

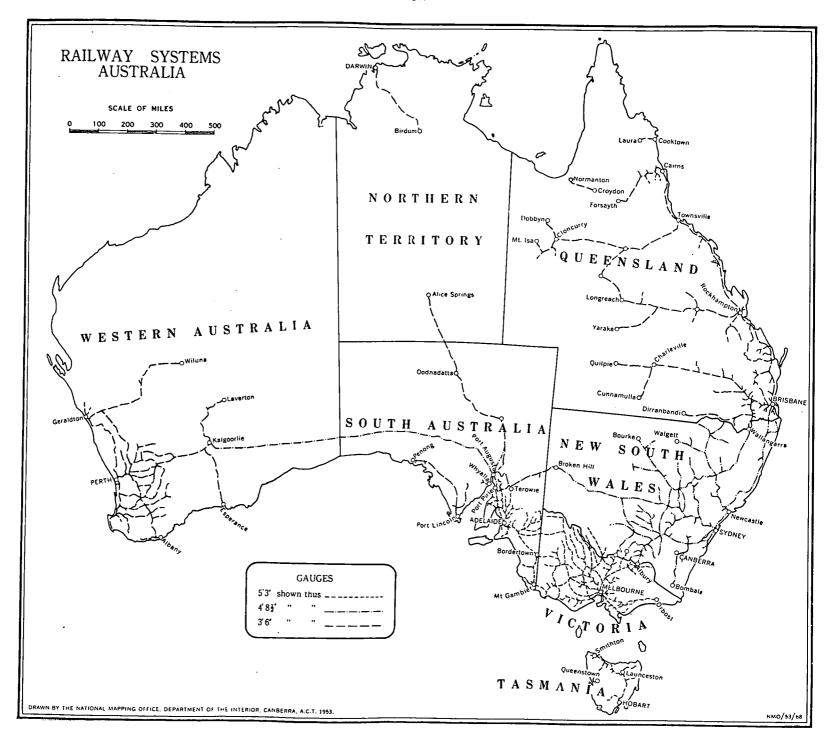
The following table shows statistics of the net tonnage entered and cleared, with cargo and in ballast, according to the principal countries where vessels commenced or terminated their voyages to or from Australia.

OVERSEA SHIPPING: COUNTRIES FROM WHICH ENTERED OR FOR WHICH CLEARED, AUSTRALIA.

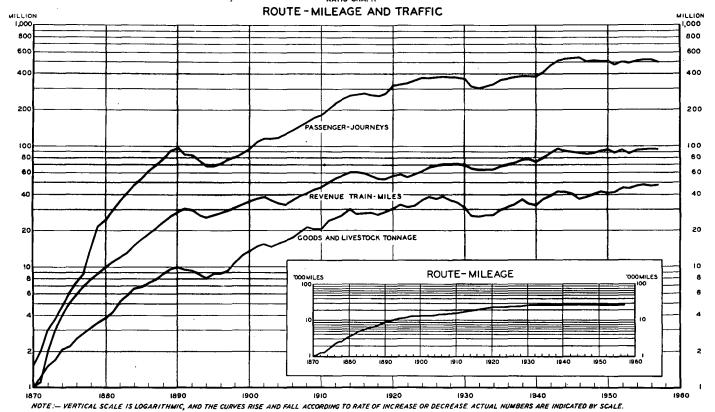
Country from which Entered	With Cargo	Net Ton	nage Enter	red (*000).	Net Tonnage Cleared ('000).			
or for which Cleared.	or in Ballast.	1954-55.	1955–56.	1 956–57.	1954-55.	1955-56.	1956-57.	
United Kingdom {	Cargo	2,004	1,833	1,568	1,966	2,002	2,120	
	Ballast	11	75	17	207	121	10	
New Zealand {	Cargo	641	568	602	911	953	1,019	
	Ballast	339	383	381	101	65	54	
Other Commonwealth Countries {	Cargo	2,248	2,249	2,507	1,440	1,497	1,796	
	Ballast	155	136	421	1,089	1,003	791	
Bahrain Islands $\left\{\right.$	Cargo Ballast	506	436 3	181 7	65 407	71 418	26 296	
Indonesia $\left\{\right.$	Cargo	671	567	918	116	155	183	
	Ballast	61	92	203	529	650	794	
Japan {	Cargo	283	344	376	315	502	716	
	Ballast	98	254	453	18	10	25	
United States of America {	Cargo Ballast	476 5	496	558 3	221 49	340 51	473 28	
Other Foreign Countries {	Cargo	2,333	3,602	3,402	1,123	1,367	1,538	
	Ballast	108	190	218	1,507	1,891	1,976	
Total {	Cargo	9,162	10,095	10,112	6,157	6,887	7,871	
	Ballast	777	1,133	1,703	3,907	4,209	3,974	
Total Cargo and Ballast	•••	9,939	11,228	11,815	10,064	11,096	11,845	

4. Nationality of Oversea Shipping.—Vessels registered at ports in Commonwealth countries accounted for 57.6 per cent. of the net tonnage of shipping entering Australian ports in 1956-57. This proportion has varied considerably since the end of the 1939-45 War. By 1946-47 the proportion had increased from the low level of 43.4 per cent. recorded in 1943-44 to 76.2 per cent., but since then has steadily declined.

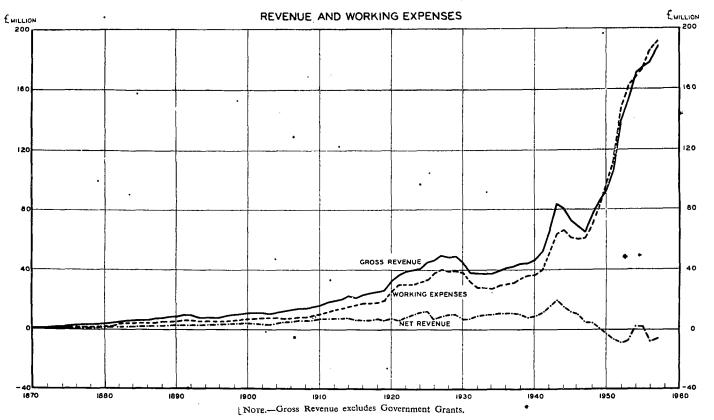
Particulars of the nationality of oversea shipping which entered Australian ports during each of the years 1954-55 to 1956-57 are given in the following table.



# GOVERNMENT RAILWAYS: AUSTRALIA, 1870 TO 1957

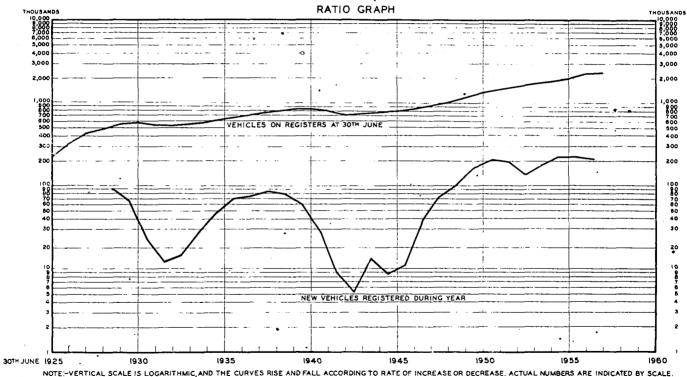


### GOVERNMENT RAILWAYS: AUSTRALIA, 1870 to 1957



### MOTOR VEHICLE REGISTRATIONS: AUSTRALIA, 1925 To 1957

(EXCLUDING MOTOR CYCLES)



### OVERSEA SHIPPING: NATIONALITY OF VESSELS ENTERED, AUSTRALIA. ('000 Net Tons.)

Vessels Registered at Ports in—	1954- 55.	1955- 56.	1956- 57.	Vessels Registered at Ports in—	1954- 55.	1955- 56.	1956- 57.
Commonwealth Count- ries— Australia New Zealand United Kingdom	347 423 5,207	308 395 5,730	281 462 5,680	Foreign Countries— continued————————————————————————————————————		1,246 473 480	1,397 507 332
Other	241	218	377	U.S.A Other	160 163	182 262	312 373
In Cargo In Ballast	5,695 523	5,908 743	5,747 1,053	In Cargo	3,467 254	4,187 390	4,366 649
Total Commonwealth			į	1			
Countries Proportion of	6,218	6,651	6,800	Total Foreign Countries	3,721	4,577	5,015
Proportion of total %	62.6	59.2	57.6	Proportion of total %	37.4	40.8	42.4
Foreign Countries-			<u> </u>	All Countries-			
Denmark	173	283	240	In Cargo	9,162	10,095	10,112
France	185	192	206	Proportion of total % In Ballast	92.2 777	89.9 1,133	85.6 1,703
Germany(a)	54	142	94	Proportion of total %		10.1	14.4
Italy Japan	332 209	379 .308	464 420	110portion of total /a			
Netherlands	608	630	670	Grand Total	9,939	11,228	11,815

(a) Federal Republic.

The Australian tonnage which entered Australian ports from overseas during the year 1956-57 represented 2.4 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Islands trade.

The proportion of oversea shipping tonnage which entered Australia in cargo fell from 88.9 per cent. in 1938-39 to 79.4 per cent. in 1947-48. In 1956-57 it was 85.6 per cent. However, the proportion of shipping which cleared in cargo declined from 87.6 per cent. in 1938-39 to 66.5 per cent. in 1956-57, the trend over the period being generally downward.

#### 8 4. Interstate Shipping.

1. System of Record.—Interstate Shipping comprises two elements: (a) Vessels engaged solely in interstate trade; and (b) Vessels trading between Australia and oversea countries and in the course of their voyages proceeding from one State to another. (It should be mentioned that these vessels, except under special circumstances, do not engage in interstate carrying.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the oversea vessels (b) some explanation is necessary. Each State desires that its shipping statistics (which are prepared in this Bureau) should show in full its shipping communication with oversea countries, but at the same time it is necessary to avoid any duplication in the statistics for Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an oversea country-say the United Kingdom-via another State, is recorded in the second State as from the United Kingdom via States, thus distinguishing the movement from a direct oversea entry. Continuing the voyage, the vessel is again recorded for the statistics of the third State as from the United Kingdom "Oversea via States". On an inward voyage, the clearance from the first State to the second State is a clearance interstate, and is included with interstate tonnage in conformity with the pre-federation practice of the States, and to preserve the continuity of State statistics. Thus, movements of ships which are, from the standpoint of Australia as a whole, purely coastal movements, must for the individual States be recorded as "Oversea via States" or "Interstate" according to the direction of the movement. The significance of the record of these movements will be seen more clearly from the following tabular presentation of the inward and outward voyages to and from Australia of a mail steamer which, it is presumed, reaches Fremantle (Western Australia) and then proceeds to the terminal port of the voyage-Sydney (New South Wales)-via South Australia and Victoria. From the terminal port the vessel will commence the outward voyage, and retrace its inward track.

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#### ITINERARY OF AN OVERSEA VESSEL ON THE AUSTRALIAN COAST.

		Recorded as						
Particulars.	For the and Austra	for	For t	he States.				
Inward Voyage— Enters Fremantle from United Kingdom Clears Fremantle for Adelaide	Oversea	direct	Interstate direct Interstate direct Interstate direct	Oversea via States Oversea via States Oversea via States				
Outward Voyage— Clears Sydney for United Kingdom via Melbourne Enters Melbourne from Sydney Clears Melbourne for United Kingdom via Adelaide Enters Adelaide from Melbourne Clears Adelaide for United Kingdom via Fremantle Enters Fremantle from Adelaide Clears Fremantle from United Kingdom	Oversea	direct	Interstate direct Interstate direct Interstate direct	Oversea via States Oversea via States Oversea via States				

From the method outlined above, the requirements for Australia and for the individual States are ascertained as follows. (a) The aggregate of all ships recorded for each State as "Oversea direct" gives the oversea shipping for Australia as a whole; (b) the aggregate for all ships recorded in any State as "Oversea direct" plus those recorded as "Oversea via States" gives the total oversea shipping for that State; and (c) the aggregate for all ships recorded as "Oversea via States" may also be used, together with those recorded as "Interstate direct", to furnish figures showing the total interstate movement of shipping.

However, it should be remembered that all oversea vessels do not follow the same itinerary as the vessel in the table above.

2. Interstate Movement.—(i) Interstate Direct. The following table shows the number of entrances and the net tonnage of vessels recorded into each State and the Northern Territory from any other State (including oversea vessels on interstate direct voyages) during each of the years 1954–55 to 1956–57. The shipping of the Murray River, between the States of New South Wales, Victoria and South Australia, is excluded.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES OF VESSELS INTERSTATE DIRECT.

State or Terri				Number.		Net Tons ('000).			
State of Terri	1954-55.	1955-56.	1956–57.	1954–55.	1955–56.	1956–57.			
New South Wales			1.584	1,634	1,711	4,553	4,606	4,853	
Victoria			1,555	1,614	1,594	4,058	4,475	4,128	
Queensland			598	597	688	1,541	1,554	1,806	
South Australia			963	1,027	1,088	3,476	3,733	3,876	
Western Australia			524	554	526	2,725	2,753	2,590	
Tasmania			960	893	1,025	1,085	984	1,203	
Northern Territory	••	• •	40	38	45	77	55	93	
Australia		••	6,224	6,357	6,677	17,515	18,160	18,549	

From 1938-39 the total net tonnage of interstate shipping declined steadily each year until 1942-43, when it represented only 38 per cent. of the total for the pre-war year. It remained practically unchanged during the next three years, but increased by almost one-third in 1946-47. By 1956-57 the total had risen to 93 per cent. of the 1938-39 total.

(ii) Oversea via States. To ascertain the aggregate movement of shipping between the States, including the total interstate movement of oversea vessels, the figures in the following table, which show the number of entrances and clearances of vessels to and from oversea countries via other Australian States and the aggregate tonnage, must be added to those in the preceding table.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS OVERSEA VIA OTHER AUSTRALIAN STATES, 1956-57.

N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
545	622		_	27	86	1	1,828
			•			1	9,413
. 1						• •	1,666 8,236
	i	545 622 2,886 3,226 518 520	545 622 246 2,886 3,226 1,165 518 520 187	545 622 246 301 2,886 3,226 1,165 1,580 518 520 187 289	545 622 246 301 27 2,886 3,226 1,165 1,580 150 518 520 187 289 23	545 622 246 301 27 86 2,886 3,226 1,165 1,580 150 405 518 520 187 289 23 129	545 622 246 301 27 86 1 2,886 3,226 1,165 1,580 150 405 1 518 520 187 289 23 129

Oversea vessels moving interstate are with few exceptions not engaged in the active interstate trade of Australia, but are merely proceeding to the several States in continuation of their oversea voyages.

(iii) Total, Australia. The following table shows the total interstate movement of shipping, including oversea vessels travelling oversea via States and interstate direct, for each of the years 1952-53 to 1956-57.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, AUSTRALIA.

	Particul	ars.	1952–53.	1953-54.	1954–55.	1955–56.	1956-57.
Entrances		No.	7,525 25,583	7,983 26,925	8,300 28,515	8,362 28,868	8,505 27,962
Clearances	• •	No. '000 net tons	7,481 25,359	8,036 27,190	8,151 28,292	8,460 29,095	8,480 27,763

(iv) Total, States. The following table shows, for each State and the Northern Territory, the number of entrances and clearances of vessels from and for other States (including the interstate movement of oversea vessels) during the year 1956-57, together with the aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, 1956-57.

Particulars.	N.S.W.	Vic.	QId.	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances . No. '000 net tons Clearances No.		2,216 7,354 2,277	934 2,971 796	1,389 5,456 1,373	553 2,740 514	1,111 1,608 1,141	46 94 41	8,505 27,962 8,480
'000 net tons		7,643	2,290	5,393	2,830	1,583	59	-,

3. Shipping Engaged Solely in Interstate Trade.—The following table shows, for each State and the Northern Territory, the number of entrances direct from other States, of vessels engaged solely in interstate trade during the year 1956-57, together with the net tonnage.

#### SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE: ENTRANCES, 1956-57.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	Aust.
Ships entered	'000	1,313	1,183	406	801	175	888	39	4,805
Net tons		3,220	1,851	683	2,433	594	704	61	9,546

4. Interstate and Coastal Shipping Services.—The following table shows particulars, so far as they are available, of all vessels engaged in the regular interstate or coastal services at the end of each of the years 1953 to 1957:—

#### INTERSTATE AND COASTAL SHIPPING SERVICES: AUSTRALIA.

Part	iculars.		1953.	1954.	1955.	1956.	1957.
Number of companie	es operating		31	36	41	41	40
Number of vessels		• •	172	174	185	174	177
Tonnage { Gross Net			501,782	524,975	522,326	511,534	544,545
Net Net			277,294	289,854	283,771	275,337	291,911
Horsepower (Nomin	al)		49,159	53,017	50,455	48,667	51,439
Number of passen- gers for which licensed(a)	1st class 2nd class and	steerage	2,208 621	2,198 626	1,966 648	1,777 526	1,771 523
Complement of	Masters and Engineers		650 751	675 785	709 795	682 776	700 803
Crew	Other		4,886	4,950	4,853	4,563	4,546

<sup>(</sup>a) Excludes purely day-passenger accommodation.

Note.—This table excludes particulars of a small number of chartered vessels for which returns could not be obtained.

#### § 5. Shipping at Principal Ports.

1. Total Shipping, Australia.—The following table shows the total volume of shipping—oversea, interstate and coastwise—which entered the principal ports of Australia during the years 1955-56 and 1956-57. Warships are excluded from the table.

TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA.

		1955	5–56.	1956	5-57.			1955	-56.	1956–57.	
Port of Entry.		Num- ber.	Net Tons.	Num- ber.	Net Tons.	Port of Entry.		Num- ber.	Net Tons.	Num- ber.	Net Tons.
<del></del>	-		³000.		'000.				³000.	,	'000.
New South Wales-	- 1		ļ			South Australia-		1		ł	
Sydney		4,361	9,519	4,357	10,629	Adelaide	• •	2,491	5,180	2,668	5,001
Newcastle		2,457	3,775	2,348	4,041			221	310	258	347
Port Kembla	!	578	1,778	636	1,983	Port Pirie		315	848	416	956
			1		'	Rapid Bay		133	181	138	196
			ì	1		Wallaroo		125	130	130	147
						Whyalla		478	1,412	509	1,596
Victoria-					1	Western Australia	<b>z</b> —	1			ĺ
Melbourne		2,502	9,183	2,471	8.668	Fremantle		1,202	6,418	1,163	6.095
Geelong	::	454	1,980	459	1,930			64	255	86	356
Controlle	٠. ا		1,,,,,,		.,,,,,	Bunbury		56	155	80	214
	- 1		}			Carnaryon		97	147	95	146
			1			Geraldton		103	275	117	349
			1	1		Yampi		128	292	111	206
Queensland-					2 240	Tasmania-				1	
Brisbane	• •	1,128	3,685	1,127	3,518	Hobart		396	864	432	890
Bowen	••	82	270	73	260	Burnie	• •	224	332	253	377
Cairns	•••	233	624	208	540	Devonport	• •	228	196	257	225
Gladstone	•••	75	276	87	291	Launceston	• •	378	419	493	508
Mackay	•••	98	282	90	271		• •	3/6	717	723	300
Rockhampton	••	126	286	128	292		<i>y</i> —	i			
Townsville		329	993	330	1,001	Darwin		57	101	61	123

2. Total Shipping—Australia, New Zealand and the United Kingdom.—The following table shows the total shipping tonnage which entered the principal ports of Australia during 1956-57 and of New Zealand and the United Kingdom during 1956.

TOTAL SHIPPING: ENTRANCES AT PORTS, AUSTRALIA, NEW ZEALAND AND THE UNITED KINGDOM.

('000 Net Tons.)

Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.	Port.	Net Tonnage Entered.
AUSTRALIA— Sydney (N.S.W.) Melbourne (Vic.) Fremantle (W.A.) Adelaide (S.A.) Newcastle (N.S.W.) Brisbane (Qld.) Port Kembla (N.S.W.) Geelong (Vic.) Whyalla (S.A.) Townsville (Qld.) Port Pirie (S.A.) Hobart (Tas.) Cairns (Qld.) Launceston (Tas.)	10,629 8,668 6,095 5,001 4,041 3,518 1,983 1,930 1,596 1,001 956 890 540 508	New Zealand— Wellington Auckland Lyttleton. Otago Napier New Plymouth Bluff  ENGLAND AND WALES— London. Southampton Liverpool (including Birkenhead) Tyne Ports	3,943 3,069 2,744 1,124 690 527 466 35,894 20,450 18,216 8,066	ENGLAND AND WALES— continued.  Manchester (including Runcorn) Hull Bristol Swansea Dover Middlesbrough Cardiff SCOTLAND— Glasgow NORTHERN IRELAND— Belfast	7,532 5,575 5,334 4,917 4,454 4,212 3,680 7,082

#### § 6. Shipping Cargo.

1. Oversea and Interstate Cargo.—(i) Australia. The table hereunder shows the aggregate tonnage of oversea and interstate cargo discharged and shipped at Australian ports for the years 1952-53 to 1956-57. The majority of cargo is recorded in terms of the ton weight of 2,240 lbs. However, some additional cargo, mainly bulky commodities, is shipped and recorded on the basis of 40 cubic feet of space occupied representing one ton measurement.

### SHIPPING CARGO MOVEMENT: AUSTRALIA. ('000 Tons.)

		1	Overse	a Cargo.		Interstate Cargo.					
Year.	•	Discharged.		Ship	ped.	Discha	arged.	Shipped.			
		Weight.	Meas.	Weight.	Meas.	Weight.	Meas.	Weight.	Meas.		
1952-53		7,733	1,929	6,045	1,452	8,995	1,492	8,447	1,275		
1953-54		8,520	2,812	5,765	1,355	9,059	1,790	9,105	1,539		
1954-55		10,992	3,403	6,084	1,420	10,136	1,621	10,212	1,472		
1955-56		12,431	3,421	6,667	1,546	11,184	1,572	11,632	1,315		
1956–57	• •	12,596	2,752	8,734	1,378	11,862	1,285	11,899	1,290		

(ii) Principal Ports. The following table shows the tonnage of oversea and interstate cargo discharged and shipped at the principal ports of Australia during 1956-57.

CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1956-57. ('000 Tons.)

				`	000 10				_		
	-		!		Discha	rged.			Shipp	ed.	
	Port.			Over	sea.	Inter	state.	Oversea.		Interstate.	
<del></del>				Wt.	Meas.	Wt.	Meas.	Wt.	Meas.	Wt.	Meas.
Sydney Newcastle Port Kembla				3,291 256 230	1,207 1	720 2,255 2,254	196	863 655 338	372	562 2,581 564	236
Other	••	••	••						18		3
Total, 1	New South	Wales	••	3,777	1,208	5,229	196	1,880	390	3,707	239
Melbourne Geelong Portland		••		2,351 2,271 43	923 26	2,153 254 5	307	604 847 16	514	464 700 	388 ::
Total,	Victoria	••		4,665	949	2,412	307	1,467	514	1,164	388
Brisbane Cairns Gladstone Mackay Townsville Other		·· ·· ·· ·· ··		304 38 29 23 42 2	176 4   3	671 66 45 26 114 20	133 15  4 25 13	607 133 25 201 275 213	117  4  10 5	33 106 115 86 94 281	58 20  4 4
Total,	Queenslan	d		438	184	942	190	1,454	136	715	86
Port Adelaide Ardrossan Port Pirie Rapid Bay Whyalla Other		••		480 12  4 87	280	1,608 257 353 37	135	508 224 529  7 466	107   	164 114 258 322 3,425 250	95   
Total,	South Aus	tralia .		583	286	2,255	138	1,734	110	4,533	95
Fremantle Geraldton Yampi	:: ::			2,688	103	318	153	1,442 321	78 4	966 44 329	56
Other	••	•••	••	100	3	37	3	289	56	48	32
Total,	Western A	lustralia		2,817	106	356	156	2,052	138	1,387	88
Hobart Burnie Launceston Other	 	::		114 33 102 31	14 1 4	402 39 92 82	112 34 101 43	69 28 36 5	70 15 5	156 32 40 160	140 117 93 42
Total,	Tasmaniu			280	19	615	290	138	90	388	392
Darwin				36		53	8	9		5	2
Total,	Northern (	Territory		36		53	8	9		5	2
Austral				12,596	2,752	11,862	1,285	8,734	1,378	11,899	1,290

2. Oversea Cargo according to Nationality of Vessels.—The following table shows the total oversea cargo, discharged and shipped combined, according to the countries in which the vessels were registered, during each of the years 1954-55 to 1956-57:—

OVERSEA CARGO DISCHARGED AND SHIPPED: NATIONALITY OF VESSELS, AUSTRALIA.

('000 Tons.)

		0 10113.)				
Vessels Registered at Ports in—	1954	<b>-55.</b>	1955	-56.	1956-57.	
·	Weight.	Meas.	Weight.	Meas.	Weight.	Meas.
Commonwealth Countries—	-		:			
A	357	106	250	117	366	101
Hong Kong	160	35	121	45	350	37
New Zealand	472	327	432	380	567	388
United Kingdom	8,792	3,014	9.377		9,761	2,352
Other	274	134	239		421	130
			ļ			
Total, Commonwealth Coun-						
tries	10.055	3,616	10,419	3,594	11,465	3,008
Proportion of Total %	58.9	75.0	54.6	72.4	53.8	72.8
Troportion of Total 76	30.5					
Foreign Countries—	-	•				
Denmark	388	44	566	88	545	34
France	242	41	221	47	182	40
Germany, Federal Republic of	134	69	320	96		106
Italy	217	71	167	67	499	51
Japan	432	63	547	83		53
Netherlands	1.091	198	1.131	190	1.069	214
Norway	2,499	246	2,985	294	3,336	194
Panama	765	27	886	47	1,105	
Sweden	719	221	1.135	236		174
United States of America	235	174	253	161	296	209
Other	299	53	467	64	873	47
				;		
Total, Foreign Countries	7,021	1,207	8,678	1,373	9,865	1,122
Proportion of Total %	41.1	<b>25.0</b>	45.4	27.6	46.2	<b>27.2</b>
Grand Total	17,076	4,823	19,097	4,967	21,330	4,130

#### § 7. Vessels Built and Registered.

1. Vessels Built.—The following table shows the number and tonnage of vessels built in Australia during each of the calendar years 1953 to 1957, so far as such information can be ascertained from the Shipping Registers of the various States. However, the Merchant Shipping Act, under which vessels are registered in Australia, does not make it compulsory to register vessels under 15 tons burden if engaged in river or coastal trade. Larger vessels are also exempt from registration if not engaged in trade. Yachts and small trading vessels may be, and frequently are, registered at the request of the owners.

VESSELS	RITET AND	) RECISTERED	IN AUSTRALIA.

	Steam.			Motor.(a)				Sailing	•	Total.			
Yea	Year. Tonnage.		nage.	No. Tonna		nage.	-		Tonnage.		Toni	nnage.	
		140.	Gross.	Net.	140.	Gross.	Net.	No.	Gross.	Net.	No.	Gross.	Net.
											_		
1953		3	11,744	6,647	4	7,889	4,051	3	23	22	10	19,656	10,720
1954		2	11,289	5,706	12	11,890	6,546				14	23,179	12,252
1955		2	3,905	1,903	9	185	156	2	9	9	13	4,099	2,068
1956		1	7,583	4,203	22	14,552	8,432	1	3	3	24	22,138	12,638
1957		2	15,166	8,202	25	19,211	11,164			••	27	34,377	19,366
1957	••	2	15,166	8,202	25	19,211	11,164	•••	••	•••	27	34,377	19

(a) Includes vessels with auxiliary motors.

2. Vessels Registered.—The following table shows the number and net tonnage of steam, sailing and other vessels on the register of each State and the Northern Territory at 31st December, 1957:—

VESSELS REGISTERED, 31st DECEMBER, 1957.

		G		Saili	ing.		Hu	rges, ilks,		
State or Territory.	Steam and Motor.		Propelled by Sail only.		Fitted with Auxiliary Power.		Dredges, etc., not Self- propelled.		Total.	
	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.	No.	Net Tons.
New South Wales	303	60,299	24	2,114	108	1,381	10	948	445	64,742
Victoria	188	178,983		578	57	1,614	33	11,919	326	193,094
Queensland	89	33,401	31	585	46	518	4	830		35,334
South Australia	75	31,899	10	192	45	2,151	32	5,692	162	39,934
Western Australia	89	10,895	208	3,106	70	1,735	5	478	372	16,214
Tasmania	41	8,018	43	718	94	2,358	2	513	180	11,607
Northern Territory			16	154	9	177	••		25	331
Australia	785	323,495	380	7,447	429	9,934	86	20,380	1,680	361,256

3. World Shipping Tonnage.—At 1st July, 1957, the total steamships, motorships and auxiliaries of 100 gross tons and upwards throughout the world amounted to 33,804, with a gross tonnage of 110,246,000. Of these totals, steamships numbered 16,204 for 69,287,000 gross tons, motorships 16,605 for 40,760,000 gross tons and auxiliaries 995 for 199,000 gross tons. Included therein were 3,776 oil tankers of 100 gross tons and upwards, with a gross tonnage of 29,938,000. Australian steamships, motorships and auxiliaries, 232 for 603,000 gross tons, constituted 0.69 per cent. and 0.55 per cent. respectively of the total number and tonnage. There was one Australian oil tanker of 12,624 gross tons registered. This information has been derived from Lloyd's Register of Shipping.

#### § 8. Miscellaneous.

- 1. Lighthouses.—A list of the principal lighthouses on the coast of Australia, giving details of the location, number, colour, character, period, candle-power and visibility of each light so far as particulars are available, will be found in *Transport and Communication*, Bulletin No. 46.
- 2. Distances by Sea.—The distances by sea between the ports of the capital cities of Australia and the most important ports in other countries which trade with Australia are published in the annual bulletin, *Transport and Communication*.
- 3. Shipping Freight Rates.—The Quarterly Summary of Australian Statistics shows a list of the ruling freight rates for general merchandise in respect of both oversea and interstate shipments. At 31st December, 1957, the rate for general merchandise from Australia to the United Kingdom and the Continent was £10 4s. per ton weight or measurement, while

the rates for wheat and wool (greasy) were respectively £4 10s. per ton weight and 3.39d. less 7 per cent. per lb. These rates, which are expressed in sterling, are subject to an adjustment of 25½ per cent. when freight is prepaid in Australia.

- 4. Depth of Water at Main Ports.—A table showing the depth of water available and tides at principal ports of Australia is published in the annual bulletin, *Transport and Communication*.
- 5. Shipping Losses and Casualties.—Courts of Marine Inquiry are constituted by a magistrate assisted by skilled assessors, and, when necessary, are held at the principal port in each State and at Launceston (Tasmania). Such courts have power to deal with the certificates of officers who are found at fault. Particulars of shipping losses and casualties reported on or near the coast during each of the years 1953 to 1957 are shown in the table below.

SHIPPING	LOSSES A	AND CA	SUALTIES	: AU	STRALIA.

\_\_\_\_\_

	Shipping Losses.			ises.	Other S	hipping Ca	sualties.	Total Shipping Casualties.		
Ye	ar.	Vessels.	Net Tons.	Lives Lost.	Vessels.	Net Tons.	Lives Lost.	Vessels.	Net Tons.	Lives Lost.
1953					85	242,972		85	242,972	
1954					149	426,878		149	426,878	
1955		1	53		220	694,847		221	694,900	
1956		2	529	18	237	771,418		239	771,947	18
1957		1 1	249		224	709,432		225	709.681	

6. Commonwealth Navigation and Shipping Legislation.—By section 51 (i) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws in respect of trade and commerce with other countries and among the States. By section 98 the power in this particular respect is further defined as extending to navigation and shipping.

A review of the introduction and development of the Navigation Act 1912-1950 was given in Official Year Book No. 40, pp. 110-2. Amendments to the Principal Act were made by the Navigation Act 1952, the provisions of which covered the settlement of maritime industrial disputes, standards of accommodation to be provided on ships and the engagement and discipline of seamen.

Other shipping Acts under the trade and commerce power of the Commonwealth are the Sea-Carriage of Goods Act 1924, the Seamen's Compensation Act 1911–1954, and the Seamen's War Pensions and Allowances Act 1940–1955.

7. Ports and Harbours.—A report on "The Turn-round of Ships in Australian Ports" was submitted to the Commonwealth Government by Henry Basten, C.M.G., on 4th January, 1952. The report deals with all factors affecting the turn-round of ships and congestion in Australian ports and the measures that might be taken to effect improvement on both shorterm and long-term bases. Further information on ports and harbours will be found in Chapter XIX.—Local Government.

#### B. GOVERNMENT RAILWAYS.

1. General.—The first steam-operated railway in Australia, between Melbourne and Port Melbourne, a distance of two miles, was opened on 12th September, 1854. It was owned and operated by the Melbourne and Hobson's Bay Railway Company. In the next one hundred years the mileage increased greatly and at 30th June, 1957, 26,478 route-miles (excluding several hundred miles of privately-owned line) were open for traffic. However, the operation of Australia-wide services is greatly hampered by the presence of many break-of-gauge stations, necessitated by the several gauges at present in use. The policy of government ownership and control of railways has been adopted in each State and at 30th June, 1957, 24,213 route-miles were owned by the State Governments and 2,258 route-miles by the Commonwealth Government. In the following tables details of the four lines owned by the Commonwealth are grouped and shown with the totals for the various State-owned systems. Separate particulars for each Commonwealth line and more detailed statistics for all lines are shown in the annual bulletin, Transport and Communication.

In some States there are comparatively small privately-owned railway systems offering passenger and freight services to the public. Details of these private railways were included in Official Year Book No. 39 and previous issues, but owing to their relative unimportance and the incomplete nature of the statistics available the series has been discontinued.

2. Railway Communication in Australia.—An account of the progress of railway construction in Australia since the opening of the first line in 1854 was given in Official Year Book No. 6, p. 681 and in No. 22, p. 259. The main ports on the mainland are connected by lines running approximately parallel to the coast and are the focal points of lines which radiate inland to the agricultural, mining and pastoral areas of the continent to a distance of up to 600 miles at some points. However, Darwin in the Northern Territory is not connected by rail to any other port. A 3 ft. 6 in. gauge railway extends southward from Darwin to Birdum, a distance of 317 miles, and from Port Augusta in South Australia northwards to Alice Springs in the Northern Territory, a distance of 771 miles.

The heavy traffic of the 1939-45 War, coming after a period of depression when replacement of track and rolling stock had not been maintained at desirable levels, placed a severe strain on the railway systems, which required extensive post-war rehabilitation. Track works were restored and improved and many new items of rolling stock replaced worn-out equipment. Besides the construction of air-conditioned passenger trains and high-capacity goods rolling stock, many new locomotives were built and others purchased. In recent years there has been a significant development of diesel-electric traction and the number of diesel-electric locomotives in service has risen from two at 30th June, 1949 to 315 at 30th June, 1957.

- 3. Distances between Capital Cities.—The distances by rail between the capital cities of Australia are published in the annual bulletin, *Transport and Communication*.
- 4. Government Railways Development.—In spite of the great extensions of State railways since 1875 and the construction of various railways by the Commonwealth Government, there are still, in some States, immense areas of country which are as yet practically undeveloped, and in which little in the nature of permanent settlement has been accomplished. The general policy of the States was to extend the existing lines inland in the form of light railways as settlement increased, and while it is true that lines which were not likely to be commercially successful in the immediate future were constructed from time to time for the purpose of encouraging settlement, the general principle that the railways should be self-supporting was kept in view.

The greatest recorded route-mileage of government railways was 27,234 at 30th June, 1941. Although short lengths of line have been opened since that date, most railway construction is being confined to the duplication and electrification of existing main lines. The closure of other lines (mainly developmental branch lines whose retention would have been uneconomic), especially in Victoria and Western Australia, has resulted in a considerable decrease in route-mileage. Variations in route-mileage in each State and Territory during the ten years ended 30th June, 1957 are shown in the following table.

#### GOVERNMENT RAILWAYS: VARIATIONS IN ROUTE-MILEAGE, 1947 TO 1957.

State or Terr	-itoru		Route-mileage at 30th June,		ring Ten Years e, 1957 due to—	Route-mileage at 30th June,	
State of Tell	11013.		1947.	Route Miles Opened.	Route Miles Closed.	1957.	
New South Wales			6,331	2	27	6,306	
Victoria			4,545	15	355	4,205	
Oueensland			6,566		110	6,456	
South Australia			3,799	177	123	3,853	
Western Australia			4,802	16	247	4,571	
Tasmania			636		51	585	
Northern Territory			490			490	
Australian Capital To	erritory	••	5	• •	••	5	
Australia	••		27,174	210	913	26,471	

5. Standardization of Railway Gauges.—A summary of the report and recommendations relating to the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge, made in March, 1945, at the request of the Commonwealth Government by the late Sir Harold Clapp, together with an outline of the agreement between the Commonwealth Government and the States of New South Wales, Victoria and South Australia regarding the standardization of railway gauges in their respective States, was published in Official Year Book No. 37, pp. 146-9. The agreement, which was signed in 1946, was ratified by

the Governments of the Commonwealth, of Victoria and of South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had failed to ratify the agreement, the Commonwealth Government decided to enter into a separate agreement with South Australia, and the necessary legislation was enacted in 1949 by each Government concerned. The Commonwealth-South Australia Agreement provides for the same standardization work to be carried out in South Australia as would have been carried out had New South Wales ratified the original Commonwealth-Three States Agreement, and that over a period of years the Commonwealth should contribute 70 per cent. and South Australia be responsible for the remaining 30 per cent. of the estimated cost.

As a further step towards standardization, a Committee consisting of members of the Federal Parliament was formed in March, 1956 to ascertain whether a scheme confined to the main trunk routes would be desirable. This Committee recommended in October, 1956 that standard gauge (4 ft. 8½ in.) lines be provided from Wodonga to Melbourne, from Broken Hill to Adelaide via Port Pirie and from Kalgoorlie to Fremantle via Perth. Action to implement these recommendations has been commenced in respect of the Wodonga to Melbourne line. This project envisages the construction of a new 4 ft. 8½ in. track alongside the present 5 ft. 3 in. single track between Wodonga and Mangalore, the conversion of one of the two existing tracks between Mangalore and Albion and a combination of new track and conversion of existing track between Albion and Spencer Street station. The Commonwealth Government agreed to contribute £25,000, supplemented with £25,000 from the Victorian Government, towards the cost of surveying the route of the proposed standard gauge line. Contracts have been let for aerial and altimetric surveys of the area and the design of station yard layouts has been commenced.

A map showing the railway systems of Australia according to gauge appears on page 377.

6. Grafton-South Brisbane Uniform Gauge Line.—The first step towards uniform gauge railway communication between the capitals of the mainland States was effected in 1930 with the construction of the 4 ft. 8½ in. gauge line from Grafton to South Brisbane. The finance required for the construction was provided by the Commonwealth Government. For details of the agreement between the Commonwealth and New South Wales and Queensland, see Official Year Book No. 31, p. 122.

This line is operated by the New South Wales Railways and details of operations in New South Wales are included with those of the New South Wales system. Details of operations on the Queensland portion are included with Queensland railway statistics unless otherwise specified.

7. Mileage Open for Traffic, all Lines.—Almost all the railways open for general traffic in Australia are owned and controlled by the State or Commonwealth Governments. Private lines have been laid down for the purpose of opening up forest lands, mining districts or sugar areas. These lines are not generally used for the conveyance of passengers or the public conveyance of goods.

The following table shows the route-mileage of Commonwealth and State lines open in each State and Territory at various periods since the inauguration of railways in Australia in 1854:—

GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN. (Miles.)												
At 30th J	une	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.		
1855(a)		14	2		7					23		
1861(a)		73	114	١	56		i			243		
1871(a)		358	276	218	133		45			1,030		
1881(a)		996	1,247	800	832	92	45			4,012		
1891		2,182	2,763	2,195	1,666	198	351	145	٠	9,500		
1901		2,846	3,237	2,801	1,736	1,355	457	145		12,577		
1911		3,762	3,523	3.868	1.935	2,376	470	145		16,079		
1921		5,043	4,267	5,752	3,408	3,992	630	199	5	23,296		
1931		6,247	4.514	6,529	3,898	4,634	665	317	5	26,809		
1941		6,368	4,518	6,567	3,809	4,835	642	490	5	27,234		
1951		6,354	4,445	6,560	3,805	4,682	605	490	5	26,946		
1957		6,306	4,205	6,456	3,853	4,571	585	490	5	26,471		

(a) At 31st December.

At 30th June, 1957, 255 route-miles in Victoria and 209 route-miles in New South Wales were electrified.

The next table shows for each State and Territory the length of government lines open in relation to both population and area at 30th June, 1957.

GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN AT 30th JUNE, 1957. (Miles.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-mileage open Per 1,000 of population Per 1,000 square miles	1.74			4.41	4,571 6.61 4.68	1.78	25.56	0.13	

8. Classification of Lines according to Gauge, at 30th June, 1957.—The next table shows the route-mileage of government railways open in each State and Territory at 30th June, 1957, classified according to gauge.

GOVERNMENT RAILWAYS: GAUGES, AT 30th JUNE, 1957. (Route-miles.)

Gauge.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 ft. 3 in. 4 ft. 8 in. 3 ft. 6 in. 2 ft. 6 in. 2 ft. 0 in.	 (a) 203 6,103 	4,171  34	(b) 69 6,357	1,631 (c) 809 (d)1,413	(c) 454 4,117	585	(c) 490	(c) 5	6,005 7,440 12,962 34 30
Total	 6,306	4,205	6,456	3,853	4,571	585	490	5	26,471

<sup>(</sup>a) Portion of Victorian system. (b) Queensland section of Grafton-South Brisbane Uniform Gauge Line. (c) Portion of Commonwealth system. (d) Includes 500 miles of Commonwealth system.

9. Summary of Operations.—In the following table a summary is shown of the operations of government railways open in Australia during 1956-57:—

#### GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, 1956-57.

Particulars.	Commonwealth Railways.	State Railways.	Total.
Route-mileage, 30th June miles	2,258	24,213	26,471
Gross revenue £'000	4,961	182,883	187,844
", ", per revenue train-mile pence	557	472	474
Working expenses £'000	(a) 3,597	188,760	192,357
,, per revenue train-mile pence	404	487	485
Net revenue £'000	(a) 1,364	-5,877	-4,513
,, per revenue train-mile pence	153	- 15	- 11
Revenue train-miles '000	2,136	92,949	95.085
Passenger-journeys '000	213	499,303	499,516
Goods and livestock carried '000 tons	1,069	46,407	47,476
Average number of employees(b)	2,606	141.230	143,836
,, earnings per employee . £	859	957	955

<sup>(</sup>a) Excludes amounts paid for Commissioner's salary, government contributions under the Superannuation Act, Accident and Insurance Fund and proportion of salaries of Auditor-General's staff—total, £92,733.

(b) Excludes construction staff except in respect of Victoria.

Note.—Minus sign (-) denotes loss.

A graph showing the route-mileage and traffic of government railways from 1870 to 1956-57 appears on page 378.

10. Summary, States.—The following table shows, for government railways in Australia, particulars of the mileage open, cost of construction and equipment, passengers and goods carried and train-miles run during 1956-57.

#### GOVERNMENT RAILWAYS: SUMMARY, STATES, 1956-57.

		Mileage (	Open.(a)	Cost of Construc-	_	Goods and	Revenue	
Railway System.		Route- miles.	Track- miles.	tion and Equipment during Year. (£'000.)	Passenger- journeys.	Livestock Carried.	Train- miles.	
New South Wales		6,103	8,478	12,018	264,137	(b)18,791	37,030	
Victoria		4,408	5,804	7,112	167,405	9,381	18,544	
Queensland		6,456	7,494	4,611	34,271	8,453	20,054	
South Australia		2,544	3,176	2,201	17,406	4,498	7,188	
Western Australia		4,117	4,706	3,742	13,271	4,223	8,278	
Tasmania		585	686	217	2,813	1,061	1,855	
Commonwealth	٠٠ ;	2,258	2,481	1,923	213	1,069	2,136	
Australia		26,471	32,825	31,824	499,516	47,476	95,085	

- (a) At 30th June.
- (b) Partly estimated.
- 11. Gross Revenue.—(i) General. The gross revenue is composed of (a) receipts from coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) receipts from the carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1956-57 are as follows:—£1,000,000 for the working of country development lines and £800,000 to subsidize payments from Superannuation Account in New South Wales; £10,356 recoup on operating the Kerang-Koondrook Tramway in Victoria; and £3,400,000 towards working expenses and £800,000 towards debt charges in South Australia.
- (ii) Coaching, Goods and Miscellaneous Receipts. (a) Summary. In the following table the gross revenue is shown for the years 1954-55 to 1956-57, together with the revenue per average route-mile worked and per revenue train-mile:—

#### GOVERNMENT RAILWAYS: GROSS REVENUE.(a)

	 				,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	D. 10 D.(u	, 	
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
				ross Revi E'000.)	enue.			
1954–55 1955–56 1956–57	  73,361 75,386 78,689	37,667 37,032 37,352	31,625 31,312 36,678	12,939 13,098 13,771	12,315 13,080 13,859	2,322 2,535 2,534	3,741 4,741 4,961	173,970 177,184 187,844
	Gross	REVENU	e per Av	erage Ro (£.)	OUTE-MILE	Worked	•	
1954–55 1955–56 1956–57	 12,022 12,352 12,894	8,449 8,322 8,441	4,823 5,961 5,681	5,047 5,108 5,398	2,996 3,175 3,367	3,839 4,260 4,333	1,700 2,154 2,172	6,541 6,689 7,083
	(	GROSS RE		R REVENT	je Train-	MILE.		
1954–55 1955–56 1956–57	 469.78 470.21 509.99	482.39 476.94 483.42	386.52 389.60 438.94	430.34 441.92 459.80	380.43 379.21 401.80	269.72 288.98 328.00	442.47 487.04 557.51	439.80 441.88 474.13

(a) Excludes government grants; see para. 11 (i) above.

(b) Distribution. The following table shows the gross revenue for the year 1956-57 classified according to the main three sources of receipts.

#### GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS REVENUE(a), 1956-57.

		Gross	Revenue. (	£'000.)	Proportion	of Total.	(Per Cent.)
Railway System.		Coaching.	Goods and Livestock.	Miscel- laneous.	Coaching.	Goods and Livestock.	Miscel- laneous.
New South Wales		22,850	51,956	3,883	29.04	66.03	4.93
Victoria		12,775	22,110	2,467	34.20	59.20	6.60
Oueensland		5,155	30,502	1,021	14.05	83.16	2.79
South Australia		1,851	10,990	929	13.44	79.81	6.75
Western Australia		1,507	11,698	654	10.88	84.40	4.72
Tasmania		215	2,240	79	8.49	88.39	3.12
Commonwealth	••	973	3,626	363	19.60	73.09	7.31
Australia		45,326	133,122	9,396	24.13	70.87	5.00

(a) Excludes government grants; see para. 11 (i) on p. 393.

12. Working Expenses.—(i) General. In order to make an adequate comparison of the working expenses as between the several States and Territories, allowance should be made for the variation of gauges and of physical and traffic conditions, not only on the different systems of the State and Commonwealth railways, but also on different portions of the same system. When traffic is light, the proportion of working expenses to revenue is naturally greater than when traffic is heavy; and this is especially true in Australia, where ton-mile rates are in many cases based on a tapering principle—i.e., a lower rate per ton-mile is charged upon merchandise from remote interior districts—and where on many of the lines there is but little back loading.

Working expenses, wherever presented in the Railways section of this chapter, exclude interest, sinking fund, exchange and certain other payments (see paras. 13 and 14 following).

(ii) Working Expenses. The following table shows the total working expenses, the ratio of working expenses to gross revenue and working expenses per average route-mile worked and per revenue train-mile for the years 1954-55 to 1956-57:—

#### GOVERNMENT RAILWAYS: WORKING EXPENSES.

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
		,	To	OTAL WOR	KING Ex	PENSES.			
1954–55 1955–56 1956–57	••	68,397 74,904 75,352	37,032 38,026 39,118	30,946 33,873 37,790	15,414 15,761 15,977	14,690 15,920 17,076	3,077 3,262 3,447	2,921 3,176 3,597	172,477 184,922 192,357
		RATI	o of Wo		PENSES TO	GROSS I	Revenue.	,	
1954–55 1955–56 1956–57		93.23 99.36 95.76	98.31 102.68 104.73	97.85 108.18 103.03	119.12 120.33 116.03	119.29 121.71 123.21	132.50 128.69 136.01	78.09 66.99 72.50	99.14 104.36 102.40
		Workin	ng Expen	SES PER A	VERAGE (£.)	Route-mii	E Work	ED.	
1954–55 1955–56 1956–57		11,209 12,273 12,347	8,307 8,545 8,840	4,720 5,247 5,853	6,012 6,146 6,263	3,574 3,864 4,148	5,086 5,482 5,893	1,327 1,443 1,575	6,485 6,981 7,253

#### GOVERNMENT RAILWAYS: WORKING EXPENSES-continued.

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
	W	ORKING E		PER REVE Pence.)	NUE TRAI	N-MILE.		
1954–55	 437.99	474.26	378.22	512.64	453.81	357.38	345.51	436.02
1955–56	 467.21	489.74	421.46	531.75	461.55	371.89	326.26	461.1
1956–57	 1 488.36	506.28	452.24	533.49	495.07	446.12	404.20	485.5

(a) See para. 9, note (a), page 392.

The following table shows the total working expenses for the year (iii) Distribution. 1956-57 classified according to the main four expenditure headings.

#### GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES, 1956-57. (£'000.)

Railway System.	Mainten- ance of Way and Works.	Motive Power.(a)	Traffic.	Other Charges.	Total Working Expenses.
New South Wales	 13,414	31,488	17,777	12,673	75,352
Victoria	 8,230	12,216	10,159	8,513	39,118
Queensland	 9,535	17,889	8,318	2,048	37,790
South Australia(b)	 3,145	7,461	3,735	1,636	15,977
Western Australia(b)	 2,972	7,906	3,556	2,642	17,076
Tasmania(b)	 860	1,467	715	405	3,447
Commonwealth(c)	 1,395	1,104	801	297	3,597
Australia	 39,551	79,531	45,061	28,214	192,357

(a) Includes maintenance of rolling stock.
(b) Includes provision of reserves for depreciation.
(c) See para. 9, note (a), page 392.

13. Net Revenue.—The following table shows, for the years 1954-55 to 1956-57, the net revenue, i.e., the excess of gross revenue over working expenses, the amount of such net revenue per average route-mile worked and per revenue train-mile, the interest on railway loan expenditure and the profit or loss after paying interest:-

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
	 			TET REVER	NUE.			
1954–55 1955–56 1956–57	 4,964 482 3,337			- 2,663	- 2,375 - 2,840 - 3,217		(a) 820 (a) 1,565 (a) 1,364	1,493 — 7,738 — 4,513
	 Net 1	Revenue	per Avei	RAGE ROU	TE-MILE V	Vorked.	·	
1954–55 1955–56 1956–57	 813 79 547	142 - 223 - 399	103 - 397 - 172	- 965 - 1,038 - 865	- 689	- 1,247 - 1,222 - 1,560	(a) 373 (a) 711 (a) 597	56 - 292 - 170
	 	NET REV		Revenui	E TRAIN-M	IILE.		
1954–55 1955–56	 31.79			- 89.83	- 82.34	- 82.91	(a) 96.96 (a) 160.78	19.30

#### GOVERNMENT RAILWAYS: NET REVENUE, INTEREST, AND PROFIT OR LOSS -continued:

					omimaeu.				
Year.		N.S.W.	Vic	Q'land.	S.Aust.	W.Aust.	Tas.	C'wealth.	Aust.
					T PAYMEI £'000.)	NTS.			
1954–55 1955–56 1956–57	••	7,100 8,032 9,071	2,545 2,874 3,022	2,630	1,288 1,471 (b)1,621	1,411 1,721 2,053	282 322 348	(b) 407 (b) 385 (b) 383	15,493 17,435 19,468
					ofit or L £'000.)	.oss.			
1954–55 1955–56 1956–57		- 2,136 - 7,550 - 5,734	-3,868	- 5,191		-4,561			- 14,000 25,173 23,981
		(a) See 1	para. 9, no	te (a), pag	ge 392.	(b) Inclu	ides exchar	nge.	

(a) See para. 9, note (a), page 392.

(b) Includes exchange.

Note.-Minus sign (-) denotes loss.

A graph showing the gross and net revenue and working expenses from 1870 to 1956-57 appears on page 379.

14. Exchange.—Exchange on interest payments abroad and certain other charges are not debited against the railways in Queensland and Western Australia. For the purposes of comparison these items have been excluded wherever possible from the table above.

In the remaining States the amounts paid on account of exchange during 1956-57 were:-New South Wales, £482,540; Victoria, £123,891; and Tasmania, £4,349.

15. Traffic.—(i) General. Reference has already been made to the difference in the traffic conditions on many of the lines. These conditions differ not only in the several State and Commonwealth systems, but also on different lines in the same system, and apply to both passenger and goods traffic. By far the greater part of the population of Australia is located in a fringe of country near the coast, more especially in the eastern and southern districts. A large proportion of the railway traffic between the chief centres of population is therefore carried over lines in the neighbourhood of the coast, and is thus, in some cases, open to seaborne competition. In recent years competition from road and air transport has become an important factor.

The following table shows particulars of railway traffic for the years 1954-55 to 1956-57:--

#### GOVERNMENT RAILWAYS: TRAFFIC.

Year		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Aust.
		Pas	SENGER-JO	URNEYS (	Suburban	and Cou	ntry).	<u>'</u>	
				(	'000.)				
1954–55		281,417	169,204	35,919	16,849	10,139	3,114	215	516,85
1955–56		280,470	166,708	35,647	16,434	12,271	2,977	230	514,73
1956–57	• •	264,137	167,405	34,270	17,407	13,271	2,813	213	499,516
PASSENGE	R-JOU	RNEYS (S	UBURBAN	AND CO	UNTRY) P	er Avera	GE ROU	TE-MILE	Worke
		·		(Nu	mber.)				
1954–55		46,119	37,955	5,478	6,571	2,466	5,147	98	19,43
1955-56		45,956	37,462	5,522	6,410	2,979	5,003	104	19;43
		43,280	37,832	5,308	6,823	3,223	4,809	93	18,83

GOVERNMENT F	RAILWAYS:	TRAFFIC-continued.
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		GOVE	KINILLIN	IKALLY	VAIS. I	KAFFIC-	-continue	:u.	
Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Total.
			Goor		vestock Tons.)	CARRIED.			
1954–55 1955–56 1956–57	Gooi	(a) 19,386 18,787 18,791	10,082 9,607 9,381	8,492 8,180 8,453	4,474 4,414 4,498 PER AVE	3,407 3,793 4,223	1,041 1,075 1,061 TE-MILE	816 918 1,069 Worked.	47,698 46,774 47,476
				(7	Fons.)	1			
1954–55 1955–56 1956–57		3,177 3,176 3,079	2,262 2,159 2,120	1,295 1,315 1,309	1,745 1,722 1,763	829 921 1,026	1,721 1,807 1,814	371 417 468	1,793 1,766 1,790

#### (a) Partly estimated.

- (ii) Passenger Traffic. With the exception of the Commonwealth Railway Systems, which operate only country services, all systems provide both suburban and country passenger services. Traffic classed as "suburban" moves between stations within a classified suburban area around each capital city, whilst traffic classified as "country" originates or terminates at stations outside of this suburban area. Particulars of suburban and country passenger traffic are shown separately in the two tables following.
- (a) Suburban Passenger Traffic. The following table shows a summary of suburban passenger operations for the years 1954-55 to 1956-57. Most of the suburban services in New South Wales and Victoria are operated within electrified areas.

#### GOVERNMENT RAILWAYS: SUBURBAN PASSENGER SUMMARY.

			}			Subui	rban Passe	nger Earr	nings.
Year.	Suburban Passenger- journeys.	Suburban Passenger Train- miles.	Suburban Passenger- miles.	Average Number of Passengers per Train- mile.	Average Mileage per Passenger- journey.	Gross.	Per Pas- senger- journey.	Per Pas- senger- mile.	Per Pas- senger Train- mile.
	('000.)	('000.)	('000.)		(Miles.)	(£'000.)	(Pence.)	(Pence.)	(Pence.)
<del></del>			Ne	w South	Wales.	·			
1954–55 1955–56 1956–57	a 269,016 a 269,000 a 253,000	11,503 11,886 11,618	) (b)	(b)	(b)	(b)	(b)	(b)	(b)
				Victoria	۸.				
1954-55 1955-56 1956-57	162,957 161,124 162,255		1,376,307 1,379,610 1,416,115	167 166 171	8.45 8.56 8.73	6,088 7,005 7,647	8.97 10.43 11.31	1.06 1.22 1.30	177 203 221
				Queenslai	ND.				
1954-55 1955-56 1956-57	29,712 29,748 28,783	2,099 2,019 2,070	) (b)	(b)	(b) {	767 749 882	6.19 6.05 7.36	(b) (b) (b)	88 89 102
			So	UTH AUST	RALIA.				
1954-55 1955-56 1956-57	15,450, 15,061, 15,995	1,772 1,778 1,935	143,003 140,906 152,021	81 79 79	8.49 9.36 9.50	526 567 603	8.17 9.04 9.04	0.88 0.97 0.95	71 77 75
		<u>`</u>	( ) 70.00.00		Niet seelle	.1.			·

(a) Estimated:

(b) Not available:

Note.-Train-miles refer to revenue mileages only.

#### GOVERNMENT RAILWAYS: SUBURBAN PASSENGER SUMMARY-continued.

						Subur	ban Passe	enger Ear	nings.
Year.	Suburban Passenger- journeys.	Suburban Passenger Train- miles.	Suburban Passenger- miles.	A verage Number of Passengers per Train- mile.		Gross.	Per Pas- senger- journey.	Per Pas- senger- mile.	Per Pas- senger Train- mile.
	('000.)	('000.)	('000.)		(Miles.)	(£'000.)	(Pence.)	(Pence.)	(Pence.)
	<u> </u>		Wes	STERN AUS	TRALIA.		•	·	<u> </u>
1954-55	9,354	1,038	66,456	64	6.56	293	7.51	1.06	68
1955-56	11,481	1,290	80,408	52	5.79	362	7.56	1.08	67
1956-57	12,497	1,303	86,102	66	6.89	391	7.52	1.09	72
				TASMANI	Α.				
1954-55	2,519	239	14,683	61	5.83	51	4.87	0.83	51
1955-56	2,443	250	13,568	54	5.55	47	4.66	0.84	46
1956-57	2,345	213	13,279	62	5.66	58	5.96	1.05	66

Note.—Train-miles refer to revenue mileages only.

(b) Country Passenger Traffic. The following table shows a summary of country passenger operations for the years 1954-55 to 1956-57.

#### GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY.

						Cou	ntry Passer	nger Earn	ings.		
Year.	Country Passenger- journeys.	Country Passenger Train- miles. (a)	Country Passenger- miles.	Average Number of Passengers per Train- mile.	Average Mileage per Passenger- journey.	Gross.	Per Pas- senger- journey.	Per Pas- senger- mile.	Per Pas- senger Train- mile.		
	('000.)	('000.)	('000.)		(Miles.)	(£'000.)	(Pence.)	(Pence.)	(Pence.		
New South Wales.											
1954-55	(b)12,401	10,408		1				1	ĺ		
1955-56 1956-57	(b)11,470 (b)11,137		(c)	(c)	(c)	(c)	(c)	(c)	(c)		
1930-37	(0)11,137	10,300	ر	<u>.                                    </u>	<u> </u>		· l /	'- <del>-</del> -	i		
				Victoria	١.						
1954-55	6,247	4,590	497,644	108	79.66	3,791	145.65	1.83	197		
1955–56	5,584	4,653	459,828	98	82.34	3,789	162.83	1.98	195		
1956–57	5,150	4,709	437,481	93	84.95	3,717	173.25	2.04	189		
				QUEENSLA	ND.						
1954-55	6,207	5,079	]		<u> </u>	2,609	100.90	(c)	110		
1955-56	5,899	5,142	(c)	(c)	(c) {	2,524	102.68	(c)	106		
1956–57	5,487	5,183	J i		U	2,740	119.85	(c)	115		
			Sot	UTH AUSTR	ALIA.						
1954-55	1,399	2,163	126,203	56	90.21	824	141.43	1.57	87		
1955-56	1,373	2,154	125,088	55	91.08	802	140.13	1.54	85		
1956-57	1,412	2,133	121,135	54	85.81	795	135.14	1.57	85		
Western Australia.											
1954-55	785	1,546	79,097	51	100.72	667	203.89	2.03	104		
1955–56	790	1,677	82,813	47	104.85	678	205.95	1.96	97		
1956–57	774	1,645	80,700	49	104.32	685	212.58	2.04	100		
			No	F. C. A.							

Note.—For footnotes see next page.

#### GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY-continued.

					! 	Cour	ntry Passen	ger Earni	ngs.
Year.	Country Passenger- journeys.	Country Passenger Train- miles. (a)	Country Passenger- miles.	Average Number of Passengers per Train- mile.		Gross.	Per Pas- senger- journey.	Per Pas- senger- mile.	Per Pas- senger Train- mile.
	('000.)	('000.)	(.000)		(Miles.)	(£'000.)	(Pence.)	(Pence.)	(Pence)
				Tasmani	Α.				
1954-55	595	747	21,183	28	35.57	120	48.29	1.36	38
1955-56	534	766	19,528	25	36.59	115	51.92	1.42	35
1956-57	468	560	17,476	30	37.31	106	54.07	1.45	43
			Con	MONWEAL	.тн.( <i>d</i> )				
1954-55	215	641	74,260	101	344.88	615	685.44	1.99	201
1955-56	230	762	86,514	103	376.97	710	742.69	1.97	203
1956–57	213	725	83,984	104	393.95	741	834.47	2.12	220
	cludes mi			(b) Estimat	ed. (	c) Not a	vailable.	(d) R	ailways

Note.—Train-miles refer to revenue mileages only.

(iii) Freight Traffic. (a) Commodities Carried and Revenue. Some indication of the differing conditions of the traffic in each system may be gained from an examination of the tonnage of the various classes of commodities carried, and of the revenue derived therefrom. The following table shows the quantities of various commodities carried during 1956-57 and the revenue received.

#### GOVERNMENT RAILWAYS: COMMODITIES CARRIED AND REVENUE, 1956-57.

Railway System.		Coal, Coke and Shale.	Other Minerals.	Flour and Agricul- tural Produce.	Wool.	Live- stock.	All Other Com- modities.	Total.		
QUANTITY CARRIED. ('000 Tons.)										
New South Wales		(a)	(a)	<del></del>	(c) 226	(c) 649	16,981	18,791		
Victoria		2,478	109	2,261	158	445	3,930	9,381		
Queensland	• •	(d)1,690	(e) 914	3,199	68	878	1,704	8,453		
South Australia	• •	154	1,248	1,133	50	245	1,668	4,498		
Western Australia		472	205	1,844	60	148	1,494	4,223		
Tasmania		239	42	32	4	27	717	1,061		
Commonwealth		528	78	12	6	127	318	1,069		
Australia		(f)	(f)	(f)	572	2,519	26,812	47,476		
		•		EVENUE.						
			(;	£'000.)						
New South Wales		8,128	(a)	(a)	(a)	3,707	40,121	51,956		
Victoria		3,217	127	4,636	821	1,269	12,040	22,110		
Queensland		(g)3,183	(h)2,800	6,026	1,290	4,365	12,838	30,502		
South Australia		132	3,300	1,811	288	818	4,641	10,990		
Western Australia		921	531	3,508	365	418	5,955	11,698		
Tasmania		559	89	73	14	73	1,432	2,240		
Commonwealth		847	184	43	34	296	2,222	3,626		
Australia		16,987	$\overline{(f)}$	$\overline{(f)}$	(f)	10,946	79,249	133,122		

<sup>(</sup>a) Included with "All other Commodities". (b) Wheat only. (c) Estimated. (d) Excludes shale. (e) Includes shale. (f) Not available. (g) Excludes revenue from shale. (h) Includes revenue from shale.

(b) Freight Summary. A summary of freight traffic on each railway system for each of the years 1954-55 to 1956-57 is shown in the following table.

#### GOVERNMENT RAILWAYS: FREIGHT SUMMARY.

				† ‡	Good	is and Liv	estock Ea	rnings.	
Year.	Revenue Goods Train- miles. (a)	Revenue Net Ton- miles.	Average Train Load (Paying Traffic).	Average Haul per Ton.	Gross.	Per Average Route- mile Worked.	Per Revenue Net Ton- mile.	Per Revenue Goods Train- mile.	Density of Traffic. (b)
	(.000.)	('000.)	(Tons.)	(Miles.)	(£'000.)	(£)	(Pence.)	(Pence.)	
			New	South	Wales.				
1954–55	14.571	c2,965,614	(c) 196	(c) 153	51,803	8,490	4.19	823	c 486,007
1955-56	15,104	c2,942,192	(c) 188	(c) 157	51,963	8,514	4.24	797	c 482,089
1956-57	14,317	c2,929,338	(c) 197	(c) 156	51,956	8,513	4.26	840	c 479,983
				Victori	íA.				
1954–55	5,866	1,426,415	242	141	24,417	5,477	4.11	994	319,967
1955–56	5,638	1,324,877	234	138	22,635	5,086	4.10	958	297,725
1956–57	5,502	1,249,494	226	133	22,110	4,997	4.25	961	282,372
			Qı	UEENSLAN	ND.(d)	•			
1954-55	10,650	1,376,781	117	168	25,428	3,919	4.43	520	212,204
1955-56 1956-57	10,340	1,387,331	121 122	176 182	25,140 29,844	3,936 4,673	4.35	527 590	217,212 231,829
1930-37	11,005	1,400,054	1.22	1 102	22,077	1 4,073	7.04	, 550	231,029
			Sou	TH AUST	ΓRALIA.				
1954-55	2,959	677,128	213	151	10,242	3,995	3.63	774	264,090
1955-56	2,865	643,801	209 215	146 144	10,350	4,037 4,308	3.86 4.07	808 874	251,092
1956-57	2,811	648,397	213	144	10,990	4,506	4.07	.074	254,174
			West	ren Au	STRALIA.				
1954-55	5,185	556,505		163	10,360	2,520	4.47	480	135,370
1955-56	5,311	608,418	115	160	10,989	2,668	4.33	497	147,710
1956-57	5,330	667,695	125	158	11,698	2,841	4.20	527	162,180
				Tasman	IA.				
1954-55	1,024	96,178	91	92	2,043	3,377	5.10	462	158,972
1955-56	1,031	101,210	95	94	2,246	3,774	5.32	504	170,100
1956-57	999	100,274	95	95	2,240	3,829	5.36	510	171,409
			Сом	MONWEA	Lтн.( <i>е</i> )				
1954-55	1,104	196,824	178	241	2,650	1,204	.3.80	492	89,425
1955-56	1,340	265,790	178	289	3,437	1,561	.3.10	551	120,759
1956–57	- 1,159	:293,382	221	274	3,626	1,588	2.97	656	128,451
(a) Exclestimated.	udes mixed (d):Ex	train-miles. cludes (Quee	(b) To	tal ton-mi	iles per av Grafton-Se	verage rou outh Bris	ite-mile w bane (Un	orked. iform Ga	(c) Partly uge) Line.

 <sup>(</sup>a) Excludes mixed train-miles.
 (b) Total ton-miles per average route-mile worked.
 (c) Partly estimated.
 (d) Excludes Queensland portion of Grafton-South Brisbane (Uniform Gauge) Line.
 (e) Railways controlled by the Commonwealth Government.

16. Rolling Stock.—The following table shows the number of rolling stock of Government railways at 30th June, 1957.

### GOVERNMENT RAILWAYS: ROLLING STOCK(a) AT 30th JUNE, 1957.

			Locom	otives.				
Railway System.	Steam.		esel- ctric.	Other.	Total,	Coaching Stock.(b)	Goods Stock.	Service Stock.
New South Wales	 1,139	<u> </u>	44	34	1,217	3,750	25,675	1,011
Victoria	 447	(c)	67	35	(c) 549	(d)2,407	21,432	(e) 1,271
Queensland	 795		44	6	845	1,536	26,887	1,342
South Australia	 292	1	26		318	(d) 697	8,534	(e) 472
Western Australia	 354		- 66	10	430	592	11,892	781
Tasmania	 90	1	32	8	130	165	2,662	155
Commonwealth	 132	ļ	36		168	188	1,982	441
Australia	 3,249	(c)	-315	93	(c)3,657	(f).9,390	99,064	(f)5,474

<sup>(</sup>a) Included in capital account. (b) Includes all brake vans. (c) Includes 3 locomotives on hire. (d) Excludes 55 interstate coaching stock owned jointly by Victoria and South Australia. (f) Includes stock owned jointly by Victoria and South Australia. (f) Includes stock owned jointly by Victoria and South Australia.

17. Accidents.—The following table shows particulars of the number of persons killed or injured through train accidents and the movement of rolling stock on the government railways of Australia during 1956-57:—

GOVERNMENT RAILWAYS: ACCIDENTS(a), 1956-57.

Particulars.	N.S.W.	Vic.	QId.	S.A.	W.A.	Tas.	C'wth.	Aust.
Persons killed Persons injured	 80 772	42 540	17 212	18 181	6 161	4		167 1,894

<sup>(</sup>a) Excludes accidents to railway employees.

18. Consumption of Coal, Oil and Petrol.—The following table shows the quantities of coal, oil and petrol consumed by the various government railways during 1956-57:—

#### GOVERNMENT RAILWAYS: COAL, OIL AND PETROL CONSUMED, 1956-57.

<b>P</b> . 11	·Ca	oal.		o	il.	Other Purposes.  '000 gal 634 1,460 815 (c) 1,425 1,43 573	'Petrol for
Railway System.	Locomo- tives.	Other Purposes.	Diesel Oil.(a)	Fuel Oil.(b)	Lubri- cation.		Rail Cars.
New South Wales Victoria Queensland South Australia Western Australia Tasmania Commonwealth	'000 tons. 1,373 173 :652 136 320 34 2	'000 tons. 18 13 7 8 5 (d)	'000 gal. 5,226 6,074 3,706 3,064 3,196 1,167 2,922	'000 gal. 8,545 10,285 17,169 1,244	'000;gal. 470 365 446 (c). 252 46 83	634 1,460 815 (c) 1,425 143	'000 gal. 46 3 176 110 52
Australia	2,690	·52	25,355	37,400	(c)	(c)	393

<sup>(</sup>a) Used in internal combustion engines of locomotives and rail cars. (b) Used in oil-fired furnaces of steam locomotives. (c) Not available. (d) 212 tons.

<sup>19.</sup> Staff Employed and Salaries and Wages Paid.—The following table shows details of the average staff employed and the salaries and wages paid by the government railways of Australia during 1956-57.

### GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES AND SALARIES AND WAGES PAID, 1956-57.

Railway System.		Op	erating St	aff.	Const	ruction St	Total Salaries and	Average Earnings Per Em-	
		Salaried.	Wages.	Total.	Salaried.	Wages.	Total.	Wages Paid. (£'000.)	ployee.
New South Wales Victoria Queensland South Australia Western Australia Tasmania Commonwealth		9,686 (b)5,227 4,520 1,879 2,105 359 376	45,122 (b)24,589 25,303 8,252 11,872 2,316 2,230	(i)29,816 29,823 10,131 13,977 2,675	(c) 39 10 	74 (c) 1,082 1,080  128 213	79 (c) 1,121 1,090  162 220	54,422 28,933 28,573 10,755 12,281 2,515 2,426	992 970 923 958 879 886 859
Australia		d 24,152	d 119,684	d 143.836	95	2,577	2,672	139,905	955

<sup>(</sup>a) In Victoria, Queensland and Western Australia a considerable amount of construction work is carried out by private contractors and the staff engaged are therefore not under the control of the Railways Commissioners. (b) Includes construction staff. (c) Included with operating staff. (d) Includes construction staff, victoria.

#### C. TRAMWAY AND TROLLEY-BUS SERVICES.

1. Systems in Operation.—(i) General. Tramway systems are in operation in all the State capital cities and in a number of the larger towns of Australia. Since 1st April, 1947, all systems have been operated by government or municipal authorities. Tramway systems are located in the following cities—New South Wales, Sydney; Victoria, Melbourne, Bendigo and Ballarat; Queensland, Brisbane; South Australia, Adelaide; Western Australia, Perth; and Tasmania, Hobart. In Sydney, Brisbane, Adelaide, Perth and Hobart, tramway systems are supplemented by trolley-bus services. All systems are electric.

In many parts of Australia private lines used for special purposes in connexion with the timber, mining, sugar, or other industries are often called tramways, but they are more properly railways and the traffic on them has nothing in common with that of the street tramways for the conveyance of passengers, which are dealt with in the present section.

(ii) Total Mileage Open and Classification of Lines. The following table shows, for each State, the total route-mileage of tramway lines open for general passenger traffic at 30th June, 1957, classified (a) according to the controlling authority; (b) according to gauge. Trolley-bus route-mileage also is shown.

TRAMWAY AND TROLLEY-BUS SERVICES: ROUTE-MILEAGE OPEN AT 30th JUNE, 1957.

(Miles.)

Particulars—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
	According	<b>G</b> то Со	NTROLLIN	<b>G А</b> итно	RITY.		
Government	 103 (	170	· · ·	1	33	35 1	341
Municipal	 		85	67			152
Total	 103	170	85	67	33	35	493
	A	CCORDIN	ig to Ga	UGE.			
Tramways	1 1		1	(			
5 ft. 3 in.	 1	4			1		4
4 ft. 8½ in.	 97	166	66	44	!		373
3 ft. 6 in.	 				11	9	20
Trolley-buses	 6		19	23	22	26	96
Total	 103	170	85	67	33	35	493

2. Summary of Operations, Australia.—The following table gives a summary of the working of all tramway systems in Australia for the years 1952-53 to 1956-57:—

TRAMWAY AND TROLLEY-BUS SERVICES: SUMMARY OF OPERATIONS, AUSTRALIA.(a)

Particulars.		1952–53.	1953-54.	1954-55.	1955-56.	1956-57.
Average mileage open for traffic	route-miles	530	529	527	528	505
T(1)	track-miles	990	992	994	1991	947
Tramcars(b)	<u>::</u>	2,833	2,714	2,626	2,619	2,416
Net increase in capital equipment duri	ng	1		1		
year(c)	£'000	911	861	910	1,034	644
Gross revenue( $c$ )( $d$ )	£'000	15,968	15,780	15,267	15,878	17,267
Working expenses(c)(e)	£'000	18,420	18,181	17,797	18,558	18,148
Net revenue(c)	£'000	-2,452	- 2,401	- 2,530	- 2,680	- 881
Interest(c)	£'000	628	656	702	835	897
Ratio of working expenses to gro		1				
revenue(c)	per cent.	115.36	115.22	116.57	116.88	105.10
Car-miles	'000	66,185	64,186	60,878	58,881	57,622
Gross revenue per car-mile(c)	pence	58.16	59.40	60.79	65.69	73.21
Working expenses per car-mile(c)	pence	67.09	68.43	70.86	76.78	76.94
Net revenue per car-mile(c)	. pence	- 8.93	- 9.03	-10.07	-11.09	- 3.73
Passenger-journeys	'000	652,987	637,289	619,279	593,284	534,707
Passenger-journeys per car-mile	••	9.87	9.93	10.17	10.08	9.28
Average gross revenue per passeng		_				
_ journey(c)	. pence	5.92	6.01	6.01	6.55	7.93
Persons employed at end of $year(c)(f)$	••	16,051	15,743	15,030	14,499	14,014
Accidents-		1				
Persons killed	••	(c) 72	(c) 59	(c) 58	42	45
" injured		(c) 3,255	(c) 2,993	(c) 3,177	3,077	3,154

<sup>(</sup>a) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services, (b) Includes trolley-buses. (c) Excludes Queensland trolley-buses. (d) Excludes government grants. (e) Includes provision of reserves for depreciation, etc. (f) Includes motor omnibus employees in South Australia, but excludes a number of employees in New South Wales and Western Australia who cannot be distributed between tramways and omnibuses.

Note.-Minus sign (-) denotes loss.

3. Traffic and Accidents.—Particulars of the traffic of electric tramways and the accidents which occurred in the movement of rolling stock during 1956-57 are shown for each State in the following table:—

TRAMWAY AND TROLLEY-BUS SERVICES: TRAFFIC AND ACCIDENTS, 1956-57.

		Average Mileage Open for Traffic.		Tram-	Car-	Pas- senger-	Pas- senger-	Accidents.		
State.		Route- miles.	Track- miles.	cars.	miles.	journeys.	journeys per Car- mile.	Persons Killed.	Persons Injured.	
New South Wales Victoria Queensland South Australia Western Australia Tasmania	::	108 172 85 75 33 32	207 320 156 146 59 59	646 857 438 217 130 128	13,500 23,574 9,395 6,329 1,512 (d) 3,312	144,718 213,412 101,331 40,702 11,499 (d)23,045	9.05 10.79 6.43 7.60	(c) 8	(b) 652 1,197 816 (c) 294 165 (d) 30	
Australia		505	947	2,416	57,622	534,707	9.28	45	3,154	

<sup>(</sup>a) Includes trolley-buses. (b) Excludes accidents to employees. (c) Includes particulars for municipal-owned omnibus services. (d) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services,

<sup>4.</sup> State Details.—The following table shows a summary of the operations of electric tramways in each State for the years 1954-55 to 1956-57.

#### TRAMWAY AND TROLLEY-BUS SERVICES: SUMMARY OF OPERATIONS.

Year ended 30th June—	Mileage Open for Traffic at 30th June.	in Capital Equip- ment during Year.	Gross Rev- enue. (a)	Working Expenses.	Net. Rev- enue.	In- terest.	Ratio of Working Ex- penses to Gross Revenue.	Car- miles.	Passenger- journeys.	Persons Employed at end of Year.
	(Route- miles.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	(£'000.)	cent.)	('000.)	('000.)	ļ
		·	<del></del>				· <del></del>		<u></u>	'
						H WALE				
1955	117		4,731		-1,685			14,663		
1956 1957	113 103	-206 $-215$			- 1,905 - 507		145.03 109.14	12,002 13,500	174,954	(c)3,923 (d)3,376
1557	103		3,312	0,015	<u></u>	<u>`</u>	107.14	13,500	144,710	(4)3,370
					Victo					
1955	175	1,389						23,173		5,409
1956 1957	173 170							24,082 23,574		5,264
1937	170	407	0,040	0,730	1 - 100	293	101.63	23,374	213,412	5,399
				•	Queens	LAND.				
1955	80						e100.46	10,245		(e)2,481
1956							e 98.29	10,208		
1957	85	(e) 87	(e)2,409	e 2,295	(e) 114	(e) 110	e 95.28	9,395	101,331	(e)2,228
				Sot	лн Аи	STRALIA				
1955	92			2,133	-346		119.39	7,646	54,909	(f)2,054
1956	83						111.94	7,225		(f)1,981
1957	67	142	1,524	1,709	-185	251	112.09	6,329	40,702	(f)2,025
				WES	TERN A	USTRALI	A.			
1955	31							2,205	17,289	445
1956	34							2,039	15,862	427
1957	33	12	376	479	-103	37	127.48	1,512	11,499	334
				7	<b>Tasman</b>	IA.(g)				
1955	(h) 30	48	611	666	<b>1</b> −55	5  37	109.14	2,946	23,118	568
1956	(h) 30							3,325	24,833	613
1957	(h) 35	151	768	860	-92	14	111.98	3,312	23,045	652
				1	Austra	LIA.(i)				
1955	525	910	15,267	17,797	J-2,530	702	116.57	60,878	619,279	15,030
1956			15,878		-2,680	835	116.88	58,881	593,284	14,499
1957	493	644	17,267		881	897	105.10	57,622	534,707	14,014
(a) F:	rcludes	povernme	nt grants.		(b) Inclu	ides pro	vision of	reserves	for deprecia	tion. etc.

<sup>(</sup>a) Excludes government grants. (b) Includes provision of reserves for depreciation, etc. (c) Excludes administrative staff not distributable between omnibus and tramway services. (d) Excludes 1,311 administrative staff and 585 salaried staff who cannot be distributed between omnibus and tramway services. (e) Excludes trolley-bus services, particulars of which are included with omnibus services, for Includes motor omnibus employees of Adelaide Municipal Tramways Trust. (g) Includes particulars of Hobart and Launceston Municipal Council Omnibus Services. (h) Tramway and trolley-bus mileage only. At 30th June, 1957, Hobart and Launceston Municipal Council Omnibus route-mileage was 78 miles. (i) See notes (a) to (h).

#### D. MOTOR OMNIBUS SERVICES.

1. General.—Motor omnibus services have been in operation for some years in the capital cities and many of the larger towns of Australia. Government and municipal authorities operate certain services and the others are run by private operators; in the States the former are run in conjunction with the existing electric tramway systems.

2. Government and Municipal Services.—(i) Summary of Operations, States. The following table gives a summary for the year 1956-57 of the operations of omnibus systems controlled by government and municipal authorities.

MOTOR OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, 1956-57.

Particula	ırs.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.
Length of route		miles	493	99	413	71		688		4,869
Omnibuses			1,313	269	260	236	236	115	60	2,489
Net increase in capi	tal equ	ipment !	-				, ,		. ,	
during year		£'000	1,278	121		426	119	(b) $-4$	64	2,126
Gross revenue(c)		£'000	7,884	1,192	(a) 994	765	1.055	(b) 178	138	12,206
Working expenses		£'000	8.691	1.447	(a)1,173	1.008	1.122	(b) 164	206	13.811
Omnibus-miles		.000	32,868	5,907		4,605		(b) 976	944	58,439
Passenger-journeys		2000	179,575	34,640	28,150	21.488		(b) 914	3.627	294,568
Persons employed			(d) 5,317	943	(a) 713	(e)	(d) 132	(b) 44	142	(f) 7,291

(a) Includes Brisbane City Council trolley-bus service.

Municipal Council Services.
(c) Excludes government grants.
between omnibus and tramway services.
(e) Not available; employees are interchangeable with electric tramway employees and are included therewith (see p. 404).

(f) See notes applicable to individual States.

Note.—Minus sign (-) denotes decrease.

(ii) Summary of Operations, Australia. The following table gives a summary of the working of motor omnibus services in Australia under government and municipal control during each of the years 1952-53 to 1956-57.

MOTOR OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, AUSTRALIA.

Particulars.		1952-53.	1953-54.	1954–55.	1955-56.	1956-57.
Length of route	miles	4,562	4,612	4,492	4,571	4,869
Omnibuses		2,258	2,302	2,301	2,392	2,489
Net increase in capital equip-					ſ	
ment during year $(a)(b)$	£'000	(c) 1,494	(c) 711	545	765	2,126
Gross revenue (a)(b)	£,000	9,320		9,613	9,592	12,206
Working expenses $(a)(b)$	£'000	11,465	11,387	12,063	12,970	13,811
Net revenue( $a$ )( $b$ )	£,000	-2,145	-2,534	-2,450	-3,378	~1,605
Ratio of working expenses to		[	1		· '	-
gross revenue $(a)(b)$	per cent.	123.01	128.61	125.48	135.22	113.15
Omnibus-miles(a)	'000	55,382	56,894	57.513	57,809	58,439
Gross revenue per omnibus-		,	,			•
mile(a)(b)	pence	40.18	37.07	39.70	39.23	49.27
Working expenses per omnibus-	F					
mile(a)(b)	pence	49.43	47.68	49.81	53.05	55.75
Net revenue per omnibus-mileab	pence	-9.25		-10.11	-13.82	
Passenger-journeys(a)	1000	334,907		346,749	333,761	294,568
Passenger-journeys per omnibus-	500	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,,,,,,,		,,,,,,,	_,,,,,,
mile(a)		6.05	5.97	6.03	5.77	5.04
Average gross revenue per	••	0.05	3.57	3.03	.,,,	3.01
passenger-journey $(a)(b)$	pence	6.57	6.12	6.47	6.68	9.56
Persons employed $(d)$	pence 	7,663		7,225		

<sup>(</sup>a) Excludes Hobart and Launceston Municipal Council Services, (b) Includes Brisbane City Council trolley-bus service. (c) Excludes South Australia. (d) See relevant notes to table above.

Note.—Minus sign (-) denotes loss.

<sup>3.</sup> Private Services.—(i) General. Particulars of motor omnibus services under the control of private operators are recorded in the States of New South Wales, South Australia and Western Australia only.

In New South Wales, particulars are compiled for the Metropolitan, Newcastle and Wollongong Transport districts only, but in South Australia and in Western Australia particulars of all services throughout the State are included.

(ii) Summary of Operations. The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, South Australia and Western Australia during each of the years 1954-55 to 1956-57:—

MOTOR OMNIBUS SERVICES: PRIVATE.

Year.	Year.		Omnibus- miles.	Passenger- journeys.	Value of Plant and Equipment.	Gross Revenue.	Persons Employed
			('000.)	('000.)	(£'000.)	(£'000.)	
			New Sou	TH WALES.(	a)		
1954–55		836	20,587	89,508	1,032	2,536	1,340
1955-56		808	24,335	96,759	1,384	3,216	1,583
1956-57	••	848	24,449	93,761	1,424	3,676	1,635
			South .	Australia.			
1954-55		(b)	6,213	14,058	h	r 669	h
1955–56		113	6,082	13,508	(c)	707	(c)
1956–57		117	6,045	13,254	J "	712	J '
			Western	Australia			
1954–55		388	13,190	33,860	1,024	1,674	906
1955-56		372	12,172	32,607	1,125	1,581	827
1956-57		378	11,801	30,802	1,142	1,594	837

### E. FERRY (PASSENGER) SERVICES.

- 1. General.—Ferry services to transport passengers are operated in the following States—New South Wales, at Sydney and Newcastle; Western Australia, on the Swan River at Perth; Tasmania, on the Derwent River at Hobart, on the Mersey River at Devonport and across D'Entrecasteaux Channel to Bruny Island. Control is exercised both by governmental authorities and by private operators. In Victoria and Queensland the services operated are not extensive, and there are no ferry services in South Australia.
- Summary of Operations.—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1954-55 to 1956-57 are summarized in the following table. Particulars of passengers carried on vehicular ferries are not included.

### FERRY (PASSENGER) SERVICES.

	Year.		Number of Vessels.	Passenger Accom- modation.	Passenger- journeys.	Gross Revenue.	Persons Employed.	
					_	('000.)	(£.)	]
		Ne	w Sou	TH WALES—	Sydney an	d Newcast	LE.	
1954-55				38	22,055	18,936	785,827	350
1955-56				39	22,696	18,056	741,695	346
1956–57	••			40	22,950	16,810	875,000	341
			v	Vestern Au	STRALIA—P	ERTH.		
1954-55		·		4 ,	785	469	11.480	<u> </u>
1955-56				4 [	785	437	9,944	10
1956–57				4	785	445	12,836	11
			TASM	ania—Hoba	RT AND DE	VONPORT.		
1954-55				6	1,607	1,355	33,863	35
1955-56				5	1,582	1,034	29,531	33
						707	29,632	24

#### F. MOTOR VEHICLES.

- 1. Motor Industry.—Chapter VII.—Manufacturing Industry contains summarized information on the motor industry of Australia and includes therein some data on the imports of motor bodies and chassis. Chapter X.—Trade contains further data on imports, including those of petroleum products.
- 2. Registration.—(i) General. The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia. The following statement indicates the procedure followed at 30th June, 1957 in each of the States and Territories, and the fees for registration and licensing and the amount of motor tax payable where such tax is not incorporated in the registration fees. Complete or partial exemption from the payment of registration fees or motor tax is usually granted for certain vehicles, such as ambulances, fire-brigade vehicles, those owned by farmers and used solely for carting the produce of, or requisites for, their farms, Government-owned vehicles, etc.

In all States except South Australia, before a licence to drive a motor vehicle or ride a motor cycle is issued the applicant must, by passing the prescribed test, satisfy the competent authority that he is capable of driving or riding the vehicle concerned. All vehicles, before being registered, must be tested for road-worthiness.

(ii) New South Wales. The registration of vehicles, licensing of drivers, and collection of various taxes, fees and charges are functions of the Commissioner for Motor Transport. By arrangement with the Commissioner for Motor Transport, the police effect the registrations and collect the taxes and fees in certain areas. The normal term of registrations and licences and renewals thereof is a year, but quarterly registrations of motor vehicles are permitted under certain conditions.

A driver's licence costs £1 a year for a motor vehicle and a rider's licence 15s. a year for a motor cycle. A learner's permit, which has a currency of two months, costs 5s.

Annual registration fees are as follows:—Motor cycles, 15s.; motor cars, lorries, trailers and tractors, £1 10s.; taxi cabs, hire cars and motor omnibuses—metropolitan area and cities of Greater Wollongong and Newcastle £5, country £3; traders' plates—motor cycles, £3 3s. 6d., other vehicles, £13 15s. An additional fee of 10s. a year is payable in respect of any vehicle used in trade or business.

- A motor tax is payable in addition to the registration fee. For motor cycles the tax is:—without side-car, £1 7s.; with side-car or box, £2 7s. 6d. For vehicles other than motor cycles, the tax is payable on the unladen weight of the vehicle. The taxes payable for different classes of vehicles are as follows:—
- (a) Motor Cars (including taxi-cabs, etc.). The rate commences at 3s. 6d. a ½ cwt. but decreases slightly as the weight of the vehicle increases.

- (b) Motor Lorries and Trailers. The tax payable commences at £1 15s. for a vehicle of 5 cwt. or less, and rises by a proportionately greater amount for each increase of 5 cwt., so that the average amount payable per cwt. increases with the weight of the vehicle.
- (c) Tractors. The rates of tax are the same as for motor lorries, subject to a maximum of £31 14s. 6d.
- (d) Motor Omnibuses. The rate commences at 5s. a ½ cwt., but decreases slightly as the weight of the vehicle increases.

In the case of vehicles with solid rubber tyres, the rates shown above are increased by 25 per cent. Double the ordinary rates of tax are payable in respect of vehicles powered by a diesel engine.

(iii) Victoria. The registration of motor vehicles and the licensing of drivers and riders is controlled by the Chief Commissioner of Police under provisions of the Motor Car Act 1951. The Motor Car (Fees) Act 1956 provided for an increase, as from 1st January, 1957, in the rates payable for the registration of motor vehicles. The annual fees payable for the registration of motor vehicles and licensing of drivers and riders are as follows:—

Motor cycles (without trailer, forecar or side-car attached)

Motor cycles (with trailer, etc.) .. £2 5s.

Motor cars (private use)

4s. 6d. for each power-weight unit. (The number of power-weight units equals the sum of the horsepower and the weight in cwt. of a motor car unladen and ready for use.)

£1 10s. to £6, according to the unladen

Trailers attached to motor cars ...

weight and type of tyres.

on £7 10s. plus additional fees for each passenger
erroseat.

type of tyres.

Motor omnibuses (operating on specified routes in the metropolitan area)

Motor cars used for carrying passengers or goods for hire or in the course of trade

Motor cars (constructed for the carriage of goods) owned by primary producers and used solely in connexion with their business From 5s. 6d. to 13s. 3d. for each power-weight unit, according to the unladen weight and

From 3s. 9d. to 8s. for each power-weight unit, according to the number of wheels and type of tyres. (When more than one motor car is so owned, the rate shall apply to one motor car only.)

Drivers' and riders' licences .. 10s.

Notwithstanding anything in the foregoing paragraphs, the minimum fee payable for the registration of a motor vehicle (other than a motor cycle) shall be £4 10s.

Where a vehicle is powered by a diesel engine the registration fee is double that charged for a vehicle of the same power-weight units fitted with a petrol engine.

(iv) Queensland. The Main Roads Department controls the registration of motor vehicles within the State. The rates are as follows:—Annual registration fees for pneumatictyred vehicles propelled by petrol engines are determined by adding the horsepower to the weight in cwt. of the vehicle ready for use, and charging 6s. a unit. Vehicles fitted with compression ignition (diesel) engines are charged at double the foregoing rates. For solidtyred vehicles propelled by petrol engines the sum of the horsepower, weight of the vehicle, and maximum permissible load (in cwt.) is charged at 5s. a unit if the maximum permissible load is not over 2 tons, and 9s. a unit if over 2 tons, whilst diesel units are rated at 9s. 9d. and 18s. a unit respectively. Registration fees for trailers are determined at the rate of 6s. a cwt., and for caravan trailers at the rate of 9s. a cwt. Traction engines are registered at the fixed rate of £3 3s. a year. The fees payable according to these rates on motor cars range from £4 16s. to approximately £25. On pneumatic-tyred trucks and utilities, the fees are from about £12 12s. to over £15 for a truck with a capacity of 1 ton, and up to £30 for 5-ton trucks. Fees for motor cycles are £2 5s., or £3 8s. with a side-car. With the above-mentioned fees, an annual driving fee of 7s. 6d. for a private motor vehicle or motor cycle or 12s. 6d. for a commercial vehicle must be paid to the Main Roads Department.

The driver of any motor vehicle or the rider of any motor cycle must hold a licence from the Commissioner of Police. Licences are endorsed according to the types of vehicles in the operation of which the holder has shown proficiency and which he or she is permitted

to operate. The period of currency of a licence varies according to the age of the applicant, namely:—Aged under 41 years, 10 years; 41 years and under 46 years, until 51st birthday; 46 years and under 62 years, 5 years; 62 years and under 66 years, until 67th birthday; 66 years and over, 1 year.

- (v) South Australia. Under the provisions of the Road Traffic Act 1934-1956, the Registrar of Motor Vehicles controls the registration of all motor vehicles and the granting of licences. The fee prescribed for a motor vehicle propelled by a compression ignition (diesel) engine is double that for a vehicle of the same horsepower and weight propelled by a petrol engine. The power-weight unit is the basis for the calculation of registration fees. The period of registration is for six or twelve months, commencing with the date of registration. Primary producers' vehicles are registered at 50 per cent. of the ordinary fee. The ordinary fees payable for yearly registration of motor vehicles, other than motor cycles and trailers, extend from a minimum of £5 10s. for 25 power-weight units or less to £54 10s. for 160 power-weight units. The ordinary fees for motor cycles are:—solo, up to 1 cwt.; £1 10s.; over 1 cwt., £2 5s. with side-car attached, £3. Fees for trailers vary according to the weight of the vehicle and range from £2 5s. for 1 ton or less to £4 10s. for 2 tons or more. An extra 50 per cent. is charged for trailers with solid rubber tyres and 100 per cent. for those with metal tyres. Fees for drivers' and riders' licences are:—for any motor vehicle, £1; for a motor cycle only, 10s.
- (vi) Western Australia. The Traffic Act 1919-1956 provides for the registration of motor vehicles by (i) the Commissioner of Police for the Metropolitan Traffic District and (ii) individual Local Government Authorities (10 Municipalities and 114 District Road Boards) throughout the remainder of the State. Ministerial supervision is exercised by the Minister for Local Government.

The basis on which fees are assessed was revised as from 14th January, 1957. Annual fees for motor vehicles, other than motor cycles, trailers and semi-trailers, are now assessed on a power-weight unit basis and R.A.C. horsepower rating is used instead of the Dendy Marshall formula. The power-weight of a vehicle is the weight in cwt. of the vehicle ready for use plus the rated horsepower. The annual fees for cars, commercial vehicles and tractors are as follows:—cars and tractors (other than prime mover type), 4s. for each power-weight unit; commercial vehicles and prime mover type tractors, from 5s. 3d. a unit to 9s. a unit where the number of units exceeds 100. Trailers and caravans are assessed on the unladen weight and semi-trailers (the trailer portion of an articulated vehicle) on a load plus weight The fees for caravans vary from 3s. to 5s. a cwt., for trailers from 5s. to £1 a cwt. and for semi-trailers (ascending on a differential scale) from £1 10s. where the weight of the semitrailer plus the declared maximum load does not exceed 10 cwt. to £72 for the first 10 tons and £6 for each additional ton where the load plus weight exceeds 10 tons. Double the ordinary fees are charged for vehicles propelled by engines using fuel other than petrol (e.g., diesel, kerosene, gas, electricity, etc.) and additional fees are charged for certain other vehicles, as follows:-80 per cent. extra if fitted with metal tyres, 40 per cent. if fitted with solid rubber tyres and 10 per cent. if fitted with cushion tyres (i.e., neither solid nor pneumatic).

Annual registration fees for motor cycles are: -solo, £2; with side-car attached, £3.

Vehicles used in the carriage of either passengers or goods for hire or reward (other than an omnibus licenced under the State Transport Co-ordination Act 1933-1948) are further subject to the additional licence fee of 15s, a wheel or pair of dual wheels.

The issue of drivers', riders' and conductors' licences is the sole prerogative of the Commissioner of Police.

The maximum period of a licence is twelve months, although short-term renewals may be effected at quarterly intervals. Date-to-date licensing periods operate in the metropolitan traffic area; elsewhere, a quarterly system of "staggering", whereby the last day of each quarter is an expiry date, is in operation.

(vii) Tasmania. By the Transport Act 1938 the Transport Commission assumed control of the registration and taxation of motor vehicles, the licensing of drivers and the regulation of commercial transport. Annual registration fees are as follows:—Motor vehicles other than motor cycles and trailers, £1 10s.; trailers, £1; motor cycles — less than 1 h.p., £2; 1 h.p. and over, £2 10s. Charges for transfer of registration and duplicate certificates are 5s. and 1s. respectively. A licence to drive or ride any motor vehicle costs 10s. a year.

Motor tax is calculated on a power-weight basis—i.e., unladen weight units and horse-power. Separate rates are provided for lorries, for trailers and for other motor vehicles. For lorries and trailers, every ½ cwt., and for other motor vehicles every cwt., constitutes a weight unit. The rate of tax for lorries is 3s. 6d. a unit and for motor vehicles other than lorries and trailers, 4s. 6d. a unit. In the case of a trailer, if the number of weight units does not exceed ten, no tax is payable, but for every unit exceeding ten the rate is 3s. 6d. The rate on motor vehicles propelled otherwise than by any volatile spirit by means of an internal combustion engine (steam, electric, diesel, or petrol-electric engines) is 8s. 3d. a unit.

(viii) Northern Territory. The registration of motor vehicles and the licensing of drivers and riders is controlled by the Registrar of Motor Vehicles, under the provisions of the Motor Vehicles Ordinance 1949-1954.

Annual registration fees for motor cars, motor lorries and tractors and motor omnibuses vary according to whether the vehicle is fitted with (a) pneumatic, semi-pneumatic rubber or super-resilient tyres or (b) non-pneumatic or solid tyres. The fees payable (for each ½ cwt.) are as follows:—motor cars, (a) 2s. 9d., (b) 3s. 9d.; motor lorries and tractors, (a) 2s. 9d., (b) 3s. 6d.; motor omnibuses (a) 4s. 3d., (b) 5s. 6d. For British manufactured vehicles these rates are reduced by 6d. a ½ cwt. A concession of 50 per cent. is allowed for (a) a motor lorry or tractor owned and used by a farmer or grazier solely for transporting his own produce or requisites for his business and (b) a motor lorry owned and used by a person engaged, on his own account and not in association with more than two other persons, in mining, hunting or trapping. The maximum fee for a motor tractor is £15.

Registration fees for motor cycles are as follows:—without side-car—British manufactured, £1 1s., other, £1 2s. 6d.; with side-car—British manufactured, £1 18s., other, £2. For other motor vehicles the fees are:—British manufactured, 3s. a  $\frac{1}{2}$  cwt., other, 3s. 6d. a  $\frac{1}{2}$  cwt.

The annual fee for a licence to ride a motor cycle is 5s. and to drive any other motor vehicle 10s. Where the licence is in respect of a motor lorry with a carrying capacity of more than one ton, a motor omnibus, a hire car, or a motor vehicle licensed to carry goods or to carry workmen to and from their work, an additional 10s. is payable. The fee for the use of one trader's plate is 10s.

(ix) Australian Capital Territory. The registration of motor vehicles and the licensing of drivers and riders in the Australian Capital Territory is controlled by the Services Branch of the Department of the Interior under the provisions of the Motor Traffic Ordinance 1936–1956.

Annual registration fees for motor cars, lorries and omnibuses are as follows (rates are for each  $\frac{1}{2}$  cwt. of unladen weight):—motor cars, 3s. 6d. a  $\frac{1}{2}$  cwt.; motor lorries—not over 40 cwt. unladen weight, 3s. 6d.; over 40 to 80 cwt., 4s. 3d.; over 80 to 120 cwt., 5s.; over 120 cwt., 5s. 9d.; motor omnibuses, 5s. Double these rates are payable for vehicles propelled by diesel engines. Fees for other motor vehicles are:—motor cycles—without side-car, £1 10s., with side-car, £2 10s.; motor tractors—primary producers', £1, other, £5; other motor vehicles, £5. The rates charged for the registration of trailers are:—domestic, social or farmers' purposes only—unladen weight not over 5 cwt., 10s.; over 5 to 10 cwt., £1; over 10 cwt., £1 for every 10 cwt. or part thereof; other trailers—2s. 9d. a  $\frac{1}{2}$  cwt. of the unladen weight.

Concessions are available in the case of vehicles owned by primary producers, totally and permanently incapacitated ex-servicemen, clergymen and certain members of the staffs of diplomatic missions.

The annual fees for drivers' and riders' licences are:—car, lorry or motor cycle, 10s., other vehicles, 12s. 6d.

- 3. Taxi-cabs and Other Hire Vehicles.—In all the capital cities and in many of the provincial centres, taxi-cabs and other vehicles ply for hire under licence granted by either the Commissioner of Police or the local government authority concerned. As most of these vehicles are independently controlled by individuals or small companies, it has not been possible to obtain complete data in respect of their operations.
- 4. Motor Omnibuses.—In both urban and provincial centres motor omnibus traffic has assumed considerable proportions during recent years and in some States the railway and tramway systems run motor services complementary to their main services. There has been a considerable replacement also, during the last few years, of existing tramway services by trolley-bus and motor omnibus services. (See pp. 402-6.)
- 5. Motor Vehicles on the Register, etc.—(i) Registrations and Revenue. The following table shows particulars of the registration of motor vehicles, licences issued and revenue received for 1956-57 and a summary for Australia for each of the years 1952-53 to 1956-57. It should be noted that in Victoria registration is made on the basis of the purpose for which the vehicle is to be used; consequently, motor car registrations are overstated by the inclusion of commercial vehicles registered for private use.

A graph showing for all motor vehicles other than motor cycles the registrations in force at 30th June of each year from 1925 to 1957 will be found on p. 380.

## MOTOR VEHICLES: REGISTRATIONS AND REVENUE.

	Numbe	r of Moto 30t	r Vehicle h June.(a	es Registe r)	red at	Number of	Gross	Revenue	derived f	rom-
State or Territory, and Year.	Motor Cars.(b)	Com- mercial Vehicles.	Motor Cycles.	Total.	Per 1,000 of Popu- lation at 30th June.	Drivers' and Riders' Licences in force at 30th June.	and Motor Tax.	Licences.		Total.
<del></del>	l	J			_		(£'000.)	(£'000.)	(£'000.)	(£'000.)
			STATES	AND TE	RITORII	s, 1956-	-57.			
N.S.W Victoria (d) Queensland S. Aust W. Aust Tasmania Nor. Terr. A.C.T	515,941 527,859 190,134 164,210 103,788 52,716 2,419 7,674	155,100 134,638 66,198 66,030 22,893 3,574	25,623 20,312 19,799 13,146 4,391 664	708,582 345,084 250,207 182,964 80,000 6,657	265 247 287 264 244 350	(e) 308,705 229,739 90,988 7,961	6,975 4,633 3,302 1,591 858 37	953 143 345 134 47	1,574 993 92 133 144	
Australia	d1,564,741	d706,721	119,963	2,391,425	248	∫2575896	27,379	2,743	4,265	34,387
	1	<u> </u>	St	JMMARY,	Austr	ALIA.		1		
1952–53 1953–54 1954–55 1955–56 1956–57	(d) 1,107,659 1,199,833 1,347,082 1,472,259 1,564,741	606,899 649,609 678,857 706,721	147,639 140,614 133,029 125,575 119,963	1,834,742 1,947,346 2,129,720 2,276,691 2,391,425	208 218 231 241 248	(g) 2,288,370 2,148,119 2,295,854 12,457,246 2,575,896	20,450 22,951 24,438	1,579 1,758 1,875	4,382 3,764 3,385	26,411 28,473

(a) Excludes, at 30th June, 1957, trailers (152,207), road tractors, etc. (31,947), and dealers' plates (10,815). Excludes Northern Territory registrations prior to 1953-54. (b) Includes taxis and hire cars. (c) Includes utilities, panel vans, lorries, omnibuses, and station wagons. (d) See reference to Victoria above. (e) As from 1st October, 1952, drivers' and riders' licences have not been issued on an annual basis in Queensland. (f) Excludes Queensland. (g) Excludes Queensland from 1953-54.

NOTE.—All Commonwealth-owned vehicles are included except those belonging to the Defence Services. Prior to 1st January, 1956, Department of the Navy vehicles were also included.

(ii) Relation to Population. The table hereunder shows the number of vehicles (excluding motor cycles) registered per 1,000 of population in each State and Territory at 31st December, 1921, and at 30th June for each of the years 1939 and 1953 to 1957.

MOTOR VEHICLES	(EXCLUDING	MOTOR	CYCLES)	REGISTERED	PER 1,000 O	F
	F	OPULAT	ION.			

Date.	···	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
31st Dec., 1921		15	16	8	24.	12	13	(a)		( <i>b</i> ) 15
30th June, 1939		107	125	118	137	133	96	218	174	118
,, 1953		168	211	188	234	204	180	(a)	226	b 192
" 1954		179	215	199	245	217	193	206	241	201
" 1955		193	241	216	257	238	212	269	267	220
,, 1956		204	250	224	257	243	223	272	277	228
,, 1957		213	256	232	264	245	231	315	273	236

(a) Not available. (b) Excludes Northern Territory.

Note.—See Note to previous table.

6. New Vehicles Registered.—(i) States and Territories, 1956-57. The following table shows the number of new vehicles registered in each State and Territory during 1956-57. A graph showing the number of new motor vehicles (excluding motor cycles) registered during each of the years 1928-29 to 1956-57 will be found on p. 380.

#### NEW MOTOR VEHICLES REGISTERED, 1956-57.

Vehicles.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Motor cars(b) Commercial vehi-	51,513 22,463	47,603 13,821	<b>1</b>	15,689 5,702	9,321 4,418	5,307 1,981	287 389		a 149,695
cles, etc.(c) Motor cycles	2,919	1,999	1,659		1,192	341	60	44	
Total	76,895	63,423	30,620	22,832	14,931	7,629	736	1,251	218,317

<sup>(</sup>a) See para. 5 on p. 411. (b) Includes taxis and hire cars. vans, lorries, omnibuses and station wagons.

NOTE. -- See NOTE to table on p. 411.

(ii) Australia. Particulars of the number of new vehicles registered in Australia during each of the years 1952-53 to 1956-57 are shown in the following table:—

#### NEW MOTOR VEHICLES REGISTERED: AUSTRALIA.

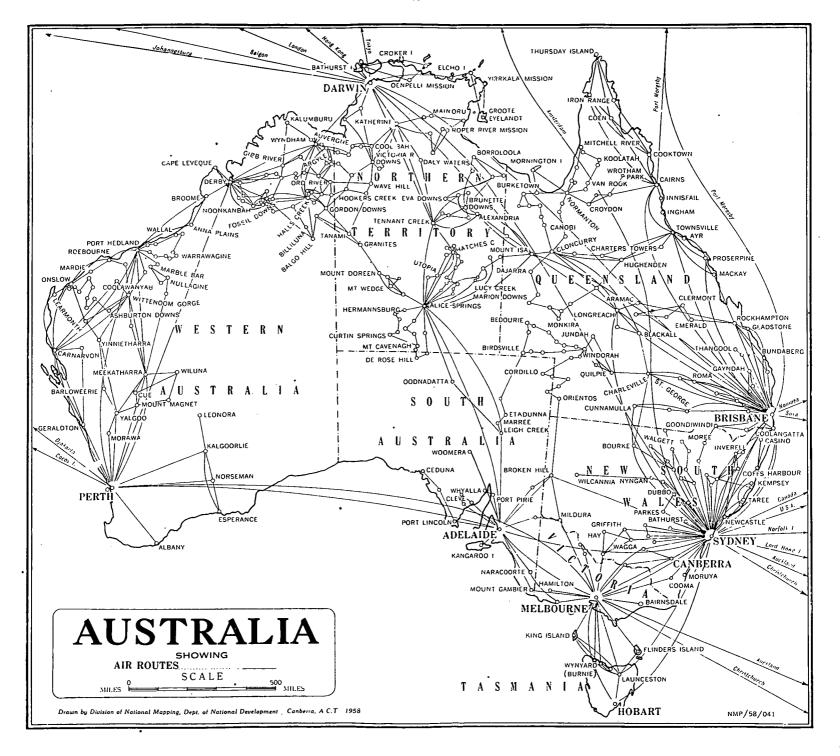
Ve	hicles.	 1952-53.	1953–54.	1954-55.	1955–56.	1956-57.
Motor cars (a)(b) Commercial vehicles, Motor cycles	 etc.(b)(c)	93,417 52,290 (d)11,289	57,402	67,188		58,967
Total		 d 156,996	193,857	245,271	243,440	218,317

<sup>(</sup>a) Includes taxis and hire cars. (b) See para. 5 on p. 411. (c) Includes utilities, panel vans, lorries, omnibuses and station wagons. (d) Excludes motor cycles registered in the Northern Territory.

Nore.-See Nore to table on p. 411.

7. World Motor Vehicle Statistics, 1956.—Particulars of motor vehicle registrations in the principal countries of the world may be found in the annual mimeographed publication Registrations of New Motor Vehicles. This information is derived from Automobile Facts and Figures. For reasons of space detailed particulars cannot be given here, but the same source shows that in 1956 there were 102,655,000 motor cars, trucks and omnibuses registered in various countries of the world. This was an increase of 7 per cent. on the figure for the previous year, 96,001,000. Of these vehicles, 65,213,000 or 64 per cent. of the world total were in the United States of America, and Australian registrations amounted to 2 per cent.

<sup>(</sup>c) Includes utilities, panel



• •

8. Census of Motor Vehicles, 31st December, 1955.—A census of motor vehicles (including motor cycles) on the register in each State and Territory at 31st December, 1955 was conducted by the Commonwealth Statistician in collaboration with the State Government Statisticians and Road Transport Authorities. The census covered only those items normally shown on motor registration certificates, such as make, year of model, type of vehicle, horsepower, body type, carrying capacity, unladen weight and motive power. Results have been published in a series of bulletins which give details for each State, for the Northern Territory and the Australian Capital Territory and for Australia as a whole. Less detailed figures in respect of new vehicles only are published in the Monthly Bulletin of Registrations of New Motor Vehicles. Information contained therein includes the make, type and R.A.C. horsepower of new motor vehicles registered in each State and Territory.

A summary for each State and Territory of the number of motor vehicles of each type on the register at 31st December, 1955 is given in the following table.

### MOTOR VEHICLES ON THE REGISTER AT 31st DECEMBER, 1955.

Type of Vehicle.	N.S.W	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
			Мото	r Cars.					
Sedan Open Other	416,077 52,936 743			127,582 21,432 148	11,074	41,140 4,751 63	1,342 199	5,938 536	1,194,37 160,27 2,03
Total Cars		422,543	167,416	149,162		45,954	1,552	6,478	1,356,68
Proportion of Total (ex- cluding Motor Cycles)%		;	55.9	67.6	60.1	67.3	33.9	72.1	66.
		(	Commercia	L VEHICLI	ES.				
Station Wagons Omnibuses Utilities Panel Vans Lorries—	5,257 3,653 117,677 21,411	2,580 75,721	1,853 1,043 } 91,430	1,344 973 33,837 5,256	30,135	392 660 10,228 2,512	66 42 1,645 82	135 92 1,297 ( 238 (	
Platform Van Tipper Articulated or Semi-	63,517 1,948 8,434	5,781 6,369	$\rightarrow$ (d)36.027	24,561 480 3,150	21,946 1,193 1,444	6,929 78 835	789 20 265,	450 ( 15 ( 212 (	(c) 9,513 (c) 20,709
trailer Other	5,011 664	4,754 1,321	}(f) 1,362	1,340 134	613 49	408 133	63 10	32 ( 9 (	(g) 13,583 (c) 2,320
Total Lorries	79,574	68,509	37,389	29,665	25,245	8,383	1,147	718	250,630
Other Total Commercial	2,751	1,853	303	462	286	161	47	21	5,884
Vehicles	230,323	174,266	132,018	71,537	62,372	22,336	3,029	2,501	698,382
Proportion of Total (ex- cluding Motor Cycles)%	32.9	29.2	44.1	32.4	39.9	32.7	66.1	27.9	34.0
Т	OTAL M	1otor \	/EHICLES (E	EXCLUDING	в Мото	R CYCL	ES).		
Total Motor Vehicles (ex- cluding Motor Cycles)	700,079	596,809	299,434	220,699	156,193	68,290	4,581	8,979	2,055,064
		<del>'</del>	Motor	Cycles.	<u></u>		<u></u>		
Motor Cycles	36,953	26,406	21,041	23,704	13,012	5,073	460	480	127,129

<sup>(</sup>a) Under the system of registration in operation in Queensland it is not possible to distinguish between the various types of lorries shown for the other States and Territories.

(b) Includes Queensland panel vans.

(c) Excludes Queensland.

(d) Rigid type; see note (a).

(f) Towing units; see note (a).

(g) Includes Queensland towing units.

#### G. ROAD TRAFFIC ACCIDENTS.

- 1. General.—Prior to the year 1949-50, it was not possible to make proper comparisons between States of the number of accidents recorded, because of the differences in legislation regarding the reporting of accidents and the degree to which the legislation could be enforced. However, arrangements were made, in co-operation with the Australian Road Safety Council and the various police and transport authorities concerned, to obtain the numbers of road traffic accidents on a comparable basis from all States and the Australian Capital Territory in respect of the year ended 30th June, 1950 and subsequent years. This was achieved by restricting the statistics so that they related only to those accidents which resulted in death or bodily injury to any person, or in damage in excess of £10 to property. It is considered that there was little difference in the recording of accidents as between States for the years 1949-50 to 1953-54, except in the case of Western Australia, where statistics shown relate to all accidents which occurred in the metropolitan area and, in the remainder of the State, for periods prior to 1st January, 1953, only to those which involved fatal or "near-fatal" injury. Statistics are now collected on a comparable basis for all States except Tasmania, where, under legislation passed on 10th August, 1954, it is no longer obligatory to report accidents involving only damage to property. It should be noted, however, that the comparability of the statistics between States even on this basis still depends on the degree to which accidents so defined are in fact recorded by the police.
- 2. Total Accidents Recorded.—(i) States, 1955-56 and 1956-57. The following table gives a summary of accidents recorded and casualties in each State and the Australian Capital Territory for the years 1955-56 and 1956-57.

#### ROAD TRAFFIC ACCIDENTS(a): ACCIDENTS RECORDED AND CASUALTIES.

1		Pe	rsons Kille	ed.	Per	sons Injure	d.( <i>c</i> )				
Total Accidents Recorded. (a)	Involving	Number.	Per 100,000 of Mean Popu- lation.	Per 10,000 Motor Vehicles Regis- tered.	Number.	Per 100,000 of Mean Popu- lation.	Per 10,000 Motor Vehicles Regis- tered.				
1955–56.											
38,823 14,781	12,917 10,606	808 582	23 23	11 9	17,047 13,483	484 525	230 207				
25,557				9		678	286 157				
11,312		185	28	10		613	236				
2,259	874	72	23	10	1,046	328	140				
		1110		10							
	38,823 14,781 25,557 12,530 11,312	Accidents Recorded. (a) Casual-ties. (b)   38.823 12,917 14,781 10,606 25,557 7,116 12,530 2,886 11,312 3,211 2,259 874 376 156	Total Accidents Involving Casual-ties. (b)  Number.  195  38,823 12,917 808 14,781 10,606 582 25,557 7,116 298 12,530 2,886 167 11,312 3,211 185 2,259 376 1156 7	Total Accidents Involving Casual-ties. (b) Number. Per 100,000 of Mean Population.  1955–56.  38,823 12,917 808 23 14,781 10,606 582 23 25,557 7,116 298 22 12,530 2,886 167 20 11,312 3,211 185 28 2,259 874 72 23 376 156 7 21	Total Accidents Involving Casual-ties. (b)  Number.   Per 100,000 of Mean Population.   Population.   Per 100,000 of Mean Population.   Population.   Per 100,000 of Mean Popula	Total Accidents Involving Casual-ties. (b)  Number. Per 10,000 of Mean Population. Registered.  1955–56.  1955–56.  1955–56.  1955–56.	Total Accidents Involving Casual- Recorded. (a) Number.   Per 10,000 of Mean Population.   Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 10,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number.   Per 100,000 of Mean Population.   Number				

# 1956-57.

New South Wales	39,725	13,473 (	774	22	10	17,321	483	220
Victoria	15,505	10,804	589	22	8	14,120	535	202
Oucensland	27,553	7,527	325	24	10	9,800	710	290
South Australia	13,189	3,142	185	21	8	3,944	458	160
W. Australia	11,214	3,082	168	25	9	3,921	573	216
Tasmania(d)	2,140	852	65	20	8	1,107	339	143
Aust. Cap. Terr.	346	186	7	19	7	237	658	223
Total	109,672	39,066	2,113	22	9	50,450	530	216

(a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death or injury to persons or, except in Tasmania, damage exceeding £10 to property. (b) Accidents involving persons killed, and persons injured to an extent requiring surgical or medical treatment. (c) Persons injured to an extent requiring surgical or medical treatment. (d) See reference to Tasmanian legislation above.

<sup>(</sup>ii) Australia, 1952-53 to 1956-57. A summary for Australia of accidents recorded in each of the years 1952-53 to 1956-57 is shown in the following table.

#### ROAD TRAFFIC ACCIDENTS(a): ACCIDENTS RECORDED, AUSTRALIA.

Particulars.	1952–53.	1953–54.	1954-55.	1955-56.	1956–57.
Total accidents recorded(a) Accidents involving casualties(b)	75,295	87,224	97,758	105,638	109,672
	31,635	35,523	36,602	37,766	39,066

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares and which caused death or injury to persons or, except in Tasmania, damage exceeding £10 to property. See reference to Tasmanian legislation on p. 416. (b) Accidents involving persons killed, and persons injured to an extent requiring surgical or medical treatment.

A summary for persons killed or injured will be found on page 419.

(iii) Riders, Drivers, Pedestrians, etc., Killed or Injured. The following tables show the number of persons killed and the number injured during 1955-56 and 1956-57 in each State and the Australian Capital Territory, classified into drivers, riders, pedestrians, etc.

ROAD TRAFFIC ACCIDENTS(a): DRIVERS, RIDERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1955-56.

Drivers, Riders, Pedestrians, etc.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
		Pers	SONS KII	LED.				
Drivers of Motor Vehicles	165	152	) 61	1 42	46	16	1 1	483
Motor Cyclists	91	59	47	20	20	12	3	252
Pedal Cyclists	44	42	15	23	17	2		133
Passengers (all types)(b)	230	150	91	51	62	26	1	611
Pedestrians	273	175	82	31	50	16	2	629
Other Classes(c)	5	4	2					11
Total	808	582	298	167	185	72	7	2,119
		Perso	ns Injui	RED.(d)				
Drivers of Motor Vehicles	4,119	3,629	2,049	827	853	245	68	11,790
Motor Cyclists	1,912	1,125	1,498	830	673	134	21	6,193
Pedal Cyclists	1,078	1,444	1,127	359	423	95	34	4,560
Passengers (all types) (b)	6,608	4,659	3,228	1,262	1,425	344	82	17,608
Pedestrians	3,283	2,578	1,245	425	704	225	15	8,475
Other Classes(c)	30	48	23	6	20	3	١ ا	130
Not Stated	17							17
Total	17,047	13,483	9,170	3,709	4.098	1,046	220	48,773

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares. (b) Includes pillion riders. (c) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles. (d) Persons injured to an extent requiring surgical or medical treatment.

ROAD TRAFFIC ACCIDENTS(a): DRIVERS, RIDERS, PEDESTRIANS, ETC., KILLED OR INJURED, 1956-57.

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares. (b) Includes pillion riders. (c) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles, (d) Persons injured to an extent requiring surgical or medical treatment.

(iv) Ages of Persons Killed or Injured. The following tables show the age groups of persons killed or injured in traffic accidents in each State and the Australian Capital Territory during 1955-56 and 1956-57:—

ROAD TRAFFIC ACCIDENTS(a): AGES OF PERSONS KILLED OR INJURED, 1955-56.

								_
Age Group (Years).	 N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
		Pers	ons Kil	LED.				
Under 5 5 and under 7 7 7 17 17 17 17 19 21 21 30 30 30 40 40 50 30 30 60 60 60 60 60 60 60 60 60 60 60 60 60	 43 1 11 64 94 145 101 72 87 186 5 808	17 11 35 47 106 63 58 62 125 58 582	15. 14 36 62 39 40 29 62 	5 1 14 16 34 22 24 15 29 7	8 3 16 21 36 23 27 18 33	2 3 15 13 15 4 9 8 1 72	1 1 1 3 2 7	90 29 147 229 397 266 225 222 443 71 2,119
		Person	NS INJUR	ED.(b)				
Under 5 5 and under 7 7 7 7 17 17 17 17 19 21 21 19 30 30 40 40 7 50 50 7 60 60 60 60 60 60 60 60 60 60 60 60 60	 567 418 1,951 2,484 3,792 2,669 1,923 1,424 1,447 372	465 326 1,749 1,590 2,978 2,144 1,519 1,145 1,199 368	286 199 1,276 1,732 1,962 1,346 923 651 742 53	117 99 410 551 876 672 400 252 269 63	188 94 486 605 737 476 336 269 246 661	43 27 139 170 191 140 101 64 78 93	10 5 28 24 59 45 22 14 9	1,676 1,168 6,039 7,156 10,595 7,492 5,224 3,819 3,990 1,614
Total	 17,047	13,483	9,170	3,709	4,098	1,046	220	48,773

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares. (b) Persons injured to an extent requiring surgical or medical treatment.

ROAD TRAFFIC ACCIDENTS(a): AGES OF PERSONS KILLED OR INJURED, 1956-57.

S and under 7        10       12       5       4       9       5        43         17        10       12       5       4       9       1       162         17        10       98       49       38       25       21       10       1       242         21        30        131       65       66       39       .33       13       2       .349         30        40        108       96       64       427       15       2       1       23       349         40        50        66       134       18       14       4       1       228         50        60        80       76       29       17       14       4        220         60 and over        165       128       74       27       38       14        446         PERSONS INJURED.(b)         Diagonal over          538       446       285       150       145       47 </th <th>Age Group (Years).</th> <th></th> <th>N.S.W.</th> <th>Vic.</th> <th>Q'land.</th> <th>S. Aust.</th> <th>W. Aust.</th> <th>Tas.</th> <th>A.C.T.</th> <th>Total.</th>	Age Group (Years).		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.				
S and under 7        10       12       5       4       9       5        43         17        10       12       5       4       9       1       162         17        10       98       49       38       25       21       10       1       242         21        30        131       65       66       39       .33       13       2       .349         30        40        108       96       64       427       15       2       1       23       349         40        50        66       134       18       14       4       1       228         50        60        80       76       29       17       14       4        220         60 and over        165       128       74       27       38       14        446         PERSONS INJURED.(b)         Diagonal over          538       446       285       150       145       47 </td <td colspan="14">Persons Killed.</td>	Persons Killed.													
Total	S and under 7 7 7 17 17 17 17 17 21 21 21 30 30 30 30 40 40 40 40 40 40 40 40 40 40 40 40 40		10 56 98 131 108 96 80 165	12 43 49 65 96 61 76 128	5 21 38 66 44 34 29	18 25 39 27 18 17 27	9 14 21 33 15 14 14	5 9 10 13 2 4 4	'	73 45 162 242 349 293 228 220 446				
Under 5	Total	i				·	168	65		2,113				
5 and under 7      332     355     192     100     78     30     6     1,692       7 , , , 17      2,161     1,702     1,345     454     480     149     31     6,322       17 , , , , 21      2,765     1,815     1,912     583     644     164     39     7,922       21 , , , 30      3,752     3,156     2,102     833     691     184     59     10,777       30 , , , 40      2,612     2,308     1,351     626     482     161     45     7,583       40 , , , , 50      1,998     1,789     1,026     410     373     77     25     5,698       50 , , , 60      1,998     1,201     690     268     268     268     68     15     3,900       60 and over      1,433     1,162     720     270     241     84     10     3,920       Not Stated       339     186     177     250     519     143     2     1,616				Perso	utnI sn	RED.(b)								
	5 and under 7 7 " " 17 17 " 21 21 " 30 30 " 40 40 " 50 50 " 60 60 and over		332 2,161 2,765 3,752 2,612 1,998 1,391 1,433	355 1,702 1,815 3,156 2,308 1,789 1,201 1,162	192 1,345 1,912 2,102 1,351 1,026 690 720	100 454 583 833 626 410 268 270	78 480 644 691 482 373 268 241	30 149 164 184 161 77 68 84	31 39 59 45 25 15	1,616 1,093 6,322 7,922 10,777 7,585 5,698 3,901 3,920 1,616 50,450				

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares. (b) Persons injured to an extent requiring surgical or medical treatment.

<sup>(</sup>v) Accidents Recorded and Casualties, classified according to Type of Vehicle, Road User, etc., Involved. The following table shows, for the years 1955-56 and 1956-57, the number of accidents in which each of several classes of vehicles, road users, etc., was involved. The accidents involving casualties and persons killed and injured are similarly classified.

ROAD TRAFFIC ACCIDENTS(a), CLASSIFIED ACCORDING TO TYPE OF VEHICLE, ROAD USER, ETC., INVOLVED, AUSTRALIA.(b)

Particulars.	Motor Vehicle.	Motor Cycle.	Pedal Cycle.	Tram.	Animal and Animal- drawn Vehicle.	Pedes- trian.	Fixed Object.	Other Vehicle.
			1955-56.					
Total Accidents Recorded Accidents Involving		10,080	5,272	1,954	2,744	8,671	9,029	389
Casualties	33,589 1,918	7,313 331 8,505	4,893 142 5,060	735 35 886	537 22 644	8,511 627 8,528	2,314 157 3,143	161 46 224
	1 / 1		1956-57		1		l	
Total Accidents Recorded Accidents Involving		10,205	5,097	1,689	2,995	8,174	9,631	451
Casualties	34,914	7,438 292	4,800 136	636 42	510 15	8,118 649	2,495 146	208 47
Persons Injured(d)	1 45 600 1	8,627	5,075	794	613	8,006	3,425	253

(a) Accidents (reported to the police) which occurred in public thoroughfares.
(b) It should be noted that, as accidents and casualties classified according to one type of road user, etc., may also be classified according to another, these totals cannot be added across to obtain grand totals. For 1956-57 (1955-56 figures in parentheses) the figures above exclude 408 (363) accidents which were not classified according to type of vehicle, road user, etc., involved, of which 117 (72) involved casualties—6 (7) persons killed and 115 (72) persons injured.
(c) Total accidents causing death or injury to persons or, except in Tasmania, damage exceeding £10 to property.
(d) Persons injured to an extent requiring surgical or medical treatment.

It will be seen, therefore, that in 1956-57 (1955-56 figures in parentheses) motor vehicles were involved in 104,710 (100,614) accidents, of which 34,914 (33,589) involved casualties —1,941 (1,918) persons killed and 45,689 (43,978) persons injured. The 104,710 (100,614) accidents in which motor vehicles were involved comprised 56,146 (54,154) collisions with other motor vehicles, 6,926 (6,848) with motor cycles, 4,082 (4,154) with pedal cycles, 1,213 (1,380) with trams, 2,629 (2,404) with animals and animal-drawn vehicles, 7,178 (7,580) with pedestrians, 8,975 (8,511) with fixed objects, 362 (303) with vehicles other than those mentioned, 16,556 (14,721) instances of overturning or leaving the roadway, and 643 (559) accidents to passengers only. The particulars of accidents in which motor cycles, pedal cycles, etc., were involved with motor vehicles are also included under their respective headings in the table above. Consequently, since the figures in each column refer to the total accidents in which the particular type of vehicle, etc., was involved, any aggregation across would result, through duplication, in considerable overstatement of the actual totals.

3. Persons Killed or Injured in Road Traffic Accidents.—The following table shows the number of persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during each of the years 1952-53 to 1956-57:—

ROAD TRAFFIC ACCIDENTS(a): PERSONS KILLED OR INJURED.

		1							To	otal.
Year	Year. N.S.W. Vic. Q'land. S. Aust. W. Aust. Tas.	Tas.	A.C.T.	Num- ber.	Per 10,000 Motor Vehicles Regis- tered.					
				Per	sons Ki	LLED.				
1952-53 1953-54 1954-55 1955-56 1956-57	•••	663 728 798 808 774	515 569 528 582 589	301 278 273 298 325	136 153 173 167 185	182 175 206 185 168	56 67 57 72 65	3 6 7 7	1,856 1,976 2,042 2,119 2,113	10 11 10 10 9
		·		PERSO	ULNI SNO	$RED.(\overline{b})$				
1952-53 1953-54 1954-55 1955-56 1956-57	:: :: ::	12,459 14,660 15,959 17,047 17,321	12,564 13,351 12,833 13,483 14,120	7,152 7,933 8,421 9,170 9,800	2,449 3,420 3,926 3,709 3,944	c 3,373 3,935 4,036 4,098 3,921	1,246 1,156 1,111 1,046 1,107	162 174 179 220 237	39,405 44,629 46,465 48,773 50,450	218 238 226 221 216

<sup>(</sup>a) Accidents (reported to the police) which occurred in public thoroughfares. (b) Persons injured to an extent requiring surgical or medical treatment. (c) Includes all persons injured (i.e., requiring surgical or medical treatment) in the metropolitan area but in the remainder of the State, prior to 1st January, 1953, only those suffering "near-fatal" injuries.

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- 1. Historical.—A short review of the progress of civil aviation in Australia up to the date of foundation of a Civil Aviation Administration was published in Official Year Book No. 16, pp. 334-5.
- 2. Foundation and Administration of Civil Aviation.—A brief account of the foundation and objects of this Administration will be found in Official Year Book No. 19, p. 299. Official Year Book No. 38 and earlier issues contain information on the control of civil aviation by the Board (1936) and later (1939) by the Department of that name. The Acts defining the broad principles of operation of the administration of civil aviation and the Regulations amplifying them, and the principal functions of the administration are also described.

Details of the partial re-organization of the Department in June, 1954, to provide for the more effective distribution of duties and responsibilities among senior officers, were published in Official Year Book No. 43, p. 409. At that date there were nine Divisions—Air Transport and External Relations; Administration, Personnel and Establishments; Finance and Stores; Airports; Flying Operations; Airways Operations; Airways Engineering; Aviation Medicine; Accident Investigation and Analysis.

In 1956 the Division of Airports was divided into two separate Divisions, namely, Airport Engineering and Aviation Buildings and Property. This latter Division, in addition to its buildings function, became responsible for the implementation of the new organization to provide an efficient aviation fire service.

In 1957 the position of Assistant Director-General (Air Transport Policy) was abolished and a position of Assistant Director-General (Policy) was created in lieu. A Director of International Relations was also appointed.

- 3. International Activity.—(i) International Organizations. A full report of the formation of the International Civil Aviation Organization, the Commonwealth Air Transport Council and the South Pacific Air Transport Council appeared in Official Year Book No. 37 and particulars of subsequent activity in the international field were included in issue No. 38. The International Civil Aviation Organization had a membership of 72 nations at the end of 1957. Australia has continued her representation on the council, a position which she has held since the organization was established in 1947. The eleventh meeting of the South Pacific Air Transport Council was held at Wairakei, New Zealand, in November and December, 1957. Further details will be found in Official Year Book No. 40 and earlier issues.
- (ii) International Air Services. Major changes in the organization of trans-Pacific and trans-Tasman airline operations were outlined in Official Year Book No. 41. Qantas Empire Airways continues to operate services to the United Kingdom through the Middle East, to Japan via Hong Kong and Manila, to South Africa across the Indian Ocean, to North America, to the British Solomon Islands, to New Guinea, to Norfolk Island and to Noumea. Qantas Empire Airways is equipped for long-range operations with fourteen Super Constellation aircraft, which are now operating on the Pacific, United Kingdom, South Africa and Japan services. Orders have been placed for two more Super Constellations and for seven Boeing 707 jet aircraft. Qantas services to Noumea and Norfolk Island are operated with DC4 aircraft, which are also used on a freighter service to Labuan, Djakarta and Singapore. Qantas was operating over 52,696 route-miles on international services at 30th June, 1957. A summary of the operations of oversea services wholly or partly Australian-owned appears on page 425.

DC6 aircraft operated by Tasman Empire Airways Ltd., which is jointly owned by the Australian and New Zealand Governments, link Sydney and Melbourne with both Auckland and Christchurch.

4. Regular Air Services within Australia.—Under the Government's rationalization plan, introduced in 1954, it was agreed that services on competitive routes, such as in Queensland and the Riverina (New South Wales), should be regulated to avoid wasteful operations. Trans-Australia Airlines withdrew from operations in the Riverina but continued to serve Corowa. In Queensland this operator took over the Townsville-Mt. Is a service which was previously operated by Townsville and Country Airways.

Significant changes took place in the domestic field during 1957. Australian National Airways Pty. Ltd. indicated that under the existing economic conditions it was unable to continue in operation, and following protracted negotiations an offer was eventually made

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by Ansett Transport Industries Ltd. to purchase Australian National Airways Pty. Ltd. as a going concern for £3,300,000. The purchase agreement was finalized on 4th October, 1957, and combined operations began on 21st October, 1957.

The Civil Aviation Agreement Act 1952 was amended by the Civil Aviation Agreement Act 1957, to give effect to the revised arrangements between the Commonwealth Government and Australian National Airways Pty. Ltd., and to include Ansett Transport Industries Ltd. and its subsidiaries within the scope of the agreement.

The Commonwealth Government also gave consideration during the year to its policy in regard to civil aviation, and announced on 3rd September, 1957, the revised policy which provided for extended assistance by way of subsidy to the operators of essential services in rural areas, and also assistance to help selected operators obtain suitable replacement aircraft for the DC3. The grant of this assistance is conditional upon the operator's agreeing to provide services to specified areas at frequencies approved by the Minister for Civil Aviation, having regard to public needs and convenience in the rural areas to be served. A further necessary condition is that fares and freight rates shall be fixed at reasonable levels.

A summary of the operations of regular air services within Australia appears on p. 424 and a map showing air routes on pp. 413-4.

5. Air Ambulance Services.—A brief statement of the foundation and objects of the Air Ambulance Services will be found in Official Year Book No. 32, pp. 145 and 146.

During the year 1956-57, the Air Ambulance and Royal Flying Doctor Services continued to provide medical aid for the outback regions of Australia. The Commonwealth Department of Health operates the Northern Territory Aerial Medical Service with two Drover and one Dove aircraft. The Royal Flying Doctor Service of Australia, operating from Broken Hill, New South Wales (two Drovers), and Port Hedland, Western Australia (one Cessna and one DH83), covers a wide area of inland Australia. The Bush Church Aid Society for Australia and Tasmania, supported by funds from the Church of England, maintains three aircraft (one DH84A, one Percival Proctor III and one Lockheed 12A) at Ceduna, South Australia. The Federal Methodist Inland Mission (one DH82A) operates services from Meckatharra, Western Australia and the Queensland Ambulance Transport Brigade operates a service from Cairns (one DH89A, one Auster J5B and one Cessna 182A).

6. Training of Air Pilots.—A brief statement of the pre-war policy of the Commonwealth Government regarding assistance to Aero Clubs was given in Official Year Book No. 32, p. 146. A summary of the assistance granted during the years 1951 to 1956 will be found in Official Year Book No. 42, p. 253.

Under a new contract initiated on 1st January, 1957, payments to clubs, subject to certain limitations, are made as follows:—(i) Maintenance grant of £1 10s. an hour flown at home base; (ii) maintenance grant of £2 an hour flown at other centres; (iii) licence issue bonuses of £100 for each private pilot licence gained, £150 for each commercial pilot licence gained and £50 for each initial instructor rating gained. In addition, the Commonwealth continues to assist the aero clubs in the purchase of approved types of replacement aircraft.

During the year 1956-57, the flying training organizations (non-profit aero clubs and commercial flying schools) earned bonuses in respect of 319 private pilot licences, 60 commercial pilot licences, 16 initial instructor ratings and 435 licence renewals. It should be noted that, under the new contract, commercial licence issue and instructor rating bonuses were substituted for renewal bonuses. Subsidized hours flown by aero clubs numbered 64,309 and the total earnings of all organizations amounted to £155,918. An overall limit placed on the subsidy restricted the total payments to £145,000. There were 24 aero clubs and 6 commercial flying training schools in operation during the year, and, in addition to civil flying, some 13,368 hours were flown in the training of service personnel.

7. Gliding Clubs.—For the year 1956-57 a total subsidy of £3,000 was distributed to member clubs of the Gliding Federation of Australia, on the basis of £1,500 for membership and £1,500 for gliding certificates issued.

8. Aeronautical Telecommunications.—During 1956-57 satisfactory progress was made with modernization of the aeronautical telecommunications system throughout the Commonwealth, in accordance with plans developed in previous years. Improved coverage by VHF communication was achieved on air routes covering Bass Strait and the new key communication centre at Cloncurry was brought into operation.

Installation of Instrument Landing Systems and their associated high-intensity approach and runway lighting systems was commenced at Sydney (No. 1 installation), Hobart and Adelaide. Monthly flight-testing of the Sydney (No. 1) and Melbourne Instrument Landing Systems was undertaken to ensure a high standard of operation of these essential landing aids. The Distance Measuring Equipment programme proceeded satisfactorily and at the end of the year 64 beacons were in operational use, whilst three more were awaiting final flight-testing and two were nearing completion of installation work. Experimental work being undertaken to increase the handling capacity of the Distance Measuring Equipment system by increasing the number of channels per beacon will, if successful, enable improvements to be made in the scope of the system and increase its useful operational life. The Visual Aural Range programme is now practically complete.

9. Air Traffic Control.—The Air Traffic Control System was temporarily extended and re-arranged to handle the increased traffic resulting from the Olympic Games in Melbourne. Aircraft movements additional to normal traffic which were directly attributable to the Olympic Games amounted to 670 at Melbourne, 550 at Sydney, and 240 at Darwin, with minor increases elsewhere. All were handled without incident. At Melbourne a modern Air Traffic Control centre and Airport Control Tower of Australian design was commissioned, incorporating new communication features; the Air Traffic Control centre was completed late in 1956 in time to handle the peak Christmas and New Year traffic. Airport control as required by traffic demands was also established at Coolangatta Airport, Queensland.

Procedures for expediting the handling of airport traffic through the use of high and low stacks were introduced at Melbourne and Sydney and a one-way traffic airways system between Melbourne and Tasmanian airports was brought into operation. The control procedures applied to light aircraft at "all over" training airports were revised after several full-scale experiments with various systems at Bankstown airport. Planning was completed for a "self help" Search and Rescue Service based on the maximum employment of civil facilities. Action to implement this plan was commenced. The Light Aircraft Handbook, a publication covering the rules and regulations governing the operation of the lighter class of aircraft, was issued during the year.

- 10. Meteorological Aids to Civil Aviation.—The development of working arrangements between the newly constituted Bureau of Meteorology and the Department of Civil Aviation was further advanced. A review of the present scale of meteorological aids to civil aviation, now in progress, will be finalized in the form of a plan covering all aspects of the provision of meteorological services to civil aviation. At aerodromes in Australia and its Territories officers of the Bureau of Meteorology provide forecasting and observing services for civil aviation. There are 12 forecasting and 29 observing stations.
- 11. Aircraft Parts and Materials.—At 30th June, 1957, the number of firms and organizations approved by the Department of Civil Aviation to trade in the aircraft industry was 436. With the introduction of gas turbine engines and pressurized aircraft, certain firms have been approved to undertake the specialized work of overhaul, repair and maintenance of these engines and of accessories. The major fuel and oil companies have been brought under a system of quality control.

- 12. Aircraft Overhaul and Repair.—Aircraft overhaul and repair is carried out in workshops approved by the Director-General of Civil Aviation. Components and accessories are now certified on release notes signed by approved members of the firm's inspection organization.
- 13. Test and Examination of Aircraft Parts and Materials.—This work is now carried out in test houses and laboratories registered by the National Association of Testing Authorities, except when production is for the manufacturer's own use, when the testing, etc. can be done in an approved laboratory. Certificates issued under registration by the Association are acceptable to any Commonwealth Government Department.
- 14. Statistical Summaries.—(i) Registrations, Licences, etc. The following table provides a summary of the civil aviation registrations and licences in force in Australia at 30th June in each of the years 1953 to 1957.

CIVIL AVIATION: REGISTRATIONS, LICENCES, ETC., AUSTRALIA.(a)

		A	t 30th June-	-	
Particulars.	1953.	1954.	1955.	1956.	1957.
Registered aircraft owners	369	384	414	437	485
Registered aircraft	821	845	887	934	1,054
Pilots' Licences—	1		!		
Private	1,677	2,035	2,245	2,453	2,592
Commercial	518	552	582	578	709
Senior Commercial				76	99
Helicopter (Commercial)			;	11	21
Student	2,639	2,831	3,193	3,272	3,397
1st Class Airline Transport	495	515	548	600	606
2nd ,, ,, ,,	45	34	25	9	7
3rd ,, ,, ,,	371	368	390	394	414
Navigators' Licences—	i	1			
Flight Navigator	163	166	161	177	187
Radio Operators' Licences—	i	i			
1st Class Flight Radio Tele-	!	1			
graphy Operator	93	88	78	75	69
Flight Radio Telephony			'	!	
Operator—	į	i	1		
1st Class	850	834	820	ן !	
2nd ,	243	275	309	(b)1,386	(b) 1,574
3rd "	70	113	137	J	
Flight Engineers' Licences	58	67	98	94	116
Aircraft Maintenance Engineers'	į	:	i I		
Licences	1,790	1,757	1.747	1,818	1,915
Aerodromes—	i			i	•
Government	186	198	185	188	169
Licensed(c)	260	262	303	301	313
Flying Boat Bases(d)	15	16	13	13	13

<sup>(</sup>a) Except for aerodromes and flying-boat bases, includes the Territory of Papua and New Guinea.
(b) Now only one category (Flight Radiotelephone Operator).
(c) Aerodromes under the control and management of a municipality, shire, station owner, private individual, etc. Includes emergency aerodromes.
(d) Includes alighting areas.

<sup>(</sup>ii) Aircraft on the Australian Register. A summary of aircraft on the Australian register at 31st December, 1957, classified according to the principal types of operation in which they are engaged, is shown in the following table.

AIRCRAFT ON THE AUSTRALIAN REGISTER(a), 31st DECEMBER, 1957.

Type of Aircraft.	Number.	Type of Aircraft.	Number.
(i) Aircraft Engaged in Regular		(iii) Aircraft used for Private	
Public Transport—		Purposes—	
Avro Anson	5	Auster (All Types)	115
Convair 240, 340	4	Avro Anson	15
De Havilland (All Types)	20	Beechcraft	7
Douglas—		Cessna	29
DČ3	60	Fairchild	8
DC4 (Skymaster)	16	De Havilland	
DC6, DC6B	6	DH82	56
Lockheed 1049 (Super Con-		Moth	23
stellation)	16	Other	22
Vickers Viscount	13	Miles (All Types)	18
Other Types	12	Percival Proctor	26
••		Piper	14
		Ryan	11
Total	152	Stinson	8
10iai	132	Wackett	12
		Other Types	33
		Total	397
(ii) Aircraft Available for Air			
Charter—		(iv) Aircraft used for other Pur-	
Auster (All Types)	57	poses(b)—	36
Avro Anson	17	Auster (All Types)	26
Cessna	25	Avro Anson	11
De Havilland—		Cessna	8
DH82	19	De Havilland—	
Other	9	DH82	233
Percival Proctor	10	Chipmunk	43
Other Types	49	Other	13
		Other Types	31
		Total	365
Total	186	Grand Total	1,100

<sup>(</sup>a) Includes those based in the Territory of Papua and New Guinea. aerial top-dressing, etc.

(iii) Operations of Regular Internal Services. The next table summarizes the flying activities of regular internal services operating within Australia during each of the years 1952-53 to 1956-57.

CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA.

Partici		1952-53.	1953–54.	1954–55.	1955–56.	1956–57.		
Hours flown				237,640	251,019	257,787	251,900	251,139
Miles ,,			'000	39,059	41,014	43,513	43,701	42,120
Paying passengers				1,706,446	1,772,357	1,918,125	2.020,380	2,125,338
Paying passenger-miles Freight—	••	٠.	,000	667,321	702,139	765,652	827,885	891,196
Tons(a)				57,635	69,479	78,711	84,446	75,092
Ton-miles(a) Mail—	••	• •	'000	27,167	32,650	36,984	38,909	36,330
Tons(a) Ton-miles(a)	• •	• •	'oòò	2,311 1,166	2,316 1,225	2,317 1,257	2,478 1,357	2,514 1,404

<sup>(</sup>a) In terms of short tons (2,000 lb.).

<sup>(</sup>b) Flying School training,

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(iv) Operations of Oversea Services wholly or partly Australian-owned. The following table furnishes a summary of oversea services, wholly or partly owned by Australian interests, operating between Australia and oversea countries, including Pacific islands and the Territory of Papua and New Guinea, during the years 1952-53 to 1956-57. The operations of Qantas Empire Airways. Tasman Empire Airways Ltd. and British Commonwealth Pacific Airlines are included, but those of Canadian Pacific Airlines, K.L.M. and Pan-American Airways are excluded.

CIVIL AVIATION: OPERATIONS OF OVERSEA SERVICES.(a)

Partic	ulars.			1952-53.	1953–54.	1954-55.	1955–56.	1956 -57.
Route miles (unduplica Hours flown Miles Paying passengers Paying passenger-miles Freight Tons(b) Ton-miles(b) Tons(b) Ton-miles(b)	ted) a	t 30th Ju	ne '000 '000 '000 '000	66,558 54,148 11,565 97,753 275,206 1,957 7,401 1,168 6,122	64,250 53,580 11,464 102,965 290,603 2,295 8,331 1,379 7,718	63,774 49,326 11,128 114,371 317,565 2,662 9,372 1,442 7,927	58,618 50,665 12,028 131,934 383,930 2,990 10,494 1,491 8,458	62.675 56,939 13,614 155,618 476,831 2,957 11,203 1,622 9,450

<sup>(</sup>a) Airlines wholly or partly owned by Australian interests.

(v) Accidents and Casualties. The number of accidents involving aircraft on the Australian register in which persons were killed or injured is shown in the following table for the years 1952-53 to 1956-57.

CIVIL AVIATION: ACCIDENTS INVOLVING AUSTRALIAN AIRCRAFT.(a)

Particulars.			1952-53.	1953–54.	1954–55.	1955–56.	1956–57.
Number(b) Persons killed Persons injured	•••	· · · · · ·	16 5 19	26 36 27	22 27 19	31 22 27	37 24 36

<sup>(</sup>a) Includes accidents and casualties in the Territory of Papua and New Guinea. all accidents irrespective of whether they involved death or injury.

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15. Territory of Papua and New Guinea.—In this area there were, at 30th September, 1957, 20 aerodromes and 24 water aerodromes under the control of the Department of Civil Aviation; 56 aerodromes under the control of the Territory Administration; and 25 aerodromes and 14 water aerodromes under private control. Ten cleared heliports and approximately 300 helicopter clearings were also in existence.

Five companies conduct regular services between the major aerodromes. Charter flights can be arranged to almost any locality. Further information may be found in Chapter V.—The Territories of Australia.

During the year 1956-57, three accidents occured in which two persons were killed and five persons were injured. These figures are included in the total accidents for Australia in the table above.

<sup>(</sup>b) In terms of short tons (2,000 lb.).

<sup>(</sup>b) Includes

#### PART II.—COMMUNICATION.

# A. POSTS; TELEGRAPHS; TELEPHONES; CABLE AND RADIO COMMUNICATION.

Note.—In all tables in this Division particulars for the Australian Capital Territory are included with those for New South Wales, while the South Australian figures include particulars for the Northern Territory.

#### § 1. General.

- 1. The Postmaster-General's Department.—Under the provisions of the Post and Telegraph Act 1901, the Department was placed under the control of the Postmaster-General. The Director-General of Posts and Telegraphs controls the Department under the Postmaster-General, whilst the principal officer in each State is the Director of Posts and Telegraphs.
- 2. Postal Facilities.—(i) Relation to Area and Population. The following statement shows the number of post offices, the area in square miles and the number of inhabitants to each post office (including non-official offices) and the number of inhabitants to each 100 square miles in each State and in Australia at 30th June, 1957. In order to judge clearly the relative postal facilities provided in each State, the area of country to each office as well as the number of inhabitants per office should be taken into account.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION AT 30th JUNE, 1957.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Number of post offices(a) Number of square miles of territory per		2,316	1 267	897	638	513	8,202
office	121	38	529	1.007	1,530	51	363
	1,424	1,154	1,102	995	1,084	639	1,176
	1,179	3,042	208	99	71	1,251	324

<sup>(</sup>a) Includes "official", "semi-official", and "non-official" offices.

The foregoing table does not include "telephone" offices at which there is no postal business.

(ii) Number of Offices. The following table shows the number of post offices (exclusive of telephone offices) in each State at 30th June, 1957.

NUMBER OF POST OFFICES AT 30th JUNE, 1957.

Type of Office.		N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	Aust.	
Official and Semi-official Non-official		512 2,059	313 2,003	214 1,053	166 731	151 487	53 460	1,409 6,793	
Total		2,571	2,316	1,267	897	638	513	8,202	

(iii) Employees and Mail Contractors. The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1957 are given in the following table:—

NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE, 1957.

Particulars.	Central Office.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Aust.
Employees	1,127	35,623	25,313	13,831	8,878	6,324	3,667	94,763
Mail Contractors(a)		2,163	1,097	1,229	326	279	275	5,369

(a) Includes persons employed to drive vehicles.

3. Gross Revenue, Branches—Postmaster-General's Department.—The gross revenue (actual collections) in respect of each branch of the Department during the year 1956-57 is shown in the table hereunder:—

POSTMASTER-GENERAL'S DEPARTMENT: GROSS REVENUE, 1956-57.(a) (£'000.)

Sources.	N.S.W.	Vic.(b)	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Postage	11,323	c9,378	3,733	2,475	1,821	734	29,464
Money order commission and	106	1 220	100	0.5	50	25	,
poundage on postal notes	406	239	109	95	52	25	
Private boxes and bags	84	54	43	28	20	11	240
Miscellaneous	1,032	788	313	192	155	58	2,538
Total, Postal	12,845	10,459	4,198	2,790	2,048	828	33,168
Telegraphs	1,873	1,508	1,122	679	546	176	5,904
Telephones	20,096	15,214	7,003	4,496	2,802	1,391	51,002
Grand Total	34,814	27,181	12,323	7,965	5,396	2,395	90,074

<sup>(</sup>a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes. (b) Includes Central Office collections. (c) Includes Central Office revenue from airmail services, previously shown under Miscellaneous.

For each of the years 1952-53 to 1955-56 the gross revenue for Australia was £64,398,000, £67,797,000, £72,825,000 and £79,341,000 respectively.

Gross revenue for the year 1956-57 increased by 13.5 per cent. compared with that for the previous year. Revenue of the Postal, Telegraph and Telephone branches increased by 10.4 per cent., 19.1 per cent. and 15.0 per cent. respectively.

4. Expenditure, Postmaster-General's Department.—(i) Distribution. The following table shows, as far as possible, the distribution of expenditure (actual payments) in each State during 1956-57, as shown by records kept for Treasury purposes. The table must not be regarded as a statement of the working expenses of the Department, since items relating to new works, interest, etc., are included therein.

# POSTMASTER-GENERAL'S DEPARTMENT : DISTRIBUTION OF EXPENDITURE, 1956-57.(a)

(£'000.)

Particulars.	Central Office.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	Aust.
Expenditure from Ordinary Votes— Salaries and payments									
in the nature of									
salary General expenses	484 63	15,281 1,839	10,623 1,119	5,828 463	3,570 351	2,440 301	1,439 144	98 12	39,763 4,292
Stores and material	25		481	305	156		76	15	2,042
Mail services Engineering services (other than capital	(b)4,305	1,618	835	797	382	243	119	14	8,313
works)	840		8,481	4,574	2,458	2,105	1,063	96	
Other services	(c) 79	• •	••		••	••			79
Total	5,796	31,736	21,539	11,967	6,917	5,233	2,841	225	86,254
Rent, repairs, maintenance		442	351	140	100	56	20	9	1,118
Proportion of audit ex- penses Capital works and	3	16	11	6	4	3	2		45
services— Telegraph and telephone	48	11,339	7,515	3,225	2,400	1,920	1,005		27,452
New buildings, etc		1,188	1,103	360	301	192	121	4	3,269
Other expenditure, not allocated to States	( <b>a</b> )3,779								3,779
Grand Total	9,626	44,721	30,519	15,698	9,722	7,404	3,989	238	121,917

<sup>(</sup>a) The figures in this table represent actual payments made during the year as recorded for Treasury purposes. (b) Expenditure on airmail services. (c) Excludes subsidy on coastal wireless stations, now provided by votes to the Department of Shipping and Transport. (d) Includes expenditure not apportioned to States, i.e., interest on loans, £862,000; sinking fund, £1,172,000; superannuation contributions, £1,734,000; transferred officers' pensions and allowances, £5,000; and pensions and retiring allowances, £6,000.

- (ii) Totals. Actual payments made for each of the years 1952-53 to 1955-56, respectively, were:—£98,344,000, £99,478,000, £103,586,000 and £114,397,000. Total expenditure increased by 6.6 per cent. during 1956-57, compared with that during 1955-56.
- 5. Profit or Loss, Postmaster-General's Department.—The foregoing statements of gross revenue and expenditure represent actual collections and payments made and cannot be taken to represent the actual results of the working of the Department for the year. The net results for each branch, after providing for working expenses (including superannuation, pensions and depreciation) and interest charges including exchange, are shown in the following table for the years 1952-53 to 1956-57.

POSTMASTER-GENERAL'S DEPARTMENT: PROFIT OR LOSS, BRANCHES. (£'000.)

Bran	Branch.			1953-54.	1954-55.	1955–56.	1956-57.	
Postal Telegraph Telephone			- 2,417 - 1,453 2,932	- 1,849 - 1,219 3,221	- 2,254 - 800 2,905	- 2,402 - 1,202 3,179	- 1,526 - 638 5,281	
All Branches			- 938	153	- 149	- 425	3,117	

Note.-Minus sign (-) indicates loss.

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6. Fixed Assets.—(i) Details, 1956-57. The following table shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1956 to 30th June, 1957:--

POSTMASTER-GENERAL'S DEPARTMENT: FIXED ASSETS. (£'000.)

Particulars.	Particulars.				Depreciation, etc., 1956-57.	Net Value, 30th June, 1957.
Telephone and telegraph plant		264,340	36,979	301,319	4,262	297,057
Mail-handling plant		305	34	339	6	333
Buildings		30,511	3,187	33,698	9	33,689
Motor vehicles		6,572	1,174	7,746	442	7,304
Assets subject to direct deprecia	tion(b)	3,634	807	4,441	269	4,172
Other fixed assets	• •	14,329	1,153	15,482	131	15,351
Total		319,691	43,334	363,025	5,119	357,906

<sup>(</sup>a) Includes dismantled assets, depreciation written off and assets transferred. postal service plant, miscellaneous plant, furniture and office equipment.

#### § 2. Posts.

1. Postal Matter Dealt With.—(i) States, 1956-57. The following table shows a summary of the postal matter dealt with in each State during the year 1956-57. Mail matter posted in Australia for delivery therein is necessarily handled at least twice, but only the number of distinct articles handled is included in the following table.

POSTAL MATTER DEALT WITH(a), 1956-57. ('000.)

State.		Letters.	Papers and Packets. (c)	Parcels.	Regis- tered Articles. (e)	Letters.	Papers and Packets. (c)	Parcels.	Regis- tered Articles. (e)
		Posted fo	or delivery	within A	ustralia.	Poste	ed for deli	very Over	seas.
New South Wales Victoria Queensland South Australia Western Australia Tasmania Australia		513,233 392,076 173,361 121,444 89,960 41,729 1,331,803	68,117	2,512 1,366 1,127	4,188 1,894 1,093 833	9,359 5,827 4,108 5,351 326	3,753 1,120 781 1,281	140 47 46 30 17	214 67 73
		Red	ceived fro	m Overse	as.	Total	postal ma	atter dealt	with.
New South Wales Victoria Queensland South Australia Western Australia Tasmania Australia	::	43,223 12,389 4,439 4,638 3,486 1,635 69,810	27,814 9,439 4,749 5,477 5,946 2,028 55,453	193 57 45 44 14	197 27 29 52 43	413,824 183,627 130,190 98,797	81,309 33,941 17,700 17,172	4,628 2,616 1,457 1,201	4,599 1,988 1,195 945

<sup>(</sup>a) See explanation above. (b) Includes letters, cards and other postal articles enclosed in envelopes and sorted with letters.

(c) Includes newspapers and postal articles not included in letter mail.

(d) Includes registered, cash on delivery and duty parcels.

(e) Includes registered articles other than parcels.

<sup>(</sup>b) Includes

<sup>(</sup>ii) Net Value. The net value of the fixed assets of the Postmaster-General's Department at 30th June in each of the years 1953 to 1956, respectively, was:-£222,981,000, £253,627,000, £285,205,000 and £319,691,000.

(ii) Australia. The next table shows the total postal matter dealt with in Australia during each of the years 1952-53 to 1956-57.

TOTAL.	POSTAL.	MATTER	DEALT	WITH:	AUSTRALIA.

Letters, Postcards and Letter-cards.		Newspapers and Packets.		Parce	els.(a)	Registered Articles other than Parcels.			
Year.		Total. ('000,)	Per 1,000 of Mean Popula- tion.	Total. ('000.)	Per 1,000 of Mean Popula- tion.	Total. ('000.)	Per 1,000 of Mean Popula- tion.	Total. ('000.)	Per 1,000 of Mean Popula- tion.
1952-53		1,228,685	140,675	244,363	27,978	16,313	1,868	16,479	1,887
1953–54		1,309,099	147,084	261,180	29,345	16,639	1,869	16,703	1,877
1954–55		1,344,642	147,922	274,158	30,160	16,765	1,844	17,628	1,939
1955-56		1,414,222	151,811	291,048	31,243	17,334	1,861	18,376	1,973
1956-57		1,443,337	151.372	306,417	32,136	16.998	1,783	17,007	1,784

(a) Includes registered, cash on delivery and duty parcels.

- 2. Cash on Delivery Parcels Post.—(i) General. The Postmaster-General's Department undertakes, upon prepayment of a prescribed commission, to deliver registered articles sent by parcels post within Australia, or between Australia and Lord Howe Island, Norfolk Island, Nauru, the Territory of Papua and New Guinea, or Fiji, to recover from the addressee on delivery a sum of money specified by the sender, and to remit the sum to the sender. The object of the system is to meet the requirements of persons who wish to pay at the time of receipt for articles sent to them, and of traders and others who do not wish their goods to be delivered except on payment.
- (ii) States. The next table shows particulars regarding the cash on delivery parcels posted in each State in 1956-57.

#### CASH ON DELIVERY PARCELS POST, 1956-57.

Particular	s. 	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Parcels posted	000°£,000	321	93	139	50	66	3	672
Value		1,186	282	484	182	144	11	2,289
Revenue(a)		108	35	38	17	16	1	215

<sup>(</sup>a) From commission and postage.

(iii) Australia. In the following table particulars of cash on delivery parcels posted in Australia are shown for the years 1952-53 to 1956-57.

#### CASH ON DELIVERY PARCELS POST: AUSTRALIA.

Partic	ılars.		1952-53.	1953-54.	1954–55.	1955–56.	1956-57.	
Parcels posted		,000	837	888	845	762	672	
Value		£,000	2,656	2,876	2,804	2,526	2,289	
Revenue(a)		£,000	221	239	225	206	215	

<sup>(</sup>a) From commission and postage.

<sup>3.</sup> Total Cost of Carriage of Mails.—During 1956-57 the total amounts paid for the carriage of mails, as disclosed by the Profit and Loss Account of the Postal Branch, were as follows:—road (including departmental transport) £3,478,000; railway £1,280,000; sea £172,000; air—internal £680,000, oversea £3,425,000; Grand Total—£9,035,000.

- 4. Transactions of the Dead Letter Offices.—During the year 1956-57, 1,509,000 letters were returned to senders or delivered, 346,000 were destroyed in accordance with the Act, and 254,000 were returned to other countries as unclaimed—a total of 2,109,000. Corresponding particulars for packets were—458,000, 241,000, 48,000 and 747,000. There were 2,856,000 articles handled in all.
- 5. Money Orders and Postal Notes.—(i) General. The issue of money orders and postal notes is regulated by sections 74–79 of the Post and Telegraph Act 1901–1950. The maximum amount for which a single money order payable within Australia may be obtained is £40, but additional orders will be issued upon request when larger amounts are to be remitted. The maximum amount permitted to be sent to any person in the dollar area is £A.5 a month and for remittances to countries outside the dollar area, £A.10 a week. A postal note cannot be issued for a sum larger than twenty shillings.
- (ii) States. Particulars regarding the business transactions in each State for the year 1956-57 are shown hereunder:—

MONEY ORDERS AND POSTAL NOTES: TRANSACTIONS, 1956-57. (£'000.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
Money Orders—		]	1				
Issued	37,015	17,592	8,856	5,270	3,715	2,094	74,542
Paid	37,193	17,535	8,442	4,881	3,673	2,074	73,798
Net Commission				, i		,	,
Received	248	140	73	40	32	18	551
Postal Notes		l f	,	1	1		
Issued	4,163	2,400	927	1,238	569	196	9,493
Poundage Received	159	98	35 '	55	22	8	377

(iii) Australia. The next table shows the number and value of money orders and postal notes issued and paid in Australia in each of the years 1952-53 to 1956-57.

MONEY ORDERS AND POSTAL NOTES: TRANSACTIONS, AUSTRALIA.

	Money Orders.						Postal Notes.						
Year.	Year. Issued.		Pa	id.	Issu	ed.	Paid.						
		Number.	Value.	Number.	Value.	Number.	Value.	Number.	Value.				
		'000.	£'000.	'000.	£'000.	'000.	£'000.	'000.	£'000.				
1952-53		5,666	53,088	5,578	53,075	26,793	11,658	26,658	11,614				
953-54		6,080	56,175	5,960	56,082	26,168	11,465	26,082	11,441				
95455		6,755	61,699	6,617	61,262	21,816	10,226	21,867	10,249				
955-56	. ,	7,638	70,220	7,337	69,585	23,128	10,450	23,067	10,463				
956-57		8,126	74,542	7,841	73,798	20,332	9,493	20,778	9,709				

- (iv) Classification of Money Orders Issued and Paid. Of the total money orders issued in Australia during 1956-57, 7,787,000 valued at £73,355,000 were payable in Australia and 339,000 valued at £1,187,000 were payable overseas. Of the total money orders paid in Australia during 1956-57, 7,694,000 (£73,048,000) were issued in Australia and 147,000 (£750,000) were issued overseas.
- (v) Postal Notes Paid. The following table shows the number and value of postal notes paid in each State during the year 1956-57. The number and value of postal notes issued and paid in each of the years 1952-53 to 1956-57 have been given in the previous table.

7		Paid in									
Issued	in—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.			
Same State	'000	7,071	4,378	1,378	865	1,224	263	15,179			
Other States	000°£	3,462 1,442	1,994 2,277	697 802	470 95	580 175	116 808	7,319 5,599			
	£'000	613	840	460	49	56	372	2,390			
Total	000°£	8,513 4,075	6,655 2,834	2,180 1,157	960 519	1,399	1,071 488	20,778 9,709			

#### POSTAL NOTES PAID: STATE OF ISSUE, 1956-57.

#### § 3. Telegraphs.

1. General.—A review of the development of telegraph services in Australia up to 1921 appeared in Official Year Book No. 15, p. 625, and subsequent developments of importance have been dealt with in later issues. During the past few years substantial improvements in both the speed and grade of telegraph services throughout Australia have been effected, the entire system being subjected to intensive re-organization. The external circulation system of the Australian telegraph service has been considerably modified, and direct communication has been established between cities and towns which formerly were served through intermediate repeating centres.

Telephone subscribers may telephone telegrams for onward transmission, or have messages telephoned to them. The fee for the service is small, and the system means, in effect, that the telegraph system is brought into the home of every telephone subscriber. The number of telegrams lodged by telephone during the year 1956-57 was about 8.4 million, or approximately 37 per cent. of the total lodgments. The number of telegrams

telephoned to subscribers totalled 4.5 million.

A radiogram service is provided to certain isolated places throughout Australia and a number of privately-operated wireless transceiver stations have been established at various centres throughout the Commonwealth, enabling telegrams to be exchanged with departmental telegraph offices. Stations sponsored by the Royal Flying Doctor Service of Australia can communicate by wireless with base stations.

The picturegram service between Melbourne and Sydney, which was established in 1929, but which was suspended during 1942, was restored and extended to Brisbane and Adelaide in 1949, to Perth in 1950 and to Hobart and Newcastle in 1951. The equipment installed at these points also permits the direct transmission and reception of oversea phototelegrams. Portable picture-transmitting apparatus has been provided for use at country centres in New South Wales and Victoria and was first used for the opening of the 19th Federal Parliament at Canberra on 22nd February, 1950. In 1956–57, 7,855 picturegrams were lodged for destinations within Australia, 3,626 were transmitted to oversea destinations and 4,417 were received from other countries. As from 20th May, 1953, the Department authorized the connexion of privately-owned picturegram equipment to the public telephone trunk line network for the transmission of pictures. The facilities are provided subject to certain restrictions where Departmental picturegram services operate and to payment of appropriate charges to cover the use of trunk line channels and equipment. Pictures from overseas may be routed direct to private receivers.

Teleprinter services (i.e., typewriting over electrical circuits), affording the great advantage of direct and instantaneous communication between points within the same building or separated by distances up to thousands of miles, and printergram services, that is, leased teleprinter channels between the premises of subscribers and chief telegraph offices for the transmission and reception of telegrams, are available. The number of printergram services rose from 193 to 266 during 1956–57. Messages transmitted over these services increased from 750,000 during 1955–56 to 760,000 during 1956–57.

2. Telegraph and Telephone Mileage.—At 30th June, 1957 the combined single-wire mileages for both telegraph and telephone purposes were:—aerial, underground and submarine cables—exchange 6,658,000 miles, trunk telephone and telegraph 221,000 miles; aerial wires—telephone, trunk and/or telegraph purposes 548,000 miles, exchange and non-exchange service lines 721,000 miles. The mileages of conduits and pole routes were 11,200 duct miles and 118,000 miles respectively. Conduits include only ducts and conduits with an

internal diameter of 2 inches or over. Those with a diameter of less than 2 inches are not recorded separately and are included with underground cables. The mileages in each State in 1955-56 may be found in *Transport and Communication*, Bulletin No. 47.

- 3. Telegraph Offices.—(i) States. The numbers of telegraph offices, including railway telegraph offices, in the various States at 30th June, 1957 were:—New South Wales, 3,285; Victoria, 2,357; Queensland, 1,750; South Australia, 968; Western Australia, 1,002; Tasmania, 572.
- (ii) Australia. The numbers of telegraph offices in Australia at 30th June of each of the years 1953 to 1957 respectively were:—9,902, 9,909, 9,907, 9,896 and 9,934.
- 4. Telegrams Dispatched within Australia.—(i) States. The following table shows the number of telegrams dispatched to places within the Commonwealth and to adjacent islands and to ships at sea, according to the class of message transmitted:—

# TELEGRAMS DISPATCHED, 1956-57.

				( 000.)					
		Unpaid (Ser-	Total Tele-						
State.	Ordinary. Urgent. Press. Lettergrams. Radiograms. Meteorological.	vice).	grams.						
New South Wales Victoria Queensland South Australia Western Australia Tasmania	6,941 4,191 3,504 1,658 1,577 489	382 144 125 62 48 22	68 21 31 24 19 5	19 14 13 11 16 7	71 7 72 49 60 2	191 107 169 95 138 44	7,672 4,484 3,914 1,899 1,858 569	299 144 162 57 57 29	7,971 4,628 4,076 1,956 1,915 598
Australia	18,360	783	168	80	261	744	20,396	748	21,144

(ii) Australia. Telegrams dispatched to destinations within Australia and to adjacent islands and to ships at sea, during each of the years 1952-53 to 1955-56 respectively, numbered:—23,407,000, 22,536,000, 22,713,000 and 22,600,000.

# § 4. Telephones.

1. General.—Particulars of the total mileage of lines used exclusively for telephone purposes are not available, but are combined with all other line mileage. Particulars of the total single wire mileage used for telephone, trunk and/or telegraph purposes are shown in § 3, para. 2, above.

During 1956-57, 125,570 telephone subscribers' lines and 185,093 telephones were added to the system, compared with 79,239 lines and 116,540 telephones in 1955-56. With an average at 30th June, 1957, of nineteen teiephones to every one hundred persons, Australia had a telephone density exceeded by that of only six other countries. The trunk line network was increased by 66,312 channel miles and at 30th June, 1957, had reached 992,029 miles; 68,328 additional channel miles were obtained by the installation of carrier-wave equipment, some of which was installed on radio-telephone bearers. Carrier-wave facilities enable several speech paths to be obtained from one pair of wires or, in the case of radio-telephone systems, without wires at all, and are designed to transmit the voice with greater fidelity than the wire pairs on which they are based. An alternative aerial route between Melbourne and Sydney has been completed and work is in progress to provide a direct route for traffic from Sydney to Adelaide and Perth. Sixteen additional trunk line channels are being provided between Tasmania and the mainland.

Eleven automatic exchanges were brought into operation in metropolitan areas during the year, together with 14 country and 74 rural automatic exchanges. At 30th June, 1957, there were 293 automatic exchanges in the metropolitan areas and 1,025 in country districts, to which 1,288,000 telephones were connected, representing 71 per cent. of the total number in use in Australia.

2. Summary.—Particulars relating to the telephone services in each State at 30th June, 1957, are shown in the following table:—

TELEPHONE SERVICES: SUMMARY, 30th JUNE, 1957.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Exchanges	2,306	1,766	1,345	696	764	407	7,284
changes)	3,448	2,569	1,806	1,012	999	550	10,384
Lines connected '000	479	401	174	113	73	39	1,279
Instruments connected '000	695	575	231	158	102	53	1,814
(i) Subscribers' instruments'000	680	563	. 224	154	99	51	1.771
(ii) Public telephones '000	7.7	5.5	3.2	1.7	1.4	0.9	20.4
(iii) Other local instruments '000	7.5	6.6	3.4	2.7	2.1	1.0	23.3
Instruments per 1,000 of population	190	215	166	177	148	162	188

Of the total telephones (1,814,430) in service at 30th June, 1957, 667,864 or 37 per cent, were connected to exchanges situated beyond the limits of the metropolitan telephone networks.

3. Daily Local Calling Rates.—The next table shows the average number of outward local calls daily per line at central, suburban and country telephone exchanges in the several States for 1956-57:—

TELEPHONES: DAILY LOCAL CALLING RATE AT EXCHANGES, 1956-57.

Exchanges.				N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.
Central Suburban Country				10.65 3.47 1.86	9.85 3.26 1.14	10.96 2.42 1.79	9.24 2.67 1.28	7.22 3.08 1.31	4.49 2.42 1.66

A comparison of the average daily calling rates for each class of exchange shows that Queensland registered the greatest number of calls per line at central exchanges, and New South Wales at both suburban and country exchanges.

4. Effective Paid Local Calls.—The numbers of effective paid local calls from subscribers' and public telephones in the various States during 1956-57 appear hereunder.

TELEPHONES: NUMBER OF EFFECTIVE PAID LOCAL CALLS, 1956-57.
(Million.)

Calls.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Subscribers'	469 49	343 31	133 12	88 9	65 7	26 2	1,124 110
Total	518	374	145	97	72	28	1,234

5. Trunk Line Calls and Revenue.—In the next table the number of telephone trunk line calls recorded, the amount of revenue received, and the average revenue per call are shown for each State and Australia for the year 1956-57.

TELEPHONES: TRUNK LINE CALLS AND REVENUE, 1956-57.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Total calls '000 Total revenue £'000	35,910 6,705	29,792 4,611	18,624 3,217	10,195 1,784	6,101 957	,	106,000
Average revenue per call pence	44.81	37.15	41.46	42.00	37.65	30.15	40.64

The number of trunk line calls during 1956-57 increased by 6.9 million, or 7 per cent., compared with the figure for the previous year, whilst the average revenue per call increased by 9.6 per cent.

6. Oversea Telephone Services.—During the year 1956-57, radio-telephone services were established between Australia and Bahrain, Bulgaria, Cyprus, Ethiopia, French North Africa, Ghana, Iraq, Lebanon, Nigeria, Spanish North Africa, Tangier, Turkey and the U.S.S.R., bringing the number of countries with which radio-telephone communication is available to 90. In addition, direct services were established with Canada and India to replace links through U.S.A. and London respectively. Service is also provided to certain trans-Atlantic liners, ships off the Australian coast, H.M.A. ships, and H.M.N.Z. ships when cruising in Australian waters.

The amount of traffic handled over the radio-telephone services increased by 17 per cent. over that handled in 1955-56. During 1956-57 the number of calls connected was 70,880, comprising 35,885 originating in Australia and 34,995 incoming calls.

- 7. Revenue from Telephones.—Particulars regarding the revenue from telephone services are included in tables in § 1 (see pp. 427-8).
- 8. World Telephone Statistics, 1957.—Information derived, in the main, from statistics compiled by the American Telephone and Telegraph Company shows that at 1st January, 1957, there were more than 101 million telephones in use throughout the world. The United States of America, with over 56 million, possessed by far the greatest proportion of these (56 per cent.). The United States of America also had the highest recorded number of instruments per 100 population, namely, 34. Figures for other leading countries were as follows:—Sweden 30, Canada 26, New Zealand 25, Switzerland 24, Denmark 20. At June, 1957, the number of telephones in Australia per 100 persons was 19.

### § 5. Cable and Radio Communication.

1. General.—Descriptions of the various cable services between Australia and other countries were given in Official Year Book No. 22, pp. 335-6 and earlier issues.

Competition from beam wireless services brought about a merger between cable and wireless interests, which was not, however, completely satisfactory in combining the advantages of both systems. Details of the merger, and of subsequent developments which led eventually to the establishment, in 1946, of the Overseas Telecommunications Commission, were published in Official Year Book No. 37, pp. 220-4.

2. Oversea Cable and Radio Traffic.—(i) States. The number of telegrams received from and dispatched overseas in each State during 1956-57 is shown hereunder:—

# INTERNATIONAL TELEGRAMS, 1956-57.

	_		(	'000.)				
Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Received Dispatched		698 640	522 466	76 89	65 81	72 71	(a) 21 20	1,454 1,367
Total	••	1,338	988	165	146	143	41	2,821

(a) Estimated.

(ii) Australia. (a) Number of Telegrams. The following table shows the number of international telegrams received from and dispatched overseas during the years 1952-53 to 1956-57:—

# INTERNATIONAL TELEGRAMS: AUSTRALIA.

			000.)				
Particulars.		1952~53.	1953-54.	1954-55.	1955-56.	1956-57.	
••		1,238 1,207			1,441 1,374	1,454 1,367	
		2,445	2,591	2,798	2,815	2,821	
		:: ::	1,238 1,207	1,238 1,308 1,207 1,283	1,238 1,308 1,422 1,207 1,283 1,376		

(b) Number of Words. Particulars of the international business, originating and terminating in Australia, transacted over the cable and radio services during 1956-57 are shown in the following table:—

INTERNATIONAL TELEGRAMS: NUMBER OF WORDS, AUSTRALIA, 1956-1957. ('000 Words.)

Class of	Celegram			mber of Wor insmitted to-		Number of Words Received from—				
Class of	i Cicgi ani	_	United Kingdom.	Other Places.	Total.	United Kingdom.	Other Places.	Total.		
Ordinary			4,675	7,851	12,526	4,172	6,725	10,897		
Letter			5,279	9,436	14,715	5,038	8,066	13,104		
Press			4,215	3,128	7,343	9,224	2,785	12,009		
Government			424	1,255	1,679	1,489	2,164	3,653		
Greetings	• •		926	701	1,627	816	826	1,642		
Other	••	• •	•••	16	16	••	72	72		
Total			15,519	22,387	37,906	20,739	20,638	41,377		

Words transmitted to "Other places" included 3,669,571 to the United States of America and 4,379,057 to New Zealand and the Pacific Islands. Words received from "Other places" included 3,757,150 from the United States of America and 4,645,995 from New Zealand and the Pacific Islands.

- 3. Coast Stations.—At 30th June, 1957, there were 61 radio stations established at points around the Australian coast and 13 about the coast of Papua and New Guinea and other External Territories. During the year ended 31st March, 1957, these stations handled 625,359 messages (534,286 paying, 14,747 free traffic and 76,326 meteorological) with a total of 13,171,778 paying words.
- 4. Radio-communication Stations Authorized.—(i) States and Territories, 30th June, 1957. The following table shows particulars of the different classes of radio-communication stations authorized in Australia and the External Territories at 30th June, 1957. Figures relate to radio-communication (radio telegraph and radio telephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are shown on pp. 439 and 444.

Owing to the use of a new classification, some of the figures in the table below are not comparable with those published in previous issues.

RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1957.

Class of Station.	N.S.W.	Vic.	Qld.	S.A.	w.a.	Tas.	N.T.	A.C.T.	Aust.	Ext. Terr.	Grand Total.
	Т	RANSM	ITTING	AND	RECEIV	/ING.					
Fixed(a)— Aeronautical(a)	25 46 170 168	5 12	18 316 109	11  50	15: 7: 255 37	6  14 23	6 146 16		87 65 1,000 515	297	
Land(c)— Aeronautical Base— Land Mobile Services Harbour Mobile Services Coast(d) Special Experimental Mobile(e)—	513 16 19 46	7 411 11 7 29	19 237 7 8 8	7 144 4 7 9	19 77 28 9 11	6 59 3 10 9	6   1	1 10   1	84 1,460 69 61 113	13	1,461 69
Aeronautical Land Mobile Services Harbour Mobile Services Outpost Ship Amateur	5,227 91  1,135	3,692 70  1,091	1,697 24  363	1,426 22  395	849 44 	301 3  120	 62  14	112	(f) 323 13,366 254 (f) 583 f 1,454 3,359	68 15	269 583 1,580
Total	7,475	5,447	2,806	2,174	1,568	554	260	149	g22793	642	23,435

RADIO-COMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1957-continued.

	Class of	Station.		N.S.W.	Vic.	Qld.	Ś.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	Ext. Terr.	Grand Total.
					F	RECEIVI	ING O	NLY.						
Fixed			•	80	184	62	12	34	1	1	]	373		373
Land Mobile	::	::	• •	80	34	26		::	::		::	61	::	61
T	otal	••	••	81	218	88	12	34	1		· ·	434		434
				r	OTAL	Static	ons At	JTHORI	ZED.					
Grand Total .				7,556	5,665	2,894	2,186	1,602	555	260	149	g23,227	642	23,869

<sup>(</sup>a) Stations established at fixed locations for communication with other stations similarly established.
(b) Stations established in out-back areas for communication with control stations such as those of the Royal Flying Doctor Service. (c) Stations established at fixed locations for communication with mobile stations. (d) Land stations for communication with ocean-going vessels. (e) Equipment installed in aircraft (aeronautical), motor vehicles (land mobile services), harbour vessels (harbour mobile services) and ocean-going vessels (ship) and mobile equipment of organizations such as the Royal Flying Doctor Service. (f) Stations which cannot be classified according to States, etc. (g) Includes 2,360 mobile stations, which cannot be classified according to States, etc.

(ii) Australia and External Territories, 30th June, 1953 to 1957. The number of radiocommunication stations authorized in Australia and the External Territories at 30th June, 1953 to 1957 is shown in the following table.

# RADIO-COMMUNICATION STATIONS AUTHORIZED: AUSTRALIA AND EXTERNAL TERRITORIES.

				At 30th June—								
Stations in-	1953.	1954.	1955.	1956.	1957.							
Australia External Territories		10,858 355	12,271	15,808 421	19,778 456	23,227 642						
Total Stations		11,213	12,650	16,229	20,234	23,869						

#### B. BROADCASTING AND TELEVISION.

#### § 1. Introductory.

- 1. General.—Broadcasting and television services in Australia operate under the Broadcasting and Television Act 1942-1956 and comprise the National Broadcasting Service, the National Television Service, the Commercial Broadcasting Service and the Commercial Television Service. General control of these services is a function of the Australian Broadcasting Control Board (see para. 3 below). Details of each service will be found on pp. 439-44.
- 2. Legislation.—The Broadcasting and Television Act 1956 came into force on 1st July, 1956, with the exception of the provisions relating to television viewers' licences, which have operated from 1st January, 1957.

A separate Act, the Broadcasting and Television Stations Licence Fees Act 1956, became law on 1st July, 1956. It prescribes the fees payable annually by licensees of commercial broadcasting stations and commercial television stations.

3. The Australian Broadcasting Control Board.—The Board, which was constituted on 15th March, 1949, operates under the Ministerial jurisdiction of the Postmaster-General, and its principal functions, as set out in section 16 of the Broadcasting and Television Act 1942–1956, are to ensure:—(a) that services by broadcasting stations and television stations are provided in accordance with plans from time to time prepared by the Board and approved by the Minister; (b) that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate; and (c) that adequate and comprehensive programmes are provided by the stations to serve the best interests of the general public.

In addition, the Board may exercise such other functions as are prescribed in relation to broadcasting stations and television stations.

The Board is empowered to make recommendations to the Minister as to the exercise by the Minister of any power under Part IV. of the Act which relates to the Commercial Broadcasting Service.

The Board has power, subject to the direction of the Minister:—(a) to determine the situation and operating power of a broadcasting or television station; (b) to determine the frequencies of broadcasting and television stations within bands of frequencies notified to the Board by the Postmaster-General as being available; (c) to regulate the establishment and operation of networks of commercial broadcasting or television stations and the making of arrangements by licensees for the provision of programmes or the broadcasting or televising of advertisements.

The Board also has power:—(a) to determine the conditions subject to which advertisements may be broadcast or televised by licensees; (b) to determine the hours during which programmes may be broadcast or televised; and (c) to conduct examinations as to the competency of persons to operate the technical equipment of broadcasting and television stations and to charge appropriate fees.

The Board is obliged to hold public inquiries into applications made to the Minister for licences for commercial broadcasting and television stations in areas for which the Minister proposes to grant licences and into any other matter within its functions if the Board thinks it necessary or desirable, or the Minister so directs. The Board, in exercising its powers and functions in relation to commercial broadcasting and television stations, is obliged to consult representatives of those stations.

Subject to the approval of the Minister and of the Treasurer, the Board may provide financial and other assistance to commercial broadcasting stations for the purpose of ensuring that programmes of adequate extent, standard and variety are provided in the areas served by these stations.

Section 8 of the Act provides that the Board shall consist of five members (including two part-time members) appointed by the Governor-General, one of whom, other than a part-time member, shall be chairman. No person shall be appointed as a member of the Board who: -(a) has any financial interest whether direct or indirect, in any company which is the licensee of, or an applicant for a licence for, a commercial broadcasting or television station or manufactures or deals in equipment for the transmission or reception of broadcasting or television programmes; (b) is a member of the governing body of any company or other association of persons which is the licensee of, or an applicant for a licence for, a commercial broadcasting or television station; or (c) is the licensee of, or an applicant for a licence for, a commercial broadcasting or television station.

4. The Australian Broadcasting Commission.—The Broadcasting and Television Act 1942–1956 provides that the Australian Broadcasting Commission, which consists of seven members, one of whom shall be a woman, shall control the activities of the National Broadcasting Service and the National Television Service.

Under the provisions of the Act the Commission shall provide, and shall broadcast or televise from transmitting stations made available by the Postmaster-General, adequate and comprehensive programmes and shall take in the interests of the community all such measures as, in the opinion of the Commission, are conducive to the full development of suitable broadcasting and television programmes.

The Commission prepares estimates of its receipts and expenditure for each financial year and submits these estimates to the Minister. Appropriations are made by Parliament for the purposes of the Commission and these, together with all other moneys received by the Commission, are paid into an account in the Commonwealth Bank of Australia. From this account are defrayed all costs, charges, expenses, etc., incurred by the Commission in the exercise of its powers and functions under the Act. For particulars of the financial operations of the Commission see Chapter XXI.—Public Finance.

# § 2. Broadcasting.

1. Broadcasting Stations.—The following table shows the number of broadcasting stations in operation at 30th June, 1957:—

# BROADCASTING STATIONS, 30th JUNE, 1957.

Type of Station.	N.S.W.	Vic.	Qid.	S.A.	W.A.	Tas.	N.T. A		Papua and New Guinea.	Total.
National— Medium Frequency High Frequency Commercial	15 1 37	5 3 20	12 2 20	7 8	7   2   14	8	2	1	1	55 9 108

- 2. The National Broadcasting Service.—(i) General. In sound broadcasting, the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission and the provision and operation of transmitters and technical facilities in the studios are the responsibility of the Postmaster-General's Department.
- (ii) Technical Facilities. At 30th June, 1957, the National Broadcasting Service comprised 64 transmitting stations, as follows:—

Medium-frequency Stations-

New South Wales-

2BL and 2FC Sydney, 2BA Bega, 2CO Corowa, 2CR Cumnock, 2GL Glen Innes, 2KP Smithtown, 2LG Lithgow, 2ML Murwillumbah, 2NA and 2NC Newcastle, 2NB Broken Hill, 2NR Grafton, 2NU Manilla, 2TR Taree.

Victoria---

3AR and 3LO Melbourne, 3GI Sale, 3WL Warrnambool, 3WV Dooen. Queensland—

4QG and 4QR Brisbane, 4AT Atherton, 4GM Gympie, 4QA Mackay, 4QB Pialba, 4QL Longreach, 4QN Townsville, 4QS Dalby, 4QY Cairns, 4RK Rockhampton, 4SO Southport.

South Australia-

5AN and 5CL Adelaide, 5CK Crystal Brook, 5LN Port Lincoln, 5MG Mt. Gambier, 5PA Penola, 5WM Woomera.

Western Australia-

6WF and 6WN Perth, 6AL Albany, 6GF Kalgoorlie, 6GN Geraldton, 6NM Northam, 6WA Wagin.

Tasmania—

7ZL and 7ZR Hobart, 7NT Kelso, 7QN Queenstown.

Northern Territory—

5AL Alice Springs, 5DR Darwin.

Australian Capital Territory—

2CN and 2CY Canberra.

Papua-

9PA Port Moresby.

High-frequency Stations—

VLI Sydney, New South Wales, VLG, VLH and VLR Lyndhurst, Victoria, VLQ and VLM Brisbane, Queensland, VLW and VLX Perth, Western Australia, VLT Port Moresby, Papua.

The medium-frequency transmitters operate in the broadcast band 540 to 1,600 kilocycles per second. From the high-frequency stations, using frequencies within the band 3 to 30 megacycles per second, service is given to listeners in sparsely populated parts of Australia such as the north-west of Western Australia, the Northern Territory, and northern and central Queensland and in Papua and New Guinea and adjacent islands.

Many of the programmes given by country stations are relayed from the capital cities, high-quality programme transmission lines being used for the purpose. A number of programme channels are utilized to link national broadcasting stations in the capital cities of Australia and when necessary this system is extended to connect both the national and

commercial broadcasting stations.

In June, 1957, 43 of the medium-frequency stations were situated outside the six State capital cities and additional country stations are to be constructed. When these additions have been made, the medium-frequency and high-frequency stations together will provide for clear reception of the programmes of the National Broadcasting Service in practically every part of Australia.

- (iii) Programme Facilities. (a) General. The programmes of the Australian Broadcasting Commission cover a wide range of activities, which are indicated briefly in the following paragraphs. The proportion of broadcasting time allocated to the various types of programme during 1956-57 was as follows:—Classical Music, 23.3 per cent.; Light Music, 12.4 per cent.; Variety, 20.2 per cent.; News, 7.8 per cent.; Talks, 6.9 per cent.; Sport, 5.6 per cent.; Drama and Features, 4.0 per cent.; Youth Education, 3.6 per cent.; Religion, 3.5 per cent.; Parliament, 3.3 per cent.; Children's Session, 2.3 per cent.; Rural Broadcasts, 1.6 per cent.; Non-departmental, 5.5 per cent.
- (b) Music. The A.B.C., in addition to its extensive activities in the field of musical broadcasting, is one of the largest concert-giving organizations in the world. During the 25 years of the Commission's existence there has been an immense growth of interest in fine music. Today the regular broadcasts command a large listening audience and the number of subscribers to A.B.C. public concerts exceeds 50,000. This vigorous musical life is typified in the activities of the symphony orchestras in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart. These have developed from the studio broadcasting orchestras set up in 1936 in the six capital cities to bodies whose present standard compares favourably with that of orchestras in oversea musical centres of similar size. Until 1946 these orchestras were maintained solely by the A.B.C., but since then they have been subsidized by State Governments and major municipal bodies.

In 1957, the A.B.C. organized 535 public orchestral concerts (including 157 free concerts for school children and 36 free concerts for adults) and 232 public recitals by famous artists throughout the Commonwealth. Of these concerts, 263 were given outside the State capitals, including 75 free orchestral concerts for school children.

The policy of the A.B.C. has been to foster the highest standards of musical appreciation and performance, making the utmost use of the best local talent and at the same time giving Australian audiences the opportunity of hearing leading artists from overseas.

- (c) Drama and Features. Drama programmes are designed to give listeners opportunities, which they might not otherwise have, of hearing the world's great plays as well as adaptations of the best modern stage plays and also those written specially for broadcasting. The main regular drama programmes are broadcast on Sunday afternoons and Sunday and Monday evenings, and special series of longer plays are also given at various times during the year.
- In recent years the technique of the feature programme has also been developed. The feature is a form of entertainment which is unique to radio, consisting of specially written programmes designed to present information in an interesting way. It may deal with a very wide variety of subjects ranging from history and current events to science and the arts. A number of Australian writers have become interested in this form of entertainment and about 97 per cent. of the features broadcast are written by Australians. Local writers also contribute a large proportion of the plays broadcast and every effort is made to assist and encourage their work.
- (d) Youth Education. The A.B.C. provides a regular series of broadcasts to schools as an addition to normal class-room education. The total number of listening schools at the end of June, 1957 was 8,537 or about 88 per cent. of all schools, State and private, throughout the Commonwealth. Many of the school broadcasts are presented in dramatized form, as this method makes the material more vivid and interesting to the young listener. For the very young children, the Commission broadcasts every week-day the "Kindergarten of the Air", a type of broadcast which originated in Australia. (See also Chapter XII.—Education, on this subject.)
- (e) Talks. The aim of the Talks Department is to provide programmes which will keep the listener well informed on current affairs and on general topics. Many of the talks in the first category are now presented in a magazine type of session consisting of a number of short items linked by a narrator. An extension of this type of programme is the documentary, in which radio goes into the field to analyse or to describe, using the actual sounds and voices recorded on location.

Major controversial topics are covered in the "Nation's Forum of the Air" (using the debating technique) and "I Put it to You", in which a well-known speaker presents a contentious theme before an audience chosen because it will generally be critical; afterwards the speaker must stand up to questioning by the audience. Another outstanding session is "News Review", containing at least five comments on the news of the day recorded over landline from all States of the Commonwealth and, in the case of significant world events, from overseas by radio-telephone.

(f) Rural Broadcasts. The Rural Broadcasts Department devotes its programmes to weather and market reports and talks, interviews, etc., designed to provide useful information for the man on the land. These programmes are presented on a regional, State and national

basis, many being directed to particular districts, because of the diversity of climate and conditions. Rural programmes are broadcast regularly through 17 regional stations. Other programmes are broadcast throughout each State or on a national relay, depending on whether the information they contain is of general interest or refers only to the rural industries of one State.

Material for rural programmes is obtained from many sources in Australia, including the Departments of Agriculture, numerous government and private organizations and practical farmers. Talks, interviews, etc., are also secured from many oversea sources, thus bringing to rural listeners the latest information on oversea research that is relevant to Australia's primary industries. Programme material is exchanged regularly with British Commonwealth countries and with the U.S.A. and a number of officers from the broadcasting organizations of South-East Asia have come to Australia, under the Colombo Plan and similar projects, to study A.B.C. rural broadcasting, with the aim of developing services of this type in their own countries.

During 1956-57, 6,808 talks and interviews on rural topics were broadcast by the A.B.C., as well as 5,044 weather reports and 6,240 interstate and local market reports. In times of emergency, the regular weather reports are supplemented by special services giving flood or fire warnings—a very important service because of the speed with which radio can reach a widely scattered audience.

- (g) News. On 1st June, 1947, the Australian Broadcasting Commission's independent news service came into full operation. Since that date the Commission has collected all its Australian (including Papua and New Guinea) news through its own staff journalists and part-time correspondents. It also maintains a news room in London for the selection and transmission of news obtained from major oversea agencies and has special representatives in South-East Asia. Regional bulletins are broadcast from country centres and also from capital cities to cover near-city districts. Radio Australia (the Overseas Service of the A.B.C.) broadcasts Australian and oversea news daily in English, French, Mandarin, Indonesian and Thai, with special attention to Asia and the Pacific. Each day the A.B.C. re-broadcasts two news bulletins from the British Broadcasting Corporation. The A.B.C. broadcasts 157 news bulletins each day, including those given over Radio Australia.
- (h) Other Activities. The broadcasting of the proceedings of Federal Parliament commenced as a regular service in July, 1946. At present these broadcasts are confined to one of the two national transmitters in each capital city and to one domestic short-wave station (VLR).

The National Children's Hour, presented seven days a week, is composed of over 40 programme items, including stories, music, games, and items about art, literature, natural history and sport. There is a children's newsreel and a Brains Trust, discussing, through children, topics of wide general interest. The Argonauts' Club is an important part of the session and encourages children between the ages of 7 and 17 in self-expression and the appreciation of cultural subjects, but the provision of entertainment suitable for children is the main purpose of the session.

In co-operation with the various religious denominations, the A.B.C. broadcasts several religious sessions each week-day in addition to those given on Sundays. These religious broadcasts include relays of normal church services and a variety of special programmes of talks and sacred music. The modern trend towards the use of religious drama is also followed.

The variety and sporting programmes of the A.B.C. provide the lighter side of the service. In its variety sessions the A.B.C. does everything possible to assist local artists in order to increase the amount of first-class talent in this country, and encouragement is also given to Australian composers of light music. The A.B.C. dance bands in Sydney and Melbourne are regarded as being two of the most outstanding bands in Australia.

The coverage of sport at home and abroad by the A.B.C. is comprehensive. On Saturday afternoons the sporting panel provides listeners with progress results, scores and descriptions from half a dozen or more fields of sport. Events of international interest such as Test matches, the Davis Cup, etc., are covered by simultaneous descriptions from A.B.C. commentators. In covering events overseas, the A.B.C. is indebted to the B.B.C. for its collaboration in Great Britain, to the New Zealand Broadcasting Service for events in New Zealand and to broadcasting organizations in many other countries.

3. The Commercial Broadcasting Service.—Commercial broadcasting stations are operated under licences granted and renewed by the Postmaster-General after taking into consideration any recommendations which have been made by the Board. The initial period of a licence is five years and renewals are granted for a period of one year. The fee payable for a licence is £25 on the grant of the licence, and thereafter £25 a year plus one per cent. of the gross earnings of the station from the broadcasting of advertisements or other matter during the preceding financial year. Licensees of these stations rely for their income on the broadcasting of advertisements and other publicity.

- At 30th June, 1957, there were 108 commercial broadcasting stations in operation. A table showing the call sign, location, frequency and aerial power of each commercial broadcasting station licensed at 30th June, 1956 may be found in *Transport and Communication*, Bulletin No. 47.
- 4. Overseas Broadcasting Service.—There are five high-frequency stations at Shepparton, Victoria (VLA, VLB, VLC), VLD), VLG) for use only in the oversea service known as "Radio Australia". As in the case of the National Broadcasting Service, these stations are maintained and operated by the Postmaster-General's Department and their programmes are arranged by the A.B.C. During certain periods station VLG Lyndhurst is also used for the transmissions of the domestic short-wave service. The programmes, which give news and information about Australia, presented objectively, as well as entertainment, are directed mainly to South-East Asia and the Pacific. The oversea audience has grown very substantially in recent years, as evidenced by a large and increasing number of letters from listeners abroad.

### § 3. Television.

- 1. General.—Television services in Australia operate under the Broadcasting and Television Act 1942-1956 and comprise the National Television Service and the Commercial Television Service.
- 2. The National Television Service.—(i) General. The A.B.C. provides the programmes for the National Television Service from stations made available for the purpose by the Postmaster-General. Two stations have been established, ABN Sydney and ABV Melbourne, both operating on Channel 2. ABN commenced operations on 5th November, 1956 and ABV on 18th November, 1956. Both stations operate on a frequency of 64.25 megacycles a second for vision and 69.75 mc/s. for sound.
- (ii) Programme Facilities. (a) General. The television programmes provided by the A.B.C. cover a wide range of activities. The proportion of television time allocated among the A.B.C.'s various departments to 30th June, 1957 was as follows:—Talks Department, 22.3 per cent.; Drama and Features, 18.5 per cent.; Sport, 17.6 per cent.; Variety, 9.2 per cent.; Children's Session, 7.7 per cent.; News, 5.4 per cent.; Classical Music, 1.1 per cent.; Light Music, 2.6 per cent.; Rural Services, 3.5 per cent.; Religion, 2.7 per cent.; Youth Education, 1.0 per cent.; Non-departmental (including trade demonstration films), 8.4 per cent. A summary of the activities of the departments in the field of television is given in the following paragraphs.
- (b) Talks. In television, Talks covers a very wide field, ranging from commentaries on international affairs to panel games and outside telecasts of public events. Discussions, topical interviews, magazine programmes, women's programmes, demonstrations and film and studio documentaries are all part of the regular output.
- (c) Drama and Features. A considerable proportion of television time is devoted to drama and features, and "live" television plays featuring Australian artists may usually be seen fortnightly both in Sydney and Melbourne.
- (d) Music. During 1957 the A.B.C.'s musical activities were extended to the field of television. A number of public concerts and studio performances were successfully telecast and there is reason to believe that the new medium will contribute to the further development of musical appreciation in Australia.
- (e) Rural Services. The emphasis has been on providing information for consumers and on giving city viewers, by means of films, demonstrations, etc., a picture of Australia's rural industries. Regular programmes featuring many facets of Australian agriculture and livestock activities have already been given, and this work will be developed as further facilities become available. Weather reports and forecasts are also telecast on six evenings a week.
- (f) Youth Education. The A.B.C. provides a television programme for very young children each week-day, under the title "Kindergarten Playtime". Experimental television programmes for schools are being presented during 1958.
- (g) News. Television news bulletins and newsreels have been included in the programmes presented in both Sydney and Melbourne since the television services began in November, 1956.
- (h) Other Activities. Special television programmes are presented for children, including filmed material obtained on an exchange basis from oversea television organizations. Church services have been televised in Sydney and Melbourne and other special religious programmes have been telecast. Outside broadcast cameras have covered a number of sporting events, including Davis Cup tennis, Sheffield Shield cricket and swimming championships. The A.B.C. gave a comprehensive television coverage of the Olympic Games held in Melbourne

at the end of 1956 and a film coverage of the Australia v. South Africa Cricket Tests and the Australian Rugby Union tour of Great Britain was also given. The A.B.C. hopes to develop the oversea sporting coverage on television.

3. The Commercial Television Service.—Commercial television stations are operated under licences granted by the Postmaster-General. Licences for commercial television stations have been granted as follows:—Sydney—ATN (Channel 7), TCN (Channel 9); Melbourne—HSV (Channel 7), GTV (Channel 9). These stations commenced operations on the following dates:—ATN, 2nd December, 1956; TCN, 16th September, 1956; HSV, 4th November, 1956; GTV, 19th January, 1957.

The initial period of a licence is five years, the existing four being granted as from 1st December, 1955. The fee payable is £100 on the grant of a licence and thereafter £25 a year plus one per cent. of the station's gross earnings from the televising of advertisements or other matter during the preceding financial year.

4. Extension of Television Services.—On 4th September, 1957, the Postmaster-General announced that the Government had decided to proceed with the second phase of the extension of television services in Australia, under which arrangements will be made for the establishment of national television stations in Brisbane, Adelaide, Perth and Hobart and for the Broadcasting Control Board to hold public inquiries into applications for licences for commercial television stations in each of these cities. This decision was in accordance with the policy announced by the Government in 1954, that television would be introduced on a gradual basis, the extent and timing of each stage in the development of the services being determined by the knowledge gained in the previous stages and by Australia's economic circumstances. The Postmaster-General stated that the Government had made a special examination of the financial aspects of the matter, from which it seemed evident that the revenue which would be received from viewers' licence fees (£5 a year) and from the excise duty of £7 on each cathode ray tube would ensure that the costs of the service would be borne by those who use it and that the programme of development would therefore impose no financial burden on the public in general.

Although the second stage in the development of television is confined to the remaining capital cities, the Government is anxious that television services should be available to people in other areas as soon as practicable. All aspects of the matter are therefore under close review so that the Government may be in a position to consider, as circumstances permit, the question of the further extension of the services to major provincial centres.

The Broadcasting Control Board has prepared a provisional Frequency Assignment Plan which provides for the allocation of channels for four television services in each capital city and two services in every town with a population in excess of 5,000.

#### § 4. Licences, etc.

1. Broadcast Listeners' and Television Viewers' Licences.—(i) General. Broadcast listeners' and television viewers' licences are issued at post offices in accordance with the provisions of the Broadcasting and Television Act 1942–1956, which stipulates that, except as prescribed, a person shall not use, maintain or have in his possession a broadcast or television receiver unless there is in force a licence which applies to that receiver. A broadcast listener's licence authorizes the operation of any broadcast receiver, and a television viewer's licence any television receiver, which is:—(a) in the possession of the holder of a licence, or of a member of his family, at the address specified in the licence and/or ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of the holder, or of a member of his family, and is ordinarily kept at that address while not in use.

The fee for a broadcast listener's licence or a renewal thereof is:—Zone 1, £2 15s.; Zone 2, £1 8s. Zone 1 is the area within approximately 250 miles of specified broadcasting stations and Zone 2 is the remainder of the Commonwealth. A television viewer's licence costs £5.

A licence may be granted at reduced rates to any person who (a) is in receipt of a pension under Part III. or Part IV. of the Social Services Act 1947–1957 or a service pension, or a pension in respect of total and permanent incapacity, under the Repatriation Act 1920–1956 or the Repatriation (Far East Strategic Reserve) Act 1956; and (b) lives alone, with another pensioner, or with any person whose income does not exceed the maximum amount of income and pension allowed under Part III. or Part IV. of the Social Services Act 1947–1957 or section 87 of the Repatriation Act 1920–1956. Licence fees for pensioners are as follows:—broadcast listener's licence—Zone 1, 10s.; Zone 2, 7s.; television viewer's licence, £1 5s.

A licence may be granted free of charge to a blind person over 16 years of age or to a person or authority conducting a school. A tourist resident in Australia for not more than six months and an oversea diplomatic or consular representative or a member of his staff is not required to hold a licence. Inmates of a hospital or charitable institution are covered by the licence held by the institution.

(ii) Licences in Force. (a) Broadcast Listeners'. The following table shows the number of broadcast listeners' licences in force at five-year intervals from 1925 to 1957.

DDOADCACT	LISTENERS'	LICENICES	IN ECDOR	
RRUALICAST	LISTENERS	LICHNICHS	IN BURGE.	

At 30th June-		1e	N.S.W.(a)	Vic.	Qld.	S.A.(b)	W.A.	Tas.	Aust.	
925		••	34,857	20,290	1,267	3,331	3,562	567	63,87	
930			111,253	140,072	23,335	25,729	5,755	6,048	312,193	
935			279,166	237,247	67,546	76,515	41,257	20,121	721,85	
940			458,256	348,264	151,152	124,928	87,790	42,191	1,212,58	
945(c)			548,074	394,315	180,089	146,611	98,210	47,930	1,415,22	
950(c)			683,271	505,078	260,033	195,261	133,199	64,369	1,841,21	
955			746,050	549,690	293,542	223,593	150,199	71,602	2.034,67	
957			777,072	554,909	312.527	234,120	155.166	73,459	2,107,2	

(a) Includes the Australian Capital Territory. (b) Includes the Northern Territory. (c) Excludes licences for receivers in excess of one. These licences were introduced in July, 1942 and were abolished on 31st December, 1951.

Of the 2,107,253 broadcast listeners' licences in force at 30th June, 1957, 1,222,558 or 58 per cent. were held by persons living in metropolitan areas and 884,695 or 42 per cent. by persons in country areas. Of the latter, only 12,927 were in respect of Zone 2.

(b) Television Viewers'. The following table shows the number of television viewers' licences in force at 30th June and 31st December, 1957.

TELEVISION VIEWERS' LICENCES IN FORCE.

D	ate.		N.S.W.	Vic.	Tas.	Australia.
30th June, 1957 31st December, 1957		 • •	28,912 74,627	44,986 91,922	11 27	73,909 166,576

2. Radio-inductive Interference.—In each State of the Commonwealth, the Postmaster-General's Department maintains a staff of experts with suitable equipment and transport, for the purpose of investigating complaints of radio-inductive interference to the reception of broadcast and television programmes and to defence and civil radio-communication services.

During the year 1956-57, 10,780 sources of trouble, including 444 affecting television reception, were eliminated as a result of Departmental efforts or by other action. More than 4,000 suppressors were fitted to offending appliances as recommended by investigating officers, who carried out 25,622 inspections in metropolitan and country areas.

3. Prosecutions under the Broadcasting and Television Act.—Persons convicted during the year ended 30th June, 1957 for operating unlicensed broadcast receivers numbered 4,447. Fines and costs amounting to £22,809 were imposed. During the period 1st January, 1957 (when television viewers' licences became compulsory) to 30th June, 1957, 39 unlicensed viewers were convicted and fined a total of £286, including costs.

### CHAPTER XII.

#### EDUCATION.

#### § 1. Introduction.

An account of the development of the Australian school system up to 1929 may be found in Official Year Books Nos. 1, 2, 17 and 22. In Official Year Book No. 40 a reasonably complete review of changes which had occurred up to 1951 and of the practices then current was presented from material furnished in the main by the Commonwealth Office of Education.

In the sections which follow, the information relating to the educational programme applies mainly to the year 1957. The statistics given in the tables relate to 1955 and 1956 for schools and technical colleges and to 1956 for universities.

### § 2. Government Schools.

1. Administration.—Education is mainly the responsibility of the State Governments but the Commonwealth Government provides financial assistance to students and meets the full cost of education in Commonwealth Territories (see Chapter V.)

Although there is a tendency towards regional administration, State educational administration is centralized. The permanent head of the Education Department in each State is responsible to the Minister for Education. Contact with the schools is maintained principally through Inspectors, called Superintendents in Western Australia and Tasmania. Departments are usually divided into primary, secondary and technical divisions. Some technical colleges are in a large measure autonomous. Universities are independent foundations although much of their income is derived from State and Commonwealth grants.

Examination Boards, representative of the universities, the Education Departments and non-government schools, control public examinations and syllabuses, and curriculum committees prepare primary and secondary curricula. State Ministers for Education meet periodically as the Australian Education Council, and Directors of Education meet annually as a standing committee of this Council.

- 2. The School System.—(i) Compulsion. In all States, there is legislation for compulsory school attendance. The original Victorian Education Act was passed in 1872, followed by similar Acts in Queensland (1875), South Australia (1878), New South Wales (1880), and Tasmania and Western Australia (1893).
- In 1957, the ages between which children were legally required to attend school were as follows:—New South Wales, 6 to 15 years; Victoria, 6 to 14 years; Queensland, 6 to 14 years; South Australia, 6 to 14 years (children may not leave school until the end of the term during which they reach the age of 14 years); Western Australia, 6 to 14 years; and Tasmania, 6 to 16 years. The employment of children of school age is prohibited by law.
- In Victoria, South Australia, and Western Australia, amendments to the Acts have provided for the raising of the school leaving age to 15 years, but to date this legislation has not been implemented.

Schooling may be given in government schools (including correspondence and special schools), in non-government schools or by private tuition. Schooling in government schools is ordinarily free. Non-government schools charge fees and, with the exceptions noted on p. 456, are not financially supported by State or Commonwealth Governments.

(ii) Beyond compulsion. In recent years, the development of large-scale industry and scientific farming has demanded a diversity of skills and a general raising of the educational level of the population. The raising of the school leaving age in two States and the tendency everywhere for children to stay longer at school have been expressions of public realization of this. In recent years, less than half of all children left school when they reached the age limit for compulsory attendance. Indeed, almost half now proceed to some form of further education beyond secondary school, either as full-time students, as part-time apprentices or trainees released during the day by their employers, or as part-time evening students.

In the early years of government provision of education, the main emphasis was on the primary school, which catered for children under compulsion and offered a course largely confined to the tool subjects, reading, writing and arithmetic. However, a process of extension and differentiation both at the bottom—infants' schools and kindergartens—and at the top—secondary schools—was well under way during the early years of this century.

- 3. The Educational Ladder.—(i) Infants' Schools. It is now customary, although not compulsory, for children to begin school when they are five years old. In larger primary schools, they enter the infants' school, and in smaller schools infants' classes, which occupy two or three years, the first year in some States being called "Kindergarten" or "Preparatory". The emphasis in the infants' classes is very much on general development, on play activities and on the informal aspects of the educational processes. In some cases the first two grades of primary education, together with any "Preparatory" or "Kindergarten" classes, are to be found in separate infants' schools or departments. But whether in a separate establishment or as a part of a primary school, there is a gradual move towards formal instruction. At the end of the period, most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and can write in pencil. In addition, they have acquired skills with art materials and the like. A good deal of the instruction is carried on through activity methods, involving, for example, dramatic work, puppetry, and school "shops". Children then pass at about the age of 8 or 9 to the more formal primary school, in which they normally spend four or five years.
- (ii) Primary Schools. The main emphasis in the primary school as distinct from the infants' school still lies on the tool subjects (reading, writing and arithmetic) and, in more recent years, on oral language, but the methods of teaching have undergone considerable changes. Changes in the purpose and outlook of educationists, and the raising of the professional standards of teachers, have made for greater freedom for pupils and teachers, some departure from the methods of mass instruction, and the closer linking of the curriculum with the child's social environment.

In general, there is now less emphasis on results than formerly, and basic skills are taught at a somewhat later stage. At the same time, the curriculum has been broadened. More individual instruction has led to a reduction in minimum standards of achievement for the less able and a stress on curriculum enrichment for the bright. Retardation, i.e., the repeating of grades, has been considerably reduced, the aim being for each child to remain with his age group. In all States, opportunity classes exist for backward children, and in one State opportunity classes are provided for the especially bright.

(iii) Secondary Schools. At the age of 12 or 13 (in Queensland, 14), children transfer to a secondary school course. In the cities and larger country centres, this is provided in a separate school, but in less densely populated areas secondary classes share the same buildings as primary classes. In rural areas, secondary pupils may share teachers or classrooms with primary pupils, and in one-teacher schools a few secondary students may carry out correspondence assignments under the supervision of the primary teacher-in-charge.

Secondary curricula have developed from the matriculation requirements of the universities. Formerly English grammar and literature, and mathematics, including algebra, geometry and trigonometry, were the core. Languages, chiefly Latin and French, or science, chiefly physics and chemistry, and history had an important place. Geography and drawing were often taken in the first two or three years.

As a result of changes in the academic course for matriculation, greater emphasis has been placed on oral language and written expression in the English course; Latin has waned in popularity and modern languages other than French and German are being taught in a few schools. A general science course has been introduced in some States, and social studies, a synthesis of history, geography and civics, is a subject to matriculation level in two States. More emphasis has been placed on art, music and physical education. In recent years, the provision of a secondary education for all has gained ground rapidly, although the entrance requirements of tertiary institutions are still provided for.

Consequently, alongside the academic course, other courses have grown up. In country areas, they may be offered in the same school or the academic course may even be largely abandoned. In the city, it is usual to offer non-academic courses in separate schools. The academic schools and multi-lateral country schools are usually known as High Schools, while the other types are generally distinguished by such names as Junior Technical Schools and Home Science Schools.

Particular mention should be made of the recent development of the all-age consolidated school sometimes with an agricultural bias, found under various names in different States. Tasmania and South Australia adapted the idea of the English village area schools to Australian conditions and established "Area Schools", some of which have farms attached.

The courses followed in the non-academic schools are, in general, broader than in the academic schools. There is less concentration on establishing an academic discipline and method peculiar to each subject, but more attention to correlation between fields of knowledge, sometimes expressed by projects involving them all. Generally, less time is devoted to mathematics and the formal sciences, and more time to practical work and to art and musical appreciation. In English, oral language is emphasized rather more and grammar much less than in the academic schools.

- (iv) State Details. Very brief particulars of the position in each of the States were given on pp. 432-3 of Official Year Book No. 40.
- 4. Examinations and Accrediting.—(i) Examinations. In earlier years, most States had three examinations for school children. The first came at the end of primary school and was variously known as the "Qualifying Certificate" or "Scholarship". These examinations were regarded as a qualification for secondary education. The third came at the end of the secondary course, at the age of sixteen or seventeen, and was known as the "Leaving" or "Senior Public" examination, which qualified students for university matriculation. Between these came the "Intermediate Certificate" or "Junior Public Certificate", usually one or two years before the end of the full course of secondary schooling. A pass in this examination was a useful entrance qualification for clerical occupations, nursing; some public service positions, and other callings requiring academic training.

The entrance examination for secondary schools was administered by the Education Departments, although students from private schools also sat for it. The two higher examinations were generally under the control of a board, on which universities, Education Departments and non-government schools were represented.

The external examination for secondary school entrance has now been abolished in every State except Queensland, where the age of transition is fourteen and the "Scholarship" examination must be passed to entitle the student to free education and boarding allowances. The external Intermediate Examination has declined in importance, some States substituting internal examinations in some or all schools, other States providing a variety of internal certificates from different types of schools. The Leaving Certificate in most States has not been supplanted, but has been modified to provide a greater variety of subjects and, as for example in mathematics, the opportunity of choosing several specialized courses or a broad course.

The length of the secondary course has been increased in two States from two to three years for the Intermediate Certificate and from a further one to a further two for the Leaving: South Australia has a further year beyond the Leaving Certificate fon a separate examination known as "Leaving Honours". Only the Leaving Certificate is necessary for matriculation, but good results—credits as distinct from passes—in the Leaving Honours examination may carry exemption from some subjects of the first-year university course. In Victoria, the optional Leaving Honours year has been replaced by adding a further year after the Leaving examination for a course leading to a special matriculation examination. Separate matriculation examinations also exist in New South Wales, Western Australia and Tasmania, but successful Leaving candidates are not required to sit.

- (ii) Accrediting. The system of granting certificates, or credit for subjects passed, without external examination is a major development and now operates in four States. Credit is assessed on the student's record of work for the year, together with performance in internal examinations. Syllabuses can be less rigidly controlled and can be more freely adapted to local conditions, although standards are maintained by the supervision of the central authority. All States have an external examination for matriculation.
- (iii) State Details. The details of accrediting in each State were given on pp. 433-4 of Official Year Book No. 40.
- 5. Health Services to Schools.—Information relating to school medical and dental services is given in Chapter XIV.—Public Health.

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6. Guidance.—Each Australian State now has a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of school record cards. In general, the functions of these services are:—selection and differentiation for secondary education, diagnosis and guidance of atypical children, preliminary vocational guidance and, in some States, research. The weight given to each of these functions varies considerably from State to State, but the aim is the provision of thorough educational guidance services for all children.

The Vocational Guidance Division of the Commonwealth Employment Service cooperates with State Education Departments by giving post-school vocational guidance, using the data obtained and made available by the Education Departments during the school career of the children. In New South Wales, a similar service is also provided by the Vocational Guidance Bureau of the Department of Labour and Industry.

- 7. Research.—(i) State Education Departments. All State Education Departments have set up research branches which function as integral parts of head offices. In several States, the officer who directs research is also responsible for the guidance service offered by his department. The research undertaken is directed towards departmental activities and the findings of research are examined carefully in the determination of policy and procedures; in addition, many problems of immediate importance are handled. In the majority of States, too, the Research Branch supervises the collation of statistics and also plays an important part in curriculum revision and modification of examinations.
- (ii) Australian Council for Educational Research. The Australian Council for Educational Research, a non-governmental body, is also engaged on educational research in a wide variety of fields, ranging from tertiary to pre-school education. It conducts surveys and inquiries, makes grants to approved educational investigators, serves as a centre for disseminating educational information, provides training for research workers, and standardizes and distributes educational and psychological tests for use in Australia. Although this council is an autonomous body, the Commonwealth and State Governments contribute some financial support to it.
- 8. Atypical Children.—Pupils who, for one reason or another, cannot progress to their best advantage in an ordinary school are catered for by special schools or classes. Among groups given special attention are the mentally backward, the gifted, the physically handicapped, the blind, deaf and dumb, the epileptic, the cerebral palsied, the partially sighted, the hard-of-hearing and the delinquent. The provision of special schools and classes has involved the appointment of departmental specialists, special training courses and close liaison with school health services. In some States, special clinics attached to hospitals or functioning as an independent child-welfare service handle cases of personality maladjustment and work in co-operation with the psychological services of the Education Departments.
- 9. Education of Native Children in Australia.—The Commonwealth Government is responsible for the education of full-blood native children in the Northern Territory. Each State has responsibility for the welfare and education of native children within its boundaries.

Native children are admitted to government schools in all States except in areas where separate facilities are provided for the natives. In those States where natives are more numerous, special schools are located at or near aboriginal reserves, settlements and stations. The schools are for the most part staffed by teachers from the Education Departments, and the curriculum is similar to that in ordinary government schools with a bias towards handicrafts. Numbers of native children also attend the mission schools conducted in several States by the various denominations. The standard of education in these schools generally is similar to that in the government schools.

- 10. Provision for Rural Areas.—(i) General. The population of Australia is so scattered that there is a problem in providing primary, and more especially secondary, education for all children. One method of meeting this problem was the establishment of a wide network of one-teacher primary schools, staffed in the main with trained teachers. The practice of sending itinerant teachers to assist correspondence students in outlying areas has been introduced in the far north of Western Australia.
- (ii) Subsidized Schools. Where a group of children is too small to warrant the establishment of a one-teacher school, a "subsidized school" may be opened. The Education Department pays part of the cost, and in some States appoints a teacher. Some States also administer "provisional schools", which are completely financed by the Government but which are not large enough, or sufficiently assured of adequate continued attendance of pupils, to warrant classification as permanent schools.

- (iii) Consolidation. As early as 1904, the policy of transporting pupils to larger and more central schools began to come into operation. Trains, bicycles and horses were first employed, but the use of buses has led to a very great development of school transport systems. This policy, known as "consolidation", has been responsible for a substantial reduction in the number of small schools, and is one of the most striking developments of the past twenty years. The consolidated school is usually not merely a larger primary or secondary school; and generally provides a curriculum specially adapted to the needs of the rural area it serves. Organized transport for children attending country primary and secondary schools has been developed considerably.
- (iv) Special Assistance. Another way of bringing children and schools together has been the provision of financial assistance for children who have to live away from home in order to attend school. Most of these board in private homes but there are eight government hostels and over 60 private ones (excluding private boarding schools), many of which are government-subsidized. Together, these cater for more than 1,800 children of secondary school age and a small number of primary school children also. Special scholarships for country children, giving allowances for living away from home, and substantial fare concessions for vacation travel are provided by all States.
- (v) Correspondence. For children who are still unable to attend school, systems of correspondence tuition have been established in every State. The Education Departments provide tuition through primary and secondary school levels and up to matriculation standard if required. In addition, the Technical Correspondence Schools conducted by the senior technical college of each State provide correspondence tuition at secondary level up to matriculation standard for students over the school leaving age. Further reference to the work of the Technical Correspondence Schools is made in § 5 of this chapter, which deals with technical education (see p. 461).
- 11. School Broadcasting in Australia.—Over the years, an extensive school broadcasting system has been developed in Australia by the co-operative efforts of the Australian Broadcasting Commission and education authorities. The Youth Education Department of the A.B.C. is responsible for the broadcasting of the programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison officers with the Education Departments. More than two-thirds of Australian schools are equipped with radio receivers.

School broadcasts are presented as part of the regular A.B.C. programmes without separate stations or wave lengths. Special efforts are made, however, to relate the broadcasts to school work by the extensive distribution of booklets giving details of programmes in advance and subject notes accompanied by picture sheets, work books, and teachers' notes.

Broadcasting has proved to be a most effective way of reaching the outback children of Australia, and radio lessons have been designed to supplement correspondence lessons. The success of the first School of the Air, which has been in operation at Alice Springs in the Northern Territory since 1950 and serves correspondence pupils of the South Australian Education Department, has led to the opening of similar schools in other isolated areas. One of these is based at Ceduna on the west coast of South Australia; and the other is at Broken Hill, in the far west of New South Wales. These schools serve a total of well over half a million square miles. By means of special two-way radio equipment, children hundreds of miles apart can participate in the same lesson and teachers and pupils can talk directly with each other.

The "Kindergarten of the Air" is described in § 4 (p. 460) of this chapter, which deals with pre-school education.

12. Teacher Training and Recruitment.—(i) General. The training of government school teachers is carried out by the State Education Departments, but in most States persons who wish to train for teaching in private schools may attend government training colleges on payment of a fee. Many non-government school teachers have been drawn from the government teaching services; and others have been recruited at the university graduate level. Private training institutions also provide some teachers.

An account of the early growth of teacher training systems is to be found in Official Year Book No. 22 and subsequent developments were reviewed extensively in Official Year Book No. 40. The pupil-teacher system has been abandoned as the chief method of training teachers and teacher students are now recruited at matriculation level and given a professional course of training at colleges controlled by Education Departments or by university Departments of Education. The raising of entrance standards and prolongation of training has led to a close association between the Education Departments and universities. The trend has been towards placing teacher training on the same basis as other professional training.

There is at present a shortage of teachers in Australia. Measures taken to overcome this shortage include substantial increases in teachers' salaries and liberalization of promotion systems, publicity drives to attract recruits and increases in living allowances to departmental teachers' college students.

- (ii) Training Colleges. Every State maintains at least one teachers' training college. Most students are trained at colleges in the capital cities, although there has been a movement towards the establishment of colleges in the country. In 1957, there were in Australia 22 teachers' colleges' conducted by Departments of Education and professional training for graduate teachers was provided by seven universities.
- (iii) Training of Primary Teachers. In most States, teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. Colleges are co-educational. Departmental trainees are given a monetary allowance while in training and are required to enter into a bond to serve for a specified period or to repay all or portion of the cost of training.

The entrance standard is generally at the Leaving Certificate level at about the age of seventeen. In some States, intending teachers can obtain a scholarship at the Intermediate Certificate level to enable them to complete teachers' college entrance requirements. In return, they are required to enter into a bond of service additional to that normally required of departmental teachers' college trainees.

In general, the duration of courses is two years for primary teachers, including infants' teachers. The basic subjects taken in the various courses are principles, history and general methods of teaching, special methods of teaching primary school subjects and educational psychology. In addition, students undertake courses in physical education, art, music, school hygiene and handicrafts as well as lectures designed to widen their own cultural background.

In South Australia, primary teacher trainees attend certain university courses, including Education, as part of their training. In Tasmania, while the majority of departmental teacher trainees receive their training at the university, there is also a government teachers' college providing a special short course designed to train women primary and infant teachers.

In some States, separate courses are provided for infants' teachers and for teachers in small one-teacher schools. In Victoria, an extension course of one year following the primary course is designed to train teachers of home-crafts for primary schools.

- (iv) Training of Secondary Teachers. Prospective secondary teachers are required to undertake a degree course followed by a one-year post-graduate course leading to a university degree or diploma in education. This period of professional training includes lectures and seminars on subjects associated with educational theory and practice, study of methods and techniques appropriate to secondary school subjects, periods of practice teaching and the observation of classroom techniques in the teaching of special subjects. In some States, the teachers' colleges provide special courses of training for teachers of junior secondary schools or classes.
- (v) Training of Specialist Teachers. Teachers of specialist subjects such as music, art, manual arts, domestic science and commercial subjects receive from two to five years' training varying according to the institution concerned and the type of secondary school in which the teacher is to teach. In several States, the shorter courses are provided wholly by the teachers' colleges. Where the specialist course is given at an institution other than the teachers' college—for example, at a university, technical college or conservatorium of music—as is usual for teachers of specialist subjects in high schools, trainees are required to attend teachers' college or university lectures in education and in some cases the specialist course is followed by a year of professional training.

There are conservatoria of music in four States. In New South Wales and Queensland the conservatorium is a State institution under the Minister for Education; in Victoria and South Australia it is attached to the university.

Courses designed to train Physical Education teachers are offered in five States, in one at a teachers' college and in the others by the universities.

Training of teachers of agricultural subjects in secondary schools is available in five States and consists of either an agricultural college diploma or a university degree course together with professional training. In Victoria, the two-year agricultural college diploma course follows the normal two-year primary teachers' course. In New South Wales, in addition to the three-year university agricultural course followed by one year's professional training, there is a two-year teachers' college agricultural course.

(vi) Training of Technical Teachers. Teachers of general subjects in technical schools and colleges usually receive their training either as primary or as secondary teachers and after some experience in either or both fields are transferred to a technical institution.

Teachers of specialist subjects in technical schools are in the main recruited from the ranks of qualified tradesmen engaged in either industry or commerce. Upon appointment, teachers of technical subjects usually receive instruction in classroom teaching techniques and procedures. A Technical Teachers' College has been established in Victoria.

(vii) In-service Training. As almost all teachers now enter the profession by way of teachers' training colleges, where they receive basic professional training, in-service training in Australia is directed chiefly towards keeping teachers abreast of developments and adding to their basic training.

Such training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evenings. Courses consist of discussions and lectures given by senior staff members of Education Departments and university and teachers' college lecturers, on such subjects as classroom techniques and supervision, librarianship, music, arts and crafts, and physical education. In some States, there are also in-service courses for special groups of teachers, such as headmasters or teachers of one-teacher schools. In addition, district inspectors are responsible for organizing short conferences of teachers where professional topics are discussed.

Education Departments encourage teachers to pursue university courses, and in some States pay the cost of courses undertaken by selected teachers.

The official publications of the Education Departments contain articles dealing with educational theory and practice. In most States, the magazines of the teachers' organizations, which reach the majority of government teachers, also contain articles of this type.

- (viii) State Details. The details of teacher training in the States were given on pp. 442-3 of Official Year Book No. 40.
- (ix) Sex and Status of Teachers. Although about one half of the teachers in State schools in Australia are men, the ratio varies from State to State. In the infants' schools and generally in girls' departments, women teachers only are employed. Men, however, predominate in the senior positions, both because of their greater preponderance amongst those with long service and because the higher promotion positions are generally reserved for men, except for some in infants' schools and girls' schools which are reserved for women.
- 13. School Buildings and Grounds.—In 1930, school building programmes were seriously cut because of the financial difficulties of the depression. The 1939-45 War intervened before school building could be resumed on a large scale. After the war, the building of schools was given a high priority, but the rapid post-war increases in school population have imposed a severe strain on available school accommodation and such emergency measures as the use of halls, cloakrooms and weather-sheds for class instruction have been adopted in some areas.

The post-war buildings fall into two groups, portable and permanent. In primary schools in particular, some Education Departments favour the use of both kinds of classroom in conjunction, thus enabling them to cope with the changing age-composition of particular areas. Prefabricated buildings and classrooms have been imported or locally produced in increasing quantities and include both timber-frame, aluminium and steel units and single and multiple pre-cast concrete units. Such prefabricated buildings are used not only in extending the facilities of existing schools and to provide multi-purpose units such as assembly hall gymnasiums but also, now, for erecting entire schools.

14. Equipment.—(i) Text Books and Materials. The State Education Departments supply government schools with essential equipment free of charge, including scientific apparatus and equipment, maps, blackboards, chalk and cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are supplied free in most States.

Primers and writing equipment for individual pupils are usually supplied free in primary schools, and each Department, except that in Tasmania, produces in addition monthly school magazines which are supplied free or at a small cost. Textbooks, however, are supplied to primary pupils free of charge in one State only. In other primary schools and in all secondary schools, textbooks must be purchased by students, although in several States, schools own stocks of textbooks which are hired to students, and in one State secondary textbooks are sold at reduced rates.

Other equipment is supplied free by the Departments on a limited basis only. Equipment such as radios, film and filmstrip projectors, pianos, duplicators and library books are ordinarily purchased for individual schools by the parent and citizens organizations associated with them, with the assistance of subsidies from the Departments.

(ii) Furniture. There has been considerable development in this field. Originally most schools were equipped with long desks and benches, seating six to eight pupils, but these were later replaced by the standard dual desk with tip-up seat, and in infant classes

by individual chairs and small tables. After the war, considerable research was undertaken on posture and the physical measurement of children. The dual desk is now being replaced in some States by the individual table and chair, provided in a range of sizes suitable to each class. In some States, tubular steel is used. The new type of furniture is more suitable for flexible arrangements of the class in line with modern educational practice.

- (iii) Visual Aids. In the past 20 years, there has been a remarkable growth in the use of visual aids in education. After some resourceful pioneering work had been done by individuals, the Departments of Education, between 1936 and 1939, appointed special committees and teacher demonstrators to guide the development of the new educational medium. Production units to produce film strips suitable for use in schools were set up in five States and an Australian-produced film-strip projector was manufactured. After the war, the emphasis moved from the strip projector to the 16 mm. sound machine and the Australian National Film Board, set up by the Commonwealth Government to promote the use of educational films, became the main producer of these films. Film companies are also designing films primarily for class-room use and several manufacturers have produced 16 mm. sound projectors. Education Departments have their own film libraries to distribute films to schools and, in addition, borrow from the Commonwealth National Library, which is the main distributing centre for non-technical films in Australia.
- 15. Parent and Citizen Organizations.—In Australia, where all government schools are administered by central departments, there is little opportunity for local administration of education. Public interest is expressed through parents' committees or organizations of parents and other citizens interested in supporting their local school. The Education Acts of all States provide for the formation of groups of this type, whose aims are to promote the interest of the school by bringing parents, pupils and teaching staff together, to help provide teaching aids and recreation materials not supplied by the departments, to assist in the regular attendance of children at school and to help find accommodation for teachers.

In several States, the general maintenance of school buildings, equipment and grounds is a statutory responsibility of the parent groups, costs being covered by government grants. Lunch canteen services at local schools, where Oslo lunches may be purchased, are maintained by groups in some States.

A notable achievement of the parent groups in three States has been the establishment of schoolchildren's insurance schemes, operated through State government insurance offices or private insurance companies. These schemes cover accidents to children which occur between the time of leaving home for school and returning home by the usual direct route.

In all States, parents' groups have affiliated to form State-wide councils or federations. These, in turn, form a federal body, the Australian Council of School Organizations.

16. Statistics of Government Schools.—(i) General. The government schools shown in the following tables include primary, secondary, junior technical, correspondence and subsidized schools, but exclude senior technical colleges, evening schools and continuation classes.

Particulars relating to senior technical colleges are given in § 5, p. 461.

(ii) Years 1955 and 1956. (a) General. The following tables show for 1955 and 1956 the number of government schools, together with the teachers employed, teachers in training and the number of children enrolled.

#### GOVERNMENT SCHOOLS(a), 1955.

State or	огу.	Schools Open at End of Year	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.	
New South Wales(b)			 2,595	16,214	3,159	525,298
Victoria			 2,016	11,810	2,669	(c)332,598
Queensland			 1,557	6,847	1,746	196,848
South Australia			 665	4,670	548	129,407
Western Australia			 487	3,294	831	(d) 94,718
Tasmania			 291	2,183	390	55,886
Northern Territory(e	)		 8	86		1,987
Australia			 7,619	45,104	9,343	c1,336,742

<sup>(</sup>a) Excludes Senior Technical Colleges.
(c) Estimated. (d) Average weekly enrolment.

<sup>(</sup>b) Includes Australian Capital Territory.
(c) Year ended 30th June.

#### GOVERNMENT SCHOOLS(a), 1956.

State or	Territo	угу.	Schools Open at End of Year.	Teachers Employed (excluding Teachers in Training).	Teachers in Training.	Net Enrolment.
New South Wales(b)		•••••	 2,614	16,724	3,599	528,753
Victoria			 2,039	12,194	3,184	(c) 336,343
Queensland			 1,560	7,337	2,630	208,956
South Australia			 662	4,670	713	138,220
Western Australia			 488	3,507	886	98,888
Tasmania			 277	2,331	414	60,153
Northern Territory			 10	77		2,279
Australia			 7,650	46,840	11,426	c 1,373,592

<sup>(</sup>a) Excludes Senior Technical Colleges. (b) Includes Australian Capital Territory. (c) Estimated.

As with enrolments, there is no uniform method of calculating the average attendance. Most of the States aggregate the attendances for the year and divide by the number of school sessions. New South Wales and Western Australia, however, employ averages of term averages. The average enrolment and attendance in each State and the Northern Territory during 1955 and 1956 are shown below:—

GOVERNMENT SCHOOLS(a): AVERAGE ENROLMENT AND ATTENDANCE, 1955 AND 1956.

		1955.		1956.			
State or Territory.	Average Weekly Enrolment.	Average Daily Attendance.	Percentage of Atten- dance to Enrolment.	Weekly	Average Daily Attendance.	Percentage of Atten- dance to Enrolment.	
New South Wales(b)	 490,595	439,187	89.52	510,848	457,901	89.64	
Victoria	 317,836	289,331	91.03	336,343	306,845	91.23	
Queensland	 c 192,163	171,118	89.05	c 203,097	182,426	89.82	
South Australia	 124,634	115,661	92.80	133,235	123,837	92.95	
Western Australia	 94,718	87,699	92.59	100,632	94,469	93.88	
Tasmania	 53,129	49,053	92.33	55,578	51,768	93.14	
Northern Territory	 (d) 1,760	(d) 1,579	89.72	2,039	1,835	90.00	
Australia	 1,274,835	1,153,628	90.49	1,341,772	1,219,081	90.86	

<sup>(</sup>a) Excludes Senior Technical Colleges. (b) Includes Australian Capital Territory. (c) Census enrolment at 1st August. (d) Year ended 30th June.

The average attendance at government schools in Australia is shown in the following table for the year 1891 and at varying intervals to 1956.

#### GOVERNMENT SCHOOLS(a): AVERAGE ATTENDANCE, AUSTRALIA.

	Year.	Total Population. (b)	Average Attendance.		Year.	Total Population. (b)	Average Attendance.
		'000.	No.			 '000.	No.
1891		 3,421	350,773	1950		 8,307	844,123
1901		 3,825	450,246	1951		 8,528	899,514
1911		 4,574	463,799	1952		 8,740	974,934
1921		 5,511	666,498	1953		 8,903	1,037,621
1931		 6,553	817,262	1954		 9,090	1,089,484
1941		 7,144	732,116	1955		 9,313	1,153,628
1949		 8,046	810,800	1956		 9,533	1,219,081

<sup>(</sup>a) Excludes Senior Technical Colleges.

<sup>(</sup>b) Average Enrolment and Attendance. The methods of calculating enrolment are not identical throughout Australia. The unit in South Australia is daily enrolment, while New South Wales, Victoria, Western Australia and Tasmania use weekly enrolment. In Queensland, no average enrolment is compiled, and the August census enrolment figure has been taken.

<sup>(</sup>b) At 31st December.

- (c) Schools in the Australian Capital Territory. During 1956, 13 government schools were in operation in the Australian Capital Territory. Enrolment numbered 4,678; and average attendance was 4,133. Figures for 1955 were 13, 5,196 and 4,667, respectively, By arrangement with the Commonwealth Government, these schools are conducted by the New South Wales Education Department with a provision for primary and secondary education, the Department being recouped for expenditure. The cost of the teaching staff in 1955-56 was £219,582, while the cost of general maintenance amounted to £125,820. The figures quoted exclude enrolment, etc., at the Canberra Technical College and the Evening Continuation School. For further particulars of educational facilities in the Australian Capital Territory see Chapter V.—The Territories of Australia, Australian Capital Territory, p. 117.
- (iii) Expenditure. (a) Maintenance—All Schools (except Senior Technical Colleges). The net expenditure on maintenance in all grades of schools, except senior technical colleges and, in Victoria, junior technical schools, and the cost per head of average attendance for each of the years 1952 to 1956 are shown in the following table. The figures do not include expenditure on buildings, which is shown in a subsequent table. In all expenditure tables, the figures for Victoria, Queensland, Western Australia and the Northern Territory relate to the financial year ended six months earlier than the calendar year.

#### GOVERNMENT SCHOOLS(a): NET EXPENDITURE ON MAINTENANCE.

Year.	N.S.W.	Vic. (c)(d)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (d)	A.C.T.	Aust.
		τ	OTAL (IN		Secondar 000:)	х <b>S</b> сноо	ols).		
1952 1953 1954 1955 1956	17,844 19,717 21,486 24,901 27,054	9,777 11.931 12,993 14,454 17,405	4,814 5,630 6,353 6,979 8,194	3,768 4,107 4,444 5,480 5,986	3,853 3,898 4,382 5,143 5,752	1,916 2,211 2,411 (e) (e)	57 88 102 125 139	171 202 258 309 345	42,200 47,784 52,429 (e) (e)

#### PER HEAD OF AVERAGE ATTENDANCE.

(£	s.	d.)	
----	----	-----	--

1953 1954 1955	49 9 6 46 52 1 11 47 1 57 4 9 49 1	9 10 31 2 6 41 0 5 7 36 2 0 40 15 3 6 39 5 2 41 3 1 9 2 40 15 8 47 7 4 6 44 18 3 48 6	5 51 5 4 50 7 1 1 53 0 0 51 2 1 8 58 12 11 (e)	8 57 4 5 64 2 3	46 1 0 48 2 6 (e)

<sup>(</sup>a) Excludes Senior Technical Colleges.(c) Excludes Junior Technical Schools.(e) Not yet available.

(b) Maintenance—Secondary Schools. The figures shown in the preceding table refer to expenditure on the maintenance of all government primary and secondary schools, excluding senior technical colleges. It has been the practice of the State Education Departments to give separate information in regard to the cost of secondary education. The fact, however, that both elementary and higher education are in some instances given in the same school and by the same teacher makes difficult any satisfactory allocation of expenditure between primary and secondary education. Furthermore, the term "secondary" has not the same meaning in all States. Similar difficulties arise in connexion with the apportionment amongst the various branches of expenditure on administration, inspection and the training of teachers. The figures quoted hereunder in regard to cost have been extracted mainly from the reports of the State Education Departments, and are subject to the foregoing qualifications. There are no secondary schools in the Northern Territory, although some primary schools have secondary tops. Consequently no figures are given in the following table for the Northern Territory.

<sup>(</sup>b) Gross figures, receipts not being available.
(d) Twelve months ended 30th June of year shown.

#### GOVERNMENT SECONDARY SCHOOLS(a): EXPENDITURE ON MAINTENANCE.

	19	54.	19	55.	19	1956.			
State.	Cost.	Cost p Head Populat	of	Cost.	Cost p Head Populat	of	Cost.	Cost per Head of Population.	
	£	£ s.	d.	£	£ s.	d.	£	£s	. d.
New South Wales(b)	6,450,426	1 17	4	7,660,115	2 3	6	7,217,534	2 0	2
Victoria	3,377,023	1 7	11	3,881,621	1 11	2	4,763,622	1 16	7
Queensland	735,821	0 11	4	842,976	0 12	9	1,027,837	0 15	2
South Australia	1,056,726	1 6	6	1,316,448	1 12	1	1,487,692	1 15	1
Western Australia	1,118,198	1 15	5	1,340,213	2 1	4	1,444,205	. 2 3	2
Tasmania(d)	424,705	1 7	4	(c)	(c)		(c)	(c)	ı
Australia	13,162,899	1 9	7	(c)	(c)		(c)	(c)	

<sup>(</sup>a) Excludes Senior Technical Colleges.

(d) Includes High and Junior Technical Schools.

The figures in all cases exclude the cost of buildings. In Queensland, the figure quoted excludes the cost of the Agricultural High School and College, which amounted in 1953-54 to £214,080, in 1954-55 to £221,181 and in 1955-56 to £246,973.

(c) Buildings. Expenditure on government school buildings, excluding senior technical colleges, for the years 1952 to 1956 was as follows:—

#### GOVERNMENT SCHOOLS(a): EXPENDITURE ON BUILDINGS.

(Including Loan Fund Expenditure.)

(£'000.)

Yea	аг.	N.S.W.	Vic.(b)	Q'land.(b)	S. Aust.	W. Aust. (b)	Tas.(c)	N.T.	Total.
1952		4,845	3,119	855	1,667	917	599	97	12,099
1953		4,170	3,099	645	897	2,007	668	117	11,603
1954		5,494	4,061	812	1,146	1,038	1,353	60	13,964
1955		7,366	4,660	1,287	1,366	1,458	(d)	16	(d)
1956		7,409	5,917	1.589	1,518	1,591	(d)	29	(d)

<sup>(</sup>a) Excludes Senior Technical Colleges. 1st August. (d) Not yet available.

The totals for the various States in 1956 (1955 in parentheses) include the following amounts expended from funds other than the consolidated revenue fund:—New South Wales, £5,549,542 (£5,115,130); Victoria, £5,641,382 (£4,460,586); Queensland, £1,326,602 (£1,063,018); South Australia, £1,301,786 (£1,171,484); and Western Australia, £1,306,668 (£1,189,452).

<sup>(</sup>b) Includes A.C.T.

<sup>(</sup>c) Not yet available.

<sup>(</sup>b) Year ended 30th June.

<sup>(</sup>c) Year ended

(d) Total Net Cost. The total net cost of education in government schools, including buildings, during the years 1952 to 1956 was as follows:—

# GOVERNMENT SCHOOLS(a): TOTAL NET COST. (£'000.)

Yea	ır. 	N.S.W. (b)(c)	Vic. (d)(e)	Q'land. (d)	S. Aust. (c)	W. Aust. (d)	Tas. (c)	N.T. (d)	A.C.T. (f)	Aust.
1952		22,689	12,896	5,669	5,435	4,770	2,515	154	171	54,299
1953		23,887	15,030	6,276	5,004	5,905	2,879	205	202	59,388
1954		26,980	17,055	7,165	5,590	5,420	3,764	162	258	66,394
1955		32,268	19,114	8,265	6,847	6,601	(g)	141	309	(g)
1956		34,464	23,322	9,784	7,504	7,343	(g)	168	345	(g)

(a) Excludes Senior Technical Colleges. (b) Gross expenditure, receipts not being available. (c) Figures relate to 12 months ended 31st December of year shown. (d) Figures relate to 12 months ended 30th June of year shown. (e) Excludes Junior Technical Schools. (f) Excludes expenditure on buildings. (g) Not yet available.

The figures in this and the preceding tables refer to all grades of government schools with the exception of senior technical colleges, and in Victoria, junior technical schools.

(e) School Banking. Particulars of School Savings Banks are included in Chapter XX.—Private Finance.

#### § 3. Non-Government Schools.

1. Public Authority and the Non-Government Schools.—In all States, education is compulsory for all children between certain ages. It must be received in a government school, unless the child is under "regular and efficient" instruction elsewhere. This may be at home, or in a non-government school. The provision for control over the regularity and efficiency of instruction in the non-government schools varies considerably from State to State. In New South Wales and Western Australia, provision is made for an initial inspection when a new school starts, and for inspections thereafter as the Minister requires, to ensure efficiency. In Victoria and Tasmania, registers are kept of teachers and schools, and both teachers and schools must satisfy the administering authority that they are efficient before registration is granted. Without such registration, neither a teacher nor a school can operate. Provision is made, too, for inspections at any time by the registering authority.

In Queensland, eight grammar schools, which exist by statutory authority and are subsidized by the State, are subject to annual inspection. These are the only non-government schools in Australia for which an annual inspection is prescribed by statute. Other non-State schools in Queensland may be inspected at their own request, but it is possible for these schools—and also those in South Australia—to exist without inspection.

Public authority over schools or institutions having scholars above the compulsory ages is generally less direct. It is effected directly by the registration procedures in Victoria and Tasmania, and in all States there is a measure of indirect control through provisions governing the award of State scholarships, bursaries or other forms of financial assistance to secondary scholars, which are available only in State or approved non-State schools. In New South Wales, also, the Intermediate and Leaving Certificates are awarded only to pupils of schools whose courses of study are approved by the Department of Education.

In all States, non-government schools are required, under the authority of either the Education Acts or Statistics Acts, to furnish certain statistical returns. The form of these returns may be prescribed in the Acts or may be subject to alteration with the Minister's consent.

2. Non-Government Schools Finance.—Roman Catholic parochial schools do not charge fees, although most families make a contribution if they can afford to do so. With this exception, pupils of non-government schools must ordinarily pay fees. At the majority of non-government secondary schools, privately endowed scholarships are available in varying numbers and reductions in fees are normally made for children of clergy or for two or more members of one family attending the same school.

Certain State scholarships and bursaries are, as noted above, tenable at approved non-State secondary schools. Since the establishment of educational systems by the State Governments, official policy has been largely against the provision of direct financial assistance to non-government schools. Eight undenominational grammar schools in Queensland, however, receive a State subsidy under the Grammar Schools Acts 1860–1900. In 1957, the Tasmanian State Government approved the provision of capital grants to non-government schools, and in 1956, the Commonwealth Government announced a plan to contribute to the interest payments on loans raised by churches in order to build denominational secondary schools in the Australian Capital Territory.

3. Numbers of Non-Government Schools, Teachers and Enrolments.—The numbers of non-government schools, teachers and enrolments for 1955 are shown in the following table:—

#### NON-GOVERNMENT SCHOOLS, 1955.

Denomination.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
		Nume	ER OF S	CHOOLS.				
Denominational— Church of England Methodist Presbyterian Roman Catholic Other Undenominational	. 12 . 648 . 21	35 4 15 385 23 44	(b) 5 3 246 7 10	14 3 2 114 19 5	1 8 3 2 156 5 88	5 1 2 38 4 7	2	120 22 36 1,589 79 205
Total	. 780	506	287	157	262	57	2	2,051
			Теаснен	ks.				
Denominational— Church of England Methodist Presbyterian Roman Catholic Other Undenominational	. 165 283 . 4,506 . 71	682 165 314 2,125 154 335	(b) 112   57   1,560   32   112	202 80 70 638 88 75	108 46 52 661 17 175	23 10 213 55	13	2,073 591 786 9,716 417 1,185
Total	. 6,220	3,775	2,124	1,153	1,059	424	13	14,768
		E	ENROLME	NTS.				<u> </u>
Church of England Church of England Methodist Presbyterian Roman Catholic Other Undenominational	2,452 4,243 135,021 1,177	6,280 94,642 2,670	4,196 (b)1,719 613 48,798 547 2,248	3,657 1,285 1,144 18,262 1,420 1,072	2,158 934 1,071 22,072 319 3,459	1,508 311 163 7,047 869 627	450	35,800 10,153 13,514 326,292 7,002 17,184
Total	. 160,029	123,967	58,121	26,840	30,013	10,525	450	409,945

<sup>(</sup>a) Includes Australian Capital Territory.

<sup>(</sup>b) Presbyterian and Methodist Schools' Association.

Similar figures for the year 1956 are shown in the following table:-

### NON-GOVERNMENT SCHOOLS, 1956.

Denomination.	1	LS:W (a)	V.c.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
			Numi	BER OF S	CHOOLS.				
Methodist Presbyterian Roman Catholic Other		41 6 12 662 21 47	35 4 15 400 23 44	(b) 5 3 245 7 10	14 3 2 120 19 5	8 3 2 164 5 93	5 1 2 37 4 3	  2	119 22 36 1,630 79 202
Total		789	521	286	163	275	52	2	2,088
				TFACHER	s.				
Methodist Presbyterian Roman Catholic Other		800 164 277 4,639 72 417	694 165 330 2,219 163 349	256 (b) 119 53 1,547 29 117	215 83 73 724 98 75	113 52 49 675 21 184	100 23 10 212 51 26	   	2,178 606 792 10,027 434 1,168
Total		6,369	3,920	2,121	1,268	1,094	422 <sup>-</sup>	11	15,205
			E	NROLMEN	NTS.				
Methodist Presbyterian Roman Catholic Other	::	10,523 2,494 4,378 12,741 1,154 5,745	12,778 3,572 6,688 102,832 3,074 6,226	4,305 (b)1,808 661 48,835 545 2,425	3,832 1,304 1,200 20,075 1,481 1,158	2,196 986 1,051 23,583 294 3,651	1,579 314 169 7,394 889 412	633	35,213 10,478 14,147 346,093 7,437 19,617
Total	16	7,035	135,170	58,579	29,050	31,761	10,757	633	432,985

4. Growth of Non-Government Schools.-The enrolment and average attendance at non-government schools in 1891 and at varying intervals to 1956 were as follows:-

# NON-GOVERNMENT SCHOOLS: ENROLMENT AND ATTENDANCE.

Year.			Average Attendance.		Year.		Enrolment.	Average Attendance,	
		124,485	99:588	1951			326.258	293,429	
		148,659		1952			, ,	315,796	
		160,794		1953				337,156	
		198,688	164,075	1954				352,736	
		221,387	189,665	1955			409,945	374,571	
		256,580	224,355	1956			432,985	(a)396,300	
			124,485 148,659 160,794 198,688 221,387	124,485 99,588 148,659 120,742 160,794 132,588 198,688 164,075 221,387 189,665	124,485 99,588 1951 148,659 120,742 1952 160,794 132,588 1953 198,688 164,075 1954 221,387 189,665 1955	124,485 99,588 1951 148,659 120,742 1952 160,794 132,588 1953 198,688 164,075 1954 221,387 189,665 1955	124,485 99,588 1951		

<sup>(</sup>a) Partly estimated.

4. The Organization of Roman Catholic Education.—There is, in each State capital, an official who acts under the Archbishop as a Director of Catholic Education for the area. Each diocese within the area is, however, autonomous and manages its own educational affairs subject to the local episcopal authority. The State Director has, in

<sup>(</sup>a) Includes Australian Capital Territory. (b) Presbyterian and Methodist Schools' Association.

addition to possible inspectorial functions within his own diocese, the duty of co-ordination of educational matters within his area, and of liaison with other educational authorities, particularly the State Education Department.

The system includes kindergartens, sub-primary, primary, academic secondary, home science, commercial, agricultural and technical schools, juniorates and minor seminaries, schools for the mentally and physically handicapped, orphanages and a variety of special schools of a charitable nature for under-privileged or socially handicapped children.

With the exception of a small number of permanent lay teachers and a number of visiting teachers, usually specialists in such matters as physical education, sport, and speech, teaching is done by members of religious orders.

5. The Organization of Other Non-Government Education.—(i) General. Practically all non-government schools, except a limited number under private ownership, are governed by a controlling body known variously as a School Council or Board of Trustees or Governors.

Within each State, although the other non-government schools may be organized into loose forms of association for purposes such as sports, conferences, uniform conditions, there is no system corresponding in size, detail or organization with the Roman Catholic schools.

The Headmasters' Conference of Australia and the Headmistresses' Association of Australia are composed of headmasters and headmistresses respectively of a number of the larger non-State schools, including some Roman Catholic schools. Neither body has executive powers. One of the chief considerations for the admission of new members is the degree of independence enjoyed by the governing body and principal of the school concerned.

(ii) Church of England. The various types of Church of England schools include small schools associated with a local parish; schools under direct ownership of a diocese; schools established by Acts of the Church Synod, in which the majority of the members of the council are church representatives but which, otherwise, have almost complete independence; and schools conducted by religious orders of the church.

The proportion of members of a school council nominated by the church varies. In some schools, members may also be nominated by parents, by former students, and by the council itself.

In general, schools incorporating the words "Church of England" in their title follow a diocesan syllabus of religious education.

(iii) Other Denominations. In general, control of Presbyterian schools is exercised through School Councils appointed by the General Assembly of the Presbyterian Church in the State concerned. Councils vary considerably in size and in the bodies represented on them. Similarly, appointments to councils of Methodist schools are made by the annual Conference of each State.

In Queensland, six schools are operated under the joint auspices of the Presbyterian and Methodist churches.

A limited number of schools are conducted by other denominations, such as the Baptist, Congregational and Lutheran churches and by the Seventh Day Adventists. The Society of Friends conducts one school in Australia, the Friends' School, Hobart.

Jewish schools are conducted in several capital cities.

(iv) Undenominational. There are a number of undenominational schools in Australia. Some of the larger, although not State-operated, have Government nominees on their boards. They include Sydney Grammar School, the Hale School, Perth, and the eight Queensland grammar schools. Other undenominational schools operate under the auspices of corporate bodies, usually in the form of a limited liability company, while others are privately owned. The majority of schools in this last category are small kindergartens and primary schools.

#### § 4. Pre-School Education.

1. Types of Pre-School Centres.—Free kindergartens were originally established in congested industrial areas and financed mainly by voluntary effort, but over the years the Commonwealth Government, the State Governments and some municipal councils have provided an increasing amount of financial assistance.

In 1938, the six Kindergarten Unions, the voluntary organizations which pioneered pre-school education in Australia, met to form a federal organization. Its title "Australian Association for Pre-school Child Development" was changed in 1954 to "Australian Pre-school Association". Its membership is now open to all organizations whose main objective is the care of the pre-school child, and includes bodies in the Australian Capital Territory, the Northern Territory, and the Territory of Papua and New Guinea.

The aim of the association is to promote the continuous advancement of pre-school movements throughout Australia. It sets out standards which act as a guide throughout Australia to those sponsoring pre-school centres, and is responsible for the administration of the six Lady Gowrie Child Centres. These centres are demonstration nursery schools which the Commonwealth Government established in each of the capital cities in 1940 and which are maintained by Commonwealth grants.

To-day pre-school centres are found not only in inner city areas but also in suburban and country districts. Programmes are adapted to suit the areas in which the centres are situated. Types of pre-school centres include nursery kindergartens, crèches with full-day care for children of working mothers, play groups and play centres, occasional care centres and residential holiday homes. Crèches accept children from a few weeks of age up to 5 or 6 years while other centres cater for children from about 3 years up to 5 or 6 years. A mobile unit is in operation in the Australian Capital Territory.

2. The Training of Teachers.—It is an accepted principle in Australia that all types of pre-school work should be under the guidance of trained pre-school teachers, although, owing to the shortage of teachers, this cannot always be put into practice.

The Kindergarten Unions in all States except Tasmania have established teacher training colleges providing three year courses. The minimum entrance age is seventeen and the Leaving Certificate is usually required before admission. In addition, in New South Wales, the Sydney Day Nursery and Nursery Schools' Association maintains a training college, and a two-year course for nursery teachers is available at the Sydney Teachers' College.

In Tasmania, prospective teachers may either complete the normal two-year primary course followed by one year's training at the Kingston Pre-School Centre or undertake a shorter course entirely at the Centre. Those wishing to gain a Kindergarten Training College diploma must attend a college on the mainland.

Many students-in-training receive government scholarships, and others are sponsored by government departments or voluntary organizations.

- 3. Kindergarten of the Air.—The Kindergarten of the Air came into being in 1942 in Western Australia, where, under the stress of the war, kindergartens could not remain open. It was conducted by the Australian Broadcasting Commission and proved so successful that within a few years it was being broadcast throughout Australia and has inspired similar projects overseas. It consists of a daily programme of 25 minutes based on the interests of children from 3 to 5 years of age and reaches children in the outback and in isolated country schools, children in hospital, and other children who are not able to attend a pre-school centre.
- 4. Kindergarten Unions.—The following information regarding kindergarten unions has been compiled from particulars supplied by the principals of the chief institutions or the organizing secretary in each State, except in the case of Western Australia where the details were furnished by the Education Department. It refers to kindergarten unions or associations and excludes the kindergarten branches in the government schools of the various States.

KINDERGARIEN UNIONS, 1956.											
State.			No. of Schools.	Average Attendance.	Permanent Instructors.	Student Teachers.					
New South Wales			38	1,548	118	21					
Victoria			47	1,449	71 أ	(a)					
Queensland			20	(a)	33						
South Australia(b)			90	3,167	272						
Western Australia		\	41	1,410	78						
Tasmania			(c)	(c)	(c)	(c)					
Total		i	236	7,574	572	(a)					

(a) Not available. (b) Includes affiliated suburban and country centres. (c) In 1956, all Kindergartens formerly under the jurisdiction of the Tasmanian Kindergarten Union came under the control of the Department of Education.

In 1956, only 51 of these 236 kindergartens were located outside metropolitan areas, mainly in the larger provincial cities. In each capital city, except Hobart, there is a training college and the number of students in training during 1956 was 89 in Sydney, 154 in Melbourne, 29 in Brisbane, 44 in Adelaide, and 20 in Perth.

### § 5. Technical Education.

1. General .- In this section, technical education refers to that branch of education which is concerned with the preparation for entry to skilled occupations, including trades and professions. In the main, this education is vocational and is chiefly part-time, being carried out by the student while he is engaged in his occupation. The work of technical high schools, junior technical schools and other schools of this nature, which provide courses with a bias towards technical handwork, has been excluded, as these schools provide a form of education which is more properly regarded as secondary education.

The chief institutions for higher education other than the universities are the technical colleges, which are administered in five States by a division of the Education Department. In New South Wales a separate Department of Technical Education has been established, and in Victoria a number of the foremost technical colleges are controlled by independent councils which, although responsible to the Minister of Education, enjoy a large measure of autonomy.

The technical colleges offer training not only in all the major industrial skills, but also in a variety of commercial, artistic and domestic occupations. Their courses may be divided into three main types, as follows:-

(i) Diploma courses giving advanced training in the technical professions and other fields such as accountancy and art.

- (ii) Vocational courses, usually leading to the award of a certificate, for skilled technical and semi-professional workers. Many of these courses are in fields not covered by an apprenticeship award.
- (iii) Craftsman or artisan training in the apprenticeship trades.

In New South Wales, the University of Technology conducts a number of diploma courses on behalf of the Department of Technical Education.

A brief description of the expansion in technical training since the 1939-45 War appeared in Official Year Book No. 43, p. 449 The following table gives some indication of the growth of technical education in the years 1952 to 1956.

	Year.				No. of Students.	No. of Teachers.(a)	Total Expenditure.	
							£	
1952				141	170,239	6,428	7,145,402	
1953				141	178,301	6,688	7,826,645	
1954		• •		148	178,527	7,149	9,245,560	
1955				151	(b)	7,632	(b)	
1956				164	(b)	8,364	(b)	

<sup>(</sup>a) Includes both full-time and part-time teachers.

Training in certain technical aspects of agriculture such as farm mechanics, wool classing, and in related fields such as food technology is also provided by the technical colleges, while the seven State agricultural colleges (see also § 27 of Chapter XXII), located in all States except Tasmania, provide comprehensive agricultural courses of two to three years' duration which lead to diplomas in agriculture. At some colleges other diploma courses are offered in addition, including horticulture, dairying and dairy manufactures, food technology and oenology. The Queensland Agricultural High School and College is administered by the Department of Education; in other States the Departments of Agriculture are responsible for administration of the colleges.

2. Correspondence Training.—Technical correspondence courses were first offered in Australia about 1910. During the period 1940 to 1944, technical correspondence schools were founded in each state in conjunction with the Commonwealth and these have become an important part of the system of technical education in the Australian states.

These schools not only offer a wide variety of correspondence courses, including trade and apprenticeship, rural, commercial and art courses, but, in addition, provide secondary courses up to matriculation or diploma entrance standard. Students who because of distance or working hours cannot attend technical college classes may enrol for these courses. In New South Wales, "mobile instructional units" consisting of rail cars equipped as self-contained workshops are used to provide practical experience for correspondence students, as well as for the instruction of apprentices and tradesmen at smaller country centres.

<sup>(</sup>b) Not yet available.

In 1955, the Royal Melbourne Technical College established a shortwave broadcasting station to provide further tuition for its correspondence students.

An interesting recent development in technical correspondence education, in which the Australian technical colleges are co-operating with the Commonwealth Government, is the Correspondence Scholarship Scheme operating under the Colombo Plan. Through this scheme, South and South-east Asian students may take correspondence courses conducted by the technical colleges and by the University of Queensland, which has a highly organised system of external tuition. Courses include commercial, rural and teachertraining, engineering and other technical courses. Where practical training is required as part of the course, it is taken by the student in his own country.

- 3. Teacher Training.—Prior to the 1939-45 War, technical colleges were staffed chiefly by men drawn from two sources. They were either trained teachers in the employment of the Education Department or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers. In order to remedy this, there has been a move to develop schemes of training technical college teachers without breaking the important link provided by recruiting specialist tradesmen to teach in the colleges. In New South Wales, technical college lecturers and tradesmen-instructors receive an in-service course of teacher training in both general educational theory and teaching method, and correspondence courses and visiting lecturers care for the newly appointed teacher-instructor in country colleges. Modifications of this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teachers' certificates from teachers' colleges.
- 4. Colleges, Teachers and Students.—The number of colleges, teachers and enrolments of individual students during the years 1952 to 1956 are given in the following table:—

TECHNICAL EDUCATION: COLLEGES, TEACHERS AND ENROLMENTS.

_				Teachers.		Individua	l Students	Enrolled.
State.		Colleges.	Full- time.	Part- time.	Total.	Males.	Females.	Persons.
New South Wales(a	1)						1	
1952	·	40	984	1,032	2,016	(b)37.564	(b)19,409	56,973
1953		40	994	1,036	2,030	38,134	19,606	57,740
1954		42	1.064	1,037	2,101	40,718	20,796	61,514
1955		42	1,162	1,102	2,264	(c)	(c)	(c)
1000		45	1,197	1,265	2,462	(6)	6	(8)
1936 Victoria	• •	75	1,157	1,203	2,402	(6)	(6)	(6)
		36	1 220		2 420	20 617	12.002	46.510
1952	• •		1,338	1,090	2,428	32,517	13,993	46,510
1953		37	1,497	1,147	2,644	35,511	14,304	49,815
1954		43	1,712	1,199	2,911	34,900	14,778	49,678
1955		45	1,808	1,346	3,154	37,152	15,374	52,526
1956		47	2,026	1,484	3,510	39,796	14,784	54,580
Queens!and					-	1	1	1
1952		12	137	354	491	13,849	5,953	19,802
1953.		12	143	361	504	14,574	6,732	21,306
1954		12	147	403	550	12,200	4,420	16,620
1955	:.	12	161	423	584	12,067	4,555	16,622
1956		13	165	402	567	12,478	4,461	16,939
South Australia—	• • •	13	105	402	301	12,470	4,401	10,939
10.00		27	203	498	701	11.033	7,195	18,228
		27				11,033		
1953			209	494	703	11,439	6,863	18,302
1954		26	212	549	761	11,922	6,799	18,721
1955		27	205	530	735	12,675	6,945	19,620
1956		28	267	583	850	13,478	7,841	21,319
Western Australia-	-		1					1
1952		17	159	321	480	7,995	5,284	13,279
1953		16	173	286	459	8,987	5,736	14,723
1954		16	203	278	481	9,670	5,948	15,618
1955		18	200	337	537	10.946	6.341	17,287
1956		24	237	339	576	12,100	6,703	18,303
Casmania		1				12,100	0,	10,003
1952.,		9	37	275	312	3,085	2,440	-5,525
40.03	• •	9	56	292	348	3,382	2,740	5.677
*DP4	• •	9	71	274	345	3.890	2,295 2,882	6.772
.0	• •	1 7					2,002	
1955	• •		73	285	358	3,394	2,145	5,539
1956		7	79	320	399	3,583	2,153	5,736
Tota'								
1952		141	2,858	3,570	6,428	106,043	54,274	160,317
1953	• • • • • • • • • • • • • • • • • • • •	141	3,072	3,616	6,688	112,027	55,536	167,563
1954	• • • • • • • • • • • • • • • • • • • •	148	3,409	3,740	7,149	113,300	55,623	168,923
1955		151	3,609	4.023	7.632	(c)	(c)	
	••	164	3,971	4,393	8,364	(6)	(c)	(c) (c)
1956	• •	104	3,7/1	4,373	0,304	(C)	(0)	(6)

<sup>(</sup>a) Excludes correspondence students as follows: 1952, 9,922; 1953, 10,738; and 1954, 6,818. The figures for 1954, represent enrolment in courses; figures for previous years are subject enrolments. (b) Partly estimated. (c) Not yet available.

5. Expenditure.—The expenditure on technical education in each State for 1955 and 1956 is shown in the two tables which follow:—

# TECHNICAL EDUCATION: EXPENDITURE, 1955. (Including Loan Fund Expenditure.)

(£.)

State.		Salaries and Main- tenance.	Equipment.	Buildings.	Gross Expendi- ture. (a)	Receipts— Fees, etc.	Net Expendi- ture.
New South Wales	٠.	2,577,694	218,846	707,239	3,505,023	433,480	i  3,071,543
Victoria (b)(c)		2,607,155	65,000	1,051,176	4,271,059	269,078	4,001,981
Queensland	٠.	452,498	146,387	165,240	764,125	41,224	722,901
South Australia		560,055	(d)	125,606	685,753	112,291	573,462
Western Australia(c)	٠.	488,447	(d)	99,137	587,584	22,992	564,592
Tasmania		151,762	31,861	15,171	202,925	(e)	(e)
Aust. Cap. Terr.(c)	٠.	35,409	424		42,448	5,307	37,141
Australia(f)	٠.	6,873,020	316,131	2,163,569	10,058,917	(e)	(e)

<sup>(</sup>a) The differences between amounts shown in this column and the sums of the three preceding columns represent expenditure on other items. (b) Includes expenditure on Junior Technical Schools. (c) Year ending June. (d) Included with salaries and maintenance. (e) Not yet available. (f) There is no technical college in the Northern Territory.

# TECHNICAL EDUCATION: EXPENDITURE, 1956. (Including Loan Fund Expenditure.)

	(£.)										
State.		Salaries and Main- tenance.	Equipment.	Buildings.	Gross Expendi- ture.(a)	Receipts— Fees, etc.	Net Expendi- ture.				
New South Wales Victoria(b)(c) Queensland South Australia Western Australia(c) Tasmania Aust. Cap. Terr.(c)		2,840,530 3,219,722 524,828 623,273 563,658 167,198 40,373	118,688 63,480 171,326 (d) (d) 32,471 2,303	891,439 926,213 172,354 288,249 113,746 14,431	3,856,187 4,803,644 868,508 911,522 677,404 228,991 49,189	449,233 284,481 42,098 80,045 23,515 (e) 5,776	3,406,954 4,519,163 826,410 831,477 653,889 (e) 43,413				
Australia(f)		7,979,582	388,268	2,406,432	11,395,445	(e)	(e)				

<sup>(</sup>a) The differences between amounts shown in this column and the sums of the three preceding columns represent expenditure on other items. (b) Includes expenditure on Junior Technical Schools. (c) Year ending June. (d) Included with salaries and maintenance. (e) Not yet available. (f) There is no technical college in the Northern Territory.

Fees and other receipts are paid into Consolidated Revenue in all States except Victoria, where they are retained and spent by the Technical School Councils. The expenditure on buildings is financed largely from loan moneys, the sums provided from this source in 1955 being: New South Wales, £585,644; Victoria, £1,051,176; Queensland, £143,272; South Australia, £88,192; Western Australia, £50,097; Tasmania, nil.

#### § 6. Commonwealth Activities.

Although the primary responsibility for education rests with the States, the Commonwealth Government is committed to a number of educational activities related to its other functions. For example, it maintains officer training colleges and education services for each of its defence services, a School of Pacific Administration for the training of administrative and other officers for service in Commonwealth Territories, and a School of Forestry. In each of the Australian Territories, the educational programme provides for both the native and white children who live there. References to these programmes appear in Chapter V.—The Territories of Australia.

The Australian Broadcasting Commission features school broadcasts and other educational broadcasts as part of its daily programmes. The Commonwealth Scientific and Industrial Research Organization undertakes research, the results of which are made available to educational institutions. In 1951, the Commonwealth Government in roduced a free-milk scheme for school children. This extended a service which some State authorities were already providing for a proportion of the school population. Under the Commonwealth Reconstruction Training Scheme, many ex-servicemen and women have received the training which has enabled them to enter many different trades and professions.

The Commonwealth Office of Education, established under the Education Act 1945, acts as the Commonwealth's educational adviser, undertakes research work as Commonwealth activities require and is the channel for liaison between Commonwealth and State educational authorities. This office has responsibilities with regard to the education of migrants, international relations, including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization, and the provision of scholarships and fellowships for selected students under the Technical Cooperation Scheme (Colombo Plan) and under the scheme known as Australian International Awards.

The Universities Commission was also established under the Education Act 1945. This commission is mainly concerned with arranging training in universities and similar institutions for ex-members of the forces and providing assistance to students at universities and other approved institutions.

The Commonwealth assists a number of other bodies concerned with education. Besides grants to organizations such as the Australian Council for Educational Research, grants are made to the States for payment to universities.

Further details of Commonwealth assistance to students and of grants for universities are given in § 8, para. 6, (iii) and (iv), of this chapter.

#### § 7. Australia and International Relations in Education.

Despite its isolation, Australia has always been responsive to educational developments in oversea countries, particularly those in the United Kingdom, but it is only recently that it has begun to make any considerable impact on educational thought overseas.

In this connexion, there have been important developments since the 1939-45 War. For instance, there has been a remarkable increase in the volume of information on educational matters exchanged between Australia and South-east Asia, and Australia participates in the Technical Co-operation Scheme (Colombo Plan), the United Nations Technical Assistance programme and the cultural programme of SEATO.

Perhaps the most important single factor behind the quickening of Australian interest in international cultural affairs has been membership of the United Nations Educational, Scientific and Cultural Organization. Australia has been a member since 1946. Eleven expert committees in Australia are responsible for a wide and varied programme of activities on behalf of UNESCO. Their advice has helped to make Australia's contribution to UNESCO international conferences and seminars highly effective. Other work undertaken by these committees has included the provision of technical material and advice to the countries of South and South-east Asia, the conducting of seminars in Australia, arranging for exhibitions and displays in Australia and overseas, and the publication of handbooks and brochures to assist teachers and other persons in meeting the problems involved in educating for international understanding.

The Australian National Advisory Committee for UNESCO, on which all the other committees are represented, advises the Commonwealth Government and co-ordinates the work of the specialist committees.

#### § 8. Universities.

1. General.—There are at present nine universities and two university colleges in Australia, as follows:—

#### New South Wales.

University of Sydney				Sydney							
New South Wales University of T	echnolog	у		Sydney							
University of New England				Armidale							
Newcastle University College				Newcastle							
Vic	toria.										
University of Melbourne				Melbourne							
Quee	ensland.										
University of Queensland				Brisbane							
South Australia.											
University of Adelaide				Adelaide							
Western	Australia										
University of Western Australia				Perth							
Tası	mania.										
University of Tasmania				Hobart							
Australian Co	apital Teri	ritory.									
Australian National University				Canberra							
Canberra University College				Canberra							

Three of these universities (the New South Wales University of Technology, the University of New England and the Australian National University) and one university college (the Newcastle University College) have been established since the 1939-45 War.

Officially incorporated by the Technical Education and New South Wales University of Technology Act 1949 of the New South Wales Parliament, the New South Wales University of Technology was established to provide facilities for training and research in the fields of applied science and technology. The council of the university is empowered to establish colleges of the university in country districts of New South Wales. Under this authority, a college of the university was established at Newcastle in December, 1951. In addition, the university provides part-time instruction in science and engineering at Wollongong and Broken Hill, and in mechanical engineering at Orange and Lithgow. Courses are provided at the technical colleges in these towns. Further particulars concerning the New South Wales University of Technology were given in Official Year Book No. 42 (pp. 473-4). In all cases, statistics of the Newcastle University College have been included with those of the New South Wales University of Technology.

The New England University College, established as a branch of the University of Sydney in 1938, was incorporated as the University of New England under the University of New England Act 1953 of the New South Wales Parliament. There are at present four faculties in the university—Arts, established in 1938; Science, established in 1939; and Rural Science and Agricultural Economics, established in 1955. The university co-operates with the New South Wales University of Technology in the provision of arts courses at the Newcastle University College. Under this scheme, the courses of study are prescribed by the University of New England which is also the examining body. Instruction is provided by the members of the teaching staff of the Newcastle University College. Further particulars concerning the University of New England were given in Official Year Book No. 42 (p. 475).

The Australian National University was established under the Australian National University Act 1946 of the Commonwealth Parliament. It provides facilities for post-graduate research in medicine, physical sciences, social sciences and pacific studies. Further particulars concerning the Australian National University were given in Official Year Book No. 42 (pp. 472-3).

2. Expansion within the Universities.—An important administrative development in all universities has been the appointment of full-time salaried Vice-Chancellors or Principals. This has given much greater effectiveness to university administration.

Within the past 20 years, the appearance of some of the universities has altered to a striking extent. New permanent buildings and some temporary ones have been erected and new wings have been added.

There was a continuing increase in university enrolments from 1929 (approximately 9,000) to 1940 followed by a slight recession. In the closing year of the 1939-45 War, however, the number of students had risen beyond any previous figure, and rapid post-war expansion was responsible for a peak enrolment of 32,453 students in 1948. After 1948, the numbers decreased each year until 1953 as ex-service personnel completed their training under the Commonwealth Reconstruction Training Scheme. Thereafter they increased again and it is expected that by 1965 some 70,000 students will be enrolled in Australian universities. Enrolment in 1956 was 34,406.

3. Courses.—A brief survey of developments in university courses since the war up to 1954 was given in Official Year Book No. 42 (p. 476). An outline of some developments during 1955 and 1956 appeared in Year Book No. 43 (p. 453).

At the New South Wales University of Technology, two new courses, leading to bachelor's degrees in Commerce and Textile Technology, commenced in 1957, and the extension course in Hospital Administration, designed for administrators with previous experience in this field, was held for the first time. Another new course to commence in 1957 was the one-term post-graduate course in Traffic Engineering.

The University of New England completed plans for its new four-year degree course in Agricultural Economics, designed to provide general training in economics and principles of agriculture with the possibility of specialization in one of these fields.

A four-year course leading to the degree of Bachelor of Agricultural Engineering was offered by the University of Melbourne for the first time. This university also instituted a one-year post-graduate course in Audio-Visual Aids in 1957.

In South Australia, a number of associate diploma courses of the School of Mines and Industries were replaced by three-year courses conducted by the University of Adelaide and leading to the degree of Bachelor of Technology. The courses are offered in a variety of engineering and technological fields.

Medical courses are at present available at four Australian universities. During the year, the University of Western Australia proceeded with arrangements for the establishment of a medical course. In 1957, in addition to the first year course, sixth year Western Australian students who had completed the earlier years of their course at the University of Adelaide were enrolled. A complete medical course will be available in 1959.

For the majority of university courses full-time attendance is required. At most universities, however, certain courses, such as arts, commerce and economics, may also be undertaken by part-time or evening study. At the New South Wales University of Technology a variety of degree courses are available to evening students.

Several universities have limited systems of external tuition whereby students in country areas may take a restricted number of courses by correspondence. The University of Queensland has developed a system of correspondence tuition which now caters not only for students within the State but for those in the Northern Territory, Papua and New Guinea and adjacent Pacific islands. External students within Queensland receive tutorial assistance at university centres in the principal country towns. In addition, the university co-operates in the Colombo Plan Correspondence Scholarship Scheme (see p. 462).

The University of New England's Department of External Studies offers a wide range of subjects for external study, leading to the degree of Bachelor of Arts and the Diploma in Education. External students must attend short annual residential schools of instruction in their subjects, usually held at the university.

4. Research.—The research activities of the universities have been greatly stimulated over recent years by the interest and assistance of the Commonwealth and State Governments, of government departments and instrumentalities such as the Commonwealth Bank and C.S.I.R.O., of private foundations, both oversea and Australian, such as the Nuffield-Foundation, the Carnegie Corporation and the Water Research Foundation of Australia, and of industrial undertakings such as General Motors Holdens Limited and Broken Hill Proprietary Company Ltd.

The Water Research Foundation of Australia, founded in 1956 and supported by pastoral and industrial concerns and private individuals, has provided funds for research by Australian universities into the supply, use, control and disposal of water in Australia. In 1957, the New South Wales University of Technology commenced a Hunter Valley research project as part of the Hunter Valley Research Foundation's programme.

During the year the universities continued research projects in a number of fields, including education, anthropology, psychology, medicine and nuclear physics. Grants have been made by the Commonwealth Government, through the Australian Atomic Energy Commission, to a number of Australian universities for nuclear research.

The further expansion of teaching and research in various agricultural and veterinary fields was assisted by the annual and special grants of the Commonwealth Bank's Rural Credits Development Fund to several Australian universities. The C.S.I.R.O. also contributed to research in these and other fields.

- 5. Services.—The various types of community services provided by the universities are outlined in Official Year Book No. 42 (pp. 476-7). A noteworthy example of service to agriculture and industry is the Tractor Research Station at Werribee, Victoria, which was opened in 1957, as a result of an agreement between the Commonwealth, the States and the University of Melbourne. The station is conducted by the university and carries out tests for manufacturers on new tractors and other agricultural equipment.
- 6. The Commonwealth and the Universities.—(i) General. Before 1939, Commonwealth interest in research projects carried out by or in collaboration with the universities led to the granting of increasing sums for this purpose. During and after the 1939-45 War, the Commonwealth extended assistance to university students, at first with the object of increasing the number of highly qualified people available for the war effort, then with the object of rehabilitating ex-servicemen and finally as a social service of benefit to the community. Since 1951, the Commonwealth has made special grants to the States for payment to universities, and in addition has, through the Commonwealth Scholarship Scheme, given direct assistance to university students on a wide scale.
- (ii) Grants for Research. The Commonwealth had given some support to research prior to 1926, chiefly through the Institute of Science and Industry, but the amount spent did not exceed £25,000 per annum. In 1926, the Institute was replaced by the Council for Scientific and Industrial Research (known since 1949 as the Commonwealth Scientific and Industrial Research Organization) with an annual appropriation of £250,000. Further particulars concerning this organization may be found in Chapter XXX, Miscellaneous, §7. It has since worked in close association with the universities. Both fundamental and applied research have at times occupied the attention of both the universities and the Commonwealth Scientific and Industrial Research Organization, but in general, the preliminary training of graduates in research work has been left to the universities.

In 1936, the Commonwealth Government made a grant of £30,000 a year for five years to Australian universities for research in the physical and biological sciences. When this grant was reviewed in 1941, a slight increase was made in funds available for research in the physical and biological sciences and an amount of £9,000 added for research in the social sciences. The combined figure rose over the years to £110,000 in 1950 and was subsequently absorbed in the larger general grant which was then made available by the Commonwealth to the States for universities.

(iii) Assistance to Students. Up to 1945, the Universities Commission functioned under National Security Regulations but in that year it was established on a permanent basis under the Education Act. After the 1939-45 War, the Commission continued to provide financial assistance to students under an interim scheme until 1951, when the interim scheme was superseded by the Commonwealth Scholarship Scheme.

Under this scheme, 3,000 scholarships are allocated annually to the States on a population basis. These scholarships are tenable at universities and other approved institutions. Awards are made on merit and all successful applicants have their fees paid. In addition, scholarship holders may be paid a living allowance subject to a means test. At 31st October, 1957, there were 9,036 scholars in training at universities and 833 at other institutions.

The Universities Commission also provides for the training at universities and similar institutions of ex-service personnel and war widows under the Reconstruction Training Scheme, the Korea and Malaya Training Scheme and the Disabled Members' and Widows' Training Scheme. A detailed description of the Reconstruction Training Scheme was given on page 240 of Official Year Book No. 39. For the purpose of reconstruction training, the Commonwealth Government made available to the universities approximately £1 million for buildings and £500,000 for equipment, and, in addition to paying the full tuition fees for reconstruction trainees, paid the universities an amount to cover the full cost of their training.

At 30th June, 1957, 25,253 full-time and 19,547 part-time students had been selected for university or university-type training under the Reconstruction Training Scheme and 21,429 had successfully completed their courses. At the same date, 22 full-time and 26 part-time students were taking university or university-type training under the Korea and Malaya Training Scheme and 27 had completed their courses. Eight students were taking university or university-type courses under the Disabled Members' and Widows' Training. Scheme and five had completed their courses.

(iv) Commonwealth Grants to the States for University Purposes. Following a report submitted by a committee of inquiry appointed to report on university finances and requirements, the Commonwealth passed the States Grants (Universities) Acts in 1951, 1953, 1955, 1956 and 1957 to enable grants to be made to the States for their universities.

The States Grants (Universities) Act No. 7 of 1957 (assented to 15th April, 1957) operated with effect from 1st January, 1957. The main provisions of the act are summarized below:-

Section 4 (1).—If the sum of the fees and State grants received by a university during the years 1957 and 1958 exceeds the amount specified in column 2 of the table below, the grant to the State for the years 1957 and 1958 for that university is:-

(a) an amount equal to one-third of the excess, and

(b) the amount shown in column 3 of the table.

Section 4 (2).—The maximum amount payable under Section 4 (1) is shown in column 4. Section 5 (1).—The State will:—

- (a) in the year in which payment is received pay to the university concerned an amount equal to the grant received for that university; and
- (b) ensure that the amount shown in column 5 is applied towards the teaching and administrative costs of the residential colleges of the university and that the remainder of the grant is used for expenditure, not being capital expenditure, for university purposes.

## COMMONWEALTH GRANTS TO THE STATES FOR UNIVERSITY PURPOSES. (£.)

University.			Amount of Fees and State Grants.	Amount of Financial Assistance under Section 4 (1) (b).	Maximum Amount Payable under Section 4 (1).	Amount for Teaching and Adminis- trative costs of Residential Colleges.
(1)			(2)	(3)	(4)	(5)
New South Wales-			,,,			
University of Sydney			783,369	273,323	585,000	12,200
New South Wales Univers	ity of	Tech-				
nology			605,805	83,529	278,000	4,000
University of New England			64,164	16,379	62,500	3,500
Victoria						
University of Melbourne	• •	• •	655,159	225,149	509,600	12,000
Queensland—						
University of Queensland	• •	• •	309,269	98,553	300,000	8,400
South Australia—						1
University of Adelaide	• •		272,394	95,998	278,000	5,200
Western Australia-						
University of Western Austr	alia		183,531	64,777	191,900	3,600
Tasmania—					Í	
University of Tasmania	••		106,319	33,722	95,000	1,100
Total		••	2,980,010	891,430	2,300,000	50,000

<sup>(</sup>v) Committee on Australian Universities. In 1957, the Prime Minister appointed a committee to investigate the problems of Australian universities. The committee was given wide terms of reference. Among other things, it was asked to consider the role of the university in the Australian community, the extension and co-ordination of university facilities, technological education at university level, the financial needs of universities and appropriate means of providing for these needs, and the Commonwealth Scholarship Scheme.

The report of the Committee (Murray Committee)\* was presented to Parliament in November, 1957.

In accepting the principal recommendations of the committee the Government offered considerable additional assistance to the States for the recurrent expenses of their universities and has offered assistance to meet the capital needs of the universities for new buildings

<sup>\*</sup> Report of the Committee on Australian Universities (Canberra, Commonwealth Government Printer, 1957.)

and equipment. It also stated that it would establish a permanent Australian Universities Committee.

The Government also accepted certain recommendations related to the Australian National University and the Canberra University College.

The Australian National University and the Canberra University College, which are not covered by the States Grants (Universities) Acts, receive grants direct from the Commonwealth Government.

7. Teaching and Research Staff.—The following table shows particulars of the teaching and research staff of Australian universities during 1956:—

UNIVERSITIES: TEACHING AND RESEARCH STAFF, 1956.

University or College.	Pro- fessors.	Readers.	Lectu	rers.(b)	Tutor Rese	strators, is and earch stants.	Honor- ary Lec- turers and	Total.
		(3)	Full- time.	Part- time.	Full- time.	Part time.(c)	Demon- strators.	
Australian National University Sydney	17 54 50 32 32 22 15	13 34 46 30 31 20 6	(d) 68 308 234 154 126 67 52	240 64 165 61 55	13 77 93 55 19 15	2 91 91 39 97 22	48 (e)27 	113 852 578 502 366 201 94
N.S.W. University of Technology	20 12	7 7	288 59	23	(f) 102 13	(g) . 1	(h) ·· 3	812 117
lege Total	265	196	1,383	1,031	400	349	78	3,702

<sup>(</sup>a) Includes associate professors, assistant professors and lecturers-in-charge. (b) Includes senior lecturers and assistant lecturers. (c) Excludes part-time demonstrators. (d) Senior fellows, fellows and research fellows. (e) Department of External Studies. (f) Includes 70 technical officers who in previous years have been regarded as special research workers. (g) Technical officer. (h) Includes 2 Department of External Studies.

The following table gives details of the teaching and research staff of Australian universities for each year from 1952 to 1956:—

UNIVERSITIES: TEACHING AND RESEARCH STAFF, SUMMARY, AUSTRALIA.

Year.		Pro- fessors.	Readers.	Lecturers.(b)		Tutor Rese	strators, s and earch tants.	Honorary Lecturers and Demonstrators.	External Studies Staff.	Total.
				Full- time.	Part- time.	Full- time.	Part- time.(c)			
1952 1953 1954 1955		212 215 227 245 265	138 155 169 177 196	1,131 1,180 1,227 1,290 1,383	972 990 1,099 1,062 1,031	272 292 300 290 (d) 400	255 263 303 321 (e) 349	76 73 60 66 49	21 24 26 29 29	3,077 3,192 3,411 3,480 3,702

<sup>(</sup>a) Includes associate professors, assistant professors and lecturers-in-charge. (b) Includes senior lecturers, assistant lecturers, senior fellows, fellows and research fellows. (c) Excludes partitime demonstrators. (d) Includes 70 technical officers of the New South Wales University of Technology who in previous years have been regarded as special research workers. (e) Includes one technical officer of the New South Wales University of Technology.

<sup>8.</sup> Students.—(i) Total. The number of students (of whom 123 males and four females were Commonwealth Reconstruction Training Scheme students) enrolled for courses at the universities for the year 1956 is shown in the following table.

#### UNIVERSITIES: STUDENTS ENROLLED, 1956.

		_	Diploma	Courses.		Miscel-	4.45	
University or College.		Degree Courses.	Post- graduate.	Sub- graduate.	Certificate Courses.	laneous Subjects.	Adjusted Total.(a)	
Australian National Univers	ity	68				6	74	
Sydney	٠	6,718	111	929	:	173	7,885	
Melbourne		6,652	21	264	172	479	7,588	
Oueensland		3,757	36	673	616	262	5,329	
Adelaide		2,628	150	781	3	754	4,281	
Western Australia		2,022	85		l I	121	2,215	
Tasmania		634	40	35	126	74	890	
N.S.W. University of	Гесh-		1		l '			
nology		1,311	٠	3,277	108	232	4,906	
New England		845	107	Ĺ.	l	2	952	
Canberra University College		239		18	i i	103	360	
Total		24,874	550	5,977	1,025	2,206	34,480	

(a) Adjustment made for students enrolled for more than one course.

Of the students enrolled in 1956, 26,872 were males and 7,608 females. Included in those enrolled for degrees were 68 enrolled for higher degree courses at the Australian National University, 112 in Sydney, 252 in Melbourne, 147 in Queensland, 191 in Adelaide, 139 in Western Australia, 16 in Tasmania, 214 at the New South Wales University of Technology, 23 at the University of New England and 26 at the Canberra University College. In addition 717 students at the University of Sydney were doing higher degree courses but were not enrolled.

The following table shows the number of students enrolled at Australian universities for each of the years from 1952 to 1956.

#### UNIVERSITIES STUDENTS ENROLLED, SUMMARY, AUSTRALIA.

	37		Degree	Courses.	Diploma	Courses.			
	Year.		Higher degrees.	Bachelors' degrees.	Post- graduate.	Sub- graduate.	Certificate Courses.	Miscel- laneous Subjects.	Adjusted Total.(a)
1952	•••		700	20,324	350	5,499	511	2,340	29,662
1953		/	800	19,796	318	5,190	511	2,306	28,838
1954			917	20,358	315	5,093	677	2,191	29,445
1955			1,094	21,539	321	5,153	801	2,130	30,868
1956		!	1,188	.23,686	.550	5,977	1,025	2,206	34,480

(a) Adjustment made for students enrolled for more than one course.

(ii) New Students Enrolled. The number of new students (of whom five males and one female were Commonwealth Reconstruction Training Scheme students) enrolled for courses at the universities during the year 1956 is shown in the following table:—

#### UNIVERSITIES: NEW STUDENTS ENROLLED, 1956.

		University or College.			Courses.	G	Miscel-		
University or Co	ollege.		Degree Courses.	Post- Graduate.	Sub- Graduate.	Certificate Courses.	laneous Subjects.	Adjusted Total.(a)	
Australian National	ustralian National University.						3	23	
Sydney	iney				390		51	2,433	
Melbourne			1,623	4	86	11	202	1,926	
Queensland			1,010	6	302	190	128	1,634	
Adelaide			628	31	276	1	283	1,208	
Western Australia			532	2	١		51	.585	
Tasmania			181	2	9	66	29	286	
N.S.W. University	of T	ech-	1	[	[	1	ľ		
nology			408		1,115	49	167	1,739	
New England			553	59	1			612	
Canberra University College			76		6		62	144	
Total			7,015	112	2,184	317	976	10,590	

(a) Adjustment made for students enrolled for more than one course.

Of the new students enrolled in 1956, 7,760 were males and 2,830 females. Included in those enrolled for degrees were 134 enrolled for higher degree courses—Australian National University 20, Sydney 5, Melbourne 18, Queensland 15, Adelaide 11, Western Australia 4, Tasmania 6, New South Wales University of Technology 36, New England 11 and Canberra University College 8.

The following table shows the number of new students enrolled at Australian universities during each of the years from 1952 to 1956.

UNIVERSITIES: NEW STUDENTS ENROLLED, SUMMARY, AUSTRALIA:

			Degree	Courses.	Diploma	Courses.	:		
			Bachelor's Degrees,	Post- graduate.	Sub- graduate.	Certificate Courses.	Miscel- laneous Subjects.	Adjusted Total.(a)	
1952 1953 1954 1955 1956			115 84 137 125 134	5,033 4,958 4,951 5,791 6,881	17 9 37 55 112	1,346 1,288 1,265 1,412 2,184	124 118 175 254 317	884 904 860 926 976	7,500 7,335 7,420 8,549 10,590

<sup>(</sup>a) Adjustment made for students enrolled for more than one course.

9. University Income for General Activities.—The income of the universities is derived principally from State and Commonwealth Government grants, students' fees, and income from private foundations. From all sources other than new bequests, the income during 1956 for general university functions was as shown in the table below. In South Australia, Government grants and income from private foundations include amounts in respect of the Waite Agricultural Research Institute.

UNIVERSITIES: INCOME FOR GENERAL ACTIVITIES, 1956.

(£.)

University or College.	Government Grants.	Students' Fees.	Interest, Rent, Dividends and Donations.	Other.	Total.
Australian National University	1,502,500	478	30,597	58,323	1,591,898
Sydney	1,304,590	606,489	63,319	45,305	2,019,703
Melbourne	1,294,498	492,321	49,741	22,868	1,859,428
Queensland	922,806	167,281	30,151	26,058	1,146,296
Adelaide	856,900	69,078	45,160	13,144	984,282
Western Australia	674,560	24,141	13,501	19,865	732,067
Tasmania	324,100	33,762	2,170	5,762	365,794
N.S.W. University of Tech-		-		•	1
nology	1,873,715	125,267	l l	59,600	2,058,582
New England	362,138	27,014	961	45,197	435,310
Canberra University College	119,610	9,104	1	910	129,624
Total	9,235,417	1,554,935	235,600	297,032	11,322,984

<sup>10.</sup> Principal University Benefactions.—Earlier issues of the Official Year Book included details of the principal private benefactions to universities. (See Year Book No. 40, pp. 467-8.)

11. University Expenditure for General Activities.—The principal item of disbursements on general university activities is the maintenance of the teaching and research staff, representing 62.9 per cent. of the total in 1956 compared with 62.4 per cent. in 1955.

The following table shows the expenditure including capital expenditure during the year 1956:—

### UNIVERSITIES: EXPENDITURE FOR GENERAL ACTIVITIES, 1956.

(£.)

				М	aintenance	of—		
University or	Adminis- tration.	Teaching and Research Depart- ments.	Premises and Grounds.	Libraries.	Other (including Buildings).	Total.		
Australian Nationa	ıl Univer	sity	104,208	675,909	75,016	47,873	707.006	1,610,012
Sydney			237,520	1,482,296	212,692	70,032	120,566	2,123,106
Melbourne			155,491	1,325,034	205,571	80,228	146,802	1,913,126
Queensland			82,295	854,832	74,218	48,675	24,570	1,084,590
Adelaide			91,319	734,695	93,112	48,051	71,694	1,038,871
Western Australia			57,482	463,557	65,526	30,802	102,359	719,726
Tasmania			41,229	260,768	19,520	24,480	33,254	379,251
N.S.W. University o	f Technol	ogy	138,949	1,148,279	118,512	47,946	614,076	2,067,762
New England		••	63,811	209,405	37,954	25,594	111,349	448,113
Canberra University	College		18,649	84,686	6,000	12,834	9,088	131,257
Total	••		990,953	7,239,461	908,121	436,515	1,940,764	11,515,814

- 12. Funds for Special Purposes.—(i) General. The tables shown in paras. 9 and 11 relate to general university activities while the following two show the financial position of the special purpose funds which are, in the main, for special research purposes.
- (ii) Income for Special Purposes. The following table shows the main items of income for the year 1956:—

#### UNIVERSITIES: INCOME FOR SPECIAL PURPOSES, 1956.

(£.)

University or College.	Govern- ment Grants.	Interest, Rent, Dividends and Dona- tions.	Public Examina- tion Fees.	Special Research Grants.	Other.	Total.
Australian National Universit		4,154		8,575	187	12,916
Sydney	255,000			429,242	18,933	
Melbourne	127 055				64,230	
Queensland	10,400				15,189	
Adelaide	16 600			86,659	7,840	
Western Australia	100,000				16,543	
Tasmania	5 044	, ,	4,959	17,894	498	
N.S.W. University of Technolog		, , ,		51,762	43,851	
New England	140,000	1 1		8,377	7,887	
Canberra University College .	16 500			2,475		19,223
Total	. 704,338	693,474	189,571	785,152	175,158	2,547,693

(iii) Expenditure for Special Purposes. The following table shows the main items of expenditure for the year 1956:—

# UNIVERSITIES: EXPENDITURE FOR SPECIAL PURPOSES, 1956.

University or College.	Special Purpose Funds (Research)	Other Special Purposes.	Public Examina- tion Expenses.	Scholar- ships, Bursaries, etc.	Other, (including Buildings).	Total.
Australian National University					11,997	11,997
Sydney	241,674	336,268		19,247	23,256	620,445
Melbourne	168,149	153,263	76,409	7,017	642,976	1,047,814
Queensland	39,604	42,877	60,648	4,433	7,284	154,846
Adelaide	144,504	21,804	23,667	3,918		193,893
Western Australia	46,087	143	28,062	22,638	30,670	127,600
Tasmania	20,406		4,040	3,232		27,678
N.S.W. University of Technology	77,321	60,375		5,708		143,404
New England	5,170	13,688		205	154,191	173,254
Canberra University College	4,316	13,407		5,401		23,124
Total	747,231	641,825	192,826	71,799	870,374	2,524,055

<sup>13.</sup> Degrees Conferred, etc.—The following table shows the number of degrees conferred and diplomas and certificates granted for males and females separately at each university during the year 1956:—

# UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, 1956.

Course.	Nati	Aust. National Univ.		ney.	bot	Mel- ourne. Queens- land.		Ade- laide.		Western Aus- tralia.		Tas- mania.		N.S.W. Univ. Tech.		New England.		Australia.		
	М.	F.	м.	F.	м.	F.	м.	F.	М.	F.	М.	F.	M.	F.	М.	F.	м.	F.	М.	P.
Agriculture Architecture Arts Dentistry Divinity Economics Education Engineering Law Medicine(b) Music Science Veterinary Science Total Post-graduate Diplomas— Education Medicine Other	··· ··· ··· ··· ··· ··· ··· ··· ··· ··		23 10 167 72 2 51 1 92 65 319 106 23 931	4 117788 2 6788 42 3 2.511	132  886	3 115 6  4 10  8 19 16 37	29 34 4 60 7 63 58 19 333	2  1 	18 22 57 9 79 1 74 	266 1 3 26 	41 8  10 33 5  25	35	22 · · · · · · · · · · · · · · · · · · ·		··· 3 ··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··		15    21 	 20    3  23	68 42 508 195 2 237 73 415 155 596 6 520 42 2.859	7 4 3866 17 9 11 19 107 163 133 4 713
Total	<u>::</u>	<u>::</u>	<u>_71</u>	<u></u>	9 54	1		10	16		=	<u>::</u> -	<u></u> 15		<u>::</u>	<u>::</u>	16		12 182	94
Sub-graduate Diplomas— Certificates	::			13 	18	20 	27 81	27 5	66 	.56 	iı	8		io	::	•••	::		120 98	116 23

<sup>(</sup>a) Includes degrees conferred on students of the Canberra University College. (b) Since separate degrees for M.B. and B.S. are conferred by the University of Sydney, the number of persons who qualify at that University to practise is not more than half the number of degrees conferred.

#### § 9. Further Education.

- 1. General.—Beyond the schools, colleges and universities, there are agencies engaged in less direct educational work which cannot be readily assessed and described. Among them are the media of mass communication (press, film and radio) which are powerful educational forces—whether they are used specifically to disseminate information such as new agricultural techniques or preventive health measures, or, on the other hand, in a much more general way to exert a powerful influence on the cultural level of the population. There are also bodies and institutions such as the adult education authorities, libraries, art galleries and museums which aim at catering for the educational and cultural needs of the general public.
- 2. Adult Education.—(i) General. The term "adult education" is used in Australia to refer in the main to non-vocational educational and cultural activities for adults provided by some of the universities and by various adult education authorities, which vary in form from State to State.

The Workers' Educational Association movement, which has for its object the bringing of the universities into closer relationship with the community in general, and providing for the higher education of the workers in civic and cultural subjects, has been active in Australia. In 1913, associations were formed in all the Australian States. In four States the associations have been superseded by Adult Education Boards or Councils—set up by the State Governments in Victoria, Queensland and Tasmania and by the university in Western Australia. In the other two States, New South Wales and South Australia, the associations continue to co-operate with the universities in their extension work and are given direct grants by the governments concerned.

While the choice of courses offered by these bodies is naturally more limited in the smaller States, a variety of topics including social studies and current affairs, language and literature, drama, music, arts and crafts are available in all States.

- (ii) New South Wales: (a) Adult Education Advisory Board.—State Government grants for adult education are allocated by the Adult Education Advisory Board. Grants are made to the University of Sydney (Department of Tutorial Classes), the Workers' Educational Association, the University of New England (Department of Adult Education), the Public Library of N.S.W. (Adult Education Section) and the Arts Council of Australia (N.S.W. Division).
- (b) University of Sydney.—The Extension Board of the University of Sydney provides lectures and short courses in city and country.

In 1914, the Department of Tutorial Classes was established to provide classes and study groups along the lines of similar work in England. Its activities include the provision of tutorial classes in a wide variety of subjects, discussion groups and "kits" to serve the needs of country districts and people who cannot be catered for by tutorial classes, and publication of the fortnightly \*Current Affairs Bulletin\*. This publication, begun in 1942 and produced for four years by the Australian Army Education Service, was recommenced in 1947 as a civilian and service publication by the Commonwealth Office of Education. At the beginning of 1952, the Department of Tutorial Classes took over the full responsibility for the bulletin. It receives an annual grant from the Commonwealth Government for this purpose.

In 1956, there were 138 tutorial classes (91 in the metropolitan area and 47 in the country) with a total enrolment of 3,792, 138 discussion groups (76 in the metropolitan area, 62 in the country) with a total enrolment of 2,343, and 69 kits groups with an estimated membership of 1,100, who studied a total of 74 kits.

The Department works in conjunction with the Workers' Educational Association through the Joint Committee of Tutorial Classes, appointed by the university senate.

(c) Workers' Educational Association.—In addition to co-operating with the Department of Tutorial Classes in organizing certain classes and groups, the Association itself provides classes in a wide variety of fields. It publishes Highway, a bi-monthly journal of adult education and maintains a property near Sydney where short residential schools are held throughout the year.

In 1956, the Association ran 34 classes in the metropolitan area and Newcastle, for which there were 2.056 enrolments.

- (d) University of New England.—When the New England University College became an autonomous university in 1954, its Department of Adult Education took over full responsibility for the activities formerly undertaken by it on behalf of the Department of Tutorial Classes of the University of Sydney. It brings university extension activities to the people of northern New South Wales and conducts classes in arts and social sciences in towns throughout this region. Short residential courses are held on topics of interest to primary producers in the area.
- (e) Public Library of New South Wales.—The Public Library's Adult Education Section provides an adult education library service for all classes and groups conducted by the Department of Tutorial Classes of the University of Sydney, the Workers' Educational Association, and the Department of Adult Education of the University of New England.
- (f) Arts Council.—The New South Wales Division of the Arts Council of Australia provides a mobile theatre unit and organizes touring companies in ballet, opera and plays to country towns. Musicians provide some short lecture courses in the city.
- (g) Education Department.—The New South Wales Education Department provides evening colleges, housed in its schools and staffed by trained teachers, which provide non-vocational courses in a wide variety of crafts, dramatic and musical activities. Adults may prepare for the Intermediate and Matriculation examinations at certain of these colleges.
- (iii) Victoria.—The Council of Adult Education is a government instrumentality established by the Adult Education Act 1946. Its aims are to stimulate adult education in Victoria and to encourage voluntary organizations and associations by giving them advice and assistance. Its activities include a variety of classes (approximately 60 were available in 1956) on topics ranging from social studies, psychology, language and literature, to crafts, music, drama, travel and deportment, and usually lasting from 10 to 20 weeks. An annual 10-day summer school is another important activity. The Council publishes a monthly bulletin, C.A.E. Newsletter and a quarterly journal, Adult Education. Its group service assists and provides programme material for the discussion groups formed by organizations and individuals throughout the State. In 1955-56, there were 4,750 enrolments for classes and 2,200 individual enrolments for 193 discussion groups.

A recent development of importance is the extension of the council's activities, including classes and discussion groups, to the prisons, as part of a general plan for penal reform in Victoria.

Through its Community Arts Service, the Council organizes tours by musicians and by theatrical and other companies in country towns which otherwise would have no opportunity of seeing such performances. It provides an advisory service to musical societies and cooperates with the National Gallery of Victoria in the organization of travelling art exhibitions.

The council's income is derived mainly from a government grant, but also from student fees and Community Arts Service performances.

(iv) Queensland.—The Queensland Board of Adult Education was constituted in 1944 and is responsible under the Minister for Education for the provision of adult education facilities throughout the State. Under the executive officer of the Board, the Supervisor, are five district officers, based in large country towns, who are responsible for organizing activities in country areas.

The cost of the programme is borne by the State Government and admission to all courses is free. Activities include lectures, group meetings on a variety of topics, generally short-term but some of which extend over a full year, and film screenings. Library and film services are provided for adult education groups.

In 1956, enrolments in classes totalled 2,140. Some form of adult education activity was available in almost 170 centres.

(v) South Australia.—Since 1917, the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided each year in the metropolitan area a series of tutorial classes, lecture classes and study circles on a wide range of subjects of cultural and current interest. Fees are paid direct to the Workers' Educational Association, which organizes these classes. The Joint Committee extends its activities into the larger country centres by sending art exhibitions and plays on tour, lending boxes of books and arranging lectures and film screenings.

The Education Department also caters for adults in country towns by providing evening classes, particularly in arts and crafts, at adult education centres.

Adult education in South Australia in expanding. In 1956, the university appointed a director of adult education, who took up duty in 1957. Annual governmental grants for adult education activities are to be increased.

(vi) Western Australia.—Adult education in Western Australia is organized by the Adult Education Board, established in 1928 under the terms of the statutes of the University of Western Australia. The board has a considerable degree of autonomy. Its executive officer is the Director of Adult Education.

The board conducts lecture classes in the city and in a few suburban centres. Twentyone classes were held in 1956, with a total enrolment of 800. It sponsors musical and dramatic performances by outstanding artists both in the city and country, and arranges for screenings of foreign films. Its library provides a box scheme for discussion groups, of which there were some 60 scattered throughout the State in 1956.

The board holds an annual summer school in January, coinciding with the Festival of

Perth, for the inauguration of which it was largely responsible.

The board's finance is derived from university grants, while many of its activities are self-supporting. The State Government makes grants for the board's work in country areas.

(vii) Tasmania. Some form of adult education has existed since the formation in 1913 of a Workers' Educational Association, which worked in conjunction with the University of Tasmania for a number of years, receiving a grant through the university, which had a Director of Tutorial Classes. Later the grant was paid direct to the Association by the Government and the university's tutorial department ceased to exist. In 1948, the Adult Education Act was passed providing for the formation of an Adult Education Board whose functions are to plan and develop adult education in Tasmania and to assist other bodies actively engaged in adult education.

The executive officer of the board is the Director of Adult Education, at Hobart. Activities are organized on a regional basis by organizers based in Hobart, Launceston and

three large country centres.

- The board organizes classes of ten weeks' duration on a wide range of subjects. In 1955-56, 640 classes with an enrolment of 7,600 were held throughout the State. It sponsors special lectures, film screenings and art exhibitions, recitals of music and dramatic performances, in both city and country areas. Its income is derived from a State Government grant and from student fees.
- 3. The New Education Fellowship.—The New Education Fellowship is a world organization of parents, educators, and other citizens interested in the development of new educational practices. It was founded in London in 1915 and spread to Australia at the time of a regional conference held here in 1937. There are now sections in each State. Its Australia-wide journal New Horizons in Education is published quarterly.
- 4. Migrant Education.—The Commonwealth Government's post-war immigration policy has brought to Australia some thousands of immigrants with little or no knowledge of English. To assist their assimilation into the Australian community, a system of migrant education has been developed to teach them English and to give them information about Australia.

Before arriving in Australia, non-English-speaking migrants are taught English by shipboard education officers.

In Australia, free evening classes are arranged by State Education Departments wherever a group of nine or more migrants in country areas, or twelve or more migrants in city areas, wish to learn English. Should migrants find it impossible to attend classes, they may apply, through State Education Departments, for a free correspondence course in English. In addition, English lessons are broadcast regularly by the Australian Broadcasting Commission. The Commonwealth Office of Education provides technical advice on all aspects of migrant education and is responsible for the preparation of teaching materials.

In July, 1957, 17,780 migrants were enrolled in evening classes and 13,500 were taking correspondence lessons. At the same time, 15,580 migrants were receiving the monthly booklet accompanying the radio lessons.

#### § 10. Libraries.

- 1. General.—The Munn-Pitt Report of 1935 greatly stimulated interest in libraries and librarianship throughout Australia. This is seen in the rapid development of libraries in all States, all of which have now passed legislation to increase library services, and in the establishment in 1937 of the Australian Institute of Librarians to improve the standard of librarianship. This body was reconstituted in 1949 as the Library Association of Australia, its functions now including the promotion and improvement of libraries and library services. The Association conducts annual examinations for which students are prepared by courses of instruction in all States. Formal library schools exist in the National Library, Canberra, and the Public Libraries at Sydney and Melbourne.
- 2. Commonwealth.—(i) Commonwealth National Library. This library grew directly from the Library of the Commonwealth Parliament established in 1901. Whilst providing, as a primary responsibility, for the general reading and reference needs of the Members

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of Parliament, it has developed into a central source of information for the government and its departments and other agencies. The close association of the National Library with the central government follows the pattern of the Library of Congress at Washington, U.S.A. Like the latter, it has also inherited the basic elements of the national library concept of the older countries of Europe: that a national library is the proper place to collect the national literature systematically and to make it known and available for use, and that it is a place to which scholars may turn for what is most significant in the literature of other countries.

Through its Legislative Reference Branch the National Library aims to provide for the Parliament and the government an up-to-date reservoir of fact and opinion on public issues both domestic and foreign. In addition to assembling material, the staff compiles bibliographics and reference guides to the literature on special subjects and in 1957 handled 1,100 inquiries involving special search. A further service to the government flows from the activities of the Archives Division, a central element in the government machinery for the management and preservation of its records. Archival repositories for Commonwealth records are maintained in Canberra, Sydney, Melbourne, Brisbane, Adelaide and Perth.

As well as the governmental record of national life and development, the National Library systematically collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving-picture films and sound recordings. It is assisted by the Copyright Act 1912–1950, which requires one copy of all material printed in Australia to be deposited in the Library and has been enriched by the acquisition of such notable collections as the Petherick collection of 16,500 items in 1911, the Cook manuscripts in 1923, the Cumpston collection on Public Health in Australia in 1936, the Mathews ornithological collection in 1940, and the Ferguson sociological collection now being transferred to the Library. A special feature of the Library's Australian work is the copying on microfilm in association with the Public Library of New South Wales of all important unique material overseas relating to Australia, including more than a million pages in the Public Record Office in London.

The Library fulfils its obligations to make Australian publications widely known, both at home and abroad, through a series of select lists which include Australian Public Affairs Information Service (monthly with an annual cumulation) and Australian Books (annual) and full bibliographies in the monthly Australian Government Publications and Books Published in Australia, cumulated as the Annual Catalogue of Australian Publications. Collections of Australian books are maintained by the library at all posts at which Australia is officially represented abroad. In London and New York, the National Library maintains and staffs Australian Reference Libraries.

The Library is the central library of documentary and educational films and the nontheatrical film-distributing agency in Australia for the Australian National Film Board, and its film collection contains nearly 6,000 titles, together with Australian historical films and a great number of film strips. Special efforts are being made to discover and preserve samples of early Australian film-making.

Local library services are provided by the Library for the residents of the Australian Capital Territory, the Northern Territory, the Territory of Papua and New Guinea, Norfolk Island and Nauru.

The National Library's collections contain nearly 500,000 volumes, together with very extensive holdings of pamphlets, pictures, prints, maps, manuscripts and microfilm, and about 5½ million feet of moving-picture films. Its permanent and temporary holdings of archives were, in 1955, approximately 100,000 cubic feet. Special features of the Library's book collections are its strong holdings of Australiana, materials relating to the Pacific area and to East and South-east Asia, the publications of foreign governments and of international organizations, works in the social sciences and in particular in political theory and economics.

- (ii) Patent Office Library. The Library of the Commonwealth Patent Office, Canberra, contains approximately 8,500 books and a wide variety of periodicals and other literature relating to pure and applied science, industrial technology and the industrial property (patent, trade mark, design and copyright) laws and practice of most countries. Patent specifications of inventions are received from the principal countries of the world; present holdings are more than 6,000,000.
- (iii) The Australian War Memorial Library. In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services, together with collections covering the war in Korea, 1950-53, and earlier wars in which Australian troops participated—Sudan, 1885, South Africa, 1899-1902 and the Boxer Rebellion in China, 1900-01. Books, periodicals and other records covering contemporary trends and events in the fields of military history and military science are constantly being added.

The printed records section contains approximately 55,000 volumes, a large collection of military maps, newscuttings and newspapers, sound recordings of war leaders, personalities and events, war posters and postage stamps. Many personal collections by distinguished soldiers and historical documents relating to the wars have also been placed in the Memorial's custody for preservation.

Written records comprise correspondence files of headquarters and units of both world wars, and the original war diaries compiled from day to day by each unit during its service.

The collection of official war photographs covering the 1914-18, 1939-45 and Korean Wars numbers over 250,000, and a collection of official motion picture film depicts Australia at war.

Facilities for public research are not yet fully developed, but all requests for information are met where practicable.

(iv) Other Departmental Libraries. The following Commonwealth authorities in Canberra have specialized collections in their own fields, and in addition draw largely on the National Library:—Attorney-General's Department, Commonwealth Bureau of Census and Statistics, Commonwealth Forestry and Timber Bureau, Department of Trade; Department of Primary Industry, Department of External Affairs, Department of Territories, Department of Health, Department of National Development, Commonwealth Public Service Board, Department of Customs and Excise, Department of Works, and News and Information Bureau of the Department of the Interior.

The Department of Labour and National Service has its main library in Melbourne, and branch libraries in Sydney and Adelaide. Other departmental libraries in Melbourne are those of the Department of Air, Department of Defence, Department of Social Services, Repatriation Commission and Postmaster-General's Department. The library of the Commonwealth Office of Education is in Sydney.

(v) Commonwealth Scientific and Industrial Research Organization. The head office in East Melbourne maintains a library covering all branches of science except the medical sciences. In addition, each division and section of the organization has its own library; together, these form a series of specialist libraries covering such subjects as food preservation, forest products, industrial chemistry and physics, fisheries, agriculture, animal husbandry; and building research. There are 34 such branches, each with its own staff, and also smaller collections under the care of research officers aided by visiting librarians. The head office library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries, and small union catalogues are being developed among groups of branch libraries with similan interests. The collections are particularly strong in the publications of oversea scientific and technical research institutions, with many of which exchange relations exist. The general public may have access to these materials for reference purposes. The head office library, and most of the larger branches, have photocopying facilities. This service is normally for the use of officers of the organization itself, but where the organization holds a publication not available elsewhere in Australia photocopies will be made on request.

3. States.—(i) Metropolitan Public Libraries. In each of the capital cities, there is a well-equipped public library, the libraries in Melbourne and Sydney especially comparing very favourably with similiar institutions elsewhere in the world. The following statement gives the number of volumes in the public library of each capital city at 30th June, 1956:—

#### METROPOLITAN PUBLIC LIBRARIES, 30th JUNE, 1956.

				Nur				
City.		Reference Branch.		Ordinary Lending Branch.	Country Lending Branch.	Total.		
Canberra(a)		 	-	500,000	ļ	(b)		500,000
Sydney		 	(c)	516,174	(d)	161,452	(e)	677,626
Melbourne		 	` '	636,127	102,341	43,413	1 '	781,881
Brisbane		 		163,980		1	1	163,980
Adelaide		 		179,498	(f) 48,617	54,235		282,350
Perth		 	1	200,000				200,000
Hobart		 		52,892	(g) 125,438	83,963		262,293
Darwin		 	1	550		(h) 21,550	1	22,100

<sup>(</sup>a) Commonwealth National Library, including Parliamentary Section. (b) Books are lent to libraries or students throughout Australia whenever necessary for research work. (c) Includes 159,750 volumes in the Mitchell Library. (d) The maintenance and control of the ordinary lending branch of the Public Library at Sydney were transferred in 1908 to the Municipal Council. In 1956; octs in this library numbered 146,467. (e) Includes 10,000 volumes in the Children's Branch. (g) Includes 94,723 volumes in the Children's Branch. (h) Ordinary and Country Lending Branch and 1,800 volumes in the Children's Branch.

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(ii) New South Wales. The Free Library Movement in New South Wales, founded for the establishment of a system of public libraries on the basis suggested in the Munn-Pitt Report of 1935, helped to pave the way for the Library Act 1939, which was fully proclaimed as from 1st January, 1944. Of the 150 councils which have adopted the Library Act, 128 have put their adoption into effect. During 1955-56, they spent on their libraries £715,582, including £145,903 received in subsidy. There are 154 libraries of which seven are in Sydney, 30 in suburbs of Sydney, five in Newcastle and 112 in country municipalities and shires. There are also 12 bookmobiles, of which two are in Sydney, five in the suburbs of Sydney and five in country municipalities and shires. These libraries contain 1,468,000 volumes.

New South Wales departmental libraries are staffed by officers seconded from the State Library, which also provides a central cataloguing service for certain municipal and shire libraries constituted under the 1939 Act. The State Library manages the libraries of the University Tutorial Classes and the Workers' Educational Association.

The Country Circulation Department forwards books on loan to State schools, to municipal and shire libraries and to individual students. During 1956-57, 104,769 books were lent to small State schools, and 34,231 to country libraries, while 30,580 reference works were lent to individual country students and to libraries to satisfy special requests.

The State Library includes a general reference department of 355,000 volumes together with the Shakespeare Tercentenary Memorial Library, and the Mitchell and Dixson Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Mitchell Library, of more than 60,000 volumes and pamphlets and 300 paintings, was bequeathed to the trustees of the Public Library in 1907 by Mr. D. S. Mitchell, together with an endowment of £70,000. There are now 163,000 volumes in the library, in addition to valuable manuscripts, maps and other material. In 1929, Sir William Dixson gave a collection of historical pictures then valued at £25,000. These were subsequently added to and, at his death in 1952, Sir William bequeathed the whole of his collection of books, manuscripts, pictures and other material together with an endowment of more than £113,000, mainly for the printing or reprinting of historical documents relating to Australia and the Pacific.

The State Library also takes care of the State archives.

Other important libraries in New South Wales are the Australian Museum, 31,749 volumes; Teachers' Colleges, 155,061; Technical Education Branch, 62,319; Railways Institute, 146,499; Government Transport Institute, 46,726; Cooper Library of the New South Wales Public School Teachers' Federation, 22,000; and the Library at the National Herbarium, 8,100 volumes. At 30th June, 1957, the Parliamentary Library contained 122,815 volumes.

(iii) Victoria. Until the establishment of the Free Library Service Board in 1947, the only public library facilities available in Victoria (apart from those of the State Public Library and one or two Metropolitan Municipal Libraries) were those offered by about 200 Mechanics' Institute Libraries situated in country areas all over the State. The Board's policy has been to replace these services with modern public libraries controlled by local Municipal Councils and subsidized by the Board. Since the Board's inception, 77 municipalities, comprising 1,465,000 of the State's population, have established libraries. Of these, 19 are in the city, serving 980,000 people, and 58 in the country, serving 485,000 people. The amount of £181,600 was paid to the Councils in library subsidy for the year 1956-57 and a total of £394,824 was expended in Municipal Library Service for the same year. There are 758,318 books available to the communities in which libraries are established and combined circulation figures were 4,608,195 as at 30th September, 1956.

A feature of the services provided in the country is the number of co-operative or regional library groups now being developed. These services, of which there are twelve, comprising a total of 40 Councils, consist of groups of Councils which pool their financial resources, book-stocks and trained staff, in order to provide more comprehensive, efficient library facilities.

Approximately 140 Mechanics' Institute Libraries are still in existence in country areas. In 1956, 64 of them shared a grant of £2,000.

(iv) Queensland. The Library Board of Queensland was established in 1945 under the provisions of the Libraries Act of 1943. Its duty is to attain the fullest co-operation and improvement of the library facilities of the State, with the object of placing such facilities on a sound basis for the benefit and educational improvement of the citizens generally. The Board consists of six members with the State Librarian as ex officio member and secretary.

One of the Board's functions is the control and management of the Public Library of Queensland. Its policy is to build up the main collection of the Library, being as it is the State's reference centre.

The Country Extension Service, which is accommodated at the Public Library of Queensland, lends books of non-fiction free to adults and children residing outside the metropolitan area and to municipal libraries in areas of low population.

The Oxley Memorial Library was established in connexion with the Brisbane Centenary celebrations in 1923, and since 1946 has been administered as a department of the Public Library of Queensland and the collection has been kept segregated. Its object is to collect books, manuscripts, pamphlets and other graphic material relating to the history and literature of Australia and of Queensland in particular, and to provide facilities for research students in Queensland literature and history.

The holdings of the Public Library of Queensland and its extension services in 1955-56 were:—Main Reference Collection, 106,278 volumes and 23,114 maps and pamphlets; Country Extension Service, 39,397 volumes; Oxley Memorial Library, 18,305 volumes and 6,433 maps, pamphlets and miscellaneous items. Regarding library development throughout the State, the policy of the Library Board of Queensland is to encourage local authorities to conduct library services as a function of local government. In 1955-56, 36 local authorities were conducting 47 library services and 29 others indicated that they would do so in the near future. There were 22 libraries in Queensland free to adults and 27 free to children.

The South Western Regional Library Service was established by the State Government in 1955, as a result of co-operation between seven local authorities. By 30th June, 1956, five libraries had been opened.

The Brisbane City Council has established nine libraries of which five have separate children's collections.

The library of the Parliament of Queensland was established in 1860. At 30th June, 1957, the library held 83,791 books and pamphlets, consisting of official publications and books devoted largely to history, the social sciences, biography and literature. The library is entitled to a copy of every book published in Queensland.

(v) South Australia. In the reference department of the Public Library of South Australia there are about 179,000 volumes, most of which may be borrowed. Over 3,000 periodicals are filed, and the collection of newspapers includes every newspaper printed in South Australia. There are 36,400 volumes in the lending department available to persons living in the metropolitan area, and the Country Lending Service has 54,200 volumes, of which more than half are suitable for children.

The Research Service specializes in scientific and technical inquiries, and supplements the resources of the Public Library by borrowing from other libraries and by obtaining microfilm copies of material not available locally. It has an extensive collection of trade catalogues.

The library of the Parliament of South Australia held approximately 65,000 volumes at 31st December, 1956.

The Institutes' Association in 1956 comprised 223 suburban and country libraries with 743,809 volumes.

(vi) Western Australia. In 1955, the Library Board of Western Australia was made responsible for all public library services throughout the State to which the State Government contributes funds.

The Board has the following major functions:-

- (a) To encourage local authorities throughout the State to establish public libraries and to provide as a State subsidy all books and bibliographical services necessary for such libraries when established;
- (b) To administer for a limited period a former scheme of monetary grants of up to £50 per annum to local authorities which maintain public libraries;
- (c) To administer the State Library;
- (d) To advise the Government on all matters relating to libraries;

(e) To provide for the training of librarians.

Local public libraries are subsidized on a £1 for £1 basis, the local authority providing accommodation and staffing and the Board all books and related services. The Board provides at least one volume per head of the population. All books throughout the State are available at any library on request to the Board. All cataloguing is done by the Board. The first library under this scheme was opened in August, 1954. By 30th June, 1957, 23 libraries had been established.

Prior to the establishment of the Library Board in 1944, the government appointed a Country Free Lending Libraries Committee to make small grants to local authorities for library purposes. That committee has now been merged with the Board. Its activities will cease in about 1962, and will be replaced by the full service of the Board.

The State Library, established in 1887, is the reference division of the Library Service of Western Australia. In addition to providing the normal facilities of a reference library for the metropolitan area, it extends its service throughout the State through local public libraries. It is divided into four subject departments as follows:

J. S. Battye Library of West Australian History. Library of Business, Science and Technology. Library of Social Sciences, Philosophy and Religion.

Library of Literature and the Arts.

The State Bibliographical Centre is housed at the State Library and there is also a Commercial Information Centre. The State archives are maintained by the State Library and managed by the staff of the Battye Library. The library is fully equipped with microfilms and photocopy apparatus.

The bookstock of the Board at 30th June, 1957, was approximately:

Lending library services (including books in public libraries): 80,000 volumes.

State Library: 200,000 bound volumes.

The University of Western Australia, through its Adult Education Board, manages the Adult Education Library of some 12,000 volumes of general reading and fiction. Books are sent to country readers by post.

There are some 80 special libraries in government departments and industrial firms. A union catalogue of periodicals currently received in the libraries of all types in the metropolitan area has recently been published by the Library Board of Western Australia.

(vii) Tasmania. The Tasmanian Library Board, constituted in 1944, is responsible for administering the State library headquarters in Hobart, for the extension of library services throughout the State and for the control of State aid for libraries. State aid to municipalities is provided in the form of books of a value equal to the amount of library rates collected. The total cost of library services to the State during 1956-57 amounted to £95,162.

The Tasmanian Library Board provides lending and reference services for the people of Hobart and operates a reference service for people throughout the State. In addition, it conducts screenings of documentary films, recitals of recorded music, lectures, library weeks in country centres, puppetry demonstrations, etc.

The Parliamentary Library works in close collaboration with the State Library, which provides a reference officer to serve members during session. It catalogues all new books added to the library and supplies recreational reading.

4. University Libraries.—The libraries of the Australian universities provide material not only for the education of graduates and undergraduates, but also for scholars, research workers and practical investigators all over the continent. Much of the material they contain is not available elsewhere, for although in most cases smaller, they are in many directions more highly specialized than the public libraries. They lend to one another and to State and private institutions as well as to individual investigators. Each of them is governed by a librarian, who is responsible as a rule to an executive sub-committee and a committee which is practically co-extensive with the professional staff. In size, the library of the University of Sydney is the fourth library in Australia, and the libraries of the Universities of Melbourne and Adelaide are respectively seventh and eighth. The following table shows the sizes and rates of growth and expenditure of the Australian university libraries; borrowing statistics are not shown, as they differ too widely to be comparable without considerable explanation.

UNIVERSITY LIBRARIES, 1956.

t	niver	sity or College.			Volumes.	Accessions during year.	Expenditure.
							£
Australian Na	ional	University			121,512	9,802	47,873
Sydney					387,213	19,177	70,032
Melbourne					225,183	11,571	80,228
Queensland					147,665	12,997	48,675
Adelaide					212,802	8,666	48,051
Western Austr	alia				137,365	8,340	30,802
Tasmania					91,700	5,283	24,480
New South Wa	iles (				70,643	10,885	47,946
New England					42,980	12,088	25,594
Canberra Univ	ersity	College	••	• •	26,841	4,591	14,436
To	tal				1,463,904	103,400	438,117

The library of the Australian National University was founded in 1948. At the end of 1957, stock comprised about 130,000 volumes, including a collection in oriental languages. The library is designed to serve a staff and students of a post-graduate institution but its resources are freely available to all serious readers. It specializes in the fields of the physical and medical sciences, excluding clinical works. In the social sciences, it aims to provide a good working collection while giving consideration to the holdings of the Commonwealth National Library. It possesses significant collections in anthropology, linguistics, mathematics and mathematical statistics.

The first books were bought for the library of the University of Sydney as early as 1851. Only since 1910, however, has it possessed a building of its own; previously it had been housed in the main building. It is named after the principal benefactor, Thomas Fisher, who, in 1885, bequeathed to it the sum of £30,000. It contains an up-to-date bookstack of glass and steel and a fine reading room in which, since the beginning of 1941, about 18,000 volumes of the collection have been made available on open access shelves. In addition, members of the teaching staff and certain classes of undergraduates are admitted to the bookstacks and all readers are encouraged to borrow freely. The library possesses a large number of periodicals, especially scientific, valuable collections of seventeenth-century pamphlets and Elizabethan translations from the classics, and an extensive collection of Australian literature. Besides medical and law branches, there are a number of departmental libraries. The total holding at the 30th June, 1957, was 407,163 volumes, including more than 15,000 books in Chinese acquired during the previous two years.

Early in 1854, the University of Melbourne made its first allocation for books, but the library was housed in temporary quarters for some time. In recent years, the university authorities have treated the library generously, and there have been some welcome benefactions, but accommodation is insufficient and a new library building is a pressing need. The W. L. Baillieu Trust made available the first instalments of a £100,000 gift for building purposes, which have been followed by subsequent gifts and substantial grants from the State government, with the result that it has been possible to begin the construction of the new library at an estimated cost of £690,000. Most of the books are accessible on open shelves, and though the library is intended primarily for reference purposes, borrowing, except of text-books and certain valuable volumes, is made as easy as possible. The resources of the library are also extensively used on inter-library loan by industries and other organizations throughout Australia. The library is administered from the centrally situated general library. There is a large medical branch library specially rich in periodicals, and smaller branch libraries in various other departments. At the end of 1956, it contained 225,183 volumes.

The library of the University of Queensland was founded in 1911. The main library is now in its own building in the new University at St. Lucia, and there are a considerable number of departmental libraries. All books are in open access and most are available for borrowing. At the end of 1957, the library contained more than 155,000 volumes. The main library includes a special collection of material relating to the history, development and culture of the countries surrounding the Pacific Ocean.

The Adelaide University library bears the title of its original benefactor, Robert Barr Smith, who, with members of his family in and after 1892, gave the university about £50,000 for the library. Some 25,000 volumes are shelved in the reading room and are available to the ordinary student. Up-to-date steel bookstacks hold about 150,000 volumes. Borrowing facilities are available to all matriculated students, to country students and to graduates. There are departmental libraries for medicine, law and music. The British Medical Association (South Australian Branch) makes an annual contribution towards the maintenance of the medical library. In return, all its members enjoy borrowing privileges.

In the University of Western Australia, the first permanent library staff was not appointed until 1927. Provision for a permanent library was not possible when the university moved to its present site, and space and facilities have consequently been inadequate. The whole collection, consisting of about 140,000 volumes, is accessible on open shelves, and there are several departmental libraries. The library possesses a good range of periodicals, especially legal and scientific and is building up a useful collection of Australian literature. The medical library was opened in 1956.

Although the library of the University of Tasmania was founded in 1893, a full-time librarian was appointed for the first time at the end of 1945. From 1945 to 1956, the book stock almost doubled and now approaches 100,000 volumes. The library received about 2,000 periodicals in 1956. Since 1954, a Hobart Union List of Serials has been housed in and kept up to date by the university library, thus providing a major reference tool for all bibliographic inquiries in the State. At the end of 1957, the library contained 95,000 volumes

The New England University library was founded in 1938, and bears the name of its benefactor, Sir William Dixson. At the end of 1956, it contained 42,980 volumes, mainly on open shelves. In 1957, the library moved to its new temporary quarters which hold approximately 65,000 volumes on open access and seat 100 readers. Two basement areas are being developed to accommodate a bindery and a stack room for local records and additional books and periodicals. Microfilm and microcard readers are available.

The New South Wales University of Technology made its first allocation for books and periodicals in 1950, the publications being incorporated in the Library of the Sydney Technical College. In 1951, publications relating to professional diploma courses were transferred to the university but remained in the libraries of the Technical College where these courses were being conducted. Of the 70,640 volumes in the university's library at

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December, 1956, 14,230 were in the university's library at Kensington, 19,400 in the library of the Newcastle University College, and the rest in the Technical College libraries. The university library is administered through a central unit at the Sydney Technical College Library which maintains a central catalogue of the holdings of all libraries other than that of the Newcastle University College. The university library is strong in current scientific and technical periodicals. Borrowing facilities are available to all students.

The Canberra University College library was established in 1938. In 1957, it contained 30,000 volumes, which are on open shelves.

- 5. Children's Libraries and School Libraries.—(i) New South Wales. Children's libraries are being developed as departments of municipal and shire libraries. The Education Department maintains a school library service for the fostering of State school libraries, which are maintained partly by parents' and citizens' associations and partly by departmental subsidy. Secondary and central schools have trained teacher librarians.
- (ii) Victoria. Under the auspices of the Free Library Service Board, 78 municipal children's libraries have been, or are in the process of being, established as part of the library services provided by the councils concerned. All these libraries provide comprehensive modern children's book collections which are constantly being refreshed. An annual grant of £5,000, which is additional to the ordinary annual municipal library grant, is provided to assist these libraries. In addition, 14 independently controlled children's libraries shared in this grant in 1957.

The Education Department is making provision for the building of a library room in new schools. Where accommodation is available in existing schools, library furniture is provided free of cost to the schools and the government subsidises the purchase of books. In December, 1957, 270 schools had central libraries.

A scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years. Four hundred and fifty schools benefited from this scheme in 1956.

The Department has a Library Service Officer with a small staff to advise and assist schools in the establishment and organization of libraries. A one-year course for the training of teacher-librarians was established at Melbourne Teachers' College in 1955. Approximately 20 teachers are trained each year.

- (iii) Queensland. The purchase of books in State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Public Instruction on a £1 for £1 basis. Teachers are given short courses in school library organization at the public library in Brisbane.
- (iv) South Australia. A Children's Library of 12,230 volumes is used by school classes and individual children living in the metropolitan area. Books of fiction are lent to children of fourteen years and over, while other books may be borrowed by children of any age.
- (v) Western Australia. The State Education Department makes library subsidies and grants to government schools for the purchase of non-fiction books.

All high schools are provided with a library room and furniture, and trained teacherlibrarians are appointed to them. Building plans do not provide for primary school libraries, but a number of the schools have set up central libraries when rooms have become available.

One-teacher and two-teacher schools are served by a travelling library and the Small Schools Fixed Library services. Under the Fixed Library Scheme permanent libraries of reference books and encyclopaedias were placed in each such school. Books to the value of £15 were added to each of these libraries annually from 1948 to 1954. From 1955, the grant for these books is to be made at three year intervals. The travelling library provides recreational reading and operates 350 boxes which are exchanged every three months. The government grants £500 per annum for this service, and the participating schools contribute the commission received from the Commonwealth Savings Bank for the teachers' services—about £170.

Children in isolated country areas are catered for by books sent out by the State Correspondence School's Library. The children are kept in touch with the library by means of radio talks and leaflets issued periodically.

(vi) Tasmania. The Lady Clark Memorial Children's Libraries, at the State Library, Hobart, aim to serve all children in Tasmania with books. At 30th June, 1957, 197 children's libraries and depots had been established.

Practically all State secondary schools in Tasmania have libraries, with full-time librarians in four of them. A Schools' Library Service gives a book service to schools and assists schools wishing to set up their own libraries. In 1956, the number of schools receiving service was 112 and the number of books issued was 8,923.

6. Special Libraries.—Before the 1939-45 War, the number of special libraries, apart from those maintained by government departments, was small, but during recent years

many manufacturing, commercial, research and other firms, as well as statutory bodies, have found it necessary to establish special libraries to serve their specialist or other staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly staffed by trained librarians.

7. Microfilms.—The following libraries supply microfilm or photostat copies of material, usually at a small charge (the letter "P" signifies photostat supplied and "M" microfilm supplied):—Australian Capital Territory—Australian War Memorial (P), Commonwealth National Library (PM), C.S.I.R.O. (M); New South Wales—Metropolitan Water, Sewerage and Drainage Board (P), Public Library of New South Wales (M), Standards Association of Australia (P), School of Public Health and Tropical Medicine (M), Fisher Library, University of Sydney (PM); Victoria—Commonwealth Serum Laboratories (P), Technical Information Section, Munitions Supply Laboratories (PM), Public Library of Victoria (M), Standards Association of Australia (Melbourne Branch) (P), University of Melbourne (PM), C.S.I.R.O. (M); Queensland—Public Library (P); South Australia—Public Library of South Australia (PM), University of Adelaide (PM), Waite Agricultural Research Institute (P); Western Australia—State Library (PM); Tasmania—University of Tasmania (PM).

#### § 11. Public Museums.

The Australian Museum in Sydney, founded in 1836, is the oldest museum in Australia. In addition to possessing fine collections of Australian fauna, the museum contains valuable anthropological and mineral collections. The number of visitors to the institution during 1955-56 was 290,000 and the average attendance on week-days 650, and on Sundays, 1,700. The expenditure for 1955-56 amounted to £69,154. A valuable library containing 32,000 volumes is attached to the museum. Courses of evening popular lectures are delivered and lecturers also visit distant suburbs and country districts, and afternoon lectures for school children are provided; 10,300 children attended during 1955-56. Representative collections illustrative of the natural wealth of the country are to be found in the Agricultural and Forestry Museum and the Mining and Geological Museum. The latter institution prepares collections of specimens to be used as teaching aids to country schools. The "Nicholson' Museum of Antiquities, the "Macleay" Museum of Natural History and the Museum of Normal and Morbid Anatomy attached to the University of Sydney, and the National Herbarium and Botanical Museum at the Sydney Botanic Gardens, are all accessible to the public. There is a Museum of Applied Arts and Sciences in Sydney with branches in three country centres. Expenditure during the year 1955-56 was £59,404. Valuable research work is being performed by the scientific staff in connexion with oil and other products of the eucalyptus and the gums, kinos, tanning materials, and other economic products of native vegetation generally.

The National Museum at Melbourne, devoted to natural history, geology and ethnology is in the eastern section of the Public Library Building. The Museum of Applied Science, also housed under the same roof, contained at 30th June, 1956, 24,100 exhibits which covered applied and economic aspects of all branches of science. There is a fine Museum of Botany and Plant Products in the Melbourne Botanic Gardens. In addition to the large collection in the geological museum attached to the Mines Department in Melbourne, well-equipped museums of mining and geological specimens are established in connexion with the School of Mines in the chief mining districts.

The Queensland Museum, founded in 1855, comprises exhibited and reference collections of zoology, geology and ethnology. It is maintained entirely by the State Government. Expenditure for the year 1955-56 was £29,405. The collections are principally Australian but there is an excellent series of ethnological material formed by Sir William McGregor in New Guinea. The publication is Memoirs of the Queensland Museum which was preceded by the Annals of the Queensland Museum.

The Queensland Geological Survey Museum has branches in Townsville, opened in 1886, and in Brisbane, opened in 1892.

The South Australian Museum has considerable collections of most branches of natural history. In 1956-57, there were at least 200,000 visitors and expenditure was £47,868.

The Western Australian Museum was established in 1895. It is under the statutory management of a Board of Trustees, appointed by the State Government, but operates under its own director and staff. Although it is primarily a museum of natural history, with principal research interests in the fauna of Western Australia and the ethnology of the Western Australian aborigine, the museum has also historical and technological exhibits.

A teacher is employed full-time conducting visiting classes from schools in the metropolitan area. Under this scheme, 11,647 school children visited the museum in 1956-57.

A close relationship exists between the museum and the Geological Survey of Western Australia, the collections of the survey being housed and exhibited in the museum.

Public lectures on natural history are held in the evenings. Lectures are given three times a month for adults and more frequently for juniors.

There are two museums in Tasmania—the Tasmanian Museum at Hobart, and the Victoria Museum and Art Gallery at Launceston—both of which contain valuable collections of botanical, mineral and miscellaneous products. The museums received aid from the Government during 1955-56 to the extent of £23,000.

#### § 12. Public Art Galleries.

The National Art Gallery of New South Wales originated in the Academy of Art founded in 1871. The expenditure for 1955-56 was £35,622. At the end of 1956, its contents comprised 1,380 oil paintings, 865 water colours, 2,106 prints and drawings, 281 sculptures and casts, and 1,318 ceramics, works in metal and miscellaneous. Since 1895, loan collections of pictures have been exhibited regularly in important country towns.

The National Gallery at Melbourne at 30th June, 1956, contained 1,004 oil paintings, 7,548 objects of statuary, bronzes, ceramics, etc., and 7,962 water colour drawings, engravings and photographs. The Gallery is situated in the same building as the Museum and Public Library. Expenditure allocated to the National Gallery in 1955-56 was £63,202, including £2,076 for purchases of works of art. Several munificent bequests have been made to the institution by private citizens. There are provincial art galleries at Ararat, Ballarat, Bendigo, Castlemaine, Geelong, Mildura, Shepparton, St. Arnaud and Warrnambool, to which, periodically, pictures are sent on loan from the National Gallery.

The Queensland National Art Gallery, Brisbane, maintained by the State Government, was founded in 1895. A Director was appointed in 1950, in which year the interior of the gallery was remodelled. More recently an art museum and a print room have been opened. At 30th June, 1956, there were on view 397 oil paintings, 210 water colours, 330 black and white, and 54 pieces of statuary, together with 141 prints, mosaics, and miniatures. Exclusive of exhibits on loan, the contents are valued at about £35,000. Visitors during the year 1955-56 averaged 1,250 on Sundays and 380 on week-days.

The Art Gallery at Adelaide originated in an exhibition of pictures in the Public Library Building in 1882. Many bequests made by private citizens have materially assisted its growth. At 30th June, 1957, there were in the Gallery 1,712 paintings in oil and water colours, 108 items of statuary and a large collection of drawings, prints and furniture. The expenditure during 1956-57 was £25,592.

The Art Gallery of Western Australia was established in 1895. Although under the statutory management of a Board of Trustees, appointed by the State Government, it functions under its own director and staff. At the 30th June, 1957, the collection comprised 320 oil paintings, 157 water colours, 9 pastels, 645 black and white, 500 prints, 9 miniatures and 17 pieces of sculpture. International and interstate exhibitions are frequently held and travelling exhibitions are sent to country centres.

In Tasmania, the Art Gallery at Hobart was opened in 1887. In June, 1956, the contents consisted of 171 oil paintings, 177 water colours, 125 black and white, three statuary and 144 etchings, engravings, etc. Expenditure in 1955-56 was £19,341.

The Art Gallery at Launceston was opened in 1891. Only a small proportion of the contents belongs to the gallery, the bulk of the pictures being obtained on loan. In June, 1956, there were on view 53 oil paintings, 25 water colours, four black and white, and three miscellaneous exhibits. Expenditure in 1955-56 was £11,908.

#### § 13. Scientific Societies.

1. Royal Societies.—In earlier issues of the Official Year Book, an outline was given of the origin and progress of the Royal Society in each State. The accompanying table contains the latest available statistical information regarding these institutions, the head-quarters of which are in the capital cities.

#### **ROYAL SOCIETIES, 1956.**

Particulars.	Sydney.	Mel- bourne.	Bris- hane.	Ade- laide.	Perth	Hobart.	Can- berra.
Number of members Volumes of transactions issued Number of books in literary Societies on explanate liter	. 90	1854 236 (a) 611 22,000 360 2,185 2,090	1884 218 67 47,718 276 623 568	1880 172 81 21,300 235 2,575 2,960	1914 208 39 5,000 209 188 341	1843 510 90 30,939 300 1,591 1,548	1930 158   88 74

(a) Proceedings.

- 2. The Australian and New Zealand Association for the Advancement of Science.—This association was founded in 1887. Its headquarters are at Science House, Gloucester Street, Sydney, and meetings are held at intervals of approximately eighteen months within the various States and in the Dominion of New Zealand. The next meeting is scheduled to take place in Adelaide in August, 1958.
- 3. Other Scientific Bodies.—A number of scientific bodies have been set up by the Commonwealth Government. These are the Commonwealth Scientific and Industrial Research Organization, the Commonwealth Observatory (which has now been incorporated in the Australian National University), the Ionospheric Prediction Service, and the Atomic Energy Commission. Particulars concerning these bodies may be found in Chapter XXX.—Miscellaneous.

The Linnean Society of New South Wales, with head-quarters in Sydney, was founded in 1874. Sir William Macleay, who died in 1891, during his lifetime and by his will endowed the Society to the amount of £67,000, which has been increased by investment to approximately £100,000. The Society offers annually to graduates of the University of Sydney who are members of the Society and resident in New South Wales, research fellowships (Linnean Macleay Fellowships) in various branches of natural history. Two fellowships were awarded in 1957. The library comprises some 18,000 volumes. Eighty-two volumes of proceedings have been issued, and the Society exchanges with about 300 kindred institutions and universities throughout the world. The membership at the end of 1957 was 257.

The British Astronomical Society has a branch in Sydney, and in each of the States the British Medical Association has a branch.

In addition to the societies enumerated above, there are various others in each State devoted to branches of scientific investigation.

#### § 14. State Expenditure on Education, Science and Art.

The expenditure in each State on education, science and art during the year 1955-56 is shown in the following table. Owing to the details not being available in all States, the figures exclude officers' pensions and superannuation, pay-roll tax, and interest and sinking fund on capital expended on buildings. The cost of the medical and dental inspection of school children is also excluded, as this service is more appropriately classified under public health.

STATE EXPENDITURE ON EDUCATION, SCIENCE AND ART, 1955-56. (£'000.)

		-	Expenditu	re from—			Net
State.		Revenue.	Loan.	Other Funds.	Total.	Receipts.	Expendi- ture
New South Wales		35,180	6,707		41,887	1 777 j	41,110
Victoria		23,368	6,906		30,274	308	29,966
Queensland		10,409	1,828	504	12,741	275	12,466
South Australia		7,930	1,511		9,441	364	9,077
Western Australia		7,458	1,387	1	8,845	121	8,724
Tasmania		3,557	1,112	4	4,673	23	4,650
Total		87,902	19,451	508	107,861	1.868	105,993

#### CHAPTER XIII.

#### PUBLIC JUSTICE.

Note.—In the interpretation of statistics of public justice, allowance must be made tor the following factors which affect comparability from State to State and from year to vear:—

(a) Differences in the jurisdiction of courts;

(b) The introduction of new laws in particular States;

- (c) The methods of compilation of the figures (see footnotes to the tables dealing with convictions);
- (d) The attitude of the magistracy and instructions issued to the police, especially in the case of laws connected with liquor, vagrancy and gaming;

(e) The strength and distribution of the police force;

(f) The proportion of crime solved.

#### § 1. The Australian Legal System.

1. General.—Australia, being a federation, has two systems of courts—State and federal. The only federal courts are the High Court of Australia, the Federal Court of Bankruptcy and the Commonwealth Industrial Court. Otherwise, federal jurisdiction is vested in the State courts.

Thus, while the High Court has extensive original jurisdiction, most civil cases involving federal jurisdiction are heard in the State courts. Almost all criminal matters involving federal jurisdiction are tried in State courts. In the tables in this chapter which give statistics of proceedings in State courts, no distinction has been drawn between State cases proper and cases where State courts are exercising federal jurisdiction.

2. State Courts.—(i) Civil jurisdiction. Lower courts (which term includes, for the purposes of this chapter, Magistrates' Courts, Courts of Petty Sessions, and Small Debts Courts) are presided over by a stipendiary or police magistrate. In some limited instances, justices of the peace may exercise the jurisdiction of the court. § 2 below sets out the powers of the magistrates in the various States and Territories. Unless the amount be very small, in most cases appeal may be made to a higher court against a magistrate's decision. In any case the Supreme Court has a supervisory power, by means of the prerogative writs, to examine whether a lower court has properly exercised its jurisdiction.

In the higher courts (which term includes for the purposes of this chapter District Courts, County Courts, and the Supreme Courts) actions are usually tried by a single judge, sitting with or without a jury, from whose judgment appeal lies to the full bench of the Supreme Court. In certain cases the appeal can be carried to the High Court of Australia. Appeals to the Privy Council are discussed below.

(ii) Criminal jurisdiction.—Criminal courts are of two kinds, namely, courts of summary jurisdiction, usually called Courts of Petty Sessions, which may deal summarily with minor offences, and higher courts, known as Courts of Sessions, Quarter Sessions or General Sessions, and the Supreme Court, which hear indictable offences. A court of summary jurisdiction consists of a stipendiary or police magistrate, or two or more justices of the peace; a higher court consists of a judge or chairman, sitting with a jury. The jury finds as to the facts of the case and the judge determines the applicable law.

In the case of other than minor offences, a preliminary hearing is held before a stipendiary magistrate or justice of the peace for the purpose of determining whether a prima facic case has been made out. If the magistrate or justice of the peace finds that there is a case to answer, the person charged is committed for trial at a higher court. A magistrate or justice of the peace has power to release on bail.

There is an appeal to a higher court from the decision of a court of summary jurisdiction hearing a minor offence, and an appeal from a higher court to the full bench of the Supreme Court, or Court of Criminal Appeal. A further appeal may, with leave, be brought to the High Court of Australia.

3. Federal Courts.—The judicial power of the Commonwealth is vested in the High Court of Australia (the federal supreme court), in the federal courts created by Parliament (the Federal Court of Bankruptcy and the Commonwealth Industrial Court), and in the State courts invested by Parliament with federal jurisdiction, both civil and criminal. Further particulars regarding the judicial power of the Commonwealth will be found in Chapter III. (§§71–73) of the Commonwealth constitution (see p. 16 of this Year Book).

Particulars concerning the Federal Court of Bankruptcy, the High Court of Australia and the Commonwealth Industrial Court will be found in paragraphs 3, 4 and 5 respectively of § 3 of this chapter.

4. Appeal to the Privy Council.—There is an appeal, by special leave of the Privy Council, from the High Court to the Privy Council. In certain important types of constitutional disputes, involving questions of the powers of the Commonwealth vis-à-vis the States, a certificate of the High Court in effect granting leave to appeal is necessary. There is also an appeal from the State Supreme Courts direct to the Privy Council.

#### § 2. Criminal Courts.

#### A. LOWER (MAGISTRATES') COURTS.

- 1. Powers of the Magistrates.—(i) New South Wales. There is no general limit to the powers of the magistrates with regard to offences punishable summarily, their authority depending in each case on the statute which creates the offence and gives them jurisdiction. Except in the case of a very few statutes, and excluding cumulative sentences, the power of sentence is limited to twelve months. Imprisonment in default of fine is regulated by a scale limiting the maximum period according to the sum ordered to be paid, but in no case exceeding twelve months. Actions for debt and damage within certain limits also come within magisterial jurisdiction. In cases of liquidated debts, and damages, whether liquidated or unliquidated, the amount is limited to £50 before a court constituted by a stipendiary magistrate. Magistrates have power to entertain claims of up to £250 under the Hire Purchase Agreements Act. The amount in actions of debt before two or more justices of the peace is limited to £30 and in actions of damage it is limited to £10, but may extend to £30 with the consent of the defendant. Outside the metropolitan Area of Sydney and certain other prescribed districts one justice of the peace may near cases of debt, liquidated or unliquidated, or damage up to £5 or to £30 by consent or parties.
- (ii) Victoria. The civil jurisdiction of magistrates is restricted to what may be designated ordinary debts, damages for assault, restitution of goods, etc., where the amount in dispute does not exceed £100, and to actions arising out of torts or contracts to the extent of £250. No definite limit is fixed to the powers of the magistrates on the criminal side, and for some offences, sentences of up to two years' imprisonment may be imposed. The proportion of long sentences is, however, comparatively small.
- (iii) Queensland. Generally speaking, the maximum term of imprisonment which justices can inflict is six months, but in certain exceptional cases, such as offences against sections 233, 344 and 445 of the Criminal Code (betting houses, aggravated assaults, and unlawfully using animals), sentences of twelve months may be imposed.

There is provision for applying cumulative sentences, but in practice not more than one sentence is generally made cumulative on a previous sentence.

Magistrates have no power to deal with habitual offenders.

- (iv) South Australia. The power of special magistrates to impose fine and imprisonment is defined by the special Act creating the offence and conferring jurisdiction. In the case of minor indictable offences, triable summarily, a maximum penalty of £100 fine or two years' imprisonment is fixed by the Justices Act 1921–1957. Magistrates also have power to hear certain civil actions in which the amount claimed is less than £1,250.
- (v) Western Australia. The powers of magistrates and justices with regard to offences triable summarily are governed by the Act creating the offence and giving them jurisdiction. Imprisonment in default of payment of a fine is regulated by a scale limiting the period according to the amount of the fine but not to exceed six months.

The civil jurisdiction of magistrates and courts is restricted in general to £500. By consent of the parties, any action that might be brought in the Supreme Court may be dealt with in a Local Court. Justices may act in the case of illness or absence of the magistrate.

Magistrates are coroners and justices may be appointed as acting coroners.

Magistrates have appellate jurisdiction under some statutes and in country districts act as Chairmen of the Courts of Session. They may be appointed as Commissioners of the Supreme Court. On the goldfields, the magistrate is also the warden.

(vi) Tasmania. Magistrates are empowered to hear and determine in Courts of Petty Sessions all offences when an enactment expressly or by implication provides that the matter is to be determined summarily, or by or before justices, or that any offence is to be punishable upon summary conviction. In addition, stealing and analogous crimes may be heard and determined summarily on the election of the person charged, when the amount involved does not exceed £100.

No general limit is fixed in respect of sentences, the statute creating the offence almost invariably laying down the penalty. Where this is not the case, the Contravention of Statutes Act 1889 provides that a fine of £50 may be imposed. Sentences of imprisonment which justices may impose vary with the nature of the offence, with a maximum of two years. The aggregate of terms of cumulative sentences may not exceed two years.

The civil jurisdiction of magistrates is divided into two categories. A Commissioner of the Court of Requests, provided he is a legal practitioner, may hear actions for the recovery of debts and damages not exceeding £250. As Commissioners are invariably police magistrates, this jurisdiction is State-wide. Courts of General Sessions, constituted by at least two justices, exercise similar powers, but the jurisdiction cannot exceed £50. Only one court, that at Currie, King Island, has the maximum jurisdiction, the others being limited to £30.

(vii) Northern Territory. Magistrates constituting courts of summary jurisdiction try offences punishable summarily. The punishment that may be imposed depends on the law creating the offence. Where there is no magistrate available the offence may be tried by two or more justices of the peace or, if all parties consent, by one justice. Proceedings for committal on indictable offences may be heard by either a magistrate or a justice of the peace. Certain minor indictable offences may be tried summarily by a magistrate or two justices of the peace who may impose a fine up to £100 or two years' imprisonment.

A stipendiary magistrate constituting a local court has a civil jurisdiction to hear and determine claims for not more than £1,000. A local court constituted by two justices of the peace has a civil jurisdiction to hear claims up to £50.

(viii) Australian Capital Territory. Magistrates have jurisdiction to try an offence which is punishable summarily and also where a person is made liable to a penalty or punishment and no other provision is made for trial. The punishment depends upon the statute which creates the offence. Certain indictable offences of a less serious nature may be tried summarily by a magistrate, who may impose a fine of £50 or imprisonment for one year. Magistrates also hear proceedings for committal on indictable offences. The stipendiary magistrate is also the coroner. In civil proceedings, magistrates try actions for amounts up to £200. Justices of the peace have no judicial functions.

2. Cases Tried.—The total numbers of cases tried at magistrates' courts in each State for the years 1952 to 1956 are shown in the following table:—

CASES TRIED AT MAGISTRATES' COURTS. State or Territory. 1952. 1953. 1954. 1955. 1956. New South Wales 269,197 276,566 (a) 271,172 (a) 271,105 (a) 254,487 . . Victoria 129,091 134,912 135,409 149,296 180,886 . . Oueensland(b) 49,849 44,868 49.372 46,482 47,072 . . 30,953 South Australia(b) 33,688 28,757 32,593 31,799 . . 40,674 43,495 Western Australia . . 50,640 67,739 62,753 Tasmania 16,964 20,381 19,814 19,672 19,274 Northern Territory(b) ... 1,178 1,657 2,077 2.105 2,779 Australian Capital Terri-1,294 1,610 1,480 1,006 tory 1,406 556,861 Australia 539,516 555,690 576,744 616,741

(a) In addition the following numbers of parking offences were settled by payment of fines to the Police Department, without court appearances: 1954—23,177; 1955—61,179; 1956—163,921. Cases of parking offences tried in previous years are included in the totals shown.

(b) Twelve months ended 30th June of year shown.

3. Convictions at Magistrates' Courts.—Of the persons who appeared before Magistrates' Courts in 1955 and 1956, the following table shows the number who were convicted:—

#### CONVICTIONS AT MAGISTRATES' COURTS.

Class of Offence.	N.S.W.	Vic.	Qld. (a)(b)	S.A. (a)	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
			1955	i <b>.</b>					
A animat Duamanter	3,060 16,478		495 3,051	336 1,527	389 3,979	237 888	57 80	30 104	5,713 32,312
against the Currency Against Good Order	265 105,294 108,680	27,118	26,340 16,356	5,996 21,401	7,344 53,406	1,545 14,642	40 746 941	1,057	319 175,440 314,655
Total	233,777	133,575	46,242	29,264	65,118	17,314	1,864	1,285	528,439
			1956	<b>.</b>					
A Total Donor Control	3,092 17,972		447 3,495			254 918		36 133	5,828 36,289

Total	 249,131	163,856	45,711	28,221	59,883	17,029	2,444	801	567,076
against the C Against Good C Other	335 103,942 123,790			5,802 20,530			1,440 889		363 171,865 352,731

<sup>(</sup>a) Year ended 30th June of year shown. (b) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately.

The following table shows the number of convictions in each year from 1952 to 1956:-

#### CONVICTIONS AT MAGISTRATES' COURTS.

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales	249,845	257,522	(a) 250,019	(a) 233,777	(a) 249,131
Victoria	115,534	121,497	121,919	133,575	163,856
Oueensland( $b$ )( $c$ )	46,436	41,266	42,590	46,242	45,711
South Australia(b)	27,432	30,229	25,482	29,264	28,221
Western Australia	38,109	40,643	48,005	65,118	59,883
Tasmania	15,032	17,705	17,299	17,314	17,029
Northern Territory(b)	980	1,411	1,915	1,864	2,444
Australian Capital Terri-	1			1	1
tory	1,441 '	1,141	1,128	1,285	801
Australia	494,809	511,414	508,357	528,439	567,076

<sup>(</sup>a) In addition, the following numbers of parking offences were settled by payment of fines to the Police Department without court appearances: 1954—23,177; 1955—61,179; 1956—163,921. Cases of parking offences tried in previous years are included in the totals shown. (b) Twelve months ended 30th June of year shown. (c) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately.

- 4. Convictions for Serious Crime at Magistrates' Courts.—(i) General. The figures given in the preceding tables refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which, if they can be said to come under the heading of crime at all, at least do so in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at Magistrates' Courts for what may be regarded as the more serious offences, i.e. offences against the person, offences against property, forgery and offences against the currency.
- (ii) Number and Rates. The following table shows the number of convictions for serious crime at Magistrates' Courts for the years 1952 to 1956:—

#### CONVICTIONS FOR SERIOUS(a) CRIME AT MAGISTRATES' COURTS.

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales	17,858	17,612	17,085	19,803	21,399
Victoria	7,602	6,905	7,471	7,318	8,497
Queensland $(b)(c)$	3,041	2,916	3,226	3,546	3,942
South Australia(b)	1,926	1.945	1,744	1.867	1.889
Western Australia '	3,446	3,632	4,241	4.368	5,289
Tasmania	1,126	1,185	898 -	1,127	1,176
Northern Territory(b)	144	149	195	177	115
Australian Capital Territory	173	53	231	134	173
Australia	35,316	34,397	35,091	38,340	42,480

<sup>(</sup>a) Offences against the person, offences against property, forgery and offences against the currency.

(b) Twelve months ended 30th June of year shown.

(c) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately.

The number of convictions for serious crime at Magistrates' Courts per 10,000 of population for the same series of years is shown in the following table:—

#### CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS.

(PER 10,000 OF POPULATION.)

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales	53.4	52.0	49.8	56.7	60.2
Victoria	. 32.4	28.8	30.5	29.0	32.6
Queensland(a)	24.5	22.9	24.8	26.8	29.1
South Australia(a)	25.9	25.4	22.2	23.1	22.6
Western Australia	57.4	58.5	66.3	66.3	78.1
Tasmania	37.7	38.7	28.9	35.6	36.5
Northern Territory(a)	95.2	97.8	122.4	107.0	65.8
Australian Capital Territory	65.1	18.5	76.0	41.3	49.9
Australia	41.0	39.1	39.1	41.8	45.1

<sup>(</sup>a) Twelve months ended 30th June of year shown.

<sup>(</sup>iii) Rate of Convictions, 1881 to 1951. The rate of convictions at ten-year intervals over a period of 70 years is shown below.

### RATE OF CONVICTIONS FOR SERIOUS CRIME AT MAGISTRATES' COURTS: AUSTRALIA.

Year .. .. .. 1881. 1891. 1901. 1911. 1921. 1931. 1941. 1951. Convictions per 10,000 persons .. 69.3 44.8 29.1 24.6 29.2 37.1 33.6 37.1

5. Committals to Higher Courts.—(i) Number of Committals. The following table shows the number of offences, classified according to the nature of the offence, for which persons appearing in the lower courts were committed to higher courts for each State and Territory for the years 1955 and 1956:—

#### COMMITTALS TO HIGHER COURTS.

Class of Offence.	N.S.W.	Vic.	Q'land. (a)(b)	S. Aust.	W.Aust.	Tas.	N.T.(a)	A.C.T.	Aus- tralia
			195	5.					
Against the Person Against Property Forgery and Offences	1,222 3,465	480 1,399	221 254	203 177	110	74 236	21	6 17	2,337 5,897
against the Currency Against Good Order Other	76 29	206 5 108	 2 5	22 5 19	2 2 5	10 5 23	1	<sub>2</sub>	249 97 190
Total	4,792	2,198	482	426	454	348	45	25	8,770
			195	6.					
Against the Person Against Property Forgery and Offences	1,500 4,424	441 1,781	216 348	165 211	75 286	49 224	46 25	4 30	2,496 7,329
against the Currency Against Good Order Other	85 47	180 13 214	2 6	22 11 23	8 6 11	25 15 8	10	 	246 132 315
Total '	6,056	2,629	572	432	386	321	87	35	10,518

<sup>(</sup>a) Year ended 30th June of year shown. (b) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings, whether for the same or for a different type of offence, the results of all hearings are recorded separately.

The following table shows the number of committals to higher courts for each of the years 1952 to 1956:—

#### COMMITTALS TO HIGHER COURTS.

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales	4,504	4,263	4,205	4,792	6,056
Victoria	1,671	2,071	2,082	2,198	2,629
Queensland(a)	434	605	609	482	572
South Australia(a)	480	554	422	426	432
Western Australia	373	384	381	454	386
Tasmania	224	337	- 357	348	-321
Northern Territory(a)	28	35	46	45	87
Australian Capital Territory	23	19	23	25	35
Australia	7,737	8,268	8,125	8,770	10,518

<sup>(</sup>a) Twelve months ended 30th June of year shown.

(ii) Rate of Committals, 1881 to 1951. The rate of committals to higher courts for serious crime at ten-year intervals since 1881 is shown below:—

#### RATE OF COMMITTALS TO HIGHER COURTS, AUSTRALIA.

6. Drunkenness.—(i) Cases and Convictions. The numbers of arrests for drunkenness and the convictions recorded during each of the years 1952 to 1956 are given in the following table:—

#### DRUNKENNESS: CASES AND CONVICTIONS.

State or Territory.	1952.	1953.	1954.	1955.	1956.
	CA	SES.			
New South Wales	79,217	72,765	72,591	81,199	77,867
Victoria	21,751	19,424	20,167	20,685	18,884
Queensland (a)	. 28,176	22,994	21,257	23,986	22,748
South Australia (a)	5,000	6,317	5,530	4,772	4,739
Western Australia	6,107	6,274	5,850	5,752	5,959
Tasmania	. 834	800	836	776	705
Northern Territory (a)	564	434	707	487	507
Australian Capital Territory.	. 545	381	240	231	218
Australia	143,096	129,389	127,178	137,888	131,627
	Conv	ictions.			
New South Wales	79,088	72,647	72,541	80,457	77,195
Victoria	21.526	19,226	19,955	20,437	18,611
Queensland (a)	20,144	22,932	21,199	23,947	22,687
South Australia (a)	5,890	6,307	5,509	4,765	4,732
Western Australia	6,042	6,210	5,809	5,720	5,912
Гаsmania	816	763	798	757	674
Northern Territory (a)	524	424	699	474	502
Australian Capital Territory	541	378	240	231	218
Australia	142,571	128,887	126,750	136,788	130,531

<sup>(</sup>a) Twelve months ended 30th June of year shown.

The term "drunkenness" includes drunkenness and disorderliness, and habitual drunkenness.

<sup>(</sup>ii) Convictions per 10,000 of Population. In the twenties, the convictions for drunkenness averaged approximately 100 per 10,000 of population, but the rate fell away considerably during 1930 and 1931, being only 57.1 in the latter year. The average then rose steadily, the annual average for the period 1936 to 1939 being 82.7 and that for the years 1940 to 1945, 90.8. In 1946, the convictions per 10,000 rose very steeply to 132.1 increasing further to 174.5 by 1951, since when they have declined again to 138.9 in 1956.

The rates of convictions for drunkenness since 1952 are shown in the following table:—

#### CONVICTIONS FOR DRUNKENNESS.

(PER 10,000 OF POPULATION.)

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales	236.6	214.5	211.6	230.4	217.1
Victoria Oueensland (a)	91.9	80.3 180.2	81.3 163.0	80.9 180.7	71.5 167.7
South Australia (a)	79.2	82.3	70.1	59.0	56.7
Western Australia	100.6	100.0	90.7	86.8	87.3
Tasmania	27.4	24.9	25.6	23.9	20.9
Northern Territory (a)	346.3	278.2	438.8	286.6	287.3
Australian Capital Territory	203.6	131.6	79.0	71.3	62.8
Australia	165.6	146.6	141.4	149.1	138.9

<sup>(</sup>a) Twelve months ended 30th June of year shown.

#### CONSUMPTION OF INTOXICANTS IN AUSTRALIA PER HEAD OF POPULATION.

	Year	r. 	1	Spirits.	Wine.	Beer.
				Proof Gals.	Gals.	Gals.
1952-53				0.20	1.36	21.80
1953-54				0.25	1.39	23.05
1954-55				0.29	1.11	24.26
1955-56				0.31	1.18	24.74
1956–57				0.28	1.25	22.09

- (iv) Remedial Treatment of Drunkenness. Legislation has been passed in each State providing for the committal of inebriates to special government institutions. The laws in the various States are as follows:—New South Wales, Inebriates Act 1912 amended in 1949; Victoria, Inebriates Act 1928; Queensland, Inebriate Institutions Act 1896; South Australia, Inebriates Act 1908–1934, Convicted Inebriates Act 1913–1934; Western Australia, Inebriates Act 1912–1919; Tasmania, Inebriates Act 1885, Inebriate Hospitals Acts 1892 and 1941. In New South Wales, the care and treatment of inebriates other than those convicted of an offence are under the control of the Inspector-General of Mental Hospitals. The Inebriates Home in Queensland is under the control of the Department of Health and Home Affairs. Its function is curative. In Western Australia, the treatment of inebriates is under the control of the Inspector-General of Mental Health Services. In Tasmania, a charitable institution has been established by the Gaols Department, but treatment is purely custodial. A certain amount of remedial treatment is undertaken by the Director of Mental Health.
- 7. First Offenders.—In all States, statutes dealing with first offenders have been in force for many years. Existing legislation is as follows:—New South Wales, Crimes Act 1900–1955, First Offenders (Women) Act 1919 amended in 1929; Victoria, Crimes Act 1957; Queensland, Criminal Code Acts 1899 to 1945; South Australia, Offenders Probation Act of 1913–1953; Western Australia, Criminal Code Act 1913–1956; Tasmania, Probation of Offenders Act 1934. In New South Wales, Queensland, South Australia and Western Australia the court may allow a first offender convicted of a minor offence to go free on recognizances being entered into for his good behaviour for a certain period. In Victoria, the court may suspend sentence and place the offender under the supervision of a probation officer for not more than five years. In Western Australia, the court may also dismiss the

<sup>(</sup>iii) Consumption of Intoxicants. The following table shows the consumption of spirits, wine and beer per head of population in Australia during the years 1952-53 to 1956-57:—

indictment or complaint without proceeding to conviction. In Tasmania, the court may discharge an offender on his recognizance, with or without sureties, to be of good behaviour and to appear for sentence when called upon at any time during the following three years. The offender may be placed under the supervision of a probation officer.

8. Children's Courts.—(i) New South Wales. Children's Courts, established in 1905, exercise jurisdiction under the Child Welfare Act 1939-55. Where practicable, they are not held in ordinary court rooms, and persons not directly interested are excluded from any hearing in order that children may be protected against the adverse influences which they would encounter in ordinary courts.

The magistrates exercise all the powers of a Court of Petty Sessions in respect of offences committed by or against children under 18 years of age. They also exercise jurisdiction in respect of neglected and uncontrollable children. Their functions are reformative, not punitive; they may commit children to institutions, to the care of persons other than the parents, or to the care of the Minister for Education.

- (ii) Victoria. The jurisdiction of Children's Courts is limited to children under the age of 17 years. A stipendiary special magistrate, with jurisdiction throughout the State has the assistance of two stipendiary probation officers who investigate problem cases which come before the court. A clinic has been established to deal with cases referred to it by the court.
- (iii) Queensland. The Children's Court in the metropolitan area is presided over by a magistrate, and the services of the Psychiatric clinic are available to him if he considers they are needed. Proceedings are held in camera. A non-commissioned police officer is present to offer any observations he considers necessary and to assist the magistrate. In country areas the court is presided over by the local stipendiary magistrate or, in his absence, by two justices. If found guilty a child may be either admonished, released on probation or committed to the care of the State Children's Department or an institution. A conviction will not necessarily be recorded against him. His parent or guardian may be ordered to pay damages to the wronged party, and in default is liable to the same consequences as a defendant in an ordinary Court of Petty Sessions.
- (iv) South Australia. A Juvenile Court to hear cases of offences by children under the age of 17 years is constituted by a special magistrate or two justices. It has power to determine all charges other than homicide. A child can be committed by a court only to a reformatory. For indictable offences, the penalty is committal to a reformatory or a fine of up to £50.
- (v) Western Australia. Children's Courts are established to deal with offenders under the age of 18 years and to hear cases of certain offences against children. Special magistrates are appointed for Children's Courts, and the Governor may appoint other persons to be members of a particular Children's Court. One member may sit and adjudicate with the special magistrate, but in the magistrate's absence at least two members must be present.

A Children's Court is deemed to be a court of summary jurisdiction and may exercise exclusive jurisdiction in respect of all offences except wilful murder, murder, manslaughter or treason alleged to have been committed by children.

Adults charged with certain specified sexual offences against children may be dealt with summarily, but have the right to elect to be tried by a jury.

- (vi) Tasmania. Children's Courts are established to deal with offenders under the age of 17 years. Special magistrates are appointed by the Governor for Children's Courts. One or two special magistrates, or one or two justices constitute a court.
- A Children's Court is deemed to be a court of summary jurisdiction, and may exercise exclusive jurisdiction in respect of all offences alleged to have been committed by children.
- (vii) Australian Capital Territory. The Court of Petty Sessions constitutes the Children's Court when it is hearing proceedings involving persons under the age of 18 years. Its proceedings are similar to those of an ordinary Court of Petty Sessions except that persons not directly interested are excluded from the Court. The Court has power to hear and

determine summarily a charge for an indictable offence. It may release an offender on probation, commit him to the care of a specified person, make him a government ward or commit him to an institution for up to three years.

#### B. HIGHER (JUDGES') COURTS.

1. Persons Convicted at Higher Courts.—The following tables show for each State and Territory and for Australia as a whole the number of persons convicted at higher courts classified according to the nature of the offence, during 1955 and 1956:—

PERSONS CONVICTED AT HIGHER COURTS, 1955.

Offence.	N.S.W. (a)	Vic,	Q'land. (a)(b)	S. Aust.	W.Aust.	Tas. (c)	N.T. (a)	A.C.T.	Aus- tralia.
I. OFFENCES AGAINST THE									
Person.  Concealment of Birth	1							İ	1
Murder	6	2	iı	1 ::	''4	• • •	8	::	31
Attempted Murder	4		15	::	2	ż	l "	::	13
Manslaughter	16	11	4	2	5	1	;;		39
Causing Death by Danger-									
ous Driving		•••	••	2	1	• •		•••	. 3
Rape	5	2	5	3	1	• •	(d) 1	• • •	17
Other Offences against Fe-	110	110	40	87	23	21	_		407
males Abduction	118	118	49	87	23	21	9	2	427 5
7.7 A	127	82	22	`i7	'i4	7	3		273
Abortion and Attempts to	121	02	22	1 1	1 1	•	,	•	213
Procure	4	2	l	] 3	1 1	1			10
Bigamy	58	13	4	8	3	2			88
Attempted Suicide		2			1	4			6
Aggravated Assault	114	42	45	4	8	5	3		221
Common Assault	32	12	1	3	1			1	50
Other Offences against the		_					•		
Person	1	3	3	14	2	<u></u>	<u></u>		23
Total	490	290	149	143	64	43	24	4	1,207
II. OFFENCES AGAINST PROPERTY.			į.						
Burglary and House-break-	625	368	133	83	96	53	6	9	1 272
ing	023	300	133	0.5	96	33		,	1,373
the Person	43	55	16	6	7	29		2	158
Embezzlement	44	11	1 7	14	1 7 1		l ::	1 2	85
Other Larceny	164	143	33	25	41		6		412
Unlawfully using horses,					i i				
cattle or vehicles	54	. 1	5		18	• • .		• • •	78
Receiving	39	46	7	.8	4	4		• • •	108
Fraud and False Pretences	105	22	13	15	17	6	1	•••	179
Other Offences against Pro-	21	24	13	8		2	3	3	74
perty	1,095	$-\frac{24}{670}$	227	159	190	94	16	16	74
Total	1,093	0/0			190				2,467
III. FORGERY AND OF-					!				
FENCES AGAINST THE				İ	i 1		!		
CURRENCY	15	40		25	2	9	10	'	101
			<del></del>					<del></del> -	
IV. OFFENCES AGAINST							i		
GOOD ORDER	7	I	2		2	3	2		17
V. OTHER	24	42	4	13	2	5	3		93
Total All Offences	1,631	1.043	382	340	260	154	55	20	3,885

<sup>(</sup>a) Year ended 30th June. (b) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately. (c) Convictions. (d) Attempted rape.

#### PERSONS CONVICTED AT HIGHER COURTS, 1956.

Offence.	N.S.W. (a)	Vic.	Q'land. (a)(b)	S. Aust.	W.Aust.	Tas. (c)	N.T. (a)	A.C.T.	Aus- tralia.
I. Offences against the					1				
PERSON. Infanticide	,			i	i			l	1
Murder	12	4	3		2			::	22
Attempted Murder	12	2	3 2 2	1	2	1		::	13
Manslaughter	12	4	2	1	3	;	3		25
Causing Death by Danger-				ļ	4				_
ous Driving Culpable Driving	13	• • •		• • •	4	••	• •		13
Rape	14	3	14	3	l ''7	2		::	43
Other Offences against Fe-	i			i .				1	
males	169	91	38	51		24	5	1	379
Abduction	120		1 .1	1 1	1	5	• •	• • •	3
Unnatural Offences Abortion and Attempts to	120	65	19	15	11	2	••	• •	235
Procure	2	1		2	4				9
Bigamy	35	11	''9	5	4	1		2	67
Attempted Suicide		2				4			6
Aggravated Assault	88	33	28	6	9	3	20		187
Common Assault	37	26	3	5	1	4	5	• • •	81
Other Offences against the	14	5	2	19	4		12		56
Person						٠.			36
Total	525	247	121	110	51	44	45	3	1,146
II. OFFENCES AGAINST									
PROPERTY.								ļ	
Burglary, Breaking and En-	764	502	208	134	100	86	5	6	1,805
Robbery and Stealing from	/04	302	200	134	100	00	,		1,603
the Person	71	52	19	3	ا و	7	1		162
Horse, Cattle and Sheep	'-	!				· 1			
Stealing		12	3	3		٠. ا	3		21
Embezzlement and Stealing			١			1		١.	
by Servants	47	11	11	32	16 28	• • •	4	1	95 544
Other Larceny Unlawfully using Horses,	281	173	26	32	20	٠٠	7	• • • • • • • • • • • • • • • • • • • •	344
Cattle or Vehicles	5	43	5		4				57
Receiving	68	50	11	. 8	4	6	1		148
Fraud and Faise Pretences	104	28	4	21	15	10	1		183
Arson	3	j	3	4	1 1	4	•••	• •	12
Malicious Damage Other Offences against Pro-	15	6	••	*		•••	1	• •	26
perty	10	23	2	4	1				39
p, ,.									
Total	1,368	901	292	218	177	113	16	7	3,092
III. FORGERY AND OF- FENCES AGAINST THE CURRENCY.									
Forgery and Uttering Forged									
Instruments	20	34	4	12	2	9	11	:	92
Offences in Relation to the						i			_
Currency	1	<del></del>				2			3
Total	21	34	4	12	2			••	95
IV. Offences against Good Order	7	2	3		2	15			29
٠									
V. OTHER	12	65	11	22	9	1	[		120
Total All Offences	1,933	1,249	431	362	241	184	72	10	4,482

<sup>(</sup>a) Year ended 30th June. (b) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately. (c) Convictions.

2. Persons Convicted at Higher Courts. The numbers of persons convicted and rates of conviction at higher courts for the years 1952 to 1956 are given in the following table:—

### PERSONS CONVICTED AT HIGHER COURTS.

State or Territory.	1952.	1953.	1954.	1955.	1956.
New South Wales(a)	1,388	1,629	1,449	1,631	1,933
Victoria	883	918	912	1,043	1,249
Queensland(a)(b)	336	419	502	382	431
South Australia	328	330	312	340	362
Western Australia	213	241	216	260	241
Tasmania(c)	171	203	244	154	184
Northern Territory(a)	44	26	51	55	72
Australian Capital Territory	16	10	26	20	10
Australia	3,379	3,776	3,712	3,885	4,482
	PER 10,000 O	F POPULATI	ON.		
New South Wales(a)	4.2	4.8	4.3	4.7	5.5
Victoria	3.8	3.8	3.7	4.1	4.8
Queensland $(a)(b)$	2.7	3.3	3.9	2.9	3.2
South Australia	4.3	4.3	3.9	4.1	4.3
Western Australia	3.5	3.9	3.4	3.9	3.6
Tasmania(c)	5.7	6.6	7.8	4.9	5.7
Northern Territory(a)	29.1	17.1	32.0	33.3	41.2
Australian Capital Territory	6.0	3.5	8.6	6.2	2.9
Australia	3.9	4.3	4.1	4.2	4.8

- (a) Twelve months ended 30th June of year shown. (b) A person convicted on several counts at the one hearing appears only once, but if a person be convicted at different hearings during the year, whether for the same or for a different type of offence, the results of all hearings are recorded separately. (c) Convictions.
- 3. Habitual Offenders.—In most States, judges have power to declare as habitual criminals persons who have a certain number of previous convictions. A summary of the methods adopted in each State was given on pp. 497–8 of Official Year Book No. 40.
- 4. Capital Punishment.—There were nine executions in Australia during the period 1947 to 1956. Three took place in Victoria (in 1951), three in South Australia (one in 1950, one in 1953 and one in 1956), one in Western Australia (in 1952), and two in Northern Territory (in 1952). In each case the offence was murder.

Under the Criminal Code Amendment Act 1922, capital punishment was abolished in Queensland, and in New South Wales the Crimes Act was recently amended abolishing capital punishment for all offences except treason and piracy.

In the early days of the history of Australia, the penalty of death was attached to a large number of offences, many of which would now be dealt with in a Magistrate's Court. With the growth of settlement, and the general improvement in social and moral conditions, the list was considerably curtailed, and the existing tendency is to restrict death sentences to persons convicted of murder. Although rape is a capital offence in some States, the penalty of death has not been imposed in recent years on persons convicted of it.

The average annual number of executions in Australia from 1861 to 1880 was 9; from 1881 to 1900, 6; from 1901 to 1910, 4; from 1911 to 1920, 2; from 1921 to 1930, 2; from 1931 to 1940, 1; and from 1941 to 1950, 0.5.

#### § 3. Civil Courts.

#### A. LOWER COURTS.

The total numbers of plaints entered and the amounts awarded to plaintiffs during 1955 and 1956 are shown in the following table. The figures are compiled from returns from the Small Debts Courts in New South Wales, Courts of Petty Sessions in Victoria, Magistrates' Courts in Queensland, Local Courts in South Australia and Western Australia, Courts of Requests in Tasmania, Courts of Summary Jurisdiction in the Northern Territory and the Court of Petty Sessions in the Australian Capital Territory.

#### CIVIL CASES AT LOWER COURTS.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Aus- tralia.
				1955.					
Cases No.	72,167	80,155	7,220	37,575	31,079	22,721	843	771	252,531
Amount Awarded to Plaintiffs £	401,999	955,503	286,560	543,274	448,213	159,652	(b)	10,637	2,805,838 (c)
				1956.					
Cases No.	53,881	96,136	8,540	48,519	40,313	28,341	1,057	1,098	277,885
Amount Awarded to Plaintiffs £	315,440	1,538,170	439,839	778,013	415,698	216,401	(b)	22,392	3,725,593 (c)

<sup>(</sup>a) Twelve months ended 30th June of year shown. Territory.

#### B. HIGHER COURTS.

1. General.—The following table shows the transactions on the civil side (excluding divorce and bankruptcy) in the higher courts during 1955 and 1956. The particulars given below include the number and amount of judgments entered by default or confession, or agreement, and differ from those in issues of the Official Year Book prior to No. 29, which related in most States only to cases tried during the year.

#### CIVIL CASES AT HIGHER COURTS.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aus- tralia.
				1955.					
Cases No.	3,581	2,897	909	64	131	122	(d)	97	(d)
Amount Awarded to Plaintiffs £	(d)	1,694,054	286,585	123,985	307,785	206,308	(d)	11,280	°(d)
		·		1956.	·	<u>·</u>		·· /	
Cases No.	3,011	2,741	775	94	10:	160	(d)	59	(d)
Amount Awarded to Plaintiffs £	(d)	1,467,850	374,129	166,364	280,531	312,924	(d)	78,739	(d)

<sup>(</sup>a) Excludes judgments signed in the Supreme Court. (b) Twelve months ended 30th June of year shown. (c) Judgments signed and entered. (d) Not available.

2. Divorce.—(i) General. The marriage relationship may be terminated by process of law in any one of three ways: by dissolution of the marriage, by annulment of the marriage, or by the grant of a judicial separation. The term "divorce" is used sometimes to designate all three processes, and sometimes to designate only the first. In this publication it is used in the wider sense.

Every decree for dissolution of marriage is first a decree nisi. During a period which varies from State to State, any person may show cause why the decree should not be made absolute, either because of collusion or because material facts were not before the court. In some States, the Attorney-General also may intervene. If no matter in opposition is pending, the decree nisi may be made absolute at the expiration of the time set. A decree absolute for dissolution of marriage dissolves the marriage tie at the time when it is made, the parties to that marriage cease to have the status of husband and wife, and are free to remarry after the expiration of the time set down for appeal against the court's decision.

Proceedings for nullity of marriage may be instituted in respect of a marriage which is void or voidable. A marriage which is void has no existence at all and so, strictly speaking, it is not necessary to obtain a decree of nullity of marriage, but as the issue may depend on difficult questions of fact, such as insanity, it is advisable to seek a court judgment, which is binding and decides the question of the validity of the marriage. Proceedings for annulling a voidable marriage must be taken before the marriage is terminated by dissolution or death. Once the final decree has been pronounced, a voidable marriage is void ab initio, but until then the parties to it have the status of married people and transactions

<sup>(</sup>b) Not available. (c) Excludes Northern

concluded on the basis of the existence of that status cannot be undone or re-opened. Since the parties to a marriage which is void or which has been voided do not have the status of married people, they are free to remarry.

A decree of judicial separation leaves unimpaired the status of marriage, but suspends the rights and duties of the parties to the marriage with respect to cohabitation, and is a defence against a suit for the restitution of conjugal rights. A husband is not responsible for the acts of his wife, save that he is liable for necessaries supplied to her if he has failed to pay alimony ordered by a court. Persons who have been judicially separated are not free to remarry.

(ii) Number of Petitions filed. The following table shows the number of petitions for dissolution of marriage, nullity of marriage and judicial separation filed in each State during 1956.:—

PETITIONS FILED FOR DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATION, 1956.

Petition for-		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of Marriage	3								ļ <del></del> -	
Husband Petitioner		1,679	822	387	303	359	128	16	25	3,719
Wife Petitioner		2,264	925	450	451	293	145	10	19	4,557
Total		3,943	1,747	837	754	652	273	26	44	8,276
Nullity of Marriage Husband Petitioner Wife Petitioner		17 20	8	2	3 12	4				28 52
Total		37	21	2	15	4	$\overline{I}$			80
Judicial Separation Husband Petitioner Wife Petitioner		1 28	5	4		5			2	6 41
Total		29	5	4	I	6			2	47
Total										
	No. %	1,697 42	830 47	387 46	306 40	364 55	128 47	16 62	25 56	3,753 45
Wife Petitioner	ν̂ο. %	2,312 58	943 <i>53</i>	456 <i>54</i>	464 60	298 45	146 53	10 38	21 44	4,650 55
Grand Total		4,009	1,773	843	770	662	274	26	46	8,403

(iii) Number of Divorces granted, 1956. The following table shows the number of dissolutions of marriage, nullities of marriage and judicial separations granted in each State during 1956:—

DISSOLUTIONS OF MARRIAGE, NULLITIES OF MARRIAGE AND JUDICIAL SEPARATIONS GRANTED, 1956.

Decree For—		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of Marriage		-								
Husband Petitioner		1,330	(a) 591	340	264	304	89	13	11	2,942
Wife Petitioner		1,795	(a) 664	363	303	240	107	12	9	3,493
Total		3,125	a 1,255	703	567	544	196	25	20	6,435
Nullity of Marriage Husband Petitioner Wife Petitioner		6	(a) 6 (a) 7	1 4	1 4	4			::	14 32
Total		18	(a) 13	5	- 5	4	1	<del></del>		46
Judicial Separation Husband Petitioner Wife Petitioner		4	2	::		. 4		• •	,	4 7
Total		4	2			4			<u> </u>	11
	No. %	1,336 42	597 47	341 48	265 47	308 56	89 46	13 52	11 52	2,960 46
	No. %	1,811 58	673 53	367 52	307 53	244 44	108 54	12 48	10 48	3,532 54
Grand Total		3,147	1,270	708	572	552	197	25	21	6,492

(a) Decrees nisi.

(iv) Number of Divorces granted, 1952 to 1956. The following table shows the number of dissolutions of marriage, nullities of marriage and judicial separations granted in each State and Territory for each year from 1952 to 1956:—

## DIVORCES GRANTED: AUSTRALIA. DISSOLUTION OF MARRIAGE.

State of	r Territory.			1952.	1953.	1954.	1955.	1956.
New South Wales				3,335	3,725	2,816	2,874	3,125
Victoria(a)				1,596	2,096	1,519	1,674	1,255
Oueensland				705	725	710	801	703
South Australia				581	628	594	624	567
Western Australia				585	535	530	479	544
Tasmania				217	210	235	233	196
Northern Territory				6	12	20	18	25
Australian Capital	Territory	••		17	31	33	21	20
Australia				7,042	7,962	6,457	6,724	6,435

#### NULLITY OF MARRIAGE.

State	or Territory.			1952.	1953.	1954.	1955.	1956.
New South Wales				27	21	28	17	18
Victoria(a)				17	31	20	16	13
Queensland				6	5	4	2	5
South Australia	• •		!	3	8	4	4	5
Western Australia					4	2	6	4
Tasmania						2	1	1
Northern Territory			}	}				
Australian Capital	Territory	• •	• •	,				••
Austrana	••			53	69	60	45	46

#### JUDICIAL SEPARATION.

State o	or Territory.			1952.	1953.	1954.	1955.	1956.
New South Wales				7	6	7	9	4
Victoria	••	• •	••	3	1		1	2
Queensland	• •	• •	• •					• •
South Australia	• •	• •		1	2	2		
Western Australia					]	1	3	4
Tasmania						1		
Northern Territory	• •							
Australian Capital	Territory	••		••	1	••	••	1
Australia	••	••		11	10	11	13	11

<sup>(</sup>a) Decrees nisi granted.

(v) Average Number of Divorces granted Annually. The ten-year averages of the numbers of divorces granted annually in Australia for the 80 years from 1871 to 1950 are as follows.

#### DIVORCES: AUSTRALIA.

Decade 1871-80. 1881-90. 1891-1900. 1901-10. 1911-20. 1921-30. 1931-40. 1941-50. Average 29 70 358 399 744 1,699 2,521 6,192

(vi) Grounds of Decree on which Divorces were granted. The grounds on which dissolutions of marriage, nullities of marriage and judicial separations were granted during 1956 in each State and Territory are shown in the following table:—

## GROUNDS OF DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATION, 1956.

Ground.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of Marriage-	712	210	202	200	240	4.0	10		1 751
Adultery	713	318	203	208	248	46	10	5	1,751
Bigamy	133	12	1	103		2		2	2 255
Cruelty		16		103		- 2		1 2	233 127
Cruelty and Drunkenness Desertion	111	851	478	227	i36	144	12	13	
	1,700	851	4/8	221	136	144	12	13	3,561
Desertion (non-compli-	1		1 1		1				
ance with order for	1		1					1	
restitution of conjugal	405		1 1					!	405
rights)		41	l ii l	• •	3	• •	• •		403 55
Desertion and Adultery	1	41	111	• •	3	• •	• • •		23
Drunkenness and Failure	1 25	2	1 1	••		•		i .	40
to Support	35	2.	!	10		2	• • •		49
Drunkenness and Neglect	9		1 !			1			1.0
of Domestic Duties	9	1		1		1 :	• •		12
Failure to pay mainte-	1 1			3	17				20
nance	i7	٠٠,		د			• • •	]	23
Imprisonment	1 1	5 6	او"	• •	1 2			1	10
Insanity		0	) 9	• •	3	1	• •		18
Non-consummation	1	• •	••			• • •	• •		18 3 1
Prenuptial Incontinence	1 1	• •	ا ٠٠٠ ا		1 1	• • •	• •		3
Presumption of Death	1	• •	2	1		• • •		!	3
Separation for over 5	1				133			!!	145
years		• •		12		••• ]	• •		
Sodomy	2	•••	· · ·	2	• • •		• •	!	4
Not Stated	••	1		• •	• • •		• •		1
Total	3,125	1,255	703	567	544	196	25	20	6,345
Nullity of Marriage—									
Bigamy	1 11	5	i i	2	4	1		i i	23
Impotence	7	8	5 1	1 '				l l	21
Invalid Marriage	1 1		1 1	2	ا ا				2
•					-				
Total	18	13	5	5	4	1	••		46
Judicial Separation—									
Adultery	2	1						1	4
Cruelty	ī	ī						l l	4 2 5
Desertion	1 1			• •	4				5
Total	4	2			4				

<sup>(</sup>a) For dissolutions and nullities of marriage the figures represent decrees nisi granted.

(vii) Ages of Husband and Wife at time of Dissolution of Marriage. The following table shows the number of husbands and wives in each age group who were parties to marriages dissolved in 1956. Age is taken at the time the decree absolute is made.

Forty-two per cent. of wives were in the 25-34 years age group and 40 per cent. of husbands in the 30-39 years age group. These proportions have varied little during recent years and are considerably higher than the proportions of married persons of those age groups in the whole population (27 per cent. and 26 per cent. respectively at the Census of 30th June, 1947; 28 per cent. and 25 per cent. respectively at the Census of 30th June, 1954).

AGES OF PARTIES AT TIME OF DISSOLUTION OF MARRIAGE, AUSTRALIA, 1956.

	Age of Wife (Years).											Total
Age of Husband (Years).	Under 21.	21 to 24.	25 to 29.	30 to 34.	35 to 39.	40 to 44.	45 to 49.	50 to 54.	55 to 59.	60 and over.	Not stated.	Hus- bands.
Under 21 21 to 24 25 to 29 30 to 34 40 to 44 45 to 49 55 to 59 60 and over Not stated	2 19 20 3 	1 76 268 74 14 3 1	21 572 602 129 37 7 6 2	2 88 615 461 142 46 18 3 3	1 9 118 430 379 122 30 16 7	2 18 75 363 289 93 33 7 2	 4 16 70 224 161 63 29	1 2 11 42 102 89 37	  3 2 6 30 73 58	     1 6 15 94	1 61	3 119 961 1,434 1,130 1,007 738 447 294 235 67
Total Wives	44	438	1,378	1,379	1,112	882	567	284	172	116	63	6,435

(viii) Duration and Issue of Marriages Dissolved. The following table shows the number of dissolutions of marriage granted in 1956, classified according to the legal duration of the marriage (i.e., the period from the date of marriage to the date when the decree nisi was made absolute) and issue. The majority of marriages dissolved are of less than fifteen years' duration; about 40 per cent. of them are of less than ten years' duration. About one-third of all marriages dissolved in 1956 were childless. These proportions have varied very little in recent years. The proportion of all childless marriages in the population was 16.7 per cent. at the Census of 30th June, 1947, and 18.5 per cent. at the Census of 30th June, 1954.

DURATION AND ISSUE OF MARRIAGES DISSOLVED, AUSTRALIA, 1956.

Duration of Marriage (Years).	0	1	Nui 2	mber o	f Mar	riages 5	dissolv	red wh	sose Is	sue w	7as—	11	12	N.S.	Total Dis- solutions of Marriage.	Total Child- ren.
1 year and under 2 2 years and under 3 3 3 3 3 3 3 3 4 5 4 5 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	15 499 799 1877 2333 2366 2200 1999 1555 786 899 811 75 52 242 211 25 767 322 17 868 1898 1818 1818 1818 1818 1818 1818	12 33 87 112 153 170 131 131 131 97 70 69 53 36 69 53 39 38 32 100	16 327 79 918 98 765 63 88 765 64 51 54 113 77 32 14			3 3 4 4 2 2 2 1 1 6 5 5 7 7 7 1 1 1 6 1 1 1 6 1 1 1 1 1 1 1 1 1	2  2  1 7 13 3 7 5 5		1 4 6 2:	2	2; 1:	1		2 1	17 62 117 290 379 467 491 444 421 397 300 271 250 227 176 172 164 151 413 339 179 89 43 179	2 7 16 7 43 119 182 321 329 3441 464 411 357 317 437 329 384 3298 286 343 292 750 474 471 464 411 411
Total Children	<u>.</u>	1,773	2,762	1,668.	992	485	258	147	128	18:	40	11	24	;		8,306

(ix) Number of Divorced Persons at each Census 1901 to 1954. The following table shows the number and proportions of divorced persons in Australia at each census from 1901 to 1954. A classification of these persons by age appeared in earlier issues of the Official Year Book (see No. 39, p. 269). Prior to 1911, no record was made of divorced persons in South Australia, so comparisons cannot be made to extend beyond that date.

#### DIVORCED PERSONS AT CENSUS DATES: AGE DISTRIBUTION, AUSTRALIA.

Number.							Proportion per 10,000 of population, 15 years of age and over.						
		1901. (a)	1911.	1921.	1933.	1947.	1954.	1901. (a)	1911.	1921.	1933.	1947.	1954.
Males Females	::	1,234 1,149		4,233 4,304	10,298 10,888	25,052 27,516	32,389 36,650	10 10	15 15	23 24	42 46	89 96	100 115

(a) Excludes South Australia.

3. Bankruptcies.—Particulars relating to bankruptcy in each State to the end of 1927 have been incorporated under this heading in issues of the Official Year Book prior to No. 23. On 1st August, 1928, the Commonwealth Bankruptcy Act, which is now the Bankruptcy Act 1924–1955, came into operation.

Under the Bankruptcy Act 1924–1955, the Commonwealth is divided into bankruptcy districts which coincide generally with State boundaries. A Federal Court of Bankruptcy has been established with jurisdiction throughout Australia but it exercises this jurisdiction mainly in the bankruptcy districts of New South Wales, which includes the Australian Capital Territory, and Victoria. Certain State courts have been invested with federal jurisdiction in bankruptcy and, outside New South Wales and Victoria, usually exercise that jurisdiction in the appropriate bankruptcy district.

Any person unable to pay his debts may voluntarily apply for the sequestration of his estate, or his creditors may apply for a compulsory sequestration, if he has committed an act of bankruptcy. The act of bankruptcy usually relied on is non-compliance by a debtor with a bankruptcy notice which requires the debtor to whom it is addressed to pay within a specified time to a creditor who has obtained a final judgment or order to pay the amount of the debt or satisfy the Court that he has a counter-claim, set-off, or cross demand which equals or exceeds the judgment debt. If a bankruptcy notice is not complied with, a creditor may thereupon present a petition against a debtor provided that—

- (1) the debt or debts amount to £50:
- (2) the act of bankruptcy relied on has occurred within the six months preceding the presentation of the petition; and
- (3) the statutory requirements relating to domicile or residence are applicable to the debtor.

Upon the issue of a sequestration order, the property of the bankrupt vests in the official receiver named in the order, and his property is divisible among his creditors in accordance with the provisions of the Act. No creditor to whom the bankrupt is indebted in respect of any debt provable in bankruptcy has any remedy against the property or person of the bankrupt except by leave of the court.

Instead of having a sequestration order made against his estate, under Part XI of the Bankruptcy Act 1924-1955, a debtor may compound with his creditors or assign his estate for their benefit. Under Part XII of the Act a debtor may enter into a scheme of arrangement. The object of Parts XI and XII of the Act is to allow a debtor and his creditors to enter into an agreement concerning the debts due to the creditors without having a sequestration order made against the debtor.

The Court has power to decide questions of law affecting a bankrupt estate. Questions of fact may be tried before a jury.

The Bankruptcy Act 1924-1955 provides for an Inspector-General in Bankruptcy, who performs such duties as are prescribed. The Act also provides for a Registrar and an Official Receiver to be appointed for each bankruptcy district.

A Registrar in Bankruptcy is controlled by the Court and has such duties as the Attorney-General of the Commonwealth directs, or as are prescribed, and exercises such functions of an administrative nature as are authorized by the Court. He may examine a bankrupt

or a person indebted to a bankrupt or having in his possession any of the estate or effects of a bankrupt. Stipendiary magistrates are appointed Deputy Registrars in country districts.

All sequestrated estates are vested in an Official Receiver, who is a permanent officer of the Commonwealth Public Service. His duties are to investigate the conduct, property and transactions of the debtor, and the cause of bankruptcy of a debtor and to realise and administer the estate of the debtor. He acts under the general authority of the Attorney-General and is controlled by the Court.

Persons registered by the Court as qualified to act as trustees may be appointed by resolution of the creditors to be trustees of estates. In cases where a registered trustee under a deed of arrangement, composition, or assignment (Parts XI and XII of the Bankruptcy Act) is removed from or vacates his office, the official receiver may be appointed by the Court to complete the administration of the estate, or the Court may direct the official receiver to convene a meeting of the creditors in the estate to enable them to appoint a registered trustee to complete the administration of the estate.

The following tables show the number of bankruptcies of the various types in each State, together with the assets and liabilities of the debtors, during the eleven months ended 30th June, 1956, and the twelve months ended 30th June, 1957:—

#### BANKRUPTCIES, 1955-56.(a)

	State.		Sequestration Orders and Orders for Administra- tion of Deceased Debtors' Estates.	Compositions without Bankruptcy, Part XI.	Deeds under Part XI.	Deeds of Arrangement, Part XII.	Total.
N.S.W. (b)	Number Liabilities Assets	·· €	347 1,071,366 575,565	5 96,507 28,035		48 476,605 488,723	400 1,644,478 1,092,323
Vic.	Number Liabilities Assets	£	153 403,142 199,436	4 40,210 37,953	4 28,701 5,029	45 240,170 279,741	206 712,223 522,159
Q'land	Number Liabilities Assets	£ £	128 258,668 74,513	2,789 634		24 100,179 76,807	153 361,636 151,954
S.A.	Number Liabilities Assets	£	75 193,596 103,587	20 191,985 185,489	4 56,045 53,714		99 441,626 342,790
W.A.	Number Liabilities Assets	£	61 121,468 36,120	50 210,175 207,131	6 25,795 22,257	3 15,681 10,738	120 373,119 276,246
Tas.	Number Liabilities Assets	£	33 114,159 92,642	 	•••		33 114,159 92,642
N.T.	Number Liabilities Assets	£	5,587 629	 	••		5,587 629
Aust.	Number Liabilities Assets	£	798 2,167,986 1,082,492	80 541,666 459,242	14 110,541 81,000	120 832,635 856,009	1,012 3,652,828 2,478,743

<sup>(</sup>a) Eleven months.

<sup>(</sup>b) Includes the Australian Capital Territory.

#### BANKRUPTCIES, 1956-57.

	State.		Sequestration Orders and Orders for Administration of Deccased Debtors' Estates.	Compositions without Bankruptey, Part XI.	Deeds under Part XI.	Deeds of Arrangement, Part XII.	Total.
	Number		484		2	64	555
N.S.W.	↓ Liabilities	£	1,570,845	33,062	5,247	653,457	2,262,611
(a)	Assets	£	788,567	11,863	2,539	638,762	1,441,731
	Number		258	4	1	72	335
Vic	↓ Liabilities	£	562,380	18,171	9,083	402,612	992,246
	Assets	£	288,378	16,269	4,951	351,670	661,268
	Number		128			24	152
Q'land	↓ Liabilities	£	321,348			128,171	449,519
-	Assets	£	274,073			120,825	394,898
	Number		165	30	19	l l	214
S. Aust.	↓ Liabilities	£	393,499	118,819	85,772	l l	598,090
	Assets	£	182,147	99,420	71,349		352,916
	Number		107	87	10		204
W. Aust.	↓ Liabilities	£	205,336	331,434	26,038		562,808
	Assets	£	143,477	417,723	47,224		608,424
	Number		55			11	66
Tas	↓ Liabilities	£	161,561			58,594	220,155
	Assets	£	96,592			85,347	181,939
	Number		3			1 1	3
N.T	↓ Liabilities	£	28,780				28,780
	Assets	£	22,596				22,596
	Number		1,200	126	32	171	1,529
Australia	↓ Liabilities	£	3,243,749	501,486	126,140	1,242,834	5,114,209
	Assets	£	1,795,830	545,275	126,063	1,196,604	3,663,772

<sup>(</sup>a) Includes the Australian Capital Territory.

For purposes of comparison the following two tables show Australian figures in respect of each of the various types of bankruptcy, and State figures in respect of all types of bankruptcy for the past five years.

Until 1954-55, the bankruptcy year ended on the 31st July. Thereafter it has ended on the 30th June. Figures for 1955-56 therefore cover only eleven months.

#### BANKRUPTCIES, AUSTRALIA.

	Year.		Sequestration Orders and Orders for Administration of Deceased Debtors' Estates.	Compositions without Bankruptcy, Part XI.	Deeds under Part XI.	Deeds of Arrangement, Part XII.	Total.
	Number	•	636	41	14	115	806
1952-53	↓ Liabilities	£	1,521,830	246,502	97,518	896,429	2,762,279
	Assets	£	927,764	260,805	62,753	721,260	1,972,582
	Number		687	40	5	113	845
1953-54	↓ Liabilities	£	1,763,134	285,299	34,448	829,585	2,912,466
	Assets	£	1,079,830	309,992	24,453	734,376	2,148,651
	Number		769	66	19	123	977
1954-55	↓ Liabilities	£	1,724,252	284,027	145,003	1,013,150	3,166,432
	Assets	£	946,761	268,729	113,995	728,232	2,057,717
	Number		798	80	14	120	1,012
1955-56	↓ Liabilities	£	2,167,986	541,666	110,541	832,635	3,652,828
(a)	Assets	£	1,082,492	459,242	81,000	856,009	2,478,743
	Number		1,200	126	32	171	1,529
1956-57	↓ Liabilities	£	3,243,749	501,486	126,140	1,242,834	5,114,209
	Assets	£	1,795,830	545,275	126,063	1,196,604	3,663,772

(a) Eleven months.

#### BANKRUPTCIES, STATES.

Year.	N.S.W.	Vic.	Q'land,	S. Aust.	W. Aust.	Tas.	N.T.	Aus- tralia.
Number	298	184			64	44		806
952–53 { Liabilitie:		597,244				44,078		2,762,279
Assets	£ 685,397	383,094	382,730			25,488		1,972,582
Number	330	175	145			39		84.
953-54 { Liabilities		597,090	437,119	229,984		96,869		2,912,46
\ Assets \ Number	£ 968,456	285,854 200	341,806 155			52,820 49	•••	2,148,65 97
954-55 { Liabilitie		764,083	461,874		315,157	121,198	2 625	3.166.43
Assets	£ 789,226	365,151	338,287	241,597		78,851		2,057,71
Number	400	206		211,599		33	,,-1.	1.012
955-56 Liabilities		712,223	361,636			114,159	5.587	3,652,82
(b) Assets	£ 1,092,323	522,159	151,954			92,642		2,478,74
Number	555	335	152	214	204	66	3	1,52
956-57 ≺ Liabilitie:		992,246	449,519			220,155		5,114,20
( Assets	£ 1,441,731	661,268	394,898	352,916	608,424	181,939	22,596	3,663,77

(a) Includes the Australian Capital Territory.

(b) Eleven months.

4. High Court of Australia.—Under the provisions of Section 71 of the Commonwealth Constitution, the judicial power of the Commonwealth is vested in a Supreme Court called the High Court of Australia, and in such other courts as the Parliament creates or invests with Federal jurisdiction. The High Court of Australia possesses both original and appellate jurisdiction. The powers of the Court are defined in the Commonwealth Constitution, and in the Judiciary Act 1903–1955. The Court consists of a Chief Justice and six other judges. Sittings of the Court are held in the capitals of the various States as occasion requires. The High Court functions as a Court of Appeal for Australia. The following statement shows the transactions of the High Court for 1956 and 1957:—

TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA.

Original Jurisdiction.	1956.	1957.	Appellate Jurisdiction.	1956.	1957.
	İ			ļ	
Number of writs issued	182	197	Number of appeals set	ļ	
Number of cases en-			down for hearing	98	111
tered for trial	22	14	NT -1 11	27	1
Judgments for plaintiffs	61	43	Number allowed	37	46
Judgments for defendants	2	3	Number dismissed	35	50
Otherwise disposed of	10	7	1.4		-
Amount of judgments	£148,336	£170,198	Otherwise disposed of	8	11
	1	:		!	1

During 1956 and 1957, respectively, the High Court dealt also with the following: Appeals from Assessments under the Taxation Assessment Act, 31, 51; Special cases stated for the opinion of the Full Court, 10, 5; Applications for Prohibitions, etc., 42, 44. The fees collected amounted to £3,457 in 1956 and £3,544 in 1957.

5. Commonwealth Industrial Court.—Information regarding the Commonwealth Industrial Court, which was established under the Conciliation and Arbitration Act 1904–1956, will be found in Chapter VI.—Labour, Wages and Prices.

#### § 4. Police, Prisons and Prisoners.

1. Police.—The primary duties of the police are to prevent crime, to detect and detain offenders, to protect life and property, to enforce the law, and to maintain peace and good order. In addition they perform many duties in the service of the State, e.g. they act as clerks of petty sessions in small centres, as crown land bailiffs, foresters, mining wardens and inspectors under the fisheries and various other acts. In metropolitan and large country areas they also regulate the street traffic. With the exception of a small body of Commonwealth police in the Northern Territory and the Australian Capital Territory, the police forces of Australia are under the control of the State governments, but their members perform certain functions for the Commonwealth government, such as acting as aliens registration officers and policing various acts and regulations.

Women police perform special duties at places where young women and girls are subject to moral danger, control traffic at school crossings, and lecture school children on road safety. They also assist male police as required in the performance of normal police duties.

The strength of the police force in each State and Territory for the years 1952 to 1956 is shown in the following table. The figures include traffic police, probationers, cadets, special constables and women police, but exclude parking police, blacktrackers (natives employed in outlying districts in tracking lost persons and persons wanted by the police), female searchers, wardresses and interpreters. Figures refer to the 30th June, except where otherwise indicated.

#### STRENGTH OF POLICE FORCES.

As at 30th Jui	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aus- tralia.
1952 1953 1954 1955	 4,688 4,661 4,610 4,817 4,927	2,992 3,047 3,021 3,109 3,392	2,455 2,449 2,403 2,355 2,422	1.055 1,091 1,107 1,086 1,131	877 929 936 964 971	420 418 438 471 481	48 50 56 62 67	58 57 62 60 60	12,593 12,702 12,633 12,924 13,451

<sup>(</sup>a) Figures refer to the 31st December of the year shown.

The following table shows the population of each State and Territory to each police officer for the years 1952 to 1956. A decrease in the figures in this table represents an increase in the number of police relative to the population.

#### POPULATION TO EACH POLICE OFFICER.

As at 30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aus- tralia.
1952 1953 1954 1955	718 731 751 732 728	791 793 821 813 776	513 527 549 571 566	716 711 720 744 738	684 668 684 683 698	705 727 705 668 665	322 317 294 284 273	479 521 502 558 602	694 701 720 721 706

(a) Figures refer to the 31st December of the year shown.

The following table shows the number of women police in each State and Territory for the years 1952 to 1956. As has been stated above, the figures are included in the table showing the strength of the police forces.

#### NUMBER OF POLICEWOMEN.

As a 30th Ju	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aus- tralia.
1952	 36 36 37 37 37 36	29 28 30 34 43	8 9 9 8 7	16 18 20 20 20 23	9 8 9 9	6 5 5 5 8	  	2 2 3 2 2	106 106 113 115 128

(a) Figures refer to the 31st December of the year shown.

The following table shows the number of blacktrackers in each State and Territory for the years 1952 to 1956. As has been stated above, these figures are not included in the table showing the stength of the police forces. There are no blacktrackers in Tasmania, where the aboriginal race is extinct, nor in the Australian Capital Territory.

#### NUMBER OF BLACKTRACKERS.

As at 30th Ju		N.S.W. (4)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aus- tralia.
1952 1953 1954 1955	::	14 11 7 8 8	1 1 1 1	28 24 24 23 25	  (b)	18 23 18 18 18	••	29 30 28 29 31		90 89 78 79 72

<sup>(</sup>a) Figures refer to the 31st December of year shown. (b) One blacktracker, who is paid a small weekly retainer and is supplied with rations, is continuously on call.

2. Prisons and Prison Accommodation.—The table below shows the number of prisons in each State and the accommodation therein in 1955 and 1956. All figures refer to the 30th June except where otherwise indicated.

PRISONS AND PRISON ACCOMMODATION.

Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aus- tralia.
				1955.					
Prisons		16	12	7	16	19	2	2	74
Separate cells Wards	::	2,305	1,331 469	603 295	697 102	669 207	109 32	31 28	5,745 1,133
Total	••	2,305	1,800	898	799	876	141	59	6,878
				1956.					
Prisons	•••	16	12	7	16	19	(b) 1	2	73
Accommodation in— Separate cells Wards	::	2,304	1,344 450	603 301	697 102	669 207	(c) 149 32	31 28	5,797 1,120
Total		2,304	1,794	904	799	876	181	59	6,917

<sup>(</sup>a) 31st December. (b) Includes Hayes Farm previously shown as a separate gaol. (c) Includes 40 single-unit huts not previously included.

There is no gaol in the Australian Capital Territory, but there is a lock-up consisting of five cells attached to the police station at Canberra, and a similar lock-up at Jervis Bay, where offenders are held while awaiting trial or serving short sentences not exceeding one week imposed by a Magistrate's Court.

3. Convicted Prisoners.—The number of convicted prisoners in each of the years 1952 to 1956 and the proportion per 10,000 of the population are shown in the following table. The figures exclude aborigines and debtors.

#### CONVICTED PRISONERS.

	Year.	N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aus- tralia.
				Nt	JMBER.				
1953 1954 1955		2,070 2,135 2,155 2,238 2,860	1,248 1,173 1,186 1,295 1,564	472 538 606 580 612	(a) 437 (a) 413 (a) 377 413 457	362 374 360 386 482	142 154 152 163 149	34 44 47 50 21	4,765 4,831 4,883 5,125 6,145
		-	Number	PER 10,	000 of P	OPULATION	ı <b>.</b>		
1953 1954 1955		6.2 6.3 6.3 6.4 8.1	5.3 4.9 4.8 5.1 6.0	3.7 4.2 4.6 4.3 4.5	(a) 5.7 (a) 5.3 (a) 4.7 5.0 5.4	6.0 6.0 5.6 5.7 7.1	4.8 5.1 4.9 5.2 4.7	22.0 27.8 28.5 28.4 11.5	5.5 5.5 5.4 5.6 6.6

<sup>(</sup>a) 31st December of year shown.

#### § 5. Cost of Administration of Law and Order.

1. Expenditure by the States.—The tables below show the net expenditure (i.e. gross expenditure less receipts from fees, fines, recoup for services rendered, etc.) from Consolidated Revenue during 1955-56 and 1956-57 in connexion with the administration of justice, police and prisons in each State.

In South Australia the receipts for legal fees and registrations exceed the expenditure under "Justice". Because of differing legislative and administrative arrangements in the various States the activities covered by the figures shown are not exactly the same in each State. Other small differences result from differing accounting practices. However, the figures shown for individual States are comparable from year to year.

#### NET EXPENDITURE ON LAW AND ORDER.

	[	Net Expenditu	re.	Per He	ad of Pop	ulation.
State.	Justice £.	Police.	Prisons.	Justice.	Police.	Prisons.
		1955–56.				
New South Wales	931,8	86 6,017,476	871,171	.5 3	34 2	4 11

New South Wales Victoria Queensland South Australia	••	931,886 663,354 320,583 -2,817	6,017,476 4,365,316 3,105,679 1,399,201	871,171 613,736 226,487 244,632	.5 .5 4 -0	3 2 9 1	34 2 34 0 45 11 33 6	4 11 4 9 3 4 5 10
Western Australia	• •	47,932	1,381,003	197,464	1	5	41 3	5 11
Tasmania	••	149,895	657,155	87,142	9	3	41 2	5 6
Total	••	2,110,833	16,925,830	2,240,632	4	7	36 6	4 10

#### 1956-57.

Total	 1,890,228	18,175,072	2,560,574	4	0	38	1	- -	5	4
Victoria Queensland South Australia Western Australia Tasmania	 598,694 155,261 —14,995 90,483 155,437	5,082,401 3,287,787 1,539,417 1,469,828 750,584	756,021 248,975 249,141 172,291 102,043	4 2 -0 2 9	6 3 4 7 6	38 47 35 43 46	6 8 8 0		5 3 5 5 6	9 7 9 0 3
New South Wales	 905,348	6,045,055	1,032,103	5	1	33	8	:	5	9

2. Commonwealth Expenditure.—(i) Police and Prisons. The expenditure shown in the previous table is that incurred by the State Governments. Expenditure by the Commonwealth Government on police in the Australian Capital Territory and police and prisons in the Northern Territory is shown in the following table.

## EXPENDITURE ON POLICE AND PRISONS IN THE NORTHERN TERRITORY AND THE AUSTRALIAN CAPITAL TERRITORY.

	Year.		Northern Territory.	Australian Capital Territory.(a)
1952-53	 	 	118,545	74,492
1953–54	 	 	108,726	86,413
1954–55	 	 	135,738	87,126
1955–56	 	 ]	145,387	98,720
1956–57	 	 	136,000	109,710

<sup>(</sup>a) Expenditure on police only. There is no prison in the Australian Capital Territory.

(ii) Attorney-General's Department. Expenditure by the Commonwealth Attorney-General's Department throughout Australia is shown in the two tables which follow:—

# EXPENDITURE OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT. $(\pounds.)$

Gross Net Receipts. Expenditure. Expenditure. Year. 1,438,139 286,746 1,151,393 1952-53 ... ٠. . . 1953-54 ... 1,549,991 321,683 1,228,308 ٠. . . . . . . 1954–55 . . 1,715,945 370,759 1,345,186 . . . . . . . . 407,474 1955-56 ... 1,896,741 1,489,267 . . . . 1956-57 ... 1,952,184 451,758 1,500,426

## EXPENDITURE BY THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT, 1956-57.

Item.				Expenditure. £
Administration				269,455
Bankruptcy				161,129
Commonwealth Investigation	n Servi	ice		123,064
Conciliation and Arbitration	n		]	148,309
Court Reporting Branch			)	92,885
Crown Solicitor's Office				326,610
High Court				114,667
Industrial Court				62,612
Judges' Salaries and Pension	ns			10,467
Legal Service Bureau				64,388
Miscellaneous Services				13,236
Patents, Trade Marks and I	Designs		[	396,197
Peace Officer Guard				94,530
Public Service Arbitrator's	Office			7,016
Rent			[	56,647
Repairs and Maintenance	• •	• •		10,972
Total			1	1,952,184

In addition £244,214 was spent by the Attorney-General's Department on capital works and services.

(iii) Receipts of Commonwealth Attorney-General's Department.—The above items of expenditure are gross. Revenue received by the Commonwealth Attorney-General's Department, which offsets this expenditure to some extent, is shown in the following table:

## RECEIPTS OF THE COMMONWEALTH ATTORNEY-GENERAL'S DEPARTMENT, 1956-57.

		Amount. (£.)		
Bankruptcy				72,194
Court Reporting Bran	ch			34,779
Fees, Fines and Costs	of Court			25,931
Patents, Trade Marks	and Design	is, Copyri	ght	305,642
Miscellaneous		••	•	13,212
Total		• •		451,758

#### CHAPTER XIV.

## PUBLIC HEALTH.

#### A. STATE GOVERNMENT ACTIVITIES

(including activities of the Commonwealth Government in the Northern Territory and the Australian Capital Territory).

# § 1. Public Health Legislation and Administration.

1. New South Wales.—The Department of Public Health comes under the jurisdiction of the Minister for Health, with an Under-Secretary as Permanent Head of the Department for administrative purposes.

There is also a Director-General of Public Health and Chief Medical Adviser to the Government, who is ex officio President of the Board of Health and Chairman of the Nurses' Registration Board.

The Inspector-General of Mental Hospitals is responsible for the administration of that part of the Lunacy Act relating to the care and treatment of mental patients.

The Department's activities embrace all matters relating to public health and the greater part of the general medical work of the Government. These include:—
(a) Supervision of the work of local authorities (municipal and shire councils) in relation to public health matters connected with the following Acts—Public Health Act, Noxious Trades Act and Pure Food Act; (b) Scientific divisions (Government Analyst, Microbiological Laboratory, and Division of Industrial Hygiene); (c) Tuberculosis and Social Hygiene Divisions; (d) Medical Officers of Health at Sydney, Broken Hill, Newcastle, Wollongong, Bathurst and Lismore; (e) State hospitals and homes and State sanatoria; (f) Mental hospitals; (g) Public hospitals (Hospitals Commission); (h) Maternal and baby welfare (Baby health centres); (i) School medical and dental services; and (j) Publicity, nutrition and library services.

- 2. Victoria.—The Department of Health comprises four branches, the General Health Branch, the Maternal and Child Hygiene Branch, the Tuberculosis Branch and the Mental Hygiene Branch. The work of these branches is described below.
- (a) The General Health Branch. This branch collaborates with local government health authorities to fight against infectious diseases. Since 1st October, 1954, the State Government, through the Hospitals and Charities Commission, has been responsible for the whole cost of treating cases of infectious disease.

Special clinics for prophylaxis and treatment of venereal disease are attached to several public hospitals in the State and treatment may be obtained at all public hospitals.

The Poliomyelitis Division, which has been operating since 1949, provides a consultant diagnostic service and maintains an after-care treatment service for the whole of the State. Three doctors and a number of visiting physiotherapists and nurses treat a great number of patients, mainly in their own homes.

The Industrial Hygiene Division, staffed by doctors and scientists with a number of specially trained inspectors, supervises the working conditions of persons employed in industry.

- (b) The Maternal and Child Hygiene Branch. This branch is concerned with pre-natal hygiene, the development of pre-school services, and the school medical and dental services.
- (c) The Tuberculosis Branch. The Tuberculosis Branch under the control of a Director of Tuberculosis combats the spread of tuberculosis. Using improved diagnostic facilities and better methods of treatment, it has been possible to reduce greatly the incidence of this disease. No longer is there a waiting list for entry into a sanatorium; in fact, the former State sanatorium at Greenvale is now used as an institution for the aged.
- (d) The Mental Hygiene Branch. At the end of 1951, an Authority consisting of three members was established under the Mental Hygiene Authority Act 1950 to take charge of the Mental Hygiene Branch. Although the Authority is head of the branch, detailed administration can be carried out by its officers leaving the Authority free to deal with major

problems relating to the improvement of treatment and accommodation for the mentally ill. The efforts of the Authority at the present time are principally concerned with improving existing hospitals and providing additional accommodation made necessary by the increase in population in the State and with developing preventive out-patient psychiatric services designed to reduce the need for in-patient beds.

The Cancer Institute, set up in 1949 under the provisions of the Cancer Institute Act 1948, is now operating a very active out-patients treatment centre as well as a small inpatient unit. Facilities provided at the Institute for radiation therapy are being extended by installing a 4 m.e.v. linear accelerator. It will be the first of this type of machine to operate in Australia.

- 3. Queensland.—(i) General. The Health Acts 1937 to 1955 are administered by the Director-General of Health and Medical Services subject to the Minister for Health and Home Affairs. A central staff controls the following divisions:—
- (a) Division of Public Health Supervision. This Division is controlled by the Deputy Director-General of Health and Medical Services and comprises separate sections of environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease (leprosy) control. Two institutions (one at Peel Island in Moreton Bay for white patients and one at Fantome Island near Townsville for aboriginal patients) are maintained for the treatment of Hansen's disease. Modern therapy with sulphone drugs has caused a decline in numbers of patients at these institutions. Free treatment of venereal diseases is offered at the Department's male and female clinics in Brisbane, and at any public hospital. Free immunization against diphtheria, whooping cough and tetanus is offered by most of the local authorities. About 94 per cent. of school children in the Greater Brisbane area and 90 per cent. in the rest of the State have been immunized against diphtheria.
- (b) Division of Tuberculosis. A central chest clinic in Brisbane offers Mantoux tests, X-ray examinations, and inoculations of Mantoux negative reactors free of charge and this service is extensively used. A mobile X-ray unit visits country districts. Children in the final grade of primary schools are now being Mantoux-tested and given B.C.G. vaccine.
- (c) Division of Industrial Medicine. This Division exercises supervision over the health of workers in both primary and secondary industries, including control of leptospirosis (Weil's disease), scrub typhus and other fevers of occupational origin in the sugar-cane growing districts north of Ingham.
- (d) Division of Maternal and Child Welfare. This Division offers supervision and advice on the rearing and health of infants and pre-school children at 232 baby health centres throughout the State. Outlying centres are visited by air or by special rail car. Homes for in-patient treatment of infants with feeding problems have been established at Brisbane, Toowoomba, Ipswich and Rockhampton.
- (e) Division of School Health Service. This Division comprises the Chief Medical Officer, School Health Services, and a staff of doctors, dentists and visiting school nurses. Every child has a medical examination at least once in three years.
- (f) Division of Mental Hygiene. The Director is responsible for the care and treatment of mentally sick patients in the State's four mental hospitals at Brisbane, Toowoomba, Ipswich and Charters Towers.
- (g) Division of Laboratory Services. Two laboratories—the Laboratory of Microbiology and Pathology and the Government Chemical Laboratory—are maintained to ensure the purity of a wide range of foodstuffs and materials. The former also offers a service in clinical pathology to country hospitals and private doctors.
- (ii) Hospitals. All public hospitals operate under the district system, which provides for the constitution of hospitals regions and hospitals districts and a hospitals board for each district. The State is divided into 11 hospitals regions with a base hospital for each region which comprises a number of hospitals districts. The purpose of the regional scheme is to co-ordinate the public hospitals in the region with the base hospital. The administration of the hospital services, including public dental services, in each hospitals district is vested in the hospitals board, which comprises not less than four members nor more than eight members appointed by the Governor-in-Council and one member elected by the component local authorities. There are 54 hospitals boards controlling 140 public hospitals.

Private hospitals in Queensland are controlled under the provisions of the "Health Acts 1937 to 1955" and the "Private Hospital Regulations 1937". There are 59 private hospitals licensed in the State, containing 1,617 beds and six cots, of which 20, containing 684 beds and three cots, are in Brisbane.

4. South Australia,—The Department of Public Health embraces the activities of the Central Board of Health, the Food Drugs Advisory Committee, the School Medical and Dental Services, Poliomyelitis Services, Deafness Guidance Clinic and the public health aspect of the control of tuberculosis, including the State X-ray Health Survey, under the control of the Director of Tuberculosis.

The Central Board of Health consists of five members, three of whom (including the chairman) are appointed by the Governor while one is elected by metropolitan local boards and one by all other local boards. The Central Board of Health administers the Health, Food and Drugs, Dangerous Drugs, Noxious Trades, Bakehouses Registrations and Early Notification of Birth Acts. The Board is also concerned to some degree with Acts relating to local government, abattoirs and cremation. Other legislation administered by the Department of Public Health relates to venereal diseases and vaccination.

The Health Act 1935-1956 constitutes every municipal council and every district council a local board of health for its municipality or district. There are 143 local boards under the general control and supervision of the Central Board. Under the Food and Drugs Act, each local board is constituted the local authority for its respective district, except in the metropolitan area, for which the Metropolitan County Board is the local authority.

5. Western Australia.—Health services are provided under the Health Act 1911-1957. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified doctor. The State is divided into 147 local government areas which are constituted as municipalities or road boards. Each type of authority has health administration powers.

By law, a local board of health may be set up in lieu of a road board, but this method of control is no longer used. In any emergency, the Commissioner may exercise all the powers of a local health authority in any part of the State.

Features of recent legislation are as follows:—(a) Act No. 70 of 1948 gives power to control sufferers from tuberculosis and established a Tuberculosis Control Branch; (b) Act No. 11 of 1952 gives wide powers to regulate the sale and use of pesticides; (c) Act No. 34 of 1954 provides for the licensing of manufacturers of therapeutic substances; (d) Act No. 45 of 1954 requires every doctor who at ends a child which dies within 28 days of birth to notify the Commissioner; and (e) Act No. 21 of 1957 gives power to require the notification of any prescribed condition of health in addition to infectious diseases.

6. Tasmania.—The Department of Health Services is under the jurisdiction of the Minister for Health, and the administration of the various divisions is controlled by the permanent head of the department, the Director-General of Health Services, who is also directly responsible for the Division of Hospital and Medical Services. Associated with the Director-General are the Directors of Orthopaedics, Pathology and Anaesthetics, and the Government Analyst.

The Division of Hospital and Medical Services is responsible for the establishment and administration of public hospitals, the provision of specialist services under the supervision of the Directors of Orthopaedics, Pathology and Anaesthetics, the licensing and inspection of private hospitals, the provision of district nursing hospitals and services in country districts, the administration of the district and tourist nursing services, the conduct of homes for the aged and the government medical service, which comprises 18 practices in country districts where there are no private doctors.

The Division of Public Health administers laws relating to environmental sanitation, food and drugs, places of public entertainment, cremation, and notifications of infectious diseases. The Division also controls the school medical and dental services, maternal and child health centres, and the mothercraft home.

The Tuberculosis section conducts comprehensive X-ray surveys and maintains diagnostic clinics and chest hospitals.

The Division of Mental Health is responsible for the building of mental hospitals, the consultative diagnosis and treatment of psychiatric cases, the treatment and care of the mentally ill, the treatment and care of inebriates, the treatment and custody of sexual offenders, the treatment of psychopathic cases, and the care and treatment of retarded children.

7. Northern Territory.—The Commonwealth Department of Health provides hospital, health and medical services in the Northern Territory.

Four general hospitals have been established. The Darwin Hospital has accommodation for 199 in-patients, Alice Springs Hospital, 117, Katherine Hospital, 30, and Tennant Creek Hospital, 34. East Arm Settlement was opened in August, 1955, for the treatment of Hansen's disease. A full range of ancillary services is available at the Darwin hospital which serves as a base hospital for the Territory. Dental clinics have been set up at Darwin and Alice Springs.

Medical and dental services to outback areas are provided by road and air. Aircraft used in the Territory are one Drover and one De Havilland Dove stationed at Darwin, and one Drover at Alice Springs. They are staffed and serviced by Trans-Australia Airlines and are extensively used in ambulance and survey medical work. At Alice Springs, doctors of the Northern Territory provide the medical services to the Flying Doctor Service (South Australian) base.

A section of the Department of Health undertakes continuous investigation into native health.

School doctors and dentists move throughout the area diagnosing and treating. Public health services are provided and health inspectors periodically visit all settlements.

Darwin, as a first port of entry for oversea aircraft and shipping, has a quarantine station.

8. Australian Capital Territory.—The Public Health Ordinance 1928–1930 placed under the control of the Minister for Health all matters relating to public health and hygiene in the Australian Capital Territory. The Minister has appointed a Medical Officer of Health and a number of Health Inspectors to administer and police this ordinance. The Canberra Community Hospital is administered subject to the Minister for Health by a board consisting of five elected members and three members appointed by the Minister. The hospital has accommodation for 253 in-patients, an out-patients department, and a 16 bed tuberculosis chalet. A district nursing service administered by the Commonwealth Department of Health was established in 1950 to provide a home-nursing service for the sick and aged. The service is available at the request of a registered doctor.

# § 2. Supervision and Care of Infant Life.

1. General.—The number of infant deaths and the rate of infant mortality for the five years 1952 to 1956 are given in the following table. Further information regarding infant mortality (including information for each State as a whole and for the Territories) will be found in Chapter XVII.—Vital Statistics.

#### INFANT DEATHS AND DEATH RATES.

State.		Me	tropolite	ın.		Remainder of State.				
State.	1952.	1953.	1954.	1955.	1956.	1952.	1953.	1954.	1955.	1956.
		1	Number	OF INI	FANT D	EATHS.	-			
New South Wales	604	620	787	814	784	1,214	1,226	1,063	1,036	993
Victoria	610	544	576	549	630	588	589	479	486	491
Queensland	259	228	206	210	224	513	541	489	446	51
South Australia	210	196	199	207	193	203	179	189	224	18
Western Australia	179	180	153	187	156	205	198	206	186	22
Tasmania	50	51	58	55	53	122	126	128	134	11'
Australia(a)	1,912	1,819	1,979	2,022	2,040	2,845	2,859	2,554	2,512	2,53
		RA	TE OF	Infant	Morta	LITY.( <i>b</i> )				
New South Wales	20.71	21.45	22.51	22.76	21.33	26.96	26.66	27.85	26.81	25.49
Victoria	21.69	19.56	18.26	16.68	18.13	22.96	22.88	20.72	20.75	21.0
Queensland	23.73	21.02	18.95	18.60	19.93	25.60	27.14	24.08	21.17	24.2
South Australia	21.29	19.71	19.82	20.13	18.47	25.31	21.79	23.08	27.27	21.6
Western Australia	23.52	23.28	19.59	22.50	17.89	26.27	24.36	25.37	22.37	27.8
Fasmania	21.62	22.16	25.45	23.10	22.18	21.77	23.18	23.31	23.48	20.4
Australia(a)	21.73	20.78	20.30	20.03	19.56	25.38	25.23	24.70	23.84	23.8

<sup>(</sup>a) Fxcludes Territories. (b) Number of deaths of children under one year of age per 1,000 live births registered.

Because the health of mothers and infants depends largely on pre-natal attention as well as after-care, government and private organizations provide instruction and treatment for mothers before and after confinement. The health and well-being of mother and child are looked after by the institution of baby health centres, baby clinics, crèches, visits by midwives and special attention to the milk supply.

In all States, Acts have been passed with the object of supervising and ameliorating the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out to suitable persons of the wards of the State, and wherever possible the child is boarded out to its mother or to a near female relative. Stringent conditions regulate the adoption, nursing and maintenance of children placed in foster-homes by private persons, while special attention is devoted to the welfare of ex-nuptial children. (See also in this connexion Chapter XV.-Welfare Services.)

Under the provisions of Part V. of the Social Services Act 1947-1957, a sum of £15 is payable to the mother in respect of each confinement at which a living or viable child is born if the mother has no other children under 16 years of age. Where there are one or two other children under 16 the amount payable is £16, and where there are three or more other children under 16 the amount payable is £17 10s. Where more than one child is born at a birth the amount of the allowance is increased by £5 in respect of each additional child born at that birth. More detailed information concerning maternity allowances is given in Chapter XV.—Welfare Services.

- 2. Nursing Activities.—(i) General. In several of the States, the Government maintains institutions which provide treatment for mothers and children, and, in addition. subsidies are granted to various associations engaged in welfare work.
- (ii) Details by States. In earlier issues of the Official Year Book (see No. 22, pp. 515-6) information concerning the activities of institutions in each State is given.
- (iii) Summary. The following table gives particulars of the activities of Baby Health Centres and Bush Nursing Associations :-BABY HEALTH CENTRES AND BUSH NURSING ASSOCIATIONS.

Aus-N.S.W. Vic. Old. S. Aust. W.Aust. Tas. N.T. A.C.T Heading. tralia. (a) (a) (a) 1956. Baby Health Centres Metropolitan N No. 103 156 59 84 28 26 463 Urban-Provincial 1,039 and Rural Νo. 232 387 168 152 30 68 (b) Total No. 335 227 58 94 1,502 543 236 Attendances at No. 1,010,404 1,172,916 401,828 218,495 214,588 133,293 5.692 25,360 3,182,576 Centres Visits paid by Nurses 26,945 118,600 27.964 24,708 20.010 78.092 674 3.497 300,490 No. **Bush Nursing Associa**tions—Number Centres ... 30 57 8 33 11 27 166 1957. **Baby Health Centres** 104 157 462 No. 61 84 32 18 6 Metropolitan Urban-Provincial 239¦(c) and Rural No. 412 171 148 30 63 1,065 Total No. 343 569 232 232 62 81 1,527 Attendances at Centres No. 1,041,273,1,222,820 418,105 220,864 217,728 137,055 7,355 28,472,3,293,672 Visits paid by Nurses 30,684 131,783 24,883 76,718 4,149 320,516 No. 22,672 1.074 28,553 **Bush Nursing Associa**tions-Number

8 (a) Year ended 30th June. (b) Includes eight mobile units which served 26 centres. seven mobile units which served 20 centres. (c) Includes

34

12

25

163

of

28

56

Centres ..

In the last twenty-five years, the number of attendances at the Baby Health Centres has more than trebled. The numbers of attendances, at five-year intervals, since 1930 were as follows:—1930, 919,893; 1935, 1,355,306; 1940, 2,035,299; 1945, 2,927.764; 1950. 3,049,375; and 1955, 3,099,233. During the year 1957, the number of attendances was 3,293,672.

# § 3. Medical Inspection of School Children.

- 1. General.—Medical inspection of school children is carried out in all States, in the Northern Territory and in the Australian Capital Territory. Medical staffs have been organized, and in some States travelling clinics have been established to deal with dental and ocular defects.
- 2. New South Wales.—(i) School Medical Service. Doctors of the School Medical Service examine children attending all schools administered by the Department of Education and the majority of other schools in the State. They make annual visits to schools in the metropolitan, Newcastle and Wollongong areas, and in Armidale, Tamworth, Bathurst, Orange and Wagga, and examine children in kindergarten or 1st grade in primary schools and 1st and 4th years in secondary schools. Children in other classes are examined or reviewed, as necessary. The vision and hearing of pupils in 4th grade are re-tested. In country areas, doctors aim to visit schools every three years, and examine all children attending. Owing to insufficient staff, the country portion of the programme cannot be completed each year.

If treatment is necessary, the parent is informed in writing and, if possible, is called in for interview. In the metropolitan, Newcastle and Wollongong areas, school nurses follow up these cases with the object of persuading parents to seek medical advice.

As well as examining school children, the medical officer examines the sanitary arrangements at each school. Bush nurses act as school nurses in schools at or near the bush nursing centres and carry out a limited inspection for defects or unhygienic conditions.

Doctors of this service examined 161,581 children in 1955 and 162,945 in 1956. Notifiable defects were found in 22 per cent. of the children examined.

Various surveys of school children are undertaken from time to time, e.g. hearing surveys, hookworm surveys, height-weight surveys, nutrition surveys, and investigations to determine the incidence of enlargement of the thyroid gland, defective vision, postural defects.

Five child guidance clinics, all in the metropolitan area, operate under the administration of the school medical service. One clinic functions at the Yasmar Boys' Sheker and deals exclusively with cases before the Children's Courts. Each clinic is staffed by a psychiatrist, a psychologist and social workers.

- (ii) School Dental Service. The aim of the School Dental Service is to provide dental treatment for children on school premises, to train them in the care of their teeth, and to teach them the principles of dental health.
- Of 32,993 children examined in both city and country schools in 1957, 30,077 were included in a Dental Health Survey. Of these, six per cent. were found to have naturally sound mouths, and 77 per cent. were in need of treatment.

In 1957, the clinics treated 15,920 children in 45,399 visits; 25,352 teeth were extracted, 36,827 permanent fillings and 46,704 other treatments, including prophylaxis, were provided. As the number of clinics is not sufficient to provide more than a limited service, it is necessary to restrict treatment to the ages 6–8 years in the metropolitan area, and 6–9 years in large country centres. In small outlying rural schools, children of all ages are included.

3. Victoria.—The School Medical and Dental Services are gradually being extended throughout the State. The objective of the medical services is to ensure that each child is examined to ascertain any physical defects at least once in every three years of school life. Parents are informed of any defects and told how treatment may best be obtained. In 1956, approximately 115,000 children were examined, 65 per cent. of them being in the metropolitan area. Nurses perform valuable follow-up work in interviewing parents to ensure that as far as possible treatment recommended is carried out. There are at present 31 doctors and 38 nurses employed in this service.

The school dental service affords dental treatment to children attending primary schools and resident in institutions in certain parts of the State. Children from metropolitan schools in industrial suburbs are transported to the school dental centres by contract bus service. Country schools are visited by mobile dental units. Nine dental vans and six semi-trailer (two-surgery) units are operating in the mobile service. The dental service has a staff of 40 dentists and 45 dental attendants. During 1956, 37,000 children attending 387 schools were examined and all necessary dental treatment carried out. This treatment included approximately 35,000 extractions and 62,000 fillings.

4. Queensland.—During 1955-56, doctors and nurses examined 67,807 school children, referring children with defects to their own doctors. In western Queensland, local doctors

act as part-time ophthalmic officers. In North Queensland, two school sisters assist in the control of hookworm. Advice is given on school sanitation, infectious diseases in schools and health education.

During 1955-56, school dentists gave treatment to 10,039 school children whose parents could not afford private treatment. The treatment was carried out at four rail dental clinics and at schools with portable equipment. In addition, school children are treated at hospital dental clinics in the larger towns.

5. South Australia.—Children in State schools are examined while in Grades 1, 4 and 7 in the primary schools, and in their second and fourth years in secondary schools. Efforts are made to visit country schools every three or four years and all the children are examined. Students who wish to become teachers are examined on appointment as preliminary probationary studen s while still attending secondary schools, again immediately prior to entering the Teachers' College and finally when they leave the college to take up teaching. Courses of lectures in hygiene and in first aid are given to all college students and, in addition, domestic arts students are lectured on home nursing.

During 1956, 53,330 children were examined by doctors in 150 country and 82 metropolitan schools. Of these, 3,935 required notices for defective vision, 1,299 for defective hearing, and 1,618 for their tonsils and adenoids.

A deafness guidance clinic was established in 1956. Of the 330 children it examined, 301 were referred to doctors or hospitals for treatment.

Educational work was assisted by talks to mothers' clubs and interviews with parents by doctors and dentists, and by home visits and interviews by nurses.

The Psychology Branch examines difficult children of many types, including those with such problems as backwardness, truancy and delinquency, and assists the parents of the children interviewed in handling these problems. In addition to supervising opportunity and special classes for children who are hard-of-hearing or backward in school work it advises on questions of placement and types of education for ordinary children. Its guidance officers organize vocational guidance work in schools, interview pupils and visit schools. They also lecture to students of the Teachers' College as well as to other interested organizations such as mothers' clubs. Expenditure of the Psychology Branch was £21,985 during 1957 and £18,830 during 1956.

6. Western Australia.—The Department of Public Health has four full-time doctors for schools, who during 1956 examined 37,773 children (metropolitan 30,666, country 7,107) of whom 18,935 were boys and 18,838 girls. The 184 schools visited comprised—Metropolitan: 73 government, 32 convent and 17 kindergarten; Country: 50 government, 10 convent and 2 kindergarten. The aim is to examine every school child once every two years.

During 1956, the 12 full-time dentists employed visited 16 metropolitan schools, 140 country schools, 12 orphanages and 14 native missions. The number of children examined was 12,257 of whom 7,468 were treated with their parents' consent. The cost of this service for 1955-56 was £47,419.

7. Tasmania.—During 1956, two full-time and four part-time doctors examined school children in State and private schools, and 13 full-time and 2 part-time sisters visited homes and schools. Of the 23,613 children examined by doctors, 8,762 were found to have defects, 5,735 requiring dental treatment.

There are 17 school dental clinics. Surgeries are located at Hobart (2), Launceston (2), Burnie and Devonport, mobile clinics being operated in other districts. A full-time dentist is in charge of each surgery or clinic. During the year, there were 19,290 new visits to the school dentists and 29,290 repeat visits.

The cost of the school medical and school dental services for the year ended 30th June, 1956, was £71,143.

8. Northern Territory.—(i) School Medical Service. The Schools Medical Officer makes routine physical examinations of all children attending both pre-school centres and the schools which come under the supervision of the Assistant Supervisor of Education in the Northern Territory. The only children not examined by him are those at the Native Welfare Settlement School, i.e. full-blooded aborigines, who are examined during native health surveys.

Children attending pre-school centres are examined once a year if possible, and all new entrants are examined. It is aimed to provide a medical examination for all children attending primary and secondary school at least three times during their school life—on entry, about two years later, and before they leave school.

An immunization clinic is held one afternoon a week at the Darwin Hospital by the Schools Medical Officer. He also conducts a pediatric clinic at the hospital one afternoon

a week, and is responsible for procedures in connexion with the Salk anti-poliomyelitis immunization campaign which was introduced in 1956.

During the long summer holidays, the services of the Schools Medical Officer are used on relieving work at the Darwin hospital and on general supervision at the infant welfare clinic in Darwin.

- (ii) School Dental Service. A special service for school and pre-school children is available in Darwin. Each dentist is required to work in the infant school clinic for four months a year. At present only pre-school and infant school children are treated every year. Children from primary, secondary and denominational schools are treated at longer intervals, but emergency treatment is available for them at the main Darwin clinic. Full records of all children are kept.
- 9. Australian Capital Territory.—The Commonwealth Department of Health is responsible for the medical inspection of school children in the Australian Capital Territory.

During 1951, with the appointment of an Infant Welfare and Schools Medical Officer, a plan was introduced for triennial examinations of children in primary and secondary schools, attention also being paid to those children with defects, many of whom were marked for review. At pre-school centres and nursery schools, all children were to be examined on entrance and reviewed in their second year of attendance.

It was apparent at the commencement of 1955 that, owing to a great increase in the child population of the Australian Capital Territory, some modification of the School Medical Officer's programme would be necessary if all schools and play centres were to receive their share of attention. Accordingly, in 1955 and 1956, initial examinations were carried out on school children who were members of 1st class (mostly six year olds) instead of five year olds in kindergarten. Examination of this age group was found to be less time-consuming and results were found to be more reliable than those of the earlier age groups. Children in 3rd class (mostly eight year olds) and in third year at high school received full examination whilst those in 6th class (mostly eleven year olds) received tests for sight and hearing only. Pre-school children were examined once only before entering primary school.

In 1956, 1,305 school children and 436 pre-school children were fully examined. The School Medical Officer also interviewed 124 infants and toddlers and acted as an adviser to the Canberra Mothercraft Society.

#### § 4. Inspection of Food and Drugs for Sale.

Public health legislation in force in all States provides for the inspection of foods and drugs with the object of ensuring that all goods sold shall be wholesome, clean and free from contamination or adulteration, and that all receptacles, places and vehicles used for their manufacture, storage or carriage shall be clean. For further particulars in this connexion, see § 1. Public Health Legislation and Administration, page 513.

#### § 5. Supervision of Dairies, Milk Supply, Etc.

Earlier issues of the Official Year Book (see No. 22, p. 498), refer to the legislation in orce in the various States to ensure the purity of dairy produce.

#### § 6. Disposal of the Dead by Cremation.

The first crematorium in Australia was opened in South Australia in 1903. At 31st December, 1957, there were fifteen crematoria in Australia, situated as follows:—

## CREMATORIA, 31st DECEMBER, 1957.

A	Lustralia				• •		15
Tasmania	••	••	• •	••	• •	••	
Western Aus	stralia	• •		• •	• •	• •	1
South Austr	alia	• •					. 2
Queensland						• •	2
Victoria							2
New South	Wales						6

There is no crematorium in the Northern Territory or the Australian Capital Territory.

The following table shows the number of cremations in each State for each of the years 1953 to 1957:—

#### CREMATIONS.

	Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1953 1954 1955 1956 1957		:-	10,556 10,962 11,128 12,358 12,189	5,513 5,593 6,119 6,733 6,849	2,723 2,879 2,993 3,341 3,250	(a) 348 (a) 309 431 514 539	924 1,007 1,169 1,201 1,239	538 573 549 551 688	20,602 21,323 22,389 24,698 24,754

(a) Year ended 30th June of year shown.

#### B. COMMONWEALTH GOVERNMENT ACTIVITIES.

#### § 1. General.

At the time of federation, the only health function given to the Commonwealth Government under the Constitution was the power to make laws with respect to quarantine. All other health powers remained with the State Governments. Under this power, the systems of State quarantine formerly in operation were abolished with the passing of the Quarantine Act 1908 and a branch of the Department of Trade and Customs, under the control of a Director of Quarantine, was created on the 1st July, 1909.

The Commonwealth Department of Health was formed in 1921 by the extension and development of the quarantine service, the Director of Quarantine becoming the Director-General of Health. It had certain other functions in the field of public health. An amendment to the Constitution in 1946 gave the Commonwealth power to make laws with respect to pharmaceutical, hospital and sickness benefits, and medical and dental services. In addition, the Commonwealth Government has used its powers under Section 96 of the Constitution to make grants to the States for health purposes.

# § 2. National Health Benefits.

1. Pharmaceutical Benefits.—Since September, 1950, under the provisions of the Pharmaceutical Benefits Act 1947–1952 and the National Health Act 1953–1957, certain life-saving and disease-preventing drugs have been provided free of charge to the general community. These drugs are supplied free if they have been prescribed by a doctor registered in Australia.

The number of drugs listed as available as general pharmaceutical benefits has steadily increased. At 30th June, 1957, 230 separate preparations were supplied. Before a drug is listed as being available, it must be approved by the Pharmaceutical Benefits Advisory Committee, a body appointed by the Minister for Health.

All drugs listed in the British Pharmacopoeia, and other drugs as specified, are supplied free to persons who benefit under the pensioner medical service (see § 2. 5, page 524).

Total expenditure on pharmaceutical benefits in the year 1956-57 was £11,716,825.

2. Hospital Benefits.—The payment of hospital benefits to the States is authorized under Part V. of the National Health Act 1953-1957. This Act continues the agreements entered into with the various States under the Hospital Benefits Act 1951. Under these agreements, the Commonwealth pays the States certain sums of money which vary according to the number of occupied beds in public hospitals and the status of patients.

Payment of 12s. per day is made for a patient who is a pensioner or a dependant of a pensioner. The rate of 8s. per day is paid for all other qualified patients. A payment of 8s. per day is made also for patients in approved private hospitals. This payment is made to the proprietor of the private hospital. A condition of the benefit is that an equivalent amount has been allowed against the patient's account.

Commonwealth additional benefit is paid in the case of patients who are members of a registered hospital benefit organization. The additional benefit is payable at the rate of 4s. per day if a person contributes for a fund benefit of at least 6s. per day, but less than 16s. per day, and at the rate of 12s. per day if a person contributes for a fund benefit of at least 16s. per day. Payment of the additional benefit is made through the benefit organization and the patient normally receives it with the amount of fund benefit payable by the organization.

Australian residents who are temporarily living overseas and their dependants who receive hospital treatment are eligible to receive the benefit of 8s. a day and the additional benefit to which they are entitled.

Expenditure on hospital benefits in 1956-57 was £9,813,283. This does not include expenditure on mental hospitals (see para. 3, below).

The following table shows the number of registered organizations, the membership thereof, and payments of Commonwealth benefits and hospital fund benefits on account of occupied beds in public and approved private hospitals. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital benefits schemes is considerably higher than the number of members. Reliable figures for coverage are not available.

#### HOSPITAL BENEFITS: SUMMARY 1954-55 to 1956-57.

1. Ordinary Benefits (a). Payable to Hospitals in respect of all occupied beds.

				(~-,				
Year Ender 30th June.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Territories and Overseas.	Aus- tralia.
1955 1956 1957	 3,160,551 3,112,037 3,065,921	1,835,000 1,896,789 1,920,075	1,308,000	665,000		246,020 255,668 264,227	58,757	7,807,508 7,914,230 7,973,163

(a) Ordinary benefits are payable in respect of :—(i) Beds occupied by pensioners in public hospitals (12s. a day); (ii) Beds occupied in certain South Australian hospitals (12s. a day); and (iii) Other occupied beds in public hospitals and approved private hospitals (8s. a day).

# 2. Additional Benefits (a). Payable through Benefit Organizations.

YEAR ENDED 30TH JUNE, 1957.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.(b)
Registered Organizations No. Members . No. Commonwealth Benefit £ Fund Benefit . £	28 1,026,103 980,613 4,258,485	53 648,380 438,652 876,671	3 217,937 86,868 581,237	15 198,690 100,398 473,455	13 193,527 177,875 489,378	10 88,825 55,714 332,829	1,840,120

- (a) An additional benefit of 4s. a day is payable to registered hospital benefit organizations for persons who contribute for a fund benefit of at least 6s. a day or 12s. a day for those who contribute for a fund benefit of at least 16s. a day. (b) No hospital benefit organization is registered in the Northern Territory or the Australian Capital Territory. Persons who live in one of these territories, or who are overseas, receive their fund benefit from an organization, and their Commonwealth benefit through an organization, which is registered in one of the States.
- 3. Mental Hospitals. In 1946, when Commonwealth hospital benefits were introduced for patients in public hospitals, no provision was made for patients in mental hospitals. To help meet the cost of maintaining patients in mental hospitals, the Commonwealth parliament passed the Mental Institutions Benefits Act 1948. This Act ratified agreements with the States whereunder it was provided that:—
  - (a) the Commonwealth would pay the States a benefit equal to the amount being collected by the States from the relatives of patients in mental hospitals by way of charges for maintenance; and
- (b) the States would cease making charges for the maintenance of mental patients. These agreements operated for five years, and terminated in the latter half of 1954. The amount contributed by the Commonwealth during the operation of the agreements was approximately one shilling a day for each patient. When the agreements terminated, Dr. Alan Stoller, of the Victorian Mental Health Authority, was commissioned to undertake a survey on mental health facilities and needs in Australia. His report was released in May, 1955. The report stated that serious overcrowding existed in the majority of mental hospitals in Australia. The provision of more beds was the most urgent need, but other accommodation and rehabilitation facilities were also required. The immediate shortage of accommodation could be made good only by the provision of 10,000 beds at a cost of £3,000 each. This meant the immediate expenditure of £30 million.

On receipt of the report, the Commonwealth Government proposed a new arrangement with the State Governments. It offered to find £10 million on the basis that the State Governments would find £2 for every £1 contributed by the Commonwealth Government. In effect, therefore, the Commonwealth Government offered to find one-third of the £30 million required.

The following table sets out the amounts which have been paid to the State Governments

by the Commonwealth Government.

EXPENDITURE ON MENTAL INSTITUTIONS BY THE COMMONWEALTH GOVERNMENT.

Year.	 N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1949–50	 97,035	108,239		32,751	8,528	9,033	255,586
1950-51	 198,165	146,728		34,368	17,225	9,178	405,664
1951-52	 203,505	149,384	102,697	35,300	17,527	9,367	517,780
1952-53	 208,888	151,227	98,820	36,075	17,723 :	9,819	522,552
1953-54	 209,772	156,752	62,413	37,370	18,280	10,246	494,833
1954-55	 106,525	53,820	36,460	15,871	9,453	3,457	225,586
1955-56	 208,763	445,747	66,588	12,245	9,984	29,822	773,149
1956-57	 383,555	527.213	88,068	128,467	51,855	68,974	1,248,132

Amounts shown in the foregoing table in respect of the years up to and including 1954-55 represent payments made under the Mental Institutions Benefits Act 1948. Amounts shown in respect of 1955-56 and 1956-57 represent payments made during the year shown under the States Grants (Mental Institutions) Act 1955. The total amounts payable to each State government under the last-mentioned Act are as follows:—

Australia		 	 	10,000,000
Tasmania	• •	 ٠.	 	355,000
Western Australia		 	 	720,000
South Australia		 ٠.	 	895,000
Queensland		 ٠.	 	1,460,000
Victoria		 ٠.	 	2,740,000
New South Wales		 	 	3,830,000
				£

There is no mental hospital in the Northern Territory or the Australian Capital Territory.

4. Medical Benefits.—A medical benefits scheme has operated since July, 1953, being authorized firstly by the National Health (Medical Benefits) Regulations and then by the National Health Act 1953.

The basic principle of the scheme is Commonwealth support of voluntary insurance against the costs of medical attention. The benefits payable by the Commonwealth are paid either on a fee-for-service basis in respect of the items set out in the first and second schedules to the National Health Act, or in the form of a subsidy, not exceeding half of the payments made to doctors by registered organizations under contract arrangements.

In order to qualify for the Commonwealth benefit, a person is required to be insured with a registered medical benefits organization. The organization pays the benefits to the contributor usually at the time it pays its own benefits. Reimbursement of the Commonwealth benefit is subsequently made to the organization by the Commonwealth.

An organization wishing to be registered by the Commonwealth for the purposes of the medical benefits scheme is required to provide to its contributors, subject to its rules, all benefits specified in the first schedule, at rates not less than those provided by the Commonwealth. The organization must be non-profit-making.

In 1956-57, Commonwealth expenditure on medical benefits was £6,146,029.

The following table shows the number of registered medical benefit organizations, their membership, the number of medical services rendered to members and their dependants, and payments of Commonwealth benefits and medical fund benefits to members of registered organizations. As many persons contribute on behalf of both themselves and

their dependants, the total number of persons covered by medical benefit schemes is considerably higher than the number of contributors. Reliable figures for coverage are not available.

MEDICAL	BENEFITS:	SUMMARY,	YEAR EI	NDED 30	th JUNE,	, <b>1957.</b>
Dostionless	New	Vic O'l	and S A	32/	Aust To	Austr

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Registered Organizations No. Members No. Medical Services No. Commonwealth Benefit £ Fund Benefit £	25 1,004,510 5,968,340 2,715,955 3,428,933	3,228,342 1,433,579	1,518,790 665,396	1,306,124	1,325,646 600,727		2,228,594 13,667,766 6,146,029

- (a) No medical benefit organization is registered in the Northern Territory or the Australian Capital Territory. Persons who live in one of those territories, or who are overseas, receive their fund benefit from an organization, and their Commonwealth benefit through an organization, which is registered in one of the States.
- 5. Pensioner Medical Service.—The Pensioner Medical Service, which commenced on 21st February, 1951, was introduced under the authority of the National Health (Medical Services to Pensioners) Regulations made under the provisions of the National Health Service Act 1948–1949. The service has been continued under the provisions of the National Health Act 1953–1957.

The service covers pensioners, and dependants of pensioners, who either were receiving an age, invalid, widow's or service pension before the 1st November, 1955, or would not have been debarred by reason of their income from receiving a pension at the maximum rate under the Social Services Consolidation Act 1947-1953 or the Repatriation Act 1920-1953. Broadly, this means pensioners whose income from sources other than their pension is not more than £104 a year (£2 a week). However, pensioners who were benefiting under the scheme before the additional means test was imposed continue to benefit. Beneficiaries of the scheme are provided with a free general practitioner service, but not with specialist services. A small fee may be charged by doctors who attend patients outside normal surgery or visiting hours. Doctors in the scheme are paid on a fee-for-service basis by the Commonwealth Government.

At 30th June, 1957, 4,990 doctors were enrolled in the scheme to attend to approximately 683,850 pensioners and their dependants.

During the year ended 30th June, 1957, doctors in the scheme performed 5,381,108 services—visits and surgery consultations—for persons enrolled in the scheme. For these services they were paid £5,962,403. The average number of services rendered by doctors to each person was 7.9.

6. Anti-Tuberculosis Campaign.—The main provisions of the Tuberculosis Act 1948 are as follows:—(a) Section 5 authorizes the Commonwealth to enter into an arrangement with the States for a national campaign against tuberculosis; (b) Section 6 empowers the Commonwealth to take over or provide specified facilities for the diagnosis, treatment and control of tuberculosis; (c) Section 8 provides for the setting up of an advisory council to advise the Commonwealth Minister for Health on matters relating to the national campaign; and (d) Section 9 authorizes the Commonwealth to pay allowances to sufferers from tuberculosis and their dependants.

Under an arrangement with the Commonwealth Government, each State is required to conduct a campaign against tuberculosis. The Commonwealth Government reimburses the State for all approved capital expenditure in relation to tuberculosis, and for net maintenance expenditure to the extent that it exceeds net maintenance expenditure for the year 1947-48. Thus, the States are required to carry out the physical or field work of the national campaign and the Commonwealth acts in an advisory, co-ordinating and financial capacity. For this reason, the Commonwealth has not found it necessary to make much use of its powers under Section 6.

An advisory council, known as the National Tuberculosis Advisory Council, has been set up and has held seven meetings. There are eleven members under the chairmanship of the Commonwealth Director-General of Health. The members are the Commonwealth Director of Tuberculosis, the six State Directors of Tuberculosis, the Consultant (Chest Diseases) of the Department of Repatriation, two specialist private practitioners, and the Chief Administrative Officer of the Commonwealth Department of Health.

To help reduce the spread of infection, the Commonwealth Government pays living allowances to persons suffering from tuberculosis, so that they might give up work and undergo treatment. These allowances have been in operation since 13th July, 1950. Since 24th October, 1957, the rates payable have been:

Married sufferer with a dependent wife £10 7s. 6d. a week.
Each dependent child under the age of 10s. a week (additional to child endowsixteen years

ment)

Sufferer without dependants ...

.. £6 10s. a week (reducible to £4 7s. 6d. a week if a person is maintained free of charge in an institution).

There is a means test on income but not on property. The allowance is reduced by the amount by which a person's income from sources other than his allowance exceeds, in the case of a married person, £7 a week, and in the case of a person without a dependent wife, £3 10s. a week.

The following table gives particulars of the number of new cases of tuberculosis notified in Australia for the year 1956-57.

TUBERCULOSIS: NEW CASES NOTIFIED, YEAR ENDED 30TH JUNE, 1957.

			Age Group	э.		
State.	 0-14.	15-34.	35–54.	55 and over.	Not Stated.	Total.
New South Wales	 66	423	623	480	9	1,601
Victoria	 75	262	278	190	9 5 2	810
Queensland	 44	151	202	230	2	629
South Australia	 34	135	109	71		349
Western Australia	 22	102	187	153	3	467
Tasmania	 25	62	66	55		208
Northern Territory Australian Capital	 8	23	12	13	1	57
tory	 1	7	2	1		11
Australia	 275	1,165	1,479	1,193	20	4,132

The following table sets out expenditure by the Commonwealth Government during 1956-57 on its anti-tuberculosis campaign.

ANTI-TUBERCULOSIS CAMPAIGN: EXPENDITURE BY THE COMMONWEALTH GOVERNMENT, 1956-57.

(£.)

State.	_		Allowances.	Maintenance.	Capital.	Total.
New South Wales Victoria Queensland South Australia Western Australia			527,161 361,303 244,186 158,401 91,545	1,607,000 1,091,456 1,080,232 319,045 469,945	989,576 120,056 671,778 89,426 503,977	3,123,737 1,572,815 1,996,196 566,872 1,065,467
Tasmania Northern Territory	··	••	78,055	171,087	6,397	255,539
Australian Capital Te  Australia	rritory 		1,460,651	4,754,765	2,381,210	8,596,626

The following table sets out expenditure by the Commonwealth Government on its anti-tuberculosis campaign since the start of the campaign.

# ANTI-TUBERCULOSIS CAMPAIGN: EXPENDITURE BY THE COMMONWEALTH GOVERNMENT 1947-48 TO 1956-57.

(£.)

_	Year	:	Allowances.	Maintenance.	Capital.	Total.
1947-48			 27,590			27,590
1948-49			 151,079	i		151,079
1949~50			 534,550		236,179	770,729
1950-51			 1,344,891	930,508	407,350	2,682,749
1951–52			 1,777,620	2,101,307	734,227	4,613,154
1952-53			 1,907,945	2,968,012	1,292,332	6,168,289
1953–54			 1,876,581	3,703,067	1,379,482	6,959,130
19 <b>54-</b> 55			 1,904,467	3,752,856	1,709,405	7,366,728
1955–56			 1,689,774	4,006,869	1,757,612	7,454,255
1956–57			 1,460,651	4,754,765	2,381,210	8,596,626

7. Anti-Poliomyelitis Campaign.—The success of the 1954 United States field trials of the poliomyelitis vaccine developed by Dr. Jonas Salk and his associates at the University of Pittsburg was announced in April, 1955. The Commonwealth Government immediately decided to produce the anti-polio vaccine in Australia.

With the advantage of the experience of the campaigns in the United States and Canada, Australia has adopted a vaccine which has already been proved to be safe and effective in building up immunity against poliomyelitis.

The vaccine was being produced in Australia by the end of 1955 under the most rigid safety conditions. Plans were made for comprehensive testing procedures to be carried out at many stages both during the production process and with the finished product. These tests ensured the maintenance of safety standards no less rigid that those laid down in other countries where vaccination campaigns were in progress. The Research Laboratory at the Fairfield Hospital, Melbourne, agreed to act as an independent testing authority under an arrangement with the Commonwealth Government, and the pathology department of the University of Melbourne also agreed to conduct tests. No vaccine was released for use unless the searching requirements of the Commonwealth Serum Laboratories, the Fairfield Hospital, and the University of Melbourne were met.

The vaccine was supplied to the States free of charge and the States accepted responsibility for the cost of their particular vaccination programmes. No child can be vaccinated without the consent of his parents or guardian.

Distribution of the Salk poliomyelitis vaccine to the States began in July, 1956. The States are responsible for the organization and running of their own campaigns and for the distribution of the vaccine in accordance with priority groups established by the National Health and Medical Research Council. The first priority group consists of children in the 0-14 age group, expectant mothers, and persons subjected to special risk. These persons have been found to be the most vulnerable.

Vaccination against poliomyelitis takes the form of three injections of the vaccine. The second injection is given approximately four weeks after the first, and the third injection is given not less than 32 weeks after the first.

Where the incidence of the disease in certain areas approaches epidemic proportions, special efforts have been made to vaccinate all persons giving their consent in the area as soon as possible.

There has been excellent response by the public to the poliomyelitis campaign, notwithstanding the widespread doubts which arose from mishaps overseas.

POLIOMYELITIS: NEW CASES NOTIFIED.

	Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
					Males					-
1953 1954 1955		239 384 343 143 149	183 147 317 145 137	85 105 81 95 60	385 191 88 91 63	21 25 244 15 177	66 62 8 4 34	i 	1 1 17 1 6	980 916 1098 498 626
					FEMALE	s.				
1952 1953 1954 1955 1956		176 251 219 75 86	152 104 255 90 114	74 93 59 80 46	324 201 86 81 54	16 20 190 18 224	34 49 2 4 21		  9 	776 718 820 348 550
					Persons	s.			<u> </u>	
1952 1953 1954 1955 1956		415 635 562 218 235	335 251 572 235 251	159 198 140 175 106	709 392 174 172 117	37 45 434 33 401	100 111 10 8 55	i 	26 1	1,756 1,634 1,918 846 1,176

8. Free Milk for School Children Scheme.—In 1950, the States Grants (Milk for School Children) Act was passed. The object of this Act was to improve the diet of school children by the addition of a small quantity of milk each day. All children under the age of thirteen years attending public or private primary schools, including nursery schools, kindergartens, crèches and aboriginal missions, are eligible to receive this issue. Wherever practicable, the milk is given to the children in one-third of a pint bottles. The cost of the milk plus half the capital or incidental costs, including administrative expenses of the scheme, is reimbursed by the Commonwealth to the States. All States now participate in the scheme. At 30th June, 1957, approximately 1,100,000 children were receiving free milk.

Expenditure by the Commonwealth Government under the scheme since its inception has been as follows:—

COMMONWEALTH EXPENDITURE ON NUTRITION OF SCHOOL CHILDREN, (£.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Australia.
1950–51 1951–52 1952–53 1953–54 1954–55 1955–56	35,683 440,316 701,448 881,600 980,589 1,042,173 1,094,469	140,000 433,766 429,000 498,000 540,000 600,901	55,000 204,600 323,340 308,000 386,999	74,642 175,400 156,000 156,000 184,000 200,000	67,480 92,996 107,138 127,015 137,211 158,659	90,390 60,000 219,580 145,695 185,000 156,275	158 233 552 921 1,016 1,323	92 3,989 5,261 6,891 10,760 14,048 16,146	35,775 816,975 1,524,104 2,005,361 2,242,320 2,411,448 2,614,772

The figures in the foregoing table differ slightly from those in the table shown in Chapter XV., Welfare Services (p. 546), since they include capital and administrative costs. Figures in the latter table represent only expenditure which is a charge on the National Welfare Fund (i.e., the cost of the milk).

#### § 3. Commonwealth Laboratories and Research Institutions.

1. National Health and Medical Research Council.—In 1926, the Commonwealth Government established a Federal Health Council, in accordance with a recommendation of the Royal Commission on Health (1925), "for the purpose of securing closer co-operation between the Commonwealth and State Health Authorities". This council held sessions

each year except in 1932. In 1936, the Commonwealth Government decided to create a body with wider functions and representation, and the National Health and Medical Research Council was established with the following functions:—

- To advise Commonwealth and State Governments on all matters of public health legislation and administration, on matters concerning the health of the public and on medical research.
- To advise the Commonwealth Government on the expenditure of money specifically appropriated to be spent on the advice of this Council.
- To advise the Commonwealth Government on the expenditure of money upon medical research and on projects of medical research generally.
- To advise Commonwealth and State Governments upon the merits of reputed cures or methods of treatment which are from time to time brought forward for recognition.

The council consists of the Commonwealth Director-General of Health (as chairman), two officers of his department, the official head of the Health Department in each State, together with representatives of the Federal Council of the British Medical Association, the Royal Australasian College of Surgeons, the Royal Australasian College of Physicians, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the Australian Dental Association, the Australian Council of the College of General Practitioners, the College of Pathologists of Australia and (jointly) the five Australian universities having medical schools. A prominent layman and laywoman, appointed by the Commonwealth Government, also serve on the council.

The first session of the National Health and Medical Research Council was held at Hobart in February, 1937. The forty-third session was held at Melbourne in May, 1957.

Under the Medical Research Endowment Act 1937, the Commonwealth Government has made an annual appropriation of funds to assist:—(a) departments of the Commonwealth or of a State engaged in medical research; (b) universities for the purpose of medical research; (c) institutions and persons engaged in medical research; and (d) in the training of persons in medical research.

Approved research institutions under this system now number 51. During 1955, grants for projects numbered 50 in the following fields:—bacteriology, biochemistry, biophysics, clinical research, dentistry, epidemiology, haematology, medical chemistry, neurology, neuro-physiology, obstetrics, pathology, physiology and pharmacology, tuberculosis and virus diseases. In certain instances, equipment and apparatus have been made available by the council; this has greatly facilitated some specialized lines of research. The wide scope of work being carried out is greatly assisted by the formation of committees which meet regularly and advise the council on such subjects as industrial hygiene, public health, epidemiology, maternal and child welfare, radio-active isotopes, antibiotic distribution, tropical physiology and hygiene, tuberculosis, staphylococcus infections, dentistry and the latest developments in X-ray technology and application.

The research work being done under these grants is of a high standard, many of the individual investigators enjoying international reputations. Beyond this practical achievement, the original objectives of the council are being attained in encouraging young graduates to take up research work and in securing a continuity and permanence of medical research in Australia.

Four scholarships are available each year to allow overseas study for one year; in addition, assistance is often given to scholarship-holders to cover part of their travel expenses.

An insurance benefit scheme for these medical workers on the lines of the Federated Superannuation System for Universities is now in operation.

2. Commonwealth Serum Laboratories.—The Laboratories were established in 1916 under the administration of the Department of Trade and Customs and since 1921 have operated under the Department of Health. Buildings occupy a site of 23 acres at Royal Park, Melbourne, and a farm of 325 acres is situated at Broadmeadows nine miles from Melbourne.

Their basic function is to ensure the supply of essential biological products to the Commonwealth in line with its national health needs. This includes—

- (a) Production and supply of biological products not otherwise freely available
  in Australia because of the absence of local manufacturers or because of
  difficulties associated in importing biological products and marketing them
  in satisfactory condition. (Many biological products deteriorate quickly.)
   (b) Research and development directed towards the improvement of essential
- (b) Research and development directed towards the improvement of essential biological products or for their introduction.

Since their foundation, the Laboratories have greatly extended in size and scope. They now produce some 4,000 different biological products for use in the diagnosis, prevention and treatment of human and animal diseases. Professional, technical and other staff totals approximately 900.

Products comprise a full range of human bacterial and virus vaccines, veterinary bacterial and virus vaccines, serum products such as blood fractions, a wide variety of antibacterial and antitoxic sera, antivenenes, penicillin, endocrines, including insulin, A.C.T.H., pituitary and thyroid extracts, allergy test materials and desensitizing preparations, culture media and diagnostic agents for clinical and laboratory work.

Continuous research is conducted into the relevant aspects of bacteriology and immunology, and related fields. As the growth of medical and scientific knowledge in Australia and overseas reveals new methods of diagnosis, prevention and treatment of diseases, this information is applied to the preparation of new biological products at the Laboratories, the most recent being the production of poliomyelitis (Salk) vaccine.

Facilities are maintained for investigation in relation to public health matters which it is inconvenient or impracticable to handle at the Commonwealth Health Laboratories or the School of Public Health and Tropical Medicine.

The Laboratories serve as a national centre for the maintenance in Australia of International Standards of the Permanent Commission on Biological Standards (World Health Organization). They act as a regional reference centre for W.H.O. in collating reports of the prevalence of certain infectious diseases and provide facilities for the identification of diseases.

Veterinary biological products produced at the Laboratories have given the lead to other producers in Australia, resulting in the diminution of incidence of a number of serious infectious stock diseases.

3. The Commonwealth Health Laboratories. Health Laboratories, of which there are fourteen, are situated in the following towns: Albury, Bendigo, Cairns, Canberra, Darwin, Hobart, Kalgoorlie, Launceston, Lismore, Port Pirie, Rockhampton, Tamworth, Toowoomba and Townsville. They were established as an essential part of the quarantine system but were also to undertake research into local health problems and to provide doctors of each district with up-to-date facilities for laboratory investigation and diagnosis. It was realized that co-operation between the general practitioner with his clinical observations and knowledge of the environment of disease on the one hand, and the staff of a well-equipped laboratory on the other, is essential to the investigation and control of disease.

From this standpoint, the Laboratories have already proved their value in the determination of leptospirosis and endemic typhus in North Queensland, in the investigation of special local problems in Darwin, of undulant fever throughout Australia, of silicosis and tuberculosis at Kalgoorlie and of plumbism at Port Pirie. In these investigations, close co-operation has existed with State and local health and hospital services; especially is this so in Queensland where collaboration has yielded exceptionally valuable results in differentiating the groups of fevers previously unclassified in that State. In this investigational work, as well as in more routine activities, the Laboratories have at their disposal the full resources and technical and specialist facilities available at the Commonwealth Serum Laboratories and the School of Public Health and Tropical Medicine, Sydney.

4. Commonwealth Acoustic Laboratories. During the years 1942-46 the Acoustic Research Laboratory at Sydney, which was sponsored by the National Health and Medical Research Council, investigated problems of noise and difficulties of intercommunication in aircraft and tanks. In subsequent years it directed its attention to the problem of deafness in children, particularly the group whose affliction was caused by the mother's contracting rubella in the early months of pregnancy. In January, 1947, the Department of Health took over the laboratory. Subsequently it established branch laboratories in all other State capital cities.

The Acoustic Laboratories Act 1948 allowed the Laboratories to:—(1) provide hearingaids for the Repatriation Commission and the Department of Social Services; (2) assist the Education Departments of the States in measuring deafness, by providing and maintaining portable audiometric equipment; (3) make independent tests on behalf of various State and other authorities; (4) investigate problems associated with noise in industry; (5) make hearing tests of Civil Aviation aircrew as required by international agreement; (6) give advice to the armed services on noise problems; and (7) provide hearing aids to schoolchildren and members of the defence forces as required. The Laboratory in Sydney is responsible for the training of personnel for the whole Acoustic Service, the production of equipment, the calibration of hearing-aids and audiometers and the technical administration of the branch laboratories.

5. Commonwealth X-ray and Radium Laboratory. The persistent increase in cancer mortality has led to the development in Australia of a national organization directed towards the control of this disease. The Commonwealth Department of Health has actively participated in this movement. Annual cancer conferences, convened by the Department from 1928 up to the beginning of the 1939-45 War, provided an opportunity each year for those engaged in the campaign against the disease to meet for the discussion of problems and the determination of lines of action for further development.

Cancer conferences were not held during the war and have not been revived, primarily because facilities for the discussion of the various aspects of the treatment of cancer have been provided by the regular congresses of the British Medical Association and of the different specialist colleges and associations. The Department has, however, continued to maintain liaison in the general programme against cancer and in March, 1955, convened a conference in Canberra of representatives of the Commonwealth and States to discuss the co-ordination of anti-cancer activities. This conference recommended that an annual conference of State-sponsored anti-cancer organizations should be convened by the Commonwealth Government and that consideration should be given to the formation of a nationwide Anti-cancer Organization comprising representatives of the statutory Anti-cancer Organizations.

A total of 10 grams of radium, purchased in 1928 by the Commonwealth Government for use in treatment and research, has been distributed on loan to treatment centres throughout Australia. Under the terms of this loan, treatment at well-equipped clinics is available to all persons requiring it, irrespective of their ability to pay. This work is co-ordinated by the Department. From time to time, portions of the original radium holding have been remounted by the Department in forms more suitable for recently developed techniques.

Realizing the importance of accuracy in determining the quality of radiation used in the treatment of cancer and in measuring the dosage of this radiation delivered to the tumour, and the need for the investigation of physical problems in connexion with the utilization of X-rays and radium in the treatment of disease, the Commonwealth Department of Health, in 1935, extended the work of the Commonwealth Radium Laboratory, established in 1929, to include the investigation of the physical problems of radiation therapy generally. This laboratory, known as the Commonwealth X-ray and Radium Laboratory, is maintained, controlled, and staffed by the Commonwealth Department of Health. It is situated, by agreement with the University of Melbourne, within the University grounds. On 4th March, 1957, it also established offices at Surry Place, Melbourne. It is specially designed for work with X-ray and radium, and is amply provided with all necessary equipment for research work, including a 500,000 volt high-tension generator. The free-air chamber which acts as the Australian standard X-ray dosemeter is maintained in the Laboratory.

The Laboratory co-operates closely with the local physical services which have been developed in the other capital cities of Australia to provide local facilities for the production of radon, for the calibration of X-ray therapy equipment, and for the measurement of radiation exposure of X-ray and radium workers. It also undertakes investigations into physical problems arising in the use of X-rays and radium in treatment. In recent years, the Laboratory has widened its functions to include investigations of the physical aspects of the diagnostic use of X-rays with particular emphasis on miniature radiography.

During the year 1956-57, a total of 88,393 millicuries of radon was prepared and issued from the Laboratory in the form of implants, needles and tubes for use in Victoria, Tasmania, South Australia and Western Australia. A further 27,209 millicuries were issued by the associated centres in Sydney and Brisbane. The corresponding figures for 1955-56 were 91,353 and 28,777 millicuries respectively. The issue of radon from a few centres to serve hospitals all over the continent is an Australian development and enables very efficient use to be made of the radium available.

Supplies of artificial radio-isotopes have been made available through the development of atomic energy programmes overseas. The radio-isotopes can be used medically either as an alternative to natural radio-active materials such as radium and radon, or they may be administered orally or intravenously to patients, in which case the selective up-take by a particular organ or tissue may be used to determine its condition. In addition, radio-isotopes have great potential in industry, in production control, the investigation of the efficiency of processes and as research tools.

The importation of artificial radio-isotopes is restricted under Customs (Prohibited Imports) Regulations, approval for importation being given through the Laboratory by the Director-General of Health after it has been established that the isotope will be used safely and usefully. Isotopes used in Australia are obtained from Great Britain, Canada and the United States of America, and are imported through the Laboratory.

During 1956-57, 41 different radio-isotopes were imported for all purposes. This

represented 431 separate deliveries from oversea sources of supply.

Regular bulk supplies of radio-isotopes for medical purposes are obtained and these are distributed by the Laboratory as individual doses for use on patients throughout Australia according to a policy developed by the Committee on Radio-isotopes of the National Health and Medical Research Council. These radio-isotopes are issued free of charge.

Nine different radio-isotopes were imported in the year 1956-57 for medical purposes, radio-iodine, radio-phosphorus and radio-gold being in greatest demand. However, during 1956-57 an increasing use was made of radio-chromium and radio-iron as labelled compounds in haematological investigations and of radio-cobalt labelled vitamin B12 and radio-iodinated human serum albumin. Since only relatively small activities of these radio-isotopes are used per patient investigated, the total number of activities issued during the year is small. The increased use of these radio-isotopes is illustrated by the use of radio-chromium which was issued for 96 patients in 1955-56 and for 990 patients in 1956-57.

In all approximately 6,000 individual doses of radio-isotopes were issued by the Laboratory during 1956-57 for use on patients.

The use of radio-isotopes in research and industry is also steadily increasing.

Investigations of the degree of protection necessary in particular applications of X-rays and radio-active materials continue to be an important activity of the Laboratory. It prepares specifications of the protection facilities necessary in departments and laboratories employing ionizine radiation in medicine, research and industry and carries out measurements of radiation levels in existing departments and laboratories. An extensive film badge service to measure the radiation dose received by those exposed to ionizing radiation is maintained. In 1956-57, 12,548 film badges were processed and assessed. The corresponding figure for 1955-56 was 9,977 films.

The Laboratory has an extensive library of special radiological literature and issues regular library bulletins. Through its advisory service the Laboratory is available for consultation to all users of ionizing radiation. Technical communications on topics related to its functions are issued from time to time to medical men engaged in the clinical investigation and treatment of cancer and to research workers and those in industry interested in applications of radiation.

6. The School of Public Health and Tropical Medicinc.—In March, 1930, the Commonwealth Government, under an agreement with the University of Sydney, established a School of Public Health and Tropical Medicine at the University of Sydney for the purpose of training medical graduates and students in the subjects of public health and tropical medicine. The organization of the Australian Institute of Tropical Medicine at Townsville was merged in the new school, and the staff, equipment and material were transferred to Sydney.

The work of the school comprises both teaching and investigation. Courses are held for the university post-graduate diploma of public health and the diploma of tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Other classes include students in architectural, social, and school hygiene, lay officers and nurses in the tropical services, and missionaries. Training is also provided for certain personnel of the armed services, for sister tutors and for laboratory workers from various services and institutions.

Investigation covers a wide field of public health and medical subjects, both in the laboratory and in the field. Field work has been carried out in Australia and in Papua, New Guinea, Norfolk Island and Nauru in co-operation with the local administrations and the South Pacific Commission. Sections of Child Health, Occupational Health and Medical statistics have been recently added.

7. Commonwealth Bureau of Dental Standards.—This laboratory is concerned with research, standards and testing related to dental and allied materials and processes. It became part of the Department of Health in January, 1947, but for the preceding eight years it was sponsored by the National Health and Medical Research Council. During that time the former Dental Materials Research Laboratory established itself as a recognised authority in its special field and proved to be of particular value to the defence services, government departments, the dental profession and manufacturers of dental products. By maintaining the quality of dental materials and improving techniques for their use, the Bureau continues to assist the dentist in his service to the community—a service that calls for restorations and appliances of a high degree of precision and permanence under very exacting conditions.

The functions of the Bureau are: (1) original research into dental equipment, materials, techniques and processes; (2) regular reporting of the results of these investigations in recognized Australian scientific journals; (3) the development through the Standards Association of Australia, in consultation with a committee representing the Commonwealth Department of Health, the Australian Dental Association and manufacturers and distributors, of specifications for dental materials and equipment; and (4) the provision of a consultative service and testing facilities for manufacturers and distributors of dental materials with a view to assisting them in the improvement of existing products and the development of new materials.

8. The Australian Institute of Anatomy. The Australian Institute of Anatomy, situated in Canberra, occupies a monumental building erected by the Commonwealth Government under the Zoological Museum Agreement Act of 1924. Prior to the passing of this Act, the Commonwealth Government had expressed regret that the Australian nation possessed neither a collection of specimens of the unique and fast disappearing fauna of Australia, nor a museum in which such specimens could be preserved for future generations. Sir Colin MacKenzie, the first Director of the Institute of Anatomy, presented his entire private collection of Australian fauna to the Commonwealth Government. This gift was housed in the Australian Institute of Anatomy. The Institute became part of the Commonwealth Department of Health in 1931.

The original collection has been greatly augmented. A list of gifts to the Australian nation may be found in Official Year Book No. 39, p. 1277. In addition to these donations of material, there have been several endowments for orations and lectures, particulars of which are shown in previous issues of the Official Year Book.

The Institute consists of a museum section and a laboratory section. In the museum section, which is open to the public, is displayed a portion of the original collection of anatomical specimens assembled by Sir Colin MacKenzie, together with ethnological collections which have been added since the foundation of the Institute. The material has been arranged to present simple lessons in human hygiene, to display the anatomical features and peculiarities of Australian fauna, and to display aspects of the character of Australian aboriginals and natives of Papua and New Guinea.

A number of Health Department sections are now situated in the Institute. These include the Museum and Medical Artistry Section, the Nutrition Section, the Commonwealth Health Laboratory for the Australian Capital Territory and the Veterinary Laboratory.

The scientific research work of the Institute is now concentrated on problems of nutrition. It takes the form of field surveys of the dietary status of the Australian population and laboratory investigations into the biochemistry of nutrition and metabolism. For further information concerning the Institute see Official Year Book No. 32, pp. 919-21.

#### § 4. Control of Infectious and Contagious Diseases.

- General.—The provisions of the various Acts with regard to the compulsory notification of infectious diseases and the precautions to be taken against the spread thereof may be conveniently dealt with under the heading of quarantine and notifiable diseases, including venereal diseases.
- 2. Quarantine.—The Quarantine Act is administered by the Commonwealth Department of Health, and has three sections of disease control, as follows:—(i) Human quarantine, which controls the movements of persons arriving from overseas until it is apparent that they are free of quarantinable disease; (ii) Animal quarantine, which controls the importation of animals and animal products from overseas and the security of other animals present on vessels in Australian ports; and (iii) Plant quarantine, which regulates the conditions of importation of all plants and plant products with the object of excluding plant diseases, insect pests and weeds.

In respect of interstate movements of animals and plants, the Act becomes operative only if the Governor-General considers that Commonwealth action is necessary for the protection of any State or States; in general, the administration of interstate movements of animals and plants is left in the hands of the States.

(i) Human Quarantine. All passengers and crews arriving in Australia from overseas, whether by air or sea, are subjected to a medical inspection by quarantine officers for the purpose of preventing the introduction of disease into Australia. At the major ports, full-time quarantine officers carry out the work but in the minor ports local doctors act as part-time quarantine officers. In each State, quarantine activities are controlled by a medical officer of the Commonwealth Department of Health with the title of Commonwealth Director of Health.

The main concern of the examining officers is to detect cases of the quarantinable diseases smallpox, cholera, yellow fever, plague and typhus fever. These diseases are not endemic infAustralia and it is a matter of extreme moment to prevent their entry. Quarantine stations at the major ports and at Darwin, Thursday Island and Townsville are kept ready for occupation at all times. In addition, persons arriving in Australia and suffering from infectious diseases such as chicken pox, mumps, scarlet fever and measles are directed to appropriate care and placed in isolation where necessary.

The increasing use of air travel has created particular quarantine problems. Before the use of air transport, persons suffering from an infectious or quarantinable disease would show symptoms on arrival and before disembarkation. Passengers travelling by air however can arrive well within the incubation period, and they are, therefore, required to be vaccinated against smallpox before departure. Those from an area infected with cholera or yellow fever are required to be inoculated in addition against the particular disease prevalent in that area. They are also required to report any sickness which they might suffer within the fourteen days after arrival. All passengers, whether they arrive by sea or air, are required to give their intended place of residence so that they may be traced if a case of disease occurs among the passengers on the aircraft or ship by which they travelled to Australia.

The number of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of oversea vessels and aircraft calling at Australian ports during the year ended 30th June, 1957, and during the preceding four years, are shown in the following tables.

HUMAN QUARANTINE: CASES OF INFECTIOUS (NON-QUARANTINABLE)
DISEASES ON OVERSEA VESSELS AND AIRCRAFT CALLING AT
AUSTRALIAN PORTS, YEAR ENDED 30th JUNE, 1957.

•	Disease.			Number of Oversea Vessels and Aircraft on	Number of Cases of Infectious Disease.		
	Jiscase.		<del> </del>	which Cases were Found.	Passengers.	Crew.	
Chicken Pox				23	44		
Influenza				2	2	9	
Measles			30	146	1		
Mumps				4	6		
Rubelia				3	11		
Whooping Cough	• •	• •	• •	3	7	• •	
Total				(a) 53	216	10	

<sup>(</sup>a) On some vessels there may be cases of more than one disease.

# HUMAN QUARANTINE: OVERSEA VESSELS AND AIRCRAFT ARRIVING IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE) DISEASE FOUND THEREON.

Year ended 30th June.			versea Vessels aft Cleared.	Number of Oversea Vessels and Aircraft	Number of Cases of Infectious Disease.			
			Ships.	on which Cases were Ships. Aircraft. Found.		Passengers.	Crew.	
1953			2,231	1,173	54	365	7	
1954			2,254	1,221	44	319	5	
1955			2,319	1,310	48	267	3	
956			2,592	1,417	26	104	4	
957			2,702	1,747	53	216	10	

(ii) Animal Quarantine. Animal quarantine, authorized by the provisions of the Quarantine Act 1908-1950, aims at preventing the introduction or spread of animal diseases. It covers the importation of all animals, raw animal products and biological cultures associated with animal diseases and goods associated with animals.

Domesticated animals, i.e., horses, cattle, pigs, sheep, goats, dogs, cats and poultry, are admitted from a limited number of countries depending on diseases present in the country of origin. All must be accompanied by health certificates which include prescribed

tests. On arrival in Australia, they are subject to quarantine detention.

Zoological specimens are imported into registered zoos where they remain in permanent quarantine. Circuses are also registered if exotic species of animals are kept. In a somewhat similar manner, animals for scientific purposes are imported to approved laboratories. All these premises are kept under constant surveillance. Raw animal products such as hair, special types of wool, skins and hides, are specially treated under quarantine control, whilst such items as raw meat, sausage casings and eggs, which cannot be sterilized, are admitted from very few countries. Other items such as harness-fittings, fodder, and ship's refuse, are treated to destroy any possible infection.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine; formerly the full responsibility for this administration fell on the Director of Quarantine; the organization of the Division provides an excellent example of Commonwealth and State co-operation. The central administration is situated within the Health Department at Canberra, with a Director, an Assistant Director and Veterinary Officers. The Principal Veterinary Officer of the Department of Agriculture in each State is appointed Chief Quarantine Officer (Animals) of the State, and members of his staff Quarantine Officers (Animals). These State officers carry out the quarantine policy formulated by the central administration. Quarantine accommodation is provided in permanent animal quarantine stations at each capital city.

The Division participates in world-wide international notification of the more serious contagious diseases of animals and maintains a census of such diseases throughout the world. Information regarding animal diseases and parasites in Australia is also collected and disseminated by means of service publications. Consultation on technical matters is maintained with various scientific institutions, notably the Commonwealth Scientific and Industrial Research Organization. In matters of policy and the quarantine control of imports, there is a close liaison with the Department of Customs and Excise.

The Division collaborates with the "General" and "Plant" divisions of the quarantine service. Many diseases of animals are communicable to man and for this reason "Animal" and "General" quarantine administration are in some respects inseparable. Similarly the interests of "Animal" and "Plant" divisions overlap, many items such as insects, fodder and straw being the subject of combined control.

In each alternate year, the Director of the Division convenes the Biennial Conference of Principal Commonwealth and State Veterinarians which meets under the aegis of the Australian Agricultural Council to discuss problems of animal health and disease control and animal quarantine.

In the Australian Capital Territory veterinary officers of the division exercise control over animal disease, dairy and piggery hygiene, manage the Canberra abattoir and give advice to stockowners.

(iii) Plant Quarantine. Since 1st July, 1909, the importation into Australia of all plants or parts of plants, cuttings, seeds and fruits, whether living or dead, has been subject to an increasingly stringent quarantine with the object of preventing the introduction of insect pests, plant diseases and weeds not yet established in this country. Under the Quarantine Act 1908–1950, quarantine inspectors are required to examine all plant material at the first port of entry and to release only material free from diseases and pests. Everyone entering Australia is required to declare if he or she has any plant material in luggage or personal effects. Heavy penalties are laid down for those found evading the regulations. All plant material entering as cargo must also be declared.

When the Commonwealth became responsible for all plant quarantine, the State Governments agreed to co-operate by providing and maintaining inspection facilities and personnel, for which they are reimbursed by the Commonwealth. In 1921, the administration of the regulations came under the newly-formed Department of Health, and in 1927 the Division of Plant Quarantine was created, under a Director who is responsible for policy and legislation and for co-ordinating the work of the State officers, who carry out the detailed administration in their capacity as Commonwealth officers.

Any plant material found carrying diseases or pests, or suspected of doing so, may be ordered into quarantine for remedial treatment, or if the treatment be impracticable may be destroyed. The cost of treatment is met by the importer. Regulations governing the different types of plants are based on the following broad principles:—(a) The importation

of plants likely to be infected with plant diseases, noxious fungi or poison plants is prohibited; (b) Agricultural seed must conform to standards of purity, insect pest and disease freedom; (c) Many commodities such as hops, cotton, peanuts in shell, nursery stock, potatoes, certain crop seeds, vines and specified plants may be imported only by approved importers under special conditions; (d) Certain plant products such as bulbs and timber (in logs or sawn) from specified areas may be imported only if accompanied by certificates showing that prescribed treatment has been given in the country of origin.

3. Notifiable Diseases.—(i) General. (a) Methods of Prevention and Control. Provision exists in the Health Acts of all the States for the observance of precautions against the spread of, and the compulsory notification of, infectious disease. When any such disease occurs, the local authority must be notified at once, and in some States notification must be made also to the Health Department.

As a rule, the local authorities are required to report from time to time to the Central Board of Health in each State on the health, cleanliness and general sanitary state of their several districts, and on the appearance of certain diseases. Regulations are prescribed for the disinfection and cleansing of premises, and for the disinfection or destruction of bedding, clothing or other articles which have been exposed to infection. Bacteriological examinations for the detection of plague, diphtheria, tuberculosis, typhoid and other infectious diseases within the meaning of the Health Acts are continually being carried out. Regulations are provided in most of the States for the treatment and custody of persons suffering from certain dangerous infectious diseases, such as smallpox and leprosy.

(b) Diseases Notifiable and Cases Notified in each State and Territory. The following table, which has been compiled by the Commonwealth Department of Health, shows for each State and Territory the diseases notifiable in 1956 and the number of cases notified.

Diseases not notifiable in a State or Territory are indicated by an asterisk.

DISEASES NOTIFIABLE IN EACH STATE AND TERRITORY OF AUSTRALIA AND NUMBER OF CASES REPORTED DURING THE YEAR ENDED 31st DECEMBER, 1956.

Disease.		l	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Acute rheumatism			156	157	164	15	21	•	11	1	525
Amoebiasis	• •		•	5		1	7		١	1	14
Ankylostomiasis			33	2	343		1		66		445
Anthrax			•	1			l		١	٠ ا	1
Bilharziasis									i		
Brucellosis			12	18		3	3	1		1	37
Chorea		!	15	23	1	Ī	1	•	1	1	42
Dengue					•			*			
Diarrhoea, infantile			270	652	173		48	1	13	1 8 1	1,165
Diphtheria			70	103	20	7	145	2	1	٠. ،	348
Dysentery, bacillary				94	308	37	71	1	25		536
Encephalitis			34	44	1	23	2				104
Erythema Nodosum				19		4	1		1	:	25
Filariasis			*		1					٠ )	1
Homologous serum jaun	dice				• "						
Hydatid				12		1		18			31
Infective hepatitis			4,435	3.056	•	79 Î	181	247	79	72	8,861
Lead poisoning			*		14		13	•			27
Leprosv				1	1.		34		14	۱ ۱	50
Leptospirosis			22	3	199						224
Malaria				11	18		6		35	l i	70
Meningococcal infection			112	142	44	12	13	36	3	2	364
Ophthalmia		i	*		•				5		5
Ornithosis			3	1			- : :	· •			4
Paratyphoid fever			4	3 1	1		i	13		1 1	21
Poliomyelitis			240	251	112	122	401	55		13	1.194
Puerperal fever			41	2	50	3	1 1	3	5		105
Rubella			• ` `	1,681	19	80ō	85	1	20		2,606
Salmonella infection		- : : !	*	*	ا 🛉	26	27	* *		2 :	55
Scarlet fever			574	681	257 Ì	249	57 I	20	5	14	1.857
Tetanus		-::'	* ' '	7	36	5	15	•	1		64
Trachoma		11.1	*	i i	*		280		154		435
Trichinosis			*	• 1		1	200				
Tuberculosis			1.702	878	726	349	463	242	46	13	4.419
Typhoid fever	• •	1	1,715	12	7		8		2		44
Typhus—flea, mite or tic	k horne		15	2	35	2	16		-	• • •	60

<sup>\*</sup> Not notifiable.

Note.-No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified.

(ii) Venereal Diseases. The prevention and control of venereal diseases are undertaken by the States. Each State has a Venereal Diseases Act, or provisions in the Health Act govern the control of these diseases. Under these Acts, treatment has been made compulsory in every State. Consequent steps have been taken to ensure free treatment by medical practitioners or in subsidized hospitals and clinics. Registered pharmaceutical chemists are allowed to dispense only prescriptions signed by medical practitioners. Clinics have been established and, in some cases, beds in public hospitals have been set aside for patients suffering from these diseases.

Penalties may be imposed on a patient who fails to continue under treatment. Clauses are inserted in the Acts which aim at preventing the marriage of any infected person and the employment of an infected person in the manufacture or distribution of foodstuffs.

# § 5. Commonwealth Grants to Organizations Associated with Public Health.

- 1. General.—In addition to providing the services mentioned in sections 1-4 above, the Commonwealth Government gives financial assistance to certain organizations associated with public health which it desires to encourage. Examples of organizations included in this category are the Lady Gowrie Child Centres, the National Fitness Organizations, the Royal Flying Doctor Service of Australia, and the Red Cross Blood Transfusion Service.
- · 2. Lady Gowrie Child Centres.—Sessions of the National Health and Medical Research Council and the reports of the Commonwealth Advisory Council on Nutrition have called attention to the need for greater effort throughout Australia directed towards the care of the growing child, especially during the pre-school period. Movements for the welfare of the school child and the care of the infant are already developed by State authorities as recorded in sections 2 and 3 of division A of this chapter (see pp. 516-520). The Commonwealth Government felt that more could be done for the child of pre-school age, and it was decided to give a lead by assisting in the provision of facilities for demonstrating what could be done and the practical methods which could be applied. It therefore established in each capital city a pre-school demonstration centre, known as the Lady Gowrie Child Centre, and, in order to achieve the best results in association with those who have had experience in this field, it secured the co-operation of the federal organization of Kindergarten Unions which operated under the title of "The Australian Association for Pre-school Child Development". A suitable site was secured in each capital city and the necessary school structure was built. This organization has since been extended to include all pre-school organizations and its title has been changed to "The Australian Pre-school Association".

The Australian Pre-school Association administers the Lady Gowrie Child Centres for the Commonwealth Department of Health. An annual grant of £33,500 is received of which £29,850 is divided equally among six centres; £2,000 is allocated for the payment of salary and travelling for the Federal Pre-school Officer of the Association and £150 is a contribution to office expenses of the A.P.A. The Commonwealth Department of Health retains £1,500 for the maintenance of buildings.

The specialized function of the centres is that of demonstration and research and the programmes are carried out under the supervision of the Federal Officer. Each centre is concerned with a study of the factors promoting and retarding physical and mental health in young children, and in demonstrating an educational health programme based on the developing needs of children aged 3 to 6 years. Detailed case history records are kept for each child and these are discussed at weekly staff meetings of teachers, the sister, and the social worker, and form the basis for the guidance of child and parents. These records are available for approved research students.

The centres are used for observation by university students of Medicine, Psychology, Education, Social Studies, Architecture, Physical Education, Teacher Training Colleges, Nursing Colleges and Domestic Science. A number of research projects have been carried out into problems relating to the pre-school child.

In Sydney and Brisbane, the centres are used as a laboratory for a Social Paediatrics course for advanced medical students.

A research project at the Perth Centre is now in progress on "The Development of Concepts of Social Relations in Pre-school Children", under the direction of the University

of Western Australia. All centres are gathering material on possible stress in children—when (1) mothers are working outside the home, (2) mothers are in hospital, or (3) families are migrants.

In June, 1956, the Commonwealth Government made a grant of £3,000 to cover a two-year research study at the Sydney centre, under the supervision of the Institute of Child Health. Each centre has a committee of management responsible for the disbursement of funds.

3. National Fitness.—In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government appointed a Commonwealth Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and Local Government authorities in the movement. Following the recommendations of the first Commonwealth Council meeting in 1939, the Commonwealth Government agreed to make available an annual sum of £20,000 for five years and grants were allocated to each State for purposes of organization and to each of the six Australian universities to establish lectureships in physical education. In June, 1942, this grant was increased to £72,500 to include grants to State Education Departments and for the work in the Australian Capital Territory.

Autonomous National Fitness Councils operating in each State are engaged in voluntary leader training, camping and hostelling, co-ordinating and promoting the work of amateur sports organizations, and providing advisory services to these organizations.

In some States, school camps are held as part of the regular school programmes. In Western Australia, a combined white and aboriginal children's camp has become a regular annual feature. Education departments spend their grant on physical education in schools and teachers' colleges. In New South Wales, the Education Department is providing high schools with pre-fabricated gymnasiums, and in Queensland 24 swimming pools have now been provided at schools.

A number of universities provide either a diploma course in physical education or a major course in physical education as part of a degree course.

An annual grant is made to sports and youth organizations in the Australian Capital Territory for the purchase of equipment, the development of coaching schemes, and the extension of club and camp facilities. In 1956, approval was given for the allocation, on a £1 for £1 basis, of £10,000 to the Y.M.C.A. from the accumulated balances of the A.C.T. National Fitness Fund for the erection of a central indoor recreation centre which will be for the use of all youth and sports organizations in the Australian Capital Territory.

4. Royal Flying Doctor Service of Australia.—The purpose of the Royal Flying Doctor Service of Australia is to provide medical and dental services to white and aboriginal persons in isolated areas. Most remote homesteads are equipped with two-way radio sets which they use for receiving ordinary radio programmes, participating in the School of the Air, and for contacting each other. In cases of minor illness or injury, they also use these sets to seek medical advice. If the illness or injury is serious, a doctor holding an aeroplane pilot's licence flies to the homestead and, if necessary, flies the patient to the nearest hospital. Standard medicine chests are supplied by the service. Each chest contains a first-aid book and instructions on the use of the various drugs and medical supplies in it. Further instructions are given by doctors over the air.

From time to time, special purpose work is undertaken in connexion with flood relief, searching for lost parties and co-ordinating cattle movements.

The service is not conducted with a view to profit. In some sections, small charges are made for particular services or a fixed annual charge is levied on graziers. Other sections rely on voluntary contributions from those who use their services. Donations and government contributions help to provide much of the overhead and capital expenditure incurred each year.

The Commonwealth has made an annual grant to this organization for operational expenses since 1936. Prior to that, from 1928 to 1931, the Commonwealth subsidized the Australian Inland Mission Aerial Medical Service. The Commonwealth annual grant to the Royal Flying Doctor Service of Australia towards maintenance was increased from £20,000 to £25,000 per annum, for three years from 30th June, 1957. The Commonwealth grant towards capital expenditure remained at £15,000 per annum. This capital expenditure grant is made on a £1 for £1 basis, in respect of approved projects.

The Royal Flying Doctor Service of Australia is conducted by a federal council comprising representatives of six sections, namely Queensland, New South Wales, Victoria, South Australia, Western Australia and the Eastern Goldfields of Western Australia. The Queensland, New South Wales and South Australian sections are centred in their own States but in Western Australia there are three centres, that in the far north being under the control of the Victorian section, and that in the south-east under the control of the Eastern Goldfields section. The third one, which has bases at Port Hedland and Meekatharra, is sponsored by the Western Australian section.

5. Red Cross Blood Transfusion Service.—The Australian Red Cross Society conducts a blood transfusion service in all States.

Before 1952-53, the cost of the Red Cross Blood Transfusion Service was borne by the Red Cross Society with assistance from the State Governments. In 1952, the Commonwealth agreed to make an amount of £50,000 available to the Red Cross Society through the State Governments. The States were to continue to assist the society at the same level as previously and make arrangements with the society to share any deficit still remaining.

The Commonwealth recognized that the proper maintenance of a blood transfusion service was of the utmost importance to the welfare of the community and that the service was one eminently suited for operation by the Australian Red Cross Society. Hence, in March, 1954, the Commonwealth offered each State Government a grant equal to 30 per cent. of the certifiable operating expenses incurred by the Society in the conduct of the blood transfusion service in that State. The grant was to be made subject to the conditions that the government of the State concerned agreed to meet 60 per cent. of the cost of operating the service in that State, leaving the society to meet the remaining 10 per cent. of the cost. All States accepted this proposal. The following table sets out the payments made by the Commonwealth government to the State governments in 1956-57:—

# RED CROSS BLOOD TRANSFUSION SERVICE: PAYMENTS TO STATES FOR 1956-57.

				£
New South Wa	les		 	 30,809
Victoria			 	 31,698
Queensland			 	 19,352
South Australi	a		 	 10,261
Western Austra	ılia		 	 11,079
Tasmania		• •	 • •	 3,938
Total		• •	 	 107,137

#### C. INSTITUTIONS.

# § 1. General.

In Australia, institutions related to public health may be classified to three groups:
(a) State, (b) public and (c) private. To the first group belong those institutions wholly provided for by the State, such as the principal mental hospitals in the various States and the Government and leased hospitals in Western Australia. To the second group belong public institutions of two kinds, namely:—(i) those partially subsidized by the State or by State endowments for maintenance, but receiving also private aid, and (ii) those wholly dependent upon private aid. To the first of these two kinds belong such institutions as the principal metropolitan hospitals; in the second are included institutions established and endowed by individuals for the benefit of the needy generally. All institutions of a private character are included in the third group. A more or less accurate statistical account is possible in classes (a) and (b), but in respect of (c) general tabulation is impossible. Owing to differences in the dates of collection and tabulation, it is impossible to bring statistics of some charitable institutions to a common year.

# § 2. Public Hospitals (other than Mental Hospitals).

1. General.—All the State capitals have several large and well-equipped hospitals, and there is at least one in every important town. In large centres, there are special hospitals for infectious diseases, tubercular patients, women, children, and patients suffering from chronic diseases.

The particulars given herein refer to public hospitals at the latest available date and include all institutions affording hospital relief, whether general or special, with the exception of mental hospitals, repatriation hospitals and private hospitals conducted commercially.

2. Number, Staff and Accommodation.—Details regarding the number of hospitals, staff and accommodation for the year 1955-56 are given in the following table:—

PUBLIC HOSPITALS: NUMBER, STAFF AND ACCOMMODATION, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Number of Hospitals	264	126	140	65	95	26	4	1	721
Medical Staff— Honorary Salaried	3,446 748	1,284 631	610	137	309 107	92 99	13	34 4	5,754 2,349
Persons	4,194	1,915	761	575	416	191	13	38	8,103
Nursing Staff Accommodation— Number of beds	11,035	7,671	4,563	2,062	2,376	1,153	97	113	29,070
and cots	20,200	11,819	10,705	3,617	4,291	2,300	368	250	53,550

The figures for accommodation shown in the table above include particulars, where available, of a considerable number of beds and cots for certain classes of cases in outdoor or verandah sleeping places.

3. In-Patients Treated.—The following table furnishes particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital twice during a year is counted twice. Newborn are excluded unless they remain in hospital after their mothers' discharge.

PUBLIC HOSPITALS: IN-PATIENTS TREATED, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
In-patients at begin-								¦	<u> </u>
ning of year—	6 200	ا محما	2 - 40	1 100	1 250	700	151	-	1000
Males Females	6,302		3,619 3,797			782 931	151. 100	62 88	
D	8,700				·	1,713	$-\frac{100}{251}$		
	15,002	8,490	7,416	2,456	2,724	1,/13	231	150	38,202
Admissions and re- admissions during					i			İ	
year Males	155 510	<b>50.004</b>	06.640	00 101	25 700	11.950	2,994	2 070	403,778
Camalan	155,618 243,512	79,304 135,192	86,649 106,304	29,484 37,355	35,709 42,838	19,240	2,979		590,688
7	399,130	214,496	192,953	66,839	78,547	31,190	5,973		
Total in-patients	399,130	214,490	192,933	00,039		31,190	3,973	2,330	994,400
(cases) treated—		- 1	ł		1	!			
Males	161,920	82,826	90,268	30,590	37.059	12,732	3,145	2,132	420,672
Females	252,212	140,160	110,101	38,705	44,212	20,171	3,079	3,356	611,996
Persons	414.132	222,986	200,369	69,295	81,271	32,903	6,224	5,488	1,032,668
Discharges—	1	<u> </u>				T i			
Males	148,983	75,214	83,429	28,066	34,496	11,327	2,944	1,990	386,449
Females	238,622	131,934	104,206	36,220	42,041	18,853	2,929	3,224	578,029
Persons	387,605	207,148	187,635	64,286	76,537	30,180	5,873	5,214	964,478
Deaths-			1						
Males	6,963	4,171	3,291	1,365	1,307	606	88	67	17,858
Females	5,297	3,495	2,304	1,032	857	477	46		13,559
Persons	12,260	7,666	5,595	2,397	2,164	1,083	134.	118	31,417
In-patients at end of vear—									
Males	5,974	3,441	3,548	1,159	1,256	799	113	75	16,365
Females	8,293,	4,731	3,591	1,453	1,314	841	104	81	20,408
Persons	14,267	8,172	7,139	2,612	2,570	1,640	217	156	36,773
Average daily num-	j i								
ber resident	15,791	8,252	7,104	2,530	2,648	1,636	226	154	38,341

In addition to those admitted to the hospitals, there are large numbers of out-patients. During 1955-56, there were 1,077,618 out-patients treated in New South Wales, 514,423 in Victoria, 583,061 in Queensland, 109,196 in South Australia, 121,000 (estimated) in Western Australia, 111,008 in Tasmania, 63,530 in the Northern Territory and 7,661 in the Australian Capital Territory, making an estimated total for Australia of 2,587,000. The figures quoted refer to cases, as distinct from persons and attendances.

4. Revenue and Expenditure.—Details of the revenue and expenditure for the year 1955-56 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme.

PUBLIC HOSPITALS: REVENUE AND EXPENDITURE, 1955-56. (£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aus- tralia.
Revenue— Government aid Commonwealth Hospital Benefits, etc. Municipal aid Public subscriptions,	} 19,068 (a)	{ 11,825 2,333 21			517	<b>} 1,600</b>	381 37		55,392
legacies, etc	134 6,792 949	3,183			902		51	42	1,664 12,539 1,605
Total	26,943	18,796	11,571	5,851	5,472	1,958	469	276	71,336
Expenditure— Salaries and wages Upkeep and repair of buildings and	14,639	8,550	5,376	2,501	2,728	1,262	289	147	35,492
grounds All other ordinary Capital	779 7,190 5,138	6,370	4,189	309 1,391 1,717	1,827	675	57	88	21,787
Total	27,746	19,824	12,230	5,918	5,421	2,408	469	276	74,292

<sup>(</sup>a) Included in "Other".

5. Summary.—A summary, for the years 1951-52 to 1955-56, of the number of public hospitals in Australia, medical and nursing staffs, beds, admissions, in-patients treated, out-patients, deaths, average daily number resident, revenue and expenditure is given in the following table.

PUBLIC HOSPITALS: AUSTRALIA.

Particulars.	1951–52.	1952–53.	1953–54.	1954-55.	19 <b>55</b> –56.
Hospitals	675	694	699	709	721
Medical Staff	6,889	7,246	7,487	7,738	8.103
Nursing Staff	24,556	25,940	26,116	27,566	29,070
Beds and cots	47,328	50,076	50,812	52,979	53,550
Admissions during year	863,058	905,492	925,571	1 008,955	994,466
Total in-patients (cases) treated	896,020	939,856	961,288	1,046,171	1,032,668
Out-patients (cases) (a)	2,286,183	2,422,302	2,458,631	2,651,000	2,587,000
Deaths	28,746	28,604	29,403	32,489	31,417
Average daily no. resident	33,552	34,552	34,587	38,179	38,341
Revenue(b) £	41,216,677	51,141,059	54,814,436	63,943,446	71,336,164
Expenditure £	43,327,700	50,541,100	53,884,574	64,192,550	74,292,240

<sup>(</sup>a) Partly estimated. or New South Wales.

<sup>(</sup>b) Up to and including 1954-55, excludes loan receipts and expenditure

# § 3. Leper Hospitals.

Isolation hospitals for the care and treatment of persons suffering from Hansen's disease (leprosy) have been established in New South Wales (Little Bay), Queensland (Peel Island, near Brisbane, and Fantome Island, North Queensland), Western Australia (Derby), and the Northern Territory (East Arm Settlement, near Darwin). In addition, special wards for the isolation of leprosy patients have been provided at Fairfield (Victoria) and Wooroloo (Western Australia). At the end of 1957 there were 6 cases in residence at Little Bay, 19 at Peel Island, 24 at Fantome Island, 175 at Derby, 186 at East Arm Settlement, 5 at Fairfield and 1 at Wooroloo. Of the 416 cases, 351 were full-blood aborigines, 34 half-caste aborigines, 3 Asians and 28 Europeans.

### § 4. Mental Hospitals.

- 1. General.—The methods of compiling statistics of mental patients are fairly uniform throughout the States, but there is an element of uncertainty about possible differences in diagnosis in the early stages of the disease. Licensed houses are included in all particulars excepting revenue and expenditure for New South Wales. The figures exclude those of reception houses and observation wards in gaols. There are no mental hospitals in the Northern Territory or the Australian Capital Territory.
- 2. Hospitals, Staff and Accommodation.—Particulars regarding the number of hospitals, the medical and nursing staff, and accommodation are given in the following table for the year 1956. Figures for Victoria and Western Australia relate to 31st December, 1956. Figures for the other States relate to 30th June, 1956.

MENTAL HOSPITALS: NUMBER, STAFF, ACCOMMODATION, 1956.

Particular	3.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Number of Hospitals	••		14	13	5	2	4	1	39
Medical Staff— Males Females		::	37	} 77	{ 11 2	12 1	8	4	} 161
Persons			(b) 46	77	13	13	8	4	161
Nursing Staff and Atte Males Females	ndants— 	-	998 1,018	1,002 1,068	548 455	214 226	180 131	97 93	3,039 2,991
Persons			2,016	2,070	1,003	440	311	190	6,030
Accommodation— Number of beds and	cots		12,652	7,517	4,787	2,668	1,655	810	30,089

<sup>(</sup>a) Includes the Epileptic Home. for their services.

<sup>(</sup>b) In addition there are 59 visiting specialists who are paid

3. Patients.—Information regarding patients treated during 1955-56 is given in the following table:—

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1955-56.

Par	ticulars	i.		N.S.W.	Vic. (a)	Q'land.	S. Aust.	W. Aust. (a)	Tas.	Aust.
Number of patie	ents at	beginni	ng of	1						
year— Males			İ	6,533	3,928	2 479	1,324	1,007	353	15,624
Females	• •	::	::	6,889	4,476	2,479 2,225	1,289	783	407	16,069
Persons	. <b>.</b>			13,422	8,404	4,704	2,613	1,790	760	31,693
Admissions and cluding absco	nders	retaken	and							
transfers from Males	other	nospitai		1,159	1,543	674	284	158	185	4,003
			::	1,299	1,121	564	268	108	161	3,521
Persons		••		2,458	2,664	1,238	552	266	346	7,524
Number of pers	sons tr	eated d	uring							
Males	• •	• •	::	7,692 8,188	5,471 5,597	3,153 2,789	1,608 1,557	1,165 891	538 568	19,627 19,590
Persons				15,880	11,068	5,942	3,165	2,056	1,106	39,217
				15,000	11,000	3,542	3,103		1,100	
Discharges (incli retaken)—	uding a	bsconde	rs not						1	
Males				524	988	427	134	63	145	2,28
Females	• •	••	••	667	590	379	142	37	139	1,95
Persons			• •	1,191	1,578	806	276	100	284	4,23.
Deaths-							-	·		
Males	• •	• •	• •	456	344	198	104	76	15	1,19
Females	••	••	••	466	433	203	127	66	41	1,33
Persons	••	••	••	922	777	401	231	142	56	2,52
Number of pati	ents at	end of	year—				-l	-		
Males	••	• •		6,712	4,139	2,528 2,207	1,370	1,026	378	16,15 16,30
Females	••	••	•••	7,055	4,574	2,207	1,288	788	388	16,30
Persons	••	••		13,767	8,713	4,735	2,658	1,814	766	32,45
Average daily n	umber	residen	:							
Males Females	• •	• •	• •	5,874	3,431	2,411	1,328	955 696	362 394	14,36 14,27
remaies	••	••	•••	5,931	3,969	2,077	1,211		394	14,27
Persons				11,805	7,400	4,488	2,539	1,651	756	28,63
Number of patie			ear per							
Males				3.76	3.12	3.59	3.18	2.91	2.30	3.3
Females	••	••	•••	3.99	3.51	3.59 3.31	3.09		2.49	3.4
Persons				3.87	3.31	3.45	3.13	2.65	2.40	3.4
Average number in mental h	er of pa	atients r s per 1,	esident 000 of			-	-			
population— Males	-			3.32	2.61	3.47	3.14	2.74	2.22	3.
Females	::	::		3.32	3.08	3.15	2.95	2.12	2.52	3.0
Persons				3.35	2.84	3.32	3.04	2.44	2.37	3.0

<sup>(</sup>a) Year 1956. (b) Includes persons treated at the Epileptic Home. transferred to other institutions,

Persons who are well advanced towards recovery are allowed to leave the hospitals and live with their relatives or friends, but they are under supervision and their names are kept in the records. They are included in the figures shown in the above table.

4. Revenue and Expenditure, 1955-56.—Mental hospitals are maintained by the State Governments. They derive a small proportion of their revenue from other sources (chiefly patients' fees, pharmaceutical benefits and sale of farm produce), but in 1955-56 this source provided less than 4 per cent. of all their revenue. For a statement on the funds provided by the Commonwealth Government for the treatment of mental diseases, see Part B of this Chapter, § 2, para. 3, Mental Hospitals, p. 522.

In New South Wales, the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals:—

MENTAL HOSPITALS: FINANCES, 1955-56.

(2.)												
Particulars.	N.S.W.	Vic.	Q'land. (a)	S. Aust.	W. Aust.	Tas.	Australia.					
Revenue (excluding Government Grants)—												
Pees of patients Other	(b) 231,940 (b) 85,593	34,830	73,764 5,145	42,652 39,470	32,330 10,998	9,214 620	389,900 176,656					
Total	317,533	34,830	78,909	82,122	43,328	9,834	566,556					
Expenditure— Salaries and wages Upkeep and repair	2,320,442	2,194,140	1,001,906	494,757	428,874	218,835	6,658,954					
of buildings, etc. All other Capital(c)	234,362 1,644,596 947,174	331,812 2,017,321 1,505,954	13,563 748,120 88,302	69,820 367,588 140,741	19,653 252,461 40,554	8,899 104,420 108,637	678,109 5,134,506 2,831,362					
Total	5,146,574	6,049,227	1,851,891	1,072,906	741,542	440,791	15,302.931					
Expenditure per average daily resident	£435/19/4	£817/9/3	£412/12/8	£422/11/5	£449/2/11	£583/1/2	£534/6/9					

(a) Includes ne Fpileptic Home. (b) Includes £28,716 Commonwealth Hospital Benefits. (c) Capital expenditure includes purchases of land, cost of new buildings, and additions to buildings.

5. Summary for Australia.—The following table gives a summary relating to mental hospitals in Australia for each of the years 1951-52 to 1955-56;—

MENTAL HOSPITALS: SUMMARY, AUSTRALIA.

Particulars.	1951-52.	1952-53.	1953–54.	1954–55.	1955-56.
Hospitals	. 33	34	34	37	39
Medical Staff	. 145	159	140	144	161
Nursing Staff and Attendants .	. 5,164	5,276	5,541	5,748	6,030
Beds	. 27,768	29,069	29,244	29,690	30,089
Admissions	5,582	5,856	5,628	5,722	7,524
Discharged as recovered, relieved, etc.	c. 2,732	2,907	3,126	3,021	4,235
Deaths	2,141	2,244	2,178	2,276	2,529
Patients at end of year	20.760		30,798	31,223	32,453
Average daily resident	. 26,787	27,478	27,921	28,012	28,639
Revenue (excluding Governmen	t I		1	-	
Grants)	E i 861,083	866,561	888,681	654,486	566,556
Expenditure—Total	E 8,749,187	10,713,747	11,680,996	13,189,269	
,, -Per average daily	1 1				, _,
resident .	£220/5/11	£393/0/7	£420/7/3	£467/14/5	£534/6/9

6. Number of Mental Patients.—The total number returned as under treatment at the end of each year shows a slight increase during the period but the proportion to total population shows a slight decline. A more rational attitude towards the treatment of mental cases has resulted in a greater willingness in recent years to submit afflicted persons to treatment at an early stage, and an increase in the number of recorded cases, therefore, does not necessarily imply an increase in mental diseases. The difference between States in the number of patients in mental hospitals per 1,000 of population may also to some extent be the result of differences in classification. Figures for Victoria and Western Australia relate to 31st December of the year shown; figures for the other States relate to 30th June of the year shown.

PATIENTS IN MENTAL HOSPITALS.

State.		1952.	1953.	1954.	1955.	1956.						
Number.												
New South Wales			12,873	12,979	13,169	13,422	13,767					
Victoria		[	7,568	7,707	7,936	7,795	8,713					
Queensland(a)			4,388	4,554	4,621	4,704	4,735					
South Australia			2,425	2,534	2,644	2,613	2,658					
Western Australia		• •	1,599	1,666	1,721	1,798	1,814					
Tasmania	••	••	710	750	771	760	760					
Australia			29,563	30,190	30,862	31,092	32,453					
		PER 1	000 of Po	PULATION.	· · · · · · · · · · · · · · · · · · ·	<u>`</u>						
New South Wales			3.85	3.84	3.85	3.85	3.87					
Victoria			3.29	3.26	3.28	3.14	3.31					
Queensland(a)			3.48	3.53	3.51	3.50	3.45					
South Australia			3.21	3.27	3.32	3.19	3.13					
Western Australia			2.71	2.72	2.72	2.77	2.65					
Tasmania	• •	••	2.40	2.47	2.50	2.42	2.40					
Australia		••	3.46	3.46	3.47	3,40	3.43					

<sup>(</sup>a) Includes the Epileptic Home.

#### CHAPTER XV.

#### WELFARE SERVICES.

#### A. COMMONWEALTH SOCIAL SERVICES.

#### § 1. Introduction.

Under the provisions of section 51 of the Constitution, the Commonwealth Government is empowered to legislate on :—

" (xxiii) Invalid and old-age pensions:

(xxiiia) The provision of maternity allowances, widows' pensions, child endowment, unemployment, pharmaceutical, sickness and hospital benefits, medical and dental services (but not so as to authorize any form of civil conscription), benefits to students and family allowances: ".

The latter paragraph was inserted in the constitution after being accepted by the electors at a referendum on the 28th September, 1946. The enabling Act was assented to on the 19th December, 1946.

Before 1947, each social service benefit was paid under a separate Act. On the 1st July, 1947, with the passage of the Social Services Consolidation Act 1947, all Acts providing social service benefits were amalgamated. This Act eliminated certain anomalies and obsolete provisions and changed the title "old-age pension" to "age pension". The word "Consolidation" was dropped from the short title of the Act in 1954. The Act is at present styled the Social Services Act 1947–1957.

The social service benefits provided by the Commonwealth Government, and the date on which each came into operation, are:—

Age pension	1st July, 1909
Child endowment (for other than first child	d) 1st July, 1941
Child endowment (for first child)	20th June, 1950
Commonwealth Rehabilitation Service	10th December, 1948
Funeral benefit	1st July, 1943
Invalid pension	15th December, 1910
Maternity allowance	10th October, 1912
Sickness benefit	1st July, 1945
Special benefit	1st July, 1945
Unemployment benefit	1st July, 1945
Widow's pension	30th June, 1942

Information concerning these benefits appears in later sections of this chapter (pp. 547-558). Particulars of benefits provided under the National Health Service appear in Chapter XIV.—Public Health, pp. 521-527.

#### § 2. Commonwealth Expenditure on Social and Health Services.

1. National Welfare Fund.—The National Welfare Fund was established by the National Welfare Fund Act 1943 to finance a scheme of national welfare. In introducing this measure to Parliament, the Prime Minister said that part of the scheme was to be introduced immediately, and part was to be deferred until after the end of the war. A certain balance, which would therefore accrue to the fund, would be invested in Commonwealth securities, and would thus provide finance for the war effort.

The fund operated from 1st July, 1943. At its commencement, it was used to finance funeral benefits and maternity allowances. Other social and health benefits were made a charge on the fund from time to time. At present, expenditure on all benefits except repatriation and a few minor social and health benefits is met from the fund. The fund is used only to finance the benefits themselves; it is not used to finance the cost of administering the benefits, nor on capital works associated with the benefits.

For particulars of the income of the fund, see Chapter XXI., Public Finance, Part A, § 2, III., para. 6. The following table sets out expenditure from the fund during 1956-57.

COMMONWEALTH	<b>EXPENDITURE</b>	ON	SOCIAL	AND	HEALTH	SERVICES,
	1:	956-:	57.			
	(	£'00(	0.)			

	<del></del>			1		· · · · · ·	1	1		
Service.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Over- seas.	Total.
Social Services—						i		i		
Age and Invalid Pen-				1.		l			l	1
sions	45,296	26,773	16,332	9,622	7,254	3,698	38	122	75	109,210
Child Endowment	20,759	15,168	8,836	5,250	4,461	2,173	164	217	9	57,037
Commonwealth Re-		i	h		l	i		Į.		
habilitation Service	145	175	64	91	71	22				568
Funeral Benefits	136	94	48	30	23	10				341
Maternity Allowances	1,252	948	533	319	271	131	9	17	2	3,482
Unemployment Bene-	t .			1				i		1
fits	670	531	419	114	337	23		2		2,096
Sickness Benefits	640	340	234	136	97	47	1	4		1,499
Special Benefits(a)	116	155	80	26	14	13		1		405
Widows' Pensions	3,642	2,035	1,504	735	612	303	6	15	10	8,862
National Health Ser- vices—										
Hospital Benefits	4.046	2.359	1,443	815	772	320	34	24	١	9,813
Medical Benefits	2,716	1,434	665	590	601	140		1	::	6,146
Medical Benefits for	_,	,,					''	''	١	5,1.0
Pensioners	1.380	734	366	261	194	58		6		2,999
Nutrition of Children	1,093	599	386	199	158	155	1	16	::	2,607
Pharmaceutical Bene-	.,050		555		100	100	•		٠٠.	_,,,,,,,
fits	3,994	2,757	1,321	843	698	244	١	67	١	9,924
Pharmaceutical Bene-	0,22.	_,	-,	0.5	0,0		l '''		١	,,,,,,,
fits for Pensioners	825	378	279	162	114	35	٠	1		1,793
Tuberculosis Cam-			1	102		-		i	٠٠.	-,,,,
paign—	ļ	l	Į.					1		Į.
Allowances	527	361	244	159	92	78		1		1,461
Maintenance (b)		1,092	1,080	319	470	171	::	16	::	4,755
Miscellaneous(c)	42	36	75	7	13	19	io	(d)723	::	925
T-4-1	88,886	55,969	33,909	19,678	16,252	7,640	263	1,230	96	223,923
Total	00,000	133,709	1 23,709	17,070	10,232	7,040	203	1,230	. 20	443,743

<sup>(</sup>a) Includes special benefits to migrants in reception and training centres. (b) Paid to the State Governments as a contribution towards the maintenance of institutions for the treatment of tuberculosis. (c) This item covers the cost of district laboratory services, the free supply of prophylactic materials and biological products (e.g., insulin, poliomyelitis and diphtheria prophylactic), the supply and maintenance of hearing aids for children, subsidies to voluntary organizations conducting home-nursing services, and certain costs associated with the blood transfusion services of the Australian Red Cross Society. (d) Includes an amount of £650,642 for the production of poliomyelitis vaccine.

Expenditure from the fund during each of the years 1952-53 to 1956-57 is shown in the following table. A graph showing expenditure from the fund from 1940-41 to 1956-57 is to be found on page 559.

COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES. (£'000.)

Service.	-	1952–53.	1953-54.	195455.	1955–56.	1956–57.
Social Services—						
		72,424	81,293	88,006	101,625	109,210
		53,244	50,761	52,530	60,381	57,037
Commonwealth Rehabilitation Service		454	429	451	505	568
Funeral Benefits		270	288	304	319	341
Maternity Allowances		3,248	3,226	3,362	3,410	3,482
Unemployment, Sickness and Speci	ial	•	-,	-,	-,	-,
DemoGeo		6,255	4,543	2,640	2,563	4,000
Widows' Pensions	1	6,334	6,626	6,862	7,723	8,862
National Health Services—	1		-,		.,	0,002
Hoonital Danafta		7,223	8,330	9,321	9,553	9,813
Madiaal Danafta		.,	1,434	4,210	5,413	6,146
Medical Danafte for Danaianers		1.740	2,115	2,516	2,874	2,999
Montal Institution Donofts		523	495	225	_,	-,,,,,
Mutuitian of Children		1,521	1,999	2,237	2,405	2.607
Pharmacoutical Danafts		6,487	8,219	9,445	10,380	9,924
Dhanna diad Danette Car Daneta	::	729	1,011	1,295	1,508	1,793
Tuberculosis Campaign—	٠. ا		.,0	-,	1,500	1,,,,,
Allewanea		1,908	1,877	1,904	1,690	1,461
M-:		2,968	3,703	3,753	4,007	4.755
Missellaneaus		183	216	258	510	7,735
	٠٠  -					
Total	(	165,511	176,565	189,391	214,866	223,923

<sup>(</sup>a) See footnote to table on p. 551.

<sup>2.</sup> Capital Expenditure. Particulars of Commonwealth expenditure on capital works are given in Chapter XIV., Public Health, Division B, Section 2, para. 3 Mental Health

and para. 6, Anti-tuberculosis Campaign. Grants are made to private organizations for the construction of homes for elderly people (see Division B of this Chapter, § 1, para, 4, p. 561).

3. Administrative Expenditure. Information concerning the cost of administering each benefit separately is not compiled. Particulars of the cost of administering the Department of Health and the Department of Social Services may be found in Chapter XXI., Public Finance, Division A, Section 2, III., para. 5.

## § 3. Age and Invalid Pensions.

Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who have resided in Australia continuously for at least 20 years, which need not be immediately prior to the date of claim for a pension. Absence in a Territory of the Commonwealth, any periods of absence during which a person's home remained in Australia, and absences in certain other circumstances including, in the case of a claimant who has had at least 18 years' residence, occasional absences aggregating up to 2 years plus 6 months for every year of residence in excess of 18 years, are counted as residence.

Invalid pensions are payable to persons, 16 years of age and over, who have resided in Australia for a continuous period of five years (including any occasional absences not exceeding, in total, six months), and who are permanently incapacitated for work or permanently blind. The degree of permanent incapacity has to be not less than 85 per cent. and the claimant must have become permanently incapacitated or permanently blind while in Australia or during a temporary absence from Australia, but this condition is waived if he has resided in Australia for not less than 20 years (continuous or otherwise), whether any such period was before or after the occurrence of the permanent incapacity or blindness.

Pensions may be granted to aboriginal natives of Australia who have been granted exemption from State control laws, or who, in any State where exemption is not provided for, are considered, by reason of their character, intelligence and social development, to be suitable persons to receive pensions.

A pension is not payable to:—an alien (except a woman who, before marriage, was a British subject); a person who has deprived himself of property or income, or who has brought about his incapacity, in order to qualify for a pension; a person in receipt of income of £409 10s. per annum (£819 per annum for a married couple); a person who owns property, apart from his permanent home and other exempt property, to the net value of more than £1,750 (£3,500 for married persons); or a person who has deserted his spouse or children for the six months preceding the date of the claim (age pension only).

Since 24th October, 1957, the maximum rate of pension has been £227 10s. per annum. The wife of an invalid pensioner (or an age pensioner who is permanently incapacitated for work or permanently blind) may be granted a wife's allowance of not more than £91 per annum (£1 15s. a week). A child's allowance of £29 18s. per annum (11s. 6d. a week) is also paid to an invalid pensioner who is maintaining a child under 16 years of age. If a pensioner is maintaining more than one child, his pension is increased by £26 a year (10s. a week) for each additional child. At 30th June, 1957, 376,022 age pensioners (80.7% of all age pensioners) and 79,529 invalid pensioners (90.1% of all invalid pensioners) were receiving an annual pension of £208 or more.

A pensioner who is an inmate of a benevolent home is paid so much of his pension as does not exceed £79 6s. per annum (£1 10s. 6d. a week) and the balance, if any, of the pension is paid to the institution for his maintenance.

Age and invalid pensions (other than invalid pensions paid to blind persons) and allowances paid to wives of invalid pensioners (but not the child's allowance of 11s. 6d. a week) are subject to a means test. They are reduced by the amount by which a pensioner's income from sources other than his pension exceeds £182 per annum (£3 10s. a week). For this purpose, certain types of allowances received are not counted as income. These include gifts or allowances received from the pensioner's children, benefits from friendly societies, payments for illness, infirmity or old age from a trade union, State food relief, maternity allowances, child endowment or any other payment received for children maintained by the pensioner, allowances received under the national health service, interest on war gratuities, income received from property owned by a pensioner or his spouse and income such as dividends on shares and interest from bonds or on money in the bank.

The annual rate of pension or allowance is further reduced by £1 for every complete £10 by which the value of property owned by a pensioner or his spouse exceeds £200, and the pension cuts out altogether if the value of the property exceeds £1,750. For this purpose, certain types of property are disregarded. They include the permanent home of the

pensioner, his furniture and personal effects, the surrender value (up to £750) of life insurance policies, the capital value of annuities or contingent interests, the present value of any reversionary interests, inheritances not received and war gratuities.

For the purposes of the administration of the means test, the income and property of a married person is deemed to be half the total income and property of the husband and wife (unless they are legally separated). This provision means that the pension of a married pensioner, whether or not his spouse is a pensioner, will not be reduced because of his income from other sources unless that income exceeds £364 per annum (£7 per week), nor will his pension be reduced on account of the value of his property unless that value exceeds £400.

The following statement shows the rates of pension at 1st July, 1909, and the rates as they have been varied since that date, subject in all cases, to income and property qualifications:—

	Pension of In- Payable. come		Limit of In- come (in-	,	Maxi Pen Paya	Limit of In- come (in-	
Date from which Operative.	Per Week.	Per Annum.	clud- ing Pen-	Date from which Operative.	Per Week.	Per Annum.	clud- ing Pen-
1st July, 1909 12th October, 1916 1st January, 1920 1st January, 1920 13th September, 1923 1sth October, 1925 23rd July, 1931 13th October, 1932(b) 26th October, 1933 4th July, 1935(c) 24th September, 1936 9th September, 1937 26th December, 1940 3rd April, 1941(c) 11th December, 1941 2nd April, 1942(d) 1st October, 1942(c)	s. d. 10 0 12 6 15 0 17 6 20 0 17 6 18 0 17 6 18 0 20 0 21 0 21 6 22 0 24 0 25 0 25 0	£ s. 26 0 32 10 39 0 45 10 52 0 45 10 45 10 46 16 49 8 52 0 54 12 55 18 61 2 62 8 65 0 66 66	£ s. 52 0 58 10 65 0 78 0 84 10 78 0 71 10 78 0 79 6 81 18 84 10 87 2 88 8 8 12 94 18 97 10 98 16	7th January, 1943(c) 1st April, 1943(c) 19th August, 1943(c) 25th November, 1943(e) 25th November, 1943(e) 5th July, 1945 . 13th August, 1946 3rd July, 1947 . 21st October, 1948 2nd November, 1950 1st November, 1951 2nd October, 1952 . 29th October, 1953 14th October, 1954 27th October, 1955 .	s. d. 26 0 26 6 27 0 26 6 27 0 32 6 37 6 42 6 50 0 67 0 67 0 80 0 87 6	£ s. 67 12 68 18 70 4 68 18 70 4 84 10 97 10 110 10 130 0 175 10 182 0 208 0 227 10	£ s. 100 2 101 8 102 14 101 8 102 16 117 0 136 10 148 10 208 0 234 0 253 10 286 0 364 0 360 0 390 0 409 10

# MAXIMUM RATES OF PENSION PAYABLE.(a)

Note.—Provision for variations according to retail price index numbers was repealed on 6th April,

During 1956-57, 50,799 age pension claims were granted, 1,882 pensioners were transferred from the invalid pension list, and 36,642 pensions expired through cancellations and deaths. The number of age pensioners at 30th June, 1957, was 465,781, of whom 160,308 (or 34 per cent.) were males, and 305,473 (or 66 per cent.) were females. Pensioners in benevolent homes have been included in these figures; in past years they were excluded.

The recorded ages of the 50,799 persons (19,699 males and 31,100 females) to whom age pensions were granted during the year 1956-57 varied considerably, ranging from 8,305 at age 60 to eight who were over 97; 36,862 were in the 60-69 years age-group. The conjugal condition of these new pensioners was as follows:—Males—single, 2,205; married, 14,207; and widowed, 3,287: Females—single, 3,748; married, 16,401; and widowed, 10,951.

<sup>(</sup>a) Excludes amounts payable for wives and children of invalid pensioners. (b) Additional pension of £6 10s, per annum (2s, 6d. per week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. per week were paid additional pension of 2s. 6d. less the amount of income. (c) Variation according to change in retail price index number. (d) Increase paid on 9th July, 1942, retrospective to 2nd April, 1942. (e) Rate restored to £70 4s. per annum under National Security (Supplementary) Regulations 112A—Statutory Rule 315 of 1943.

During 1956-57, 11,726 invalid pension claims were granted, 7,049 pensions ceased through cancellation or death, and 1,882 invalid pensioners were transferred to the age pension list. The number of invalid pensioners at 30th June, 1957, was 88,236, of whom 50,423 (or 57 per cent.) were males and 37,813 (or 43 per cent.) were females. Pensioners in benevolent homes have been included for the first time in the 30th June, 1957, figures.

The recorded ages of the 11,726 persons (6,883 males and 4,843 females) to whom invalid pensions were granted during 1956-57 varied widely, 968 (8 per cent.) were in the 16-19 years age-group, 2,241 (19 per cent.) were in the 20-44 years age-group; 5,951 (51 per cent.) were in the 45-59 years age-group, 2,043 (17 per cent.) were in the 60-64 years age-group, and 523 (5 per cent.) were over 65 years of age.

The conjugal condition of persons to whom invalid pensions were granted during the year was as follows:—Males—single, 2,273; married, 4,106; and widowed, 504: Females—single, 1,813; married, 2,180; and widowed, 850.

:	Particulars.			N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Age Pension	s in fo	rc <del>o</del>										
Males				67,003				11,938		. 70	222	160,308
Females				118,603	83,437	43,075	29,628	20,254	10,003		405	305,473
Persons	••	••	• •	185,606	118,788	69,938	43,645	32,192	14,847	138	627	465,781
Masculinit	y(a)			56.49	42.37	62.36	47.31	58.94	48.43	102.94	54.81	52.48
Invalid Pens	ions in	force-									ļ	
Males				25.353	10.807	7.176	2.736	2.850	1.422	31	48	50,423
Females				17,209	8,400	5.937	2,637	2,189	1.390	12	. 39	37,813
Persons		••		42,562	19,207	13,113	5,373	5,039	2,812		87	88,236
Masculinit	y(a)		••	147.32	128.65	120.87	103.75	130.20	102.30	258.33	123.08	133.35

AGE AND INVALID PENSIONS, 30th JUNE, 1957.

The sum disbursed in age and invalid pensions in 1956-57, including the amount paid to homes for the maintenance of pensioners and allowances to wives of invalid pensioners, represented an expenditure of £11 9s. 1d. per head of population as compared with £10 18s. 2d. in 1955-56.

The following table gives details of age and invalid pensions for the years 1952-53 to 1956-57:—

		Pen	sioners at	End of Y	čear.	) <b>j</b>	Total Payment	Aver Pension	Average Fortnightly Pension as at 30th June.			
Year ended 30th June-		A	ge.			Amount Paid to Pensioners.	to Pensioners and	Age.	Invalid.	Age and Invalid		
		No.	Rate.	Invalid.	Total.	<b>(b)</b>	Homes.(b)	Age.	III Valiu.	Com- bined.		
1953 1954 1955 1956 1957	· · · · · · · · · · · · · · · · · · ·	374,791 397,784 425,556 446,207 465,781	410 423 439 449 460	No. 70,232 73,732 78,498 82,775 88,236	No. c445,023 c471,516 c504,054 c528,982 554,017	101,242,275			s. d. 130 11 136 10 137 7 156 10 157 8	s. d. 128 9 134 7 135 1 154 1 153 7		

AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA.

<sup>(</sup>a) Number of males to each 100 females.

<sup>(</sup>a) Number of pensioners per 1,000 persons of pensionable age (males aged 65 years and over and females aged 60 years and over). (b) Includes allowances to wives of invalid pensioners. (c) Excludes age and invalid pensioners in benevolent homes, at 30th June, 1953, 6,309; 1954, 6,463; 1955, 6,132; and 1956, 6,244.

#### § 4. Child Endowment.

A person who is resident in Australia and has the custody, care and control of one or more children under the age of sixteen years, or an approved institution of which children are inmates shall be qualified to receive an endowment in respect of each child.

Endowment may be paid in respect of a child whose father is not a British subject if the child was born in Australia, the mother is a British subject, or the child is likely to remain permanently in Australia. A child born during the mother's temporary absence from Australia is deemed to have been born in Australia. Endowment is payable to aboriginal natives of Australia unless they are nomadic, or unless the child concerned is wholly or mainly dependent on the Commonwealth or a State, and also in respect of children of members of the naval, military or air forces of the United Kingdom who are serving with the Australian forces from the time of arrival of the children in Australia. There are provisions to meet cases of families divided by reason of divorce, separation, unemployment or death of a parent. There is no means test.

From 1st July, 1941, the rate of endowment was 5s. a week for each child in excess of one in a family, and for each child under sixteen years in an approved institution. The rate was increased to 7s. 6d. a week on 25th June, 1945, and to 10s. a week on 9th November, 1948. Since 20th June, 1950, the rates of endowment have been 5s. a week for the first child in a family, 10s. a week for each other child in a family, and 10s. a week for each child in an institution.

The number of families with one or more endowed children at 30th June, 1957, was 1,378,169, an increase of 38,362 or 2.9 per cent. during the year. The following table shows particulars of the numbers of persons in each State and Territory who were receiving child endowment at the 30th June, 1957:—

CHILD	ENDOWMENT:	SUMMARY.	. 30th	JUNE	1957.
-------	------------	----------	--------	------	-------

	F	amily Groups	i.	Institu	itions.		
State or Territory.	Number	Endowed	Children.		Number	Total. Number of Endowed	
	of Claims in force.	Claims in		Number.	Endowed Child Inmates.	Children.	
New South Wales	518,942	1,081,141	2.08	119	5,606	1,086,747	
Victoria	373,121	791,026	2.12	88	4,852	795,878	
Queensland	199,689	453,717	2.27	48	3,280	456,997	
South Australia	127,356	274,291	2.15	45	1,393	275,684	
Western Australia	102,157	227,575	2.23	63	3,347	230,922	
Tasmania	48,743	111,367	2.28	19	453	111,820	
Northern Territory	2,705	5,881	2.17	15	2,214	8,095	
Australian Capital	-	_			·		
Territory	5,297	11,717	2.21			11,717	
Overseas	159	331	2.08			331	
Total	1,378,169	2,957,046	2.15	397	21,145	2,978,191	

# CHILD ENDOWMENT: LIABILITY AND EXPENDITURE, 1956-57.

(£.)

State or		Annual Liability at 30th June, 1957.(a)							
Territory.	Family Groups.	Institutions.	Total.	and Institutions during 1956–57.					
New South Wales	21,363,420	145,756	21,509,176	20,758,876					
Victoria	15,716,103	126,152	15,842,255	15,168,739					
Queensland	9,200,685	85,280	9,285,965	8,836,240					
South Australia	5,475,938	36,218	5,512,156	5,249,971					
Western Australia	4,588,909	87,022	4,675,931	4,461,588					
Tasmania	2,261,883	11,778	2,273,661	2,172,628					
Northern Territory	117,741	57,564	175,305	163,412					
Australian Capital Ter	ri-								
tory	235,781	i	235,781	216,624					
Overseas	6,539	]	6,539	8,884					
Total	58,966,999	549,770	59,516,769	57,036,962					

<sup>(</sup>a) A number of endowments are paid every twelve weeks. During two years out of every three there are four such payments, but every third year there are five. Since the size of the amount so paid (£24,200,000 in 1956-57) causes considerable fluctuations in the figures for expenditure on child endowment from year to year, figures for annual liability reflect trends in expenditure on child endowment more accurately than do figures for expenditure.

The following table shows, as at 30th June, 1957, the number of claims in force and the number of endowed children classified according to the number of endowed children in the family:—

CHILD ENDOWMENT: NUMBER OF ENDOWED CHILDREN IN FAMILIES, 30th JUNE, 1957.

							nber of End ldren in Fa	Claims in Force.	Number of Endowed Children.
1			494,990	494,990	10		 317	3,170	
2			464,540	929,080	11		 91	1,001	
3			247,411	742,233	12		 19	228	
4			106,436	425,744	13		 9	117	
5			39,370	196,850	14		 5	70	
6			15,618	93,708	16		 1	16	
7			5,959	41,713	21		 1	21	
8			2,513	20,104			l <del></del>		
9			889	8,001	ĺ	Total	 1,378,169	2,957,046	

#### § 5. Commonwealth Rehabilitation Service.

The Commonwealth Rehabilitation Service has been set up to help persons who are too disabled to work or who have had to give up their employment because of sickness or injury. It aims at restoring disabled persons so they can earn a living and lead useful lives. They are given suitable treatment and training, the cases selected being those in which the person's disability is remediable and there are reasonable prospects of his engaging in a suitable vocation within three years after the commencement of treatment or training.

The benefits are available to invalid pensioners, persons receiving unemployment or sickness benefits, persons receiving tuberculosis allowances and persons over 14 but under 16 years of age who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of 16 years. Other persons may participate in the scheme upon reimbursement of the cost of treatment and training. During the treatment stage of rehabilitation the payment of pension or benefit is continued. If, however, vocational training is provided the pension or benefit is suspended and the trainee is paid instead a rehabilitation allowance equivalent to the amount of invalid pension for which he is qualified, or which would be payable if he were qualified to receive an invalid pension, together with the amount of any wife's and child's allowances, plus a training allowance of £1 10s. per week.

Living-away-from-home allowances are paid where necessary. Fares and living expenses (including those of an attendant where required) incurred in connexion with treatment, training or attendance for an interview or for medical examination may also be paid. A person receiving treatment or training may be provided, free of charge, with necessary artificial replacements, surgical aids and appliances. He may also be provided with books, equipment and tools of trade, costing not more than £40. If these are retained by him, he is required to pay the cost, but payments may be made by small instalments after he has commenced employment.

If the treatment or vocational training does not result in the trainee being able to engage in employment, his right to the continuance of his pension or benefit is not prejudiced.

The numbers of persons receiving benefits who were examined, accepted, trained and placed in employment during the year 1956-57 are shown in the following table:—

#### COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1956-57.

			Commission	Placed in Employment.			
Туре.	Examined.	Accepted.	Completed Training.	After Training.	Without Training.		
Invalid Pensioners	10,135	262	60	55	63		
Unemployment and Sickness Beneficiaries	8,042	862	95	100	444		
Recipients of Tuberculosis Allow- ance	661	172	145	185	53		
Persons Aged 14-15 years	143	93	13	15	24		
Persons provided with rehabilitation							
on payment of the cost	153	116		1	82		
Total	19,134	1,505	313	356	666		

#### § 6. Funeral Benefits.

A funeral benefit of up to £10 is payable to the person who has paid, or is liable to pay, the cost of the funeral of an age or invalid pensioner or of a claimant who, but for his death, would have been granted an age or invalid pension, or of a person who at the time of his death was receiving, or was a claimant for, a tuberculosis allowance, if he would otherwise have been qualified to receive an age or invalid pension. Where the cost of the funeral has been partly met by payment from a contributory funeral benefit fund of an organization other than a friendly society, funeral benefit is payable to the extent of the amount (not above £10) by which the cost of the funeral exceeded the amount paid from the fund. A funeral benefit is not payable to a person administering a contributory funeral benefit fund.

The following table shows the number of funeral benefits which were paid in each State and Territory for the years 1952-53 to 1956-57.

<b>5</b>			Benefits Granted.								
State.			1952–53.	1953–54.	1954–55.	1955-56.	1956-57.				
New South Wales			11,405	11,397	13,108	13,148	13,927				
Victoria			7,537	8,269	7,921	8,216	9,262				
Queensland			3,813	4,051	4,590	4,501	4,830				
South Australia			2,394	2,529	2,668	2,864	2,974				
Western Australia			1,817	1,871	2,045	2,335	2,366				
Tasmania			864	913	1,053	918	1,002				
Northern Territory			(a)	(a)	3	6	2				
Australian Capital	Territory	٠٠٠	(b)	(b)	.20	31	28				
Australia			27,830	29,030	31,408	32,019	34,391				

#### FUNERAL BENEFITS GRANTED, AUSTRALIA.

In 1956-57 the average amount paid per grant was £9 18s. 5d.

# § 7. Maternity Allowances.

Maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children and are additional to the benefits provided under the Commonwealth hospital benefits scheme. They are not subject to a means test.

The allowance is £15 if the mother has no other children, £16 if she has one or two other children and £17 10s. if she has three or more other children under the age of sixteen years. The amount is increased by £5 in respect of each additional child born at a birth. An advance payment of £10 on account of a maternity allowance may be made four weeks before the expected date of birth. The balance is payable immediately after the birth. Payment may be made in respect of the birth of a still-born child, or a child which lives for less than twelve hours, if the period of intra-uterine life of the child was at least 5½ months.

A maternity allowance is payable to a woman who, at the date of giving birth to a child, is residing in Australia, is temporarily abroad or who is on board a ship proceeding from a port in Australia or an Australian Territory to another port in Australia, or another Australian Territory, or on board a ship proceeding to Australia, provided she receives no maternity benefit in respect of the birth from the country whence she came. An alien mother may receive the allowance if she was a British subject prior to her marriage, or if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, but this last condition may be waived if the mother is likely to remain in Australia. The allowances may be paid to aboriginal natives of Australia who have been granted exemption from State control laws or who, in any State where exemption is not provided for, are considered suitable persons to receive the allowance by reason of their character, standard of intelligence and social development.

The following table gives details of the amount paid in each State for the years 1952-53 to 1956-57:—

MATERNITY ALLOWANCES: AMOUNT PAID IN EACH STATE. (£'000.)

	ear end th June	n.s.w.	Vic.	Q'land.	S.Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Over- seas.	Total.
1953 1954 1955 1956 1957	::	a 1,195 a 1,173 1,250 1,207 1,252	872 874 892 935 949		(b) 305 (b) 301 297 304 319	249 254 261 276 271	128 125 128 137 131	(c) (c) 7 .8 9	(d) (d) 13 15 17	.2 .2 1 2	3,248 3,226 3,362 3,410 3,482

<sup>(</sup>a) Includes Australian Capital Territory. (b) Includes Northern Territory. with South Australia. (d) Included with New South Wales.

<sup>(</sup>a) Included with South Australia.

<sup>(</sup>b) Included with New South Wales.

The following table shows the number of maternity allowance claims paid in each State or Territory during the years 1952-53 to 1956-57:—

# MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID IN EACH STATE.

Year ended 30th June—	N.S.W.	Vic. Q'land.	S.Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Over- seas.	Total.
	a 72,380 5 76,614 5 75,591 5		19,036	15,803 16,261 17,180		(c) (c) 481 510 579	(d) (d) 787 961 1,067	48 88 110	203,042 199,814 208,179 212,865 216,617

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Included with South Australia. (d) Included with New South Wales.

The following table shows the number of claims paid in each State at the several rates of maternity allowances during the year 1956-57:—

## MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID AT EACH RATE, 1956-57.

	S	Single Bi	rths.			Multip	le Bi	ths.			
State or Territory.	£15.	£16.	£17 10s.	Twins. Triplets.					ets.	Quad- rup- lets.	Total Claims Paid.
,				£20.	£21.	£22 10s.	£25.	£26.	£27 10s.	£31.	
New South Wales Victoria Queensland South Australia Western Australia Tasmania Northern Territory	25,119 19,150 9,591 5,961 4,867 2,351	36,476 28,674 15,281 9,767 8,222 3,761 264	11,130 7,662 4,007 3,572 1,971	246 187 91 51 43 23 6	435 345 151 95 83 33 2	153 99 48 65	2	7 4 6  1	5 3 1 	::	77,387 59,648 32,882 19,929 16,853 8,166 579
Australian Capital Territory Overseas	331 40	521 58	206 8	7	1	::	1	••	::	••	1,067 106
Total	67,580	103,024	43,567	654	1,145	615	4	18	9	1	216,617

#### § 8. Unemployment, Sickness and Special Benefits.

Unemployment and Sickness benefits are paid to men over 16 and under 65 years of age, and women over 16 and under 60 years of age who, through unemployment, sickness or accident, suffer temporary loss of regular earnings. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. A person in receipt of an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the Repatriation Act, or a tuberculosis allowance is ineligible to receive a benefit.

To qualify for an unemployment benefit, a person must establish that he is unemployed and that his unemployment is not due to his being a direct participant in a strike, that he is capable and willing to undertake suitable work, and that he has taken reasonable steps to obtain such work. Registration with the local Commonwealth District Employment Officer is necessary.

To qualify for a sickness benefit, a person must establish that he is temporarily incapacitated for work by reason of sickness or accident and that he has thereby suffered a loss of salary, wages or other income.

A married woman is not eligible to receive a sickness benefit if it is reasonably possible for her husband to maintain her. Where her husband is able to maintain her only partially, a benefit may be paid at such rate as is considered reasonable in the circumstances. In exceptional cases, a married woman may qualify for an unemployment benefit in her own right.

A benefit may be paid to those aboriginal natives of Australia who are considered suitable by reason of character, standard of intelligence and social development.

The maximum weekly rates of benefit payable and permissible income since the 17th October, 1957, have been as follows:—

Age and Marital Status of	Maximum Weekly Benefit Payable.	Permissible Weekly Income.			
Person over 21 years of age			<u> </u>	£ s. d.	£ s. d.
Married person under 21 years of age Unmarried person 18-20 years of age	• •	• •	7	276	1 0 0
Unmarried person 17 years of age	••	• •	::	1 15 0	1 0 0
Unmarried person 16 years of age	••	••		1 15 0	100

An additional benefit of £2 7s. 6d. per week may be paid for a dependent spouse and 10s. for one dependent child under 16 years of age. If no allowance is paid for a dependent spouse, a similar benefit may be paid for a claimant's housekeeper, provided there are one or more children under 16 years of age in the home and the woman is substantially dependent on the claimant but is not employed by him.

The weekly rate of benefit is reduced by the amount by which a beneficiary's income from sources other than his pension exceeds the amount shown in the final column of the relevant line in the above table. For unemployment benefit purposes, the incomes of the claimant and his spouse are taken into account, unless they are permanently separated. For sickness benefit purposes, the income of the claimant only is taken into account, while up to £2 per week is disregarded of any payment received from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable. "Income" does not include child endowment, or other payments in respect of children, the Commonwealth hospital benefits and pharmaceutical benefits, or a tuberculosis allowance or an amount paid in reimbursement of medical, dental or similar expenses paid. There is no means test on property.

Where a person qualified for sickness benefit receives or is entitled to receive (in respect of the same period and the same incapacity for which sickness benefit is payable) any payment by way of compensation (including workers' compensation), damages, or otherwise under any law (except payments for which he has contributed), the amount of the compensation, etc., is not taken into account as income but is deducted from the rate of sickness benefit otherwise payable.

There is a waiting period of seven days in respect of which unemployment or sickness benefit is not payable. Unemployment and sickness beneficiaries are eligible to participate in the Commonwealth Rehabilitation Service under the same conditions as invalid pensioners. Payment of an unemployment or sickness benefit may be refused if the claimant or beneficiary, on being required, fails to undergo a medical examination or to receive treatment or undertake training or to do any suitable work.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not in receipt of an age, invalid or widow's pension or a service pension, if by reason of age, physical or mental disability or domestic circumstances, or for any other reason, he is unable to earn a sufficient livelihood for himself and his dependants.

The following table shows the number admitted to benefit during 1956-57, the number of persons on benefit at 30th June, 1957, and the amount paid for each benefit during 1956-57.

UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS	NEMPLOYMENT, SICKNESS AND SPECI	TAL BENEFIL:	. 1956-57.
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Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
Admissions to Benefit— Unemployment—									
Males	23,086	20,316	18,698	5,448	12,918	1,113	12	131	81,722
Females	5,640	3,622	2,853	1,062	916	171	1	43	14,308
Persons	28,726	23,938	21,551	6,510	13,834	1,284	13	174	96,030
Sickness—	1.5.643	0.007	7 724	4.002	2 226		40	70	41.017
Males Females	15,642 5,163	8,827 2,923	7,734 1,809	4,023 875	3,226 664	1,441 307	46 7	78 26	41,017 11,774
Persons	20,805	11,750		4,898		1,748	53	104	
Special—(a)	20,005	11,750	7,545	7,070	3,070	1,740	,,,	104	32,771
Males	926	369	684	234		62		4	2,356
Females	445,	681	227	68		44	1	11	
Persons	1,371	1,050	911	302	121	106	1	15	3,877
Total—(a) Males	39,654	20 572	27,116	9,705	16.221	2,616	58	213	125,095
Females	11,248	29,512 7,226	4,889	2,005		522	9		27,603
Persons	50,902	36,738		11,710		3,138	67	293	
Persons on benefit at end			,,	,	1,	-,			,
of year—	1 :			ļ		i			
Unemployment—					1				
Males	4,713	4,012	2,306	730		351		6	14,324
Females	1,517		545	324	235	59		. 6	
Persons	6,230	5,073	2,851	1,054	2,441	410	• •	12	18,071
Sickness— Males	2,130	1,147	855	459	366	188	1	14	5.160
Females	7,130	398				51	i	9	1,685
Persons	2,885	1,545				239	· 2		6,845
Special(a)	'	,	′	i			_		
Males	220	86				15		1	504
Females	447	445				78	• • •	4	1,467
Persons Total—(a)	667	531	424	157	94	93	• •	5	1,971
Males	7,063	5,245	3,259	1,246	2,599	554	,	21	19,988
Females	2,719	1,904				188	1	19	
Persons	9,782	7,149				742	2		26,887
Benefits Paid-			<b>'</b>	,					<i>'</i>
Unemployment £	669.798	530,959	418.997	113,653	336,846	23,045	105	2,633	2.096,036
Sickness £	639,342	339,414	234,000	136,332	96,907	47,243	1,361	3,927	1,498,526
Special (b) £	116,087	155,126	80,237	25,459	14,055	13,030	33	838	404,86 <b>5</b>
Total Benefits Paid b £	1,425,227	1025499	733,234	275,444	447,808	83,318	1,499	7,398	3,999,427

<sup>(</sup>a) Excludes special benefits paid to migrants in reception and training centres, payments to migrants in reception and training centres,

The following table shows the number of persons who were admitted to benefit, the average member receiving benefit at the end of each week and the amount paid for each benefit for Australia during each of the years 1952-53 to 1956-57.

UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS: SUMMARY, AUSTRALIA.

	Numi	er Admit Benefits.	dmitted to fits.  Average of Number of Persons on Benefit at end of each week.			t at end	Amoun	t Paid in	Benefits.
Year.	Un- employ- ment:	Sick- ness.	Special.	Un- employ- ment.	Sick- ness.	Special.	Un- employ- ment.	Sick- ness.	Special.
1952–53 1953–54 1954–55 1955–56	175,082 62,133 24,300 37,384 96,030	56,536 57,766 55,985	3,631 3,548 3,679	29,510 13,812 3,871 3,948 12,452	7,967 7,967	1,859 1,966 1,984		1,675,593 1,607,842 c1,519,073	352,587 372,220

<sup>(</sup>a) Excludes special benefits paid to migrants in reception and training centres. (b) Includes payments to migrants in reception and training centres. (c) Does not include special variations of advances for payments in regional areas, made at the end of the year.

<sup>(</sup>b) Includes

# § 9. Widows' Pensions.

Widows' pensions are payable to the following classes of women. The rates shown have been in operation since 15th October, 1957.

- Class "A"—A widow who has the custody, care and control of one or more children under the age of 16 years—£240 10s. per annum (£4 12s. 6d. a week) plus £26 per annum (10s. a week) for each child after the first in her custody, care and control.
- Class "B"—A widow who has no children under 16 years of age in her custody, care and control, and who is not less than 50 years of age or who, after having attained the age of 45 years, ceased to receive a Class "A" widow's pension by reason of the fact that she no longer had the custody, care and control of a child—£195 per annum (£3 15s. a week).
- Class "C"—A widow who is under 50 years of age and has no children under the age of 16 years in her custody, care and control, but is in necessitous circumstances at the time of or within 26 weeks after the death of her husband—£3 15s, a week for not more than 26 weeks. If at the time of her husband's death the widow is with child, this period will be extended until the birth of the child. She will then become eligible for a class "A" widow's pension.
- Class "D"—A woman whose husband has been serving a term of imprisonment for at least six months, if she has the custody, care and control of one or more children under the age of 16 years or is not less than 50 years of age—£195 per annum (£3 15s. a week).

The term "widow" includes; (i) a woman who was wholly or mainly maintained by a man as his wife on a permanent and bona fide domestic basis for not less than the three years before his death; (ii) a woman who has been deserted by her husband without just cause for not less than six months; (iii) a divorcee who has not remarried; and (iv) a woman whose husband is an inmate of a mental hospital.

The residential qualification is five years' continuous residence in Australia immediately prior to the date of lodgment of the claim, but this period may be reduced to one year under certain circumstances.

A widow's pension is not payable to an alien, unless she was a British subject before her marriage, a woman who is in receipt of an age or invalid pension, a tuberculosis allowance, or a war widow's pension, a woman who has deprived herself of property or income in order to qualify for a pension, a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband, a woman who is not of good character, or a woman who is not deserving of a pension. Widows' pensions may be granted to aboriginal native women of Australia under the same conditions as age pensions.

Widows' pensions are subject to a means test. They are reduced by the amount by which a pensioner's income from sources other than her pension exceeds £182 per annum (£3 10s. a week). In determining the amount of income, the income of a Class "A" widow is reduced by £26 per annum (10s. a week) less the amount of any payment other than child endowment received by her in respect of her child.

The pension of a woman in Class "B" or "D" is further reduced by £1 per annum for every complete £12 by which the value of her property exceeds £200.

No pension is payable to a woman who owns property valued at more than £1,750. The types of income and property disregarded in the case of widows' pensions are the same as in the case of age and invalid pensions except that any amount in excess of 15s. a week received by a deserted wife, or a divorcee from her husband or former husband, for the maintenance of a child is taken into account in the claimant's income.

The pension payable to a Class "A" widow may be continued after her child reaches 16 years and until the age of 18 years is reached if the child continues with full-time education at a school or university, is still dependent on the widow and is not in employment.

The number of widows' pensions by class, current at 30th June, 1957, was as follows:—Class "A", 20,648; Class "B", 24,269; Class "C", 223; Class "D", 276; total, 45,416.

The amount paid in pensions during 1956-57 was £8,862,402. The following table shows details of widows' pensions paid in each State and Territory in the year 1956-57:—

WIDOWS' PENSIONS AT 30th JUNE, 1957.

		· Per	nsions Curre	nt.	Average	Amount Pension 1956	s during
State or Territory.		Class "A".	All Classes.	Total per 10,000 of Popu- lation.	Fort- nightly Pension.	Amount.	Per head of Popu- lation.
					£ s. d.	£	s. d.
New South Wales		8,616	18,389	51	7 16 7	3,641,724	20 4
Victoria		4,619	10,879	51	7 13 4	2,035,597	15 5
Queensland		3,659	7,544	54	7 17 0	1,503,523	21 9
South Australia		1,689	3,783	43	7 13 10	735,021	17 1
Western Australia		1,237	3,243	47	7 7 10	612,271	17 11
Tasmania		772	1,476	45	7 19 1	303,367	18 7
Northern Territory		12	24	13	8 2 3	5,935	6.6
Australian Capital							
Territory		44	78	21	7 16 7	14,579	8 1
Overseas		(a)	(a)		(a)	10,385	
Total		20,648	45,416	47	7 15 1	8,862,402	18 7

(a) Included in figures for State in which pensioner is permanently domiciled.

# § 10. Reciprocal Agreements with Other Countries.

1. New Zealand.—An agreement between the governments of Australia and New Zealand for reciprocity in social services came into operation on 1st July, 1949.

The reciprocal arrangements cover age and invalid pensions, widows' pensions, child endowment and unemployment and sickness benefits, and apply to both permanent and temporary changes of residence.

Residence in one country counts as residence in the other country in relation to entitlement to benefits in which a residential qualification applies.

Persons from one country taking up permanent residence in the other country become eligible for any of the specified benefits of the new country under the same conditions (with one or two exceptions) as apply to citizens of that country.

Persons in receipt of any of the specified benefits in one country may continue to receive those benefits while temporarily absent in the other country. These payments are made on an agency basis by the appropriate authority of the country in which the person is temporarily resident.

2. United Kingdom.—A reciprocal agreement on social services between the United Kingdom and Australia came into operation on 7th January, 1954.

Under this agreement, former residents of the United Kingdom who were in the National Insurance Scheme when they left the United Kingdom are deemed, for the purposes of qualifying for age, invalid and widows' pensions, child endowment and unemployment and sickness benefits, to comply with the Australian residential requirements. Subject to the means test, persons who would be entitled to receive United Kingdom pensions on account of age, invalidity or widowhood if they were living in the United Kingdom have their United Kingdom pensions supplemented by the Commonwealth Government.

Australians going to the United Kingdom for permanent residence are treated in the United Kingdom as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

Families who go from one country to the other qualify for child endowment, or family allowances, as soon as they arrive in their new country.

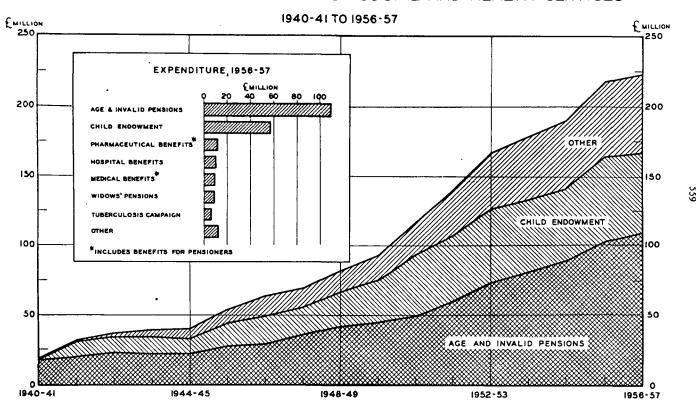
There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

#### B. OTHER SERVICES.

# § 1. Benevolent Homes.

1. General.—Numerous establishments exist for the housing and protection of persons no longer able to provide for themselves. These homes are supported by government and municipal aid, public subscriptions, bequests, etc. In many cases relatives of poor and afflicted persons contribute to their maintenance.

# COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES





An entirely satisfactory statistical tabulation of all forms of charitable aid provided by benevolent institutions is difficult because these services differ considerably.

- 2. Principal Institutions.—Particulars respecting the accommodation and the number of inmates of the principal institutions were published in earlier issues of the Official Year Book (see No. 22, p. 485).
- 3. Revenue and Expenditure.—Details regarding revenue and expenditure for the year 1955-56 are given in the following table.

BENEVOLENT HOMES:	REVENUE AND	<b>EXPENDITURE, 19</b>	55-56.
	(6)	•	

	<del> </del>	(	£.)				
Particulars.	N.S.W.(a)	Vic.	Qland.	S. Aust.	W. Aust.	Tas.	Australia.
Revenue-							
Government Aid	737,312	868,962 1,079	•	95,871	309,734	235,011	2,659,387 1,079
Public Subscrip-		1,079	••	• • • • • • • • • • • • • • • • • • • •		• • •	1,079
tions, Legacies	n	48,638			806		'n
Fees (b)	245,279				158,833		> 1,294,740
Other	לן	17,412	39,933	3,986	1,584	115	נן
					·		
Total	982,591	1,419,605	678,568	128,080	470,957	275,405	3,955,206
- tr.					i		
Expenditure—	470 170	665.022	204.005	96.260	215 204	172 420	1 022 117
Salaries and Wages Upkeep and Repair	478,178	665,023	304,005	80,209	215,204	173,438	1,922,117
of Buildings	71,546	59,428	10,653	14,137	11,595	6,033	173,392
All Other	309,599	305,211	308,637	26,817	90,604	102,022	1,142,890
Capital (c)	123,268	388,712	59,837	857	153,554		726,228
			<del></del>		<u> </u>		
Total	982,591	1,418,374	683,132	128,080	470,957	281,493	3,964,627
	I					l	i

- (a) These figures relate to the three State hospitals and homes only. (b) Includes Commonwealth hospital benefits and age and invalid pension receipts. (c) Includes such items as purchase of land, cost of new buildings and additions to buildings.
- 4. The Aged Persons Homes Act.—The Aged Persons Homes Act 1954 operated from 16th December, 1954. The purpose of the Act is to encourage the provision of homes at which aged persons may reside in conditions approaching normal domestic life as nearly as possible.
  - To be eligible for assistance under this Act an organization must be-
    - (a) carried on otherwise than for purposes of profit or gain to the individual members; and
    - (b) a religious organization, an organization the principal objects or purposes of which are charitable or benevolent, an organization of former members of the defence forces established in every State or a State branch of such an organization, or an organization approved by the Governor-General for the purpose of this Act.

An organization conducted or controlled by, or by persons appointed by, the Government of the Commonwealth or of a State or a local governing body established under the law of a State, is not eligible for assistance under this Act.

The Director-General of Social Services may make a grant of money to an organization as assistance towards meeting the cost of the construction or purchase of a home to be used permanently for the accommodation of aged persons. When the Act was introduced, the grant was made on a £1 for £1 basis with money raised by the organization, not counting money which the organization received from a governmental body or borrowed. Since 22nd October, 1957, the grant has been £2 for every £1 raised by the organization. Before a grant is made, the Director-General must be satisfied that the sum of the money expended, and the money presently available for expenditure, by the organization towards the capital cost of the home, together with the amount of the grant, will be not less than the capital cost of the home. Expenditure by the Commonwealth Government was £436,236 in 1954-55, £397,994 in 1955-56 and £751,136 in 1956-57.

## § 2. Orphanages, Industrial Schools, etc.

- 1. General.—The methods of caring for orphans and neglected children differ extensively, some are placed in orphanages and industrial schools, while others are boarded out with their mothers or female relatives or with approved foster-mothers. The children in orphanages and similar institutions may receive, in addition to primary education, some craft training. In all cases employment is found for the children on their discharge from the institution, and they remain for some time under the supervision of the proper authorities. The conditions under which orphans, neglected children and children boarded out live are subject to frequent departmental inspections.
- 2. Principal Institutions.—Particulars concerning the principal institutions in each State were published in earlier issues of the Official Year Book (see No. 22, p. 486).
- 3. Children under Government Authority.—The following table summarizes the transactions of State Departments during 1955-56 in connexion with children under their control or supervision. In addition to neglected children, the figures include uncontrollable and convicted children who are wards of a government authority, as well as poor children whose parents obtain assistance from the government without giving up the legal right of custody.

CHILDREN UNDER GOVERNMENT AUTHORITY: SUMMARY, 1955-56.

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
A. Children maintained or subsidized by the State.							
In State shelters, industrial schools, reformatories, etc.(b)	932	509		274	67	32	
In licensed or approved institutions	676	1,500	1,111	70	340	214	5,725
Boarded out—	5,960	3 177	(c)3,853	24			<u> </u>
With licensed foster-	3,500	3,1,7,	(2)3,033	2-	> 1,751	••	21,324
mothers, guardians, relatives and friends	1,887	449	316	3,792	]	115	J
Total children maintained or subsidized by the State	9,455	5,635	5,280	4,160	2,158	361	27,049
B. Children not maintained or subsidized by the State.							
Boarded out	(d) 1,633 204	 493		63 1,973	623 286		2,319 2,956
stitutions or Children's Courts)	3,203		172				4,529
In service or apprenticed Adopted or otherwise placed	42 415	230 23	296	208 460	92 101	•••	868 999
Total children not maintained or subsidized by the State	5,497	746	468	2,996	1,964		11,671
Total children under State control or supervision	14,952	6,381	5,748	7,156	4,122	361	38,720
Gross cost of children's relief	£ 1,202,547	£ 769,840	£ 450,793	£ 276,483	£ 136,502	£	£ 2,873,725
Receipts from parents' con- tributions, etc.	78,897	32,752				_	206,684
	· · ·						
Net Cost to State	1,123,650	737,088	422,837	231,151	118,326	33,989	2,667,041

<sup>(</sup>a) Year ended 31st December, 1956. (b) Includes inmates of hospitals. with female relatives. (d) Includes 526 after-care ex-institution inmates.

The total expenditure on children's relief in the foregoing table shows considerable variation amongst the States owing to the different methods of treating assistance to mothers with dependent children. In South Australia, Western Australia and Tasmania, large amounts have been excluded from the total expenditure on this account owing to the difficulty of obtaining separate amounts for allowances made in respect of the dependent children only.

#### § 3. Protection of Aboriginals.

For the protection of the aboriginal Australian race, there are institutions, under the supervision of Aborigines Boards, where these people are housed and encouraged to work, the children receiving elementary education. The work is usually carried on at mission stations, but many of the natives are nomadic, and receive food and clothing when they call, while others only rarely come near the stations. The aboriginal race is extinct in Tasmania. The expenditure from Consolidated Revenue in 1955–56 was as follows (figures in brackets are for the year 1956–57):—New South Wales, £181,585 (£174,967); Victoria, £16,219 (£13,039); Queensland, £657,917 (£632,107); South Australia, £214,809 (£177,535); Western Australia, £447,993 (£417,864); Northern Territory, £508,743 (£421,412); Australian Capital Territory, £4,684 (£3,427); Australia, £2,031,950 (£1,840,351).

#### § 4. Lifesaving.

There are three lifesaving societies in Australia—The Royal Life Saving Society, the Australian Life Saving Society and the Surf Life Saving Association. The object of these societies is the saving of life from drowning and other forms of asphyxiation. Among other things, they aim to encourage an ability to swim and a knowledge of lifesaving techniques on the part of pupils in schools and colleges. Numerous certificates of proficiency in various grades are issued annually throughout Australia.

#### § 5. Royal Humane Society.

The Royal Humane Society of Australasia with head office at 188 Collins Street Melbourne has as its main object the granting of awards to all who with bravery, skill and perseverance promptly risk their own lives in saving or attempting to save those of their fellow creatures. The classes of awards are (a) Gold Medal; (b) Silver Medal; (c) Bronze Medal; and (d) Certificate of Merit. The Clarke Medal is awarded for the outstanding case of the year, and the Rupert Wilks Trophy is awarded for the most outstanding bravery by a child under 13 years of age. About 50 awards are made annually.

#### § 6. The Order of St. John.

The Priory in Australia of the Most Venerable Order of the Hospital of St. John of Jerusalem is the governing body of the various activities of the Order which comprises the St. John Ambulance Association, the St. John Ambulance Brigade and the Hospitallers' Clubs in all States and Commonwealth Territories.

Members of the St. John Ambulance Association teach first aid to the injured, home nursing, hygiene and child welfare.

Members of the St. John Ambulance Brigade provide first aid at public functions.

The Hospitallers' Clubs in each State undertake the collection of funds for the St. John Ophthalmic Hospital in Jerusalem, and other duties which tend to bring together all persons interested in the work of the order.

The Order of St. John has established ambulance transport services in some States, acts as an ancillary to such services in other States, and provides technical reserves for the medical services of the Crown.

The Lifesaving Medal is awarded by the Order as warranted.

# § 7. Other Charitable Institutions.

Owing to the variety of name and function of other charitable institutions it has been found impracticable to give detailed results. The aid given in kind—food, clothing, tools of trade, etc.—is considerable, whilst the shelter and treatment afforded range from a bed for a night for casual callers in establishments ministering minor charity to indoor treatment over long periods in those that exist for the relief of the aged and the infirm. The institutions not so particularized include homes for the deaf, dumb and blind, infant homes, homes for the destitute and aged poor, industrial colonies, night shelters, crèches, rescue homes for females, free kindergartens, auxiliary medical charities, free dispensaries, benevolent societies and nursing systems, ambulance and health societies, boys' brigades, humane and animals' protection societies, prisoners' aid associations, shipwreck relief societies, bush fire, flood and mining accident relief funds.

#### CHAPTER XVI.

#### POPULATION.

Note.—The figures shown throughout this chapter for the Census of 30th June, 1954, are the final results, and population estimates shown for the intercensal period 1947 to 1954 are revised figures which have been adjusted in accordance with these results.

In general, the remaining statistics in this chapter cover the year 1957. More detailed figures will be found in the annual bulletin, *Demography*.

# § 1. Population Statistics.

Population statistics relating to Australia or to the component States and Territories as at specific dates are of two types—

- (i) Those ascertained by census enumeration. These results attain a very high degree of accuracy and may generally be accepted without reservation.
- (ii) Estimates derived by the application of vital and migration statistics to census data. In general, three estimates are made for any specific date:
  - (a) Original estimates for dates subsequent to a census made before another census is taken.
  - (b) Two-stage revision of the original estimates for each newly completed intercensal period to adjust for the difference between the new census result and the comparable estimate. This is to bring intercensal estimates into line with the two census populations. The first revision is reconciled with preliminary census results and the second revision with final census results.

Final revised figures become the permanent population estimates. For purposes requiring a mean population for any twelve-month period such mean is calculated as described in § 4. As populations at specific dates are used in these calculations, consequential revisions are made in mean populations when the estimates for specific dates are revised as described above.

In accordance with this policy, all Australian population statistics shown in this issue of the Official Year Book for dates up to 30th June, 1954, and all mean populations for calendar years up to 1953 and financial years up to 1953-54 are final. Population statistics for dates or years subsequent to these are subject to revision when another census is taken.

Since the establishment of the Commonwealth Bureau of Census and Statistics, the populations of the States and Territories have been estimated in a comparable manner and attention has been given to the improvement of the basic demographic data from which the estimates are compiled. The principal source of error in early estimates lay in the migration records, both oversea and interstate, and efforts were directed towards their improvement. The 1911 Census disclosed an error in the precensal estimates equivalent to proportions of 14.5 per cent. and 10.0 per cent., respectively, of recorded male and female oversea departures from Australia. These proportions were used as adjusting factors to recorded oversea departures during the intercensal period 1911-21. These adjusting factors were reduced after the 1921 Census to 1 per cent. for males and 4.5 per cent. for females and were discontinued altogether after the 1933 Census. From the results of the 1954 Census it appears that the accuracy of the records of oversea migration is such that in future little adjustment to recorded figures will be necessary for Australia as a whole.

It is improbable that the same degree of accuracy as has been attained in the record of oversea migration can be reached in the case of interstate movements. Records are made of interstate passengers by sea, rail and air, but it is impracticable, with occasional important exceptions, to record the movements by road.

#### § 2. The Census.

1. Census-taking.—Although "musters" of the population were carried out at least annually from 1788 to 1825, the first regular census in Australia was not taken until 1828, when a count of the population of the Colony of New South Wales was made. Subsequent censuses were taken sporadically in the various colonies until 1881, when a census was taken on the same date throughout Australia.

In 1891 and 1901, census-taking was still in the hands of the Government Statisticians of the States, but, in 1911, under the provisions of the Commonwealth Census and Statistics Act, which provides for the enumeration to be made from one centre instead of by each State as formerly, the Commonwealth Statistician undertook the first census of the Commonwealth of Australia. The second was taken in 1921, the third in 1933, the fourth in 1947 and the fifth in 1954.

2. Population recorded at Censuses.—State and Territorial populations recorded at the Australia-wide censuses taken over the period 1881 to 1954 are shown in the following table. The figures relate to the political boundaries of the several States (or Colonies) and Territories as they existed at the date of each census, except that the Northern Territory has been shown separately from South Australia for three censuses prior to its transfer from that State. The years of formation of the separate Colonies and transfer of the Territories are shown in Chapter 1, § 4 and § 5. The total populations recorded at the censuses taken in the Colonies from 1828 to 1876 were shown in Official Year Book No. 40, p. 326.

POPULATION: AUSTRALIAN CENSUSES, 1881 TO 1954.

0	Population Enumerated (Excluding Full-blood Aboriginals).									
Census.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aust.	
			М	ALES.						
3rd April, 1881	410,211 609,666 710,005 857,698 1,071,501 1,318,471 1,492,211 1,720,860	451,623 598,222 603,720 655,591 754,724 903,244 1,013,867 1,231,099	223,779 277,003 329,506 398,969 497,217 567,471	162,241 180,485 207,358 248,267 290,962 320,031		61,162 · 77,560 89,624 97,591 107,743 115,097 129,244 157,129	4,560 4,216 2,734	992 1,567 4,805 9,092	1,214,91 1,705,83 1,977,92: 2,313,03 2,762,87 3,367,11 3,797,37 4,546,11	
			Fei	MALES.						
3rd April, 1881	339,614 517,471 644,841 789,036 1,028,870 1,282,376 1,492,627 1,702,669	409,943 541,866 597,350 659,960 776,556 917,017 1,040,834 1,221,242	221,126 276,307 357,003 450,317	130,231 153,292 177,861 201,200 246,893 289,987 326,042 393,191	204,915	54,543 69,107 82,851 93,620 106,037 112,502 127,834 151,623	1,046 1,472	722 1,005 4,142 7,813	1,035,28 1,471,98 1,795,87 2,141,97 2,672,86 3,262,72 3,781,98 4,440,412	
			Per	RSONS.						
3rd April, 1881 5th April, 1891 31st March, 1901 3rd April, 1911 4th April, 1921 30th June, 1933 30th June, 1947 30th June, 1954	749,825 1,127,137 1,354,846 1,646,734 2,100,371 2,600,847 2,984,838 3,423,529	861,566 1,140,088 1,201,070 1,315,551 1,531,280 1,820,261 2,054,701 2,452,341	393,718 498,129 605,813 755,972 947,534 1,106,415	315,533 358,346 408,558 495,160 580,949 646,073	184,124 282,114 332,732	115,705 146,667 172,475 191,211 213,780 227,599 257,078 308,752	3,451 4,898 4,811 3,310 3,867 4,850 10,868 16,469	1,714 2,572 8,947 16,905 30,315	2,250,194 3,177,823 3,773,801 4,455,005 5,435,734 6,629,835 7,579,358 8,986,530	

(a) Part of New South Wales prior to 1911.

The final results of the 1954 Census of the Australian External Territories will be found in § 13 of this chapter.

3. Increase since 1881 Census.—The increases in the populations of the several States and Territories and of Australia as a whole during the last seven intercensal periods are shown in the following table, which distinguishes the numerical increases, the proportional increases (which do not allow for the differences in the length of the intercensal periods) and the average annual rates of increase.

#### POPULATION: INTERCENSAL INCREASES.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

							_~-				
State or Territory.	1881-1891 (10 years).		1901-1911 (10 years).	1911-1921 (10 years).	1921-1933 (12½ years).	1933–1947 (14 years).	1947-1954 (7 years).				
Numerical Increase.											
New South Wales(a)	377,312	227,709	293,602	453,637	500,476	383,991	438,691				
Victoria	278,522	60,982	114,481	215,729	288,981	234,440	397,640				
Queensland ·	180,193	104,411	107,684	150,159	191,562	158,881	211,844				
South Australia	39,119	42,813	50,212	86,602	85,789	65,124	151,021				
Western Australia	20,074	134,342	97,990	50,618	106,120	63,628	137,291				
Tasmania	30,962	25,808	18,736	22,569	13,819	29,479	51,674				
Northern Territory	1,447	-87	-1,501	557	983	6,018	5,601				
Aust. Cap. Terr.(b)	i	٠		858	6,375	7,958	13,410				
Australia	927,629	595,978	681,204	980,729	1,194,105	949,519	1,407,172				
PROPORTIONAL INCREASE—PER CENT.											
New South Wales(a)	50.32	20.20	21.67	27.55	23.83	14.76	14.70				
Victoria	32.33	5.35	9.53	16.40	18.87	12.88	19.35				
Queensland	84.39	26.52	21.62	24.79	25.34	16.77	19.15				
South Australia	14.15	13.57	14.01	21.20	17.33	11.21	23.38				
Western Australia	67.57	269.86	53.22	17.94	31.89	14.50	27.32				
Tasmania	26.76	17.60	10.86	11.80	6.46	12.95	20.10				
Northern Territory	41.93	-1.78	-31.20	16.83	25.42	124.08	51.54				
Aust. Cap. Terr.(b)	••			50.06	247.86	88.95	79.33				
Australia	41.22	18.75	18.05	22.01	21.97	14.32	18.57				
	Average	Annual	RATE OF I	NCREASE-	PER CENT						
New South Wales(a)	4.16	1.86	1.97	2.46	1.76	0.99	1.98				
Victoria	2.84	0.52	0.91	1.53	1.42	0.87	2,56				
Oueensland	6.31	2.38	1.98	2.24	1.86	1.11	2.53				
South Australia	1.33	1.28	1.32	1.94	1.31°	0.76	3.05				
Western Australia	5.30	13.97	4.36	1.66	2.29	0.97	3.51				
Tasmania	2.40	1.63	1.04	1.12	0.51	0.87	2.65				
Northern Territory	3.56	-0.18	-3.67	1.57	1.87	5.93	6.12				
Aust. Cap. Terr.(b)				4.14	10.71	4.65	8.70				
Australia	3.51	1.73	1.67	2.01	1.63	0.96	2.46				
(a) Tankadan Assat		1.70		(1)		. C 1 11/-	lea				

<sup>(</sup>a) Includes Australian Capital Territory prior to 1911. (b) Part of New South Wales prior to 1911.

Note.—Minus sign (-) denotes decrease.

# § 3. Growth and Distribution of Population.

1. Growth of Population.—The table which follows shows the growth in the population of each sex in the various States and Territories as measured by the estimated population at 31st December in 1880 and thereafter at decennial intervals to 1950. Each year from 1952 to 1957 is included in order to show recent growth in greater detail.

#### ESTIMATED POPULATION: 1880 TO 1957.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

At 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T. (b)	Australia.
				MA	LES.				
1880 1890 1900 1910 1920 1930 1940(c) 1950	404,952 602,704 716,047 858,181 1,067,945 1,294,419 1,402,297 1,627,618	450,558 595,519 601,773 646,482 753,803 892,422 947,037 1,114,497	124,013 223,252 274,684 325,513 396,555 481,559 536,712 620,329	147,438 166,049 180,349 206,557 245,300 288,618 297,885 364,705	16,985 28,854 110,088 157,971 176,895 232,868 248,734 294,758	60,568 76,453 89,763 98,866 107,259 113,505 123,650 147,103	4,288 2,738 2,911 3,599 6,337 9,414	1,062 4,732 7,856 13,021	1,204,514 1,692,831 1,976,992 2,296,308 2,751,730 3,311,722 3,570,508 4,191,445
1952 1953 1954 1955 1956 1957	1,695,899 1,713,639 1,738,385 1,770,966 1,802,142 1,837,358	1,189,262 1,212,060 1,246,591 1,288,058 1,328,357 1,360,540	652,974 666,348 679,012 692,920 708,246 718,166	388,433 397,610 409,858 423,413 437,426 449,282	316,700 326,372 334,886 345,487 353,082 360,031	157,702 161,305 162,801 165,994 171,151 175,887	9,477 9,854 9,974 10,345 10,545 10,621	15,081 16,090 d16,502 d17,746 d19,772 20,820	4,425,528 4,503,278 4,598,009 4,714,929 4,830,721 4,932,705

For footnotes see next page.

ESTIMATED POPULATION: 1880 TO 1957—continued. (Excluding Full-blood Aboriginals.)

At 31st Dec.—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.		
Females.											
1880	336,190	408,047	87,027	128,955	12,576	54,222			1,027,017		
1890	510,571	538,209	168,864	152,898	19,648	68,334			1,458,524		
1900	644,258	594,440	219,163	176,901	69,879	83,137	569		1,788,347		
1910	785,674	654,926	273,503	200,311	118,861	94,937	:563		2,128,775		
1920	1,023,777	774,106	354,069	245,706	154,428	105,493	1,078	910	2,659,567		
1930	1,251,934	900,183	435,177	285,849	198,742	111,792	1,365	3,987	3,189,029		
1940(c)	1,388,651	967,881	494,740	301,171	225,342	120,352	2,637	6,304	3,507,078		
1950	1,613,439	1,122,685	585,089	358,138	277,891	143,230	5,006	10,558	4,116,036		
1952	1,672,087	1,177,457	618.282	380,137	296,235	151.856	5,294	12,693	4,314,041		
1953	1,695,370	1,203,975	632,072	388,055	305,371	155,160	5,781	13,624	4,399,408		
1954	1,723,928	1,234,286	643,740	398,385	314,529	156,710	6,166	d 14.642	4,492,386		
1955	1,754,957	1,266,963	657,764	411,222	325,263	159,807		d 15.724	4,598,362		
1956	1,786,202	1,304,266	670,701	424,486	331,753	161,659		d 16,238	4,702,613		
1957	1,823.139	1,340,095	683,261	436,921	340,183	164,979	7,894	18,294	4,814,766		
	-			Pers	ONS.						
1880	741,142	858.605	211.040	276,393	29,561	114,790		1	2,231,531		
1890	1.113,275	1,133,728	392,116	318,947	48,502	144,787			3,151,355		
1900	1,360,305	1,196,213	493,847	357,250	179,967	172,900	4,857	!	3,765,339		
1910	1,643,855	1,301,408	599,016	406,868	276,832	193,803	3,301		4,425,083		
1920	2,091,722	1,527,909	750,624	491,006	331,323	212,752	3,989	1,972	5,411,297		
1930	2,546,353	1,792,605	916,736	574,467	431,610	225,297	4,964	8,719	6,500,751		
1940(c)	2,790,948	1,914,918	1,031,452	599,056	474,076	244,002	8,974	14,160	7,077,586		
1950	3,241,057	2,237,182	1,205,418	722,843	572,649	290,333	14,420	23,579	8,307,481		
1952	3,367,986	2,366,719	1,271,256	768,570	612,935	309,558	14,771	27,774	8,739,569		
1953	3,409,009		1,298,420	785,665	631,743	316,465	15,635	29,714	8,902,686		
1954	3,462,313		1,322,752	808,243	649,415	319,511	16,140	d 31,144	9,090,395		
1955	3,525,923		1,350,684	834.635	670,750	325,801		d 33,470	9,313,291		
1956	3.588.344		1,378,947	861,912	684,835	332,810	17.853	d 36.010	9,533,334		
1957	3,660,497		1,401,427	886,203	700,214	340,866	18,515	39,114			

(a) Northern Territory figures included with South Australia prior to 1900. (b) Part of New South Wales prior to 1911. (c) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment. (d) Revised estimates based on the June, 1957 Population Count of Canberra are as follows:—1954, males 16,458, females 14,848, persons 31,306; 1955, males 17,615, females 16,345, persons 33,960; 1956, males 19,553, females 17,275, persons 36,828.

Estimates of population for intercensal years are obtained in the manner outlined in § 1. The estimated population at 31st December each year from 1788 to 1946 on the same basis as in the table above was shown in *Demography*, Bulletin No. 67, 1949 and for the period 1881 to 1956 in *Demography*, Bulletin No. 74. A graph illustrating the growth of the population of Australia and of each State and Territory appears on p. 593.

- 2. Present Numbers.—The population of Australia at 31st December, 1957, was estimated at 9,747,471 persons, of whom 4,932,705, or 50.60 per cent., were males and 4,814,766, or 49.40 per cent., were females. The increase during 1957 was 214,137, equal to 2.25 per cent., males having increased by 101,984 or 2.11 per cent., and females by 112,153 or 2.38 per cent. This increase was the result of an excess of births over deaths of 135,405, and a net gain by migration of 78,732 persons.
- 3. Proportion of Area and Population, Density and Masculinity.—The previous table shows the number of persons in each of the States and Territories at 31st December, 1957. In the following table the proportions of the total area and of the total population represented by each State and Territory are given, together with the density and the masculinity of the population.

DENSITY AND MASCULINITY OF POPULATION, 1957.

(EXCLUDING FULL-RIOOD ABORIGINALS.)

	(27	CLUD	ING TOLL	BECOD 71	BORIGINA	20.)		
State or Territory.			Pro- portion of Total		n of Estima ist Decemb (Per cent.)		Density.	Mascu-
State of Territory.			Area. (Per cent.)	Males.	Females.	Persons.	(a)	linity.(b)
New South Wales			10.40	37.25	37.87	37.55	11.83	100.78
Victoria			2.96	27.58	27.83	27.71	30.73	101.53
Queensland			22.54	14.56	14.19	14.38	2.09	105.11
South Australia			12.78	9.11	9.07	9.09	2.33	102.83
Western Australia			32.81	7.30	7.07	7.18	0.72	105.83
Tasmania			0.88	3.57	3.43	3.50	13.00	106.61
Northern Territory			17.60	0.21	0.16	0.19	0.04	134.55
Australian Capital Te	rritory		0.03	0.42	0.38	0.40	41.65	113.81
Australia			100.00	100.00	100.00	100.00	3.28	102.45

<sup>(</sup>a) Number of persons per square mile.

<sup>(</sup>b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

4. Urban and Rural Distribution.—Particulars of the distribution of the population amongst metropolitan urban, other urban and rural areas in each State and Territory is available only from a census. Particulars of the distribution at the 1947 Census were shown in Official Year Book No. 39, pp. 521-524.

At the census of 30th June, 1954, the number of persons and the proportion of the total population of Australia in each division were:—metropolitan urban 4,845,230, 53.92 per cent.; other urban 2,230,039, 24.81 per cent.; rural 1,887,892, 21.01 per cent. Migratory population (23,369) accounted for the remaining 0.26 per cent.

Of the States, Victoria had the largest proportion of population residing in the metropolitan area (62.15 per cent.) but was closely followed in this respect by South Australia (60.66 per cent.). Percentages for the other States were:—New South Wales, 54.42; Queensland, 38.10; Western Australia, 54.50; and Tasmania, 30.84.

A feature of the metropolitan population is its higher femininity as compared with the population of extra-metropolitan areas. In 1933, 52.5 per cent. of the metropolitan population was composed of females; in 1947, the proportion had fallen slightly to 51.9 per cent., being highest in Tasmania at 52.3 per cent.; at the Census of 30th June, 1954, the proportion had fallen to 51.0 per cent., there being little difference in the proportions as between the several States. The proportion of females in extra-metropolitan areas was between 46 per cent. and 48 per cent. at each of these three censuses.

Metropolitan Urban Divisions include the capital cities of the States and (included in 1954 for the first time) Canberra, the capital city of Australia, the boundaries of the capital cities being determined for census purposes by the Statisticians of the States in collaboration with the Commonwealth Statistician, and normally include the city proper and all contiguous urban areas. In order to conform to the growth of the metropolitan urban population, the boundaries are reviewed at each census and adjustments made, wherever necessary, to embrace contiguous urban areas that have developed since the previous census. Amendments were made prior to the Census of 1954 to the boundaries of the Metropolitan Urban Divisions in New South Wales, Victoria and Tasmania.

Other Urban Divisions comprise the capital city of the Northern Territory, all separately incorporated cities and towns, and all other towns with a population of 1,000 persons or more (750 in Tasmania), outside the Metropolitan Urban Divisions. The inclusion in the Other Urban Divisions in 1954 of the larger towns not separately incorporated was a significant departure from the classification adopted at previous censuses, when these towns (in all States except Tasmania) were included in the Rural Divisions, and the Other Urban Divisions (or Provincial Urban Divisions) were restricted to provincial separately incorporated cities and towns only.

Rural Divisions comprise the remaining portions of each State and Territory, and are affected by the intercensal changes in the areas of the Metropolitan Urban and Other Urban Divisions. As already mentioned, the Rural Divisions in 1954 exclude the towns of 1,000 persons or more (750 in Tasmania) which were not separately incorporated.

The term "Migratory" refers to persons not elsewhere enumerated who at midnight between 30th June and 1st July, 1954 were travelling on ships in Australian waters or on long-distance trains or aircraft.

As particulars of the population in urban and rural divisions for the 1947 Census are not directly available on the basis of the 1954 composition of these divisions, adjustments have been made to the 1947 figures in order to provide approximate comparisons with 1954 for the purposes of the following table. Adjustments to 1947 Metropolitan figures have been made in New South Wales, Victoria, Tasmania and the Australian Capital Territory, while in all States and in the Northern Territory adjustments have been made to allow for the transfer of towns of 1,000 persons or more from Rural to Other Urban.

URBAN AND RURAL POPULATION(a): CENSUS, 30th JUNE, 1954. (EXCLUDING FULL-BLOOD ABORIGINALS.)

Division.		1954 Census	•	Proportio Populatio (Per	n of Total n of State. cent.)	Percentage Increase since the
	Males.	Females.	Persons.	1947 Census.	1954 Census.	since the 1947 Census.
		New So	UTH WALES.		·	<u> </u>
Urban—				∥ .		
Metropolitan	909,978	953,183	1,863,161	55.14	54.42	13.20
Other	485,128	480,259	965,387	27.19	28.20	18.94
Rural	319,562	268,549	588,111	17.42	17.18	13.11
Migratory	6,192	678	6,870	0.25	0.20	-6.43
Total	1,720,860	1,702,669	3,423,529	100.00	100.00	14.70
	л	Vi	CTORIA.	<u>}'</u>		
Urban—		i				
Metropolitan	747,712	776,399	1,524,111	62.91	62.15	17.90
Other	233,083	236,980	470,063	18.08	19.17	26.52
Rural	243,809	206,317	450,126	18.82	18.35	16.42
Migratory	6,495	1,546	8,041	0.19	0.33	108.80
Total	1,231,099	1,221,242	2,452,341	100.00	100.00	19.35
	<u> </u>	Our	ENSLAND.			<u> </u>
	<u></u>	1 1				1
Urban—						
Metropolitan	244,904	257,416	502,320	36.34	38.10	24.95
Other	230,157 198,605	229,923	460,080 352,888	34.18 29.31	34.90 26.77	21.65
Rural Migratory	2,586	154,283 385	2,971	0.17	0.23	8.82 57.45
						<u> </u>
Total	676,252	642,007	1,318,259	100.00	100.00	19.15
		South	Australia.	-		
Urban						
Metropolitan	237,651	245,857	483,508	59.20	60.66	26.42
Other	55,853	54,254	110,107	13.69	13.81	24.48
Rurai	108,199	92,934	201,133	26.85	25.23	15.95
Migratory	2,200	146	2,346	0.26	0.30	37.92
Total	403,903	393,191	797,094	100.00	100.00	23.38
	<u> </u>	WESTER	N AUSTRALIA.		1	
	li .	1		i		
Urban—	171 032	176 015	240 647	54.34	54.50	27.02
Metropolitan	171,832	176,815	348,647 105 <b>.</b> 418	54.24 16.68	16.48	27.93
Other	53,868	51,550 80,686	183,439	28.49	28.67	25.75 28.15
Migratory	102,753 1,905	362	2,267	0.59	0.35	-23.95
<b></b>	120 350	200 412	620 771	100.00	100.00	27.20
Total	330,358	309,413	639,771	100.00	100.00	27.32

<sup>(</sup>a) See letterpress preceding this table for definitions of urban, rural, etc., and for reference to the adjustments to 1947 Census figures in order to provide approximate comparisons on the 1954 Census basis.

Note.—Minus sign (-) denotes decrease.

URBAN AND RURAL POPULATION(a): CENSUS, 30th JUNE, 1954—continued.

Division.		1954 Census.		Proportio Populatio (Per	n of Total n of State. cent.)	Percentage Increase
	Males.	Females.	Persons.	1947 Census.	1954 Census.	since the 1947 Census
		Т	ASMANIA.			
Urban—						1 ]
Metropolitan	46,544	48,662	95,206	30.19	30.84	22.67
Other	53,521	54,607	108,128	33.45	35.02	25.74
Rural	56,418	48,350	104,768	36.09	33.93	12.93
Migratory	646	4	650	0.27	0.21	-7.54
Total	157,129	151,623	308,752	100.00	100.00	20.10
		Northe	RN TERRITOR	RY.		
Urban		]				
Metropolitan	]					
Other	6,378	4,478	10,856	65.14	65.92	53.35
Rural	3,692	1,697	5,389	33.59	32.72	47.60
Migratory	218	6	. 224	1.27	1.36	62.32
Total	10,288	6,181	16,469	100.00	100.00	51.54
	A	USTRALIAN	CAPITAL TER	RITORY.	!	
	1	1				
Urban— Metropolitan Other	15,076	13,201	28,277	89.65	93.28	86.57
Rural	1,153	885	2,038	10.35	6.72	16.52
Migratory					••	• • •
Total	16,229	14,086	30,315	100.00	100.00	79.33
		Aı	USTRALIA.	<u> </u>	· · · · · · · · · · · · · · · · · · ·	
Urban						
Metropolitan	2,373,697	2,471,533	4,845,230	53.94	53.92	18.51
Other	1,117,988	1,112,051	2,230,039	24.10	24.81	22.08
Rural	1,034,191	853,701	1,887,892	21.71	21.01	14.72
Migratory	20,242	3,127	23,369	0.25	0.26	25.62
Total	4,546,118	4,440,412	8,986,530	100.00	100.00	18.57

<sup>(</sup>a) See letterpress preceding this table for definitions of urban, rural, etc., and for reference to the adjustments to 1947 Census figures in order to provide approximate comparisons on the 1954 Census basis.

Note.—Minus sign (-) denotes decrease.

<sup>5.</sup> Capital Cities: Australia and Other Countries.—In Australia there is an abnormal concentration of population in the capital cities, which are the only cities of outstanding importance in the various States. A comparison with the capitals of various other countries is given in the following table.

POPULATION OF CAPITAL CITIES: AUSTRALIA AND OTHER COUNTRIES. ('000.)

State or Country.	Metropolis.	Year.	Metro- politan Popu- lation.	Country.	Metropolis.	Year.	Metro- politan Popu- lation.
New South Wales	Sydney	1957	a 1,975	Brazil .		1955	2,767
Victoria	Melbourne	1957	a 1,677		Prague	1956	973
Oueensland	Brisbane	1957	(a) 543	Denmark .	Copenhagen	1950	975
South Australia	Adelaide		(a) 529	Egypt .		1951	2,373
Western Australia	Perth	1957	(a) 376			1954	2,850
Tasmania	Hobart	1957	(a) 104	Germany	Berlin	1955	3,495
Australian Cap. Ter.	Canberra	1957	(a) 36	Greece	Athens(c)	1951	1,368
England	London(b)	1957	8,270	Hungary		1955	1,757
0	Edinburgh	1956	466	Italy		1953	1,760
Northern Ireland	Belfast	1955	454	Japan	.   Tokyo(e)	1957	8,335
Ireland, Republic of	Dublin	1956	585	Netherlands		1956	869
Canada	Ottawa	1956	335	Norway		1955	447
New Zealand	Wellington	1956	224	Poland		1956	1,031
Union of South Africa	Capetown	1957	709	Portugal .		1952	795
		l .		Spain		1955	1,768
Argentina	Buenos Aires	1955	3,583	Sweden		1956	786
Belgium	Brussels	1955	982	U.S.A.	Washington	1956	859

<sup>(</sup>a) Excludes full-blood aboriginals. Piraeus. (d) Greater Budapest.

6. Principal Urban Areas.—The following table shows the estimated population of the principal urban incorporated areas (population 6,000 or more) in each State and Territory of Australia at the latest date available.

# ESTIMATED POPULATION OF PRINCIPAL URBAN INCORPORATED AREAS : AUSTRALIA.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

City or Town.	Popu- lation.	City or Town.	Popu- lation.	City or Town.	Popu- lation.
New South Wales.(a)		Victoria.(a)		South Australia.	
Sydney and Suburbs(b)	1,975,020	Melbourne and Suburbs(b)	1,677,100	Adelaide and Sub-	
Newcastle and Suburbs(c)	189,750		82,820	urbs(a)(b)	529,000
Greater Wollongong	106,710		51,330	Port Pirie	(d)14,223
Greater Cessnock	42,330	Bendigo and Suburbsc	39,370	Monnt Gambier	(d)10,331
Broken Hill	33,320	Warrnambool	13,500		(d) 8,598
	23,390	Moe	13,400	Port Augusta	(d) 6,704
Blue Mountains	22,530	snepparton	12,090		1
Maitland	20,820	mangaratia	11,810	Western Australia.(a)	ł
Penrith		Mildura	11,760	Western Australia.(u)	1
Goulburn	.20,560		9,080	Perth and Suburbs(b)	376,000
Wagga Wagga	20,400		8,730 8,430	Kalgoorlie and	
Orange	18,930	A =====	7,810	Suburbs(c)	23,000
Lismore	18,040	Maryborough	7,210	Bunbury	11,176
Albury	17,950	Sale	7,170	Geraldton	9,094
Bathurst	16,780	Benalla	7,100	Albany	8,906
Grafton	15,200	Castlemaine	6,890	Northam	6,305
Lithgow	15,000	Echuca	6,000	i	1
Tamworth	14,480		'	Tasmania.(a)	1
Dubbo	12,890	Queensland.(a)		тазшана.(и)	1
Campbelltown	11,290		543,000	Hobart and Suburbsb	103,570
Windsor	10,730	Toowoomba	45,900	Launceston and	133,0
Taree	9,900	Rockhampton	42,900	Suburbs(c)	:53,790
A! 4.4-	9.140	TOWNSVILLE	42,900		(d)11,193
	8,290	ipswich	41,700	Devonport(e)	(d)10,597
~ .	8,250		22,940	1	1
			22,800 21,600	Northern Territory.(a)	J
Queanbeyan	8,100		18,800	Northern Territory.(a)	<b>'</b>
Inverell	7,940	Th. 1.1.00	16,200	Darwin	9,395
Kempsey	7,880	Madian	15,000		9,393
Cooma	7,850	Gymnie	10,420	1	1
Shellharbour	6,930	Warwick	9,800	Australian Capital	4
Forbes	6,710	Gladstone	7,300	Territory.	1
Cowra	6,200	Charters Towers	6,800		1
Muswellbrook	6,000	Daiby	6,800	Canberra(b)	(f)35,827

<sup>(</sup>a) At 30th June, 1957. (b) Metropolitan Area. (c) Entire Urban Area. (d) Census, 30th June, 1954. (e) Non-municipal town. (f) June, 1957 Population Count of Canberra.

<sup>(</sup>b) Greater London.
(c) Greater Tokyo.

<sup>(</sup>c) Greater Athens, including

7. Urban Areas Outside Metropolitan Areas.—The proportion of the total population of each State which was located in incorporated urban provincial areas at the 1933 and 1947 Censuses was shown in Official Year Book No. 39, pp. 522-3. In Official Year Book No. 40, p. 334, a table was given showing aggregate population at the 1947 Census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more inhabitants, irrespective of whether such centres were incorporated separately or not. In addition, the proportion of the aggregate population of these cities and towns to the total population of the State was shown. The following table shows similar particulars for the 1954 Census.

# AGGREGATE POPULATION OF CITIES AND TOWNS OF SPECIFIED SIZE: CENSUS, 30th JUNE, 1954.

#### (EXCLUDING FULL-BLOOD ABORIGINALS.)

•	Citie	s and Towns o	outside Metro	politan Are	ea with Popula	tion of→
State or Territory.		2,000 and	over.	}	3,000 and or	ver.
State of Territory.	Number.	Population.	Proportion of Total Population.	Number.	Population.	Proportion of Total Population
• ,			%			%
New South Wales(a)	98	881,391	25.75	67	806,373	23.55
Victoria	56	415,690	16.95	40.	376,347	15.35
Queensland	41	404,520	30.69	29	374,328	28.40
South Australia	14	74,502	9.35	9	62,008	7.78
Western Australia(b) .	. 13	82,139	12.84	7	67,440	10.54
Tasmania	8	89,003	28.83	6	84,312	27.31
Northern Territory	.   2	10,856	65.92	1	8,071	49.01
Australian Capital Terri	-	<u> </u>		1	]	
tory (c)		• • •			•••	
Total	232	1,958,101	21.79	159	1,778,879	19.79

<sup>(</sup>a) Excludes that part of Liverpool Municipality outside the Metropolitan Area of Sydney.

(b) Excludes that part of Fremantle suburbs outside the Metropolitan Area of Perth.

(c) The only city or town is Canberra, the capital city of Australia, classed as metropolitan.

In the foregoing table, "Urban Areas" comprising two or more Local Government Areas or portions thereof are treated as units. The "Urban Areas" so treated are: in New South Wales, Newcastle; in Victoria, Ballarat, Bendigo, and Geelong; in Western Australia, Kalgoorlic; and in Tasmania, Launceston. The figures in each instance include the populations of the adjoining areas which, together with the city proper, constitute the entire "Urban Area".

The numbers of towns of 2,000 or more inhabitants in New South Wales and Victoria, and of 3,000 or more in New South Wales, show considerable decreases as compared with the figures for the 1947 Census. This is due to the absorption, by the increased metropolitan areas, of towns within these ranges which were formerly outside the metropolitan limits, and, in New South Wales, to similar absorptions by the City of Blue Mountains, Greater Wollongong and Newcastle Urban Area.

8. Principal Cities in the World.—The following table shows the population of the world's largest cities at the latest available date:—

# POPULATION OF THE WORLD'S LARGEST CITIES. (Names of cities in Commonwealth countries are printed in italics.)

Country	y.	City.	Year.	City Popu- lation ('000).	Country.	City.	Year.	City Popu- lation ('000).
Japan		Tokyo(a)	1957	8,335	Canada	Toronto(h)	1956	1,348
England		London(b)	1957	8,270	Japan	Nagoya	1955	1,337
U.S.A.		New York	1955	8.005	Italy	Milan	1951	1,277
China		Shanghai	1953	6,204	Singapore	Singapore	1956	1,262
U.S.S.R.		Moscow	1955	4,839	Romania	Bucharest	1956	1,237
U.S.A.		Chicago	1950	3,621	Turkey	Istanbul	1955	1,215
Argentina		Buenos Aires	1955	3,583	Philippines	Manila	1953	1,200
Germany		Berlin	1955	3,495	Japan	Kyoto	1955	1,170
U.S.S.R.		Leningrad(c)	1955	3,176	Japan	Yokohama	1955	1,137
India		Calcutta(d)	1951	2,982	England	Birmingham	1956	1.111
France		Paris	1954	2,850	Venezuela	Caracas	1956	1,102
India		Bombay	1951	2,839	Peru	Lima	1956	1,086
China		Peking	1953	2,768	India	Hyderabad	1951	1.086
Brazil		Rio de Janeiro	1955	2,767	Scotland	Glasgow	1956	1.084
China		Tientsin	1953	2,694	China	Dairen	1950	1.054
Japan		Osaka	1955	2,542	Korea	Pusan	1955	1,045
Indonesia		Diakarta	1953	2,500	Egypt	Alexandria	1951	1.041
Egypt		Cairo	1951	2,373	Poland	Warsaw	1956	1,031
China		Shenyang	1956	2,290	Italy	Naples	1951	1,025
Mexico		Mexico City	1950	2,234	China	Nanking	1950	1,020
U.S.A.		Los Angeles	1953	2,105	Pakistan	Karachi	1951	1.009
U.S.A.		Philadelphia	1950	2 071	U.S.A	Cleveland	1956	996
Brazil		Sao Paulo	1950	2,017	U.S.S.R	Kiev	1955	991
Australia		Sydney	1957	1.975	Belgium	Brussels	1955	982
U.S.A.		Detroit	1950	1,850	Denmark	Copenhagen	1950	975
Vietnam		Saigon	1956	1.800	Czechoslovakia	Prague	1956	973
China		Wuhan	1956	1,800	Thailand	Bangkok	1952	971
Germany		Hamburg	1955	1,782	Germany	Munich	1955	968
Spain		Madrid	1955	1,768	Japan	Kobe	1955	967
Italy		Rome	1953	1,760	U.S.A	Baltimore	1950	950
Hungary		Budapest(e)	1955	1,757	India	Delhi	1951	915
Australia		Melbourne	1957	1,677	U.S.S.R	Baku	1955	901
China		Chungking	1953	1,620	South Africa	Johannesburg	1951	884
Austria		Vienna	1955	1,618	U.S.S.R	Kharkov	1955	877
Canada		Montreal(f)	1956	1,595	U.S.S.R.	Gorky City	1955	876
Korea		Scoul	1955	1,575	Netherlands	Amsterdam	1956	869
Persia		Tehran	1956	1,513	U.S.A	Washington	1956	859
China	٠.	Canton	1950	1,496	U.S.A	St. Louis	1950	857
India		Madras	1951	1,416	China	Tsingtao	1948	850
Greece		Athens(g)	1951	1,368	Pakistan	Lahore	1951	849
Spain		Barcelona	1955	1,361	Uruguay	Montevideo	1953	838
Chile		Santiago	1952	1,350	U.S.A	Boston	1950	801

<sup>(</sup>a) Greater Tokyo.(e) Greater Budapest.Toronto.

#### § 4. Mean Population.

- 1. General.—Mean populations are calculated for twelve-month periods to provide a satisfactory average basis for calculations requiring allowance for the continuous change in population figures during such periods.
- 2. Method of Calculation.—From 1901 onwards the mean population for any year has been calculated by the formula:—

Mean Population = 
$$\frac{a + 4b + 2c + 4d + e}{12}$$

where a, b, c, d and e, respectively, are the populations at the end of the quarter immediately preceding the year and at the end of each of the four succeeding quarters; e.g., in the case of a calendar year, 31st December of the preceding year and 31st March, 30th June, 30th September and 31st December of the year under consideration. This formula gives a close approximation to the mean of a theoretical population progressing smoothly through the five values a, b, c, d, e.

<sup>(</sup>b) Greater London.
(f) Greater Montreal.

<sup>(</sup>c) Greater Leningrad. (d) Includes Howrah. (g) Greater Athens, including Piraeus. (h) Greater

3. Results.—(i) Calendar Years. The following table shows the mean population of each State and Territory for the calendar years 1948 to 1957:—

#### MEAN POPULATION: CALENDAR YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Yea end 31s Dec	ed st	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1948 1949	••	3,020,058 3,093,277		1,127,318		514,621 532,603	263,445 270,327	11,984 13.068	19,182	7,709,559 7,908,890
1950	::	3,193,208	2,209,013	1,191,081	709,475	557,878	278,785	14,309	23,545	8,177,294
1951 1952	::	3,279,415 3,341,476		1,223,719 1,255,896		580,317 600,615	288,294 298,361	15,179 15,087	24,658 26,570	8,420,391 8,636,657
1953 1954		3,386,556 3,428,488	2,395,851 2,453,458		776,355 796,361	621,034 640,140	306,318 311,128	15,534 16,214	28,724 a 30,383	8,817,603 8,989,227
1955 1956	••	3,492,385			820,143	658,747	316,153		a 32,412 a 34,698	9,202,150 9,427,291
1957		3,555,854 3,622,557		1,392,384		677,317 691,723	322,216 330,200		a 37,631	9,641,038

(a) Revised estimates based on the June, 1957 Population Count of Canberra are as follows:—1954, 30,424; 1955, 32,738; 1956, 35,352; 1957, 37,999.

(ii) Financial Years. The following table shows the mean population of each State and Territory for the years ended 30th June, 1948 to 1957:—

#### MEAN POPULATION: FINANCIAL YEARS.

(EXCLUDING FULL-BLOOD ABORIGINALS.)

Year ended 30th June—	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
1948 1949 1950 1951 1952 1953 1954 1956 1957		2,115,830 2,174,844 2,242,882 2,309,708 2,372,366 2,422,839 2,488,115 2,564,849	1,173,232 1,207,194 1,239,868 1,272,244 1,300,464 1,325,336 1,352,629	669,828 694,582 721,845 743,310 766,538 785,981 807,501 834,465	508,747 521,932 545,134 570,346 589,887 611,191 630,705 648,930 669,040 684,518	261,202 266,518 274,493 283,526 293,340 302,529 309,416 312,987 319,192 326,137	11,209 12,539 13,737 14,827 15,131 15,241 15,930 16,536 17,474 18,340	18,097 19,965 22,571 24,017 25,545 27,721 29,595 a31,249 a33,642 a36,013	7,639,519 7,796,479 8,044,292 8,303,043 8,528,629 8,734,188 8,900,344 9,090,192 9,315,670 9,534,985

(a) Revised estimates based on the June, 1957 Population Count of Canberra are as follows:—1955, 31,411; 1956, 34,132; 1957, 36,749.

#### § 5. Elements of Increase.

1. Natural Increase.—(i) General. The two factors which contribute to the growth of a population are the "natural increase", i.e., the excess of births over deaths, and the "net migration", i.e., the excess of arrivals over departures. In earlier issues of the Official Year Book, particulars of the natural increase from 1861 were given for each sex and for each State and Territory (see No. 22, p. 899). Figures for more recent years will be found in Demography, Bulletin No. 74.

During the present century, the rate of natural increase grew until it reached its maximum at a rate of 17.44 per thousand of population in 1914, but it steadily declined after that year to 7.07 in 1934. There was little change until 1939, but during the war and in the post-war period the rate rose sharply, reaching the level of 14.37 in 1947. In 1957 the rate was 14.04.

In the following table particulars of the natural increase in each State and Territory are given for each sex for each five-year period from 1926 to 1955 and for each of the years 1953 to 1957.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS). (Excluding Full-blood Aboriginals.)

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Males					
926–30	72,430	43,756	25,645	14,583	11,245	7,001	-131	175	174,70
931-35	51,566	25,286	20,627	8,686	8,576	5,810	- 93	270	120,72
936-40(a)	49,092	26,141	23,145	9,187	9,409	6,040	39	397	123,45
941-45(a)	68,071	42,650	31,871	15,563	12,391	7,234	15	740	178,53
946-50(a)	93,564	63,984	41,580	24,206	19,367	11,356	412	1,583	256,05
951–55	97,898	76,291	46,700	26,672	24,658	12,767	767	1,932	287,68
953	20,444	15,200	9,428	5,576	5,048	2,479	165	337	58,67
954	19,197	15,950	9,259	5,455	4,933	2,426	178	370	57,76
955	19,411	16,902	10,020	5,313	5,330	2,771	158	357	60,26
956	20,043	17,253	9,623	5,465	5,605	2,750	201	457	61,39
957	. 22,145	17,884	10,416	5,924	5,612	2,851	252	494	65,57
<del></del>	i					<u>-</u>			
				FEMALES	j. 				
926–30	80,733	44,417	31,128	15,407	14,406	6,893	126	203	193,31
931-35	60,300	28,216	26,036	9,228	12,352	5,953	156	280	142,52
936-40(a)	60,628	28,464	28,991	10,057	13,626	6,574	220	437	148,99
941-45(a)	75,809	42,538	36,709	15,654	16,029	7,420	232	826	195,21
946-50(a)	102,959	63,744	46,650		22,273	11,667	652	1,574	274,12
951-55	110,115	78,058	52,282		27,650	13,219	1,029	2,023	312,01
953	22,739	15,711	10,348	5,618	5,742	2,706	179	327	63,37
954	21,484	16,156		5,593	5,631	2,648	229	369	62,68
955	22,443	16,907	11,025	5,645	5,914	2,829	238	378	65,37
956	21,607	17,254			5,739	2,841	248	453	64,64
957	23,994				6,015	2,914	279	472	69,82
				·		!			
				PERSON	s. 				
926–30	153,163	88,173	56,773	29,990	25,651	13,894	- 5	378	368,01
931–35	111,866	53,502	46,663		20,928	11,763	63	550	263,24
936–40(a)	109,720		52,136	19,244	23,035	12,614	259	834	272,44
941-45(a)	143,880		68,580		28,420	14,654	247	1,566	373,75
946-50(a)	196,523		88,230		41,640	23,023	1,064	3,157	530,17
951-55	208,013		98,982	54,313	52,308	25,986	1,796	3,955	599,70
953	43,183	30,911	19,776	11,194	10,790	5,185	344	664	122,04
954	40,681	32,106	19,832	11,048	10,564	5,074	407	739	120,45
955	41,854	33,809	21,045	10,958	11,244	5,600	396	735	125,64
956	41,650	34,507	20,223	11,371	11,344	5,591	449	910	126,04
957	46,139	36,333	22,084	11,960	11,627	5,765	531	966	135,40
	,,	,	,_,	,- 50	,	-,. 55		- 50	,

For footnotes see next page.

NOTE.—Minus sign (-) denotes excess of deaths over births.

POPULATION: NATURAL INCREASE (EXCESS OF BIRTHS OVER DEATHS)—
continued.

Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
		RATE C	F NATU	RAL INC	REASE(b)-	-Person	is.		
1926–30	12.51 8.61 8.06 10.05 12.90 12.29	10.10 5.89 5.84 8.64 12.14 12.87	12.84 9.88 10.40 13.04 15.56 15.42	10.58 6.17 6.48 10.17 14.64 14.00	12.63 9.54 9.94 11.86 16.01 16.87	12.85 10.33 10.66 12.02 17.41 17.09	-0.22 2.54 8.27 4.97 17.50 22.72	9.60 11.96 14.14 21.85 32.61 27.71	11.72 7.95 7.89 10.32 13.65
1953 1954 1955 1956 1957	12.75 11.87 11.98 11.71 12.74	12.90 13.09 13.38 13.25 13.59	15.36 15.10 15.72 14.80 15.86	14.42 13.87 13.36 13.40 13.68	17.37 16.50 17.07 16.75 16.81	16.93 16.31 17.71 17.35 17.46	22.14 25.10 23.24 25.09 28.35	23.12 d24.32 d22.68 d26.23 d25.67	13.84 13.40 13.65 13.37 14.04

<sup>(</sup>a) Excess of births over civilian deaths from September, 1939 to June, 1947. (b) Excess of births over deaths per 1,000 of mean population. (c) Excess of births over civilian deaths per 1,000 of mean population from September, 1939 to June, 1947. (d) Rates based on the revised estimates of mean population for the Australian Capital Territory consequent on the June, 1957 Population Count of Canberra are as follows:—1954, 24.29; 1955, 22.45; 1956, 25.74; 1957, 25.42.

Note.-Minus sign (-) denotes excess of deaths over births.

During the first five years of the present century, the average annual increment to the population of Australia by natural increase was 56,886 persons. The increment rose to 81,695 persons a year in 1921–25, but thereafter fell to 52,650 in the five years 1931–35. During 1941–45, the average annual excess of births over civilian deaths was 74,750, while during 1951–55 the annual excess of births over deaths was a record high average of 119,940. The excess for the year 1957 was 135,405.

A graph showing the rate of natural increase for each year from 1860 to 1957 will be found on p. 630.

(ii) Comparison with other Countries. Australia has a higher rate of natural increase than most European countries, owing to the fact that it has both a higher birth rate and a lower death rate. The following table gives a comparison between the rate of natural increase in Australia and that in some of the principal countries for which such information is available.

NATURAL INCREASE OF POPULATION: VARIOUS COUNTRIES.

ANNUAL INCREASE PER 1,000 OF MEAN POPULATION.

Country.	1941- 45.	1946- 50.	1951- 55.	1956.	Country.	1941- 45.	1946- 50.	1951- 55.	1956.
Mexico Ceylon Egypt Israel Canada Union of S. Africa(c) New Zealand(d) Argentina U.S.A Netherlands Australia(e) Finland Portugal	23.2 17.1 12.7 19.0 13.7 16.2 11.7 13.8 9.6 10.9 10.3 5.7 9.0	27.7 25.1 21.4 23.1 18.1 17.6 16.1 15.6 14.2 18.0 13.7 15.2 11.8	30.4 27.3 b24.8 24.2 19.6 16.5 15.0 15.8 15.1 14.4 13.6 12.6	(a) 26.6 (a) 22.5 19.8 16.6 15.7 15.6 13.4 13.4 11.7 10.8	Spain Japan Norway Ireland, Republic of Denmark Italy Switzerland France Germany(f) Sweden Belgium United Kingdom Austria	7.3 9.9 8.0 10.0 11.2 5.2 7.5 -1.9 (a) 8.1 -0.5 3.3 1.2	10.0 17.6 11.4 8.9 11.4 10.6 8.1 7.9 5.6 8.0 4.6 6.5	10.5 13.2 10.2 8.7 8.2 7.0 6.4 5.0 4.4 4.0 2.8	10.8 10.5 10.2 9.3 8.4 7.8 7.2 6.0 5.5 5.2 4.7 4.4

<sup>(</sup>a) Not available. (b) t (e) Excludes full-blood aboriginals.

<sup>(</sup>b) 1951-53. (c) Whites only. als. (f) Federal Republic.

<sup>(</sup>d) Excludes Maoris.

Note.-Minus sign (-) denotes decrease.

2. Recorded Net Interstate and Oversea Migration.\*—The other factor of increase in the population, namely, the excess of arrivals over departures, known as "net migration," is, from its nature, much more subject to variation than is "natural increase".

Particulars of the increase by net migration are given below for five-year periods from 1926 to 1955 and for each of the years 1953 to 1957.

POPULATION: INCREASE BY RECORDED NET INTERSTATE AND OVERSEA MIGRATION.(a)

MIGRATION.(a)												
Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.			
				MALES.								
1926–30	37,524	7,849	11,584	- 2,230	19,069	<b>- 3,668</b>	870	2,259	73,257			
1931–35	-1.646	-5,951	6,195			-1,384	- 24	3	- 10,676			
1936-40(b)	7,847	12,096		- 4,988		<b>–</b> 793	2,787	1,176	20,873			
1941-45(b)(c)	6,614	17,502	-6,487	2,202	-9,261	- 4,312	889	-1,822	5,325			
1946-50(b)(c)	84,834	58,331	15,038	18,531	23,299	13,178	1,852	2,665	217,728			
1951-55	58,092	99,072	18,990	22,681	26,320	9,500	267	5,559	240,481			
1953	604	7,920	1,968	924	4,679	2,088	241	1,677	20,101			
1954 ]	7,208	18,793	2,411	5,452	3,611	- 450	- 42	(d) 545	37,528			
1955	13,170	24,565	3,888	8,242	5,271	422	213	(d) 887	56,658			
1956	11,133	23,046	5,703	8,548	1,990	2,407	- 1	(d)1,569	54.395			
1957	13,071	14,299	496	5,932	1,337	1,885	— 176	(d) 554	36,406			
				FEMALES								
	1			1	1		· ·					
1926-30	33,326	12,532	3,537			- 4,293	278	2,048	56,450			
1931–35	1,093	2,943	1,125	-2,284	- 578	- 2,644	88	47	- 210			
1936–40( <i>b</i> )	14,414	9,409	1,509			<b>— 1,872</b>	715	656	22,255			
1941-45(b)(c)	3,648	10,745	- 4,759		- 3,654	<b>–</b> 3,701	357		2,484			
1946-50(b)(c)	53,087	30,124	10,233			7,708	1,643	1,545	135,356			
1951-55	43,272	57,924	20,649	23,924	20,359	4,061	1,226	1,928	173,343			
1953	3,974	8,426	3,512	1,867		800	477	161	22,796			
1954	8,769	12,971	1,133	4,516			243		30,679			
1955	8,586	15,770	2,999	7,192			258		40,597			
1956	9,638	20,049	2,337	7,358	751		398		39,603			
1957	12,943	17,380	892	6,399	2,415	406	307	(d)1,584	42,326			
				Persons	S.							
				1	Ī							
1926–30	70,850	20,381	15,121	<b>–</b> 2,571	28,432		1,148		129,707			
1931–35	- 553	- 3,008				<b>- 4,028</b>	64		– 10,886			
1936–40(b)	22,261	21,505						1,832	43,128			
1941–45(b)(c)	10,262	28,247	,						7,809			
1946–50(b)(c)	137,921	88,455				20,886		4,210				
1951–55	101,364	156,996	39,639	46,605	46,679	13,561	1,493	7,487	413,824			
1953	4,578	16,346					718		42,897			
1954	15,977							(d) 973	68,207			
1955	21,756	40,335				690		(d)1,591	97,255			
1956	20,771	43,095						(d)1,630	93,998			
1957	26,014	31,679	396	12,331	3,752	2,291	131	(d)2,138	78,732			
		l	<u> </u>			<u> </u>						

<sup>(</sup>a) Excess of arrivals over departures. Interstate migration relates to recorded movements by rail, sea and air and to certain special movements by road, together with an allowance for unrecorded movement into the Australian Capital Territory. (b) Excludes troop movements from September, 1939 to June, 1947. (c) Excludes interstate migration from July, 1943 to June, 1947. (d) Revised figures of net migration consequent on the June, 1957 Population Count of Canberra are as follows:—1954, males 501, females 501, females 614, persons 1,135; 1955, males 800, females 119, persons 1,919; 1956, males 1,481, females 477, persons 1,958; 1957, males 773, females 547, persons 1,320.

Note.-Minus sign (-) indicates excess of departures over arrivals.

<sup>\*</sup> The subject of oversea migration is dealt with at some length later in this chapter (see p. 591.)

In the five years ended 1935, there was a net emigration of 10,886 and, in the five years ended 1940, a net immigration of 43,128. During the war period 1941-45 net immigration fell to 7,809 persons. In 1946 there was a net loss by migration of 15,148 persons, due mainly to the departure of refugees and evacuees, and also fiancées, wives and children of British and Allied servicemen but, with increasing transport facilities and the resumption of assisted migration, there was a net gain of 10,611 in 1947, which increased rapidly to 55,115 in 1948, 150,001 in 1949 and 152,505 in 1950. This large net gain was due in great measure to the arrival of successive contingents from Australia's quota of 176,000 former European displaced persons, of whom 156,491 had arrived by the end of 1950. As this flow diminished, it was partly offset by new schemes for assisted migrants, but by 1953 the total net gain from all sources during the year had fallen to 42,897. Since then it has risen, being 93,998 in 1956 and 78,732 in 1957. The net gains in each of the years 1949 to 1952 were the highest recorded for individual years with the exception of 1919, for which year troops returning from the 1914-18 War were included.

3. Total Increase.—The total increase of the population is obtained by combining the natural increase with the increase by net migration. For the period September, 1939 to June, 1947, deaths of defence personnel have been deducted from the total increase so derived. The results of the 1947 and 1954 Censuses disclosed some unrecorded movements of population during the intercensal periods, July, 1933 to June, 1947 and July, 1947 to June, 1954, and particulars of total increase, after taking into account deaths of defence personnel in the earlier period, have been adjusted for these discrepancies. However, no separate adjustment has been applied to individual elements of increase during the periods, although intercensal discrepancies disclosed by previous censuses were adjusted on recorded oversea departures.

The annual increments to the population for the years 1953 to 1957 are shown below, together with the increases for each five years from 1926 to 1955. For the reasons stated in the previous paragraph, figures for the period 1933 to 1954 differ from the totals of figures for natural increase and net migration shown in preceding tables by an amount equal to the net total of deaths of defence personnel and unrecorded movements of population disclosed by the Censuses of 1947 and 1954.

POPULATION: TOTAL INCREASE.

Period.	N.S.W.	Victoria.	Q'land,	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
	·	1		Маі	LES.			<u></u>	'
1926-30	109,954	51,605	37,229	12,353	30,314	3,333	739	2,434	247,961
1931-35	50,277		26,789			4,619			
1936-40(a)	57,601	36,297	28,364	4,218	9,995	5,526	2,847	2,622	147,470
1941-45(a)(b)	62,389	47,747	20,117	14,703	2,856	2,204	915	427	151,358
1946-50(a)(b)	162,932	119,713	63,500	52,117		21,249	2,162	4,738	469,579
1951–55	143,348	173,561	72,591	58,708	50,729	18,891	931	4,725	523,484
1953	17,740	22,798	13,374	9.177	9,672	3,603	377	1,009	77,750
1954	24,746		12,664			1,496	120		94,731
1955	32.581	41,467	13,908	13,555		3,193		(c) 1,244	
1956	31,176		15,326	14,013		5,157		(c) 2,026	
1957	35,216		9,920			4,736		(c) 1,048	
				FEMA	LES.				
	1	1				1			
1926–30	114,059	56,949	34,665	15,066	23,769	2,600	404	2,251	
1931–35	61,442	30,672	27,772	7,246	12,142	3,507	275		143,595
1936–40(a)	75,275	37,026	31,791	8,076	14,458	5,053	997	1,778	174,454
1941–45(a)(b)	79,661	52,442	33,295	17,123	13,156	4,074	657	845	
1946–50(a)(b)	145,127	102,362	57,054	39,844	39,393	18,804	1,712		407,705
1951–55	141,518	144,278	72,675	53,084	47,372	16,577	1,656	5,166	482,326
1953	23,283	26,518	13,790	7.918	9.136	3,304	487	931	85,367
1954	28,558	30,311	11,668	10,330	9,158	1,550		(c) 1,018	92,978
1955	31,029	32,677	14,024	12,837	10,734	3,097		(c) 1,082	105,976
1956	31,245	37,303	12,937	13,264	6,490	1,852	646		104,251
1957	36,937	35,829	12,560	12,435	8,430	3,320	586	(c) 2,056	112,153

For footnotes see next page.

Note.-Minus sign (-) denotes decrease.

POPULATION: TOTAL INCREASE—continued.

Period.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Person	s.				
1926–30		108,554				5,933	1,143	4,685	497,724
1931–35 1936–40( <i>a</i> )	111,719	73,323	60,155	12,294		8,126 10,579	166 3,844	1,041 4,400	
1941–45(a)(b) 1946–50(a)(b)	308,059	100,189 222,075	120,554	91,961	82,561	6,278 40,053	1,572 3,874	1,272 8,147	877,284
1951–55		317,839				35,468	2,587	9,891	
1953 1954	41,023 53,304		24,332	22,578	17,672	6,907 3,046		1,940 (c)1,430	187,709
1955 1956	63,610	, ,		,		6,290 7,009		(c) 2,326 (c) 2,540	
1957	72,153	68,012	22,480	24,291	15,379	8,056	662	(c)3,104	214,137

<sup>(</sup>a) Includes recorded deaths of defence personnel, whether inside or outside Australia, from September, 1939 to June, 1947. (b) Excludes interstate migration from July, 1943 to June, 1947. (c) Revised figures based on the June, 1957 population Count of Canberra are as follows:—1954, males 368, females 1,224, persons 1,592; 1955, males 1,157, females 1,497, persons 2,654; 1956, males 1,938, females 930, persons 2,868; 1957, males 1,267, females 1,019, persons 2,286.

4. Rate of Population Growth.—(i) Australia. The annual percentage rate of population growth is computed by the compound interest formula. The formula is as follows:—  $P_1 = P_0 (1+r)^t$ 

where  $P_0$  and  $P_1$  are the populations at the beginning and end of the period respectively, t is the number of years intervening and r is the annual rate of growth.

The annual rates of growth per cent. of population in Australia during each of the years 1948 to 1957 were as follows:—1948, 2.02; 1949, 3.25; 1950, 3.26; 1951, 2.65; 1952, 2.48; 1953, 1.87; 1954, 2.11; 1955, 2.45; 1956, 2.36; and 1957, 2.25.

The annual rate of population growth during the present century has been 1.68 per cent., but the results from year to year have deviated widely from this figure. In the following table the period 31st December, 1900 to 31st December, 1957 has been arranged into certain defined groups of years according to the occurrence of influences markedly affecting the growth of population:—

POPULATION: PERIODICAL RATES OF GROWTH.

Period.		Interval.	Total	Average Annual Numerical	Annual Rate of Population Growth. (Per cent.)			
Torrou.		(Years.)	('000.)	Increase. ('000.)	Natural Increase. Migration.		Total.	
1901 to 1913		13	1,128	87	1.59	10.53	2.04	
1914 to 1923		10	862	86	1.50	0.15	1.64	
1924 to 1929		-6	-680	113	1.28	0.64	1.88	
1930 to 1939(a)		10	569	57	0.82	0.03	0.85	
1940 to 1946(a)		7	513	73	1.05	0:01	1.01	
1947 to 1957(a)	• •	11	2,229	203	1.45	1.09	2.39	

<sup>(</sup>a) For the period September, 1939 to June, 1947, oversea movements of Australian defence forces have been excluded and deaths of members of these forces, whether occurring in Australia or overseas, have been included.

Up to 1913 the rate of natural increase was rising, and this factor, coupled with the impetus given to immigration from 1911 onwards by increased governmental assistance, was responsible for the comparatively high annual rate of 2.04 per cent. during this period. The 1914-18 War was a dominating influence in the decade 1914-23, and its effects can be

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seen in the reduction of the rate from 2.04 to 1.64 per cent. From 1924 to 1929, more settled and prosperous conditions were experienced; encouraged migration was resumed on a large scale and, despite a further decline in the rate of natural increase owing to the persistent fall in the birth rate, the annual rate of growth rose to 1.88 per cent. After 1929 came the economic depression, and immigration ceased—in fact, Australia actually lost people through an excess of departures over arrivals in 1930, 1931, 1932 and 1935. The rate of natural increase also fell, and the annual rate of growth of the population fell to 0.85 per cent. With the outbreak of war in 1939, Australia entered a new phase in her demographic history, the full effects of which will not be seen for some time to come. The immediate effect of the war was to increase the number of marriages and to reverse the downward trend in fertility. The number of births increased each war year from 1940 to 1945, and these increases more than offset the rise in deaths due to war casualties and higher civilian death rates. As might be expected, migration over these years was negligible. The post-war period 1947 to 1957 was marked by a continued high natural increase and a resumption of immigration, the latter resulting in very high net gains in each of the four years 1949 to 1952. The annual rate of growth for the period was 2.39 per cent.

Rates of population growth from 1881 are shown for each State and Territory of Australia in the annual bulletin, *Demography*.

(ii) Various Countries. Estimated rates of growth of the population of Australia in comparison with those for other countries are shown in the following table:—

POPULATION:	RATES (	OF	GROWTH IN	VARIOUS	COUNTRIES.

Country.	Annua		f Popul Per cent		rowth.		Annual Rate of Population Growth. (Per cent.)				
	1931- 36.	1936- -41.	1941- 46.	1946- 51.	1951- 56.	Country.	1931- 36.	1936- 41.	1941- 46.	1946- 51.	1951- 56.
Ceylon Canada Australia New Zealand U.S.A. Japan Netherlands Switzerland Norway Spain France	1.34 1.23 0.76 0.79 0.69 0.77 1.26 0.44 0.46 1.46 0.02	0.85 0.96 a 0.58 0.79 1.06 1.12 0.43 0.52	1.35 0.98 1.81 1.18 0.92	2.95 2.62 2.55 2.04 1.79 2.05 1.72 1.24 1.25 0.61	2.89 2.80 2.28 2.27 1.72 1.36 1.19 0.99 0.78 0.75	Sweden Germany		0.45 (b) -0.10 c 0.55 0.44 0.64	1.01 (b) 0.22 d 0.49 0.45	1.03 0.92 0.73 0.70 0.61 -0.08	0.68 0.56 0.56 0.54 0.12

(a) Excludes armed forces overseas at 31st December, 1941. (b) Not available. (c) Excludes war losses. (d) Territory defined by 1947 peace treaty.

Note.-Minus sign (-) denotes decrease.

#### § 6. Density.

1. General.—From certain aspects population may be less significant in respect of its absolute amount than in its relation to the area of the country. Australia, with an area of 2,974,581 square miles, and an estimated population at 31st December, 1957 of 9,747,471, excluding about 47,000 full-blood aboriginals, has a density of only 3.28 persons to the square mile, and is, therefore, the most sparsely populated of the civilized countries of the world. For the other continents and sub-continents the densities in 1956 were approximately as follows:—Europe (excluding U.S.S.R.), 217; Asia (excluding U.S.S.R.), 145; U.S.S.R., 23; Africa, 20; North and Central America, 26; and South America, 18. The population of Australia has thus about one-sixth of the density of that of South America and of Africa; about one-seventh of that of U.S.S.R.; about one-eighth of that of North and Central America; about one-forty-fifth of that of Asia (excluding U.S.S.R.); and about one-sixty-eighth of that of Europe (excluding U.S.S.R.).

On account of the large area of Australia and the unsuitability for settlement of much of the country, the density of population must necessarily increase slowly. In Australia as a whole the figure has increased from 1.29 per square mile in 1901 to 3.28 in 1957. Victoria's density, however, has grown from 13.77 to 30.73 and that of New South Wales from 4.43 to 11.83 in the same period. When comparing the density of population of the several States, consideration should be given to the average annual rainfall distribution

in each State as an indication of the climatic influence upon probable population numbers. The proportion of the area of Australia receiving less than 10 inches of rainfall is 38 percent.; that of the various States is:—New South Wales, 20 per cent.; Victoria, nil; Queensland, 13 per cent.; South Australia, 83 per cent.; Western Australia, 58 per cent.; and Tasmania, nil.

2. Main Countries of the World.—Number and density of population of the most important countries of the world in 1956 are shown in the following table. In some instances, more particularly in the cases of Asia and Africa, the numbers must be considered as rough approximations only.

POPULATION OF THE PRINCIPAL COUNTRIES OF THE WORLD: NUMBER AND DENSITY, 1956.

Country.		Popu- lation. ('000.)	Density.	Country.	Population.	Density (a)
Europe.				Africa.		
Germany		70,723	517.9	Nigeria	33,368	89.4
United Kingdom	• •	51,430	545.9	Egypt	23,410	60.6
Italy		48,279	415.1	Ethiopia and Eritrea, Federa-		Ī
France		43,648	205.1	tion of	20,000	42.3
Palace		29,203	230.0	French West Africa	18,890	10.6
Poland		27,819	231.2	Union of South Africa(d)	13,915	29.5
Yugoslavia		17,886	181.4	Belgian Congo	12,900	14.3
Romania		17,886 17,579	191.7	Sudan	10,226	10.6
Czechoslovakia		13,229	268.1	Sudan	9,823	65.1
Netherlands		10,888	869.0	Algeria	9,800	11.6
Hungary Belgium Portugal Grecce Bulgaria Sweden Austria Switzerland		9,833	273.8	Tanganyika Territory	8,456	23.3
Reloium	::	8,924	757.6	Rhodesia and Nyasaland	-,	
Portugal	• • •	8,837	248.2	Federation of	7,260	14.9
Greece	::	8,031	156.9		6,150	27.3
Bulgaria	• • •	7,593	177.4	Other	53,802	
Swadon		7,316	421.4	Total Africa	228,000	
Austria	• •	5,983	215.7	I otal Africa	220,000	19.6
Austra	• •	5.039	316.1	NORTH AND CENTRAL		i e
Denmark	• •	4,466	269.4	AMERICA.		
	• •	4,291	33.0	United States of America	168,174	55.6
	• •		27.7		30,538	40.2
Norway	• •	3,462	106.8		16,081	40.2
reland, Republic of	• •	2,898		Canada	6,410	
Other	• •	3,643		Cuba Other	22,797	145.0
				Total North and Central		
Total Europe		412,000	216.6	America	244,000	26.0
Total Europe	••	712,000	210.0			
				SOUTH AMERICA.		
			!	Brazil	59,846	18.2
Asia.			i	Argentina	19,486	18.2
				Argentina	12,939	29.4
China		621,225 387,350	165.9	Peru	9,651	20.1
India		387,350	305.1	Chile	6,944	24.2
Japan		90,000	630.3	Other	18,134	
Indonesia		84,000	145.9	Total South America	127,000	18.5
Pakistan		83,603	229.2	Total Sollin America		
Vietnam		26,600	209.0	OCEANIA.		i
Turkey(b)		24,797	82.7	Australia(e)	9,428	3.2
Philippines		22,265	192.6	New Zealand and Depen-	•	l
Vietnam  Furkey(b)  Philippines  Furth Korea		21,800	603.0	dencies(d)	2,178	21.0
Thailand		20,686	104.2	Territory of New Guinea	1,287	13.8
Burma		19,856	76.9	Hawaii	584	90.9
(ran		18,945	30.1	Papua	452	5.0
		12,000	47.8	Papua Fiji	346	49.9
Afghanistan Taiwan		9,863	710.3	Other	625	
Ceylon		8,929	352.5		14,900	4.5
		8,432	155.2	Total Oceania	14,500	4.5
Malaya, Federation of		6,252	123.3	SUMMARY.		1
Saudi Arabia	• • •	6,036	9.8	Europe	412,000	216.6
Other	::	41,361		Asia	1,514,000	144.8
	• •	1,501		Asia U.S.S.R	200,200	23.3
				Africa	228,000	19.6
Total Asta		1 514 000	144.8	America, North and Central	244,000	26.0
Total Asia	• •	1,514,000	144.8	America, South	127,000	18.5
				Oceania	14,900	4.5
		200,200	23.3	1	2,740,100	52.5
U.S.S.R. (Europe and )				Total		

<sup>(</sup>a) Number of persons per square mile. 1954. (d) Includes non-Europeans.

The populations shown in the table above are, in the main, in accordance with figures published in the *Demographic Year Book*, 1957, published by the United Nations, and the countries have been arranged in accordance with the continental groups used therein. The totals for continents include adjustments for overestimation and underenumeration.

<sup>(</sup>b) Includes European Territory.
(e) Excludes full-blood aboriginals.

<sup>(</sup>c) Population

# § 7. General Characteristics.

1. Sex Distribution.—(i) States. The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. On pp. 163-5 in Official Year Book No. 2 a table was included showing the masculinity of the population of each of the States for each year from 1796 to 1907. In issue No. 5, on p. 123, the figures in this table for the years 1901 to 1907 were modified in accordance with the results of the 1911 Census.

With the exception of some dislocation arising from the two World Wars, there was a continuous diminution of the masculinity of the population until 1945. This resulted from the increasing proportion of the population in the higher age groups, in which females preponderate owing to their greater longevity, and the general long-term fall in the birth rate. At the 1947 Census, the numbers of the sexes were practically equal, but there has since been an increase in masculinity owing to the higher birth rate and to the increase in the number of immigrants, the majority of whom are males.

The following table shows the masculinity of the population at five-year intervals from 1925 to 1950 and for each of the years 1953 to 1957:—

POPULATION: MASCULINITY, 1925 TO 1957.

(NUMBER OF MALES PER 100 FEMALES.)

At 31 Decemb		N.S.W.	Victoria.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
1925		104.09	99.71	110.94	102.02	115.76	100.90	297.61	132.37	104.24
1930 1935	• •	103.39	99.14	110.66 109.81	100.97	117.17 113.21	101.53	263.66 212.80	118.69 115.64	103.85
1940	• • • • • • • • • • • • • • • • • • • •	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1945 1950	• •	99.75 100.88	97.50 99.27	105.45	98.21 101.83	105.49 106.07	101.15	220.16 188.05	115.86 123.33	100.36 101.83
		100								
1953 1954	••	101.08	100.67 101.00	105.42 105.48	102.46	106.88 106.47	103.96 103.89	170.45 161.76	118.10 a112.70	102.36 102.35
1955		100.91	101.67	105.34	102.96	106.22	103.87		a112.86	102.53
1956 1957	::	100.89 100.78	101.85 101.53	105.60 105.11	103.05	106.43 105.83	105.87 106.61	144.29 134.55	a121.76 113.81	102.72 102.45

<sup>(</sup>a) Revised figures based on the June, 1957 Population Count of Canberra are as follows:—1954, 110.84; 1955, 107.77 and 1956, 113.19.

(ii) Various Countries. The masculinity of the population in various countries is shown in the following table:—

POPULATION: MASCULINITY IN VARIOUS COUNTRIES.

Country.	Year.	Number of Males per 100 Females.	Country.		Year.	Number of Males per 100 Females.
Canada	1955	102.5	Northern Ireland		1957	95.0
Australia(a)	1957	102.5	Italy		1951	95.0
Ireland, Republic of	1956	102.1	Yugoslavia	٠.	1954	94.6
New Zealand(b)	1957	101.1	Spain		1955	93.7
Union of South Africa(c)	1955	100.0	Switzerland	٠.	1954	93.4
Sweden	1955	99.4	England and Wales		1957	93.1
Netherlands	1955	99.3	France		1955	93.1
Norway	1954	98.8	Poland		1955	92.4
Denmark	1954	98.5	Scotland		1957	91.8
United States of America	1956	98.4	Germany, Federal	Re-		1
Belgium	1954	96.7	public		1955	88.9
Japan	1955	96.6	Austria	٠.	1955	87.0

<sup>(</sup>a) Excludes full-blood aboriginals,

<sup>(</sup>b) Excludes Maoris.

<sup>(</sup>c) White population only.

2. Age Distribution.—The age distribution of the population is obtained only at a census, but estimates, based on the census distribution and on births, recorded ages at death and recorded ages of migrants, are made for intercensal years.

Estimates for 30th June, 1956 and 1957 are shown in the following table. Particulars of the age distribution recorded at the 1947 and 1954 Censuses were published in Official Year Book No. 43, p. 560.

# POPULATION: ESTIMATED AGE DISTRIBUTION(a), AUSTRALIA.

(Excluding Full-blood Aboriginals.)

A	ze last F	lirthday.		30	th June, 19	56.	30th June, 1957.			
1.6	(Yea			Males.	Females.	Persons.	Males.	Females.	Persons.	
0- 4 5- 9 10-14 15-19 20-24	::		::	512,477 500,222 400,447 326,757 312,852	489,451 477,717 383,129 309,966 284,778	1,001,928 977,939 783,576 636,723 597,630	521,350 500,164 436,034 341,544 319,172	497,607 478,060 416,203 324,457 292,893	1,018,957 978,224 852,237 666,001 612,065	
25-29 30-34 35-39 40-44 45-49		•••	: . : . : .	370,176 383,544 338,938 337,119 301,301	330,665 356,163 326,730 322,780 277,299	700,841 739,707 665,668 659,899 578,600	364,113 387,908 352,290 336,731 311,145	326,111 356,419 338,250 324,682 289,717	690,224 744,327 690,540 661,413 600,862	
50-54 55-59 60-64 65-69 70-74			:: :: ::	253,122 211,710 175,863 151,352 99,455	233,797 216,250 200,022 172,849 122,078	486,919 427,960 375,885 324,201 221,533	260,388 219,615 174,050 153,994 102,182	239,784 220,864 198,484 178,661 125,862	500,172 440,479 372,534 332,655 228,044	
75-79 80-84 85-89 90-94 95 and ov	·· ·· ·· ver			59,368 28,179 11,533 2,736 416	80,843 41,728 18,224 4,741 781	140,211 69,907 29,757 7,477 1,197	61,515 28,024 11,203 2,700 380	84,473 42,265 18,241 4,802 742	145,988 70,289 29,444 7,502 1,122	
То	tal			4,777,567	4,649,991	9,427,558	4,884,502	4,758,577	9,643.079	

<sup>(</sup>a) Based on the age distribution at the Census of 30th June, 1954 (adjusted only for "not stated" ages) and on subsequent births, recorded ages at death and recorded ages of migrants.

The next table shows the change which has been taking place in the age constitution of the population of Australia since 1871. Up to the 1954 Census, each successive census except that of 1921 had revealed a larger percentage of the population 15 years of age and over than had been recorded at the previous census. However, in 1954, the proportion of this age group dropped sharply to a level (71.5 per cent.) slightly below that of 1933, the proportion of children under 15 years showing a corresponding increase to 28.5 per cent. of the total population. The proportions at 30th June, 1957 were estimated to be 70.5 per cent. and 29.5 per cent. respectively.

## POPULATION: PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA, 1871 TO 1957.

(Per cent.)

		Males.		Females	<b>.</b>		Persons.					
Census.	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.	Under 15 years.	15 and under 65.	65 and over.	Total.
1871 1881 1891 1901 1911 1921 1933 1947 1954	38.84 36.36 34.80 33.89 30.84 31.64 27.53 25.49 28.81 29.84	59.11 60.81 62.01 61.80 64.82 63.88 66.09 67.08 63.82 62.79	2.05 2.83 3.19 4.31 4.34 4.48 6.38 7.43 7.37	100 100 100 100 100 100 100 100 100	46.02 41.86 39.38 36.51 32.52 31.79 27.42 24.62 28.23 29.25	52.60 56.03 58.09 59.88 63.28 63.83 65.99 66.71 62.52 61.19	1.38 2.11 2.53 3.61 4.20 4.38 6.59 8.67 9.25 9.56	100 100 100 100 100 100 100 100 100	42.09 38.89 36.92 35.14 31.65 31.71 27.48 25.06 28.52 29.55	56.17 58.61 60.19 60.88 64.08 63.86 66.04 66.89 63.18 62.00	1.74 2.50 2.89 3.98 4.27 4.43 6.48 8.05 8.30 8.45	100 100 100 100 100 100 100 100

(a) Estimate, 30th June.

3. Conjugal Condition.—Of the total population of Australia at the 1954 Census, 46.8 per cent. had never married; 47.1 per cent. were married (including 1.4 per cent. married but permanently separated); 5.2 per cent. were widowed; and 0.8 per cent. were divorced. Between 1947 and 1954, the number never married increased by 17.7 per cent.; those married (including permanently separated) by 20.6 per cent.; the widowed by 10.2 per cent.; and the divorced by 31.8 per cent.

From the demographic point of view, the most important change in the conjugal condition of the population of Australia between 1947 and 1954 was the increase of 35.0 per cent. in never married persons under 15 years of age, which offset by many times the continued decrease in never married persons aged 15 years and over. The latter decrease was, however, confined to females, as the number of unmarried males aged 15 years and over increased by 3.6 per cent. between 1947 and 1954. The proportion of married persons continued to increase, and in 1954 comprised 66 per cent. of the population 15 years of age and over who stated their conjugal condition, compared with 62 per cent. in 1947 and 54 per cent. in 1933.

The number of widowed females recorded in Australia in 1954 was 351,102, or more than three times as many as the number of widowed males. This disparity is the result of two influences. The first is the greater longevity of females coupled with the usually younger age at marriage; and the second is that a larger proportion of widowed males cancel their widowhood by remarriage.

POPULATION: CONJUGAL CONDITION, AUSTRALIA, 1947 AND 1954.
(EXCLUDING FULL-BLOOD ABORIGINALS.)

Conjugal	Conjugal Condition.		ıs, 30th Jun	ie, 1947.	Census	Census, 30th June, 1954.			
Conjugur			Females.	Persons.	Males.	Females.	Persons.	1947–54.	
Never Marries Under 15 vo 15 years of	ears of age			1,899,053 1,677,626	1,309,660 962,491	1,253,674 684,154	2,563,334 1,646,645	664,281 -30,981	
Total		1,896,971	1.679,708	3,576,679	2,272,151	1,937,828	4,209,979	633,300	
Married Married but	 Permanen	1,692,913	1,686,885	3,379,798	2,062,122	2,043,651	4,105,773	725,975	
Separated Widowed Divorced Not Stated	··	58,722 111,680 24,952 12,132	309,383 27,441	126,612 421,063 52,393 22,813	57,371 113,064 32,389 9,021	66,228 351,102 36,650 4,953	123,599 464,166 69,039 13,974	-3,013 43,103 16,646 -8,839	
Total		3,797,370	3,781,988	7,579,358	4.546,118	4,440,412	8,986,530	1,407,172	

Note.-Minus sign (-) denotes decrease.

4. Birthplace.—At 30th June, 1954, the Australian-born element of the population of Australia represented 85.7 per cent. as compared with 90.2 per cent. at the 1947 Census. The number of Australian-born increased by 864,893, or 12.7 per cent., between 1947 and 1954, while the oversea-born population increased by 542,279 or 72.9 per cent. The latter resulted mainly from the increase of 503,458 in the number of persons of European birthplace between 1947 and 1954—principally persons born in England (an increase of 96,819); Italy (86,265); Germany (50,855); Poland (50,021); and the Netherlands (49,861).

Although numerically less significant, the number of persons of Asian and African birthplace more than doubled during the intercensal period, but there was little change in the number of persons born elsewhere.

Of persons born outside Australia, 57 per cent. were males and 43 per cent. females.

POPULATION: BIRTHPLACES, AUSTRALIA, 1947 AND 1954.

(Excluding Full-blood Aboriginals.)

Birthplace.	Census	, 30th Jun	e, 1947.	Census	s, 30th June	e, 1954.	Increase,
	Males.	Females.	Persons.	Males.	Females.	Persons.	1947-54.
Australia	3,380,324	3,454,847	6,835,171	3,812,435	3,887,629	7,700,064	864,893
New Zealand	21,890	21,720	43,610	21,723	21,627	43,350	- 260
Other Australasian	776	810	1,586	1,065	1,058	2,123	537
Total, Australasia	3,402,990	3,477,377	6,880,367	3,835,223	3,910,314	7,745,537	865,170
England	205,330	176,262	381,592	256,699	221,712	478,411	96,819
Wales	6,859	5,005	11,864	8,343	6,144	14,487	2,623
Scotland	55,734	47,264	102.998	66,792	56,842	123,634	20,636
Nor:hern Ireland		2,325	5,539	5,527	3,976	9,503	3,964
Ireland, Republic of	2,420	2,244	4,664	3.595	2,397	5 992	1,328
Ireland (undefined)		16,301	34,610	18,054	14,124	32,178	-2,432
Austria	2,368	1,851	4,219	5,582	5,286	10,868	6,649
Czechos ovakia		558	1,484	8,515	4,165	12,680	11,196
Estonia	656	446	1,102	3,393	3,156	6,549	5,447
France	1,077	1,138	2.215	2,417	2,282	4,699	2,484
Germany	8,955	5,612	14 567	33,663	31,759 9.068	65,422	50,855
Greece	9,115	3.176 525	12,291	16.794	5,548	25,862 14,602	13,571 13,375
Hungary	22,506	11.126	33,632	80,279	39.618	119,897	86,265
Italy Latvia	22,300	151	33,032	9,524	7,734	17,258	16.811
Latvia Lithuania	169	104	273	5.272	3.152	8,424	8.151
Malta	2,472	766	3,238	12,411	7,577	19.988	16,750
Netherlands	1.577	597	2.174	30,046	21,989	52,035	49,861
Po.and	3,672	2,901	6,573	35.652	20,942	56,594	50,021
Ukraine	113		1 -	8,728	6,029	14,757	۱٦ ′
U.S.S.R	2,817	2,159	4,976	6,419	6,672	13,091	22,872
Yugoslavia	4,281	1,585	5,866	15,473	7,383	22,856	16,990
Other Furopean		4,065	16,055	17,471	7,806	25,277	9,222
Total, Europe	365,445	286,161	651,606	659,703	495,361	1,155,064	503,458
Ceylon, India and Pakistan	5,247	2,913	8,160	8.487	6,373	14,860	6,700
China	5.135	1,269	6,404	7,199	3,078	10,277	3,873
Cyprus	544	137	681	4,254	1,519	5,773	5,092
Syria and Lebanon	1,035	851	1,886	2,614	1,552	4,166	2,280
Other Asian	4,129	2,836	6,965	9,717	6,788	16,505	9,540
Total, Asia	16,090	8,006	24,096	32,271	19 310	51,581	27,485
Egypt	412	391	803	4,392	3.758	8,150	7,347
Union of South Africa	3,071	2,795	5,866	3,113	2,858	5,971	105
Other African	494	374	868	930	775	1,705	837
Total, Africa	3,977	3,560	7,537	8,435	7,391	15,826	8,289
Canada	2,300	1,709	4.009	2,571	1.917	4,488	479
United States of America	3,794	2,438	6,232	5.039	3,250	8.289	2.057
Other American	783	606	1,389	938	781	1,719	330
Total, America	6,877	4,753	11,630	8,548	5,948	14,496	2,866
Dalumas's	1,526	1,619	3,145	1,628	1,730	3,358	213
At Sea	465	512	977	310	358	668	309
Total Born Outside Australia	11			733,683			542,279
i oi ai zorn Oursiae Australia	417,046	327,141	744,187	/33,083	552,783	1,286,466	342,279
Total	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

NOTE.-Minus sign (-) denotes decrease.

5. Period of Residence in Australia.—This table classifies the immigrant population of Australia according to period of residence in Australia, and reflects the greatly increased rate of immigration since 1947. It shows that in 1954, of persons born outside Australia who stated their period of residence, 40.9 per cent. had resided in Australia for a period of less than 5 years, 53.9 per cent. for less than 8 years, and 56.2 per cent. for less than 15 years, compared with 5.7, 7.7 and 14.8 per cent. respectively at the previous Census in 1947.

#### IMMIGRANT POPULATION: PERIOD OF RESIDENCE, AUSTRALIA, 1947 AND 1954.

PERSONS BORN OUTSIDE AUSTRALIA.

Period of Residence.	Censu	s, 30th Jun	e, 1947.	Censu	s, 30th Jun	e, 1954.	Increase.
Ferrou of Residence.	Ma¹es.	Females.	Persons.	Males.	Females.	Persons.	1947–54.
Under 1 year 1 year and under 2 years 2 years and under 3 years 3 years and under 4 years 4 years and under 5 years	16,660 4,116 2,124 822 671	9,953 4,953 1,322 462 319	26,613 9,069 3,446 1,284 990	47,430 32,228 65,374 71,183 87,636	34,841 27,096 39,354 50,367 62,200	82,271 59,324 104,728 121,550 149,836	55,658 50,255 101,282 120,266 148,846
Total under 5 years	24,393	17,009	41,402	303,851	213.858	517,709	476,307
5 years and under 6 years 6 years and under 7 years 7 years and under 8 years 8 years and under 9 years 9 years and under 10 years 10 years and under 15 years	2,217 2,374 3,608 7,966 6,270 13,507	1,238 1,827 3,032 6,803 4,166 12,769	3,455 4,201 6,640 14,769 10,436 26,276	64,618 21,522 9,452 } 15,677	45,416 15,424 7,883 12,526	110,034 36,946 17,335 28,203	106,579 32,745 10,695 23,278
Total 5 years and under 15 years	35,942	29,835	65,777	111,269	81,249	192,518	126,741
15 years and over Not Stated	345,039 11,672	270,399 9,898	615,438 21,570	306,288 12,275	247,819 9,857	554,107 22,132	- 61,331 562
Born outside Australia Born in Australia (a)	417,046 3,380,324	327.141 3,454,847	744,187 6,835,171	733,683 3,812,435	552,783 3,887,629	1,286,466 7,700,064	542,279 864,893
Total	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

Note.—Minus sign (-) denotes decrease.

(a) Excludes full-blood aboriginals.

6. Nationality.—At 30th June, 1954, 8,582,251 persons, or 95.5 per cent. of the Australian population, were of British nationality (consisting of 85.7 per cent. born in Australia and 9.8 per cent. born outside), compared with 99.5 per cent. in 1947 (90.2 per cent. Australian-born and 9.3 per cent. born outside Australia). Of the oversea-born population in 1954, 68.6 per cent. were British subjects, compared with 94.8 per cent. in 1947. The most numerous foreign nationals in Australia at 30th June, 1954, were:—Italian, 90,018 persons; Dutch, 53,458; Polish, 49,746; German, 31,448; Yugoslav, 18,124; Greek, 17,843; Ukrainian, 17,239; and Latvian, 17,225.

POPULATION: NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA, 1947 AND 1954(Excluding Full-blood Aboriginals.)

Nationality.	Census	s, 30th Jun	e, 1947.	Census	s, 30th Jun	e, 1954.	Increase,
Nationalty.	Males.	Females.	Persons	Males.	Females.	Persons.	1947-54.
British(a)— Born in Australia Born outside Australi	3,380,324 387,767	3,454,847 317,767	6,835,171 705,534	3,812,435 484,798	3,887,629 397,389	7,700,064 882,187	864,893 176,653
Total, British .	. 3,768,091	3,772,614	7,540,705	4,297,233	4,285,018	8,582,251	1,041,546
Foreign— American (U.S.) Austrian Chinese Czechoslovak Dutch Estonian French German Greek Hungarian Italian I atvian Lithuanian Norwegian Romanian Russian Swiss Ukrainian Yugoslav Other Foreign Stateless  Total, Foreign	376 4,329 239 1,408 1,59 770 1,669 3,720 154 5,473 36 23 36 23 36 839 333 321 1,753 3,292 1,187	877 280 529 135 593 96 551 692 784 1,699 25. 15 600 721 31 210 127  343 672 761	3,351 656 4,858 374 2,001 255 1,321 2,361 4,504 327 7,172 61 38 745 1,560 70 543 448 2,096 3,964 1,948	3,761 1,859 5,010 4,958 30,518 2,720 1,908 17,262 11,415 5,910 61,673 9,161 4,854 1,414 29,524 871 2,174 9,871 11,633 8,880 22,582	1,958 1,696 931 2,280 22,940 2,581 1,624 14,186 6,428 3,746 28,345 8,064 3,248 20,222 519 2,077 696 7,368 6,491 3,343 16,367	5,719 3,555 5,941 7,238 53,458 5,301 3,532 31,448 17,843 9,656 90,018 17,225 8,102 1,698 49,746 1,390 4,251 1,623 17,239 13,124 12,223 38,949	2.368 2.899 1.083 6,864 51,457 5.046 2.211 29,087 13,339 9.329 82,846 17,164 8,064 953 48,186 1.320 3,708 1.175 17,239 16,028 8,259 37,001
Total	. 3,797,370	3,781,988	7,579,358	ļ	4,440,412	8,936,530	1,407,172

<sup>(</sup>a) "Irish" nationality is included with "British" nationality for the purpose of this table.

7. Religion.—At the 1921 Census, 92,258 persons in Australia, or 1.7 per cent., gave no reply to this question, but at the Censuses of 1933, 1947 and 1954, when the public was informed that there was no legal obligation to answer this question, 848,948 persons (12.8 per cent.), 824,824 (10.9 per cent.) and 855,819 (9.5 per cent.), respectively, gave no reply. Of males 10.3 per cent., and of females 8.7 per cent., did not state their religion in 1954.

Of those who stated their religion, the greatest numerical increase during the intercensal period between 1947 and 1954 was recorded by Roman Catholic and Catholic combined. This group was followed closely by Church of England, and then Presbyterian, Methodist and Lutheran in that order. Amongst the denominations with the largest numbers of adherents, the greatest proportional increases were recorded by Roman Catholic and Catholic combined, 29.9 per cent.; Presbyterian, 17.0 per cent.; Church of England, 15.3 per cent.; and Methodist, 12.2 per cent. The largest proportional increase was that of the Lutheran denomination, 73.7 per cent.

At the 1954 Census, as at earlier censuses, 99 per cent. of those who stated their religion professed the Christian faith. Between 1947 and 1954 the number who stated they were of non-Christian religion increased by 50 per cent., while those specifically stating they had no religion decreased by 10 per cent.

## POPULATION: RELIGION, AUSTRALIA, 1947 AND 1954. (Excluding Full-blood Aboriginals.)

Religion.	Censu	s, 30th Jun	e, 1947.	Censu	s, 30th Jun	e, 1954.	Increase,
Kengion.	Males.	Females.	Persons.	Males.	Females.	Persons.	1947-54.
Christian— Baptist Brethren Catholic, Roman(a) Catholic(a) Church of Christ Church of England Congregational Greek Orthodox Lutheran Methodist Presbyterian Protestan!(undefined) Salvation Army Seventh Day Adventist Other (including Chris-	53,197 5,807 335,241 448,959 33,276 1,480,527 29,364 (b) 34,854 425,745 366,892 36,708 17,542 7,453	60,330 7,195 294,957 507,581 38,495 1,476,505 33,879 (h) 32,037 445,680 376,648 36,562 20,030 10,097	113,527 13,002 630,198 956,540 71,771 2,957.032 (b) 66,891 871,425 743,540 73,270 37,572 17,550	60,048 7,511 413,719 635,398 37,880 1,709,197 32,508 44,382 60,306 478,605 430,798 48,539 20,304 11,166	67,396 8,893 347,383 664,486 42,484 1,699,653 36,944 30,363 55,872 499,328 439,444 46,877 22,534 14,163	127,444 16,404 761,102 1,299,884 80,364 3,408,850 69,452 74,745 116,178 977,933 870,242 95,416 42,838 25,329	13,917 3,402 130 904 343,344 8,593 451,818 6,209 (b) 49,287 106,503 126,702 22,146 5,266 7,779
tian undefined)	27,492	29,883	57,375	31,957	35,616	67,573	10,198
Total, Christian	3,303,057	3,369,879	6,672,936	4,022,318	4,011,436	8,033,754	1,360,818
Non-Christian— Hebrew Other	16,426 3,736	15,593 807	32,019 4,543	24,548 4,910	23,888 1,471	48,436 6,381	16.417
Total, Non-Christian	20,162	16,400	36,562	29,458	25,359	54,817	18,255
Indefinite No Religion No Reply	9,838 18,888 445,425	8,870 7,440 379,399	18,708 26,328 824,824	10,038 16,652 467,652	8,418 7,032 388,167	18,456 23,684 855,819	-252 -2,644 30,995
Total	3,797,370	3,781,988	7,579,358	4,546,118	4.440,412	8,986,530	1,407,172

(a) So described in individual Census Schedules. (b) Not available.

Note.—Minus sign (-) denotes decrease.

8. Industry.—In the following table, the male and female populations of Australia are classified according to the industry in which they were usually engaged at the 1954 Census. Persons usually engaged in industry are regarded as being "in the work force," while the remainder of the population, which at the 1954 Census comprised 5,284,508 persons, is classified as not being in the work force. The term "in the work force" includes persons of all ages who are employers, self-employed or working on their own account, wage and salary earners and unpaid helpers engaged in industry. It also includes persons "not at work," i.e., those who stated that they were usually engaged in work, but were not actively seeking a job at the time of the Census by reason of sickness, accident, etc., or because they were on strike, changing jobs or temporarily laid off, etc.; also persons able and willing to work but unable to secure employment, as well as casual and seasonal workers not actually in a job at the time of the Census.

Persons who do not earn their living by doing work for monetary reward, such as children, housewives, full-time students, retired persons, pensioners and permanent inmates of institutions, are regarded as not being in the work force.

About 63 in every 100 of the male population and 19 in every 100 of the female population were in the work force, or in other words there were, in 1954, 3.4 males to every female in the work force.

Of the total males in the work force, those engaged in Manufacturing represented the largest proportion, namely 28.0 per cent., followed in order by those in Primary Production, 16.1 per cent.; Commerce, 13.6 per cent.; Building and Construction, 11.3 per cent.; Public Authority (n.e.i.) and Professional Activities, 9.1 per cent.; and Transport and Storage, 8.4 per cent.

As with males, females in the work force were engaged mainly in Manufacturing, 26.9 per cent., followed in order by those in Commerce, 22.5 per cent.; Public Authority (n.e.i.) and Professional Activities, 22.1 per cent.; and Amusement, Hotels, Cafés, Personal Service, etc., 14.8 per cent.

# POPULATION CLASSIFIED ACCORDING TO INDUSTRY: AUSTRALIA, CENSUS, 30th JUNE, 1954.

(Excluding Full-blood Aboriginals.)

		İ	Pers	ons.
Industry Group and Sub-group.	Males.	Females.	Number.	Proportion of Total. (Per cent.)
Primary Production—				
Fishing, Hunting and Trapping	10,003	126	10,129	0.11
Agriculture, Mixed Farming	220,218	12,172	232,390	2.59
Grazing	115,162	8,714	123,876	1.38
Dairying	100,553	11,004	111,557	1.24
Forestry	15,279	67	15,346	0.17
Total	461,215	32,083	493,298	5.49
Mining and Quarrying	60,310	1,061	61,371	0.68
Manufacturing				-
Founding, Engineering and Metalworking Manufacture, Assembly and Repair of	229,431	32,305	261,736	2.91
Ships, Vehicles, Parts and Accessories	132,653	6,463	139,116	1.55
Textile and Fibrous Materials (not Dress) Clothing and Knitted Goods (including	27,601	26,182	53,783	0.60
Needleworking)	23,144	73,367	96,511	1.07
Food, Drink and Tobacco	117,088	27,927	145,015	1.61
Sawmilling and Manufacture of Wood Products	53,252	2,136	55,388	0.62
Paper and Paper Products, Printing,				
Bookbinding and Photography	53,953	18,770	72,723	0.81
Other and Undefined	163,146	39,913	203,059	2.26
Total	800,268	227,063	1,027,331	11.43
Electricity, Gas, Water and Sanitary Services (Production, Supply and Maintenance).	69,554	4,096	73,650	0.82
Building and Construction— Construction and Repair of Buildings Construction Works (other than Build-	196,205	2,452	198,657	2.21
ings)	125,624	1,341	126,965	1.41
Total	321,829	3,793	325,622	3.62
Transport and Storage—	321,029	3,173	323,022	
Road Transport and Storage Shipping and Loading and Discharging	92,990	4,488	97,478	1.08
Vessels	55,905	2,180	58,085	0.65
Rail and Air Transport	91,691	8,031	99,722	1.11
Total	240,586	14,699	255,285	2.84
Communication	63,802	16,748	80,550	0.90
Finance and Property; Business Services		24.050	00.544	
(n.e.i.)	64,366	34,278	98,644	1.10
Public Authority (n.e.i.) and Professional	387,468	189,913	577,381	6.43
Activities Amusement, Hotels, Cafés, Personal Ser-	260,474	186,443	446,917	4.97
vice, etc Other, Inadequately Described or Not	99,003	125,486	224,489	2.50
Stated	27,745	9,739	37,484	0.42
Persons in the Work Force	2,856,620	845,402	3,702,022	41.20
Persons not in the Work Force	1,689,498	3,595,010	5,284,508	58.80
Total	4,546,118	4,440,412	8,986,530	100.00

9. Occupational Status.—The term "occupational status" relates to the capacity in which persons are engaged in the various branches of industry.

While the numbers of employers and of persons self-employed at the 1954 Census showed increases of approximately 13 per cent. and 6 per cent., respectively, as compared with 1947, the number of employees increased by slightly more than 20 per cent., and in 1954 constituted nearly 80 per cent. of the total work force, as compared with 77 per cent. in 1947. Employers and self-employed combined constituted 17.8 per cent. of the work force in 1954 as compared with 19.0 per cent. in 1947.

POPULATION: OCCUPATIONAL STATUS, AUSTRALIA, 1947 AND 1954. (EXCLUDING FULL-BLOOD ABORIGINALS.)

0	Census	s, 30th Jun	e, 1947.	Censu	s, 30th Jun	e, 1954.	Increase.
Occupational Status.	Males.	Females.	Persons.	Males.	Females.	Persons.	1947–54.
In Work Force—			1				
Employer	196,932	24,357	221,289	220,408	30,028	250,436	29,147
Self-employed Employee (on wage or	342,650	44,487	387,137	358,746	51,436	410,182	23,045
salary)	1,827,072	620,421	2,447,493	2,211,915	737,488	2,949,403	<b>5</b> 01,910
Helper (not on wage or salary)	24,227	4,498	28,725	18,342	9,866	28,208	-517
Total at Work	2,390,881	693,763	3,084,644	2,809,411	828,818	3,638,229	553,585
Not at Work(a) Not Stated	66,009 22,379	16,765 6,634	82,774 29,013	40,913 6,296	13,953 2,631	54,866 8,927	-27,908 -20,086
Total in Work Force	2,479,269	717,162	3,196,431	2,856,620	845,402	3,702,022	505,591
Not in Work Force	1,318,101	3,064,826	4,382,927	1,689,498	3,595,010	5,284,508	901,581
Grand Total	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8,986,530	1,407,172

<sup>(</sup>a) Includes persons who were (1) unable to secure employment; (2) temporarily laid off from their jobs; or (3) not actively seeking work at the time of the Census on account of sickness or accident, industrial dispute, resting between jobs or for any other reason.

Note.—Minus sign (-) denotes decrease.

10. Other General Characteristics.—Questions asked at the 1933 Census regarding orphanhood, and the ability to read and write a foreign language (of persons who could not read and write English), were not asked on the schedules of the 1947 and 1954 Censuses and the question on dependent children asked at the 1947 Census was not asked in 1954. The latest data published in respect of the first two questions appear on pp. 482 and 487 of Official Year Book No. 36, and in respect of dependent children on p. 326 of Official Year Book No. 41.

Particulars relating to race as recorded at the 1954 Census were not available when this section was prepared, but summarized results will be found in the Appendix.

#### § 8. Oversea Migration.

1. Oversea Migration during the Present Century.—Earlier issues of the Official Year Book contain in summary form tables showing the increase of population by net migration from 1861 to the latest date, while information for individual years is published in the annual bulletin, *Demography*. The following table shows, for Australia, arrivals and departures and net migration since 1901. A graph showing arrivals and departures from 1921 to 1957 appears on p. 594.

۰	OMEDCEA	MIGRATION:	ATICTDATIA
	OVERSEA	WIIGRATION:	AUSTRALIA.

		Arrivals.			Departures	ı.	Net Migration.			
Period.	Males.	Females.	Persons.	Males.	Females.	Persons.	Males.	Females.	Persons.	
1901-05 1906-10 1911-15 1916-20 1921-25	196,993 251,482 422,927 438,721 289,695	84,167 119,552 209,893 100,764 188,357	281,160 371,034 632,820 539,485 478,052	204,170 213,483 382,552 390,202 172,236	93,783 100,273 113,406 78,574 122,550	297,953 313,756 495,958 468,776 294,786	7,177 37,999 40,375 48,519 117,459	9,616 19,279 96,487 22,190 65,807	- 16,793 57,278 136,862 70,709 183,266	
1926–30 1931–35 1936–40(a) 1941–45(a) 1946–50(a) 1951–55	266,593 124,207 161,774	203,887 115,116 159,538 28,503 303,413 446,566	470,480 239,323 321,312 63,925 701,920 1,027,866	193,336 134,883 140,901 30,097 180,779 340,819	147,437 115,326 137,283 26,019 168,057 273,223	340,773 250,209 278,184 56,116 348,836 614,042	73,257 -10,676 20,873 5,325 217,728 240,481	56,450 - 210 22,255 2,484 135,356 173,343	129,707 10,886 43,128 7,809 353,084 413,824	
1953 1954 1955 1956 1957	88,584 109,601 133,463	74,541 88,424 103,774 106,040 109,841	163,125 198,025 237,237 247,448 233,328	68,483 72,073 76,805 87,013 87,081	51,745 57,745 63,177 66,437 67,515	120,228 129,818 139,982 153,450 154,596	20,101 37,528 56,658 54,395 36,406	22,796 30,679 40,597 39,603 42,326	42,897 68,207 97,255 93,998 78,732	

(a) Excludes movements of defence personnel from September, 1939 to June, 1947.
 Note.—Minus sign (-) indicates excess of departures over arrivals.

As the encouragement of immigration by governmental assistance has been a feature of Australian immigration policy, a clear indication of the significance of migration movements is obtained when "assisted" and "unassisted" movements are distinguished. This was shown broadly, for the period 1901-1952, in Official Year Book No. 40, p. 361, and has been continued in the following table for the period 1926 to 1957.

"ASSISTED" AND "UNASSISTED" MIGRATION: AUSTRALIA.

					Arrivals.		Excess of	
	Period.		Nominated and Selected ("Assisted").	Other ("Un- assisted").	Total.	Departures.	assisted " Arrivals over All Departures.	
1926-30	·		<del></del>	99,403	371,077	470,480	340,773	30,304
1931-35				781	238,542	239,323	250,209	- 11,667
1936-40	(a)			3,828	317,484	321,312	278,184	39,300
1941-45	(a)				63,925	63,925	56,116	7,809
1946-50	(a)			273,195	428,725	701,920	348,836	79,889
1951-55				275,241	752,625	1,027,866	614,042	138,583
1953				27,310	135,815	163,125	120,228	15,587
1954				54,038	143,987	198,025	129,818	14,169
1955				66,688	170,549	237,237	139,982	30,567
1956				54,957	192,491	247,448	153,450	39,041
1957				62,361	170,967	233,328	154,596	16,371

(a) Exc'udes movements of defence personnel from September, 1939 to June, 1947. Note.—Minus sign (—) indicates excess of departures over "unassisted" arrivals.

It is not possible in the statistics of departures to distinguish the return movement of persons who came to Australia as "assisted" migrants from that of "unassisted" migrants. Consequently, the separate net migration of "assisted" and "non-assisted" persons cannot be ascertained. Nevertheless, the basis on which the above table has been compiled is sufficient to throw into relief the major trends in Australian migration statistics in the period reviewed.

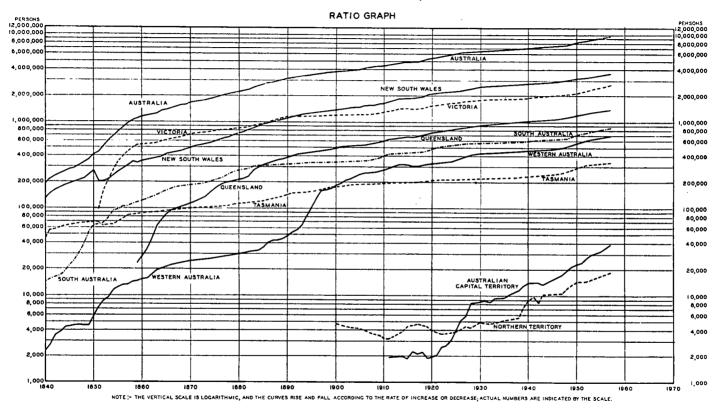
Although separate net migration figures are not available, it is generally agreed that Australia has gained considerably more population through its encouraged migration programme than it has from non-assisted migration.

A detailed review of assisted migration into Australia in recent years is given in § 9.

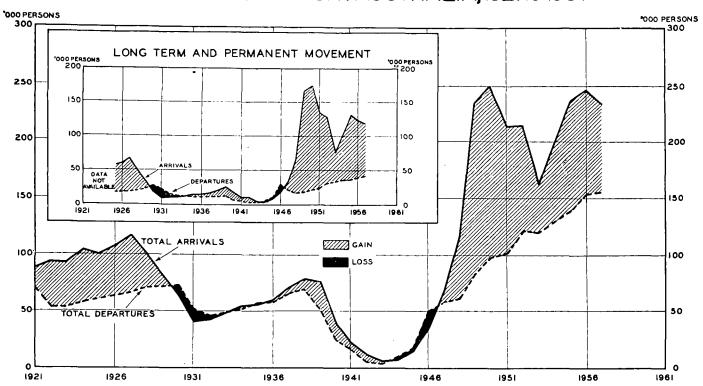
2. Classification of Arrivals and Departures.—(i) General. Since 1st July, 1924, oversea travellers have been classified according to declared intention in regard to residence made at the time of arrival or departure. Certain of the headings previously used in this classification have now been changed to ensure more accurate definition and to assist in interpretation of the figures. The figures themselves, however, are exactly comparable with those published in previous issues.

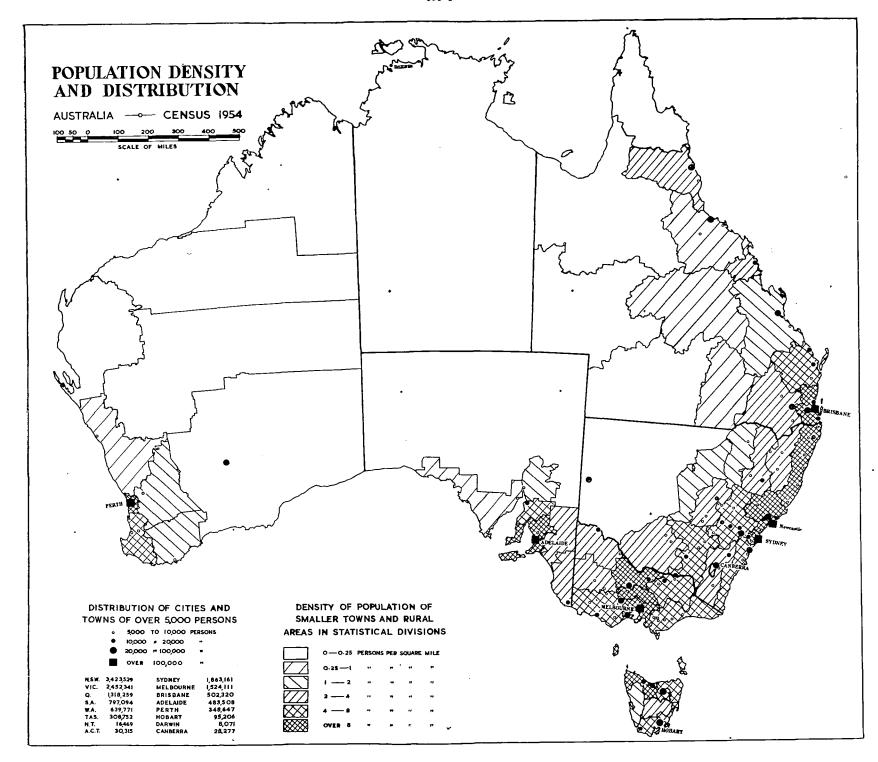
"Long Term and Permanent Movement" (formerly described as "Permanent Movement") relates to persons arriving who state that they intend to reside in Australia for a period of one year or more; and to persons departing who state that they intend to reside abroad for a period of one year or more.

### POPULATION OF AUSTRALIA, 1840 to 1957



# OVERSEA MIGRATION: AUSTRALIA, 1921 to 1957





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"Short Term Movement" (formerly described as "Temporary Movement") relates to persons arriving who state that they intend to reside in Australia for a period of less than one year; and to persons departing who state that they intend to reside abroad for a period of less than one year.

These definitions are in accordance with international usage and do not purport to represent permanent migration as such. For various reasons the intentions of travellers are subject to subsequent modification and the classification headings used must therefore be accepted as indicating intention only. The numbers so classified since 1st January, 1926, are as follows:—

ARRIVALS AND DEPARTURES CLASSIFIED ACCORDING TO INTENDED RESIDENCE: AUSTRALIA.

		Arri	vals.		Departures.					
Period.	Long Term and	Short Term Movement.  Long (a)			Long Term and	Short Ter me				
	Per- manent Move- ment.(a)	Aus- tralian Residents Return- ing.	Visitors Arriving.	Total	Per- manent Move- ment.(a)	Aus- tralian Residents Departing	Visitors Depart- ing.	Total.		
1926–30 1931–35 1936–40 1941–45 1946–50	54,444 (e)88,712 (e)32,624 457,988	121,395 84,554 104,870 11,150 108,736 216,949	125,029- 100,325 127,730- 20;151 135,196- 240,827	b 470,480 239,323 321,312 63,925 701,920 1,027,866	103,209 71,670 51,006 22,399 105,968 155,509	111,714 79,426 94,650 9,163 101,787 212,978	125,772 99,108 132,528 24,554 141,081 245,555	c 340,773 d 250,209 278,184 56,116 348,836 614,042		
1953 1954 1955 1956	104,014 130,795 123,822	42,695 44,944 52,877 57,608 56,017	45,515 49,067 53,565 66,018 58,616	163,125 198,025 237,237 247,448 233,328	32,032 35,449 35,478 37,717 41,073	39,946. 45,701 52,180 51,400 53,438.	48,250 48,668 52,324 64,333 60,085	120,228 129,818 139,982 153,450 154,596		

<sup>(</sup>a) For definitions of long term and permanent and short term movement see letterpress above.
(b) Includes 46 arrivals whose intended period of residence was not stated.
(c) Includes 78 departures whose intended length of stay abroad was not stated.
(d) Includes 5 departures whose intended length of stay abroad was not stated.
(e) Includes evacuees arriving in Australia during the war years as follows:—1936-40, 4,543; 1941-45, 12,586.

(ii) Long Term and Permanent Movement. The 1939-45 War caused a large drop, from 1940, in the number of arrivals but after the war the number rose progressively, reaching 174,540 in 1950, the highest on record. As in the case of arrivals, although not to the same extent, the number of departures rose rapidly in the period of immediate post-war readjustment of population, but the high figure of 29,806 in 1946 was surpassed in each of the years 1952 to 1957, for which the figures were higher than any recorded since this method of classification was introduced.

Up to and including 1929, there was a considerable net gain from long term and permanent movement but during 1930 and 1931 there was a heavy net loss. The loss wasvery much reduced in 1932, 1933 and 1934, whilst during the five years up to and including; 1939 there was a net gain of more than 28,000. Except for the arrival of evacuees, little movement took place during the war period, but in 1946 a net loss of 11,589 persons occurred, owing in large measure to the departure for the United States of America of Australian wives and children of American servicemen, and, when conditions permitted after the war, the departure of Australians to Papua and New Guinea and of large numbers of war evacuees who were returned to their home countries. Subsequently, the largest net gain recorded was 153,685 in 1950. A net gain of 77,622 was recorded in 1957.

(iii) Short Term Movement. Short term movement refers to persons intending residence for periods of less than one year and includes Australian residents and visitors from overseas. Since 1st July, 1947, it also includes Australian defence personnel irrespective of intended length of residence. Although considerable in number, the short term movement is of little significance from the point of view of population growth, as it represents principally the movement of people travelling on business or for pleasure.

3. Extent of Journey.—Since 1st January, 1945, the journeys undertaken by passengers have been recorded for Australian oversea migration statistics in two ways: (a) according

to country of embarkation or disembarkation and (b) according to country of last or intended future residence.

Detailed statistics of oversea journeys are published in the annual bulletin, Demography.

4. Racial Origin.—Up to 30th June, 1948, the system of classifying racial origin was a compromise based partly on nationality and partly on racial origin (see para. 5). From 1st July, 1948, this system was superseded by one in which the passenger's statement as to race is restricted to either "European", "Asian", "African" or "Polynesian" only. Statistics based on this system are shown for the years 1955 to 1957 in the following table. Under this system nationality is recorded independently, as indicated in the next paragraph.

RACIAL.	ORIGIN	OF	ARRIVALS	AND	DEPARTURES:	ATISTRATIA

Racial Origin.		Arrivals.		D	epartures		Net Migration.			
Racial Origin.	1955.	1956.	1957.	1955.	1956.	1957.	1955.	1956.	1957.	
European Asian African Polynesian	230,699 5,943 84 511	237,782 8,687 193 786	225,945 6,670 65 648	134,970 4,594 55 363	145,930 6,677 130 713	147,739 6,164 73 620		91,852 2,010 63 73	78,206 506 -8 28	
Total	237,237	247,448	233,328	139,982	153,450	154,596	97,255	93,998	78,732	

Nore.—Minus sign (-) indicates excess of departures over arrivals.

5. Nationality.—From 1st July, 1924, to 30th June, 1948, nationality of oversea passengers was recorded as "British" or "Alien" only. Racial origin was also recorded and as the particulars of racial origin stated by passengers closely reflected their nationalities and made it possible to present much more detail of "nationality" than was possible on the total "Alien" basis, published statistics were confined mainly to those compiled on the detailed basis according to a composite classification of "nationality or race".

This method was superseded on 1st July, 1948 by one in which each passenger's race was recorded as indicated in paragraph 4 above, and nationality, as shown on each passenger's passport or other document of identification, was recorded independently of race. The principal nationalities recorded on this basis for the years 1955 to 1957 are as follows:—

NATIONALITY OF ARRIVALS AND DEPARTURES: AUSTRALIA.

- <b>7</b> 4* 4*		rrivals.		r	epartures		Ne	t Migratio	on.
Nationality.	1955.	1956.	1957.	1955.	1956.	1957.	1955.	1956.	1957.
British(a) American(U.S.)	151,172 6,176	155,136 8,075	151,391 7,788		124,793 7,870		30,910 135	30,343 205	23,780 10
Austrian Chinese	4,573 1,026	3,553	2,009 1,416	216 843	317	534	4,357	3,236 364	1,475 214
Czechoslovak	1,026	1,464 267	1,410	243	1,100 301	1,202 133	183 59	- 34	- 26
Dutch	15,011	13,900	10,041	3,133	4,173	4.068	11,878	9,727	5.973
Estonian	21	18	14	22	31	18	-1	-13	-4
French	1,914	2,492	1,948	1,674	2,300	1,888	240	192	60
German	10,342	6,978	6,260	1,363	2,040	2,390	8,979	4,938	3,870
Greek	11,087 263	12,183 718	7,423 11,435	264 67	503	816	10,823	11,680 486	6,607
Hungarian	27,494	28,521	18,182	2,344	232 3,376	143 3,691	196 25,150	25,145	11,292 14,491
Latvian	54	55	25	2,347	62	3,051	23,130	23,143 -7.	- 15
Lithuanian	22	23	19	67	66	20	-45	-43	1
Polish(b)	212	382	593	145	271	159	67	111	434
Russian(c)	105	934	1,423	59	638	73	46	296	1,350
Ukrainian	44	45	26	57	55	35	13	10	-9
Yugoslav	999	1,237	1,395	143	217	170	856	1,020	1,225
decoribed	1,633	1,974	5,278	282	255	257	1,351	1,719	5.021
Stateless (other)d	79	1,5/4	3,278	202	233	16	70	1,713	3,021
Other	4,826	9,477	6,475	2,697	4,847	3,554	2,129	4,630	2,921
Total	237,237	247,448	233,328	139,982	153,450	154,596	97,255	93,998	78,732

<sup>(</sup>a) Irish nationality is included with British for the purpose of this table. (b) Includes "Stateless" who were formerly Polish. (c) Includes "Stateless" who were formerly Russian. (d) Stateless, with former nationality stated but other than Polish or Russian.

Note.—Minus sign (-) indicates excess of departures over arrivals.

6. Age Distribution and Conjugal Condition.—A summary of the age distribution and conjugal condition of arrivals and departures classified as long term and permanent movement during 1957 is as follows:—

LONG TERM AND PERMANENT MOVEMENT(a): AGE DISTRIBUTION AND CONJUGAL CONDITION OF ARRIVALS AND DEPARTURES, AUSTRALIA, 1957.

Age Group		Arrivals.		Departures.					
(Years).	Males.	Females.	Persons.	Males.	Females.	Persons.			
		Age Di	STRIBUTION.						
0–14	15,953	14,835	30,788	3,800	3,559	7,359			
15-44	37,302	36,869	74,171	15,094	11,298	26,392			
45-64	5,028	6,221	11,249	2,774	2,867	5,641			
65 and over	934	1,553	2,487	748	933	1,681			
Total	59,217	59,478	118,695	22,416	18,657	41,073			
		Conjugal	CONDITION	<u></u>	· · · · · · · · · · · · · · · · · · ·				
Never Married	36,682	29,886	66,568	13,560	9,090	22,650			
Married	21,768	26,320	48,088	8,363	7,991	16,354			
Widowed	406	2,587	2,993	351	1,326	1,677			
Divorced	361	685	1,046	142	250	392			
Total	59,217	59,478	118,695	22,416	18,657	41,073			

<sup>(</sup>a) For definition of long term and permanent movement see para. 2 (i), p. 592.

7. Occupation.—The following is a summary of the main occupational groups of males classified to long-term and permanent movement (see para. 2 (i) on p. 592) during 1957:—Permanent new arrivals—Rural, fishing and hunting, 3,580; professional and semi-professional, 2,744; administrative, 1,012; commercial and clerical, 4,497; domestic and protective service, 1,473; craftsmen, 12,542; operatives, 7,850; labourers, 3,475; indefinite or not stated, 2,463; not gainfully occupied (mainly children), 19,581; total, 59,217. Permanent departures—Rural, fishing and hunting, 724; professional and semi-professional, 2,280; administrative, 894; commercial and clerical, 2,966; domestic and protective service, 764; craftsmen, 4,683; operatives, 1,855; labourers, 2,736; indefinite or not stated, 428; not gainfully occupied (mainly children), 5,086; total, 22,416.

#### § 9. Assisted Migration into Australia.

- 1. Joint Commonwealth and States Scheme.—Details of the joint scheme of assisted immigration arrived at by agreement between the Commonwealth and State Governments, which operated from 1920 to 1939, may be found in earlier issues of the Official Year Book (see No. 38, p. 576). After the outbreak of hostilities in 1939, it was decided to discontinue the grant of assisted passages for the duration of the war.
- 2. United Kingdom Free and Assisted Passage Agreements, March, 1946.—(i) General. Resumption of migration was the subject of negotiations between the Commonwealth and United Kingdom Governments towards the end of 1945 and two agreements were signed in March, 1946. These agreements, which came into operation on 31st March, 1947, provided for free and assisted passages to be granted to British residents desirous of settling in Australia. The Free Passage Agreement was terminated on 28th February, 1955. From 1st April, 1949, the Assisted Passage Agreement continued in operation under renewal from time to time and has again been renewed as from 1st April, 1957.

(ii) Assisted Passages. Under the existing financial arrangements the United Kingdom Government's contribution towards the Assisted Passage Scheme is agreed upon when the Agreement is extended, and for the five years from 1st April, 1957, is fixed at a maximum amount of £150,000 sterling per annum.

The Assisted Passage Agreement covers five main groups of migrants (and their families), namely, personal nominees, group nominees, Commonwealth nominees, "Bring out a Briton" campaign families and unnominated single men and women and married couples without children. Personal nominees are migrants sponsored by residents of Australia able to provide suitable accommodation for them (any adult resident of Australia may nominate friends or relatives in the United Kingdom who are eligible to be considered for assisted passages under this agreement). Group nominees are recruited on a tradequalification basis to meet applications lodged by employers and State Governments, who guarantee to provide employment and accommodation for those selected; Commonwealth nominees comprise workers selected against known and assessed employment demands in Australia. Migrants in this group live in hostels established by the Commonwealth Government for up to two years while they are seeking to obtain private accommodation. The Commonwealth nominee scheme was introduced in 1950 in order to reinforce the personal and group nomination schemes. "Bring out a Briton" campaign families are selected to fill employment and accommodation vacancies located by special voluntary committees formed by community effort to stimulate the flow of British migrants who are otherwise unable to obtain sponsorship. Unnominated single men and women and married couples without children may also be granted assisted passages, even though they are unable to arrange personal nominations and are not occupationally qualified for approval under other existing assisted passage selection schemes. They must possess on arrival a minimum of £25 sterling in the case of single persons and £50 sterling in the case of married couples without children, and must comply in the United Kingdom with the normal selection criteria for assisted passages. If necessary, hostel accommodation is provided by the Commonwealth.

Although the Commonwealth is not generally prepared to accept single persons or married persons without children if they have reached their forty-sixth birthday before the date of sailing, the parents or close relatives of intending migrants or of persons established in Australia may, if otherwise acceptable under the scheme, be granted passages irrespective of age. Each migrant of 19 years of age and over is required to contribute £10 sterling towards the cost of his or her passage, while juveniles aged 14 years and under 19 years have to pay £5 sterling. Children under 14 years travel free. Apart from these contributions and that made annually by the United Kingdom Government, the cost of the passages is borne by the Commonwealth Government.

(iii) Numbers Arrived. The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years 1947 to 1957 are given in the following table:—

UNITED KINGDOM FREE AND ASSISTED PASSAGE AGREEMENT: NUMBER OF MIGRANTS.(a)

Period.	N.S.W.	Vic.	Qld.	S. Aust.	W.Aust.	Tas.	A.C.T.	C'wealth Nomi- nees.	Total.
1947–52 1953 1954 1955 1956 1957	41,756 3,890 3,046 4,743 4,231 4,994	48,985 3,962 3,199 6,068 5,516 5,184	21,176 1,835 1,872 2,731 2,471 3,219	12,407 1,072 1,406 1,756 1,814 2,197	16,601 1,969 2,067 2,219 2,231 1,774	6,242 485 425 672 602 749	2,358 110 97 119 189 220	27,367 372 6,605 7,389 7,082 6,665	176,892 13,695 18,717 25,697 24,136 25,002
Total, 1947-57	62,660	72,914	33,304	20,652	26,861	9,175	3,093	55,480	284,139

(a) Includes child migrants as shown in para. 3 (iii) below.

3. Child Migration from the United Kingdom.—(i) General. Since the commencement of the assisted passage schemes in 1947, the immigration of unaccompanied children and youths from the United Kingdom has been encouraged under the auspices of approved voluntary organizations. The organizations at present introducing child migrants include the

Fairbridge Farm Schools, Dr. Barnardo's Homes, the Big Brother Movements of New South Wales and Tasmania, and the Northcote Children's Emigration Fund. All the principal religious denominations are also participating in the scheme. There are 42 approved Homes in Australia for the reception of child migrants, and at present 35 of them are caring for child migrants.

- (ii) Financial Assistance. The United Kingdom Government contributes 12s. 6d. a week for each child and the respective State Governments contribute amounts varying from 7s. a week in New South Wales to £1 3s. 3d. in Western Australia. The Commonwealth Government pays the normal child endowment of 10s. a week. In addition, the Commonwealth Government and the State Government concerned may contribute towards the capital expenditure on accommodation for child migrants.
- (iii) Numbers Arrived. From the beginning of 1947 to the end of 1957, a total of 4,708 British children and youths arrived under the sponsorship of voluntary organizations. New South Wales took 2,650, Western Australia 1,192, Victoria 480 and the other three States 386. These children were brought to Australia under the United Kingdom Free and Assisted Passage Scheme and are included in the figures shown in the table above.
- 4. Assisted Passage Scheme, Eire.—In November, 1948, the Commonwealth Government decided to grant limited financial assistance to natural-born citizens of Eire normally residing in the British Isles, and to natural-born British citizens residing in Eire, who wish to emigrate to Australia and who are duly selected. This scheme applies only to prospective settlers and their dependants who are not eligible for assisted passages under the agreement with the United Kingdom Government (see para. 2 above). The maximum amount granted towards an adult passage is £30 sterling, with varying amounts for children according to age.

It is not essential for an applicant for a passage to be nominated by a friend or relative in Australia before the question of granting financial assistance is considered. Single men or women who are eligible under the scheme are readily accepted. Families, on the other hand, are accepted only if they can produce evidence of having secured accommodation in Australia, or, in the case of nominated migrants, a guarantee of accommodation by their sponsors. Up to the end of 1957, 3,076 migrants had arrived under this scheme.

- 5. Maltese Migration.—On 31st May, 1948, the Commonwealth Government and the Government of Malta entered into an agreement under which both Governments grant financial assistance towards the passage costs of selected Maltese migrants. The Commonwealth contribution is £30 sterling per adult with proportionate amounts for children, and the Government of Malta contributes an amount at least equal to this sum. This agreement has been extended from time to time. On 13th August, 1957 a new agreement, which is acknowledged to have come into effect as from 1st July, 1956, was signed between the two Governments. This agreement is of 2 years' duration.
- At 31st December, 1957, a total of 22,931 Maltese had arrived under this scheme since its inception. Up to the end of 1957, 225 Maltese children had been brought out to approved institutions in Australia. These are included in the number shown above.
- 6. Empire and Allied Ex-Servicemen's Scheme.—On 26th May, 1947, the Commonwealth Government implemented a scheme under which assistance was given to the passage costs of Empire ex-servicemen and their dependants not covered by the Free and Assisted Passage Scheme (see para. 2 above) and of ex-servicemen of the U.S.A. Later, eligibility was extended to ex-servicemen and resistance workers of the Netherlands, Norway, France, Belgium and Denmark. The amount of assistance for an adult was £30 sterling and amounts for children varied according to age. The scheme was discontinued as from 30th June, 1955.

During its currency a total of 21,994 migrants came to Australia under the scheme. The majority of these (16,830) were Dutch.

7. Displaced Persons Scheme.—On 21st July, 1947, the Commonwealth Government entered into an agreement with the International Refugee Organization to settle displaced persons in Australia. Although the International Refugee Organization wound up its

activities in 1951, the Commonwealth agreed to receive those displaced persons already accepted for migration, but whose passages had still to be arranged. A total of 170,700 persons settled in Australia under this scheme.

8. Netherlands Migration.—A migration agreement concluded between the Commonwealth and Netherlands Governments in February, 1951, came into operation on 1st April of that year. On 1st August, 1956, the agreement was extended for a period of 5 years with retroactive effect as from 1st April, 1956. This superseded an earlier arrangement in 1946 between the Commonwealth and the Netherlands Emigration Foundation (see Official Year Book No. 39, p. 567).

The migrant is required to contribute towards his passage costs in accordance with a formula devised by the Netherlands Government. The balance is met by the Commonwealth and Netherlands Governments and the Intergovernmental Committee for European Migration. The Commonwealth Government's contribution is now equivalent to \$110 a head.

The provision of shipping is the responsibility of the Netherlands Government. The Commonwealth arranges for the reception of migrants and their after-care and assists in the securing of employment. Families who have not obtained private accommodation prior to arrival may be temporarily accommodated in an Immigration Centre when the breadwinner is placed in employment and proceeds either to employer-found accommodation or a Commonwealth Hostel. These arrangements continue until the family can secure its own accommodation, or vacancies enable a family to be united in a hostel.

Up to the end of December, 1957, 37,376 Dutch migrants had settled here under the Netherlands-Australia Migration Agreement.

9. Italian Migration.—On 29th March, 1951, the Commonwealth and Italian Governments entered into a migration agreement effective for a period of 5 years, under which certain selected Italian migrants were assisted to Australia. The agreement came into force on 1st August, 1951.

The agreement was temporarily suspended at the end of 1952, but in March, 1954, provision was made for assisted passages to be granted to certain relatives and fiancées of migrants who had previously settled in Australia under the agreement. On 1st December, 1954, the agreement proper was re-opened and it was subsequently extended to 30th June, 1958. At present the Commonwealth contributes the equivalent of \$100 towards the fare of each migrant. The balance of passage costs is contributed by the migrants themselves, the Italian Government and the Intergovernmental Committee for European Migration. Up to 31st December, 1957, arrivals under this agreement totalled 29,104 persons.

As the Italian agreement does not provide for the acceptance of other nationals living in Italy, a special quota is determined annually for the selection of suitable refugees from Italy. Arrivals under this "Non-Italian National Quota" (N.I.N.Q.) totalled 1,176 between 1st July, 1955, and 31st December, 1957.

- 10. Migration from Trieste.—In 1953, arrangements were made for the migration of peiugees from Trieste. These arrangements continued until what was formerly the Free Territory of Trieste became part of the Italian Republic. Since then migrants from Trieste have proceeded under the Italian Agreement. Altogether 4,745 Triestians arrived in Australia as assisted migrants up to 30th June, 1955. The Commonwealth made a contribution to passage costs at the same rate as for other European migrants and the balance was made up by contributions from the Intergovernmental Committee for European Migration and the Italian Government.
- 11. German Migration.—On 29th August, 1952, a migration agreement was signed between the Commonwealth Government and the Government of the Federal Republic of Germany. This was somewhat similar to the agreements concluded with the Netherlands and Italy and was effective for a period of 5 years. On 3rd July, 1957 a new agreement, operative for a period of five years, was signed by the two countries. The Commonwealth's contribution towards passage costs is the equivalent of \$100 a head. The migrant maybe required to pay a small contribution and the balance of passage costs is paid by the Government of the Federal Republic and the Intergovernmental Committee for European Migration. Arrivals of German assisted migrants numbered 37,071 to the end of December, 1957.

- 12. Austrian Migration.—Late in 1952, arrangements were made with the Intergovernmental Committee for European Migration for the migration to Australia of a small number of selected rural and other workers and their families from Austria. Later these arrangements were extended to cover greater numbers and wider categories of migrants. The Commonwealth contributes an amount equivalent to \$100 a head towards the passage costs of Austrian migrants. The Austrian Government, the Intergovernmental Committee for European Migration and the migrants themselves also contribute towards passage costs. Reception arrangements, temporary accommodation, after-care and placement in employment are undertaken by the Commonwealth. Under these arrangements, 13,781 Austrians arrived in Australia up to 31st December, 1957.
- 13. Greek Migration.—An arrangement similar to the Austrian one was made with the Intergovernmental Committee for European Migration late in 1952. The Commonwealth's contribution and the arrangements for reception, accommodation, employment and aftercare are the same as for Austrian migrants. Under this arrangement 21,124 Greek assisted migrants had settled in Australia up to 31st December, 1957.
- 14. Hungarian Migration.—On 5th November, 1956, the Intergovernmental Committee for European Migration and the United Nations High Commissioner for Refugees, in accordance with a request received from the Austrian Government, appealed to Member Governments to give asylum to the greatest possible number of Hungarian refugees who were fleeing in thousands across the border into Austria, following Russian military action in Hungary.

On 8th November, 1956, the Minister for Immigration announced that Australia would provide permanent asylum for up to 3,000 Hungarian refugees during the year 1956-57. The Australian migration representative in Austria was instructed to begin selection of the refugees immediately, and was advised that normal standards should be applied with understanding and flexibility. Early in December, 1956, the Government decided that the number of Hungarian refugees to be received during the year 1956-57 should be increased from 3,000 to 5,000, and this number was later increased to 10,000. Subsequently, the Government decided to admit an additional 5,000 Hungarian refugees in 1957-58 under these special arrangements.

The Commonwealth Government has granted a total of £A.130,000 for the relief of Hungarian refugees and, in addition, at present contributes the equivalent of \$100 a head to the passage costs of the refugees.

To the end of December, 1957, 12,082 Hungarian refugees had arrived in Australia.

- 15. General Assisted Passage Scheme.—To encourage the migration of persons from the United States of America, Switzerland, Denmark, Norway, Sweden and Finland, the Commonwealth, on 10th September, 1954, introduced an assisted passage scheme for nationals of those countries. The Commonwealth makes a contribution of £37 10s. sterling per adult migrant and pro rata amounts for children according to the fare paid. To the end of December, 1957, 4,414 migrants had arrived in Australia under this scheme.
- 16. Summary of Arrivals of Assisted Migrants.—The following table shows, for each of the years 1951 to 1957, the number of assisted migrants who arrived in Australia under the various schemes. The total for the years 1947 to 1957 is also given.

Assisted Migration Scheme.	1951.	1952.	1953.	1954.	1955.	1956.	1957.	Total, 1947-57.
United Kingdom Free and	1							
Assisted Passage Agree- ment (including Royal			- 1	į		- 1		
M D	44,007	35,080	13,695	18,717	25,697	24,136	25,002	284,139
Empire and Allied Ex-	44,007	33,000	13,055	10,717	25,057	24,130	23,002	204,122
Servicemen's Scheme,	:					- 1		
1947	5,557	3,025	1,227	1,920	965	5		21,994
Displaced Persons Scheme,		-				: - 1		
1947	11,708	2,055	441	5				170,700
Polish Migrants from	. ,							
United Kingdom			••					1,457
Maltese Assisted Migration	0.010	1 003	1 147	4 515	2 405	1 000.	467.	22.021
Agreement, 1948	3,313	1,903	1,145	4,515	3,495	1,080:	401	22,931
Eire: Assisted Migration Agreement, 1948	426	573 <sup>.</sup>	240	218	438	321	294	3,076
Netherlands Foundation	420	313	240	210	730	521	274	3,070
Agreement, 1946	16				l }			584
Netherlands Agreement,		• •						•
1951	1,588	6,964	2,397	2,861	7,341	9,804	6,421	37,376
Italian Assisted Migration	· ·							ľ
Agreement, 1951	59	9,911		409	8,237	5,785	4,703	29,104
German Assisted Migra-	- 1							
tion Agreement, 1952.	'	1,007	6,576	12,149	8,326	4,536	4,477	37,071
General Assisted Passage			!	19	399	1,814	2 102	4,414
Scheme, 1954	••			4,273	472	1 .	2,182	4,745
Triestians, 1953 Non-Italian National	••	• •	• • •	7,273	7/2			4,743
Ouota, 1955			:		272	121	783	1,176
Austrians, 1952		13	103	1.674	4,627	3,936	3,428	13,781
Greeks, 1952		•••	1,486	7,278	6,419	3,088	2,853	21,124
Hungarians, 1956		• • •				331	11,751	12,082
<u> </u>						i — —	I	
Total Assisted Migrants	66,674	60,531	27,310	54,038	66,688	54,957	62,361	665,754

ASSISTED MIGRATION SCHEMES: NUMBER OF MIGRANTS.

From the earliest years of assisted migration to the end of 1957 a total of 1,734,065 assisted migrants arrived in Australia.

#### § 10. The Regulation of Immigration into Australia.

- 1. Powers and Legislation of the Commonwealth.—(i) Constitutional. Under section 51 (xxvii) and (xxviii) of the Commonwealth Constitution, the Parliament of the Commonwealth is empowered to make laws with respect to immigration and emigration and the influx of criminals.
- (ii) Legislation. Immigration into the Commonwealth is regulated by the Immigration Act 1901-1949, which specifies the persons whose immigration is prohibited and provides for their deportation if they enter contrary to the Act. Provision is also made for the deportation of persons who have entered lawfully but who contravene the provisions of the Act after they have entered. Power is given to the Minister for Immigration to admit prohibited immigrants for a specified period under Certificate of Exemption from the provisions of the Act relating to entry or stay in the Commonwealth.

The Aliens Deportation Act 1948 empowers the Minister for Immigration to order the deportation of an alien who after investigation by a Commissioner is reported as not being a fit and proper person to be allowed to remain in Australia.

The Immigration (Guardianship of Children) Act 1946–1952 provides that the Minister for Immigration becomes the legal guardian of every person under the age of 21 years who enters Australia other than in the charge of, or for the purpose of living in the care of, a parent or adult relative. It is primarily administered through the child welfare authorities in each State who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

The Aliens Act 1947-1952 provides that a register of aliens shall be maintained for every State and Territory of the Commonwealth. Unless exempted, aliens 16 years of age and over are required to register with the Department of Immigration, and to notify the Department of any change of address, occupation or employment, and of their marriage. The Act also provides that consent must be obtained before an alien may change his surname.

- 2. Conditions of Immigration into Australia.—(i) Persons of Non-European Race. In pursuance of established policy, the general practice is not to permit Asians or other persons of non-European descent to enter Australia for the purpose of settling permanently. Special provision exists for the temporary admission of non-Europeans who are bona fide merchants, students or tourists. They are permitted to enter and remain in Australia under exemption while they retain their status. Permission may also be given for the entry of non-Europeans as assistants to local traders domiciled in Australia. Such persons are allowed to remain so long as they retain their status.
- (ii) Persons of European Race. Persons of European race desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements in regard to health, character, freedom from security risk and general suitability as settlers.
- (iii) General Information. General information as to conditions of entry into Australia may be obtained from the following officers:—
  - (a) In Australia—The Secretary, Department of Immigration, Canberra, Australian Capital Territory, and Commonwealth Migration Officers in the capital cities of the various States;
  - (b) In Great Britain—the Chief Migration Officer, High Commissioner's Office, Australia House, Strand, London;
  - (c) In other British Commonwealth countries—The High Commissioner for Australia;
  - (d) In Holland, Italy, Germany, Greece, Austria, Denmark and Hong Kong the Chief Migration Officer or Migration Officer in the capital city of each of those countries;
  - (e) In other countries where Australia is represented—the Secretary, Australian Embassy, Legation or Consulate.

For details of Australian representatives in the British Commonwealth and other countries see the section entitled "Australian Representation Abroad: Oversea Representation in Australia" in Chapter XXX.

3. Racial Origin and Nationality of Persons Arriving.—For details of the racial origin and nationality of persons who arrived in Australia during the years 1955 to 1957, see p. 598.

#### § 11. Passports.

Provision is made in the Immigration Act 1901–1949 for the production of a passport by each immigrant over 16 years of age who desires to enter Australia. Under the Passports Act 1920, it was compulsory also for each person over 16 years of age to be in possession of a passport or other document authorizing his departure. This Act has now been superseded by the Passports Act 1938–1948, which repealed the compulsory provisions. The Act also applies to the External Territories of Australia.

Although it is not compulsory for Australians to obtain a passport when leaving Australia, it is desirable in their own interests that they should have one in order to establish their identity and nationality overseas. A passport is necessary for admission into most countries, and the holder of an Australian passport also has no difficulty in landing on return to Australia. The charge for an Australian passport is £1.

As a result of the Nationality and Citizenship Act 1948-1955 (see § 12 below) and the enactment of similar citizenship legislation in other British Commonwealth countries, it is now the general rule that Australian passports are issued only to Australian citizens. Citizens of other British Commonwealth countries secure passports from their own High Commissioners in Australia. Australian citizens abroad may secure passports only from Australian representatives.

Diplomatic and official passports are issued to members of the Australian diplomatic service and other Government officials proceeding abroad on official business.

Applicants for passports are required to produce evidence of their identity and nationality (e.g., birth certificates).

#### § 12. Citizenship and Naturalization.

- 1. Commonwealth Legislation.—The Nationality and Citizenship Act 1948 commenced on Australia Day (26th January), 1949 and repealed all previous Commonwealth legislation on this subject. The most significant effect of the Act was the creation for the first time of the status of "Australian Citizen". In this respect, the Act was complementary to citizenship legislation passed or about to be passed by other countries of the British Commonwealth. All Australian citizens, and the citizens of other countries of the British Commonwealth, are declared to be British subjects. For details of the Act, see Official Year Book No. 42, p. 619.
- 2. Certificates Granted.—(i) Australia. The following tables show the number of certificates granted under the Nationality and Citizenship Act 1948–1955 during the years 1956 and 1957.

## NATURALIZATION: CERTIFICATES GRANTED, AUSTRALIA, 1956. Previous Nationalities of Recipients.

Nationality.	Certi- ficates Gran- ted.	Nationality.	Certi- ficates Gran- ted.	Nationalit	ty.	Certi- ficates Gran- ted.	Nationalit	у.	Certi- ficates Gran- ted.
Albanian American (U.S.) Argentinian Austrian Belgian Brazilian Bulgarian Burnese Byelorussian Chinese Czechoslovak Danish	75 31 1 244 18 1 112 3 23 1 1,687	Dutch Ecuadorian Egyptian Estonian Filipino Finnish French German Greek Hungarian Iraqian Israeli	1 22 748 4 19 85 674 762 2,421	Italian Jordanian Latvian Lebanese Lithuanian Norwegian Polish Portuguese Romanian Russian Spanish Swedish		2,902 2,263 177 917 47 4,509 8 278 384 50	Swiss Syrian Thailander Turkish Ukrainian Yugoslav Stateless		78 8 1 5 1,520 2,371 1,020 25,585

## COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR EXTERNAL TERRITORIES.

Country.	Certi- ficates Gran- ted.		 Certi- ficates Gran- ted.	Country.		Certi- ficates Gran- ted.	Countr	-у.	Certi- ficates Gran- ted.
Afghanistan Africa Albania Argentina Austria Belgium Brazil Bulgaria Burma Canada China Colombia Cyprus Czechoslovakia Denmark East Africa Ecuador	3 58 39 18 2,055 284 7 14 6 6 11 296 1 18 413 86 28	Egypt Estonia Fiji Finland France Germany Greece Holland Hungary India Indonesia Iran Iraq Israel Israel Italy Japan Jordan	 361 222 1 10 721 11,802 614 1,707 231,40 319 7 7 187 4,077 6	Lebanon Lithuania Luxemburg Malaya	i	29 190 16 8 11 3 2 9 10 3 154 198 6 24 12 14	Sweden Switzerlan Syria Tahiti Thailand Trieste Tunisia United dom Ukraine US. of An U.S.S R. Venezuela West India Yugoslavia	King-	118 432 10 3 4 7 1 377 19 63 26 1 1 345

## NATURALIZATION: CERTIFICATES GRANTED, AUSTRALIA, 1957. PREVIOUS NATIONALITIES OF RECIPIENTS.

Nationality.	Certi- ficates Gran- ted.	Nationalit	y.	Certi- ficates Gran- ted.	Nationalit	ıy.	Certi- ficates Gran- ted.	Nationalit	y.	Certi- ficates Gran- ted.
Afghan Albanian American (U.S.) Argentinian Austrian Belgian British Protected Person Bulgarian Byelorussian Chinese Czechoslovak	1 71 45 4 304 23 2 104 52 70 1,419	Danish Dutch Egyptian Estonian Finnish Filipino French German Greek Hungarian Iranian Iranian		43 2,901 46 897 32 2 122 1,384 1,059 2,272 4	Israeli Italian Japanese Jordanian Korean Latvian Lebanese Lithuanian Luxembourg Norwegian Polish Portuguese	geois	53 5,246 23 7 1 2,599 265 1,208 1 68 5,884	Romanian Russian Spanish Swedish Swiss Syrian Turkish Ukrainian Yugoslav Stateless		297 677 62 29 122 13 9 2,264 2,647 1,304

## COUNTRIES IN WHICH RECIPIENTS ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA OR EXTERNAL TERRITORIES.

Country.	Certi- ficates Gran- ted.	Country.	Certi- ficates Gran- ted.		Certi- ficates Gran- ted.	Country.	Certi- ficates Gran- ted.
Afghanistan Africa Africa Arabia Arabia Argentina Austria Belgium Brazil Bulgaria Burma Canada Ceylon China Cuba Cyprus Czechoslovakia	3 149 32 2 16 2,190 279 9 8 3 18 2 2 597 1 17 289	Estonia Finland France Germany Greece Holland Hungary India Indo-China Indonesia Iran Iraq Israel Italy	 1 20 24 882 15,393 818 2,532 232 232 390 28 7 304 6,268	New Zealand Norway Pakistan Panama Philippines Poland Portugal	40 280 19 7 14 5 12 16 13 73 3 1 125 212 7	Spain Sweden Switzerland Syria Thailand Timor Turkey United Kingdom Ukraine U.S. of America U.S.S.R. Venezuela West Indies Yugoslavia	31 129 305 11 7 1 19 432 28 81 22 5 1
Denmark Egypt	97 576	Jordan	33 1	South Africa South America	19 17	Total	33,655

<sup>(</sup>ii) States. The certificates granted in 1957 were issued in respect of residents of the various States and Territories as follows:—New South Wales, 9,696; Victoria, 9,583; Queensland, 4,012; South Australia, 5,766; Western Australia, 3,575; Tasmania, 618; Northern Territory, 82; Australian Capital Territory, 256; External Territories, 67; Total, 33,655.

#### § 13. Population of External Territories.

Ordinances of the individual external territories under the control of Australia, namely:—Norfolk Island, Papua, the Trust Territory of New Guinea, and the Trust Territory of Nauru, provide for a Census of the non-indigenous population to be taken by the Commonwealth Statistician on the day prescribed for the taking of a Census in the Commonwealth of Australia. The following table shows the population of each of these Territories at the Census of 30th June, 1954 and the estimated population at 30th June, 1957.

On 23rd November, 1955, the Cocos (Keeling) Islands were placed under the authority of the Commonwealth. An estimate of the population at 30th June, 1957 is included in the table below.

## POPULATION: EXTERNAL TERRITORIES. (Excluding Indigenous Population.)

Territory.		Cens	Estimate, 30th June, 1957.		
		Males.	Females.	Persons.	Persons.
Cocos (Keeling) Islands					632
Norfolk Island		478	464	942	1,059
Papua		3,867	2,446	6,313	8,122
Trust Territory of New Guinea		7,201	4,241	11,442	14,436
Trust Territory of Nauru		1,269	376	1,645	2,210
•		J			

Particulars concerning the indigenous populations of the external territories will be found in Chapter V.—The Territories of Australia.

#### § 14. The Aboriginal Population of Australia.

In Official Year Book No. 17, pp. 951-61, a brief account was given of the Australian aboriginal population, its origin, its numbers as estimated from time to time, and the steps taken for its protection. On pp. 914-6 of Official Year Book No. 22, particulars were shown for each of the States and Territories of Australia at successive periods, while a special article dealing with the estimated number and distribution of the native population at the date of first settlement of the white race in the continent appeared on pp. 687-96 of Official Year Book No. 23.

The aboriginals are scattered over the whole of the mainland but the majority are concentrated in Western Australia, Queensland and the Northern Territory. Details of the number in each State at the June, 1947, Census are shown in the following table. Full-blood aboriginals in employment or living in proximity to settlements were enumerated at the census, while estimates of the total numbers, including those living in the wild state, were furnished by the Protectors of Aboriginals. Half-caste aboriginals are included in the numbers of the population and are of course enumerated at the census. The figures shown for Queensland are exclusive of Torres Strait Islanders.

#### ABORIGINAL POPULATION, 30th JUNE, 1947.

<i>P</i>	rRO	KIGINA	L POP	ULATIO	N, 30th	JUNE,	1947.			
			Full-t	olood.					Total.	
State or Territory.		in	loyment o Proximity ttlements.	to	Esti- mate of Total Num- bers.(b)	Half-caste. (Enumerated at the Census.)			Full- blood and Half- caste.	
		Males.	Females.	Persons.	Persons.	Males.	Females.	Persons.	Persons.	
New South Wales Victoria Queensland South Australia Western Australia Tasmania Northern Territory Aust. Cap. Territory		546 100 3,504 259 2,664 5,615	407 108 2,822 205 2,269 5,370	953 208 6,326 464 4,933	(c) 953 (c) 208 9,100 2,139 20,338	5,498 537 3,684 1,103 2,359 127 660 58	5,109 532 3,527 1,054 2,215 87 587 42	10,607 1,069 7,211 (d)2,157 (d)4,574 214 1,247 100	11,560 1,277 16,311 (d)4,296 d 24,912 214 15,147 100	
Total		12,688	11,181	23,869	46,638	14,026	13,153	27,179	73,817	

<sup>(</sup>a) Enumerated at the Census. (b) Furnished by the Protectors of Aboriginals. (c) Census totals. (d) In addition to these totals, the Protectors of Aboriginals estimated that there were 826 half-caste and mixed bloods in South Australia and 1,322 in Western Australia, presumably living in the nomadic state.

According to the annual Reports of the Protectors of Aboriginals, there has been little change in the numbers of aboriginals in most States since 1947. In Western Australia, however, the estimate for the total number of full-blood and half-caste aboriginals at 30th June, 1952 was 21,051.

#### CHAPTER XVII.

#### VITAL STATISTICS.

Note.—1. Owing to considerations of space, the tables in this chapter contain only summaries of the principal vital statistics for Australia. They relate, in the main, to the year 1956, except for the totals of marriages, births, deaths and infant deaths, for which it has been possible to include figures for 1957. Comparisons have been restricted, in general, to the individual years 1953 to 1957 and the five-year periods 1931–35 to 1951–55, while age data have been shown in groups. Comparisons over longer periods, together with more detailed figures such as single age distributions and cross-classifications of various characteristics, will be found in the annual bulletin, Demography.

2. Figures for Australia throughout are exclusive of full-blood aboriginals.

#### § 1. Provisions for Registration and Compilation of Statistics.

In Australia, vital statistics are compiled from information obtained from the registers of births, deaths and marriages. Each State and Territory has an independent system of registration. Provisions for the civil registration of births, deaths and marriages have been in force in Tasmania from 1839, in Western Australia from 1841, in South Australia from 1842, in Victoria from 1853 and in New South Wales and Queensland (then part of New South Wales) from 1856. Registration in the Territories is administered by the Commonwealth Government, registration in respect of the Northern Territory having been taken over from South Australia in 1911 and in respect of the Australian Capital Territory from New South Wales in 1930. The authority responsible for the registration of births, deaths and marriages occurring within his particular State or Territory is the Registrar-General or the Principal Registrar, or, in the case of Victoria, the Government Statist.

In the Australian Capital Territory and the Northern Territory, information concerning a birth is required to be supplied within 21 days, in South Australia in 42 days, and in all other States 60 days is allowed. In all States, however, provision has been made for the late registration of births. For the registration of a death, the length of time varies more considerably, being 8 days in Tasmania, 10 days in South Australia, 14 days in Western Australia, the Northern Territory and the Australian Capital Territory, 21 days in Victoria and 30 days in New South Wales and Queensland, Provision is made in all States and Territories for the celebration of marriages by ministers of religion registered for that purpose with the Registrar-General or the Principal Registrar of Births, Deaths and Marriages of the State or Territory and also by certain civil officers. In all cases the celebrant, whether minister of religion or civil officer, is required to register particulars of the parties married with the Registrar of the district in which the marriage has taken place. The length of time allowed for registration of marriage also shows considerable variation as between States and Territories. In Victoria, Western Australia, the Northern Territory and the Australian Capital Territory, registration is required immediately following the ceremony, in Tasmania and South Australia within 7 days and in New South Wales and Queensland within 30 days.

For all States except Queensland and Tasmania, the registration of stillbirths is compulsory. Western Australia was the first State to introduce compulsory registration in 1908, followed by the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937 and Victoria in 1953. No statutory provision has been made in Queensland or Tasmania for the registration of stillbirths, but provision is made in these States for voluntary registration and it appears likely that nearly all such births are notified to the Registrar-General. In this chapter, stillbirths have been excluded from all tables of births and deaths and shown only in those specially relating to stillbirths.

While there is every indication that the registration work of the several States and the Territories is very efficiently carried out, it is clear that in those States with a large area and scattered population, failure to register births and deaths may occur in some cases. It is believed, however, that as claims for maternity allowances are checked against birth registers before payment, the proportion of births occurring now which is not registered is very small.

The data required for the compilation of vital statistics are copied from the registers of births, deaths and marriages in the Registrar-General's Office and forwarded, through the Deputy Commonwealth Statistician in each State, and direct from the Principal Registrars in the two Territories, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is a function of the Commonwealth Statistician. The Statisticians in the various States compile and publish statistics relating to their respective States.

#### § 2. Marriages.

NOTE.—See NOTE at the beginning of this chapter.

1. Number of Marriages.—The number of marriages registered in Australia during the year ended 31st December, 1957 was 73,696, giving a rate of 7.64 per 1,000 of the mean population for the year. A summary of the number of marriages registered in each State and Territory from 1931 to 1957 is given in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Official Year Book No. 39, p. 575. A graph showing the number of marriages in each year from 1860 to 1957 appears on p. 629 of this issue.

				M	ARRIAG	ES.				
Period	ı.	N.s.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
		· <del></del>		Annt	JAL AVE	RAGES.			·	·—-
1931-35		18,742	12,773	6,950	3,967	3,328	1,638	29	53	47,480
1936-40		25,295	17,784	8,982	5,726	4,399	2,187	83	85	64,541
1941-45		28,506	19,450	10,563	6,517	4,668	2,097	71	109	71,981
1946-50		30,162	20,453	10,666	6,581	5,205	2,529	114	181	75,891
1951–55	••	28,483	20,007	10,171	6,290	5,232	2,539	146	234	73,102
				Ann	UAL TO	TALS.			!	!
1953		27,573	19,238	9,859	6,149	5,032	2,424	154	211	70,640
1954		27,503	19,404	10,027	6,190	5,204	2,512	143	246	71,229
1955		27,645	20,056	10,098	6,226	5,145	2,600	151	251	72,172
1956		27,313	20,137	9,934	6,277	5,080	2,601	160	278	71,780
1957		28,767	20,239	10,271	6,581	4,897	2,507	178	256	73,696
		1		1		'				,

2. Crude Marriage Rates.—The crude marriage rates for each State and Territory from 1931 to 1957 are given hereunder:—

			CRU	JDE MA	RRIAG	E RATE	S.(a)			
Period	1.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Averag	E ANNU	L RATES			· · · · · · · · · · · · · · · · · · ·	
1931–35 1936–40 1941–45 1946–50 1951–55		7.20 9.29 9.97 9.90 8.41	7.02 9.52 9.86 9.72 8.34	7.35 8.80 10.04 9.41 7.92	6.83 9.65 10.61 9.87 8.11	7.58 9.49 9.74 10.01 8.44	7.19 9.25 8.61 9.56 8.35	5.92 13.28 7.18 9.39 9.21	5.74 7.22 7.57 9.36 (b) 8.22	7.16 9.35 9.94 9.77 8.29
		·		An	NUAL R	ATES.		<u>'</u>	<u>'</u>	
1953 1954 1955 1956 1957		8.14 8.02 7.92 7.68 7.94	8.03 7.91 7.94 7.73 7.57	7.66 7.64 7.54 7.27 7.38	7.92 7.77 7.59 7.40 7.53	8.10 8.13 7.81 7.50 7.08	7.91 8.07 8.22 8.07 7.59	9.91 8.82 8.86 8.94 9.50	7.35 (b)8.10 (b)7.74 (b)8.01 (b)6.80	8.01 7.92 7.84 7.61 7.64

(a) Number of marriages per 1,000 of mean population. (b) Revised rates based on population estimates adjusted in accordance with the June, 1957 Population Count of Canberra are as follows:—1951-55, 8.20; 1954, 8.09; 1955, 7.67; 1956, 7.86; 1957, 6.74.

3. Marriage Rates based on Marriageable Population.—As the marriage rates in some international tabulations are based on the unmarried population aged 15 years and over, the corresponding rates have been calculated for Australia for the eight census periods to 1953-55. The period in each case comprises the census year with the year immediately preceding and the year immediately following, and the figures are as follows:—

PERSONS MARRYING PER 1,000 OF UNMARRIED POPULATION: AUSTRALIA.

	Period.				Rate.(a) Period.						
1880-82 1890-92 1900-02 1910-12				48.63 44.04 42.14 50.12	1920–22 1932–34 1946–48 1953–55		· · · · · · · · · · · · · · · · · · ·		55.97 42.88 71.24 65.32		

<sup>(</sup>a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. Crude Marriage Rates of Various Countries.—The following table gives the crude marriage rates for Australia in comparison with the rates for various other countries.

CRUDE MARRIAGE RATES(a): VARIOUS COUNTRIES.

Country.	1921- 25.	1926- 30.	1931- 35.	1956.	Country.	1921- 25.	1926- 30.	1931- 35.	1956.
United States of America Union of South Africa(b) Yugoslavia Spain Netherlands Canada Austria Switzerland New Zealand(c)	10.6 8.0 10.6 7.3 8.2 7.3 9.6 7.7 8.0	9.9 9.3 9.5 7.3 7.7 7.5 7.5 7.6	9.2 9.4 7.8 6.5 7.2 6.4 6.8 7.7 7.3	9.4 8.8 8.8 8.5 8.3 8.2 8.0 8.0	Denmark United Kingdom Japan Belgium Finland Australia(d) Italy Norway Sweden France Ireland, Republic of	7.9 7.7 8.8 10.6 7.1 8.0 9.0 6.3 9.5 4.9	7.8 7.5 8.0 9.1 7.2 7.5 7.3 6.1 6.7 8.2 4.6	8.7 7.9 7.6 7.8 7.2 7.2 6.8 6.5 7.3 7.4	7.9 7.9 7.7 7.7 7.6 7.5 7.2 7.1 6.7

<sup>(</sup>a) Number of marriages per 1,000 of mean population.
(c) Includes Maoris.
(d) Excludes full-blood aboriginals.

5. Age and Conjugal Condition at Marriage.—(i) General. Particulars of age at marriage in age groups and previous conjugal condition of bridegrooms and brides in 1956 are given hereunder. There were 6,088 males under 21 years of age married during 1956, while the corresponding number of females was 25,310. At the other extreme there were 114 bachelors and 61 spinsters in the age group 65 years and over.

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1956.

Age at		Brideg	grooms.		Brides.						
Marriage (Years).	Bach- elors.	Wid- owers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.			
Under 20	2,782		1	2,783	17,343	2	5	17,350			
20-24	29,464	12	42	29,518	31,477	79	251	31,807			
25-29	19,974	66	486	20,526	8,665	183	1,007	9,855			
30-34	6,831	135	941	7,907	3,033	307	1,206	4,546			
35-39	2,448	213	840	3,501	1,277	373	957	2,607			
40-44	1,268	256	746	2,270	712	486	669	1,867			
45-49	713	345	578	1,636	450	507	446	1,403			
50-54	415	388	339	1,142	255	387	227	869			
55-59	198	459	216	873	146	361	94	601			
60-64	101	492	93	686	69	342	48	459			
65 and over	114	740	84	938	61	332	23	416			
Total	64,308	3,106	4,366	71,780	63,488	3,359	4,933	71,780			

<sup>(</sup>b) White population only.

(ii) Proportional Distribution. In the following table the proportional distribution of bridegrooms and brides according to previous conjugal condition is shown in five-year periods from 1931 to 1955 and for each of the years 1954 to 1956:—

## CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: PROPORTIONAL DISTRIBUTION, AUSTRALIA.

(Per Cent.)

		Brideg	rooms.		Brides.						
	Bach- elors.	Wid- owers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total			
,	92 63	5 39	1 98	100.00	94 37	3 53	2 10	100.00			
• -	92.59		2.59		93.94	3.38		100.00			
	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00			
:	88.82	4.74	6.44	100.00	88.71	4.74	6.55	100.00			
'	88.77	4.63	6.60	100.00	88.04	4.81	7.15	100.00			
	88.95	4.69	6.36	100.00	88.17	4.85	6.98	100.00			
	89.24	4.46	6.30	100.00	88.28	4.72	7.00	100.00			
	89.59	4.33	6.08	100.00	88.45	4.68	6.87	100.00			
		92.63 92.59 91.44 88.82 88.77 88.95	Bach- elors. Wide- 92.63 5.39 92.59 4.82 91.44 4.77 88.82 4.74 88.77 4.63 88.95 4.69 89.24 4.46	Bachelors.         Widowers.         Divorced.           92.63         5.39         1.98           92.59         4.82         2.59           91.44         4.77         3.79           88.82         4.74         6.44           88.77         4.63         6.60           88.95         4.69         6.36           89.24         4.46         6.30           89.56         4.23         6.60	Bachelors.         Widowers.         Divorced.         Total.           92.63         5.39         1.98         100.00           92.59         4.82         2.59         100.00           91.44         4.77         3.79         100.00           88.82         4.74         6.44         100.00           88.77         4.63         6.60         100.00           88.95         4.69         6.36         100.00           89.24         4.46         6.30         100.00	Bachelors.         Widowers.         Divorced.         Total.         Spinsters.           92.63         5.39         1.98         100.00         94.37           92.59         4.82         2.59         100.00         93.94           91.44         4.77         3.79         100.00         92.11           88.82         4.74         6.44         100.00         88.71           88.77         4.63         6.60         100.00         88.04           88.95         4.69         6.36         100.00         88.17           89.24         4.46         6.30         100.00         88.28           89.5         4.69         6.36         100.00         88.28	Bachelors.         Widowers.         Divorced.         Total.         Spinsters.         Widows.           92.63         5.39         1.98         100.00         94.37         3.53           92.59         4.82         2.59         100.00         93.94         3.38           91.44         4.77         3.79         100.00         92.11         3.93           88.82         4.74         6.44         100.00         88.71         4.74           88.77         4.63         6.60         100.00         88.04         4.81           88.95         4.69         6.36         100.00         88.17         4.85           89.24         4.46         6.30         100.00         88.28         4.72           80.50         4.32         6.91         6.91         6.92         6.94         6.94         6.94	Bachelors.         Widelors.         Divorced.         Total.         Spinsters.         Widows.         Divorced.           . 92.63         5.39         1.98         100.00         94.37         3.53         2.10           . 92.59         4.82         2.59         100.00         93.94         3.38         2.68           . 91.44         4.77         3.79         100.00         92.11         3.93         3.96           . 88.82         4.74         6.44         100.00         88.71         4.74         6.55           . 88.77         4.63         6.60         100.00         88.04         4.81         7.15           . 88.95         4.69         6.36         100.00         88.17         4.85         6.98           . 89.24         4.46         6.30         100.00         88.28         4.72         7.00           . 90         50         6.95         4.62         6.92         4.62         6.92			

(iii) Relative Ages of Bridegrooms and Brides. The relative ages of bridegrooms and brides in 1956 are shown below in age groups of five years.

#### RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1956.

Age of	Total			A	ge of Brid	ie (Years)			
Bridegroom (Years).	Bride- grooms.	Under 15.	15–19.	20–24.	25–29.	30–34.	35–39.	40-44.	45 and over.
Under 20	2,783	10	2,230	520	21	1	1		
20-24	29,518	13	10,973	16,772	1,513	189	41	11	6
25–29	20,526	5	3,426	11,219	4,551	1,022	242	39	22
30-34	7,907	3	548	2,552	2,437	1,559	564	174	70
35-39	3,501	١	96	533	825	925	687	312	123
40-44	2,270		27	140	322	491	529	445	316
45-49	1,636		12	44	115	223	326	404	512
50-54	1,142		2	16	39	96	127	249	613
55-59	873		3	6	19	28	58	151	608
60-64	686		1	4	8	8	21	48	596
65 and over	938		1	1	5	4	11	34	882
Total Brides	71,780	31	17,319	31,807	9,855	4,546	2,607	1,867	3,748

<sup>(</sup>iv) Average Ages of Bridegrooms and Brides. The age at marriage of brides has remained fairly constant during recent years at an average of about 25½ years, although in the period 1937-39 the average rose to almost 26 years. The average ages, in years, of brides for each of the five years to 1956 were:—1952, 25.61; 1953, 25.73; 1954, 25.59; 1955, 25.42; and 1956, 25.34. For the following five-year periods the average ages in years were:—1931-35, 25.50; 1936-40, 25.72; 1941-45, 25.68; 1946-50, 25.61; and 1951-55, 25.61. The average ages, in years, of bridegrooms were 28.79 in 1952, 28.96 in 1953, 28.82 in 1954, 28.68 in 1955, and 28.66 in 1956. It follows, therefore, that brides are, generally speaking, a little more than three years younger than bridegrooms. The difference in age was 3.18 years in 1952, 3.23 in 1953 and 1954, 3.26 in 1955, and 3.32 in 1956.

<sup>6.</sup> Previous Conjugal Condition.—The following table shows the relative conjugal condition of the contracting parties to marriages in 1956.

CONJUGAL	CONDITION	OF	BRIDEGROOMS	AND	BRIDES:	AUSTRALIA.	1956.
----------	-----------	----	-------------	-----	---------	------------	-------

Co	Conjugal Condition of Bridegrooms.		Total	Conjugal Condition of Brides.					
			Bridegrooms.	Spinsters.	Widows.	Divorced.			
Bachelors	• • • • • • • • • • • • • • • • • • • •	•••	 64,308	59,877	1,403	3,028			
Widowers			 3,106	1,162	1,362	582			
Divorced			 4,366	2,449	594	1,323			
Tota	l Brides		 71,780	63,488	3,359	4,933			

- 7. Birthplaces of Persons Marrying.—A table showing the relative birthplaces of bridegrooms and brides married in each year will be found in the annual bulletin, Demography.
- 8. Occupation of Bridegrooms.—The distribution of the 71,780 bridegrooms for 1956 amongst classes of occupations was as follows:—Craftsmen, 19,510; commercial and clerical, 12,570; operatives, 11,518; rural, fishing and hunting, 7,946; labourers, 7,310; domestic and protective service, 4,128; professional and semi-professional, 4,001; administrative, 2,772; not gainfully occupied and not stated, 2,025.
- 9. Celebration of Marriages.-In all the States, marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar-General, or by certain civil officers-in most cases district registrars-but most of the marriages are celebrated by ministers of religion. The registered ministers in 1956 belonged to more than forty different denominations, some of which, however, have only very few adherents. A number of these have been combined under the heading "Other Christian". The figures for 1956 are shown in the following table:-

MARRIAGES IN EACH DENOMINATION, 1956.

									Aus	tralia.
Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	No.	Propor- tion of Total
Church of Eng-										%
land	9,217	5,061	2,680	1,336	1,516	970	26	102	20,908	29.13
Roman Catholic	6,923		2,466	1,042	1,199	481	41	94	17,413	
Methodist	2,687		1,590	1,543	603	408	17	11	9,393	
Presbyterian	2,995		1,848	261	351	136	14	24	9,091	12.66
Greek Orthodox	426		93	205	68	4		i	1,378	
Baptist	327		172	142	49	56		5	1,053	1.47
Lutheran	100		275	406	18	2		4	1,043	1.45
Congregational	251	255	91	225	123	48	1	i	994	
Church of Christ	86		86	195	65	14	٠. ا	4	796	
Salvation Army	99		103	51	20	15	7	ż	399	0.56
Seventh-Day Ad-	1 "	.02	105			1.5	<i>'</i>	_ ~	1	0.50
ventist	85	28	34	17	16	8		1	189	0.26
Unitarian	1			3		ĺ			34	
Other Christian	158		167	28		30			722	
Hebrew	113		1	3	16				270	
110010#										
Total	23,468	18,416	9,606	5,457	4,186	2,172	129	249	63,683	88.72
Civil Officers	3,845	1,721	328	820	894	429	31	29	8,097	11.28
Grand Total	27,313	20,137	9,934	6,277	5,080	2,601	160	278	71,780	100.00
	i			RTION C	OF TOTA	NL				
Denominational	85.92	91.45	96.70	86.94	82.40	83.51	80.63	89.57	88	3.72
Civil	14 08	8 55							1.1	28

.. 14.08 8.55 3.30 13.06 17.60 16.49 19.37 10.43 Civil ...

#### § 3. Divorce.

The number of dissolutions of marriage, nullities of marriage and judicial separations in 1956 was 6,492. Further information may be found in Chapter XIII.—Public Justice, and detailed tables relating to divorce statistics for 1956 and summary tables for earlier years in *Demography*, Bulletin No. 74.

#### § 4. Fertility and Reproduction.

NOTE.—See NOTE at the beginning of this chapter.

- 1. Introductory.—Of the two elements of increase in the population, namely, natural increase and net migration, the former has been by far the more important over the past few decades. The level of natural increase depends on the excess of births over deaths and the relation between fertility and mortality determines the rate of reproduction or replacement of the population.
- 2. Number of Live Births and Confinements.—(i) Year 1956. There are various methods of measuring the fertility of the population by relating the number of births to the numbers in the population. In each the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1956 is shown in the following table. The table shows also the number of confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

#### LIVE BIRTHS AND CONFINEMENTS, 1956.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aus- tralia.
			Lı	ve Birti	ıs.				
Single births	73,966	57,011	31,706	18,564	16,525	7,910	544	1,056	207,282
Twins	1,726	1,370	688	394	385	194	12	21	4,790
Triplets	18	12	15	6	6	]	]		57
Quadruplets	4		[						4
Males	39,209	30,115	16,702	9,708	8,870	4,128	284	573	109,589
Females	36,505	28,278	15,707	9,256	8,046	3,976	272	504	102,544
Total	75,714	58,393	32,409	18,964	16,916	8,104	556	1,077	212,133

#### STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE.

Twins	1	46	12	16	 13	6	 1	94
T			~-		 	-	 _	
Triplets		3		• •	 ••		 	3

#### CONFINEMENTS RESULTING IN ABOVE BIRTHS.

Nuptial		71.587	55.750	30.2511	18.130	15,932	7.693	472	1.048	200.863
Ex-nuptial	• • •	3,273						78	. ,	8,882
Total						16,726	8,010	550	1.067	209,745

Note.—Owing to the registration procedure adopted in some States, it is possible that in some cases where one child only of a multiple pregnancy is live-born the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also para. 13.

(ii) Live Births, Years 1931 to 1957. The average annual number of live births in each State and Territory for each five-year period from 1931 to 1955 and the total number of live births for each year from 1953 to 1957 are given in the following table. Corresponding figures for each five-year period from 1861 to 1950 were published in Official Year Book No. 39, p. 583.

LIV	m	RI	דסו	T L	C
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Period	١.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
		<u> </u>		Annu	AL AVE	RAGES.				
1931-35	· .	44,964	28,380	17,480	8,646	8,061	4,547	79	145	112,302
1936-40		47,679	30,282	19,534	9,388	8,877	4,866	125	221	120,972
1941-45		56,583	38,002	23,431	12,546	10,409	5,418	113	384	146,886
1946-50		68,856	47,372	28,003	16,270	13,130	7,064	289	734	181,718
1951-55		73,737	53,770	30,983	18,045	15,724	7,774	468	922	201,423
				ANN	UAL TO	TALS.				
1953		74,890	53,561	30,782	18,156	15,862	7,736,	460	788	202,235
1954		73,125	54,660	31,176	18,227	15,928	7,770	513	857	202,250
1955		74,407	56,336	32,352	18,494	16,623	8,089	515	861	207,677
1956		75,714	58,393	32,409	18,964		8,104	556	1,077	212,133
1957		79,456	60,464	33,763	19,536	16,924	8,435	646	1,134	220,358

A graph showing the number of births in each year from 1860 to 1957 will be found on p. 629.

3. Crude Birth Rates.—The oldest and most popular method of measuring fertility is to relate the number of births to the total population, thus obtaining the crude birth rate. The crude birth rate measures the rate per thousand persons (irrespective of age or sex) at which the population has added to its numbers by way of births during a given period. Other methods of measuring fertility are shown on pp. 616-9.

Crude birth rates for each five-year period from 1931 to 1955 and for each year from 1953 to 1957 for each State and Territory are set out below:-

CRUDE	RIK	IH.	RATES.(a	)

				RUDE	BIRTH	RATES.	(a)			
Period	đ.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Averagi	E ANNU	L RATES	3.			
1931-35 1936-40 1941-45 1946-50 1951-55		17.28 17.51 19.79 22.60 21.78	15.60 16.20 19.27 22.51 22.41	18.48 19.48 22.28 24.69 24.13	14.89 15.82 20.43 24.41 23.25	18.36 19.16 21.72 25.24 25.35	19.95 20.58 22.23 26.71 25.57	15.99 19.96 11.40 23.77 29.64	15.77 18.68 26.82 37.92 b32.30	16.94 17.52 20.28 23.39 22.85
				An	NUAL R	ATES.		<u>.                                    </u>		
1953 1954 1955 1956 1957		22.11 21.33 21.31 21.29 21.93	22.36 22.28 22.30 22.42 22.61	23.91 23.74 24.16 23.72 24.25	23.39 22.89 22.55 22.35 22.35	25.54 24.88 25.23 24.98 24.47	25.25 24.97 25.59 25.15 25.55	29.61 31.64 30.22 31.07 34.49	27.43 b28.21 b26.56 b31.04 b30.13	22.94 22.50 22.57 22.50 22.86

(a) Number of births per 1,000 of mean population. (b) Revised rates based on population estimates adjusted in accordance with the June, 1957 Population Count of Canberra are as follows:—1951-55, 32.22; 1954, 28.17; 1955, 26.30; 1956, 30.47; 1957, 29.84.

Note.-The birth rates in the table above are based on live births registered in the respective States NOTE.—The birth rates in the table above are based on live births registered in the respective States and Territories. Prior to 1939, a large proportion of births in respect of which the mother's usual residence was the Australian Capital Territory took place in Queanbeyan, just over the New South Wales border. With improved hospital facilities in the Territory, the position was reversed until late in 1952, when maternity accommodation was provided at the Queanbeyan District Hospital. Since 1952, the movements in either direction have been only small. Particularly for years prior to 1953, the following rates, based on births in respect of which the mother's usual residence was the Australian Capital Territory, are a truer measure of birth rates in the Australian Capital Territory.

An	nual Aver	age.		l	Year.	
1931-1935		٠.,	19.53	1953	 	27.61
1936-1940			19.29	1954	 	(a) 28.67
1941-1945			23.06	1955	 	(a)26.53
1946-1950			27.13	1956	 	(a)30.64
1951-1955	::		a)28.39	1957	 	(a)29.58

(a) Revised rates based on population estimates adjusted in accordance with the June, 1957 Population Count of Canberra are as follows:—1951-55, 28.32; 1954, 28.63; 1955, 26.27; 1956, 30.07; 1957, 29.29.

The variations similarly caused in the birth rates for the States and the Northern Territory by referring the birth registrations to the State or Territory in which the mother was usually resident are shown by the following corrected rates for 1957:—New South Wales, 21.92; Victoria, 22.62; Queensland, 24.30; South Australia, 22.28; Western Australia, 24.49; Tasmania, 25.60; and Northern Territory, 34.92.

A graph showing the birth rate for each year from 1860 to 1957 will be found on p. 630.

In the earlier years of the present century the crude birth rate fluctuated somewhat, but from 1912, when 28.60 was recorded, there was an almost continuous decline to the very low figure of 16.39 in 1934. The decline in the depression years was to some extent occasioned by the postponement of marriages, and with subsequent improvement in economic conditions the rate rose. From 1940 the rate increased quite appreciably, owing to a continued improvement in the economic welfare of the community and the war-time boom in marriages. The latter resulted in an abnormal number of first births, but investigation indicates that rates for births other than first were generally slightly higher than might have been expected from pre-war experience. The improvement in the birth rate has been substantially maintained since the end of the war despite some falling off in marriage rates. The post-war peak of 24.07 was recorded in 1947.

4. Crude Birth Rates, Various Countries.—The following table gives crude birth rates for Australia in comparison with rates for various other countries.

Country.	1921-	1926~ 30.	1931- 35.	1956.	Country.	 1921- 25.	1926- 30.	1931- 35.	1956.
Canada Yugoslavia	27.4 35.0 27.1 22.5 22.2 23.9 25.7 20.3 24.7	24.1. 34.2 25.9 19.7 19.7 21.0 23.2 20.1 22.5	21.4 31.8 24.1 c16.9 17.0 16.9 21.2 19.4 19.5	28.0 25.8 25.4 24.9 24.7 22.5 21.2 21.0 20.8	Spain Norway Japan France Italy Switzerland Denmark Belgium Austria United Kingdom Sweden	 29.8 22.2 34.6 19.3 29.8 19.5 22.3 20.4 22.2 20.4 19.1	28.5 18.0 33.5 18.2 26.8 17.6 19.4 18.6 17.6 17.2	27.1 15.2 31.6 16.5 23.8 16.4 17.7 16.8 14.4 15.5	20.7 18.7 18.5 18.5 18.1 17.4 17.2 16.8 16.6 16.1

CRUDE BIRTH RATES(a): VARIOUS COUNTRIES.

5. Fertility Rates.—The principal demographic factors affecting the level of crude birth rates are the proportion of women of child-bearing age in the population and the proportion of such women who are married. These factors may vary considerably at different periods and for different countries, and a population with a higher proportion of married women of child-bearing age will have a much higher crude birth rate than one with a low proportion, although the fertilities of the two populations may be identical.

In order to compare fertilities, births are sometimes related to the number of women of child-bearing age or, alternatively; nuptial births are related to the number of married women of child-bearing age. Thus births are related to potential mothers, giving the fertility rate.

The following table sets out for certain periods, commencing with 1880-82, the number of births per thousand of mean population, the number of births per thousand women of child-bearing age and the number of nuptial births per thousand married women of child-bearing age. For purposes of this table the child-bearing age has been taken to be 15-44 years inclusive, but births to mothers who were stated to be under 15 or over 44 years have been included in the compilations.

<sup>(</sup>a) Number of births per 1,000 of mean population. (b) White population only. (c) 1933-35. (d) Excludes Maoris. (e) Excludes full-blood aboriginals.

		Aver	age Annual R	ates.	Index Nos.	(Base: 1880-	·82 = 100).	
			Fertility	Rates.	1	Fertility Rates.		
Period.	 	Crude Birth Rate.(a)	Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.	Crude Birth Rate.(a)	Births per 1,000 Women aged 15-44 Years.	Nuptial Births per 1,000 Married Women aged 15-44 Years.	
1880-82		35.3	170	321	100	100	100	
1890-92		34.5	159	332	98	94	103	
1900-02		27.2	117	235	77	69	73	
1910-12		27.2	117	236	77	69	74	
1920-22		25.0	107	197	71	63	61	
1932-34	!	16.7	71	131	47	42	41	
1946-48		23.6	104	160	67	61	50	
1953-55		22.7	109:	149	64	64	46	

#### CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA.

(a) Number of births per 1,000 of mean population.

The table above shows how increasing proportions both of women of child-bearing age and of married women of child-bearing age inflate the crude birth rate. Thus, while the nuptial birth rate for married women increased by only 22 per cent. over the period 1932-34 to 1946-48 the crude birth rate rose by 41 per cent., owing principally to the greatly increased number of marriages during that period.

6. Age-specific Fertility Rates for Females.—So long as customary ages at marriage do not change drastically, the main demographic factor affecting the number of births is the age composition of the potential mothers in the population. Within the child-bearing group the fertility of women of different ages varies considerably and a clearer view of the fertility of the population can be obtained from an examination of what are known as its age-specific fertility rates, that is, the number of births to women of specified ages per thousand women of those particular ages.

Age-specific fertility rates are more commonly expressed in age groups than in single ages. In the following table, such rates, calculated in terms of female births for the purpose of obtaining the gross and net reproduction rates described in para. 7, are shown in five-year age groups for Australia for the period 1921 to 1956.

AGE-SPECIFIC FI	ERTILITY	RATES(a):	AUSTRALIA.
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Age Group (Years).	1921.	1926.	1931.	1936.	1941.	1946.	1951.	1954.	1955.	1956.
15-19 20-24 25-29 30-34 35-39 40-44 45-49	12.83 65.45 82.24 68.50 49.48 21.66 2.10	14.02 60.23 76.82 61.90 43.55 17.63	13.08 53.08 62.47 51.25 33.23 13.61 1.45	12.18 50.33 62.02 46.33 28.89 10.19	11.90 59.42 70.78 49.72 28.69 9.52 0.80	12.63 73.52 89.51 65.03 37.43 11.87	18.59 85.84 90.24 59.16 32.29 9.97 0.80	19.12 96.24 94.49 59.91 31.17 9.85 0.71	20.30 99.48 97.12 60.14 31.12 9.92 0.71	20.84 101.46 98.11 59.65 31.32 9.48 0.76

(a) Number of female births per 1,000 women in each age group.

The table shows that from 1954 the most fertile age group has been 20-24 years, whereas previously fertility had been highest between the ages of 25 and 29 years. The decline in fertility between 1921 and 1936 was general but was more pronounced in the higher age groups. During the period 1936 to 1956, a rise in fertility occurred in all age groups below 40. The most noticeable increase has been in the 20 to 24 age group, in which, as mentioned, fertility is now highest, as the result of a marked trend towards earlier marriage.

7. Gross and Net Reproduction Rates for Females.—A single measure of reproduction known as the gross reproduction rate is obtained by adding together the specific fertility rates for each age in the child-bearing group. This measure indicates the number of female children who would be born on the average to women living right through the child-bearing period, if the conditions on which the rate is based continue. The rate is unaffected by the age composition of the potential mothers, and consequently it shows more clearly than the crude birth rate the reproductive propensity of the population. It is, however, an

imperfect measure of reproduction because it does not take into account the females who fail to live from birth to the end of the reproductive period. A more accurate measureof this nature is obtained by multiplying the specific fertility rates by the number of femalesin the corresponding age group of the stationary or life table population and summing the products. Allowance is thus made for the effect of mortality and the result is known as the net reproduction rate. The net reproduction rate indicates the average number of female children who would be born to women during their lifetime if they were subject at each age to the fertility and mortality rates on which the calculation is based. A constant net reproduction rate of unity indicates that the population will ultimately become stationary. If it continues greater than unity, the population will ultimately increase; if less than unity, it will ultimately decrease. The following table should be read in the light of the comment. which follows it and of the index of marriage fertility in paragraph 9, p. 619.

GROSS AND NET REPRODUCTION RATES: AUSTRALIA.

Year.		Gross Repro- duction Rate.	Net Repro- duction Rate.	Year.			Gross Repro- duction Rate.	Net Repro- duction Rate.(g)	
1881(a)			2.65	(b) 1.88	1950	•••		1.491	1.415
1891(a)			2.30	(b) 1.73	1951			1.485	1.409
1901(a)			1.74	(c) 1.39	1952		]	1.547	1.468
1911		[	1.705	(d) 1.421	1953			1.556	1.477
1921			1.511	(e) 1.313	1954		)	1.558	1.478
1931			1.141	(f) 1.039	1955			1.594	1.513
1941			1.154	(f) 1.053	1956			1.608	1.527

(a) Approximate only. (b) 1881–1890 mortality experience used. (c) 1891–1900 mortality experience used. (d) 1901–1910 mortality experience used. (e) 1920–1922 mortality experience used. (f) 1932–1934 mortality experience used. (g) 1946–1948 mortality experience used. Norte—It is not strictly correct to assume, as in the calculations of the rates above, that a particular age-specific fertility rate can be applied to a hypothetical group of women reaching that age, without taking account of previous fertility and marriage experiences. Reproduction rates are therefore unreliable when birth and marriage rates have been changing. The indexes of marriage fertility shown on the next page are also of doubtful reliability in similar circumstances.

Since 1881, there has been a substantial downward trend in both rates, but the grossrate has fallen considerably more than the net, showing that the decline in fertility has been offset to some extent by a decline in mortality. The net reproduction rate was below unity over the period 1932 to 1939. If such low levels were to be experienced indefinitely, ultimate population decline would be certain. The progressive rise in both gross and net reproduction rates from 1939 to 1947 was due largely to higher marriage rates during the war and early post-war years than had been experienced in the immediate pre-war years. Such fluctuations in marriage rates affect both gross and net reproduction rates When fluctuations in marriage rates are transient, reproduction rates substantially. calculated as above are not valid as indicators of relative fertility nor of the extent to which population will replace itself. Owing to various influences, the number of marriages in each year since 1950 has remained at a relatively high level and the net reproduction rates have been steady at about 1.4 and 1.5. The fertility of marriages is shown in paragraph 9 below.

8. Gross and Net Reproduction Rates of Various Countries.—In the following table, a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1950 to 1956. These represent the latest available international comparison.

GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES.

Country.	Period.	Reproduction Rate.		Country.	Period.	Reproduction Rate.	
		Gross.	Net.			Gross.	Net.
Canada	1954	1.87	(a)	France	1953	1.30	1.22
New Zealand(b)	1954	1.76	1.69	Norway	1953	1.28	1.21
United States of				Switzerland	1953	1.25	1.15
America $(c)$	1953	1.60	1.54	Denmark	1954	1.23	1.12
Australia $(d)$	1956	1.61	1.53	Scotland	1952	1.18	1.12
Ireland, Republic of	1950-52	1.60	1.47	England and Wales	1953	(a)	1.03
Netherlands	1953	1.47	1.40	Belgium	1953	1.13	1.03
Finland	1953	1.44	1.34	Sweden	1952	1.08	1.03
Portugal	1953	1.50	1.27				

<sup>(</sup>a) Not available. full-blood aboriginals.

<sup>(</sup>b) Excludes Maoris.

<sup>(</sup>c) White population only.

In comparing the reproduction rates of the countries shown above, allowance should be made for any differences in years, as the rates for any one country from year to year are affected by variations in the incidence of marriage.

9. Fertility of Marriages.—Estimates of the fertility of marriages which were published in issues of the Official Year Book prior to No. 36 were calculated by relating the births of one five-year period to the marriages in the preceding five years (see Official Year Book No. 35, p. 329). Since the publication of that issue, an improved method has been formulated for measuring current marriage fertility by relating nuptial confinements in each year to the marriages from which they could have resulted. Confinements of women of a certain number of years duration of marriage are related to the number of marriages taking place that number of years previously. The table below sets out this index of current fertility per marriage in respect of confinements in the individual years shown.

FERTH ITV	OF MARRIAGES:	ALISTRALIA

Year. Nuptial Confinements per Marriage.		Year		Nuptial Confine- ments per Marriage.	Year	Nuptial Confine- ments per Marriage.		
1942		2.12	1947		2.55	1952	•••	2.63
1943		2.21	1948		2.44	1953		2.66
1944		2.28	1949		2.45	1954		2.66
1945		2.36	1950		2.56	1955		2.71
1946		2.55	1951		2.55	1956		2.76

NOTE.—See NOTE to table opposite.

The figure for a particular year gives the estimated number of children which a marriage would produce according to the fertility conditions of that year. There was an almost continuous decline for a number of years to 1942, but a pronounced increase has since occurred. In comparing this index with the net reproduction rate, it is evident that the rise in the latter since 1935 has been caused mainly by a rise in the marriage rate, due firstly to postponed depression marriages, and secondly to war-time and post-war marriages which have resulted in very high proportions of women married, particularly in the most fertile age groups. Only since 1944 has there been an increase in the fertility of marriages compared with pre-war levels.

The figures for 1949 and subsequent years present a somewhat inflated index, as many of the births which have been used to calculate the index relate to marriages of immigrants which took place overseas and are consequently not included in Australian marriage records. Partial investigation suggests that this factor probably overstated the index by very little in 1949, but that the overstatement at present is about 8 per cent.

10. Masculinity of Live Births.—The masculinity of live births, i.e., the number of males born for every 100 female births, has remained fairly stable for Australia at about 105. But when the number of births for which masculinity is being calculated is small (for example, State totals), considerable variation is shown. For 1957, the figures ranged from 105.00 in Victoria to 110.78 in the Australian Capital Territory. The averages for the ten years 1941-50 were as follows:—New South Wales, 105.49; Victoria, 105.47; Queensland, 105.49; South Australia, 105.78; Western Australia, 104.27; Tasmania, 104.45; Northern Territory, 100.20; Australian Capital Territory, 104.91; Australia, 105.38. The following table shows the figures for Australia for each ten-year period from 1901 to 1950 and for each of the years 1954 to 1957:—

MASCULINITY(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA.

Particulars.	1901–10.	1911–20.	1921–30.	1931–40.	1941-50.	1954.	1955.	1956.	1957.
Total Births Ex-nuptial Births	105.22	105.27	105.55	105.12	105.38	104.92	105.16	106.87	105.71
	104.08	105.25	105.16	105.36	105.34	101.58	104.72	107.16	102.86

(a) Number of males born for every 100 female births.

11. Ex-nuptial Live Births.—(i) General. The highest proportion of ex-nuptial births in any one year since 1901 was recorded in 1905, when there were 6,545 ex-nuptial births, representing 6.24 per cent. of total births. Since then the proportion has declined steadily. The largest number of ex-nuptial births was recorded in 1957, when 9,362 were registered, but this number represented only 4.25 per cent. of total births. The lowest proportion was 3.78 per cent. in 1940.

The variations in the proportions of ex-nuptial births as between the individual States and Territories for 1956 are shown below.

EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, 1956.

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number Proportion of	3,305	1,980	1,833	639	796	320	78	19	8,970
Total Births %	4.37	3.39	5.66	3.37	4.71	3.95	14.03	1.76	4.23

The number and proportion of ex-nuptial births at intervals from 1901 to 1956 are as follows:—

EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, AUSTRALIA.

Particulars.				.An	nual Ave	rage.				40.75	
			1901- 10.	1911- 20.	1921- 30.	1931- 40.	1941- 50.	1953.	1954.	1955.	1956.
Number Proportion	of	Total	6,498	6,836	6,238	5,133	6,780	8,032	8,027	8,537	8,970
Births		%_	6.05	5.22	4.66	4.40	4.13	3.97	3.97	4.11	4.23

It is of course possible that the number of ex-nuptial births is somewhat understated owing to diffidence in proclaiming the fact of ex-nuptiality.

(ii) Rate of Ex-nuptiality. A further comparison is obtained by calculating the number of ex-nuptial births per thousand of the single, widowed and divorced female population aged from 15 to 44 years. On this basis, the number of ex-nuptial births per 1,000 unmarried women of ages 15 to 44 is as follows:—1880-82, 14.49; 1890-92, 15.93; 1900-02, 13.30; 1910-12, 12.53; 1920-22, 10.50; 1932-34, 6.91; 1946-48, 11.45; and 1953-55, 14.45. Ex-nuptial births to married women, which are not recorded separately, are included in these figures and it is not possible to determine to what extent they influence the trend shown.

(iii) Comparison of Rates. The following table, showing the relative proportions of ex-nuptial and nuptial births to the total population, discloses a much greater proportional movement in the ex-nuptial birth rate than in the nuptial rate:—

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES(a): AUSTRALIA.

Birth Rate.			Anı	nual Aver	age.	1953.	1954.	1955.	1956.	
		1901–10.	1911–20.	1921–30.	1931–40.	1941–50.		1934.	1933.	1930.
Ex-nuptial Nuptial Total	• • •	1.60 24.91 <b>26.51</b>	1.39 25.18 26.57	1.04 21.40 22.44	0.76 16.47 17.23	0.90 20.99 21.89	0.91 22.03 <b>22.94</b>	.0.89 21.61 22.50	0.93 21.64 22.57	0.95 21.55 22.50

(a) Number of births per 1,000 of mean population.

12. Legitimations.—Acts have been passed in the several States to legitimize children born before the marriage of their parents, provided that no legal impediment to the marriage existed at the time of birth. On registration in accordance with the provisions of the Legitimation Acts, any child who comes within the scope of their purposes, born before or after the passing thereof, is deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. During 1956, the number of children legitimized in Australia was 934.

13. Multiple Births.—Because the current Australian birth statistics are based only on those confinements which resulted in a live-born child, the number of confinements for multiple births for Australia is understated—firstly, because in cases where all children of a multiple birth are still-born the confinement is excluded, and secondly, because some cases of multiple births in which only one child was live-born are registered as single births.

During 1956, multiple births recorded on the above basis comprised 2,442 cases of twins, 20 cases of triplets and 1 case of live-born quadruplets, the resultant numbers of live-born and still-born children being respectively 4,790 and 94 for twins, 57 and 3 for

triplets and 4 live-born for quadruplets. This represents an average of 11.64 recorded cases of twins and 0.10 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 86 mothers and mothers of triplets 1 in every 10,487. Total cases of multiple births represented 11.74 per 1,000 confinements or 1 in every 85 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

14. Ages of Parents.—The relative ages of the parents of children registered in 1956 have been tabulated separately for male and female births, multiple births being distinguished from single births. For total births and for multiple births the relative ages of parents are shown in *Demography*, Bulletin No. 74. In the present work the exigencies of space allow only the insertion of a table showing, in respect of confinements resulting in one or more live births, the relative ages of parents in groups of five years.

#### CONFINEMENTS: RELATIVE AGES OF PARENTS, AUSTRALIA, 1956.

	ther (Years)	Total.			Age	of Mot	her (Yea	rs).		
and Tyr	pe of Birth.		Under 15.	15–19.	20-24.	25-29.	30-34.	35–39.	40-44.	45 and over.
Under 20 20-24 25-29 30-34 35-39 40-44 45-49 50-54 65 and over		1,477 29,447 64,910 52,783 29,380 14,865 5,677 1,674 445 131	8 2	1,188 6,989 2,475 426 91 30 8 3 4		24 15	208 4,001 19,171 12,695 4,359 1,191 339 88 18	22 380 2,466 8,191 5,843 2,163 2,163 162 38	33 194 829 2,612 1,645 530 131 46	10 23 71 171 101 27
Mothers of Nuptial Children	Single Twins Triplets(a) Total	198,492 2,351 20 200,863		11,151 64 11,215	56,217 504 4 56,725	6	41,480 600 6 42,086	330		412 2
Mothers of Ex-nuptial Children	$\begin{cases} Single & \\ Twins(b) & \\ Total & \end{cases}$	8,790 92 8,882		14	2,581 13 <i>2,594</i>		1,291 20 1,311	12	252 1 253	·
Total Mothers	Single Twins(b) Triplets(a)	207,282 2,442 21		13,149					6,220 72 1	43t 2
	Total	209,745	52	13,227	59,319	66,377	43,397	20,647	6,293	433

<sup>(</sup>a) Includes 1 case of quadruplets.

- 15. Birthplaces of Parents.—A table showing birthplaces of parents of children whose births were registered during 1956 appears in *Demography*, Bulletin No. 74.
- 16. Occupation of Fathers.—A table showing occupations of the fathers of all nuptial children registered in 1956 appears in *Demography*, Bulletin No. 74.
- 17. Age, Duration of Marriage and Issue of Mothers.—(i) General. The total number of nuptial confinements resulting in live births in 1956 was 200,863, comprising 198,492 single births, 2,351 cases of twins, 19 cases of triplets and 1 case of quadruplets. The tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include children by the same father who were born to the mother prior to the marriage. Children born at the present confinement are included in the total issue shown.
- (ii) Duration of Marriage and Issue of Mothers. The following table shows that in 1956 the duration of marriage of mothers of nuptial children ranged from less than one year to over 25 years, and that the average family increased fairly regularly with the duration of marriage. The average issue of married mothers who bore children in 1956 was 2.52, compared with 2.50 in 1955, 2.48 in 1954, 2.45 in 1953, 2.42 in 1952, and 2.40 in 1951.

<sup>(</sup>b) Includes 1 case of triplets.

NUPTIAL CONFINEMENTS: DURATION OF MARRIAGE AND ISSUE	OF
MOTHERS, AUSTRALIA, 1956.	

Duration Marrias (Years)	ge .	Total Married Mothers.	Total Issue.	Average Issue.	Duratio Marri (Year	age	Total Married Mothers.	Total Issue.	Average Issue.
0- 1		26,032	26,544	1.02	14-15		3,340	15,377	4.60
1- 2		22,880	28,251	1.23	15-16		2,524	12.316	4.88
2-3		21,946	37,673	1.72	16-17		2,069	10,825	5.23
3- 4		19,990	40,846	2.04	17–18		1,406	7,784	5.54
4- 5		18,594	43,508	2.34	18-19		1,042	6,034	5.79
5- 6		15.818	41,398	2.62	19-20		848	5,269	6.21
6- 7		13,741	39,739	2.89	20-21		596	3,823	6.41
7-8		11,417	36,054	3.16	21-22		438	2,949	6.73
8- 9		9,838	33,249	3.38	22-23		300	2,122	7.07
9-10		8,590	31,243	3.64	23-24		198	1,479	7.47
10-11		6,559	25,126	3.83	24-25		120	970	8.08
11-12		4,844	19,623	4.05	25 and o	ver	178	1,467	8.24
12-13		3,794	16,192	4.27	1	•	_ <del></del>		
13-14		3,761	16,648	4.43	Tot	al	200,863	506,509	2.52

(iii) Age and Average Issue of Mothers. The following table shows the average number of children born to mothers of different ages. In the younger ages there is, naturally, little difference in the average number of children to each mother from year to year, but for mothers in the higher age groups the number of issue has until recently fallen in comparison with past years. In 1956, average issue was greater in all age groups under 40 years than in the decade 1941-50. The average issue of mothers of all ages recorded for 1956 (namely, 2.52) is 22.5 per cent. below the average of 3.25 for the years 1911-20.

AGE AND AVERAGE ISSUE OF MOTHERS: AUSTRALIA.

Period.		Age of Mother (Years).										
		Under 20.	20–24.	25–29.	30-34.	35–39.	40-44.	45 and over.	All Ages.			
1911-20		1.21	1.75	2.61	3.74	5.11	6.69	8.16	3.25			
1921-30		1.20	1.71	2.46	3.48	4.80	6.27	7.74	3.04			
1931-40		1.20	1.68	2.30	3.19	4.41	5.89	7.40	2.71			
1941-50		1.17	1.56	2.15	2.85	3.67	4.79	6.19	2.37			
1956		1.23	1.72	2.43	3.13	3.85	4.66	5.49	2.52			

(iv) Previous Issue of Mothers, Various Ages. A classification of mothers by age and previous issue is given for 1956 in the following table:—

NUPTIAL CONFINEMENTS: AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1956.

				110011					
_				Age o	f Mother (	Years).			Total
	evious ssue.	Under 20.	20–24.	25–29.	30–34.	35–39.	40-44.	45 and over.	Married Mothers.
0	•••	9,028	28,963	16,441	6,323	2,245	609	37	63,646
1		1,946	18,504	21,837	10,125	3,307	697	35	56,451
2		236	6,780	15,390	11,203	4,364	963	43	38,979
3		11	1,924	6,796	7,408	3,789	1,064	54	21,046
4		4	452	2,562	3,680	2,575	872	59	10,204
5		1	92	976	1,762	1,467	573	52	4,923
6		l l	9	373	861	882	424	34	2,583
7		i I	1	98	397	542	291	31	1,360
8		1 1		32	178	319	197	35	761
9		1 [		4	93	178	141	8	424
10 and	d over			3	56	192	209	26	486
	Married thers	11,226	56,725	64,512	42,086	19,860	6,040	414	200,863

(v) Multiple Births.—Previous Issue of Mothers. Figures regarding the previous issue of married mothers of twins in 1956 show that 585 mothers had no previous issue either living or deceased, 672 had one child previously, 485 had two previous issue, 275 three, 155 four, 88 five, 41 six, 24 seven, 10 eight, 8 nine, 3 ten, 2 eleven, 1 twelve, 1 fourteen and 1 twenty.

Of the 19 cases of nuptial triplets and the one case of quadruplets registered during 1956, 5 mothers had no previous issue, 6 had one, 2 had two, 5 had three, 1 had four, and 1 had six.

18. Nuptial First Births.—(i) Duration of Marriage. The following table shows the interval between marriage and first birth for 1911-20, 1921-30, 1931-40, 1941-50, 1954, 1955 and 1956. In cases of multiple births, the first live-born child only is enumerated.

FIRST BIRTHS: DURATION OF MARRIAGE, AUSTRALIA.

Duration of		Annual	Average.				1056
Marriage.	1911–20.	1921-30.	1931–40.	1941-50.	1954.	1955.	1956.
	N	UMBER OI	F FIRST B	IRTHS.			
Under 8 months	9,312	10,351	10,677	8,822	10,689	11,185	11,890
8 months	1,562	1,530	1,417	2,104	1,974	2,084	2,159
9 ,,	3,517	3,253	2,668	4,298	4,366	4,543	4,682
10 ,,	2,877	2,907	2,202	3,447	3,761	3,773	3,911
ii "	2,018	2,152	1,836	2,896	3,144	3,114	3,199
Total under 1 year	19,286	20,193	18,800	21,567	23,934	24,699	25,841
1- 2 years	8,563	10,133	10,595	17,762	17,755	17,439	17,820
2-3 ,	2,626	3,369	4,319	8,028	8,031	7,672	7,630
3-4 ,,	1,230	1,743	2,214	4,361	4,436	4,393	4,209
4-5 ,	700	941	1,205	2,569	2,708	2,738	2,729
5–10 ,,	980	1,446	1,766	3,936	4,324	4,477	4,561
10–15 "	168	240	289	501	707	682	711
15 years and over	42	55	55	94	134	138	145
Total	33,595	38,120	39,243	58,818	62,029	62,238	63,646
	Propor	TION OF	TOTAL FII	RST BIRTH	is.	<u></u>	
		(Pe	r cent.)				
Under 8 months	27.72	27.15	27.21	15.00	17.23	17.97	18.68
8 months	4.65	4.01	3.61	3.58	3.18	3.35	3.39
9 ,,	10.47	8.53	6.80	7.31	7.04	7.30	7.36
10 <b>,,</b>	8.56	7.63	5.61	5.86	6.06	6.06	6.14
11 ,,	6.01	5.65	4.68	4.92	5.07	5.00	5.03
Total under 1 year	57.41	52.97	47.91	36.67	38.58	39.68	40.60
1- 2 years	25.49	26.58	27.00	30.20	28.62	28.02	28.00
2-3,	7.82	8.84	11.01	13.65	12.95	12.33	11.98
3-4 ,,	3.66	4.57	5.64	7.41	7.15	7.06	6.61
4-5 ,,	2.08	2.47	3.07	4.37	4.37	4.40	4.29
5–10 ,,	2.92	3.79	4.50	6.69	6.97	7.19	7.17
10–15 "	0.50	0.63	0.73	0.85	1.14	1.10	1.12
5 years and over	0.12	0.15	0.14	0.16	0.22	0.22	0.23
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

In 1956 the masculinity of nuptial first births was 106.81 and of total births 106.87.

(ii) Age of Mother and Duration of Marriage. A summary showing grouped ages and grouped durations of marriage of mothers of nuptial first-born children is given in the following table:—

FIRST BIRTHS: AGE OF MOTHER AND DURATION OF MARRIAGE, AUSTRALIA. 1956.

		Age of Mother (Years).							
Duration of Marriage.	Under 20.	20–24.	25–29.	30-34.	35-39.	40-44.	45 and over.	Total.	
Under 8 months	5,384	4,772	1,030	442	205	56	1	11,890	
8 months	417	1,172	377	136	47	9	1	2,159	
9 ,,	1 607	2,678	964	335	80	18		4,682	
10 ,,	1 400	2,250	841	237	62	20	2	3,911	
ii "	1 321	1,853	663	206	74	22		3,199	
Total under 1 year	7,288	12,725	3,875	1,356	468	125	4	25,841	
1- 2 years	1 5 5 2 2	10,047	4.243	1,364	496	141	7	17,820	
2-3	102	3,773	2,568	776	243	73	5	7,630	
3-4 ,,	22	1,574	1,899	498	163	50	3	4,209	
4-5 ,	3	584	1,525	456	125	31	5	2,729	
5-10 ,,	1	260	2,292	1,490	422	90	6	4,561	
10-15 ,,			39	365	260	44	3	711	
15 years and over	}			18	68	55	4	145	
Total	9,028	28,963	16,441	6,323	2,245	609	37	63,646	

(iii) First Births and Subsequent Births. The following table provides a comparison between the numbers of nuptial first births and subsequent births in periods since 1911 and shows also the proportion of first to total nuptial confinements.

NUPTIAL FIRST BIRTHS AND SUBSEQUENT BIRTHS: AUSTRALIA.

		5		1	Nupt	nts.	Proportion of First to	
		Period.			First Births.	Other Births.	Total.	Total Nuptia Confine- ments (Per Cent.).
			A	NNUAL	Averages.			
1911-20					33,595	88,997	122,592	27.40
1921-30					38,120	88,086	126,206	30.20
1931–40				(	39,243	71,136	110,379	35.55
1941-50	<u> </u>				58,818	96,994	155,812	37.75
				Annual	TOTALS.			
1952					65,238	126,432	191,670	34.04
1953					63,726	128,187	191,913	33.21
1954					62,029	129,989	192,018	32.30
1955					62,238	134,679	196,917	31.61
1956					63,646	137,217	200,863	31.69

19. Stillbirths.—Registration of stillbirths is not compulsory in all Australian States. It has been compulsory in Western Australia since 14th January, 1908; in the Australian Capital Territory since 1st January, 1930; in New South Wales since 1st April, 1935; in South Australia since 1st May, 1937; and in Victoria from 1st January, 1953. In Queensland and Tasmania, where registration is not enforced, some information is obtained by notification of stillbirths for various purposes. Because registration is not compulsory in all States, detailed statistics of stillbirths for Australia as a whole have not been compiled.

The number of stillbirths in each State and Territory, as recorded since 1936 by the means outlined above, is shown in the following table:—

#### STILLBIRTHS.

Perio	d.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Ann	UAL AVE	RAGES.		`		
1936-40	•••	1,409	854	(a)	(b) 274	234	144	(a)	5	(a)
1941-45		1,478	966	(c) 657	324	248	143	(a)	9	de 3,825
1946-50		1,405	949	626	368	274	161	(a)	12	(e) 3,795
1951–55		1,239	849	581	290	271	139	8	15	3,392
				Anı	NUAL TO	TALS.				
1952		1,195	919	596	320	283	154	13	10	3,490
1953		1,257	817	585	287	268	141	8	16	3,379
1954		1,207	794	.554	254	270	124	8	19	3,230
1955		1,243	788	521	271	239	109	7	13	3,191
1956		1,273	819	556	.274	226	122	4	28	3,302
(a) Not				years 19	938–40. orthern Te		r years	1942–45.	(d)	Excludes

The incidence of stillbirths in each State and Territory as measured by the rate per 1,000 of all births, both live and still, is as follows:—

#### PROPORTION OF STILLBIRTHS.(a)

			11101	ORTIO			11101(0)			
Period		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
				Averagi	ANNUA	L RATES				
1936-40	· · ·	28.71	27.43	(b)	c27.49	25.70	28.75	(b)	22.18	(b)
1941-45		25.46	24.79	d26.76	25.17	23.29	25.68	(b)	22.87	ef 25.25
1946-50		19.99	19.64	21.87	22.12	20.46	22.26	(b)	16.35	f 20.46
1951-55		16.52	15.55	18.41	15.80	16.97	17.54	17.20	15.58	16.56
				An	NUAL RA	ATES.				
1952		15.85	16.81	18.89	17.58	18.03	19.08	28.20	8.99	17.01
1953.		16.51	15.02	18.65	15.56	16.62	17.90	17.09	19.90	16.43
1954		1624	14.32	17.46	13.74	16.67	15.71	15.36	21.69	15.72
1955		16.43	13.79	15.85	14.44	14.17	13.30	13.41	14.87	15.13
1956		16.54	13.83	16.87	14.24	13.18	14.83	7.14	25.34	15.33

<sup>(</sup>a) Number of stillbirths per 1,000 of all births (live and still). (b) Not available. (c) Three years 1938-40. (d) Four years 1942-45. (e) Excludes Queensland for 1941. (f) Excludes the Northern Territory.

## § 5. Mortality.

Note.—See Note at the beginning of this chapter. A detailed analysis for 1956 of causes of death and other characteristics such as issue will be found in *Demography*, Bulletin No. 74.

1. Number of Deaths.—(i) Year 1957. The following table shows the number of deaths, male and female, registered in each State and Territory during the year. Still-births, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

#### **DEATHS. 1957.**

	 						<u> </u>		
Sex.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males	 18,734	13,084	6,913	4,101	3,126	1,514	85	102	47,659
Females		11,047				1,156	30	66	37,294
Persons	 33,317	24,131	11,679	7,576	5,297	2,670	115	168	84,953

(ii) Years 1931 to 1957. A summary of the number of deaths in each State and Territory from 1931 to 1957 is given in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Official Year Book No. 39, p. 597.

			1	DEATH	S				
Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
		· · · · · ·	Ann	JAL AVE	RAGES.			<u>'</u>	·
1931–35	22,591	17,680	8,147	5,063	3,876	2,194	67	35	59,653
1936-40(a)	25,735	19,361	9,107	5,540	4,270	2,342	73	54	66,482
1941-45(a)	27,807	20,964	9,715	6,303	4,724	2,488	64	71	72,136
1946-50(a)	29,552	21,827	10,357	6,507	4,802	2,459	76	103	75,683
1951–55	32,135	22,900	11,187	7,182	5,263	2,576	109	131	81,483
	-	<u>'</u>	Anı	NUAL TO	TALS.			!	
1953	31.707	22,650	11.006	6.962	5.072	2,551	116	124	80,188
1954	32,444	22,554	11,344	7,179	5,364	2,696	106	118	81,805
1955	22 552	22,527	11,307	7,536	5,379	2,489	119	126	82,036
1956	34.064	23,886	12,186	7,593	5,572	2,513	107	167	86,088
1957	33,317	24,131	11,679	7,576	5,297	2,670	115	168	84,953
		1	<u> </u>	<u> </u>	i			<u> </u>	1

<sup>(</sup>a) Excludes deaths of defence personnel and of internees and prisoners of war from overseas for the period September, 1939 to June, 1947.

A graph showing the number of deaths in each year from 1860 to 1957 will be found on p. 629.

2. Crude Death Rates.—The commonest method of measuring the mortality rate is to relate the number of deaths for a given period to the mean population for that period, thus obtaining the crude death rate. This rate for a given period measures the numbers per thousand of population by which the population is depleted through deaths during that period. Crude death rates for each State and Territory from 1931 to 1957 are shown in the following table.

CRUDE DEATH RATES.(a) N.S.W. Period. Vic. Q'land. S. Aust. W. Aust. Tas. N.T. A.C.T. Aust. AVERAGE ANNUAL RATES. 8.83 1931-35 8.68 9.72 8.62 8.72 9.62 13.46 3.81 9.00 1936-40(b) 9.45 10.36 9.08 9.33 9.22 9.91 11.69 4.54 9.63 . . 9.24 1941-45(b) 9.73 9.86 4.98 10.63 10.26 10.21 6.43 9.96 . . 1946-50(b) 9.13 9.30 9.70 10.37 9.76 9.23 5.31 9.74 . . 6.27 1951-55 6.92 (c)4.609.49 9.55 8.71 9.25 8.49 8.47 9.25 ANNUAL RATES. 1953 9.36 9.45 8.55 8.97 4.32 8.33 7.47 9.09 8.17 1954 9.46 9.19 8.64 9.01 8.38 8.67 6.54 3.88 9.10 . . 8.17 1955 9.32 8.92 8.44 9.19 7.87 6.98 (c)3.898.91 . . 8.92 1956 9.58 9.17 8.95 8.23 7.80 5.98 (c)4.819.13 . . 1957-8.90 (c)5.019.76 Males 10.30 9.70 9.68 9.24 8.79 7.82 . . Females 8.09 8.34 7.03 8.08 6.46 7.22 3.82 (c)3.827.84 . . 9.20 9.03 Persons 8.39 8.67 7.66 8.09 6.14 (c)4.468.81

<sup>(</sup>a) Number of deaths per 1,000 of mean population. (b) Excludes deaths of defence personnel from September, 1939 to June, 1947. (c) Revised rates based on population estimates adjusted in accordance with the June, 1957 Population Count of Camberra are as follows:—1951-55, 4.58; 1955, 3.85; 1956, 4.72; 1957, males 5.04, females 3.72, persons 4.42.

A graph showing the crude death rate for each year from 1860 to 1957 will be found on p. 630.

- 3. Standardized Death Rates .-- (i) General. The death rates quoted above are crude rates, i.e., they simply show the number of deaths per thousand of mean population without taking into consideration differences in the sex and age composition of the population. Other conditions being equal, however, the crude death rate of a community will be low if it contains a large proportion of young people (not infants), and conversely it will be relatively high if the population includes a large proportion of elderly people. The foregoing table of crude death rates, therefore, does not indicate comparative incidence of mortality either as between States in the same year or in any one State over a period of years. In order to obtain a comparison of mortality rates on a uniform basis as far as sex and age constitution are concerned, "standardized" death rates may be computed. These are computed by selecting a particular distribution of age and sex as a standard, and then calculating what would have been the general death rate if the death rates for each sex and in each age group had been as recorded, but the age and sex distribution had been the same as in the standard population. For the standardized rates which follow, the standard population compiled by the International Institute of Statistics has been used. This standard is based upon the age distribution according to sex of nineteen European countries at their censuses nearest to the year 1900. Full details of the "Standard Population" were published in Official Year Book No. 22, p. 962.
- (ii) Death Rates in Age Groups. An examination of the age distribution of deaths and the resultant age-specific death rates is made in paragraph 9, p. 639.
- (iii) Comparison of Crude and Standardized Death Rates. The relative incidence of mortality as between individual States and as between the years 1921, 1933, 1947 and 1954 is illustrated in the following statement of crude and "standardized" death rates. These years have been chosen for comparison because the census data give essential information as to sexes and ages of the State populations. Crude death rates are shown to indicate the degree to which they disguise the true position.

CRUDE	AND	STANDARDIZED	DEATH	RATES.
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	Particulars.				Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
Crude D	eath R	ate(a)								
1921				9.50	10.52	9.37	10.02	10.42	10.30	9.91
1933				8.58	9.59	8.84	8.44	8.64	9.60	8.92
1947				9.53	10.44	9.15	9.61	9.39	9.17	9.69
1954				9.46	9.19	8.64	9.01	8.38	8.67	9.10
Standard	dized D	eath Rate	(b)—	1		1		1		}
1921		• •	`	10.35	10.79	10.24	10.38	11.88	10.83	10.58
1933				8.52	8.74	9.10	7.66	8.74	8.86	8.62
1947				7.44	7.31	7.47	6.77	7.28	7.21	7.34
1954		••		7.24	6.63	6.80	6.52	6.71	7.02	6.90

<sup>(</sup>a) Total deaths per 1,000 of mean population. in para. 3 (i) above.

The comparisons above relate to individual years in which a census of population was taken and should not be used as the basis for general conclusions as to changes in incidence of mortality for other than those years.

4. True Death Rates.—The main objections to standardized death rates are that the choice of a standard population is arbitrary and that the standardized rates have little value except for comparative purposes, and even then variation of the standard population may make appreciable differences. A correct measurement of the mortality of the population can be obtained, however, from life tables. A life table represents the number of survivors at each age from a group of newly-born children who are subject to given mortality conditions, and from such a table the complete expectation of life at birth can be calculated. The reciprocal of this figure is known as the true death rate, since, if the complete expectation of life of a person at birth is 50 years, say, then each person will on the average die 50 years after birth, so that in the standard population one person in 50 or 20 per thousand will die each year. The true death rate for a given period is unaffected by the particular age distribution of that period and is determined solely by the mortality experience of the period as manifested in the rate of survivorship from each year of age to the next. The table below sets out complete expectation of life at birth and true death rates for the periods covered by Australian life tables.

<sup>(</sup>b) See explanation of standardized death rates

COMPLETE	<b>EXPECTATION</b>	OF	LIFE	AT	BIRTH	AND	TRUE	DEATH	RATES	:
			AUS	TRA	ETA.					

	Period.		Complete Ex Life at Bir	pectation of th (Years).	True Death Rate.		
			Males.	Females.	Males.(a)	Females.(b)	
1881–1890	 	 	47.20	50.84	21.19	19.67	
1891-1900	 	 	51.06	54.76	19.58	18.26	
1901-1910	 	 	55.20	58.84	18.12	17.00	
1920-1922	 	 	59.15	63.31	16.91	15.80	
1932-1934	 	 	63.48	67.14	15.75	14.89	
1946-1948	 	 	66.07	70.63	15.14	14.16	

<sup>(</sup>a) Number of deaths per 1,000 males in life table or sta ionary population. deaths per 1,000 females in life table or stationary population.

5. Crude Death Rates of Various Countries.—The following table gives crude death rates for Australia in comparison with rates for various other countries.

#### CRUDE DEATH RATES(a): VARIOUS COUNTRIES.

Country.	1921- 25.	1926– 30.	1931– 35.	1956.	Country.	1921– 25.	1926- 30.	1931– 35.	1956.
Netherlands Japan Canada Norway Union of South Africa(b) Denmark New Zealand(c) Finland Australia(d) United States of America	10.4 21.8 11.2 11.5 9.7 11.3 8.6 15.1 9.5	9.9 19.3 11.1 11.0 9.7 11.1 8.6 14.8 9.3	8.9 17.9 9.7 10.4 9.8 10.9 8.2 13.3 9.0	7.8 8.0 8.2 8.5 8.8 8.9 9.0 9.1 9.4	Sweden	12.1 20.2 12.5 17.4 20.2 12.4 14.6 13.4 15.8 17.2	12.1 17.9 12.1 16.0 20.0 12.3 14.4 13.7 14.4 16.8	11.6 16.4 11.8 14.1 17.9 12.2 14.0 12.9 13.5 15.7	9.6 9.9 10.2 10.3 11.7 11.7 12.1 12.4 12.5

<sup>(</sup>a) Number of deaths per 1,000 of mean population.
(c) Excludes Maoris. (d) Excludes full-blood aboriginals.

6. True Death Rates of Various Countries.—The following table gives true death rates for Australia in comparison with rates for various other countries:—

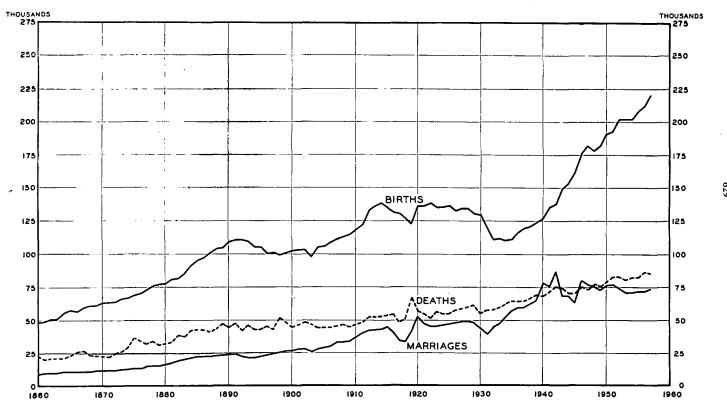
#### TRUE DEATH RATES: VARIOUS COUNTRIES.

	,	True De	ath Rate.			True De	ath Rate.
Country.	Period.	Males.	Females.	Country.	Period.	Males.	Females.
Netherlands	1953-55	14.1	13.5	Scotland	1956	15.2	14.0
Norway	1946-50	14.4	13.8	Northern Ire-		]	1
Sweden	1951-55	14.2	13.6	land	1950-52	15.3	14.5
New Zealand(c)	1950-52	14.6	13.8	Germany, Fed-		1	
Denmark	1946-50	14.7	14.3	eral Republic	1949-51	15.5	14.6
United States of				France	1950-51	15.7	14.4
of America-		ĺ		Japan	1955	15.7	14.6
Whites	1955	14.9	13.6	Union of South		1	1
Others	1955	16.1	15.2	Africa(e)	1945-47	15.7	14.6
England and		1		Finland	1951-55	15.9	14.3
Wales	1955	14.8	13.7	Belgium	1946-49	16.1	14.9
Canada	1950-52	15.1	14.1	Austria	1949~51	16.2	14.9
Switzerland	1948-53	15.1	14.1	Ireland, Re-		]	
Australia(d)	1946-48	15.1	14.2	public of	1950-52	15.5	14.9

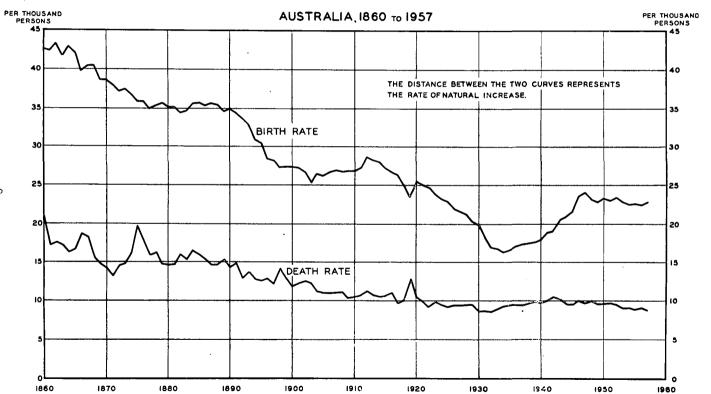
<sup>(</sup>a) Number of deaths per 1,000 males in life table or stationary population (see explanation on p. 627).
(b) Number of deaths per 1,000 females in life table or stationary population (see explanation on p. 627).
(c) Excludes Maoris.
(d) Excludes full-blood aboriginals.
(e) White population only.

<sup>(</sup>b) Number of

<sup>(</sup>b) White population only.

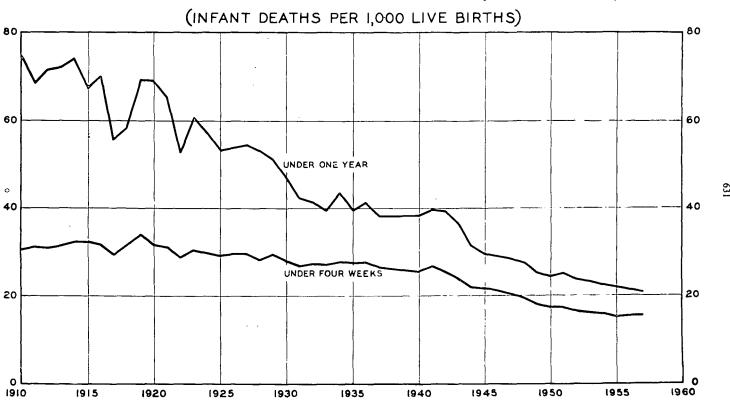


# RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE.



2

# INFANT MORTALITY RATES: AUSTRALIA, 1910 TO 1957





7. Australian Life Tables.—(i) Life Tables prior to 1947. It has been the practice at each census from 1911 onwards to prepare Life Tables representative of the mortality experience of Australia. The mortality of the Australian population for the thirty years from 1881 to 1910 inclusive was investigated in 1911 by the Commonwealth Statistician. Tables were compiled for each State and for Australia as a whole in respect of each sex for each of the decennial periods 1881–1890, 1891–1900 and 1901–1910. These compilations furnished a comprehensive view of Australian mortality in respect of sex, of time, and of geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1912. In addition, monetary tables based on the experience for the whole of Australia for the ten years 1901–1910 were prepared and published.

At the Census of 1921, Life Tables were prepared by the Commonwealth Statistician from the population recorded and the deaths in the three years 1920 to 1922. Similarly, in 1933, the Life Tables were based on the census population and the deaths in the years 1932 to 1934.

(ii) Life Tables of Census of 1947. On the occasion of the 1947 Census, Life Tables representing the sixth in the series were compiled by the Commonwealth Actuary. These were based on the population recorded, in conjunction with the deaths during 1946, 1947 and 1948, as it was considered undesirable to take into account deaths occurring prior to 1946 owing to the possible effects on the civilian population of conditions arising from the 1939-45 War. Full particulars of the data used and the methods of construction and tabulation of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1950. This report also appeared in Volume III. of Census of the Commonwealth of Australia, 30th June, 1947. Monetary tables for both single and joint lives were also prepared by the Commonwealth Actuary.

Comparative tables showing the number of survivors  $(l_x)$  out of 100,000 births, rates of mortality  $(q_x)$  and probability of surviving ten years  $(l_1p_x)$ , at selected ages, in respect of the Australian Life Tables of 1920-22, 1932-34 and 1946-48, together with a summary of the main characteristics of the tables, were published in Official Year Book No. 39, pp. 602-3. The expectation of life at selected ages taken from these three Life Tables is as follows:—

AUSTRALIAN LIFE TABLES : COMPLETE EXPECTATION OF LIFE  $(\mathring{e}_{\chi})$  AT SELECTED AGES.

	Age			Males.		Females.				
	Age $(x)$ .		1920-22.	1932–34.	1946-48.	1920-22.	1932-34.	1946-48.		
0			59.15	63.48	66.07	63.31	67.14	70.63		
10			56.01	58.02	59.04	59.20	61.02	63.11		
20			46.99	48.81	49.64	50.03	51.67	53.47		
30		:	38.44	39.90	40.40	41.48	42.77	44.08		
10		!	30.05	31.11	31.23	33.14	34.04	34.91		
0			22.20	22.83	22.67	24.90	25.58	26.14		
0		!	15.08	15.57	15.36	17.17	17.74	18.11		
0			9.26	9.60	9.55	10.41	10.98	11.14		

8. Infant Deaths and Death Rates.—(i) States. (a) Under One Year. For each State and Territory the number of deaths under one year of age and the rates of infant mortality during the period 1931 to 1957 were as follows:—

#### INFANT MORTALITY: UNDER ONE YEAR.

Period	i.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
			<u> </u>	Anni	JAL AVE	RAGES.		·	<b>!</b>	
1931-35		1,885	1,214	690	304	329	202	6	5	4,635
1936-40		1,963	1,139	718	311	352	201	6	5	4,695
1941-45		2,034	1,311	804	413	347	213	7	7	5,136
1946-50		1,990	1,129	770	431	370	187	11	14	4,902
1951-55		1,852	1,113	730	407	384	184	17	14	4,701
Annual Totals.										
1953		1,846	1,133	769	375	378	177	18	17	4,713
1954		1,850	1,055	695	388	359	186	9	4	4,546
1955		1,850	1.035	656	431	373	189	26	12	4,572
1956		1,777	1,128	737	377	384	170	24	11	4,608
1957		1,804	1,219	732	403	357	170	22	10	4,717
			A	VERAGE	Annual	RATES.(	a)			
1931-35		41.92	42.76	39.46	35.12	40.81	44.47	80.60	34.48	41.27
1936-40		41.18	37.63	36.75	33.08	39.70	41.23	44.80	21.78	38.81
1941-45		36.29	34.73	34.55	33.20	33.37	39.54	55.97	18.75	35.24
1946-50		28.91	23.82	27.49	26.50	28.15	26.53	37.37	19.89	26.98
1951-55		25.11	20.70	23.58	22.55	24.41	23.67	36.28	15.40	23.34
				Ann	UAL RAT	res.(a)	-			
1953		24.65	21.15	24.98	20.65	23.83	22.88	39.13	21.57	23.30
1954		25.30	19.30	22.29	21.29	22.54	23.94	17.54	4.67	22.48
1955		24.86	18.37	20.28	23.30	22.44	23.37	50.49	13.94	22.01
1956		23.47	19.32	22.74	19.88	22.70	20.98	43.17	10.21	21.72
1957		22.70	20.16	21.68	20.63	21.09	20.15	34.06	8.82	21.41

<sup>(</sup>a) Number of deaths of children aged under one year per 1,000 live births registered.

(b) Under Four Weeks. The following table shows infant mortality rates under four weeks of age in each State and Territory during the period 1931 to 1957.

#### INFANT MORTALITY RATES (a): UNDER FOUR WEEKS.

Period	l <b>.</b>	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
		·		Averag	E ANNU	AL RATES			· · · · · · · · · · · · · · · · · · ·	
1931-35		27.62	27.78	27.91	22.99	25.11	30.09	35.26	23.45	27.27
1936-40		27.63	25.94	26.15	21.62	22.62	29.56	28.80	16.33	26.19
1941-45		24.52	24.40	24.41	20.86	20.60	27.24	33.57	12.54	23.97
1946-50		20.53	17.55	19.95	18.38	19.53	19.34	21.45	15.80	19.34
1951-55		17.34	15.18	17.09	14.95	17.27	16.34	19.63	11.28	16.45
				An	NUAL R	ATES.				
1953		17.17	15.70	17.80	13.99	16.45	15.51	23.91	13.96	16.48
1954		17.70	14.42	16.81	15.25	16.07	16.47	7.80	3.50	16.19
1955		17.31	13.49	14.84	14.11	16.00	16.81	33.01	11.61	15.50
1956		16.97	14.13	16.35	13.55	15.90	14.56	30.58	7.43	15.60
1957		16.39	15.02	15.22	13.77	15.13	13.63	18.58	7.06	15.36

<sup>(</sup>a) Number of deaths of children aged under four weeks per 1,000 live births registered.

(c) Four Weeks and under One Year. Infant mortality rates for children aged four weeks and under one year are shown in the following table for the period 1931 to 1957.

MORTALITY.

INFANT MORTALITY RATES(a): FOU	R WEEKS AND UNDER ONE YEAR.
--------------------------------	-----------------------------

Period	N.S.W.	Vic.	Q'land.	S. Aust.	W Aust.	Tas.	N.T.	A.C.T.	Aust.
	 		Averagi	E ANNUA	L RATES	•			
1931-35	 14.30	14.98	11.55	12.13	15.70	14.38	45.34	11.03	14.00
1936-40	 13.55	11.69	10.60	11.46	17.08	11.67	16.00	5.45	12.62
1941-45	 11.77	10.33	10.14	12.34	12.77	12.30	22.40	6.21	11.27
1946-50	 8.38	6.27	7.54	8.12	8.62	7.19	15.92	4.09	7.64
1951-55	 7.77	5.52	6.49	7.60	7.14	7.33	16.65	4.12	6.89
			An	NUAL RA	ATES.				
1953	 7.48	5.45	7.18	6.66	7.38	7.37	15.22	7.61	6.82
1954	 7.60	4.88	5.48	6.04	6.47	7.47	9.74	1.17	6.29
1955	 7.55	4.88	5.44	9.19	6.44	6.56	17.48	2.33	6.51
1956	 6.50	5.19	6.39	6.33	6.80	6.42	12.59	2.79	6.12
1957	 6.31	5.14	6.46	6.86	5.96	6.52	15.48	1.76	6.05

<sup>(</sup>a) Number of deaths of children aged four weeks and under one year per 1,000 live births registered.

(b) Not yet available.

(ii) Australia. (a) Under One Year. The universal experience that during the first few years of life the higher death rate of male infants tends to counteract the excess of male births is confirmed by the fact that out of 536,330 male infants born from 1953 to 1957, 13,170 (24.56 per 1,000) died during the first year of life, while of 508,329 female infants only 9,986 (19.65 per 1,000) died during the first year. Stillbirths, for which masculinity is also higher, are not included in any of the tables relating to deaths.

As shown by the following table, the disparity is greater during the first four weeks of life, termed the neonatal period, than during the remainder of the first year of life, or the post-neonatal period.

INFANT DEATHS AND MORTALITY RATES: AUSTRALIA.

			N	umber o	of Death	ıs.	'			Rate	es.(a)		
Period.		Neonatal— Under Four Weeks.		Post- Neonatal— Four Weeks and under One Year.		Total under One Year.		Neonatal— under Four Weeks.		Post- Neonatal— Four Weeks and under One Year.		Total under One Year.	
		Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.
			An	NUAL A	VERAGE	s.			AVERA	GE AN	NUAL R	LATES.	
1931-35 1936-40 1941-45 1946-50 1951-55		1,763 1,816 2,007 2,024 1,907	1,353 1,495 1,490	886) 863 914 784 776	687 663 720 604 612	2,649 2,679 2,921 2,808 2,683	2,016 2,215 2,094	29.30 26.66 21.68	22.93 20.88 16.86	13.93 12.14 8.40	11.23 10.05 6.84	43.23 38.80 30.08	34.16 30.93 23.70
			A	NNUAL	TOTALS				A	ANNUAL	RATES	• .	
1953 1954 1955 1956 1957		1,889 1,914 - 1,863 1,879 1,953	1,361 1,355 1,430	772 694 762 704 740	577 592 595	2,661 2,608 2,625 2,583 2,693	2,052 1,938 1,947 2,025 2,024	17.50 17.15	13.39 13.95	7.16 6.42	5.85 5.84	25.18 24.66 23.57	19.23 19.75

<sup>(</sup>a) Number of deaths per 1,000 live births registered.

<sup>(</sup>b) Under Four Weeks. The following table shows particulars of infant deaths in the first four weeks of life, or the neonatal period, from 1931 to 1957. It will be seen that, for both males and females, the risk of death is very much greater during the first day of life than subsequently.

INFANT DI	EATHS	AND	MORTALITY	RATES-UNDER	<b>FOUR</b>	WEEKS:
			AUSTRA	LIA.		

			Nur	nber o	f Deat	hs.				Rate	s.(a)		
		Ear	Early Neonatal.						Early N	eonatal		Lat	
Period	<b>I.</b>	Under One Da		One land u	nder	Neons One V and u Four V	Week inder		der Day.	One and to One V		r and unc	
			e- ales.	fales.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- males.	Males.	Fe- nales.
			ANNUAL AVERAGES.							GE AN	NUAL F	CATES.	
1931-35 1936-40 1941-45 1946-50 1951-55	::	(b) (b) (906 986 918			c 1,066 c 1,120 541 539 508	320 373 280	233 280 220		8.28	8.12	c18.99 7.55 6.09	5.17 4.96 3.00	4.25 3.94 3.91 2.49 .1.89
			Annual Totals. Annual Rates.										
1953 1954 1955 1956 1 957	•••	870 943 889 933 1,020	751 696 686 754 789	738 725 740 714 685	485 520 496 478 478	246 234 232	207 245 173 198 164	8.35 8.51	7.05 6.78 7.35	7.00 6.95 6.52	5.27 4.90 4.66	2.37 2.20 2.12	2.10 1.47 1.71 1.93 1.53

<sup>(</sup>a) Number of deaths per 1,000 live births registered. under one day.

(b) Not available.

(c) Includes

The foregoing tables indicate the decrease in infant mortality in Australia, the mortality rate of children aged under one year per 1,000 live births for 1957 being 52 per cent. of the average rate for 1931-35. The improvement was due largely to the decrease in deaths from preventable causes, the mortality rate for children aged one week but under one year of age declining by 58 per cent., while that for children aged under one week declined by only 40 per cent.

A graph showing infant mortality rates for each year from 1910 to 1957 will be found on page 631.

(iii) Statistical Divisions. The total numbers of births and of deaths of children under one year of age in each statistical division are shown in the annual bulletin, Demography.

(iv) Various Countries. Compared with other countries Australia occupies a favourable position in respect of infant mortality. In 1956, only New Zealand, Sweden the Netherlands and Norway recorded a lower rate than Australia.

INFANT MORTALITY RATES: VARIOUS COUNTRIES.

_			Inf	ant Morta	ality Rate.(	a)		Crude Birth
Country.		1921-25	1926–30.	1931–35.	1936–40.	1955.	1956.	Rate(b), 1956.
Sweden	••	60	58	50	42	17	17	14.8
New Zealand(c)	٠.	43	37	32	32	20	19	24.7
Netherlands	٠.	64	56	45	37	20	19	21.2
Norway	٠.	52	49	45	(d) 40	21	21	18.7
Australia(e)	٠.	58	52	41	39	22	21	22.5
United Kingdom	٠.	78	70	65	59	26	24	16.1
Denmark	٠.	82	82	71	60	25	25	17.2
Finland		96	88	72	72	30	25	20.8
United States of America		74	68	59	51	26	26	24.9
Switzerland	٠.	65	54	48	45	26	26	17.4
Union of South Africa(f)		73	67	63	53	31	31	25.4
Canada	٠.	98	93	75	64	31	. 32	28.0
Ireland, Republic of		69	70	68	69	37	36	21.0
France		95	89	73	70	39	36	18.5
Japan		159	137	120	(g) 112	40	41	18.5
Austria		136	117	99	81	46	44	16.6
Belgium		100	95	82	77	41	46	16.8
Italy		127	119	105	103	51	48	18.1
Spain		143	124	113	121	.56	49	20.7
Vugoelavia		(h)	151		(g) 141	113	98	25.8

<sup>(</sup>a) Number of deaths under one year per 1,000 live births registered. (b) Number of live births per 1,000 of mean population. (c) Excludes Maoris. (d) 1935-39. (e) Excludes full-blood aboriginals. (f) White population only. (g) 1935-38. (h) Not available.

(v) Causes of Death: Children under one Year. Causes of death of children under one year of age should be considered in relation to age at death, because the emphasis on various causes changes rapidly as age at death varies. In 1956, 2,813 (97.7 per cent.) of the deaths occurring during the first week of life were caused by congenital malformations (12.4 per cent.) and certain diseases of early infancy (85.3 per cent.). Of the latter, 68.3 per cent. were associated with immaturity (see table below). At ages one week and under four weeks the proportions were 39.3 per cent. and 46.7 per cent. respectively. Of deaths of children over four weeks and under one year of age, 24.6 per cent. were caused by congenital malformations and only 6.3 per cent. by diseases of early infancy, the emphasis having shifted to respiratory and digestive diseases (40.5 per cent.), accidents and violence (7.2 per cent.), infective and parasitic diseases (6.8 per cent.) and diseases of the nervous system (6.3 per cent.). A summary for 1956 of the deaths of children under one year of age, classified according to principal causes of death and age at death, is given in the following table.

CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE, AUSTRALIA, 1956.

	j						A	ge at	Deat	h.						
Cause of Death.		We	eks.						N	/ontl	ıs.					Un-
Cause of Beatin	Un- der 1.	1.	2.	3.	1. (a)	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	der One Year.
Tuberculosis Septicaemia and pyaemia Bacillary dysentery Whooping cough Meningococcal infections Measles Other infective and parasitic diseases Neoplasms Allergic, endocrine system, etc.,	1 4	   i	2  	   	1 6  1 1  2 1	1 1 3 2 1	6 1 4 2 1 2	5 1	1  4 1 1	1 2 2 1	   3 1 2 1	1 2   i 1 1	· · · · · · · · · · · · · · · · · · ·	1 2   1 1 4	1 2  1 2 	5 31 3 9 23 8 14 20
Allergic, endocrine system, etc., diseases Diseases of the blood Mental, etc., disorders Meningitis Intracranial and intraspinal abscess Encephalitis Otitis media and mastoiditis Other diseases of the nervous system.	1 6 11 7 	2 5 1	3	2 1 	1 2 2 8  1	 8  1	1 1  8 1 2	2 2 2 1 1 1	1 2 3 1 1	1 1 3 	2  2  1	3 1 ·: 3 ·: 1	1 2 2 2 	1 1	3	16 13 32 59 3 8 5
etc Diseases of the circulatory system Pneumonia, age four weeks and over Bronchitis	1	 2 	1 1 	1	4 3 48 2	38 3	4 3 61 3	4 3 33 3	3i 1	3 1 29 5	1 25 	1 24 5	3 3 9 2	1 19 3	i3	26 17 330 28
Other diseases of the respiratory system Hernia and intestinal obstruction Gastro-enteritis and colitis, age four	3 18	4	·.	4	3 2	6 3	7 4	8 3	7 1		2 1	3	2	2	2 1	54 45
weeks and over Other diseases of the digestive system Diseases of the genito-urinary system Diseases of the skin and cellular	3	 2 	··· 2	4 	12 4 3	10 2 3	6 4	8 3 2	6 1 	5 1 2	8 4 1	6 1 	13 'i	5 1	 	84 30 15
tissue	1		1		2	3	2		4	2			1			16
movement Congenital malformations Certain diseases of early infancy(b)—	356	76	58	35	3 74	53	35	1 39	20	1 19	2 23	2 22	i <i>ċ</i>	·;	1 12	12 845
Without mention of immaturity(b) With immaturity(b) Symptoms and ill-defined conditions Accidents, poisonings and violence	778 1,679 3 5	66 54 	36 13 1 5	28 4 ···	22 7 	7 4 1 11	12 2 ii	3 5 1 15	3	3  6	 1 4	5  6	5  4	3  ii	1  5	972 1,768 10 107
All Causes	2,879	220	125	85	225	173	186	153	97	98	87	89	78	63	50	4,608

<sup>(</sup>a) Age four weeks and under two months.

The individual categories representing the causes of death which come within Class XV.—Certain Diseases of Early Infancy are designed to show the effect of immaturity in such causes of infant death. In 1956, 68 per cent. of deaths in this class during the first week of life and 35 per cent. of those in the next three weeks of life were due, directly or indirectly, to immaturity. The relationship between immaturity and each of the individual categories of Class XV. is shown for the year 1956 in the following table.

<sup>(</sup>b) For further detail of this group of causes see next table.

DEATHS OF CHILDREN UNDER ONE YEAR OF AGE FROM CERTAIN DISEASES
OF EARLY INFANCY: AUSTRALIA, 1956.

Cate-			out Me Immatu		With	Immat	urity.	Total.		
No.	Cause of Death.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.	Males.	Fe- males.	Per- sons.
760	Intracranial and spinal injury									
	at birth	169	107	276	52	37	89	221	144	365
761	Other birth injury	50	43	93	87	59	146	137	102	239
762	Post-natal asphyxia and									
	atelectasis	134	86	220	143	117	260	277	203	480
763	Pneumonia of the newborn	64	50	114	17	6	23	81	56	137
764	Diarrhoea of the newborn	4	4	8				4	4	8
765	Ophthalmia neonatorum				•••			• • •	٠٠.	
766	Pemphigus neonatorum	1		1				1		1
767	Umbilical sepsis	2	3	5	1		1	3	3	6
768	Other sepsis of newborn	8	6	14		1	1	8	7	15
769	Neonatal disorders arising							1	1	
	from maternal toxaemia	22	14	36	24	25	49	46	39	85
770	Haemolytic disease of new-	}	1				1	1	{	
	born (erythroblastosis)	55	42	97	14	10	24	69	52	121
771	Haemorrhagic disease of		1 1		1			ł	1	ł
	newborn	25	20	45	9	4	13	34	24	58
772	Nutritional maladjustment	12	8	20	1	4	5	13	12	25
773	Ill-defined diseases peculiar	1			1				ł	
	to early infancy	18	25	43	26	19	45	44	44	88
774	Immaturity with mention of	İ	1	1	ì	ì	ì	ì		)
	any other subsidiary con-								!	
	dition				16	10	26	16	10	26
775	Immaturity subsidiary to	ł		1	1	1	}	1	1	}
	some other cause	٠								
776	Immaturity unqualified				609	477	1,086	609	477	1,086
	Total, Class XV.	564	408	972	999	769	1,768	1,563	1,177	2,740

(vi) Deaths of Ex-nuptial Children under one Year of Age. Distinction between nuptial and ex-nuptial children in death statistics for Australia as a whole has been made since 1925. Results show that death rates during infancy have generally been much higher for ex-nuptial children than for nuptial children, but the disparity has become smaller in recent years. The following table shows the number of deaths of children under one year of age and the infant mortality rates for nuptial, ex-nuptial and all children in five-year periods since 1931 and for each year from 1953 to 1956.

DEATHS UNDER ONE YEAR OF AGE: NUPTIAL AND EX-NUPTIAL, AUSTRALIA.

		Nuptial C	Children.	Ex-N	uptial Child	lren.	All Ch	ildren.	
			Infant			fortality e.(b)		Infant	
Period	l.	Number of Deaths.	Mortality Rate.(a)	Number of Deaths.	Actual.	Ratio to Nuptial Rate. (Per Cent.)	Number of Deaths.	Mortality Rate.(c)	
1931–35		21,460	40.09	1,713	65.37	163	23,173	41.27	
1936-40		21,792	37.59	1,680	66.87	178	23,472	38.81	
1941-45		24,053	34.20	1,627	52.39	153	25,680	34.97	
1946-50		23,139	26.54	1,373	37.37	141	24,512	26.98	
1951-55	• •	22,529	23.29	977	24.43	105	23,506	23.34	
1953		4,515	23.25	198	24.65	106	4,713	23.30	
1954		4,353	22.41	193	24.04	107	4,546	22.48	
1955		4,365	21.92	207	24.25	111	4,572	22.01	
1956		4,413	21.72	195	21.74	100	4,608	21.72	

(a) Number of deaths under one year of age per 1,000 nuptial live births registered. (b) Number of deaths under one year of age per 1,000 ex-nuptial live births registered. (c) Number of deaths under one year of age per 1,000 total live births registered.

For the five years 1951-55, the ratio of the ex-nuptial to the nuptial rate at various ages of infancy was as follows:—Under one month, 99 per cent.; one month, 144 per cent.; 2 months, 113 per cent.; 3 months, 154 per cent.; 4 months, 119 per cent.; 5 months, 158 per cent.; under one year, 105 per cent.

Detailed information for Australia as to the age at which ex-nuptial children died from each cause of death will be found in the annual bulletin, *Demography*. Because of the small number of ex-nuptial deaths involved in each case, it is difficult to assess the real significance of the differences between the numbers of nuptial and ex-nuptial deaths from each individual cause.

9. Age Distribution.—(i) Number of Deaths. Age at death is recorded for statistical purposes in days for the first week of life, in weeks for the first four weeks, in months for the first two years and in completed years of life thereafter. These ages are usually combined in groups for publication, the most common being weeks for the first four weeks, months or groups of months for the first year, single years of age for the first five years and thereafter the five-year groups 5-9 years, 10-14 years, etc. A summary in this form for Australia is given in the following table for the year 1956.

AGE AT DEATH: AUSTRALIA, 1956.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.		Males.	Fe- males.	Per- sons.
Under 1 week	1,647 127 63 42	1,232 93 62 43	2,879 220 125 85	5- 9 years 10-14 ,, 15-19 ,, 20-24 ,, 25-29 ,,	::	277 226 414 579 588	263	851
Total under 4 weeks 4 weeks and under 3 months 3 months and under 6 ,, 6 months and under 12 ,,	1,879 223 236 245		3,309 398 436 465	30-34 ,, 35-39 ,, 40-44 ,, 45-49 ,, 50-54 ,,		700 787 1,234 1,790 2,533 3,577 4,898	520 758 1,084 1,369	1,074 1,307 1,992 2,874 3,902 5,533 7,755
Total under 1 year	2,583	2,025	4,608	65-69 ,, 70-74 ,, 75-79 ,, 80-84 ,,		6,280 6,668 5,988 4,566	4,135 5,077 5,672 5,217	10,415 11,745 11,660 9,783
1 year	249 141 105 91	195 132 85 72	444 273 190 163	85-89 ,, 90-94 ,, 95-99 , 100 and over Age not stated		2,764 922 191 24 17	3,638 1,404 363 27 3	6,402 2,326 554 51 20
Total under 5 years	3,169	2,509	5,678	Total, All Ages		48,192	37,896	86,088

There are different mortality rates at various stages of life and the actual number of deaths in any period depends upon the impact of these rates on the numbers living at the respective stages. Changes in the number of deaths from one period to another are caused by changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

In Australia, during the last fifty years, there has been a steady decline in the rate of mortality at all ages, which has tended to reduce the number of deaths. This has been most pronounced at ages under one year. The increased length of life due to this factor, coupled with the long-term decline in the birth rate and the effects of past and present migration, has been a significant cause in changing the age distribution of the population and consequently the age distribution of deaths, thus obscuring the effects of declining mortality rates.

The combined effect of these various influences can be seen from the following table, which shows the proportion of deaths in various age groups in ten-year periods from 1901 to 1950 and for the year 1956.

PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA.

(Per Cent.)

		Age at Death (Years).											
Period.	Under 1.	1-4.	5–19.	20–39.	40–59.	60–64.	65 and over.	Unspeci- fied.	Total.				
1901-10	20.51	6.45	6.37	14.99	17.99	5.31	28.26	0.12	100.00				
1911–20	16.66	6.09	5.49	14.44	20.32	6.19	30.68	0.13	100.00				
1921-30	13.10	4.51	4.85	12.12	20.55	8.26	36.53	0.08	100.00				
1931–40	7.40	2.56	3.83	9.36	20.54	8.36	47.92	0.03	100.00				
1941–50	6.79	1.71	2.26	6.01	19.04	9.33	54.84	0.02	100.00				
1956	1					1							
Males	5.36	1.22	1.90	5.51	18.95	10.16	56.86	0.04	100.00				
Females	5.34	1.28	1.26	3.56	13.63	7.54	67.38	0.01	100.00				
Persons	5.36	1.24	1.62	4.65	16.61	9.01	61.49	0.02	100.00				

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Official Year Book No. 39, p. 614.

(ii) Age-specific Death Rates. The following table gives the average annual age-specific death rates for each State and Australia for the years 1953 to 1955 based on the age distribution of the population at the Census of 30th June, 1954. Similar tables for the years 1932-34 and 1946-48 were published in earlier issues of the Official Year Book (see No. 37, p. 778 and No. 39, pp. 615-6).

AGE-SPECIFIC DEATH RATES(a), 1953-55.

Age G	roup (Ye	ars).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
				M	ALES.				
0- 4			7.30	5.88	6.62	6.41	7.04	6.62	6.69
5-9			0.75	0.62	0.60	0.52	0.71	0.68	0.6
0-14			0.70	0.53	0.69	0.65	0.53	0.59	0.6
5-19			1.56	1.21	1.71	1.50	1.61	1.97	1.5
0-24			1.85	1.66	1.93	1.87	1.95	1.71	1.8
25-29			1.61	1.54	1.90	1.70	1.88	1.47	1.6
0-34			1.93	1.50	2.08	1.57	1.82	1.95	1.8
5-39			2.50	2.11	2.71	2.31	2.21	1.93	2.3
0-44			4.02	3.12	4.02	3.54	3.24	3.26	3.6
15-49			6.56	5.60	5.68	5.49	5.77	5.05	5.9
50-54			10.96	9.65	10.11	10.14	9.04	8.91	10.1
55-59			19.49	16.82	16.94	15.79	15.81	15.37	17.6
60-64			29.08	25.44	26.03	24.26	24.79	23.32	26.7
55–69			43.39	41.29	38.71	39.33	41.49	36.68	41.4
70–74			67.27	64.89	61.73	63.06	62.85	61.57	64.9
75–79			101.20	98.84	93.58	94.23	93.80	92.09	97.9
3084			150.20	148.18	143.40	141.12	146.87	153.82	147.6
35-89			236.37	232.53	210.89	209.61	225.73	230.41	227.8
90 and o	ver		329.76	331.39	282.31	328.50	297.39	307.25	319.5
			J	FF	MALES.	<u> </u>	1	<u> </u>	<u></u>
						1	1	1	1
0- 4			5.78	4.62	5.38	5.01	5.06	5.72	5.2
5- 9			0.52	0.47	0.50	0.45	0.52	0.56	0.5
10–14			0.39	0.35	0.42	0.42	0.25	0.28	0.3
15-19			0.66	0.50	0.51	0.52	0.69	0.50	0.5
20–24			0.67	0.61	0.75	0.63	0.69	0.65	0.6
25–29			0.87	0.71	0.92	0.85	0.78	0.96	0.8
30-34	• •		1.21	0.91	1.38	0.99	0.96	1.23	1.1
35-39	• •	• •	1.76	1.56	2.20	1.79	1.47	1.26	1.7
10-44	• •		2.64	2.33	2.82	2.56	2.14	2.98	2.5
15-49	• •	• •	4.50	3.70	4.58	3.65	3.59	4.34	4.1
50-54	• •	• •	6.50	6.25	6.18	5.88	5.91	6.49	6.2
55-59	• •		10.20	9.28	9.39	9.04	8.57	10.05	9.6
60–64	• •	• •	15.02	14.72	14.21	14.06	13.85	14.99	14.6
55-69	• •	• •	24.65	25.26	22.34	22.99	20.74	22.98	24.0
70-74	• •		41.78	41.14	37.60	40.35	39.20	40.42	40.7
75-79 80-84	• •	• •	71.38	69.56	67.82	72.35	67.74	73.50	70.3
	٠.	• •	116.39	117.93	117.17	110.01	109.71	122.30	116.0
35-89 90 and o		• •	193.87 298.18	197.46 296.61	182.43	183.70	189.88	211.41	192.8

<sup>(</sup>a) Average annual number of deaths per 1,000 of population in each age group at 30th June, 1954.

AGE-SPECIFIC	DEATH	RATES(a).	1953-55-continued.

  6.56		RSONS.											
 6.56		Persons.											
	5.26	6.01	5.72	6.06	6.18	6.00							
0.64	0.55	0.55	0.48	0.61	0.62	0.58							
 0.55	0.44	0.56	0.54	0.39	0.44	0.50							
 1.12	0.86	1.12	1.02	1.16	1.25	1.06							
 1.28	1.16	1.36	1.29	1.35	1.20	1.27							
 1.25	1.14	1.44	1.30	1.37	1.23	1.27							
 1.57	1.21	1.75	1.29	1.41	1.60	1.46							
 2.13	1.84	2.46	2.06	1.84	1.60	2.06							
 3.34	2.74	3.44	3.07	2.72	3.13	3.11							
 5.57	4.68	5.16	4.62	4.78	4.72	5.09							
 8.76	7.98	8.23	8.06	7.64	7.74	8.28							
 14.66	12.89	13.20	12.27	12.32	12.65	13,.51							
 21.65	19.68	20.09	18.83	19.27	18.93	20.37							
 33.48	32.55	30.54	30.63	30.91	29.45	32.27							
 53.26	51.35	49.31	50.56	50.35	50.30	51.65							
 84.16	81.51	79.87	81.62	79.76	82.08	82.20							
 130.17	129.54	128.96	122.46	125.91	136.28	128.95							
 210.58	210.58	195.02	193.65	205.78	220.11	206.80							
310.02	307.94	278.81	320.77	290.38	210 21	304.96							
	3.34 5.57 8.76 14.66 21.65 33.48 53.26 84.16 130.17 210.58	3.34 2.74 5.57 4.68 8.76 7.98 14.66 12.89 21.65 19.68 33.48 32.55 53.26 51.35 84.16 81.51 130.17 129.54 210.58 210.58	3.34 2.74 3.44 5.57 4.68 5.16 8.76 7.98 8.23 14.66 12.89 13.20 21.65 19.68 20.09 33.48 32.55 30.54 53.26 51.35 49.31 84.16 81.51 79.87 130.17 129.54 128.96 210.58 210.58 195.02	3.34     2.74     3.44     3.07       5.57     4.68     5.16     4.62       8.76     7.98     8.23     8.06       14.66     12.89     13.20     12.27       21.65     19.68     20.09     18.83       33.48     32.55     30.54     30.63       53.26     51.35     49.31     50.56       84.16     81.51     79.87     81.62       130.17     129.54     128.96     122.46       210.58     210.58     195.02     193.65       310.02     30.73     24.28     1.32.97     23.07	3.34     2.74     3.44     3.07     2.72       5.57     4.68     5.16     4.62     4.78       8.76     7.98     8.23     8.06     7.64       14.66     12.89     13.20     12.27     12.32       21.65     19.68     20.09     18.83     19.27       33.48     32.55     30.54     30.63     30.91       53.26     51.35     49.31     50.56     50.35       84.16     81.51     79.87     81.62     79.76       130.17     129.54     128.96     122.46     125.91       210.58     210.58     195.02     193.65     205.78       310.02     37.79     37.89     320.78     320.78     320.78	3.34     2.74     3.44     3.07     2.72     3.13       5.57     4.68     5.16     4.62     4.78     4.72       8.76     7.98     8.23     8.06     7.64     7.74       14.66     12.89     13.20     12.27     12.32     12.65       21.65     19.68     20.09     18.83     19.27     18.93       33.48     32.55     30.54     30.63     30.91     29.45       53.26     51.35     49.31     50.56     50.35     50.30       84.16     81.51     79.87     81.62     79.76     82.08       130.17     129.54     128.96     122.46     125.91     136.28       210.58     210.58     210.70     278.81     230.77     24.278.81     230.77     278.81     230.77     278.81     230.77     278.81     230.77     278.81     230.77     230.28     230.11							

<sup>(</sup>a) Average annual number of deaths per 1 000 of population in each age group at 30th June, 1954.

10. Causes of Death.—The classification of causes of death adopted for Australia by the Commonwealth Bureau of Census and Statistics at the inception of its mortality statistics in 1907 was that introduced by the International Institute of Statistics in 1893, reviewed by that Institute in 1899 and revised by an International Commission in 1900. This classification became known as the International List of Causes of Death and further international revisions in 1909 (Second), 1920 (Third), 1929 (Fourth), 1938 (Fifth) and 1948 (Sixth) were successively adapted for use in Australian statistics.

The Sixth Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death has been used in Australia since 1950. For the first time in connexion with the International List, international rules for a uniform method of selecting the main cause to be tabulated, if more than one cause is stated on the death certificate, were laid down. Prior to 1950, the rules adopted in Australia for the selection of the cause of death to be tabulated were those laid down in the United States Manual of Joint Causes of Death, first published in 1914 and revised to conform with successive revisions of the International List.

The adoption of the new method marked a fundamental change in Australian cause of death statistics, with emphasis now placed on the underlying cause of death as indicated by the certifying practitioner. The introduction of this method required the adoption by all States of a form of medical certificate substantially identical with the International Form of Medical Certificate of Cause of Death as laid down in Article 9 of the World Health Organization Regulations No. 1. By 1950, all States had adopted satisfactory forms of certificate and it was possible to apply the new principles uniformly to all State cause of death records.

This change in principle affects the comparability of the statistics for 1950 and subsequent years with those for earlier years. For convenience in assessing the extent of the change and in accordance with a recommendation of the Sixth Decennial Revision Conference, causes of death for Australia for 1950 were also classified according to the detailed classification of the Fifth Revision, 1938, on the joint cause rules current for that revision. A complete detailed classification according to both the Fifth and Sixth Revisions was shown in *Demography*, Bulletin No. 68. Commencing with 1951, the classification is according to the Sixth Revision only.

In order to facilitate the briefer presentation of cause of death statistics, the present International Classification provides two special lists of causes for tabulation—the Intermediate List of 150 causes and the Abbreviated List of 50 causes. The latter has been used for the cause of death tabulations A to C which follow. Tables A and B show deaths of males and females, respectively, for 1956 and Table C shows the numbers of persons who died and the death rates and proportion per 10,000 deaths for the years 1955 and 1956.

### A.-CAUSES OF DEATH: MALES, 1956.

# Abbreviated List of 50 Causes (Based on the Sixth Revision of the International List).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
B 1 Tuberculosis of respiratory										
system	001-008	228	134	63	28	34	18	1	1	507
B 2 Tuberculosis, other forms	010-019	15	7 43	30	4	10	2			33
B 3 Syphilis and its sequelae	020 029 040	36			5	10	6	• • •		130
B 4 Typhoid fever	043	• • •	• •	• • •	• • •	• • •	• • •	• • •	::	• •
B 5 Cholera B 6 Dysentery, all forms	045-048		1	2	3	3	1		i :: i	10
B 7 Scarlet fever and streptococcal	043 040	٠.	•	_	"		1			10
sore throat	050, 051	٠	2	2	٠	1			l i	5
B 8 Diphtheria	055	3				1	:	1		5
B 9 Whooping cough	056				1	1				2
B10 Meningococcal infections	057	12	.8	7	1		3			31
Bl1 Plague	058	٠٠,	٠٠,							':-
B12 Acute poliomyelitis	080	9	8	4	1	10	4	1	•••	37
B13 Smallpox	084 085	ii ii	1	5	6	• • •		· · ·		23
B14 Measles B15 Typhus and other rickettsial	. 003	11			۰	• • •				2.5
diseases	100-108			1	۱			٠		1
B16 Malaria	110-117	1		ì	::			::		2
B17 All other diseases classified as							_			
infective and parasitie	(a)	54	41	33	24	15	6	2	• •	175
B18 Malignant neoplasms, includ-					1					
ing neoplasms of lymphatic	140 205	2 500	1,797	964	519	434	191	6	12	6,431
and haematopoietic tissues B19 Benign and unspecified neo-	140-205	2,508	1,797	304	315	434	151	٥	12	0,431
plasms	210-239	47	37	16	5	11	4		1	121
B20 Diabetes mellitus	260	150	142	52	27	31	15	1	1	419
B21 Anaemias	290-293	62	36	20	13	2	4			137
B22 Vascular lesions affecting cen-										
tral nervous system	330-334	2,066	1,253	719	491	307	112	4	13	4,965
B23 Non-meningococcal meningitis	340	26	23 10	9	6	3 2	3		1	71 22
B24 Rheumatic fever B25 Chronic rheumatic heart disease	400-402 410-416	126	111	60	33	30	'io	1	::	371
B26 Arteriosclerotic and degenera-	410-410	120	111	00	33	30	10	'		3/1
tive heart disease	420-422	5,885	3,946	1,882	1,402	1,021	398	8	27	14,569
B27 Other diseases of heart	430 434	774	308	224	95	34	45	3	3	1.486
B28 Hypertension with heart disease	440-443	482	228	173	79	59	19		1	1,041
B29 Hypertension without mention								1		
of heart	444-447	229	152	93	36	41	15	••	2	568
B30 Influenza	480-483 490-493	16 763	335	18 264	180	130	3 48		1 7	95 1.729
B31 Pneumonia B32 Bronchitis	500-502	293	261	121	52	52	23	ĺ	5	808
B33 Ulcer of stomach and duo-	300-302	293	201	121	32	32	23	٠.		000
denum	540, 541	195	149	79	44	25	11	3	2	508
B34 Appendicitis	550-553	43	24	13	10	7	2			99
B35 Intestinal obstruction and	!	i								
hernia	560, 561, <b>57</b> 0	133	61	38	31	18	6	1		288
B36 Gastritis, duodenitis, enteritis										
and colitis, except diarrhoea of the newborn	543, 571, 572	85	57	33	21	12	3	4	1	216
B37 Cirrhosis of liver	581	130	75	48	28	23	5	2	i	312
B38 Nephritis and nephrosis	590-594	251	184	159	61	40	16	*	î	712
B39 Hyperplasia of prostate	610	134	207	85	52	48	iš	1	l	543
B41 Congenital malformations	750-759	224	182	97	49	49	34	2	١	637
B42 Birth injuries, post-natal as-	700 700								١ .	
phyxia and atelectasis	760-762 763-768	231	197	91	35	59	17	3	2	635
B43 Infections of the newborn	/03-/08	35	24	18	6	6	8	• • •		97
B44 Other diseases peculiar to early infancy, and immaturity un-				ł	1				!	
qualified	769-776	375	141	145	81	57	28	3	2	832
B45 Senility without mention of	1	1			"			-	_	
psychosis, ill-defined and un-	1	1	ì			ì		1	1	
known causes	780-795	269	130	111	80	14	12	6	4	626
B46 All other diseases	Residual	1,506	1,443	681	328	290	155	2	8	4,413
BE47 Motor vehicle accidents	E810-E835	609	468	256	160	154	55	11	9	1,722
BE48 All other accidents	E800-E802,	> 764	443	334	150	142	66	7	6	1,912
BE49 Suicide and self-inflicted	E840-E962 E963,	K							_	
injury	E970-E979	337	130	105	80	76	13	5	5	751
BE50 Homicide and operations of	E964, E965,	3 44	19	15	9	_ ا	i i •	2		95
war {	E980-E999	5 44		13		5	1			
All Causes	l	19,166	12,862	7,079	4,243	3,265	1,378	83	116	48,192
	· · · · · · · · · · · · · · · · · · ·	,	·, <del>-</del>	, ,,	, -,	, ,			`	

<sup>(</sup>a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

B.—CAUSES OF DEATH: FEMALES, 1956.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
B 1 Tuberculosis of respiratory			44			_				
system	001-008	71	44	13	9	9	10	• • •		156
B 2 Tuberculosis, other forms	010-019 020-029	11 9	20	1 5	3	1	2	• •		28
B 3 Syphilis and its sequelae	020-029	9	1	1 -	6	1 -	3			44
B 4 Typhoid fever	043			1		1		• • •	• • •	2
B 5 Cholera	045-048	1	1	1	"1		• • •		• • •	
B 6 Dysentery, all forms	043-048	1	,	1	,	1	1	• • •	• • •	5
B 7 Scarlet fever and streptococcal	050 051	1	2	1				1	į.	1
sore throat	050, 051	2	1 -		2	••	• • •	• • •		4
B 8 Diphtheria	055	3	1	3	i	2	٠٠.			7
B 9 Whooping cough	056		8	4		2	1			8
B10 Meningococcal infections	057	12	0	1 *	3	1 4	6	• • •		35
B11 Plague B12 Acute poliomyelitis	058	,	3	1	2	5	2			٠
	080	· '	1	1 1	1 2	,				20
B13 Smallpox	084	9	2	5	3	2				
B14 Measles	085	,	1 2	3	3	4	••	• • •		21
B15 Typhus and other rickettsial	100 100		l		1	1			1	
diseases	100-108									
B16 Malaria	110-117				• • •					
B17 All other diseases classified as			1 25	25				i		í
infective and parasitic  B18 Malignant neoplasms, including neoplasms of lym-	(a)	64	35	25	15	11	4			154
phatic and haematopoietic tissues	140-205	2,228	1,861	732	467	369	185	1	7	5,850
plasms	210-239	55	38	28	9	5	7		1	1.12
B20 Diabetes mellitus	260	271	316	81	60	32	28		5	143
B21 Anaemias	290-293	67	78	28	14	9	-3	1 ::		793
B22 Vascular lesions affecting			1		-	_	-			199
central nervous system	330-334	2,640	1,996	848	569	361	176		7	6,597
B23 Non-meningococcal meningitis	340	19	22	13	5	1	i	· · · 1		0,397
B24 Rheumatic fever	400-402	6	18	4	ì	Î	i		1 ::	62
B25 Chronic rheumatic heart	100 702		"				1	• • •	• • •	31
disease	410-416	159	106	52	44	35	15	٠		
B26 Arteriosclerotic and degenera- tive heart disease	420-422	3,827	2,701	1,059	916	600	228	2	11	411 9,344
B27 Other diseases of heart	430-434	553	269	173	88	25	39		i	1,148
B28 Hypertension with heart dis-	ľ		ļ			١.			_	1,140
ease	440-443	459	319	157	93	89	31		1	1,149
B29 Hypertension without mention	1		İ			İ				1,149
of heart	444-447	232	194	110	48	31	17		1	633
B30 Influenza	480-483	15	35	20	5	10	2			87
B31 Pneumonia	490-493	544	306	217	169	98	41	1	3	1,379
B32 Bronchitis	500-502	89	80	28	23	15	12			247
B33 Ulcer of stomach and duo-			İ		-					247
denum	540, 541	84	47	22	13	6	7		i '	179
B34 Appendicitis	550-553	25	8	13	6	2	2			56
B35 Intestinal obstruction and		1			İ					30
hernia	560, 561, 570	92	61	29	24	15	6		1	228
B36 Gastritis, duodenitis, enteritis			İ		i		-		•	220
and colitis, except diarrhoea	1	1	1	1	1				]	ĺ
of the newborn	543, 571, 572	91	32	44	15	12	3	1		198
B37 Cirrhosis of liver	1 281	50	57	16	21	10	4		::	158
B38 Nephritis and nephrosis	590-594	220	127	142	31	38	19	2	::	579
B40 Complications of pregnancy, childbirth and the puer-	∫ 640–652,	١٦	10		į.			_		
childbirth and the puer-	\ 670-689 <sup>°</sup>	} 58	10	29	9	9	3		1	119
perium	1	1-	1	1		l				
B41 Congenital malformations	750-759	184	155	96	42	44	12	1	1	62
B42 Birth injuries, post-natal as-				-		١		•	1 1	53
phyxia and atelectasis	760-762	157	140	62	30	38	20	1	1	449
B43 Infections of the newborn	763-768	29	14	9	10	5	2	l <b>`</b>	i	70
B44 Other diseases peculiar to early			1	-		1	_	• • •		70
infancy, and immaturity un-			ľ	i	1				l i	1
qualified	769-776	262	141	116	56	54	23	5	1	650
			1			٠,			1	658
B45 Senility without mention of	1		1		i	·				1
		297	122	130	86	5	16	1	2	650
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795		1,237	491	285	225	132	3	5	659.
unknown causes	780–795 Residual	1.230				38	24	2	_	3,608 497
psychosis, ill-defined and unknown causes B46 All other diseases	Residual	1,230 194	174	76	344					_ 4U7
psychosis, ill-defined and unknown causes  B46 All other diseases BE47 Motor vehicle accidents	Residual E810-E835	194	124	76	39		. 1		•••	771
psychosis, ill-defined and unknown causes  B46 All other diseases BE47 Motor vehicle accidents	Residual E810-E835 E800-E802.		1,237 124 220	76 179	101	76	37	3	1	L
psychosis, ill-defined and unknown causes B46 All other diseases BE47 Motor vehicle accidents BE48 All other accidents	Residual E810-E835 E800-E802, E840-E962	194	124 220	179	101	76	37			1,036
psychosis, ill-defined and unknown causes	Residual E810-E835 E800-E802, E840-E962 E963.	194	124	1	Į.		. 1			1,036
psychosis, ill-defined and unknown causes B46 All other diseases	Residual E810-E835 E800-E802, E840-E962 E963.	194 } 419 } 132	124 220 53	179 40	101 22	76 13	37 10	3	1	Į.
psychosis, ill-defined and unknown causes  B46 All other diseases	Residual E810-E835 E800-E802, E840-E962	194 } 419 132 } 20	124 220	179 40 3	101 22 4	76 13 1	37 10 1	3	1	1,036

(a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

C.—CAUSES OF DEATH: PERSONS, AUSTRALIA.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.		ber of	1,00	e per 0,000 Mean lation.		tion per Deaths.
	1	1955.	1956.	1955.	1956.	1955.	1956.
B 1 Tuberculosis of respiratory system B 2 Tuberculosis, other forms B 3 Syphilis and its sequelae B 4 Typhoid fever B 5 Cholera	001-008 010-019 020-029 040 043	672 57 139 2	61 174	73 6 15	70 7 18	82 7 17	77 7 20
B 6 Dysentery, all forms B 7 Scarlet fever and streptococcal	045048	26		3	2	3	2
sore throat  B 8 Diphtheria	050, 051 035 056 057 058 080	35 11 86 	10 66	1 4 1 9	1 1 7 7 6	1 4 1 10	1 1 8 8
B13 Smallpox	084 085	31	.44	3		4	5
diseases B16 Malaria	100-108 110-117	2	1 2	::	::	::	::
B17 All other diseases classified as infective and parasitic B18 Malignant neoplasms, including	(a)	319	329	35	35	39	38
neoplasms of lymphatic and haematopoietic tissues B19 Benign and unspecified neoplasms B20 Diabetes mellitus B21 Anaemias B22 Vascular lesions affecting central	140-205 210-239 260 290-293	11,886 281 1,133 345	12,281 264 1,212 336	1,292 <sup>-</sup> 31 123 38	1,303 28 129 36	1,449 34 138 42	1,427 31 141 39
nervous system	330–334 340 400–402 410–416	11,035 123 85 710	133 53 782	1,199 13 9 77	1,226 14 6 83	1,345 15 10 87	1,343 15 6 91
heart disease	420–422 430–434 440–443	22,500 2,325 2,150	23,913 2,634 2,190	2,445 253 234	2,537 279 232	2,743 283 262	2,778 306 254
B29 Hypertension without mention of heart	444-447 480-483 490-493 500-502 540, 541 550-553 560, 561, 570	1,132 129 2,725 911 660 166 546	1,201 182 3,108 1,055 687 155 516	123 14 296 99 72 18 59	127 19 330 112 73 16 55	138 16 332 111 81 20 67	139 21 361 123 80 18 60
newborn B37 Cirrhosis of liver B38 Nephritis and nephrosis B39 Hyperplasia of prostate B40 Complications of pregnancy, child birth and the puerperium	543, 571, 572 581 590-594 610 { 640-652, 670-689	495 441 1,325 581 } 133	414 470 1,291 543 119	54 48 144 63	44 50 137 58 13	60 54 162 71 16	48 55 150 63
B41 Congenital malformations B42 Birth injuries, post-natal asphyxia and atelectasis B43 Infections of the newborn	750-759 760-762 763-768	1,129 1,079 157	1,172 1,084 167	123 117 17	124 115 18	138 132 19	136 126 19
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	1,419	1,490	154	158-	173	173
B45 Senility without mention of psychosis, ill-defined and un-	780-795	1,201	1,285	134	136	146	149
known causes B46 All other diseases BE47 Motor vehicle accidents	Residual E810-E835	7,649 2,168	8,021 2,219	831 236	851 235	933 264	932 258
BE48 All other accidents	E800-E802, E840-E962 E963,	2,915	2,948 1,021	317	313 108	355	342 119
BE50 Homicide and operations of war	E970-E979 E964, E965, E980-E999	} 946 } 140	135	103 15	14	115	16
All Causes		82,036	86,088	8,915	9,132	10,000	10,000

<sup>(</sup>a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

- 11. Deaths from Principal Causes.—(i) General. In the preceding tables particulars have been given for each of the causes of death comprising the Abbreviated Classification according to the Sixth Revision of the International List. Certain important causes are treated in detail hereunder. The Abbreviated Classification numbers used in tables A to C (pp. 642-4) are indicated in parentheses for each cause or group of causes.
- (ii) All Forms of Tuberculosis (B1, B2). (a) General. The total number of deaths classified to all forms of tuberculosis in 1956 was 724, consisting of 540 males and 184 females. In comparing any of the figures for 1950 and subsequent years with those for 1949 and earlier years, consideration should be given to the effect of the change in basis from the Fifth to the Sixth Revision of the International List. This was discussed in Official Year Book No. 39, p. 626.
- (b) Age at Death. The following table shows the age groups of males and females who were classified as dying from tuberculosis in 1956, together with figures for 1921, 1931, 1941 and 1951.

Age Grou	מ		Males.					Females.						
(Years).	•	1921.	1931.	194.1.	1951.	1956.	1921.	1931.	1941.	1951.	1956.			
0-14 15-29 30-44 45-64 65 and over Not stated		143 477 718 692 138 3	90 294 585 674 193	63 162 428 793 279	23 46 135 570 306	3 8 60 236 233	128 540 514 278 56	81 487 422 252 89	54 275 319 251 110	35 68 142 126 86	12 9 42 59 62			
Total		2,171	1,836	1,725	1,080	540	1,516	1,331	1,009	458	184			

TUBERCULOSIS (ALL FORMS): DEATHS IN AGE GROUPS, AUSTRALIA.

- (c) Death Rates. The reduction in mortality from tuberculosis is shown by the decline in the crude death rate from tubercular diseases, which fell from 68 per 100,000 of mean population in 1921 (males, 78; females, 56) to 18 in 1951 (males, 25; females, 11) and still further to 8 in 1956 (males 11; females, 4). The crude death rate does not reveal the even more striking fall in the number of deaths in the younger age groups, which can be seen from the table above.
- (d) Death Rates, Various Countries. A comparison of the death rates from tuberculosis for Australia with those for various other countries, made on the latest figures available, shows that Australia, with a rate of 8 deaths per 100,000 of mean population, occupies a favourable position as regards this disease. Whereas the rate for Denmark is only 6, rates range as high as 63 for Portugal. For various other countries rates are as follows:—Netherlands, 7; Canada, 9; New Zealand, Union of South Africa and United States of America, 10; United Kingdom, 15; Switzerland, 22; Italy, 23; France, 31; Finland, 42; and Japan, 53.
- (iii) Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues (B18). (a) General. It was shown in Official Year Book No. 39, p. 628, that deaths classified under this heading according to the Sixth Revision of the International List are not directly comparable in total with those on the Fifth Revision basis and comparability ratios were given to enable comparison to be made on an adjusted basis. This change must be kept in mind in considering the comparisons shown in the following pages.
- (b) Type and Seat of Disease. Tables showing the type and seat of disease in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1956 will be found in Demography, Bulletin No. 74. A summary regarding type and seat of disease for 1956 is given below. It may be pointed out that the significance of the number of deaths shown for the various types of neoplasms enumerated hereunder is doubtful, owing to the fact that, in the absence of a post-mortem, it is impracticable for the certifying doctor in the majority of cases to make an accurate diagnosis as to type in the detail required for the following classification.

DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES: TYPE AND SEAT OF DISEASE, AUSTRALIA, 1956.

Type of Disease.	Males.	Fe- males.	Per- sons.	Seat of Disease.	Males.	Fe- males.	Per- sons.
Malignant Neoplasms— Cancer and carcinoma (other than skin) Skin cancer Sarcoma and myeloid sar- coma Myeloma Glioma	5,299 58 104	30	10,305 88 179 163	Malignant Neoplasms— Buccal cavity and pharynx	185 143 1,060	66 82 694 21	251 225 1,754 39
Endothelioma Melanoma and melanotic sarcoma Hypernephroma Teratoma Malignant disease and malignant tumor, n.o.s.	108 23 10 178	82 21 3 179	190 44 13 357	Large intestine Other Respiratory system Breast Uterus Other female genital organs Male genital organs	632 808 1,238 	821 725 230 1,104 613 424	1,453 1,533 1,468 1,112 613 424 789
Total, Malignant Neoplasms	5,891	5,449	11,340	Urinary organs Skin Other and unspecified organs	360  650	177  492	537  1,142
Neoplasms of Lymphatic and Haematopoietic Tissues— Lymphosarcoma and reticulosarcoma	119	101	220	Total, Malignant Neoplasms	5,891		11,340
Hodgkin's disease Other forms of lymphoma (reticulosis) Multiple myeloma (plasmocytoma) Leukaemia and aleu-	73 22 45	41 10 39	114 32 84	Neoplasms of Lymphatic and Haematopoietic Tissues .	540	401	941
kaemia Mycosis fungoides	281	210 	491				
Total, Neoplasms of Lymphatic, etc., Tissues	540	401	941				l
Grand Total	6,431	5,850	12,281	Grand Total	6,431	5,850	12,281

(c) Age at Death. The ages of males and females who died from malignant neoplasms in 1956 are given below, together with figures for 1921, 1931, 1941 and 1951. Inferences drawn from the great increase in the number of deaths from malignant neoplasms in 1956 compared with the number in 1921 need qualification, in view of the inclusion of neoplasms of lymphatic and haematopoietic tissues from 1951 and also the fact that the age constitution of the population has changed since 1921. While the total population increased by about 73 per cent. between 1921 and 1956, the number of people over 55 years of age, at which ages the risks of cancer are much greater, increased by about 150 per cent. The rate of mortality, as distinct from the number of deaths, has increased for the lower age groups and for some of the higher age groups since 1921, but in the other age groups the rates have actually declined. It is probable that a proportion of the increased number of deaths from cancer recorded in recent years has been due to improved diagnosis and certification on the part of the medical profession.

MALIGNANT NEOPLASMS(a): NUMBER OF DEATHS IN AGE GROUPS, AUSTRALIA.

Age Group				Males.							
(Years).		1921.	1931.	1941.	1951. (a)	1956. (a)	1921.	1931.	1941.	1951. (a)	1956. (a)
Under 15		26	25	21	91	117	23	23	25	71	89
15-29	• •	29	43	49	103	90	37	38	45	76	69
30–44		163	196	176	275	339	266	326	344	387	443
45-54		387	410	465	584	728	470	548	685	692	724
55-64		800	868	983	1.334	1,459	657	744	926	1.180	1,284
65 and over		1,032	1,942	2,561	3,128	3,697	875	1,426	2,198	2,698	3,241
Not stated		3		-,		1					
Total		2,440	3,484	4,255	5,515	6,431	2,328	3,105	4,223	5,104	5,850

<sup>(</sup>a) Includes neoplasms of lymphatic and haematopoietic tissues.

- (d) Death Rates. The death rates from malignant neoplasms have continued to rise over recent years. The rates are crude death rates representing the number of deaths from malignant neoplasms per 100,000 of mean population and do not take account of changes in the age constitution of the population, and to a substantial extent reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see previous paragraph). In 1921, the rate for Australia was 87 (males, 88; females, 87); in 1931 it was 101 (males, 105; females, 97); in 1941 it was 119 (males, 119; females, 120) and in 1951 it had risen to 126 (males, 129; females, 122). Figures for 1956 show that a further rise has taken place, the rate being 130 (males, 135; females, 126).
- (e) Death Rates, Various Countries. Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows:—Portugal, 84; Japan, 87; Italy, 124; Union of South Africa, 127; Canada, 130; Australia, 130; Finland and United States of America, 146; New Zealand, 147; Netherlands, 155; France, 184; Switzerland, 188; and United Kingdom, 204. The rates are for the latest available year in each case.
- (iv) Diseases of the Heart (B25 to B28). The number of deaths classified to diseases of the heart in 1956 was 29.519 (17,467 males and 12,052 females). This class is the largest amongst causes of death, the rate having increased from 112 per 100,000 of mean population in 1911-15 to 313 in 1956. The increase in the number of deaths recorded from heart diseases has been particularly pronounced during the past twenty years. The rapid increase in mortality is partly a reflection of the ageing of the population, but the figures have been influenced mainly by improved diagnosis and certification by medical practitioners.

The death rates for heart diseases for various years from 1921 were as follows:—1921, 93 (males, 102; females, 83); 1931, 159 (males, 178; females, 142); 1941, 269 (males, 306; females, 231); 1951, 314 (males, 367; females, 259); and 1956, 313 (males, 366; females, 259). Deaths from heart diseases in 1956 represented 34 per cent. of the total deaths.

(v) Puerperal Causes (B40). It was shown in Official Year Book No. 39, p. 634, that the changes introduced with the Sixth Revision of the International List did not significantly affect the comparability of the total number of deaths from puerperal causes. The death rate from these causes (including criminal abortion) has fallen rapidly during recent years and in 1956 the rate was 0.6 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 119 deaths in 1956 correspond to a death rate of 2.6 per 100,000 females. The death rate may be expressed in other terms by stating that 1 of every 1,763 women giving birth to a live child in 1956 died from puerperal causes; the corresponding ratios for married women were 1 in every 1,843, and for single women 1 in every 888.

The death rate per 1,000 live births from peurperal causes in various countries for the latest available years is as follows:—New Zealand, United States of America and Denmark, 0.5; France, United Kingdom and the Netherlands, 0.6; Canada, 0.8; Finland and Switzerland, 1.1; Union of South Africa, 1.2; Italy, 1.3; and Japan, 1.8.

The total number of children left by the 109 married mothers who died from puerperal causes in 1956 was 320, an average of 2.9 children per mother.

Four of the mothers who died had been married less than one year, 14 between one and two years, and 5 between two and three years. The duration of marriage ranged up to 27 years. Tabulations distinguishing the ages at marriage and at death will be found in *Demography*, Bulletin No. 74, which also includes a table showing in combination the duration of marriage and previous issue.

- (vi) Congenital Malformations and Diseases of Early Infancy (B 41 to B 44). This combined group embraces two complete classes of the International List of Causes of Death which relate more specifically to infant deaths and they have already been presented in detail in the section devoted to causes of infant death (see pp. 637 and 638).
- (vii) Accidents, Poisonings and Violence (BE 47 to BE 50). (a) General. Deaths in this class are classified according to external cause and not according to nature of injury. The classification provides sub-groups for accidents, including adverse reactions to prophylactic inoculations, therapeutic misadventures and late effects of accidental injury; suicide; homicide and injuries purposely inflicted by other persons; and injury resulting from operations of war, including late effects.

The following table, showing the death rates in the main sub-groups per 100,000 of mean population, indicates that the death rate from violence is generally about three times as great for males as for females. It can be seen also that in 1956 the proportion of deaths caused by violence was 7.35 per cent., compared with 6.76 per cent. in 1931-35.

The low level of the rates and proportions for the years 1941-45 is due largely to the exclusion of deaths of defence personnel from accidents, suicide and homicide, though the

rates have been based on total mean population (including defence personnel). A further contributing factor is the decrease during this period in the number of automobile accidents. From July, 1947, deaths of defence personnel from accidents, etc., have again been included.

ACCIDENTS, POISONINGS AND VIOLENCE: DEATH RATES,(a)

		Death Rate(a) from—												Viole	
Period.	Acc	Accidents.(b) Suicide.					Homicide:(e) Total				l Viol	ence.	Proportion per .10,000 Deaths.		
	М.	F.	Р.	М.	F.	P.	M.	F.	P.	M.	Æ.	P.	M.	F.	P.
1931-35 1936-40 1941-45 1946-50 1951-55	71 86 67 76 82	-22 28 26 27 31	47 58 46 51 57	19 17 11 14 15	5 5 4 5 5	12 1-1 8 10	2 2 1 1 2	1 1 1 1	2 1 1 1	.92 105 79 91 99	28 34 31 33 37	61 .70 55 62 68	929 979 730 844 964	353 399 348 383 453	676 724 558 640 740
1952 1953 1954 1955	83 79 79 79 76	32 30 30 31 33	57 56 55 56 55	16 16 16 15 ,16	5 5 5 6	11 11 11 10 1.1	2 2 2 2 2 2	1 1 1 1	2 1 1 1	101 97 97 96 94	38 37 36 37 40	70 68 67 67 67	967 969 965 969 930	454 463 448 472 486	742 746 737 752 735

<sup>(</sup>a) Number of deaths per 100,000 of mean population. (c) Includes late effects of injuries due to operations of war.

- (b) Accidents (BE 47, BE 48). In 1956, the total number of deaths from accidental causes was 5,167 (3,634 males and 1,533 females). Half of the accidental deaths were the result of transport accidents. Of these, the numbers attributable to the major causes, and the percentages of the total accidental deaths in each case, were as follows:—Motor vehicle traffic accidents, 2,117 (40.97 per cent.); motor vehicle non-traffic accidents, 102 (1.98 per cent.); other road vehicle accidents, 113 (2.19 per cent.); railway accidents, 150 (2.90 per cent.); water transport accidents, 89 (1.72 per cent.); aircraft accidents, 28 (0.54 per cent.); a total of 2,599 (50.30 per cent.). Other important causes were accidental falls, 1,065 (20.61 per cent.); accidental drowning, 452 (8.75 per cent.); and accidents caused by fire and explosion of combustible material, 152 (2.94 per cent.).

  (c) Suicide (BE 49). (i) Modes Adopted. Deaths from suicide in 1956 numbered 1,021 (males, 751; females, 270). Firearms and explosives were used in 277 cases (27.13)
- (c) Suicide (BE 49). (1) Modes Adopted. Deaths from suicide in 1956 numbered 1,021 (males, 751; females, 270). Firearms and explosives were used in 277 cases (27.13 per cent. of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows:—Poisoning other than by gases, 221 (21.64 per cent.); poisoning by gases, 201 (19.69 per cent.); hanging or strangulation, 145 (14.20 per cent.); submersion (drowning), 60 (5.88 per cent.); other modes, 117 (11.46 per cent.).
- Of the 751 males who committed suicide, 258 (34.35 per cent.) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 95 cases (35.19 per cent.).
- (ii) Age at Death. From the following table, which shows the age of persons who committed suicide in 1956, it will be seen that both young and very old people took their lives during this year.

AGE OF PERSONS WHO COMMITTED SUICIDE: AUSTRALIA, 1956.

Age Groups (	Years).	Males.	Females.	Persons.	Age Group (Yea	rs).	Males.	Females.	Persons.
10-14	• •	2	2	4	60-64	<del></del>	69	18	87
15-19		8	6	14	65-69		56	29	85
20-24		29	11	40	70-74		40	12	52
25-29		71	9	80	75-79		29	12	41
30-34		80	29	109	80-84		7	3	10
35-39		61	29	90	85-89		3	1	4
40-44		77	26	103	90-94		l	·	
45-49		79	33	112	Not stated		1		1
50-54		74	28	102					İ
55-59		65	22	87	Total Deaths		751	270	1,021

(d) Homicide and Operations of War (BE 50). In 1956, there were 135 deaths from homicide and injury purposely inflicted by other persons (not in war), of which non-accidental poisonings caused 8 deaths, assault by firearms and explosives 31, assault by cutting and piercing instruments 25, assault by other means 59, injury by intervention of police 1 and legal execution 1. Deaths from injury resulting from the operations of war numbered 10, but all were deaths from late effects of such injuries.

<sup>(</sup>b) Includes "open verdict".

12. Age at Death of Deceased Married Males and Females, and Issue.—Demography, Bulletin No. 74, contains a number of tables showing, in combination with the issue, the age at marriage, age at death and occupation of married (including widowed or divorced) persons who died in Australia in 1956. Deaths of married males in 1956 numbered 36,048, and of married females, 29,698. The tables which follow deal, however, with only 35,562 males and 29,503 females, the information regarding issue in the remaining 681 cases being incomplete. The total number of children in the families of the 35,562 males was 113,422 and of the 29,503 females, 101,298. The average number of children is shown for various age groups in the following table.

AGE AT DEATH AND AVERAGE ISSUE OF DECEASED MARRIED(a) MALES.AND FEMALES: AUSTRALIA.

			Ave					age Issue.						
Age at Dea (Years).	ath			Males.			Females.							
		1921.	1931.	1941.	1951.	1956.	1921.	1931.	1941.	1951.	1956.			
Under 20		<del></del>	0.75	[ <del></del>	0.43	0.50	0.77	0.66	0.79	0.83	0.70			
20-24		0.84	0.81	0.73	0.96	0.97	1.22	1.13	0.95	0.86	1.10			
25-29		1.29	1.33	1.12	1.29	11.49	1.86	1.81	1.45	1.61	1.65			
30-34		2.06	1.79	1.76	1.79	11.98	2.45	2.34	1.91	1.:98	:2.27			
35-39		2.58	2.13	2.11	2.12	2.17	3.29	2.89	2.30	2.49	2.25			
40-44		3.23	2.77	2.49	2.30	2.33	3.66	3.29	2.77	2.39	2.36			
45-49		3.48	3.10	2.68	2.51	2.43	3.76	3.55	2.93	2.59	2.35			
50-54		3.76	3.46	2.96	2.56	2.49	4.23	3.60	3.29	2.76	2.43			
<b>55–59</b>		4.41	3.69	3.28	2.71	2.63	4.69	4.01	3.55	3.03	2.69			
60-64		4.98	4.02	3.55	-3.07	2.78	5.39	4.21	3.79	3.29	2.95			
<b>65–69</b>		5.50	4.41	3.73	3.25	3.05	5.86	4.82	4.01	3.63	3.35			
70–74		6.06	5.06	4.17	3.58	3.28	6.30	5.41	4.29	3.64	3.48			
<i>75–79.</i> .		6.66	5.65	4.56	3./83	362	6.:56	6.02	4.85	3.96	3.71			
80-84		6.89	6.17	4.93	4.30	3.87	6.76	6.26	5.39	4.19	3.88			
85-89		7.18	6.59	5.70	4.63	4.12	6.93	6.57	5.85	4.68	4.05			
90-94		7.21	6.94	6.57	5.06	4.68	6.53	6.73	6.11	5.08	4.64			
<b>95–</b> 99		6.97	6.69	7.04	.5.78	5.09	.6.05	7.10	6.34	5.76	4.52			
100 and over		9.20	7.00	8.69	5.71	5.00	5.11	8.20	6.73	7.72	6.00			
Age not state	d	5.36	5.00		8.00	l	5.80	5.00		5.50	3.00			
All Ages		4.97	4.44	3.91	3.39	3.19	5.05	4.72	4.22	3.68	3.43			

(a) Includes widowed or divorced.

The figures in the preceding table include the issue both living and dead. The proportion of living to deceased issue, taking males and females together, is a little over six to one. The totals for 1956 are shown in the following table:—

ISSUE OF DECEASED MARRIED(a) MALES AND FEMALES: AUSTRALIA, 1956.

	Issue of Married Males.					Issue of Married Females.								
Issue.		Males.	Females.	Total.	Issue.		Males.	Females.	Total.					
Living Dead	••	50,121 7,959	50,069 5,273	100,190 13,232	Living Dead		42,533 9,423	42,679 6,663	85,212 16,086					
Total	••	58,080	55,342	113,422	Total	• •	51,956	49,342	101,298					

(a) Includes widowed or divorced.

13. Age at Marriage of Deceased Males and Females, and Issue.—While the table giving the average issue of married males and females naturally shows an increase in the averages with advancing age at death, the following table, which gives the average issue of males and females according to the age at marriage of the deceased parent, shows a corresponding decrease in the averages as the age at marriage advances.

AGE AT MARRIA	GE AND	AVERAGE	ISSUE OF	DECEASED	MALES
	AND F	EMALES: A	USTRALIA	١.	

	Average Issue.												
Age at Marriage (Years).			Males.		Females.								
	1921.	1931.	1941.	1951.	1956.	1921.	1931.	1941.	1951.	1956.			
Under 15						7.60	6.36	7.80	4.88	6.54			
15-19	6.32	6.15	5.40	4.63	4.67	6.97	6.79	6.10	5.41	5.07			
20-24	6.05	5.56	4.89	4.23	3.97	5.50	5.23	4.80	4.28	3.97			
25-29	5.17	4.70	4.21	3.65	3.37	4.09	3.79	3.51	3.14	3.03			
30–34	4.45	3.96	3.41	3.00	2.83	2.66	2.42	2.35	2.23	2.10			
35–39	3.90	3.14	2.80	2.45	2.38	1.61	1.40	1.26	1.16	1.12			
40–44	2.67	2.36	2.01	1.69	1.63	0.62	0.39	0.35	0.36	0.38			
45–49	2.20	1.96	1.52	1.33	1.05	0.03	0.12	0.01	0.07	0.13			
50-54	1.70	1.60	1.05	0.80	0.69		• • •	,	• •				
<b>55–</b> 59	1.30	0.95	0.79	0.49	0.58				• •				
60–64	0.33	0.63	0.29	0.24	0.33			• •	• •				
65 and over	0.25	0.18	0.01	0.29	0.20			• •	• •				
Age not stated	4.93	3.64	2.95	2.81	2.65	5.41	3.96	2.45	3.17	2.83			
All Ages	4.97	4.44	3.91	3.39	3.19	5.05	4.72	4.22	3.68	3.43			

### § 6. Vital Statistics of External Territories.

Because of the outbreak of hostilities in the Pacific during the 1939-45 War, civil administration in the external territories was suspended on 11th February, 1942, and registration of births, deaths and marriages was not resumed until 1946. The following table for the year 1956 shows the number of marriages, births and deaths registered in the external territories under the control of Australia, namely:—Norfolk Island; Papua; the Trust Territory of New Guinea; and the Trust Territory of Nauru. More detailed information will be found in a series of tables in *Demography*, Bulletin No. 74.

VITAL STATISTICS: EXTERNAL TERRITORIES, 1956.
(EXCLUDING INDIGENOUS POPULATION.)

Territory.	Marri-		Births.		Deaths.			
Territory.	ages.	Males.	Females.	Persons.	Males.	Females.	Persons.	
Norfolk Island	1	7	6	13	10	9	19	
Papua	55	107	78	185	21	8	29	
Trust Territory of New Guinea	110	187	160	347	48	11	59	
Trust Territory of Nauru		11	5	16	1		1	

NOTE.—Information for Cocos (Keeling) Islands is not available.

#### CHAPTER XVIII.

#### HOUSING.

#### § 1. Introduction.

1. General. In issues of the Official Year Book prior to No. 43, certain information relating to the housing of the population was included in various chapters, but for a more convenient presentation of the material this complete chapter, which presents a summary of all available information on the subject, has now been substituted.

In sections 2 and 3, a brief outline is given of government assistance to housing since 1945 and of operations under the War Service Homes Act 1918-1956. Other sections of the chapter are devoted to statistics of new building and to characteristics of dwellings at the Censuses of 1947 and 1954.

2. Number of Dwellings, Censuses 1911 to 1954.—At each census, in addition to the questions relating to the personal particulars of the individual members of households, there have been a number of important questions on the Census Schedule designed to elicit information concerning the dwellings in which the population was housed at the date of the census. For the purpose of the census, a "dwelling" is any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has therefore a very wide reference, and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution.

The following table shows the number of occupied and unoccupied dwellings in Australia at each Census from 1911 to 1954. Occupied dwellings are classified into private and other dwellings. Dwellings other than private include hotels, boarding houses, lodging houses, hostels, hospitals, educational, religious and charitable institutions, defence and penal establishments, etc. The term "unoccupied dwellings" is not synonymous with vacant houses and flats available for occupancy, but refers mainly to "week-end", holiday and other dwellings whose usual occupants were temporarily absent on the night of the Census; newly-completed dwellings awaiting occupancy are also included.

DWELLINGS: AUSTRALIA, CENSUSES 1911 TO 1954. (Excluding Dwellings occupied solely by Full-blood Aboriginals.)

					Occupied.		
	Censi	18.		Private.	Other than Private.	Total.	Unoccupied.
1911	•••			894,389	29,870	924,259	33,473
1921				1,107,010	46,275	1,153,285	51,166
1933				1,509,671	37,705	1,547,376	68,772
1947			1	1,873,623	34,272	1,907,895	47,041
1954				2,343,421	36,932	2,380,353	112,594

#### § 2. Government Assistance to Housing Since 1945.

- 1. Agreements between the Commonwealth and State Governments.—(i) The 1945 Agreement.—In November, 1945, the Commonwealth Government entered into an agreement with the Governments of the States whereby the Commonwealth Government would provide finance for and the State Governments would undertake the building of housing projects. Tasmania withdrew from the Agreement in August, 1950 and South Australia did not begin to operate under it until July, 1953. The Agreement expired on 30th June, 1956. Features of the 1945 Commonwealth and State Housing Agreement were:—
  - (a) The Commonwealth Government agreed to advance to each participating State the amount expended for the construction of housing projects between 3rd December, 1943, and the date of the Agreement, and the amount required for the State's housing projects during a further period of ten years.
  - (b) Each advance of money was to be repaid with interest thereon in equal annual instalments within a maximum period of 53 years from the date the advance was made, the interest to be at a rate not exceeding that payable in respect of the latest Commonwealth loan at the date of the advance.

- (c) Rents charged were to be economic rents, i.e., the rents were to be sufficient to meet repayments by the State to the Commonwealth of the capital cost of each dwelling with interest and of current outgoings such as the cost of maintenance, administration, rates and taxes and insurance.
- (d) The rental provisions of the Agreement provided for a system of rental rebates, whose basic principle was that a family with an income at the basic wage level did not need to pay more than one-fifth of its income in rent, regardless of the economic rent of the dwelling.
- (e) The Commonwealth Government was to bear three-fifths, and the State concerned two-fifths, of all losses sustained by the States, on an annual basis.

The following table shows the amount of money advanced to each State under the 1945 Agreement:—

1945 COMMONWEALTH AND STATE HOUSING AGREEMENT: ADVANCES TO STATES.
(£'000.)

		<del></del>	· · · · · · · · · · · · · · · · · · ·	<del></del>	<del></del>		1		i.
	Year:		N.S.W.	Vic.	QIđ:	S.A.	WiAi.,	Tas.	Total.
1945-46			2,525	3,100	425		460	285	6,795
1946-47	••	• • •	5,530	4,000	750	•••	73.5		11.015
1947-48	• •	• • •	5,345	5,000	800.	. ••	1,260	900	13,305
1948-49	• •		6,295	5,200	900.		1,647	450	14,492
1949-50		• • •	6,600	6,300	1,250		1,965	1,100	17.215
1950-51			7,890	8,600	2,700		2,350	100.	21,640
1951-52	• • •		8,514	10,061	4,489		3,483		26,547
1952-53			12,100	11,270	3,730		2,900	• •	30,000
1953-54			12,450	12,000	4,500	4,500	3,750		37,200
1954-55			10,800	9,450	1,800	3,600	3,500		29,150
1955–56			10,800·	10,800	3,000	3,600	5,000		33,200
Tot	al		88,849	85,781	24,344	11,700	27,050	2,835	240,559

The number of dwellings erected in each State under the 1945 Agreement is shown in the following table:—

1945 COMMONWEALTH AND STATE HOUSING AGREEMENT: NUMBER OF DWELLINGS(a) COMPLETED.

	Year.		N.S.W.	Vic.	Q1d.	S.A.	W.A.	Tas.	Total.
1945–46	• •	• •	1,589	1,768	224		293	154	4,028
1946–47			2,200	1,458	470	••	537	208	4,873
1947–48			2,582	2,231	547		849	218	6,427
1948–49·			3,440	2,357	573		976	184	7,530
1949-50			3,076	2,454	643		981	284	7,438
1950-51			3,273	2,699	5'54'		1,269	82	7,877
1951-52			3,708	2,970	1,082		1,023		8,783
1952-53			4,280	3,238	1,635		1,111	!	10,264
1953-54			5,109	3,590	1,506	1,006	1,472	!	12,683
1954-55			4,932	3,960	1,382	2,013	2,031	!	14,318
1955-56			3,529	4,152	840	1,885	1,531		11,937
Tot	al		37,718	30,877	9,456	4,904	12,073	1,130	96,158

(a) Includes flats.

Initially, houses constructed under the 1945 Commonwealth and State Housing Agreement could be sold to tenants, provided the tenant was able to arrange payment of the full purchase price of the house to the State Authority immediately on sale. Under this arrangement sales to tenants were relatively few. In April, 1955, the Commonwealth and the States entered into a supplementary agreement whereby the State Governments were permitted to sell houses to tenants on terms. These were:—deposit, 5 per cent. of the first £2,000 and 10 per cent. of the balance of the purchase price of the house, the maximum amount of the remaining balance being limited to £2,750 and repayment of the balance to be made over a maximum period of 45 years at an interest rate of 4½ per cent. per annum. Tenants eligible under the War Service Homes Act were entitled to purchase houses built under the Agreement on the terms provided in that Act. The number of houses sold under the Agreement is as follows:—

1945 COMMONWEALTH AND STATE HOUSING AGREEMENT: HOUSES SOLD.

Ye	ear.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Total.(a)
1947-48					109			109
1948-49			1.5		63			78
1949-50			98	6	12		115	231
1950-51			122	39	94		508	763
1951-52			338	26	86	!	480	930
1952-53			528	13	13		309	863
1953-54			403	6	16	1.1	94	520
1954-55			165		26	7	96	294
1955-56			733	1,289	121	275	177	2,595
1956-57			1,538	1,363	93	66	101	3,161
Total			3,940	2,742	633	349	1,880	9,544

- (a) Tasmania did not operate under the 1945 Agreement.
- (ii) The 1956 Agreement. In 1956, the Commonwealth and the States entered into a new agreement, under which added emphasis was placed on the construction of homes for private ownership. Features of the agreement are:—
  - (a) The Commonwealth Government is to provide finance to the States over a period of five years ending 30th June, 1961, for the erection of housing projects.
  - (b) For the first two years of the agreement, 20 per cent. of the money allocated to each State was advanced to building societies and other approved institutions for lending to private house builders. During the remaining years of the agreement the proportion is to be increased to 30 per cent.
  - (c) The remaining 70 per cent. (first two years 80 per cent.) of the allocation to each State may be used by the States for the erection of houses for either rental or sale. The States determine the type of houses to be erected, their location and the selection of tenants. They also fix the terms of selling.
  - (d) In any one year, the Commonwealth may specify that an amount not exceeding 5 per cent. of the moneys referred to in (c) above be set aside for the erection of houses for serving members of the defence forces nominated by the Commonwealth. The Commonwealth is to provide supplementary advances to the States equal to the amounts set aside by them for this purpose.
  - (e) Each advance of money and interest thereon is to be repaid in equal annual instalments within a maximum period of 53 years from the date the advance is made. Interest on advances made during the years 1956-57 and 1957-58 was the long-term bond rate less one per cent. per annum, i.e., 4 per cent. Interest on advances made during the years 1958-59 to 1960-61 shall be as agreed between the Commonwealth and the States, or, in default of agreement, as determined by the Treasurer of the Commonwealth, but not exceeding the long-term bond rate less three-quarters of one per cent. per annum.

The following table shows progress made under the 1956 Housing Agreement up to 30th June, 1957:—

1956 COMMONWEALTH AND STATE HOUSING AGREEMENT: SUMMARY, 1956-57.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Total.
Total Advances f'000	10,800	10,000	2,750	3,600	3,000	2,000	32,150
S	гате Но	using Pi	ROGRAMM	Œ.			
Allocation of Total Advances (80 per cent.) £'000	8,640	8,000	2,200	2,880	2,400	(a)1,600	25,720
Commenced	3,855 2,992	2,296 2,580	950 1,110	1,399 1,640	1,100 800	729 541	10,329 9,663
1957	2,412 1,659	1,048 373	524 306	1,265 165	642 175	188 208	6,079 2.886
	SERV	ice Hou	SING.				<u></u>
Funds Allocated(c) £'000 Agreed Programme (Number of	864	800	220	223	221	50	2,378
Dwellings)	300 62	253 242	66 48	81 81	79 19	15 15	794 467
I	Номе Ви	ILDERS'	Account	r <b>.</b>		·	
Allocation of Total Advances (20 per cent.) £'000	2,160	2,000	550	720	600	(e) 400	6,430
Amount drawn by Institutions £'000 Dwellings—	2,160	2,000	513	720	600	225	6,218
Approved	1,274 552 169	1,679 1,607 506	163 154 42	360 349 232	258 232 115	286 206 3	4,020 3,100 1,067
New Dwellings Other	353 88	::	173	125	43	8 17	702 105

<sup>(</sup>a) Actual amount available for the Tasmanian State Housing Programme during 1956-57 was £1,775,000. An amount of £175,000 was transferred from the Home Builders' Account to the State Housing Programme in 1956-57, and was repaid to the Home Builders' Account in 1957-58. (b) Includes Service Housing. (c) Fifty per cent. by Commonwealth and 50 per cent. by State. (d) Included in State Housing Programme above. (e) See note (a).

2. Imported Houses.—With the object of supplementing the number of houses being constructed by the building industry within Australia, the Commonwealth Government in 1950 sponsored a plan to import prefabricated houses from overseas. Under the States Grants (Imported Houses) Act 1950, the Commonwealth undertook to pay a subsidy not exceeding £300 per house to assist approved State Housing Authorities to meet the cost of houses brought to Australia from overseas.

Under this plan, 14,016 houses were imported by State Authorities. Of these, 7,613 units were erected under the 1945 Commonwealth and State Housing Agreement on behalf of the State Governments themselves, whilst other houses were erected for governmental authorities concerned with public utilities such as the generation of electricity, railways and water supply.

The Commonwealth Government imported 4,176 houses for the Department of Works and the Snowy Mountains Hydro-Electric Authority. Of the 18,192 houses imported, the United Kingdom supplied slightly more than half, with France, Austria and Sweden the next largest suppliers in that order.

Expenditure by the Commonwealth Government on subsidies to the States importing houses under this plan was as follows: New South Wales, £252,000; Victoria, £1,645,200; Queensland, £703,800; South Australia, £1,173,000; Western Australia, £419,700; Total, £4,193,700. Imports of houses under this scheme ceased in January, 1954.

3. Housing Schemes in Commonwealth Territories.—(i) Northern Territory. In 1946, control of all Government-owned residences in the Territory (excluding those belonging to the Defence Services or Commonwealth Railways or attached to post offices) was vested in

the Administration. The Administration provides houses for rental for its own and other Commonwealth employees. In 1953, a Housing Scheme was inaugurated under which potential house builders may obtain loans of up to £2,750 for the erection of houses, the purchase or extension of existing houses or the discharge of mortgages on houses. Up to 30th September, 1957, 255 loans had been approved. These were for:—new houses, 168; extensions to existing houses and/or discharge of mortgages, 28; purchase of existing houses, 59.

(ii) Australian Capital Territory. The Commonwealth Government, through the Department of Works (construction) and the Department of the Interior (management), provides houses primarily for rental to employees of Government organizations and to persons privately employed in the Australian Capital Territory.

From 1st July, 1945, to 30th June, 1957, 4,407 houses and flats were erected for the Department of the Interior for letting.

Government rental houses may be purchased by tenants and the basis of sale is a minimum deposit of 5 per cent. of the first £2,000 of the purchase price fixed by the Department of the Interior and 10 per cent. of the balance, with a maximum advance by way of mortgage of £2,750. Repayment may be made over a maximum period of 45 years on all types of houses. Interest charged on loans is  $4\frac{1}{2}$  per cent. per annum. More than 1,250 houses have been sold to tenants since 1950.

Loans may be granted by the Commissioner for Housing to enable persons to purchase, erect or enlarge houses in the Territory or to discharge mortgages. Where the Commissioner's valuation of the property concerned does not exceed £2,000 the maximum loan may not exceed 95 per cent. of the valuation. If the Commissioner's valuation exceeds £2,000 the maximum loan is 95 per cent. of the first £2,000 and 90 per cent. of the balance (but in no case can the amount lent exceed £2,750). Repayment may be made over a maximum period of 45 years. The current rate of interest is 5 per cent. per annum. From 1st July, 1949 to 30th June, 1957, 343 loans were granted.

- (iii) Papua and New Guinea. The Housing Loans Ordinance 1953 permits the advance of loans of up to £2,750 to any member of the community for the erection of a house or the purchase or extension of an existing house. The loans are limited to declared township are as and are repayable over a maximum period of 45 years. The effective rate of interest is 5 per cent. per annum. Up to 21st November, 1957, loans totalling £173,250 had been a pproved.
- 4. Other Housing Schemes in the States.—(i) General. In each State, the major Government housing schemes operated by the State Housing Authorities are those provided for under the Housing Agreements between the Commonwealth and State Governments referred to earlier. Other State Government assistance to housing is referred to in the following paragraphs.
  - (ii) New South Wales. The principal schemes operating in New South Wales are:—
    (a) Commission-Financed Advances. Under the Housing Act 1912-55, the Housing Commission is empowered to provide finance to persons to have houses erected on their own land, to purchase existing dwellings, or to effect improvements or repairs to houses. In respect of advances made under the Act prior to 1952, the maximum amount that could be lent was limited to £1,540, repayment of which could be made over a maximum period of 45 years. Interest charged was at the rate of 4½ per cent. per annum. Under this scheme 779 houses were erected. Regulations prescribing the present maximum amount that may be advanced and the limitation on income which may be received by an applicant for a loan have not been

published and at present no advances are being made.

- (b) Rental Housing (other than Housing Agreements.) Upon request by other State Departments, the Housing Commission will erect houses for employees of those Departments, e.g., Education, Agriculture, Water Conservation, etc. These Departments provide the necessary land and funds needed to finance the erection of the houses. Rentals charged are fixed by the Departments in accordance with the salaries of the officers occupying the houses. The number of rental houses erected (other than under the Housing Agreements) is 755.
- (c) Sales Scheme. During 1953-54, the Housing Commission began the erection of 100 houses for sale. Under this scheme, the Commission acted as the construction authority whilst administrative arrangements are carried out by the Rural Bank. Houses are sold on the basis of 10 per cent. deposit with repayment of the balance over a maximum period of 40 years. Construction of all houses has been completed.

(iii) Victoria. In 1956, a Home Finance Trust was established with the object of receiving money from institutions and others in order to make loans for the erection or purchase of houses. Applicants for loans must declare that they intend to use the house as a home for themselves, their family and dependants. Except in special circumstances no loan will be granted if the borrower or wife or husband of the borrower already owns a house in Victoria at the date of the proposed mortgage.

Loans granted will be on the basis of a first mortgage over the house. Loans are not to exceed 95 per cent. of the value of the house and will not be made if the value of the house exceeds £4,500. In the case of purchase the house must not have been erected more than two years before the date of the mortgage. Repayment of loans may be made over a maximum period of 30 years, with interest charges determined by the Trust. At 30th June, 1957, 507 loans totalling £1,340,150 had been made.

(iv) Queensland. In this State there are two housing schemes operating-

- (a) Under the State Housing Acts, 1945 to 1957, the Queensland Housing Commission makes advances to eligible applicants on the security of homes to be erected. A person to be eligible must be the proprietor of a suitable building site, must not already own a dwelling and must undertake to use the completed dwelling as a home for himself and family. The present maximum advances allowable under the Acts are £2,400 for a timber-frame building, £2,500 for a brick veneer and £2,750 for a brick or concrete building. The rate of interest at present chargeable on advances is 51 per cent. per annum. Repayment may be made at the option of the borrower over either a 30-year or a 45-year period. A borrower or purchaser who elects to repay over a 30-year period, who is under 40 years of age, and who has passed a prescribed medical examination, is entitled to free life insurance cover in an amount sufficient to liquidate his indebtedness to the Commission in the event of his death before his loan has been fully repaid, provided that the maximum benefit payable under such insurance cover does not exceed £2,250. The total amount advanced on completed dwellings up to 30th June, 1957, was £16,900,000. The number of dwellings constructed under these Acts up to 30th June, 1957, was 24,906.
- (b) Workers homes are erected by the Queensland Housing Commission under the Workers' Homes Act 1919-1953. These homes are intended for persons who are not the owners of building sites, and applications are confined to persons with a net annual income for taxation purposes of not more than £800. The Housing Commission builds the home to suit the applicant's needs, on Crown Land, or on land purchased for the purpose, which is then converted to perpetual leasehold tenure. An applicant pays a deposit of 5 per cent. of the purchase price of the home and the balance by monthly rent over a term of 30 to 45 years. The rate of interest is 5½ per cent. per annum. The number of houses constructed under this Act up to 30th June, 1957, was 2,344.

(v) South Australia. In South Australia, the Housing Trust builds houses for both rental and sale and, in addition, administers an emergency dwelling scheme for the South Australian Government. From July, 1946 to 30th June, 1957, 28,141 houses were erected by the Trust in both city and country areas.

- (a) Rental Houses. The majority of the Trust's rental houses are of brick or stone construction and are built in pairs in housing groups. The Trust has a large number of flats for rental, tenancy of which is restricted to married couples and others without young children. Specially designed flats for pensioners and other elderly persons of limited means are also built. Rents charged for accommodation are generally based on the overall cost of construction, and are likely to vary not only according to the size of the dwelling but also as to date of erection. As at 1st November, 1957, the rents of 5-roomed houses (i.e., 3 bedrooms) ranged from £1 17s. 6d. a week for houses of an older type to £3 5s. a week for houses then being completed. Factors taken into consideration when allotting rental houses include date of application, housing need and suitability of tenant. Persons with high incomes are asked to consider purchasing their own homes.
- (b) Sales Scheme. Houses built under this scheme, which was inaugurated in 1946, are of solid or timber-frame construction. More than 12,000 houses have been completed in both metropolitan and country areas since the scheme began. When houses are sold the usual practice is for the Trust to recover the total cost of the house and land by the purchaser paying the total amount in cash or (as is usually the case) paying a deposit (which varies according to the type of house—at present £300 for a timber-frame

house and £600 for a 5-roomed brick house—and the purchaser's ability to pay) and raising the balance by way of mortgage. In cases where the deposit and first mortgage are insufficient, the Trust may advance the balance by way of a second mortgage, the repayment term of which is a maximum of 30 years, interest being at the rate of 5½ per cent. per annum. In 1956, the Trust began the erection of houses, which may be of solid or timber-frame construction or a mixture of both, for individuals on their own land. Houses are built by contract under the Trust's supervision. Prices for building and supervision of the standard houses covered by the scheme in late 1957 ranged from £2,950 for a 2-bedroom brick house to £4,700 for a 6-roomed (2-storey) house.

(c) Rural Housing. In order to assist primary producers, the Trust will erect houses on the applicant's own land for his own use or that of his employees, either using local materials or transporting prefabricated houses to the site. At the end of 1957, prices for houses erected on level sites within 100 miles of Adelaide ranged from £1,875 for a 2-bedroom minimum type timber house to £2,560 for a 3-bedroom, asbestos cement sheeted, timber house.

(vi) Western Australia. Under the State Housing Act, 1946–1956 the State Housing Commission has two types of home ownership schemes in operation. These are—
(a) Freehold scheme on a mortgage or contract of sale basis; and (b) leasehold scheme on a perpetual Crown lease.

Under both schemes, the Housing Commission builds the houses on a contract basis—with the freehold scheme on land owned by the applicant or the Commission; with the leasehold scheme on land dedicated by the Crown for the purposes of the State Housing Act. With each scheme, the maximum loan granted is £2,500. Under the mortgage scheme a deposit of not less than 10 per cent. is required, but with the contract of sale or leasehold scheme a deposit of less than 10 per cent. may be accepted at the discretion of the Commission. The rate of interest chargeable in both cases is, at present, 5½ per cent. per annum. The repayment of the balance may be made over a maximum period of 45 years. An applicant's gross income is at present not to exceed £1,078 per annum plus £25 per year for each dependent child.

A second mortgage scheme also exists. This provides a maximum loan of £1,000 under the same conditions as above. The loan on a second mortgage, however, must not exceed the amount advanced under the first mortgage. The applicant has still to provide at least 10 per cent. of the cost of the house, which is not to exceed £3,000.

The number of houses completed in the post-war years under the above Act (to 30th June, 1957) was—leasehold, 1,966, freehold, 804, assistance by second mortgage, 273.

(vii) Tasmania. The Agricultural Bank is authorized under the terms of the Homes Act 1935 to make loans to eligible persons for home building on the security of a first mortgage over the property. A person to be eligible must be married or be about to marry or have dependants for whom it is necessary to provide a home. At present, there are no statutory limitations as to the maximum income which an eligible applicant may receive. However, it is the policy of the Bank not to make loans to persons who are well able to provide houses for themselves. The maximum amount which the Bank can lend at present is £3,300 on homes built in proclaimed brick areas, and £3,000 on timber houses. The rate of interest at present charged is 5½ per cent. per annum. As funds now coming to the Bank for the purposes of the Homes Act are provided under the 1956 Housing Agreement, the period of repayment is limited to 31 years.

5. War Service Homes.—The provision of War Service Homes is a function of the War Service Homes Division of the Department of National Development, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes.

The War Service Homes Act 1918–1956 is a measure for the provision of homes for Australian ex-servicemen who served during the 1914–1918 War or the 1939–1945 War and, subject to the statutory provisions of the Act, to persons with service in Korea or Malaya. Provision is made also for assistance to the female dependants of Australian ex-servicemen and other classes of eligible persons as defined in the Act. Assistance may be granted to an eligible person and the wife or husband of that person, as the case may be, as joint tenants.

The maximum amount of loan or advance which may be granted under the Act is £2,750. The period of repayment may be approved up to 45 years. In the case of a widow or widowed mother of an Australian ex-serviceman the period may be extended to a maximum of 50 years.

The War Service Homes Division does not provide homes for occupation on a purely enancy basis.

From the inception of operations under the War Service Homes Act to 30th June, 1957, (figures in parentheses indicate cases where eligibility has been established as a result of service during the 1939-45 War or in Korea or Malaya), 172,394 (121,272) applications were

approved; 64,962 (41,933) homes were built, or assistance to build them was given; 68,627 (52,935) homes were purchased; and 17,953 (14,377) mortgages were discharged. The total number of homes provided under the War Service Homes Act to 30th June, 1957, was 151,542, including 109,245 to persons who served during the 1939-45 War or in Korea or Malaya. In addition, the Division had approved 14,406 transfers and resales, of which 5,813 were in respect of persons whose eligibility had been established as a result of service during the 1939-45 War or in Korea or Malaya. Applications approved under the Commonwealth-State Housing Agreements of 1955 and 1956 numbered 1,142 (1,076) and homes purchased 945 (894).

During 1956-57, 13,959 (13,268) applications were approved; 4,187 (4,047) homes were built or assistance to build them was given; 5,813 (5,544) homes were purchased; and 1,227 (1,172) mortgages were discharged. The total number of homes provided during the year was 11,227 (10,763). Transfers and resales approved numbered 1,150 (1,019). Applications approved under the Commonwealth-State Housing Agreements of 1955 and

1956 numbered 561 (514) and homes purchased 519 (483).

At 30th June, 1957, 2,926 homes, including 709 group homes, were in course of construction; 1,182 contracts, of which 386 were for group homes, had been let but work had not started; and 557 tenders, including 10 for group homes, had been called but not finally dealt with. The majority of these homes are being provided for persons who served during the 1939-45 War.

The total capital expenditure from inception to 30th June, 1957, was £259,657,447, including £30,170,898 for 1956-57. Receipts from inception to 30th June, 1957, amounted to £107.644,245, including £12,690,264 during 1956-57. Of the total receipts, £54,727,682 had been paid to the National Debt Sinking Fund, including £5,660,230 for 1956-57.

At 30th June, 1957, the total amount of insurances in force, including cover notes, amounted to £321,201,766. During 1956-57, the premium income amounted to £239,305, and expenditure from the War Service Homes Insurance Trust Account to £163.074.

At 30th June, 1957, arrears of instalments outstanding amounted to £357,192, or 0.35 per cent. of the total instalments due.

- 6. Other Forms of Government Assistance.—(i) General. In addition to the assistance given to housing as outlined above, the Commonwealth and State Governments, through advances by Government Banks and the exercise of certain guarantees of the operations of Co-operative Terminating Building Societies by State Governments, further assist in making finance available for the erection and purchase of houses.
- (ii) Government Banks. The terms and conditions governing the making of advances may be altered from time to time; consequently, no attempt has been made to tabulate them. However, the usual loan for a house of solid construction (brick, etc.) is generally between £2,250 and £2,500. The average loan for a timber-frame house is £2,000. Interest rates charged average 5½ per cent. per annum. In some institutions this may be changed, usually after from 5 years to 10 years from the date of the loan. The maximum period of repayment ranges from about 20 years for timber-frame houses to 30 to 40 years for a house of solid construction.
- (iii) Building Societies. There are some 1,500 building societies in Australia, over 95 per cent. of which are of the terminating type. Most of the terminating societies are in New South Wales and Victoria, where the movement derives its strength from State legislation, under which the Government of the State guarantees loans made to the societies. Terminating societies also operate in Queensland, where legislation has recently been introduced to provide a government guarantee for loans made to them, and in Western Australia and Tasmania. A few terminating societies of the Starr-Bowkett type, an earlier and now less popular form of terminating society, operate in all States.

In addition to the terminating societies there are a number of permanent building societies operating in all States under State legislation. State Governments do not guarantee the borrowings of these societies, except in Western Australia, where the Housing Loan Guarantee Act, 1957 provides guarantees in respect of loans made by approved lending institutions, including permanent building societies.

#### § 3. Statistical Summary—New Building.

1. General.—The statistics in this section relate to the operations of private contractors, Government authorities and owner-builders, with the exception of those relating to employment, which exclude the numbers of persons working on owner-built houses. In general, they relate to new building only, and data on alterations, additions, renovations and repairs to buildings are excluded, because of the difficulty in obtaining complete lists of persons who engage in these operations. Figures for houses exclude converted military huts, flats and shop dwellings. Some houses built on farms are excluded but these do not affect the figures materially.

These statistics are available for each quarter from the September quarter, 1945.

More detailed information on building activity may be found in the Quarterly Bulletin of Building Statistics.

The following definitions of terms used in this section are necessary for interpretation of the data presented:—

Owner-built. An "owner-built" house is one actually erected or being erected by the owner or under the owner's direction without the services of a contractor who is responsible for the whole job.

Contract-built. Includes the operations of all building contractors and Government instrumentalities which undertake the erection of new buildings.

Commenced. A building is regarded as having been commenced when work on foundations has begun. Owing to the difficulty of defining the exact point that this represents in building operations, it is probable that the classifications made by informants are not entirely uniform.

Completed. A building is regarded as having been completed when the contractor has fulfilled the terms of the contract. As with commencements, the classifications made may not be entirely uniform.

Under Construction. A building under construction at the end of a period is so classified regardless of whether construction was actively proceeding on that particular date.

Employment. Figures relate to persons actually working on the jobs of contractors who undertake the erection of new buildings and of Government instrumentalities which erect new buildings on their own account. They include persons actually engaged on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and instrumentalities. The figures include working principals and their employees, men working as or for sub-contractors, and men temporarily laid off on account of weather.

Contractors are asked to give details of the persons employed on a specified day but, because of frequent movement between jobs and because some persons (such as electricians, etc.) may work on several jobs which are under construction simultaneously, some duplication may occur.

The figures exclude persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance. Values. All values shown exclude the value of land and represent the estimated value of buildings on completion.

2. New Houses.—(i) Commenced, Completed and Under Construction, 1952-53 to 1956-57. The next table provides a summary of the number of new houses commenced, completed and under construction in each State and Territory for the years 1952-53 to 1956-57.

## NEW HOUSES: NUMBER.

(Including Owner-built Houses.)												
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T. (a)	A.C.T.	Aust.			
			C	COMMENC	ED.							
1952-53 1953-54 1954-55 1955-56 1956-57	c 20,127   c 27,590   24,348   23,506   23,477	16,254 20,915 22,674 21,245 19,649	9,381 8,513 7,784 7,173 7,572	7,967 6,792 7,190 8,377 6,832	7,012 7,608 8,575 6,336 5,565	2,285 2,665 2,867 2,490 2,591	(d) (d) 249 341 251	528 355 640 499 509	c 63,554 c 74,438 74,327 69,967 66,446			
			C	COMPLET	ED.							
1952-53 1953-54 1954-55 1955-56 1956-57	24,890 26,513 28,882 26,369 22,267	21,241 21,593 23,839 22,652 20,185	10,598 8,961 7,925 7,396 7,217	8,940 7,522 7,323 7,721 7,193	7,965 7,627 8,792 7,760 5,030	3,314 2,630 2,480 2,721 2,759	(d) (d) 199 312 328	590 552 398 605 561	77,538 75,398 79,838 75,536 65,540			
	,	Under	Constru	CTION A	T END O	f YEAR.						
1952-53 1953-54 1954-55 1955-56 1956-57	c 23,593 c 24,670 20,136 17,273 18,483	21,675 20,995 19,827 18,399 17,863	3,918 3,470 3,329 3,106 3,461	6,464 5,750 5,602 6,252 5,854	5,951 5,932 5,715 4,284 4,819	2,114 2,149 2,536 2,305 2,137	(d) (d) 211 240 163	646 449 691 585 533	c 64,361 c 63,415 58,047 52,444 53,313			

<sup>(</sup>a) Includes flats.
(d) Not available.

<sup>(</sup>b) Excludes Northern Territory prior to 1954-55.

<sup>(</sup>c) Partly estimated.

(ii) Commenced, 1952-53 to 1956-57. The number of new houses commenced in each State and Territory by contractors and owner-builders is shown in the following table for the years 1952-53 to 1956-57.

NEW HOUSES COMMENCED: NUMBER.

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
			Cont	RACT-BU	ILT.(c)				
1952-53 1953-54 1954-55 1955-56 1956-57	 d 9,886 d 16,105 15,049 13,812 14,607	9,704 12,756 14,543 13,154 12,371	7,237 6,625 6,075 5,469 6,006	6,422 5,017 5,386 6,303 5,053	3,913 4,557 5,764 4,489 4,455	1,288 1,477 1,636 1,342 1,465	(e) (e) 221 283 177	483 332 600 410 408	d 38,933 d 46,869 49,274 45,262 44,542
	 		0,	WNER-BU	ILT.				
1952-53 1953-54 1954-55 1955-56 1956-57	 d 10,241 d 11,485 9,299 9,694 8,870	6,550 8,159 8,131 8,091 7,278	2,144 1,888 1,709 1,704 1,566	1,545 1,775 1,804 2,074 1,779	3,099 3,051 2,811 1,847 1,110	997 1,188 1,231 1,148 1,126	(e) (e) 28 58 74	45 23 40 89 101	d 24,621 d 27,569 25,053 24,705 21,904
				TOTAL.					
1952-53 1953-54 1954-55 1955-56 1956-57	 d 20,127 d 27,590 24,348 23,506 23,477	16,254 20,915 22,674 21,245 19,649	9,381 8,513 7,784 7,173 7,572	7,967 6,792 7,190 8,377 6,832	7,012 7,608 8,575 6,336 5,565	2,285 2,665 2,867 2,490 2,591	(e) (e) 249 341 251	528 355 640 499 509	d 63,554 d 74,438 74,327 69,967 66,446

<sup>(</sup>a) Includes flats. (b) Excludes Northern Territory prior to 1954-55. (c) Includes operations of Government Authorities. (d) Partly estimated. (e) Not available.

#### NEW HOUSES COMPLETED: NUMBER.

Year.	 N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
	 		Cont	RACT-BU	ILT(c).		,		
1952-53 1953-54 1954-55 1955-56 1956-57	 13,151 14,296 16,658 15,085 13,657	12,619 12,062 14,450 14,390 13,159	7,763 7,149 6,419 5,806 5,649	7,179 5,802 5,672 5,951 5,491	4,932 4,569 5,766 5,370 3,537	1,829 1,536 1,504 1,559 1,460	(d) (d) 174 259 262	568 530 369 575 505	48,041 45,944 51,012 48,995 43,720
			0	WNER-BU	ILT.				
1952–53 1953–54 1954–55 1955–56 1956–57	 11,739 12,217 12,224 11,284 8,610	8,622 9,531 9,389 8,262 7,026	2,835 1,812 1,506 1,590 1,568	1,761 1,720 1,651 1,770 1,702	3,033 3,058 3,026 2,390 1,493	1,485 1,094 976 1,162 1,299	(d) (d) 25 53 66	22 22 29 30 56	29,497 29,454 28,826 26,541 21,820
	 			TOTAL.					
1952-53 1953-54 1954-55 1955-56 1956-57	 24,890 26,513 28,882 26,369 22,267	21,241 21,593 23,839 22,652 20,185	10,598 8,961 7,925 7,396 7,217	8,940 7,522 7,323 7,721 7,193	7,965 7,627 8,792 7,760 5,030	3,314 2,630 2,480 2,721 2,759	(d) (d) 199 312 328	590 552 398 605 561	77,538 75,398 79,838 75,536 65,540

<sup>(</sup>a) Includes flats. (b) Excludes Northern Territory prior to 1954-55. (c) Includes operations of Government Authorities. (d) Not available.

<sup>(</sup>iii) Completed. (a) 1952-53 to 1956-57. The following table shows, for the years 1952-53 to 1956-57, the number of new houses completed in each State and Territory by contractors and owner-builders.

<sup>(</sup>b) Material of Outer Walls, 1956-57. The following table shows the number of new houses completed in each State and Territory during 1956-57, classified according to the material of their outer walls.

#### NEW HOUSES COMPLETED: NUMBER, 1956-57. (Including Owner-built Houses.)

Material of Outer Walls.	N.S.W	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
Brick, Brick Veneer, Concrete and Stone Wood (Weatherboard, etc.) Fibro Cement	4,492 6,667 11,079 29	7,040 11,627 1,128 390	513 5,138 1,495 71	35,776 127 1,281 9	2,938 27 2,060 5	703 1,975 81	40 5 , 281 2	454 104 .3	21,956 25,670 17,408 506
Total	22,267	20,185	7,217	7,193	5,030	2,759	328	561	65,540

(a) Includes flats.

(c) Material of Outer Walls, 1952-53 to 1956-57. The following table shows the number of new houses completed in Australia during each of the years 1952-53 to 1956-57, classified according to the material of their outer walls.

#### NEW HOUSES COMPLETED: NUMBER, AUSTRALIA.(a) (Including Owner-built Houses.)

Mater	ial of Out	er Walls.		1952–53.	1953–54.	1954-55.	1955-56.	1956–57.
Brick, Brick Vene Wood (Weatherb Fibro Cement Other		ete;and:Ste	one	23,865 32,140 20,700 833	.22,008 31,347 21;631 412	23,901 31,050 .24,501 386	23,523 29,389 22,071 553	21,956 .25,670 17,408 506
Total			••	77;538	75,398	79,838	75,536	65,540

(a) Excludes Northern Territory prior to 1954-55.

3. New Flats.—The figures in the foregoing tables, except those for the Northern Territory, do not include particulars of new flats. The summary below shows the number of new flats commenced, completed and under construction in each State and Territory for the years 1952-53 to 1956-57. It should be noted: (i) that the figures are additional to the numbers of houses shown in other tables, (ii) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, and (iii) that new flats only are included, i.e., the conversions of old buildings into flats are omitted.

### NEW FLATS: NUMBER.

				(Ind	ividual F	lats.)				
Year.	•	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
				С	OMMENCI	ED.				
1952-53 1953-54 1954-55 1955-56 1956-57		291 801 782 879 844	490 746 1,183 715 1,106	101 204 278 215 280	158 72 131 295	168 451 380 353 153	3 58 85 34 69	(a) (a) (b) (b) (b)	28 130 326 260	1,055 2,446 2,910 2,653 3,007
				C	OMPLETE	D.				
1952–53 1953–54 1954–55 1955–56 1956–57	::	1,664 1,011 701 776 861	692 689 781 1,273 899	53 .156 309 200 174	58 99 105 86 230	100 212 316 584 365	14 13 48 49 105	(a) (a) (b) (b) (b)	46  12  264	2,627 2,180 2,272 2,968 2,898
		1	Under-	Constru	CTION A	T-END C	F YEAR			
1952-53 1953-54 1954-55 1955-56 1956-57	••	891 678 739 :830 765	721 771 1,173 615 786	75 123 92 407 213	56 115 82 121 184	235 474 538 312 100	1 46 85 70 34	(a) (a) (b) (b) (b)	28 146 472 468	1,979 2,235 2,855 2,527 2,550

(a) Not available.

(b) Not available for publication. Included with houses.

4. Value of New Buildings.—(i) Commenced, Completed and Under Construction 1952-53 to 1956-57. The following table summarizes the values of all new buildings commenced, completed and under construction in each State and Territory for the years 1952-53 to 1956-57.

NEW BUILDINGS: VALUE.
(Including Estimated Value of Owner-built Houses.)
(£'000.)

					(* 000.)	<u> </u>				
Year.		N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
-				C	OMMENC	ED.				
1952-53 1953-54 1954-55 1955-56 1956-57		133,257	60,244 87,733 101,995 121,570 111,423	25,680 27,839 32,073 35,024 37,841	25,819 25,649 29,946 43,202 31,888	20,919 26,369 35,458 26,972 22,241	6,611 9,224 10,836 9,889 14,138	(c) (c) 1,605 2,300 1,765	2,788 2,856 5,932 4,708 5,959	b 211,055 b 288,773 339,196 376,922 361,053
		<u>'</u>		C	OMPLETE	D.	·			<u>`                                    </u>
1952–53 1953–54 1954–55 1955–56 1956–57		98,049 101,545 110,694 124,138 133,094	76,593 85,250 97,886 110,932 113,963	26,233 25,913 28,318 30,519 35,383	25,882 26,108 27,081 33,717 33,997	22,918 25,785 34,096 33,678 23,424	10,665 9,692 10,649 12,798 12,609	(c) (c) 1,653 1,935 2,285	2,875 3,878 2,943 4,287 5,940	263,215 278,171 313,320 352,004 360,695
			Under	Constru	CTION A	T END	of Year.			
1952–53 1953–54 1954–55 1955–56 1956–57		b 87,449 b 104,895 117,498 132,693 138,792	99,372 106,196 123,445	17,838 19,699 23,446 28,210 31,332	25,253 23,730 26,854 36,996 36,792	23,189 25,701 29,102 25,550 26,217	10,494 11,782 12,399 9,864 12,085	(c) (c) 1,573 1,967 1,555	7,161 7,249 10,643 11,240 11,520	b 264,523 b 292,428 327,711 369,965 384,674
(a) Exclu available.	des 1	Northern	Territory	prior to	1954-55	5.	(b) Partly	estimate	ed.	(c) Not

<sup>(</sup>ii) Completed, 1956-57. The following table shows the value of all new buildings completed in each State and Territory during 1956-57, according to the kind of building. It should be remembered that all values shown exclude the value of land and represent the estimated value of buildings on completion.

# NEW BUILDINGS COMPLETED: VALUE, 1956-57. (Including Estimated Value of Owner-built Houses.) (£'000.)

				(- 000)					
Kind of Building.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Houses—			'——		!				
Brick, Brick			<u>'</u>			İ			
Veneer, Con-									1
crete and	00.071	20 222	0.040	10.101	0.046	2 522	1.50		04.505
Stone Wood (Weath-	20,271	28,332	2,040	19,101	9,846	2,533	150	2,232	84,505
erboard, etc.)	20,980	33,998	13,245	417	(a)	5,192	(a)	434	74,361
Fibro Cement	27,162	2,385	3,534	3,261	4,613	132	1,181	137	42,286
Other	81	1,056		23	(a)		(a)		1,339
Total, Houses	68,494	65,771	18,983	22,802	14,527	7,857	1,378	2,679	202,491
•									
Flats	2,070	2,355	295	517	751	360	(b)	912	7,260
Hotels, Guest		i	i l				1		
Houses, etc	3,832	1,986	1,873	375	354	60	54	• • • • • •	8,544
Shops	5,477	3,572	1,547	651	733	493	130	132	12,735
Factories	20,461	16,598	1,400	2,024	1,105	622	51	174	42,435
Business Premises- Office	0.140	2045	1 770		1.001			4-3	1= = (1
Other	8,149 4,706	3,945 6,559	1,738 3,488	1,657 1.399	1,001 1,834	521 706	78 43	472	17,561
Today and a seri	5,555	4,853	1,502	1,568	581	660	3	111	18,846
Religious	1,359	1,061	253	338	384	22	[ ]		14,867 3,518
Health	4,271	3,751	1,713	1,453	574	543	160	1,308	13,479
Entertainment	7,271	3,,,,,	1,,,15	1,400	0,,	343	100	1,500	13,415
and Recreation	3,563	2,000	803	655	699	170	i j	li	7,935
Miscellaneous	5,157	1,512	1,788	558	871	595	391	152	11,024
Total, Other		1	!						
Buildings	64,600	48,192	16,400	11,195	8,897	4,752	907	3,261	158,204
Total, New									
Buildings	133,094	113,963	35,383	33,997	23,424	12,609	2,285	5,940	360,695
		*1 11			// V				

<sup>(</sup>a) Not available for publication.

<sup>(</sup>b) Included with houses.

(iii) Completed, 1952-53 to 1956-57. The following table shows the value of all new buildings completed in Australia for the years 1952-53 to 1956-57.

#### NEW BUILDINGS COMPLETED: VALUE.

(Including Estimated Value of Owner-built Houses.) (£'000.)

	Kind of	Building	; <b>.</b>		1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
Houses— Brick, Brick Wood (We Fibro Cem Other	atherboa		e and S	tone	75,139 73,341 39,896 2,165	73,304 75,187 44,813 1,020	82,917 79,100 54,141 1,013	86,336 80,473 51,184 1,443	84,505 74,361 42,286 1,339
Total,	Houses			••	190,541	194,324	217,171	219,436	202,491
Flats Hotels, Guest Shops Factories Business Pren	•••	, etc.		••	6,636 1,213 4,406 19,788	4,791 1,989 8,297 22,018	4,856 3,675 10,694 23,613	6,822 6,322 12,461 37,246	7,260 8,544 12,735 42,435
Office Other Educational Religious Health Entertainmen Miscellaneous	t and Re	creation			40,631	46,752	53,311	8,844 14,039 15,677 2,409 10,068 4,068 14,612	17,561 18,846 14,867 3,518 13,479 7,935 11,024
Total,	Other Bu	ildings	••		72,674	83,847	96,149	132,568	158,204
Total,	New Buil	ldings			263,215	278,171	313,320	352,004	360,695

5. Persons engaged in New Building.—(i) At 28th June, 1957. The following table shows, for each State and Territory, the numbers of tradesmen, contractors, sub-contractors and wage earners engaged on jobs carried out by builders of new buildings at 28th June, 1957.

# PERSONS ENGAGED ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS, 28th JUNE, 1957.

(Excluding Persons working on Owner-built Houses.)

Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Bricklayers Painters Electricians Plumbers	. 13,630 3,282 2,939 2,185 3,416	1,190 2,238	942 1,617 909 1,306	1,705 899 494 857	3,262 1,052 815 464 823	2,203 298 363 145 253	191 39 27 22 27	127	9,740 5,527 9,047
Other	6,774	5,074 4,081	3,089 1,828	1,960 1,793	1,676 1,347	938 484	56 22		19,945 14,985
Sub-contractors (a)	3,308 4,998 29,031		1,646	1,791	665 1,314 7,460	385 493 3,806	45 46 293	91 192 1,721	9,593 14,240 90,019
Total	. 37,337	30,543	18,425	11,036	9,439	4,684	384	2,004	113,852

(a) Actually working on jobs.

<sup>(</sup>ii) Summary, 1953 to 1957. The number of persons (including contractors and sub-contractors actually working on jobs) engaged in each State and Territory on jobs carried out by builders of new buildings is shown in the following table for each year from 1953 to 1957.

### PERSONS ENGAGED ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS.

(Excluding Persons working on Owner-built Houses.)

At 30th J	une—	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.(a)
1953	::	29,100	26,564	16,074	9,371	8,820	5,180	(b)	1,812	96,921
1954		33,574	28,476	17,269	10,038	9,245	4,826	(b)	1,341	104,769
1955:		34,981	32,396	18,655	10,876	10,437	5,904	425	1,913	115,587
1956 (c)		37,300	32,306	19,427	11,258	9,080	4,620	464	1,957	116,412
1957 (d)		37,337	30,543	18,425	11,036	9,439	4,684	384	2,004	113,852

(a) Excludes Northern Territory prior to 1955: (d) At 28th June:

(b) Not available:

(c) At 29th June.

### § 4. Census Dwellings.

1. Number of Dwellings.—The following table shows the number of occupied and unoccupied dwellings in the urban and rural areas of Australia at the Census of 30th June, 1954. (For definitions of "urban" and "rural" see para. 4, p. 569). As explained therein, the boundaries of the Metropolitan Urban and other divisions of State differ from census to census, and consequently accurate comparison cannot be made between figures for corresponding divisions. Moreover, the inclusion in the Other Urban Division in 1954 of the larger towns not separately incorporated has further reduced comparability. These factors should be borne in mind when referring to tables in this section showing divisions of State.

Occupied dwellings are classified into private and other dwellings (see para. 2, p. 667, for definitions of "private" and "other" dwellings). The term "unoccupied dwellings." is not synonymous with vacant houses and flats available for occupancy, but refers mainly to "week-end", holiday and other dwellings whose usual occupants were temporarily absent on the night of the Census; newly-completed dwellings awaiting occupancy are also included:

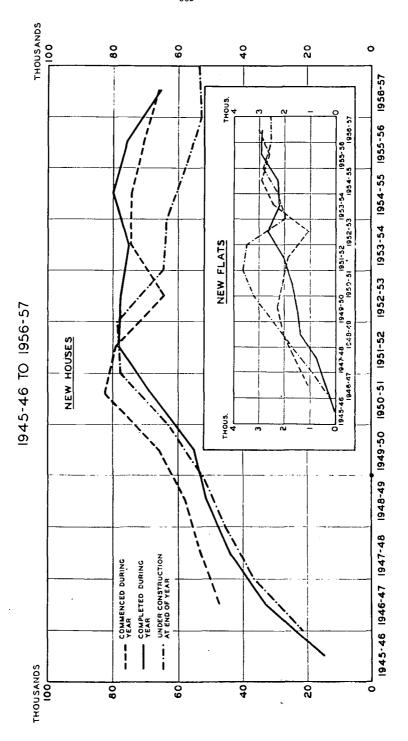
The total number of occupied dwellings in Australia at the Census of 30th June, 1954, showed an increase of 24.8 per cent. over the corresponding figure for the 1947 Census, compared with an increase of 18.6 per cent. in population. Occupied private dwellings increased by 25.1 per cent. and occupied dwellings other than private by 7.8 per cent. At the 1954 Census, 98.4 per cent. of the total occupied dwellings in Australia were private dwellings, compared with 98.2 per cent. in 1947. Proportional increases in total occupied dwellings over 1947 figures in each State and Territory were:—New South Wales 22.3 per cent., Victoria 25.3 per cent., Queensland 24.7 per cent., South Australia 27.7 per cent., Western Australia 30.5 per cent., Tasmania 26.1 per cent., Australian Capital Territory 96.9 per cent., and Northern Territory 27.1 per cent.

Unoccupied dwellings increased by 139 per cent.

# DWELLINGS: AUSTRALIA, CENSUS, 30th JUNE, 1954. (EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

			Occu	ipied.		Unocc	upied.	
División.				То	tal:			
		Private.	Other than Private.	Number.	Proportion of Total.	Number.	Proportion of Total.	
Urban— Metropolitan Other Rural		1,309,188 568,679 465,554	19,203 9,075 8,654	1,328,391 577,754 474,208	% 55.81 24.27 19.92	32,984 33,477 46,133	29.30- 29.73 40.97	
Total		2,343,421	36,932	2,380,353	100:00	112,594	100.00	

NEW HOUSES AND FLATS: AUSTRALIA



• • 

The total numbers of occupied and unoccupied dwellings in each State and Territory at the Censuses of 1947 and 1954 were as follows:—

DWELLINGS: STATES AND TERRITORIES, 1947 AND 1954.

(Excluding Dwellings Occupied Solely by Full-blood Aboriginals.)

State	r Territor	.,		Census, 30tl	h June, 1947.	Census, 30th June, 1954.			
State 0	i icinioi.	<b>,</b> .		Occupied.	Unoccupied.	Occupied.	Unoccupied		
New South Wales				746,343	17,392	912,877	42,831		
Victoria				527,406	11,412	660,690	27,491		
Queensland		• •		272,045	9,647	339,328	21,473		
South Australia				168,538	3,547	215,301	8,524		
Western Australia				124,767	2,606	162,823	6,614		
Tasmania				62,484	2,351	78,789	5,288		
Northern Territory				2,697	34	3,427	47		
Australian Capital T	erritory	••	• •	3,615	52	7,118	326		
Australia		••		1,907,895	47,041	2,380,353	112,594		

The numbers of occupied dwellings in the External Territories at the 1954 Census were as follows:—Norfolk Island, 310; Papua, 1,605; Trust Territory of New Guinea, 3,098; Trust Territory of Nauru, 99.

2. Class of Dwelling.—The following table shows the number of the various classes of occupied dwellings in the Metropolitan Urban, Other Urban and Rural Areas of Australia at the Censuses of 1947 and 1954. Definitions of the several classes of dwellings are as follows:—

Private dwellings comprise private houses (including sheds, huts, garages, etc. used for dwelling purposes), shares of private houses, flats, and rooms, apartments, etc. In previous censuses, dwellings returned on the Schedules as sheds, huts, garages, etc. were included with private houses. For the Census of 1954, particulars of these dwellings were tabulated separately, but have been included with private houses to preserve continuity with past census results. Separate particulars were shown in the 1947 Census publications for private houses which were shared by two or more family units and for which only one Householder's Schedule was received, but in 1954 these dwellings were included with private houses.

Share of private house is a portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was furnished.

Flat is part of a house or other building which can be completely closed off and which includes both cooking and bathing facilities.

Other private dwelling is an apartment, room(s), etc., which is part of a building, but which is not a self-contained unit.

Dwellings other than private include hotels, boarding houses, lodging houses, hostels, hospitals, educational, religious and charitable institutions, defence and penal establishments

It is desirable when considering the question of housing to exclude those forms of accommodation which do not represent the normal housing conditions associated with family life, and the statistics which follow relate mainly to private dwellings only.

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### OCCUPIED DWELLINGS ACCORDING TO CLASS, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

	Cei	nsus, 30th	June, 19	47.	Cen	sus, 30th	June, 195	4.	
Class of Occupied Dwelling.	Urba	n.(a)		Total.	Urban	.(a)		Total.	Increase, 1947-54.
	Metro- politan.	Other.	Rural. (a)	Aus- tralia.	Metro- politan.	Other.	Rural. (a)	Aus- tralia.	
Private House(b)— House	760,678	289,898	567,476	1,618,052	{1,067,674 14,259	506,128 12,276	433,069 22,613	2,006,871 49,148	
Total	760,678	289,898	567,476	1,618,052	1,081,933	518,404	455,682	2,056,019	437,967
Share of Private House(c) Flat	72,724 94,822 33,263	19,627 12,697 3,855	13,660 3,880 1,043	111,399	77,344 104,603 45,308	22,747 20,784 6,744	7,125 2,033 714	127,420	16,021
Total Private Dwellings	961,487	326,077	586,059	1,873,623	1,309,188	<b>5</b> 68,679	465,554	2,343,421	469,798
Caretaker's Quarters Licensed Hotel Boarding House, etc Educational Institution	1,110 1,686 15,302 449	279 1,776 3,367 290	352 2,854 2,512 389		998 1,720 14,110 523	264 2,457 4,120 488	194 2,015 1,041 251	6,192	
Religious Institution (non-educational) Hospital	85 543	21 368	42 593	148 1,504		31 517	24 353	197 1,429	49 -75
Charitable Institution (other than Hospital) Other	206 552	72 293	128 1,003		299 852	107 1,091	104 4,672		104 4,767
Total Dwellings Other than Private	19,933	6,466	7,873	34,272	19,203	9,075	8,654	36,932	2,660
Total Occupied Dwellings	981,420	332,543	593,932	1.907,895	1,328,391	577,754	474,208	2,380,353	472,458
Total Occupied Dwel- lings per square mile	711.92	121.89	0.20	0.64	592.88	123.44	0.16	0.80	0.16
Wagon, Van, etc. (in- cluding campers-out)	847	1,029	3,997	5,873	2,693	3,605	5,383	11,681	5,808

(a) See letterpress on p. 664 regarding comparability as between Censuses. (b) Includes shared private houses for which only one Householder's Schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

Note.—Minus sign (-) denotes decrease.

3. Population According to Class of Dwelling, etc.—The following table shows the number of the various classes of occupied dwellings at the Censuses of 1947 and 1954, together with the number of inmates therein.

Of the total population in 1954, 92.52 per cent. were living in private dwellings—houses, flats, apartments, rooms, etc.—whilst 672,168 persons, or 7.48 per cent. of the population, spent the night in other than private dwellings, or on ships, trains or aircraft or were camping out.

# OCCUPIED DWELLINGS, ETC. AND INMATES, AUSTRALIA, 1947 AND 1954. (EXCLUDING FULL-BLOOD ABORIGINALS AND DWELLINGS OCCUPIED SOLELY BY THEM.)

	Census, 3	Oth June, 1	947.	Census	, 30th June,	1954.
Particulars.	Number	Inm	ates.	Number	Inma	tes.
	of Dwellings.	Number.	Proportion of Total.	of Dwellings.	Number.	Proportion of Total.
D			%		-	%
Private House(a)— House	}1,618,052	6,323,621	83.43	{2,006,871 49,148		82.89 1.49
Total	1,618,052	6,323,621	83.43	2,056,019	7,583,165	84.38
Share of Private House(b)	106,011 111,399					3.23 3.67
Other	38,161		1	, ,	, ;	1.24
Total Private Dwellings	1,873,623	7,026,760	92.71	2,343,421	8,314,362	92.52
Dwellings Other than Private	34,272	520,204	6.86	36,932	618,743	6.89
Total Occupied Dwellings	1,907,895	7,546,964	99.57	2,380,353	8,933,105	99.41
Wagon, Van, etc Migratory(c)	5,873	13,791 18,603			30,056 23,369	0.33 0.26
Total		7,579,358	100.00		8,986,530	100.00

<sup>(</sup>a) Includes shared private houses for which only one Householder's Schedule was received.

(b) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

(c) Shipping, railway and air travellers.

Wood has been the most extensively used material in the construction of the outer walls, followed by brick and fibro cement, and in 1954 the respective proportions for Australia for occupied private dwellings for which the material of the outer walls was specified were—wood, 44.4 per cent., brick, 33.5 per cent. and fibro cement, 12.7 per cent. The latter has shown a most spectacular increase since 1933, when the proportion was 1.6 per cent. (23,696 dwellings), compared with 6.3 per cent. in 1947 (117,631 dwellings). The proportions of both brick and wooden dwellings have shown small decreases since 1947. The numbers of dwellings of all other materials except fibro cement and concrete have decreased. Brick dwellings in 1954 represented 51.5 per cent. of all occupied private dwellings in the Metropolitan Urban Divisions, whilst in the Other Urban and Rural Divisions wooden dwellings predominated, the percentages of such dwellings being 60.0 per cent. and 59.4 per cent. respectively.

<sup>4.</sup> Occupied Private Dwellings.—(i) Material of Outer Walls. In the following table, occupied private dwellings are classified according to the material of which the outer walls were built.

## OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO MATERIAL OF OUTER WALLS, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

	Ce	nsus, 30th	June, 194	17.	Ce	nsus, 30th	June, 19	54.	1
Material of Outer Walls.	Urba	ın.(a)		Total,	Urba	n.(o)		Total,	Increase, 1947-54.
	Metro- politan.	Other.	Rural.	Aus- tralia.	Metro- politan.	Other.	Rural.	Aus- tralia.	
Brick Stone	551,618 36,714		38,179 37,573	650,012 87,696	674,165 35,907	86,254 18,049	25,089 33,604	785,508 87,560	
Concrete	10,442	5,411	13,283	29,136	24,299	13,497	13,639	51,435	22,299
Wood	315,567	204,863	364,221	884,651	422,010	341,145		1,039,739	
Iron, Tin	6,087	14,498	45,347	65,932		19,652	31,177	58,216	
Fibro Cement	31,924	23,586	62,121	117,631	140,542	84,835	71,176	296,553	178,922
Calico, Canvas,		4 500		15 450	426	1.042			7 776
Hessian	656		13,255			1,843		7,715	- 7,735
Other	4,430	1,774 782	9,902		3,644 808	2,686 718	7,750	14,080	- 2,026 - 4,394
Not Stated	4,049		2,178				1,089	2,615	
Total	961,487	326,077	586,059	1,873,623	1,309,188	568,679	465,554	2,343,421	469,798

(a) See letterpress on p. 664 regarding comparability as between Censuses.

Note.-Minus sign (-) denotes decrease.

(ii) Number of Rooms. For Census purposes, the kitchen and any permanently enclosed sleep-out were included in the number of rooms in the dwelling, but the bathroom, pantry, laundry and storehouse were excluded unless generally used for sleeping.

Excluding houses with rooms unspecified, private houses of four, five and six rooms represented 78.3 per cent. of the total number of private houses in Australia at 30th June, 1954, compared with 79.2 per cent. in 1947, and three-quarters of the total increase in the number of private houses since 1947 consisted of houses containing these numbers of rooms. Houses of seven and more rooms also showed substantial increases.

# OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1947 AND 1954.

(Excluding Dwellings Occupied Solely by Full-blood Aboriginals.)

		Census,	30th June	, 1947.			Census, 3	30th June,	1954.	
Number of Rooms(a) per Dwelling.	Private House. (b)	Share of Private House.	Flat.	Other.	Total Private Dwell- ings.	Private House. (b)	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.
			Me	ropolit	an Urb	an.(d)				
1 2 3 4 5	2,913 5,493 27,929 153,385 271,401 203,942 61,279 20,078 6,888 5,826 1,544	17,360 18,433 13,917 7,776 3,539 1,106 317 103 49	1,055 5,850 20,505 37,406 20,338 6,967 1,572 470 147 86,426	11,263 13,035 5,495 1,923 508 210 35 9 1	24,778 41,738 72,362 206,631 300,023 214,658 63,992 20,874 7,139 5,961 3,331	17,177 39,250 192,237 377,643 302,004	17,018 18,164 13,477 9,176 5,734 2,095 869 264 111	678 5,723 21,614 40,911 23,221 9,073 2,098 685 213 83 304	15,186 16,126 7,841 3,176 1,175 594 193 92 41 14 870	
Total Private Dwellings  Average number of Roomsa per Private Dwelling	760,678 5.28		94,822	33,263 2.02		1,081,933 5.32		104,603 4.16		1,309,188 5.00

For footnotes see next page.

## OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF ROOMS, AUSTRALIA, 1947 AND 1954—continued.

	OF	KOOM	S, AUS	KALI	A, 1947	AND 19	54—cont	inued.		
		Census	, 30th Jun	ie, 1947.		:( ;)	Census	, 30th Jun	e, 1954.	
Number of Rooms(a) per Dwelling.	Private House. (b)	Share of Private House.	Flat.	Other.	Dataman	Private House.	Share of Private House. (c)	Flat.	Other.	Total Private Dwell- ings.
			·	Отнег	URBAN	.(d)				·
1 2 4	3,788 5,014 10,860 61,611 107,482 69,714 20,211 6,470 .2,158 1,543 1,047	4,788 4,903 3,902 2,208 873 249	85 901 3,285 4,671 2,610 803 182 -60 20 12 68	956 1,396 904 390 83 37 4 	12,099 19,952 70,574 112,383 71,427 20,646 6,607 2,207 1,568	11,669 20,429 98,504	2,232 5,446 5,854 4,254 2,565 1,399 485 163 56 32 261	5,121 7,910 4,098 1,522 392 112 28	1,068 2,374 1,907 899 293 84 24 6 6 3	20,942 33,311 111,567 193,044 135,578 42,267 13,654 4,426 3,255
Total Private Dwellings	289,898	19,627	12,697	3,855	326,077	518,404	22,747	20,784	6,744	568,679
Average num- ber of Roomsa per Private Dwelling	5.12	3.15	3.99	2.30	4.92	5.18	3.31	4.03	2.:61	5.04
				R	URAL.(d)					
1	23,808 21,942 37,929 134,898 163,621 110,130 41,390 16,619 6,089 7,095 3,955	1,340 3,279 3,608 2,959 1,509 570 184 63 20 26	33 325 1,048 1,353 741 246 63 37 6 2 26	160 314 324 182 40 5 1	25,860 42,909 139,392 165,911 110,951 41,638 16,719 6,115 7,123	12,976 16,271 27,458 89,397 128,313 99,843 43,694 19,111 7,532 8,759 .2,328	544 1,297 1,698 1,553 987 530 208 98 21 20 169	10 157 535 727 382 157 35 9 3 3 15	82 175 207 175 52 9 1 2	13,612 17,900 29,898 91,852 129,734 100,539 43,938 19,220 7,556 8,783 2,522
Total Private Dwellings	567,476	13,660	3,880	1,043	586,059	455,682	7,125	2,033	714	465,554
Average number of Rooms a per Private Dwelling	4.90	3.23	3.95	2.66	4.85	5.19	3.62	4.00	2.98	5.16
			T	OTAL,	AUSTRALI	Α.				
1	30,509 32,449, 76,718 349,894 542,504 383,786 122,880 43,167 15,135 14,464 6,546	13,305 25,427 26,944 20,778 11,493 4,982 1,539 457 152 88 846	1,173 7,076 24,838 43,430 23,689 8,016 1,817 567 173 100 520	12,379 14,745 6,723 2,495 631 252 40 9	57,366 79,697 135,223 416,597 578,317 397,036 126,276 44,200 15,461 14,652 8,798	24,052 45,117 87,137 380,138 692,044 534,420 181,312 64,092 22,430 20,808 4,469	12,129 23,761 25,716 19,284 12,728 7,663 2,788 1,130 341 163 1,513	769; 7,333, 27,270 49,548 27,701 10,752; 2,525; 806, 244, 98 374	16,336 18,675 9,955 4,250 1,520 687 218 100 47 18 960	53,286 94,886 150,078 453,220 733,993 553,522 186,843 66,128 23,062 21,087 7,316
Total Private Dwellings	1,618,052	106,011	111,399	38,161	1,873,623	2,056,019	107,216	127,420	52,766	2,343,421
Average number of Roomsa per Private Dwelling	5.12	3.16	4.06	2.07	4.88	5.26	3.38	4.14	2.22	5.04

<sup>(</sup>a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse, unless generally used for sleeping. (b) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received. (c) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received. (d) See letterpress on p. 664 regarding comparability as between Censuses.

(iii) Number of Inmates. A classification of occupied private dwellings according to the number of inmates is shown in the following table.

For Australia as a whole, private houses with four inmates were most numerous, followed very closely by those with two and three inmates in that order.

An increase of nearly 51 per cent. (149,348 houses) in the number of private houses occupied by two inmates brought this group from third position in 1947 to second position in 1954. Houses with two inmates in 1954 constituted 22 per cent. of the total number of occupied private houses in Australia, about the same proportion as for houses with four inmates. In 1947, houses with two inmates constituted 18 per cent. of the total and houses with four inmates 21 per cent. Houses with three inmates constituted 21 per cent. at both the 1947 and 1954 Censuses. The average number of inmates in private houses was 3.69 in 1954, compared with 3.91 in 1947.

The number of private houses which were shared, and for each share of which a separate Householder's Schedule was furnished, increased slightly between 1947 and 1954, but the average number of inmates therein decreased from 2.87 to 2.71. Separate particulars of shared houses for which only one Householder's Schedule was furnished were not compiled in 1954. These particulars are included with private houses in all tables in this section.

Flats and other classes of private dwellings increased in both numbers and total inmates, but the average number of inmates fell from 2.84 to 2.58 for flats and from 2.18 to 2.11 for others.

In flats those with two inmates and in other classes of occupied private dwellings those with one inmate predominated.

#### OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES, AUSTRALIA, 1947 AND 1954.

(Excluding Dwellings Occupied Solely by Full-blood Aboriginals.)

		Census,	, 30th <b>J</b> ui	ne, 1947.	!		Census,	30th Jur	ne, 1954.	
Number of Inmates per Dwelling.	Private House.	Share of Private House. (b)	Flat.	Other.	Total Private Dwell- ings.	Private House. (a)	Share of Private House. (b)	Flat.	Other.	Total Private Dwell- ings.
			M	[ETROPOL	ITAN UE	BAN.(c)				
1	29,205 135,257 172,288 178,144 117,858 64,385 32,669 16,973 6,911 6,988	24,144 17,901 10,193 4,562 2,098 985 496 146	12,158 33,104 25,646 14,827 5,812 2,051 775 306 80 63	11,357; 5,689 2,404 977 339 153	65,705 203,862 221,524 205,568 129,209 68,873 34,582 17,845 7,160 7,159	75,493 33,245 15,107 5,983	26,497 16,400 9,917 4,449 2,033 891 448 115	19,345 41,373 23,793 12,926 4,743 1,604 549 186 55 29	6,356 3,295 1,229 488 218	79,618
Total Private Dwellings	760,678	72,724	94,822	33,263	961,487	1,081,933	77,344	104,603	45,308	1,309,189
Total In- mates	3,008,429	203,390	265,259	70,594	3,547,672	3,944,181	204,571	<b>264,</b> 646	92,576	4,505,974
Average number of Inmates per Private Dwelling	3.95	2.80	2.80	2.12	3.69	3.65	2.64	2.53	2.04	3.44

For footnotes see next page.

# OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NUMBER OF INMATES, AUSTRALIA, 1947 AND 1954—continued.

<u>-</u>	UF	INMAI	Lo, AU	JI KAL	174, 174	ANDI	> J4-CO	niinuea.		
		Census	, 30th Jur	ie, 1947.			Census	, 30th Ju	ne, 1954.	
Number of Inmates per Dwelling.	Private House.	Share of Private House. (b)		Other.	Total Private Dwell- ings.	Private House. (a)	Share of Private House. (b)	Flat.	Other.	Total Private Dwell- ings.
		· -		OTHER	Urban.	(c)	·			·
1	18,520 53,774	2,838	1,229	941	23,528	39,178 112,952	4,609	2,945	1,883 2,21	48,615 129,727
2 ··· ··· ··· ···	53,774	6,107 4,853	4,043 3,328	1,326 870	23,528 65,250 69,975	112,952 107,678	7,231 4,986	7,333 5,085	2,211 1,389	129,727   119,138
4	61 336	2 889	2,318	424	66,967	71 110 077	3 056	3,161	175€	116,995
5 6	42,519 24,827 13,595	1,477 734	1,021 406	174 64	26,031	73,416 39,436 18,961 9,348 3,777	1,479 768	1,383 557	132	40,893
7	13,595	377 219	203 89	33 17	14,208	18,961	353 166	211 60	51 21	19,576
9	7,636 3,266	69	34	4	3,373	3,777	56	32	11	3,876
10 and over	3,501	64	26	2	_ 3,593	3,636	43	17	12	3,708
Total Private Dwellings	289,898	19,627	12,697	3,855	326,077	518,404	22,747	20,784	6,744	568,679
Total In-		<u> </u>				11				
mates	1,140,137	58,651	38,823	9,579	1,247,190	1,913,307	63,029	58,201	16,430	2,050,967
Average num-	1	1			1	1				1
ber of Inmates per Private		]			i					
Dwelling	3.93	2.99	3.06	2.48	3.82	3.69	2.77	2.80	2.44	3.61
<del></del>	<u> </u>	<u> </u>	<u> </u>	Drn	RAL.(C)	11			1	1
	li .		1	- Koi		1 1				
1	60,330 105,800 109,182 107,455 78,714	1,922 3,788 3,444 2,296	357	187 337	62,796 111,115	46,108	964 1,898	217 597	105 167	47,394 91,074
ž	105,800	3,788 3,444	1,190 1,050	284	113.960	86.142	1.534	473	159	88.308
4	107,455	2,296 1,141	693 335	116	110,560 80,263	89,458 65,284	1,285 745	381 209	134 71	91,258 66,309
6	11 48.670	3//	155	73 21	49,423	39,762	370	102	34	40,268
7	27,531 15,958	283 147	57 29	15	27,886	( 20.749	185¦ 90	36 10	25 14	20,995 10,902
š :: ::	6,487 7,349	29	8	]	16,143 6,524 7,389	10,788 4,508	36	5	3	4,552
10 and over	7,349	33	6	[	7,389	4,471	18	3	2	4,494
Total Private Dwellings	567,476	13,660	3,880	1,043	586,059	455,682	7,125	2,033	714	465,554
Total In-				0.005			- '		2 247	
mates	2,175,055	41,955	12,033	2,855	2,231,898	1,725,677	22,979	6,418		1,757,421
Average num-	<u> </u>	1		:	1	ŀ		1		
ber of Inmates per Private	1 1		ľ	1	;	i ·	;			
Dwelling	3.83	3.07	3.10	2.74	3.81	3.79	3.23	3.16	3.29	3.77
	<i>i</i> ,	·	<del>';</del>	TOTAL,	AUSTRAL	IA.			<del></del>	
1	108,055	16,870	13 744	13,360	152,029	147,308	22,082	22 507	21,191	213,088
2	294,831	34 030	13,744 38,337 30,024	13 020	380.227	444 179	35,626	22,507 49,303	16,678	545 786
	294,831 342,394 346,935	26,198 15 378	30,024 17,838	6,843	405,459 383,095	435,679 446,687 291,706	22,920 14,258	29,351 16,468	16,678 7,904 4,185	495,854
5	11 239.0911	26,198 15,378 7,180	7,168 2,612	2,944 1,224	254.663	291,706	6,673	6,335 2,263	1,5/8	495,854 481,598 306,292
6	137,882 73,795	3,409 1,645	2,612 1,035	424 201	144,327 76,676	154,691 72,955	3,171 1,429	2,263° 796'	654 294	160,779 75,474
8	40,567	862	424	96	41,949	35,243	704	256	160'	36,363
9 10 and over	16,664 17,838	244 186	122 95	27, 22,	17,057 18,141	14,268 13,303	207 146	92 49	67 55	14,634 13,55 <b>3</b>
Total Private Dwellings	1,618,052	106,011	111,399			2,056,019	107,216	127,420		2,343,421
Total In-										
mates	6,323,621	303,996	316,115	83,028	7,026,760	7,583,165	290,579	329,265	111,353	8,314,362
Average num-	ļ į	1	1	1				Ì	}	
ber of Inmates   per Private		i	1	Ì		1	. 1			_
Dwelling	3.91	2.87	2.84	2.18	3.75	3.69	2.71	2.58	2.11	3.55
	··		<u>`</u>			·		!		

<sup>(</sup>a) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received.

(b) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

(c) See letterpress on p. 664 regarding comparability as between Censuses.

Total Private Dwel-

lings ..

289,898

19,627.

12,697

(iv) Nature of Occupancy. At the 1954 Census, 52.5 per cent. of occupied private houses in Australia for which particulars were supplied were occupied by owners, 16.8 per cent. by purchasers by instalments, 28.1 per cent. by tenants, and 2.6 per cent. by others. The corresponding percentages in 1947 were—owners, 50.5 per cent; purchasers by instalments, 9.0 per cent; tenants, 37.6 per cent; and others, 2.9 per cent. Owner-occupied houses in Australia increased by 33.4 per cent. between 1947 and 1954, and those being purchased by instalments by 139.3 per cent., the increase in these two groups combined being nearly 50 per cent., while tenant-occupied houses decreased by 4.1 per cent.

In the Metropolitan Areas, 70.5 per cent. of all occupied private houses were either owner-occupied or being purchased by instalments, as compared with 69.0 per cent. in the Other Urban areas, and 66.9 per cent. in the Rural Areas.

Tenants occupied by far the greater proportion of flats and other private dwellings.

## OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY, AUSTRALIA, 1947 AND 1954.

(EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

	  - 	Census,	30th June	, 1947.			Census,	30th Jun	1954.	
Nature of Occupancy.	Private House. (a)	Share of Private House. (b)	Flat.	Other:	Total Private Dwell- ings	Private House.	Share of Private House. (b)	Flat.	Other.	Total. Private Dwell- ings.
			Metro	POLITAN	Urban.	(c)				
Owner Purchaser by Instal-	325,942	13,401	8,368	617	348,328	512,632	19,525	12,272	1,899	546,328
ments	95,232	2,562	370	86	98,250	249,018	5,777	1,503	481	256,779
Housing)( $d$ )	} 328974	55,776	84,889	31,890	501,529	48,011	379	4,127	1,795	54,312
Tenant Caretaker Other Methods of	4,350		624	228	5,507	~259955 6,617		85,530 681	40,267 391	435,885 8,138
Other Methods of Occupancy Not[Stated	2,694 3,486		290 281	202 240	3,315 4,558	3,682 2,018		322 168	211 264	4,66 3,08
Total Private Dwellings	750,678	72,724	94;822	33,263	961,487	1,081,933	77,344	104,603	45,308	1,309,18
			C	THER U	RBAN.(c)					
Owner Purchaser by Instal-	146,329	4,091,	1,677	141	152,238	279,042	6,469	3,271	426	289,20
ments ,.	25,712	580	84	16	26,392	77,063	1,158	280	70	78,57
Tenant (Governmental Housing)(d)	ر 109027	14,448	10,712	3,594	137,781	\$ 27,414 122146		712	83	28,32
Tenant	3,685		109	48		5,715		16,214 184	6,043 67	158,77 6,15
Other Methods of	2,232	. 53	53	13	2,351	4,440	150	81	28	4,69

For footnotes see next page.

3,855

326,077

518,404

20,784

6,744 568,679

22,747

Census, 30th June, 1954.

#### OCCUPIED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO NATURE OF OCCUPANCY, AUSTRALIA, 1947 AND 1954—continued.

Census 30th June, 1947.

20,571

24,349

1,618,052

Not Stated

Occupancy

lings ...

Other

Methods

Total Private Dwel-

of

. .

1,289

106,011

360

3721

111,399

Nature of Occupancy.	Private House. (a)	Share of Private House. (b)	Flat.	Other.	Total Private Dwell- ings.	Private House. (a)	Share of Private House. (b)	Flat.	Other.	Total Private Dwell- ings,
				Rura	L.(c)					
Owner	333,131	3,641	635	52	337,459	283,022	2,778	431	47	286,278
Purchaser by Instal- ments	22,650	330	49	6	23,035	17,544	164	33,	2	17,743
Tenant (Governmental Housing)(d) Tenant Caretaker Other Methods of	}160,572 17,528	1 1	3,107 43	960 10	173,440 17,838	{ 16,543 99,712 12,975	66 3,464 137	96 1,398 23	35 625 2	16,740 105,199 13,137
Other Methods of Occupancy Not Stated	15,645 17,950		17 29	4 11 ———	15,855 18,432	19,163 6,723	271 245	32	2 1	19,468 6,989
Total Private Dwellings	567,476	13,660	3,880	1,043	586,059	455,682	7,125	2,033	714	465,554
			To	TAL, AU	ISTRALIA.					
Owner	805,402	.21,133	10,680	810	838,025	1,074,696	28,772	15,974	2,372	1,121,814
Purchaser by Instal- ments	143,594	3,472	503	108	147,677	343,625	7,099	1,816	553	353,093
Tenant (Governmental Housing)(d) Tenant Caretaker	}598,573 25.563	79,025 721	98,708 776	36,444 286	812,750 27,346	91,968 481,813 25,307	67,964	4,935 103,142 888	1,913 46,935 460	99,376 699,854 27,427

219

294

26,304

38,161 1,873,623 2,056,019

1,180

107,216 127,420

230

52,766 2,343,421

28.830

(v) Weekly Rent. (a) All Tenanted Private Dwellings. The following table shows tenanted private dwellings in the Metropolitan Urban, Other Urban and Rural Areas of Australia classified according to weekly rent (unfurnished).

Information tabulated concerning rents was restricted to the actual rent paid per week by tenants for unfurnished private dwellings. Particulars of rents shown in the following tables are therefore on an *unfurnished* basis. Dwellings shown as rent "Not Stated" include those whose rents were shown on Householders' Schedules on a furnished basis, and those whose rents were not applicable (e.g., for shop and dwelling combined). In this section information on "tenanted private dwellings" relating to the 1954 Census excludes particulars of dwellings occupied by "Tenants" (Governmental Housing) in each State, i.e., those who furnished answers in response to the instruction on the Census Householder's Schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'". For the Australian Capital Territory and the Northern Territory, particulars of all tenanted private dwellings are included. Particulars for the 1947 Census relate throughout to all tenanted private dwellings.

<sup>(</sup>a) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received.

(b) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

(c) See letterpress on p. 664 regarding comparability as between Censuses. (d) These figures were compiled from the answers furnished in response to the instruction on the Householder's Schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'".

# TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED), AUSTRALIA, 1947 AND 1954.

### (EXCLUDING DWELLINGS OCCUPIED SOLELY BY FULL-BLOOD ABORIGINALS.)

	C	Census, 30th	June, 19	47.	Census, 30th June, 1954.(a)					
Weekly Rent (Unfurnished).	Private House. (b)	Share of Private House.(c)	riat.	Total Tenanted Private Dwellings.	Private House. (b)	Share of Private House.(c)	Flat.	Other.	Total Tenanted Private Dwellings.	

### METROPOLITAN URBAN.(e)

Under 5s	303	77	20	456	206	64	29	70	369
5s. and under 10s.	2,992	1,157	110	4,664		238	51	97	1,676
10- 15-	22,678	4,551	626	28,903		1,231	171	403	10,097
150 " 200	44,526	4.984	1.847	53,095		1,486	461	556	19,183
200 " 250	68,155	7,272	5,342	82,739		3,634	1,582	1,191	39,610
250 200	67,162	6,308	8,520	83,418		3,037	3,252	1,144	43.813
30s. " " 35s.	48,973	4,979	13,045	67,933		4,573	6,332	1,541	50,058
250 100	23,343	2,201	12,468	38,456		2,298	8,371	837	37,029
	15,745	1,636	14,242	31,958		4,517	16,250	1,470	56,284
		467	5.489	10,854		2,327	10,642	855	28,102
50s. " " 60s.	4,778 1,883		2,226	4,309	9.327	1,523	6,294	584	17,728
60s. " " 70s.		151 45	1.047	1.815		602	3,163	286	8,338
70s. " " 80s.	702							167	5,466
80s. ,, ,, 90s.	446	11	621	1,084	2,679	421	2,199		
90s. ,, ,, 100s.	206	19	271	487	940	116	1,283	66	2,405
100s, and over	440	10	679	1,129		282	3,398	165	6,722
Not Stated	26,642	21,918	18,336	90,229	36,062	23,900	22,259	30,844	113,065
Total Tenanted Pri-	- <del></del>								
vate Dwellings	328,974	55,776	84,889	501,529	263,683	50,249	85,737	40,276	439,945
Average Weekly Rent (Unfurnished) per									
Private Dwelling	25s. 9d.	23s. 6d.	37s. 9d.	27s. 5d.	34s. 10d.	35s. 8d.	51s. 11d.	37s. 4d.	38s. 3d.

### OTHER URBAN.(e)

Under 5s. 5s. and under 10s. 10s. 10s. 15s. 15s. 20s. 20s. 30s. 30s. 30s. 30s. 40s. 40s. 40s. 50s. 70s. 70s. 70s. 80s. 90s.	775 3,404 13,840 18,751 24,555 18,296 10,582 3,312 2,148 477 155 56 29	1,385 1,894 1,305 784 213 131 26	584 1,651 1,331 1,225 685		15,650	33 190 596 544 1,159 896 1,360 501 1,181 578 287 75	18 109 226 594 914 1,346 1,001 1,834 1,181 659	25 61 136 141 282 294 316 214 321 192 97 37	440 2,295 7,787 10,215 17,685 16,213 18,766 10,164 16,476 8,600 5,505 2,441 1,059
Not Stated  Total Tenanted Private Dwellings  Average Weekly Rent (Unfurnished) per Private Dwelling	12,627 109,027 21s. 6d.	6,229 14,448 19s. 3d.		25,473 ————————————————————————————————————	ļ	6,865 14,368 31s. 1d.	·	3,903 6,048 32s. 6d.	40,559 159,277 32s. 8d.

For footnotes see next page.

## TENANTED PRIVATE DWELLINGS CLASSIFIED ACCORDING TO WEEKLY RENT (UNFURNISHED), AUSTRALIA, 1947 AND 1954—continued.

RE	NT (UNF	URNISH	ED), AU	STRALIA	A, 1947 A	ND 1954	-continue	d.	
·	c	ensus, 30th	June, 1947	7.		Census,	30th June,	1954.(a)	
Weekly Rent (Unfurnished).	Private House. (b)	Share of Private House.(c)	Flat.	Total Tenanted Private Dwellings. (d)	Private House. (b)	Share of Private House.(c)	Flat.	Other.	Total Tenanted Private Dwellings.
				Rural.(e	)				
Under 5s. 5s. and under 10s. 10s. 10s. 10s. 15s. 15s. 15s. 20s. 20s. 20s. 20s. 30s. 30s. 30s. 30s. 30s. 30s. 35s. 40s. 50s. 50s. 50s. 50s. 10s. 10s. 10s. 10s. 10s. 10s. 10s. 1	5,758 19,212 30,873 21,598 19,506 9,469 5,075 1,315 1,109 318 134 28 21 2 14 46,140	137, 758 1,276 877; 957; 444 247, 57; 49; 97; 31 2: 	4 40 199 288 428 301 213 76 89 26 9 21 	32,405 22,816 20,951 10,253 5,557	1,266 6,437 10,356 7,920 11,644 5,850 5,622 1,670 3,682 1,560 981 359 248 75 206 42,003	29 132 240 177 282 147 190 49 129 58 20 8 4 2 6 1,991	129 88	49	1,310 6,593 10,684 8,170 12,136 6,112 5,943 1,772 3,931 1,683 1,033 375 259 77 214 45,079
vate Dwellings	160,572	8,801	3,107	173,440	99,879	3,464	1,400	625	105,368
Average Weekly Rent (Unfurnished) per Private Dwelling	15s. 6d.	15s. 11d.	23s. 4d.	15s. 7d.	22s. 0d.	23s. 4d.	30s. 10d.	25s. 2d.	22s. 2d.
	9		Тота	L, AUSTRA	LIA.				,
Under 5s.  5s. and under  10s.	6,836 25,608 67,391 84,875 112,216 94,927 64,630 27,970 19,002 5,573 2,172 786 496 496 85,409	2,629 7,497 7,246 10,123 8,057 6,010 2,471 1,816 500 162 51 11 9 10 32,134	198 1,074 2,719 7,421 10,152 14,483 13,229 14,972 5,698 2,278 1,059 631 273 679 23,817	29,023 77,248 96,787 132,055; 114,763 86,149 44,143 36,147; 11,896 4,661 1,917 1,144 499 1,155 167,916	1,841 9,753 25,594 33,904 60,497, 56,339 58,978 35,641 50,869 22,487 14,770 6,584 3,751 1,279 3,636 100,253	2,067 2,207 5,075 4,080 6,123 2,848 5,827 2,963 1,830 685 481 137 316 32,756	2,305 4,254 7,773 9,414 18,180 11,874 6,980 3,561 2,370 1,352 3,523	102 167 588 716 1,554 1,465 1,893 1,062 1,815 1,061 686 324 182 70 177 35,087	2,119 10,564 28,565 37,568 69,431 66,138 74,767 48,965 76,691 38,385 24,266 11,154 6,784 2,838 7,652 198,703
(Unfurnished) per Private Dwelling	22s. 8d.	22s. 0d.	36s. 7d.	24s. 2d.	32s. 2d.	34s. 2d.	50s. 6d.	36s. 2d.	35s. 0d.

<sup>(</sup>a) The figures shown for 1954 exclude dwellings occupied by "Tenants" (Governmental Housing), except those in the Northern Territory and the Australian Capital Territory.

(b) Includes houses, sheds, huts, etc., and shared private houses for which only one Householder's Schedule was received.

(c) Portion of a shared private house which is occupied separately and for which portion a separate Householder's Schedule was received.

(d) Includes "other private dwellings" not shown in the table.

(e) See letterpress on p.664 regarding comparability as between Censuses.

At the 1947 Census, nearly 83 per cent. of the tenanted private houses in Australia shown in the table above had weekly rentals of between 10s. and 35s.; at the 1954 Census, only 61 per cent. were within these limits. In 1947, 6 per cent. had rentals below 10s. and 11 per cent. above 35s. In 1954, 3 per cent. had rentals below 10s. and 36 per cent. above 35s. At the 1947 Census, 88 per cent. of the flats shown for Australia had rentals of between £1 and £3 a week, 5 per cent. were below this range, and 7 per cent. above it. At the 1954 Census, the corresponding proportions were:—74 per cent., 2 per cent. and 24 per cent. Dwellings whose rents were not stated were excluded in obtaining these proportions.

The average rentals shown in this table for all tenanted private dwellings in Australia at the 1954 Census were 45 per cent. higher than in 1947 (42 per cent. higher for houses and 38 per cent. higher for flats). Metropolitan rentals in 1954 were higher by 40 per cent., 35 per cent. and 38 per cent., respectively, than in 1947.

In all such comparisons as these, the difference in basis between the 1947 and 1954 Censuses, referred to in the opening paragraph above, and also the differences in the Urban and Rural divisions (see p. 664), should be borne in mind.

(b) Tenanted Private Houses of Three to Six Rooms. The comparisons in the following table, restricted to houses of three to six rooms, with outside walls of wood, brick or stone, are of particular interest, since this group comprises more than three-quarters of all tenanted private houses in Australia.

# AVERAGE WEEKLY RENT(a) PER ROOM OF TENANTED PRIVATE HOUSES, THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE, AUSTRALIA, 1947 AND 1954.

	Ce	nsus, 30t1	1. June, 19	47.	Cer	nsus, 30tl	3.June, 19	54.	
Particulars.	Urt	oan.	1	Total,	Urb	an.	1	Total,	
	Metro- politan.	Other.	Rural.	Aus- tralia.	Metro- politan.	Other.	Rural.	Aus- tralia.	tralia.)
Private Houses(a) with Walls of—  Wood— 3 rooms	s. d. 5 1 0 4 9 5 4 9 5 6 6 5 5 6 6 5 5 5 5 5 5 5 5 5 5 5 5	s. d. 5 1 4 7 4 3 3 10 4 3 5 7 5 0 4 9 4 9 5 3 4 8 4 4 1 4 5	s. d. 3 10 3 5 3 3 12 11 3 3 3 8 8 3 3 8 8 3 3 6 3 4 3 1 1 3 3 4	s. d. 4 7 4 4 2 3 10 4 1 5 6 5 7 5 7 5 1 5 1 5 1 5 1 5 1 6 4 9	s. d. 7 3 3 6 9 6 8 5 10 6 6 6 8 3 7 10 2 6 9 7 3 7 11 7 6 6 5 7 0 .	s. d. 7 11 7 10 6 4 4 5 5 3 9 4 7 2 6 8 6 1 6 8 8 4 7 1 6 5 5 7 6 5	s. d. 5 10 4 10 4 10 3 11 4 6 6 8 5 1 4 9 4 3 4 9 4 3 4 9 4 11 4 0 4 7	s. d. 7 1 6 4 6 1 5 3 5 11 8 3 7 0 6 7 1 7 9 7 1 6 5.11 6 7	3. d.  2 6 2 0 1 11 1 5 1 10 2 9 1 5 1 5 1 9 2 8 2 1 1 9 1 5 1 10
	5 3	4 5	3 4	4 9	7 0.	6 5	; 4 7	6 7	1 10

(a) Rents relate to tenanted private houses (one family) in 1947 and to tenanted private houses, excluding those occupied by "Tenants" (Governmental Housing) in each State, in 1954.

The average rent of 3- to 6-roomed tenanted private houses of wood, brick or stone increased by about 40 per cent. between 1947 and 1954 (wood by 46 per cent. and brick by 34 per cent.). The average for 3-roomed tenanted houses of wood, brick or stone increased by about 53 per cent., 4-roomed houses by about 42 per cent., 5-roomed houses by about 39 per cent., and 6-roomed houses by 33 per cent. The increases in respect of houses of wood were higher than those for brick or stone in each case. The increases in the Metropolitan Areas were relatively lower than for Australia as a whole.

- (vi) Date of Building. The numbers of occupied private dwellings in Australia at the Census of 30th June, 1954, classified according to date of building, were as follows:—Built before 30th June, 1947, 1,758,448; 1st July—31st December, 1947, 19,742; 1948, 60,360; 1949, 63,897; 1950, 78,965; 1951, 85,852; 1952, 91,712; 1953, 88,467; 1954, 44,725; built after 30th June, 1947 but particular year not stated, 19,641; not stated 31,612; total, 2,343,421.
- (vii) Facilities, etc. At the 1947 Census, a detailed question was asked concerning facilities, and a summary of the information obtained therefrom was published on p. 571 of Official Year Book No. 38. The question asked at the 1954 Census was much less detailed, and was designed partly to clarify replies to the question on class of dwelling. Information obtained in reply to this question and to that on farm dwellings in 1954 was not compiled.

### CHAPTER XIX.

#### LOCAL GOVERNMENT.

#### § 1. Introduction.

1. Local Government Authorities.—In each State of the Commonwealth, there exists a system of local government whose powers and responsibilities are in general similar, and cover such matters as the construction and maintenance of roads, streets and bridges, water, sewerage and drainage systems, and health and sanitary services, the supervision of building, and the administration of regulations relating to items such as weights and measures, slaughtering, the registration of dogs, etc. In addition to these obligatory functions, there are also many which may be performed by a local government authority either with or without the consent of the ratepayers or the Governor-in-Council. These include transport facilities, electricity, gas and other business undertakings, hospitals, charitable institutions, recreation grounds, parks, baths, libraries, museums, etc.

The system is based on the principle of a grant of specific powers by the State legislatures to the local authorities, their autonomy, however, being more or less limited by the provision for general supervision by a department of the central government or by the Governor-in-Council. Otherwise, within the scope of the Acts under which they are constituted or which they have to administer, they are responsible only to the ratepayers.

While the broad pattern of local government throughout the States of Australia is similar, the range of activities, election of officers, methods of valuation and rating powers, etc., differ considerably.

The areas over which local government bodies exercise general control, numbering 914, are known in New South Wales as cities, municipalities and shires; in Victoria as cities, towns, boroughs and shires; in Queensland as cities, towns and shires; in South Australia as cities, corporate towns and district council areas; in Western Australia as cities, municipalities and road districts; and in Tasmania as cities and municipalities. In New South Wales, some local government authorities in an area have combined to provide services such as electricity, water, sewerage and drainage—e.g., the county councils. Within shires, there are also some municipal units known as urban areas. Apart from the more thinly populated parts of New South Wales and South Australia and the Commonwealth Territories, practically the whole of Australia comes within local government jurisdiction.

The financial statistics in § 2 following are classified under the headings of Ordinary Services and Business Undertakings. The former covers the obligatory and general functions referred to above. Business Undertakings include public utilities such as water supply, sewerage, electricity, gas, transport and hydraulic power undertakings, and other miscellaneous works such as abattoirs, quarries, ice works, cinemas, etc.

- 2. Semi-Governmental Authorities.—In addition to local government authorities, a large number of authorities have been set up to control specific activities, which are often identical with some of those performed by either, or both, of the other classes of public authority—central government and local government—and a complete picture of any field of activity for a State or Australia as a whole cannot be obtained without reference to each class operating in that particular field. These semi-governmental authorities differ primarily from local government authorities in that their operations are restricted to the specific activity for which they were constituted—e.g., roads and bridges, or water and sewerage, or electricity and irrigation, or harbours, or tramways, etc.—i.e. each dispenses a specific service throughout an area as distinct from the general services of the local authority.
- In §§ 3 to 7, which deal with debt, roads and bridges, water supply and sewerage, harbours, and fire brigades, particulars are included of the more important of these authorities which operate within the range covered by this chapter.
- 3. Roads, Bridges, etc.—The construction and maintenance of roads, bridges and ferries are generally part of the functions of local authorities, but in each State there exists a central road authority or a government department whose duties relate to the construction, reconstruction and maintenance of "main" and "developmental" roads, the distribution of funds to local bodies, and the supervision and co-ordination of road construction and policy throughout the State. Although roads and bridges constructed and maintained directly by the government or by the central road authority do not properly come under the heading of "Local Government", they have been included in this chapter for the

sake of convenience. Owing to difficulty in obtaining complete particulars of receipts and expenditure by the various local governing bodies in respect of roads under their control, the details of receipts and expenditure given in § 4 are those of central governments only, relating either to the supervisory board or commission in the State or to direct activities of a department. In § 2, some information is given of the revenue and expenditure of local government authorities in respect of roads.

- 4. Water Supply and Sewerage.—In the cities of Sydney and Melbourne, the control of water supply and sewerage is in the hands of special boards, while in Adelaide and Perth these services are under the direct supervision of government departments. In most of the other cities and towns, the municipal councils, or, in some cases, water trusts, are the controlling bodies which either construct the works out of their own resources or take them over after they have been constructed by the government.
- 5. Harbours.—The majority of the harbours in Australia are managed by boards, the members of which are either elected by persons interested, or are appointed by the government. In a few instances, however, they are directly controlled by the government.
- 6. Fire Brigades.—In all the States, the management of fire brigades is undertaken by boards. These boards usually comprise members elected by the councils of municipalities and insurance companies within the districts placed under their jurisdiction, and one or more members appointed by the government. Occasionally volunteer or country fire brigades are represented.
- 7. Other Local or Semi-Governmental Activity.—The activities referred to above are not the only forms of local or semi-governmental undertakings. There are others, the most important being tramways and omnibus services, and electricity and gas undertakings, which are not dealt with in this chapter, except to the extent that they are represented in the finances as shown in the following section. Chapter XI.—Transport and Communication contains information on municipal transport services, and Chapter VIII.—Electric Power Generation and Distribution deals with the various types of electricity undertakings in each State. In addition, particulars of municipal electricity and gas undertakings, although not shown separately, are included in the relevant sections in Chapter VII.—Manufacturing Industry.

### § 2. Local Government Authorities.

1. New South Wales.—For purposes of local government, the whole of the Eastern and Central land divisions and a small portion of the sparsely populated Western division have been divided into cities, municipalities (most principal towns) and shires (mainly large rural areas, some of which embrace important towns). At the end of 1954, the area incorporated was 184,000 square miles, or nearly three-fifths of the total area of the State.

All local government authorities in the State are subject to the general provisions of the Local Government Act.

Municipalities and shires may combine to form county councils for the establishment and conduct of services of joint benefit, e.g., electricity, water, sewerage. There were 38 county councils and the Grafton and South Grafton Water Board at 31st December, 1954.

- 2. Victoria.—Local government is established throughout the State, the various divisions being termed cities, towns, boroughs or shires. The only unincorporated areas are French Island (42,000 acres) in Westernport Bay, Julia Percy Island (650 acres), off Port Fairy, and Tower Hill (1,350 acres), adjacent to the Borough of Koroit. Melbourne and Geelong were incorporated under special statutes prior to the establishment of a general system of local government, but are now subject to several provisions of the Local Government Act.
- 3. Queensland.—The whole of the State (except certain islands along the coast, the Dawson Valley Irrigation Area and the Somerset Dam Area) is incorporated into cities, towns and shires under the Local Authorities Act 1902 and its amendments.
- 4. South Australia.—The settled portion of South Australia is incorporated, being mostly under municipal corporations in the larger cities and towns, and district councils in the agricultural areas.
- 5. Western Australia.—In this State, local government is carried on by means of municipalities and district road boards, the whole of the State being so incorporated.
- 6. Tasmania.—The whole State is divided into municipal districts, Hobart and Launceston being incorporated as cities under separate Acts.

7. Area, Population, Dwellings and Value of Ratable Property.—The area, population, dwellings and value of ratable property in the incorporated areas of each State are shown in the following table. The valuations relate to ratable property only and exclude Government and other non-ratable property, whose value in the aggregate is considerable. In this table, particulars of dwellings are in accordance with the definition used in the 1954 Census, and are compiled from information collected on the Census Schedules. For the purpose of the Census, a dwelling was defined as any habitation occupied by a household group living together as a domestic unit, whether comprising the whole or only part of a building. The term has, therefore, a very wide meaning and includes, in addition to houses and flats, a great variety of dwellings ranging from a single-roomed shack to a multi-roomed hotel or institution. Unoccupied dwellings include "week-end" and holiday dwellings and other dwellings temporarily unoccupied on the night of the Census. Dwellings being built are not included.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1954-55.

						-		
				Dwe	llings.	Value of	Ratable I	roperty.
Local Bodies.	Number		Popula- tion.	Occu- pied.	Unoccu- pied.	Unim- proved Capital Value.	Im- proved Capital Value.	Annual Value.
		'000 Acres.	'000.	No. (a)	No. (a)	£'000.	£'000.	£'000.
		New S	оитн W	ALES.(b)				
Metropolitan-		7	193	52.762	1.099	106,085	211 200	17.010
Capital City	1 34	702	1.696	52,763 470,664	13,464		311,390 1,162,505	17,818 64,219
Outside Metropolitan Area	203	117,110	1,510	385,517	28,128	337,974	(c)	(c)
Total	238	117,819	3,399	908,944	42,691	736,196		(c)
10101	2501		CTORIA.		42,071	730,290	(6)	(0)
Metropolitan-			CIORIA.	<u>u)</u>				
Capital City	i 1	8	92	22,348	455	(c)	158,286	7,914
Other	41	438	1,528	371,340	6.316	(c)	826,053	42,696
Outside Metropolitan Areae		55,630	921	267,089		(c)	682,957	34,241
Total	203	56,076	2,541	660,777	27,484	(c)	1,667,296	84,851
		Qu	EENSLANI	o.(f)				
Control City	1	246	502	133,064	3,948	62 142	(3)	(3)
Capital City Outside Metropolitan Area	133	428,874	809	205,598		63,142 98,514		(c) (c)
Total				338,662		161,656		(c)
		South	AUSTRA					
Metropolitan-		1		(8)				
Capital City	1	4	30	7,454	211	19,435	60,000	3,019
Other	20	99	467		2,737	(c)	196,000	9,779
Outside Metropolitan Area	122	34,531	307.	78,505	5,399	(c)	205,000	10,256
Total	143	34,634	804	212,608	8,347	(c)	461,000	23,054
		WESTER	N AUSTR	ALIA.(h)				
N						1	1	
Metropolitan— Capital City	1	14	97	25,460	577	(c)	60,375	3,492
Other	19	107	260	65,281	1.262	(c)	(c)	1,455
Outside Metropolitan Area	127	624,467	301	72,082	4,775	(c)	(c)	1,334
Total	147	624,588	658	162,823	6,614	(c)	(c)	6,281
	<del></del>		SMANIA.	(g)	<u> </u>			
Metropolitan-			-					
	1:	18	55	14,624		7,534	24,956	1,598
Capital City					531	3.917	19,259	946
Other	2	99	40	9,333				
	- 46 49	16,661 16,778	<sup>220</sup>	54,905	4,382 5,288	30,338 <sup>1</sup> 41,789	103,963	5,398 7,942

<sup>(</sup>a) Particulars of population and dwellings are as at Census 30th June, 1954. (b) Year ended 31st December. 1954. (c) Not available. (d) Year ended 30th September. 1955. (e) Excludes Yallourn Works Area under the jurisdiction of the State Electricity Commission. (f) Year ended 30th June, 1954. (g) Year ended 30th June, 1955. (h) Municipalities—Year ended 31st October, 1955; Road Districts—Year ended 30th June, 1955.

<sup>8.</sup> Finances.—(i) General. The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1954-5, except for New South Wales, where they relate to the year 1954 and for Queensland, where they relate to the year 1953-54.

(ii) Ordinary Services. In the returns of revenue and expenditure for 1954-55 in the following table, the proceeds from loans and expenditure thereof have been excluded. The financial operations of business undertakings controlled by the various local government authorities are given in the next paragraph. The profits resulting from the working of these undertakings, where taken into general revenue, have been included.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1954-55.

	EAPENDITURE, 1954-55.												
Particulars.	N.S.W.	Vic. (b)	Q'land.	S. Aust. (d)	W. Aust. (e)	Tas. (d)	Total.						
Number of Local Government Auth- orities	238	203	134	143	147	49	914						
	REVENU	E (EXCLUD	ING LOAN	RECEIPTS).	(£'000.)								
Taxation-	21.000	12.500	1	( 2.521	2 250	1.250	`						
Rates (net) Penalties	21,808 122	13,580 40	8,961	<b>3,521</b>	2,359	1,350	<b>51,742</b>						
Licences	484	72	75	51	58	14	754						
Total Public Works and Services—	22,414	13,692	9,036	3,572	2,417	1,365	52,496						
Sanitary and Garbage Services Council Properties Street Con-		(f) 2,016	2,073 594	48 300	409 671	78 226	6,287 5,898						
struction	1,157	686	184 64	(g) 373 126	226 29	45 25	2,671						
Other	$\frac{1,514}{7,326}$	4,061	$\frac{64}{2,915}$	847	1,335	374	2,002 16,858						
Government Grants-		7,001					10,000						
Roads	5,684 924	111 462	1,687 (h) 1,326	1,886 32	924 1,018	293 28	10,585 3,790						
Total	6,608	573	3,013	1,918	1,942	321	<u> </u>						
Profits from Business Undertakings		272	1		31		304						
Fees and Fines All Other	••	66 149	419	84 139	11 181	} 130	1,179						
Total Revenue	36,348	18,813	15,384	6,560	5,917	2,190	85,212						
Evi	DENDITUDE			EXPENDIT	(f'(	000.)							
General Adminis-	PENDITURE	(EXCLUDI	NO LOAN	EXPENDIT	(L)	100.)							
tration	2,390	2,788	1,359	530	702	234	8,003						
Debt Services (ex- cluding Business Undertakings)—						ļ							
Interest Redemption Exchange	1,131 2,575 19	671 884	1,184 1,752 180	70 407	177 396	74 125	3,307 6,139 199						
Redemption	2,575		1,752										
Redemption Exchange Other	2,575	884	1,752 180		396		6,139 199						
Redemption	2,575 19	8	1,752 180 18	407	396	125	6,139 199 26						
Redemption Exchange Other Total Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and	2,575 19  3,725	884 8 1,563 6,470 700	1,752 180 18 3,134 5,143 225	407 .:. 477 4,433 90	396 .: 573 1,930	125  199 1,008	6,139 199 26 9,671 35,674 1,858						
Redemption Exchange Other	2,575 19  3,725	884 8 8 563 6,470 700 1,673	1,752 180 18 3,134 5,143 225 1,210	407 .:. 477 4,433 90 299	396 .: 573 1,930 161 456	125 .: 199 1,008 57	6,139 199 26 9,671 35,674 1,858 6,956						
Redemption Exchange Other Total Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and	2,575 19  3,725 16,690 625 3,219 875	884 8 1,563 6,470 700	1,752 180 18 3,134 5,143 225	407 .:. 477 4,433 90	396 .: 573 1,930	125  199 1,008	6,139 199 26 9,671 35,674 1,858						
Redemption Exchange Other Total Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and Garbage Services Street Lighting Council Properties	2,575 19  3,725 16,690 625 3,219 875 4,316	884 8 8 1,563 6,470 700 1,673 397 (f) 3,649	1,752 180 18 3,134 5,143 225 1,210 220 1,484	4,433 90 299 137 652	396 .:            	1,008 57 99 61 302	6,139 199 26 9,671 35,674 1,858 6,956 1,770 12,145						
Redemption Exchange Other Total Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and Garbage Services Street Lighting Council Properties Other Total Grants— Fire Brigades	2,575 19  3,725 16,690 625 3,219 875 4,316 1,231	884  8  6,470 700 1,673 397 (i) 3,649 232	5,143 225 1,210 220 1,484 (j) 1,715	4,433 90 299 137 652 94	396 .:            	1,008 1,008 57 99 61 302 29	6,139 199 26 9,671 35,674 1,858 6,956 1,770 12,145 3,351						
Redemption Exchange Other Total  Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and Garbage Services Street Lighting Council Properties Other Total  Grants— Fire Brigades Hospitals and Ambulances Other Charities  Other Charities	2,575 19  3,725 16,690 625 3,219 875 4,316 1,231 26,956	884 8 8 1,563 6,470 700 1,673 397 (i) 3,649 232 13,121	1,752 180 18 18 3,134 5,143 225 1,210 220 1,484 (j) 1,715 9,997	4,433 90 299 137 652 94 5,705	396  573 1,930 161 456 80 1,742 50 4,419	1,008 57 99 61 302 29 1,556	6,139 199 26 9,671 35,674 1,858 6,956 1,770 12,145 3,351 61,754						
Redemption Exchange Other Total  Public Works and Services— Roads, Streets and Bridges Health Administration Sanitary and Garbage Services Street Lighting Council Properties Other Total  Grants— Fire Brigades Hospitals and Ambulances Other Charities  Other Charities	2,575 19  3,725 16,690 625 3,219 875 4,316 1,231 26,956 231	884 8 1,563 6,470 700 1,673 397 (i) 3,649 232 13,121 291 { 92	1,752 180 18 3,134 5,143 225 1,210 220 1,484 (j) 1,715 9,997	4,433 90 299 137 652 94 5,705 81 119 6	396  573 1,930 161 456 80 1,742 50 4,419 67	1,008 1,008 57 99 61 302 29 1,556	6,139 199 26 9,671 35,674 1,858 6,956 1,770 12,145 3,351 61,754 862 } 2,176						
Redemption Exchange Other	2,575 19  3,725 16,690 625 3,219 875 4,316 1,231 26,956 231 } 105 k) 580	884 8 1,563 6,470 700 1,673 397 (i) 3,649 232 13,121 291 { 92 (i) 945	1,752 180 18 3,134 5,143 225 1,210 220 1,484 (j) 1,715 9,997 156 2 3 276	4,433 90 299 137 652 94 5,705 81 119 6 17	396  573 1,930 161 456 80 1,742 50 4,419 67 8	1,008 1,008 57 99 61 302 29 1,556 36	35,674 1,858 6,956 6,956 1,770 12,145 3,351 61,754 862						

<sup>(</sup>a) Figures for New South Wales relate to the year ended 31st December, 1954, and are on an income and expenditure basis as distinct from those of other States which are on a cash basis. (b) Year ended 30th September, 1955. (c) Year ended 30th June, 1954. (d) Year ended 30th June, 1955. (e) Municipalities—Year ended 31st October, 1955; Road Districts—Year ended 30th June, 1955. (f) Includes £800,000 plant hire. (g) Includes £95,000 reimbursement to Highways Department for work done. (h) Includes £927,000 for sewerage and drainage. (i) Includes £774,000 plant. (j) Includes £1,148,000 for sewerage, mosquito control and drainage. (k) To Main Roads Department. (l) Includes £478,000 to Country Roads Board.

The following table shows the revenue and expenditure (excluding loan) of local government authority ordinary services for the years 1938-39 and 1950-51 to 1954-55:—
LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE.

(62000.)

			<i>(</i> -,)	(2 00		_		
Total.	Tas.	W. Aust.(c)	S. Aust.	Q'land.	Victoria.(b)	N.S.W.(a)		Year 6 30th
		ECEIPTS).	G LOAN R	(EXCLUDING	REVENUE			
24,450	519	1,447	1,579	4,178	6,070	10,657		1939
48,075 60,284 71,933 79,211 (d)	1,214 1,590 1,800 1,954 2,190	3,582 4,158 4,988 5,352 5,917	3,461 4,390 4,938 6,204 6,560	10,182 12,472 13,816 15,384 (d)	11,044 13,504 15,641 17,213 18,813	18,592 24,170 30,750 33,104 36,348	::	1951 1952 1953 1954 1955
		EXPENDITURE).	g Loan E	(EXCLUDIN	Expenditure	E		
24,872	507	1,489	1,558	4,335	6,193	10,790	•••	1939
48,328 61,150 69,819 76,830 (d)	1,237 1,605 1,781 1,944 2,240	3,425 4,271 4,793 5,115 5,950	3,491 4,452 5,032 5,859 6,935	9,995 12,615 13,151 15,120 (d)	11,659 14,040 15,457 16,912 18,914	18,521 24,167 29,605 31,880 35,003		1951 1952 1953 1954 1955
	1,605 1,781 1,944	4,271 4,793 5,115	4,452 5,032 5,859	12,615 13,151 15,120	14,040 15,457 16,912	24,167 29,605 31,880	· · ·	1952 1953 1954

<sup>&#</sup>x27;(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (d) Not yet available.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1954-55. (£'000.)

		(**	000.)				
Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	REVENUE	(EXCLUD	ING LOAD	RECEIPT	rs).		
Water Supply and Sewer-							
Rates Charges for Services and	1,698		51	••	10	458	2,217
Sales of Products	507 (a) 618	113	2,194 975	1	2	123 67	2,940 1,665
Total	2,823	118	3,220	1	12	648	6,822
Electricity and Gas— Rates Charges for Services and	247	••	10			••	257
Sales of Products Other (including Grants)	40,544 877	8,015 134	6,217 324	504 21	506 8		55,786 1,364
Total	41,668	8,149	6,551	525	514	!	57,407
Railways, Tramways and Omnibuses— Rates						45	45
Charges for Services and Sales of Products Other (including Grants)	::	::	3,162 114			531 8	3,693 122
Total			3,276			584	3,860
Other— Rates	(b)	(c) 	(d)	(e)	(1)	(g)	1
Charges for Services and Sales of Products Other (including Grants)	2,479	491 12	45 16			62	3,140 32
Total	2,481	503	61	21	43	64	3,173
Grand Total	46,972	8,770	13,108	547	569	1,296	71,262

NOTE.—See next page for footnotes.

<sup>(</sup>iii) Business Undertakings. The table hereunder shows, for 1954-55, particulars of the revenue and expenditure, other than loan, of business undertakings under the control of local government authorities. These particulars are not included in the foregoing tables.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE, 1954-55—continued.

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Ext	PENDITURE	(EXCLUD	ING LOA	N EXPEN	oiture).		
Water Supply and Sewerage- Working Expenses	1,302	77	1,311	1	8	284	2,983
Debt Charges Other (including Trans-	(h) —108 874	9 21	797	::	3	273	99 1,968
fers to General Revenue and Construction)	]		973	••	· · ·	110	1,083
Total	2,068	107	3,081	1	11	667	5,935
Debt Charges	34,890 (h) 1,075 3,249	7,024 369 349	5,394 746	460	405 41 38	::	48,173 1,485 4,416
Other (including Trans- fers to General Revenue and Construction)		274	437	42	19		772
Total	39,214	8,016	6,577	536	503		54,846
Railways, Tramways and Omnibuses—							
Working Expenses Depreciation		••	3,081		!	435	3,516
Debt Charges Other (including Transfers to General Revenue	::	::	398	::		66	464
and Construction)			170			59	229
Total			3,649			560	4,209
Other— Working Expenses Depreciation Debt Charges Other (including Trans-	(b) 2,262 19 53	(c) 397 11 42	(d)  3	(e) 20 	υ <sub>33</sub> ::	(g)  9	2,803 30 107
Other (including Transfers to General Revenue and Construction)		38	4	1		11	54
Total	2,334	488	59	21	33	59	2,994
Grand Total	43,616	8,611	13,366	558	547	1,286	67,984

<sup>(</sup>a) Includes Government grant, £554,000, for part of cost of new works borne by Government.
(b) Abattoirs, ice-works, and production of building materials. (c) Abattoirs and hydraulic power undertakings. (d) Municipal markets, amusement parks, hotels, and cinemas. (e) Quarries. (f) Quarries, ice-works and abattoirs. (g) Abattoirs. (h) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

Note.—For years to which particulars relate, see preceding tables. Minus sign (-) indicates an excess of credits.

The next table shows the revenue and expenditure, other than loan, of local government business undertakings for the years 1938-39 and 1950-51 to 1954-55.

# LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE.

(£'000.)

Year e		N.S.W.(a)	Victoria.(b)	Q'land.	S. Aust.	W. Aust.(c)	Tas.	Total.
			REVENUE	(EXCLUDIN	g Loan R	ECEIPTS).		
1939	•••	6,405	1,814	3,374	113	963	528	13,197
1951 1952 1953 1954 1955		20,774 26,803 35,654 41,367 46,972	5,094 6,309 7,656 8,189 8,770	7,924 10,436 12,798 13,108 (d)	329 380 462 504 547	550 436 469 516 569	927 1,088 1,212 1,366 1,296	35,598 45,452 58,251 65,050 (d)
		Е	XPENDITURE	(EXCLUDIN	G LOAN E	XPENDITURE).		
1939	••	5,556	1,803	3,256	- 123	935	514	12,187
1951 1952 1953 1954 1955		20,557 27,381 34,051 38,426 43,616	5,220 6,248 7,623 7,971 8,611	7,917 10,735 12,851 13,366 (d)	340 395 449 474 558	586 454 469 520 547	926 1,070 1,243 1,310 1,286	35,546 46,283 56,686 62,067 (d)

<sup>(</sup>a) Years ended previous 31st December. (b) Years ended 30th September. (c) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (d) Not yet available.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE ON WORKS, 1954-55.

(£'000.)

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
		ORDINA	RY SERVIC	ES.			
Roads, Bridges, Streets, Footpaths, Drainage and Sewerage Council Properties Parks, Gardens and Recrea- tional Reserves	2,034 1,378 425	1,143 1,036 175 157	2,435 479 55	889 49  21	574 458 81 8	278 82 31 13	7,353 } 4,194 730
Total	4,313	2,511	2,969	959	1,121	404	12,277
	В	JSINESS (	Jndertak	NGS.			
Water Supply	1,842 555 6,371  269	107 1,124  51	1,573 3,128 153 66	45	76	757  43	4,834 10,744 196 320 80
Total	9,037	1,282	4,920	45	90	800	16,174
Grand Total	13,350	3,793	7,889	1,004	1,211	1,204	28,451

<sup>(</sup>a) Includes advances for homes, £66,000.

NOTE.—For years to which particulars relate, see next table.

<sup>(</sup>iv) Loan Expenditure. The table below shows particulars for 1954-55 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1938-39 and 1950-51 to 1954-55:—

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE ON WORKS.
(£'000.)

Year e		N.S.W.(a)	Victoria.(b)	Q'land.	S. Aust.	W. Aust.(c)	Tas.	Total.
				Ordinary	SERVICES.			
1939	•••	1,758	663	1,317	43	117	39	3,937
1951 1952 1953 1954 1955		3,243 4,256 4,660 4,121 4,313	1,195 1,701 1,797 1,747 2,511	3,546 4,412 2,898 2,969 (d)	281 512 410 785 958	586 693 715 839 1,121	347 468 351 237 404	9,198 12,042 10,831 10,698 (d)
			В	usiness Un	DERTAKING	s.		
1939		1,481	452	942	10	76	233	3,194
1951 1952 1953 1954 1955		8,950 12,077 10,496 10,436 9,037	1,185 1,841 1,772 1,408 1,282	3,311 5,433 5,437 4,920 (d)	75 101 115 62 45	64 47 44 78 90	450 811 732 642 800	14,035 20,310 18,596 17,546 (d)

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Municipalities—Years ended 31st October; Road Districts—Years ended 30th June. (d) Not yet available.

#### § 3. Local and Semi-Governmental Authorities' Debt.

- 1. General.—Statistics of local and semi-governmental debt for the years 1938-39 and 1952-53 to 1955-56 are given in the following paragraph. The information covers all local government authorities and those semi-governmental authorities responsible for the provision of the following services:—
  - New South Wales. Water Supply, Sewerage and Drainage, Electricity Supply, Fire Brigades, and Banking. County Councils are included among these authorities.
  - Victoria. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity and Gas Supply, Fire Brigades, Marketing (Buying and Selling), Industry Assistance, Grain Elevators, Housing, and Miscellaneous.
  - Queensland. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Fire Brigades, Universities, Hospitals and Ambulances, Marketing (Buying and Selling and Agency), and Industry Assistance.
  - South Australia. Irrigation and Drainage, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), Industry Assistance, Banking, Housing, and Miscellaneous.
  - Western Australia. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Tramways, Electricity Supply, Fire Brigades, Hospitals and Ambulances, Marketing (Agency), and Housing.
  - Tasmania. Harbours, Electricity Supply, Fire Brigades, Transport, and Housing.

A detailed list of the authorities included is shown in Finance, Bulletin No. 47, 1955-56.

2. Local and Semi-Governmental Authorities' Debt.—The following table provides a summary of new money loan raisings, provisions for debt redemption, debt outstanding and interest payable by local and semi-governmental authorities for the year ended 30th June, 1956. For greater detail see Finance, Bulletin No. 47, 1955-56.

LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE 1955-56.
(£'000.)

		(£'	000.)		<del></del>		
Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
	LOCAL	GOVERNM	IENT AUT	HORITIES.	·		·
New Money Loan Raisings-					İ		
From Government	19	59	1,658	475	10	12	2,233
From Public	10,393	3,342	5,019		1,429	1,171	22,160
Total	10,412	3,401	6,677	1,281	1,439	1,183	24,39.
Funds Provided for Redemp-	4.5			200		9	1,55
Government Loans Loans due to Public	42 4,112	1,404	1,181 2,063	308 189	491	368	8,62
Total	4,154	1,415	3,244	497	495	377	10,18
Accumulated Sinking Fund			3,237	'''			10,10
Balance	5,208	2,457	3,941	63	112	230.	12,01
Debt-							
Due to Government Due to Banks (Net Over-	1,727	443.	14,236	1,325	55	12,1	17,90
draft)  Due to Public Creditor(a)	1.32 65,379	538 26,217	61,473	270 2,862	6,387	8,500	170,81
Total(a)	67,238	27,198.	75,709	4,457	6,445	8,626	189,67.
Maturing Overseas(a)(b)	1,812		2,619			- 0,020	4,43
Annual Interest Payable(a)	(c)	1,168	3,117		283	364	(c)
Annual Interest Tayable(a)	(,,	1,100	3,117	(6)	[ 203	304	(6)
Semi-Go	VERNMEN	TAL AND	OTHER PO	JBLIC AU	THORITIES.		
New Money Loan Raisings-							
From Government	12,308	17,432	849	11,101	3,357	8,435	53,482
From Public	15,492	31,639	6,266	1,901	2,198	1,178	58,674
Total	27,800	49,071	7,115	13,002	5,555	9,613	112,150
Funds Provided for Redemp-					;		[
tion-							
Government Loans	696 3,702	3,732	315	1,158	120	544 158	6,86
Loans due to Public	3,702.	2,072	1,449	3	120	136	7,30
Total	4,398	5,804	1,764	1,161	541	702	14,370
					II		1
Accumulated Sinking Fund	15,307	7,777	951	840	190	190,	. 25.25
Balance	15,307	1,777	931	840	190	190	25,255
Debt					· ¦		
Due to Government	121,947	148,247	7,055	81,613	28,115	59,135	446,112
Due to Banks (Net Over-	-				1		· ·
draft)	1,702	7,744	502	20 210	5	10,550	9,99
Due to Public Creditor(a)	179,062	289,701	48,382	20,310	11,142	10,550	559,14
Total(a)	302,711	445,692	55,939	101,964	39,262	69,685	1,015,25
-,							
Maturing Overseas(a)(b)	8,438	4,351	:	767	· :		13,556
statuling Overseas(a)(b)					<u> </u>		
Annual Interest Payable(a)	(c)	17,314	2,410	3,898	1,583	2,756	(c)
Annual Interest Payable(a)	(c)	17,314	2,410	3,898	1,583	2,756	(c)

<sup>(</sup>a) Includes debt or interest payable in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (b) Included in debt figures above. (c) Not available.

In this and the following tables, debt includes all liabilities for which arrangements have been made for repayment over a period of one year or more, and net overdrafts. Interest capitalized and amounts due for the capital cost of assets or for services rendered which are to be repaid over a period of one year or more are included. Current liabilities, such as interest accrued (but not capitalized), trade creditors, amounts held in trust and other debts which are to be repaid in less than one, year are not included. Net overdraft is the gross overdraft of all funds less all bank credit balances (including fixed deposits) which do not form part of a sinking fund to repay a loan. New loans raised during the year include new loan liabilities incurred during the year, loans raised to repay indebtedness to the Government, and interest capitalized. Loans raised and redeemed within the year, increases in overdrafts and loans raised for conversion or redemption of existing debt are

excluded. Funds provided for redemption include instalments of principal repaid and amounts credited to sinking funds established for the purpose of repaying the debt on maturity. Amounts provided for redemption from loans raised for that purpose are excluded.

In the following table, a summary is given of new money loan raisings, provisions for the redemption of debt and debt outstanding of local and semi-governmental authorities for the years 1938-39 and 1952-53 to 1955-56.

LOCAL AND SEMI-GOVERNMENTAL AUTHORITIES, AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT.

Particulars.		1938–39.	1952-53.	952–53. 1953–54.		1955-56
LOCAL G	OVER	MENT AU	THORITIES			
New Money Loan Raisings-						
From Government		371	1,648	3,001		
From Public		7,060	21,522	23,843	24,423	22,16
Total		7,431	23,170	26,844	27,836	24,39
Funds provided for Redemption-						
Government Loans		2,141		1,332	1,477	1,5
Loans due to Public		2,995	6,475	6,928		8,64
Total		5,136	7,742	8,260	9,679	10,20
Accumulated Sinking Fund Balance		(a)	9,947	10,439	11,559	12,0
Debt—			· · · ·			
Due to Government		13,207	13,642	15,290	17,265	17.90
Due to Banks (Net Overdraft)		1,544		795	362	94
Due to Public Creditor(b)		76,582	125,051	141,833	159,335	170,81
<i>Total(b)</i>		91,333	140,683	157,918	176,962	189,6
Maturing Overseas(b)(c)		17,893	4,025	3,914	4,499	4,4
Semi-Governmenta	L AND	OTHER I	UBLIC A	JTHORITIE:	s	
New Money Loan Raisings—						
From Government		1,524		66,363		
From Public		7,038		64,720		
Total		8,562	126,716	131,083	115,718	112,1:
Funds provided for Redemption—						
Government Loans		699	2,316	2,738		6,80
Loans due to Public		1,146	5,196	10,955	5,933	
Total		1,845	7,512	13,693	9,261	14,3
Accumulated Sinking Fund Balance		(a)	17,487	19,517	22,240	
					-	· · ·
Debt—		(d)44,817	296,661	352,526	401,080	446,1
Debt— Due to Government		((4)77,017				
Due to Government Due to Banks (Net Overdraft)	• •	2,006	5,490	1,264		
Due to Government			5,490	1,264	502,530	559,1
Due to Government Due to Banks (Net Overdraft)	• •	2,006	5,490 376,390	1,264	502,530	559,1

<sup>(</sup>a) Not available. (b) Includes debt in London and New York. The former is expressed in United Kingdom currency, the latter is payable in dollars which have been converted at the rate of 4.8665 dollars to £1. (c) Included in debt figures above. (d) Approximate only.

### § 4. Roads and Bridges.

1. Commonwealth Government Grants.—The following table shows the allocation, under the several Commonwealth Aid Roads Acts, to the States for road construction, maintenance, repair and other works connected with transport for each of the years 1938-39 and 1950-51 to 1955-56, and to the Commonwealth for expenditure on the construction and maintenance of strategic roads and for the promotion of road safety practices for each of the years 1950-51 to 1955-56. See also Chapter XXI.—Public Finance, and Finance bulletins.

ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE COMMONWEALTH AID ROADS ACTS.

(£'000.)

Year e 30th J	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	C'wealth.	Total.
1939	 1,199	747	815	474	819	213		4,267
1951	 3,819	2,357	- 2,600	1,490	2,600	677	600	14,143
1952	 4,131	2,549	2,812	1,611	2,812	732	600	15,247
1953	 4,260	2,629	2,900	1,662	2,900	756	600	15,707
1954	 4,641	2,863	3,160	1,810	3,160	823	600	(b)22,057
1955	 5,893	3,771	4,125	2,409	4,190	1,073	900	22,361
1956	 7,282	4,660	5,097	2,976	5,178	1,326	950	27,469

(a) Allocation for expenditure on the construction and maintenance of strategic roads and the promotion of road safety practices. (b) Includes £5,000,000 paid into the Commonwealth Aid Roads (Supplementary) Trust Account to be expended on grants to the States for roads purposes in subsequent years.

2. New South Wales.—(i) General. A central road authority, known as the Main Roads Board, was created by legislation in 1925 for the purpose of providing improved and uniform standards of construction, reconstruction and maintenance of the principal roads of the State and to administer government subsidies for works on those roads. Subsequently, the Main Roads administration was reorganized as a separate department under the control of a Commissioner. The activities of the Department of Main Roads embrace works on main and developmental roads throughout the State, all roads in the unincorporated portion of the Western Division, and certain associated works, principally bridges and vehicular ferries, constructed from government funds. The Department of Main Roads co-operates with the municipal and shire councils in the work of constructing and maintaining the main roads system.

Public roads, except those within the City of Sydney, may be proclaimed as main roads on the recommendation of the Commissioner for Main Roads, who takes into consideration the representations made by the councils concerned, availability of funds for construction and maintenance purposes, and the value of the roads as connecting links between centres of population or business. The classes of main roads are (i) the State Highways which form the principal avenues of road communication throughout the State and connect with similar avenues in other States; (ii) Trunk Roads, which, with the State Highways, form the framework of a general system of intercommunication throughout the State; (iii) Ordinary Main Roads, which provide a network of roads connecting towns and important centres of population with the State Highways and Trunk Roads and with each other. In addition to the Main Roads, there are also (i) Secondary Roads (in the County of Cumberland) which carry a substantial volume of through traffic and, thereby relieve neighbouring main roads of traffic, and (ii) Developmental Roads which help to develop country districts.

In the County of Cumberland, which for the purposes of the Main Roads Act is deemed to include the City of Blue Mountains and small sections of other councils' areas on the boundary of the County of Cumberland, the full cost of road and bridge construction is paid from the funds of the Department of Main Roads. The Councils contribute towards the cost at the rate of ½d. in the £ on the unimproved value of ratable property. The rate payable in respect of lands used principally for primary production is one-half the rate levied on other lands. In country districts, the Department meets the full cost of road and bridge works on state highways; the full cost of bridge works and three-quarters of the cost of road works on trunk roads; and three-quarters of the cost of bridge works and two-thirds of the cost of road works on main roads. The cost of constructing developmental roads and works is borne in full by the Department of Main Roads, but local Councils are required to maintain them in a satisfactory condition. The Department of Main Roads meets half the cost of works on secondary roads.

(ii) Length of Roads. (a) Proclaimed Roads. The following table shows lengths of proclaimed roads at 30th June, 1956, according to class of road:—

PROCLAIMED ROADS, NEW SOUTH WALES: LENGTHS, 30th JUNE, 1956.

		(1122227)				
	Маіл	Roads.	Sagar	Davolan	, 	
State High- ways.	Trunk Roads.	Ordinary Main Roads.	Total.	dary Roads.	mental Roads.	Total.
5,201	2,874	9,699	17,774	(a) 77	2,640	20,491
1,325	1,317	2,079	4,721	( ··	/ · · · /	4,721
6,526	4,191	11,778	22,495	77	2,640	25,212
	High- ways. 5,201 1,325	State High-ways. Roads.  5,201 2,874 1,325 1,317	Main Roads.           State Highways.         Trunk Roads.         Ordinary Main Roads.           5,201         2,874         9,699           1,325         1,317         2,079	Main Roads.   State Highways.   Trunk Roads.   Main Roads.   Total.	Main Roads.   Secondary Highways.   Trunk Roads.   Ordinary Main Roads.   Total.   Roads.	Main Roads.   Secondary Roads.   Developmental Roads.   Secondary Ro

(a) Metropolitan area.

During 1955-56, 62 miles of new developmental roads were proclaimed and 158 miles were removed from the list of proclaimed roads. There were no new main roads proclaimed during the year.

The length of main and secondary roads maintained by the Department of Main Roads at 30th June, 1957 (excluding the Western Division) was 2,979 miles (17 per cent.), while the length maintained by councils was 14,872 miles (83 per cent.). The proportions of the several classes of main roads maintained by the Department and councils respectively were:—State highways, 45 per cent., 55 per cent.; trunk roads, 2 per cent., 98 per cent.; ordinary main roads, 6 per cent., 94 per cent. Secondary roads were wholly maintained by councils. In the County of Cumberland (the metropolis and adjoining areas), the Department maintained 56 per cent. of the roads (516 miles).

- (b) Composition of Roads. In 1956, the total length of all roads in New South Wales was estimated at 125,040 miles, including 8,645 miles in the Western Division. The lengths of roads, according to their composition or nature, were as follows:—cement concrete, 404 miles; asphaltic concrete, 200 miles; tar or bituminous macadam, 4,684 miles; surface water-bound macadam, 5,440 miles; water-bound macadam, 1,794 miles; gravel or crushed rock, 39,550 miles; formed only, 27,281 miles; cleared or natural surface only, 45,687 miles.
- (iii) Main Roads Department. (a) General. Progress has continued with the implementation of the Main Roads Department plan for main road development in the metropolis and the balance of the County of Cumberland. The plan has been incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act 1951. Detailed planning of the Newcastle and District Arterial Roads System is well advanced and some sections of the system have already been constructed. Surveys and designs have been advanced in the planned Wollongong-Port Kembla District Main Roads System.

In addition to its construction and maintenance work on roads, the Main Roads Department is engaged on a scheme for widening metropolitan roads. The acquisition of land required to implement approved schemes is proceeding.

During 1956-57, 67 new bridges were constructed. In addition, 45 concrete box culverts having a waterway width of 20 feet or more were completed. Major bridge works under construction include steel and concrete bridges over Middle Harbour at the Spit, Sydney (length 745 feet), George's River at Liverpool (length 912 feet), the Karuah River at Karuah (length 716 feet), the Wallambo River at Nabiac (length 668 feet), the Macleay River at Kempsey (length 917 feet) and the Wallambo River to connect Forster and Tuncurry (length 2,000 feet).

(b) Receipts and Payments. The funds of the Department of Main Roads are derived principally from taxation of motor vehicles, contributions by the Commonwealth Government under the Commonwealth Aid Roads Acts (see Chapter XXI.—Public Finance, for some particulars of the basis and distribution of grants under these Acts and para. 1 of this section for particulars of the amounts allocated in recent years), contributions by municipal and shire councils, and special (not statutory) assistance by the State Government by way of loan moneys or special grants from revenue funds. Receipts and payments for the four years 1953-54 to 1956-57 compared with the income and expenditure for 1938-39 are shown below.

DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS.

	()				
Item.	1938-39. (a)	1953–54.	1954–55.	1955–56.	1956–57.
	RECEIPT	s.			
Motor Vehicle Taxation, and Regisstration and Licence Fees Commonwealth Aid Roads and	2,018,556	6,693,215	7,279,705	7,675,281	7,944,583
Works Acts	1,176,039 250,679		4,132,187 707,230	4,646,788 878,621	
Consolidated Revenue (State)	302,643	850,000	200,000		298,072
Grants and Contributions from State		20.266	,	,	,
Government and Departments, etc. Commonwealth Funds for Special	13,549	89,266	115,983	·	161,937
Works	54,782	358,206 98,935	261,554 48,350	301,225 58,177	
Other Total		11,886,342			

## DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES: RECEIPTS AND PAYMENTS—continued.

(£.) 1954-55. Irem. 1938-39. 1953-54. 1955-56. 1956-57. (a) PAYMENTS. Roads and Bridges-6,314,770 6,896,403 Construction ... 1,736,898 7,160,708 7,813,534 5,146,618 5,546,974 Maintenance ... 1,519,929 5,946,283 6,174,524 702 Other Works 27,156 2,546 Debt Charges-152,469 136,450 140,233 Interest, Exchange, etc. 151,652 171,242 200,591 31,442 Debt Redemption 33,735 36,299 38,677 308,580 81,584 260,551 Purchase of Assets(b) 168,766 . . . . Suspense Accounts(c) 107,327 326,317 156,924. -217,258 100,583 410,547 Administration, etc. 458,428 515,715 562,056 Other .. 73,275 914 33,950 55,752 52,918. 3,711,384 12,556,165 12,867,536 13,970,738 14,764,459 Total

Note.—Minus sign (-) indicates excess of receipts over payments.

The figures shown above represent the aggregate receipts and payments of three funds—the County of Cumberland Main Roads Fund, the Country Main Roads Fund and the Developmental Roads Fund.

The total expenditure on roads, streets and bridges in the State by all authorities during the years 1938-39 and 1951-52 to 1955-56 was, respectively, £8,891,000, £14,904,000, £20,004,000, £22,510,000, £26,878,000, and £29,595,000. These figures are approximate and they include expenditure on construction, maintenance and direct administration, but not on debt charges. Expenditure on the Sydney Harbour Bridge is not included.

- (c) Sydney Harbour Bridge. The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and the clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway, two railway tracks and two tramway tracks, and there is also a footway on each side. The capital cost of the bridge to the 30th June, 1957, was £9,578,006, but this amount will be reduced slightly on completion of the disposal of the remaining surplus resumed property. The portion met from repayable loan funds, over £7,900,000, is repayable from toll income. The accumulated balance of the Bridge Account at 30th June, 1957, showed a surplus of £40,095, after the transfer of sums totalling £2,085,000 to a reserve account. Annual income, after a decline to less than £300,000 during the 1939-45 War, has risen from about £400,000 in 1938-39 to over £980,000 in 1956-57, while expenditure over the same period has remained relatively stable, varying between £424,000 and £656,000. In 1956-57, income included road tolls, £803,012, railway passenger tolls, £136,095, and tram and omnibus passenger tolls, £18,763. Expenditure amounted to £656,613, including interest, exchange, flotation expenses, etc., £296,669, sinking fund, £98,000, and maintenance and improvement £150,991. During 1956-57, 24,075,000 rail travellers, 17,455,000 tram and omnibus travellers, and 36,724,000 road travellers in 22,094,000 road vehicles crossed the bridge, contributing, respectively, 14 per cent., 2 per cent. and 84 per cent. of the total toll revenue.
- 3. Victoria.—(i) General. With the object of improving the main roads of the State, the Country Roads Board was established by legislation passed in 1912. The principal duties of the Board are to determine the main roads, State highways, tourists' roads, etc., to inquire into the State's resources in road materials and the most effective methods of road construction and maintenance, and to recommend deviations in existing roads or the construction of new roads in order to facilitate communication or to improve the conditions of traffic.
- (ii) Length of Roads. (a) Declared Roads. The total length of declared roads in Victoria at 30th June, 1956, the latest date for which details are available, was 14,430 miles, classified as follows:—State highways, 3,850 miles; main roads, 9,787 miles; tourist roads, 416 miles; forest roads, 377 miles. The total length of the surface treated (black) or higher type of pavements included in the foregoing totals was 8,571 miles or 59 per cent.

<sup>(</sup>a) Income and expenditure. (b) Excludes plant and motor vehicles. (c) Includes purchase and operation of Department's Plant and Vehices not included elsewhere.

Stores and Materials

Vehicles Act ...

Total

Road Charges-Commercial Goods

. .

. .

Hire of Plant

Other ..

- (b) Composition of Roads. It is estimated that, in addition to the 14,430 miles of classified roads as above, there were approximately 85,500 miles of unclassified roads at 30th June, 1954. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1954) provides the following information:—Wood or stone, 61 miles; portland cement concrete, 135 miles; asphaltic concrete and sheet asphalt, 233 miles; tar or bitumen surface seal, 12,197 miles; water-bound macadam, gravel, sand and hard loam pavements, 31,766 miles; formed only, 25,040 miles; not formed, 30,531 miles; total, 99,963 miles.
- (iii) Country Roads Board. (a) General. During 1955-56, 1,117 miles of declared roads under the Board's control were treated with bitumen. In addition, 329 miles of undeclared roads, for which the Board contributed funds, were similarly treated. Work for other authorities carried out by the Board's plant amounted to 141 miles. The total length of bitumen treatment carried out in 1955-56 was 1,587 miles. Of the work on the roads under the Board's control, 367 miles related to State highways.

During 1955-56, 221 bridge projects with a total value of £1,363,500 were initiated. Of these new projects, 47 with a total value of £857,000 were supervised by the Board and 174 with a total value of £506,500 were supervised by municipalities.

(b) Receipts and Payments. The funds of the Country Roads Board are derived principally from motor registration fees, two thirds of all money received by way of owners' certificates, one half of drivers' licence fees, fines, payments by the Commonwealth Government under the Commonwealth Aid Roads Acts, road charges under the Commercial Goods Vehicles Act and repayments by municipalities. In addition, loans have been authorized from time to time under the Country Roads Acts for permanent works on main and developmental roads, State highways, tourists' and forest roads, while the State Government has provided, free of repayment, loan moneys for restoration of flood and bush fire damage. During the year ended 30th June, 1956, loan receipts and payments each amounted to £1,092,950, and expenditure included £460,755 for restoration of flood and bush fire damage. The total loan expenditure to 30th June, 1956, was £12,125,808. This figure does not include loan expenditure from the Developmental Roads Loan Account, a fund which was created for the purpose of constructing and maintaining subsidiary or developmental roads. Loan money raised on this account was exhausted at 30th June, 1937, the total expenditure at that date being £6,425,758.

Total receipts and payments during each of the years 1938-39 and 1952-53 to 1955-56 are shown below :---

# COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS. (£.)

1938~39. 1952-53. 1953-54. 1954-55. 1955-56. (a) RECEIPTS. 1,690,962 3,702,131 4,647,372 Motor Vehicle Registration Fees 3,791,643 4,984,855 Drivers' Licence Fees(b) ... 159,402 178,885 181,728 199,852 . . 344,320 Municipalities' Payments 318,878 331,605 387,561 501,110 Commonwealth Aid Roads Acts(c)... 716,019 2,741,608 2,446,029 3,802,369 4,430,575 Loans from State Government 57,972 1,191,509 1,512,741 1,102,309 1,092,950 Surplus Transport Regulation Fund 387,992 500,000 Advance from Public Account

233,104

117,341

3.188,000

53,724

. .

2,092

. .

1,841

7,845,483 8,558,323 10,510,640 11,949,940

. .

. .

1,309

215,789

24,809

NOTE .- See next page for footnotes.

COUNTRY	<b>ROADS</b>	BOARD,	VICTORIA:	RECEIPTS	AND	PAYMENTS—continued.
			1.0	`		

		(4.)				
Item.		1938-39. (a)	1952-53.	1953–54.	1954–55.	1955–56.
		PAYMEN	TS.			
Construction and Maintenance Roads and Bridges—	of				!	
State Highways		453,708	2.250,803	2,503,912	3.033.653	3,495,182
Main Roads		1,027,210			3,566,478	3,889,291
Tourist Roads		77,694	232,778	217,804	294,590	342,839
Forest Roads			113,895	108,504	139,119	144,684
Unclassified Roads		468,122	918,946	995,787	1,445,032	1,947,134
Roads adjoining Commonwe	alth					
Properties		13,321				
Other		(d) 58,729	13,843	17,032	30,181	50,484
Relief to Municipalities		240,170				
Plant, Stores and Materials		310,332	840,258	670,389	584,826	627,011
Interest, Debt Redemption, etc.		427,445	570,001	611,154	676,012	745,873
Administration Expenditure	and	i .				
Other		230,125	449,030	551,046	621,478	789,374
Total		3,306,856	7,882,409	8,518,879	10,391,369	12,031,872

- (a) Figures for 1938-39 are not directly comparable with those of succeeding years owing to a change in the method of compilation adopted by the Country Roads Board. (b) Prior to 1st July, 1949 drivers' licence fees were paid into Consolidated Revenue Fund. From that date until 31st December, 1950 the fees were credited to the funds of the Country Roads Board. Since then one half of the fees has been credited to the funds of the Country Roads Board while the remaining half has been credited to the Municipalities Assistance Fund. (c) Excludes portion of Commonwealth Aid Roads Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc. (d) Includes £54,662 expenditure on unemployment relief works.
- (iv) Level Crossings. In 1954-55, the Level Crossings Fund was created under the Country Roads and Level Crossings Funds' Act 1954 to finance (a) the elimination of level crossings or the provision of alternative routes to enable road traffic to avoid level crossings, (b) the provision of lights, signs, and lighting at and the improvement of approaches to level crossings and (c) generally, the reduction of danger at level crossings. A third of all moneys received by way of owners' certificates is paid into the Fund as well as payments under other Acts for similar purposes. In 1955-56, the Fund received £225,397 from collections in respect of additional registration fees. Expenditure from the Fund amounted to £227,378 comprising £51,936 incurred by the Railways Department and £175,442 incurred by the Country Roads Board.
- 4. Queensland —(i) General. Under the Main Roads Act 1920, a Main Roads Board was constituted, consisting of three members appointed by the Governor-in-Council. In 1925, the Board was abolished and its powers conferred upon a single Commissioner. The Main Roads Commission was constituted a Department under the name of the Department of Main Roads in February, 1951, with the Commissioner of Main Roads as its permanent head. The duties of the Commissioner are to carry out surveys and investigations necessary to determine State highways, main, developmental, secondary, mining access, farmers' and tourist roads and tourist tracks, and the responsibility for building and maintaining these declared roads is largely that of the Commissioner. Roads of purely local importance are constructed and maintained by local authorities. In many cases, construction is financed by the State Government by means of Treasury loans. Other roads are built by the Public Estate Improvement Branch of the Lands Department in order to open up areas of previously inaccessible or undeveloped country.
- (ii) Length of Roads. (a) Declared Roads. The total length of declared roads in Queensland at 30th June, 1956, was 20,985 miles, comprising State highways, 8,252 miles; main roads, 10,635 miles; developmental roads, 235 miles; secondary roads, 646 miles; mining access roads, 606 miles; farmers' roads, 311 miles; tourist roads, 299 miles; tourist tracks, one mile. The length of roads improved in Queensland from the date of commencement of work under the Main Roads Acts 1920-1952 to 30th June, 1956, was 13,194 miles (63 per cent.). At that date also, 1,183 miles of new road construction and 644 miles of stage construction work were proceeding.
- (b) Composition of Roads. The total length of roads and streets in Queensland at 30th June, 1956, was:—Concrete, 101 miles; bitumen, 6,604 miles; macadam, 15,238 miles; other formed, 41,815 miles; unconstructed, 59,558 miles; total, 123,316 miles.

- (iii) Department of Main Roads. (a) General. During 1955-56, the Department completed 1,227 miles of roads including new construction and stage construction. Bridges of all types to a length of 6,559 linear feet were constructed, bringing the total constructed by the Department at 30th June, 1956, to 184,050 feet. In addition, at 30th June, 1956, 6,540 feet were under construction.
- (b) Receipts and Payments. The funds of the Department of Main Roads are obtained chiefly from motor vehicle registration and collections, fees, etc., under the Transport Acts, contributions under the Commonwealth Aid Roads Acts and loans, grants and advances from the State Government. The total receipts and payments, including amounts for defence works, during each of the years 1938-39 and 1952-53 to 1955-56 are shown below:

DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS.

	(z.)				
Item.	1938–39.	1952-53.	1953-54.	1954-55.	1955-56.
	RECEIF	ets.			
Motor Vehicle Registration, Trans-		1			
port Acts Collections, Fees, etc	938,227	3,523,958	3,766,460	4,075,193	4,342,483
Loans from State Government	392,225	825,000	100,000		380,000
Grants, Advances, Refunds, etc.					
from State Government	579,775	103,855	349,315		
Commonwealth Aid Roads and				!	
Works Acts	806,218	3,135,034	3,454,665	4,414,226	5,135,202
Maintenance Repayments-Local				i .	
Authorities	98,154				406,998
Hire, Rent, Sales of Plant, etc	} 288,330	∫ 107,468			
Other	200,230	386,210	400;676	329,549	415,931
Total	3,102,929	8,389,703	8,474,203	9,802,759	11,446,301
	Раумы	NTS.			
Permanent Road Works and Surveys	2.045,900	4.113.945	3.930.659	6.091.811	6,344,024
Maintenance of Roads	331,734	1,180,788	1,603,418		2,521,193
Plant, Machinery, Buildings, etc.	1	-,,	.,,	_,,	_,,
(including Plant Maintenance)	73,632	966,963	837,504	1,390,728	1,070,648
Loans—Interest	38,861	265,074		265,079	253,050
Redemption	78,153	239,066	250,156	250,817	255,224
Payments to State Consolidated	i ' !				•
Revenue	340,244				
Payments to Local Authorities	27,418	1,625	1,625	1,625	1,625
	151,700	682,729	699,428	803,671	905,599
Administration, etc	131,700	002,125			

- 5. South Australia.—(i) General. The Highways and Local Government Department is administered by the Commissioner of Highways, who is empowered, subject to the approval of the Minister of Roads, to undertake the construction, maintenance and protection of the main highways of the State. In addition the Commissioner—
  - (a) allocates grants to councils for roadworks and supervises the expenditure.
  - (b) assists Councils to purchase road-making plant and to defray the cost of roadworks.
  - (c) advises Councils on any question concerning the construction, maintenance or repair of road-works.
  - (ii) Source of Funds. Funds of the Department are derived mainly from-
    - (a) State Government. The Highways Fund, into which are paid the proceeds from motor vehicle registrations and drivers' licences (less cost of collection), appropriations from loan funds, repayments of advances made to Councils and contributions by the Municipal Tramways Trust.
    - (b) Commonwealth Government. Contributions under the Commonwealth Aid Roads Acts.

- (iii) Length of Roads. In South Australia, there are only two classifications of roads. These are Main Roads proclaimed under the provisions of the Highways Act and all other roads, commonly designated District Roads. At 30th June, 1957, there were 8,188 miles of proclaimed Main Roads and 44,743 miles of District Roads, totalling 52,931 miles. Of these, 24,719 miles are unformed and carry little or no traffic and a further 8,880 miles, which have been formed only, are open to traffic during most of the year. Of the remainder, there are 13,636 miles of road constructed with gravel or crushed rock and 5,696 miles of a higher standard constructed with either bitumen or concrete.
- (iv) State Highways and Local Government Department, Receipts and Payments. The following table shows particulars of receipts and payments, during the years 1938-39 and 1952-53 to 1955-56, of funds controlled by the Highways and Local Government Department.

## HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA: RECEIPTS AND PAYMENTS.

	(£.)	Į.			
Item.	1938–39. (a)	1952–53.	1953–54.	1954–55.	1955–56.
	RECEIF	rs.			
Motor Vehicle Registration, Licences, Fees, Fines, etc.	690,849	1,497,227	2,230,045	2,997,668	3,221,230
Commonwealth Aid Roads and Works Acts	479,922 200,000			2,555,471 200,000	
Recoups—Local and Semi-governmental Authorities	1	\$ 38,267 \$ 6864,480		9,978	
Other	ر ا	0 604,480			399,192
Total	1,372,302	4,442,935	4,377,171	6,111,584	6,679,365
	Раумен	NTS.			
	c1,150,082	1,786,777 666,239	2,142,728 918,582	2,877,748 825,371	3,658,078 1,562,515
Recoups to Consolidated Revenue Fund—Interest, Debt Redemption and Exchange Grants and Advances to Local and	d 178,273				•
Semi-governmental Authorities Administration	(e)	231,542	1,343,381 267,042		
Accounts, etc S	45,753	252,135 48,506			
Total	1,374,108	3,804,310	5,027,688	6,146,833	6,751,756

 <sup>(</sup>a) Figures for 1938-39 are not completely comparable with those for following years.
 (b) Includes special contribution of £620,000 from Consolidated Revenue for roads for war service land settlement and developmental roads.
 (c) Roads, plant, etc.
 (d) Interest and sinking fund payments.
 (e) Not separately available; included elsewhere.

The total expenditure, both revenue and loan, by State and local governments on roads, streets and bridges in South Australia during the years 1938-39 and 1952-53 to 1955-56 was, respectively, £1,966,000, £4,667,000, £6,131,000, £7,539,000 and £8,812,000.

6. Western Australia.—(i) General. Under the Main Roads Act 1930-54, the Main Roads Board previously existing was abolished and a Commissioner of Main Roads was

appointed. His duties relate to the determination of main roads after consideration of the funds available and the services to be rendered by the roads, the declaration and provision of developmental roads, the construction and maintenance of main roads, and the carrying out of surveys, investigations and experiments connected with roads and road materials. The Act authorizes two trust accounts (Main Roads Trust Account and Main Roads Contribution Trust Account) to record the moneys prescribed as available to the Commissioner for expenditure associated with roads, etc. In addition, the Commissioner operates on other Trust Accounts which are used for funds made available under the Commonwealth Aid Roads Acts.

(ii) Length of Roads and Streets. The total known lengths of roads and streets in existence in the various municipalities at 31st October, 1956, and in road districts at 30th June, 1956, were as follows:—Bituminous, 5,876 miles; gravel water-bound, 14,214 miles; other constructed surfaces, 1,354 miles; formed only, 39,580 miles; unprepared, 26,978 miles (incomplete); total, 88,002 miles.

The lengths of declared roads at 30th June, 1956, were :—Main roads, 3,487 miles; important secondary roads, 6,929 miles; developmental roads, 12,775 miles; total, 23,191 miles.

- (iii) Main Roads Department. During the year 1955-56, the activities of the Department included:—clearing, 1,838 miles; forming, 1,994 miles; gravelling, 1,275 miles; reconditioning, 4,495 miles; stabilizing, 200 miles; side drains, 111 miles. In addition, the length of tar and bitumen work performed aggregated 1,049 miles. Construction of the 260 miles of the Wyndham-Ord River-Nicholson road was continued during the year. Bridges constructed numbered 22. Two major bridges, one of timber over the Swan River at Upper Swan and the other also of timber over the Moore River, 20 miles west of Gingin, were completed during the year. Tenders were called later in 1956 for the construction of the projected bridge across the Swan River at the Narrows, Perth.
- (iv) Receipts and Payments—Combined Road Funds. The following table shows the combined transactions of the Main Roads Trust Account, the Main Roads Contributions Trust Account, the Metropolitan Traffic Trust Account, and the Commonwealth Aid Roads and Works Trust Accounts during the years ended 30th June, 1939 and 1953 to 1956.

ROAD FUNDS, WESTERN AUSTRALIA: RECEIPTS AND PAYMENTS.
(£.)

Item. 1938-39. 1952-53. 1953-54. 1954-55. 1955-56 (a) RECEIPTS. Motor Vehicle Registration, Licences, Fees, Fines, etc. 218,962 523,495 584,454 472,477 636,464 Commonwealth Aid Roads Works Acts . . 823,162 2,886,672 3,212,454 4,411,656 5,110,892 Recoups from Local Authorities, 210,777 199,591 273,886 etc... 233,285 1,958 Other . . 224,768 43,129 116,373 96,174 1,044,082 3,613,055 4,051,913 5,366,170 6,205,409 Total PAYMENTS. Construction and Reconstruction 3,079,210 2,492,320 2,947,597 4,497,015 of Roads and Bridges.. 922,756 255,181 309,276 Maintenance ... 258,289 214,217 Grants to Local Authorities, etc. . . 273,796 295,713 143,544 323,410 368,410 Transfer to State Consolidated Revenue 70,000 70,000 70,000 70,000 Interest, Debt Redemption and Exchange-State Consolidated Rev-7,396 7,396 7,396 7,396 enue 7,616 Administration 52,176 68,703 47,583 69,947 72,354 . . . . 502,444 545,833 481,536 Plant, Machinery, etc. 276,686 19,181 640,478 540,945 463,969 520,405 Other . . 4,900,316 3,944,860 4,683,333 6,326,392 1.145,273 Total

<sup>(</sup>a) Figures not completely comparable with those for following years. Includes Transport Co-ordination Trust Account.

- 7. Tasmania.—(i) General. Under the Road Construction (Transfer of Functions) Act 1951, which came into operation on 1st July, 1951, the control of the construction and maintenance of roads and certain road making plant was vested in the Minister for Lands and Works. Works authorized by the Minister in respect of roads classified as State highways, tourists' and developmental roads are constructed by the Department of Public Works and financed from the State Highways Trust Fund into which are paid the proceeds from Commonwealth Aid Roads grants, motor vehicle registration fees and taxes, licence fees for drivers and public transport and other moneys made available by Parliament. In addition, provision was made under the Road Construction (Transfer of Functions) Act for certain works authorized by the Transport Commission to be carried out and constructed by the Department. The expenditure by the Public Works Department during 1955-56 on the construction of roads, tracks and bridges amounted to £2,798,238 of which £1,898,207 was charged to road funds, £41,446 to revenue, £781,347 to loan and £77,238 to other funds. Except in special cases, municipal councils bear the cost of maintaining country roads and a proportion of the cost of main and secondary roads.
- (ii) Length of Roads. (a) Classified Roads. The mileages of classified roads in Tasmania at 30th June, 1956 were as follows:—State highways, 1,161 miles; main roads, 651 miles; secondary roads, 186 miles; tourist roads, 45 miles; developmental roads, 50 miles; subsidized roads, 92 miles; total 2,185 miles. Country roads totalled more than 10,000 miles. The mileages of sealed roads, and their proportions to the respective totals, were:—State highways, 586 miles (50 per cent.); main roads, 228 miles (35 per cent.); secondary and other roads, 23 miles (6 per cent.); total, 837 miles (38 per cent. of all classified roads, and 6 per cent. of all roads, in Tasmania).
- (b) Composition of Roads. The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1956, was as follows:—Bituminous, 1,166 miles; concrete, 22 miles; granite, limestone, etc., water-bound, 8,560 miles; surfaces of lower grade, 2,926 miles; total, 12,674 miles.
- (iii) Receipts and Payments—Combined Road Funds. The table hereunder shows particulars of the receipts and payments of the combined Road Funds for the years 1939-40 and 1952-53 to 1955-56:—

ROAD FUNDS, TASMANIA: RECEIPTS AND PAYMENTS.

	(£.)				
Item.	1939–40. (a)	1952–53.	1953–54.	1954–55.	1955–56.
	RECEIPT	rs.			
Motor Vehicle Taxation and Regis-	1				1
tration, Licences, Fees, Fines, etc.	193,165	432,738	450,962	523,138	623,782
Commonwealth Aid Roads and	\			, i	
Works Acts	220,241	745,985	830,922 <sup>t</sup>	1,125,259	1,303,299
Recoups from Local Authorities, etc.		11,539	10,076	8,339	10,765
State Loan Fund	l i	494,125	825,502	860,862	782,264
Hire of Plant		553,678	741,383	807,525	813,593
Other	719	152,556	115,064	167,414	171,205
Total	414,125	2,390,621	2,973,909	3,492,537	3,704,908
	PAYMENT	rs.			
Construction and Reconstruction of	1 1		· · ·		
Roads and Bridges	130,924	716,223	1,070,414	1,562,003	1,624,722
Maintenance	113,199	768,395	977,403	1,041,981	1,079,893
Jetties, etc	22,467				
Other works connected with Trans-					
port	5,748	15,566	9,823	10,480	11,558
Grants to Local Authorities, etc		2,762	3,671	5,018	5,401
Administration	15,053	58,736	56,807	39,315	40,213
Purchase, Hire and Maintenance of					
Plant	(b)	586,409	809,546	848,738	839,360
Other	31,894	120,925	- 22,558	93,332	70,53 <b>5</b>
Total	319,285	2,269,016	2,905,106	3,600,867	3,671,682

<sup>(</sup>a) First year of operation of Transport Commission. Figures not completely comparable with those for following years. (b) Not available, included with other.

Note.—Minus sign (-) indicates an excess of credits.

8. Summary of Roads used for General Traffic .- (i) Proclaimed or Declared Roads. The table hereunder is a summary of the roads proclaimed or declared under the Acts of the several States relative to the operations of the central road authorities, and shows the lengths of various classes proclaimed or declared as at 30th June, 1956. These proclaimed or declared roads are those for which the central road authority assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance, the extent varying from State to State and with the class and locality of the roads. Before proclamation of a main road, consideration is given, in general, to the following points: availability of funds; whether the road is, or will be, within one of several classes of main trunk routes; whether the district is, or will be, sufficiently served by railways. Provision is also made in some States for the declaration of roads other than main roads. The absence of a particular class in any State does not necessarily imply that there are no roads within that State that might be so classified; the classes are restricted only to roads proclaimed or declared under the Acts. A further point to make is that, through various causes, e.g., insufficiency of funds, man-power or materials, etc., construction or maintenance may not. keep pace with gazettals of mileages, and therefore the condition of a road may not match its status.

PROCLAIMED OR DECLARED ROADS: LENGTHS, 30th JUNE, 1956. (Miles.)

Class of Road.		N.S.W.	Vic.	Q'land.	S Aust.	W. Aust.	Tas.	Total.
State highways Trunk roads Ordinary main roads	::	6,526 4,191 11,778	3,849 } 9,791	8,252 10,635	8,188	3,487	1,161 } 651	68,509
Total Main Roads		22,495	13,640	18,887	8,188	3,487	1,812	68,509
Secondary roads Developmental roads Tourist roads Other roads		2,640 ::	414 (c) 376	646 235 299 (d) 918	::	6,929 12,775	186 50 45 (e) 92	7,838 15,700 758 1,386
Total Other Roads		2,717	790	2,098	·	19,704	373	25,682
Grand Total	••	25,212	14,430	20,985	8,188	23,191	2,185	94,191

(a) As at 30th June, 1954. (b) As at 30th June, 1957. (c) Forest roads. (d) Includes mining access roads, 606 miles; farmers' roads, 311 miles; tourist tracks, 1 mile. (e) Subsidized roads.

(ii) Composition of Roads. The following table represents an attempt to classify all the roads used for general traffic in Australia, at the latest dates available, according to States and Territories and to certain broad composition groups. The results are not entirely satisfactory, (i) because it is doubtful whether the whole of Australia is covered, (ii) because the dates of reference differ, and (iii) because the figures constituting each group are not wholly comparable for the States and Territories. It is hoped, however, that despite these defects the table will provide an approximate and general idea of the main types of roads in Australia.

The figures in the table for the States are obtained from the State Government Statisticians, and are derived mainly from local government sources. Unincorporated areas in some States are probably excluded and the figures on the returns supplied by the local government authorities are in some cases of doubtful accuracy. Details of the composition of roads, as far as they are available, vary to such an extent that it is considered preferable to show here only major divisions.

Groups 1-4 as shown in the table include, respectively, the following types of composition:—

- 1. Wood or Stone. Wood blocks; stone paved.
- Concrete. Cement concrete; asphaltic concrete; bituminous concrete; sheet asphalt on concrete base.
- 3. Bituminous. Tar or bituminous macadam; tar and bituminous surface seal; surfaced water-bound macadam or gravel; bituminous or cement penetration.

 Macadam and Other. Water-bound macadam; granite, limestone, and blastfurnace slag, water-bound; water-bound gravel; gravel or crushed rock; metalled (gravel or rubble); gravel, sand and hard loam pavements.

Groups 5 and 6 include roads so-called mainly because they are used for general traffic, irrespective of their surfaces, prepared or otherwise.

It will be noticed that some of the terms used above are practically synonymous. Such terms are, of course, not used by any one State, but are the classifications adopted by different States.

For details of any particular State, see the respective paragraphs in the preceding pages.

ALL ROADS USED FOR GENERAL TRAFFIC: LENGTHS. (Miles.)

	·			(ITIII)	·/				
Composition of	N.S.W.	. Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	
Road.	30th June. 1956.	30th Sept., 1954.	30th June, 1956.	30th June, 1953.	1956. (a)	30th June, 1955.	30th June, 1956.	30th June, 1956.	Total.
1. Wood or				1	1		1		
stone		61		6					67
2. Concrete	604	368	101	605		22	'	3	. 1,703
3. Bituminous	10,124	12,197	6,604	2,914	5,876	1,166	1,287	186	40,354
4. Macadam	41.344	21.766	15,238	16.829	15 560	0.500	100	160	130.654
and other 5. Formed only	27,281	31,766 25,040	41,815	12,956	15,568 39,580	8,560	190	159 227	129,654
6. Cleared, or	27,201	23,040	41,013	12,930	39,300	{	1 9,119	221	11
natural sur-	į		i	i	1	> 2,926	₹		> 345,392
face, only	45,687	30,531	59,558	22,270	26,978	J	1,424		j
Total	125,040	99,963	123,316	55,580	88,002	12,674	12,020	575	517,170

(a) Municipalities, 31st October; Road Districts, 30th June,

It will be seen from the foregoing table that only about one-third of the road lengths of Australia have actually been constructed, the remainder, for the greater part, being in little more than the natural state. The percentages for each group are as follows:—Group 1, 0.01; group 2, 0.33; group 3, 7.80; group 4, 25.07; groups 5 and 6, 66.79. The percentage of constructed lengths to total length in each State is as follows:—New South Wales, 42; Victoria, 44; Queensland, 18; South Australia, 37; Western Australia, 24; Tasmania, 77; Northern Territory, 12; Australian Capital Territory, 61. Comparisons between the States should be made with caution, however, because, in addition to the defects enumerated at the beginning of this section, factors such as the area, physiography, density and distribution of population, nature of economic activity, other facilities for transport, etc., in each State must be taken into account.

9. Summary of Expenditure on Roads and Bridges.—(i) General. In most States there are three classes of authorities—the State Government, the central road authority, and the numerous local government bodies. Most of these authorities may expend money either directly on road construction or indirectly by means of grants and miscellaneous payments to other authorities. Insufficient information is given in the accounts of many authorities to permit the exclusion of these indirect payments which would, if included in the aggregate, duplicate the expenditure. In addition, a number of authorities are not able to supply separate information concerning their expenditure on roads. For these reasons it has not been possible, up to the present, to compile statistics of the aggregate expenditure on roads.

The two paragraphs following therefore represent only: (a) aggregate expenditure from the various State road funds referred to in the foregoing pages, and (b) loan fund expenditure by State Governments. Expenditure by local government bodies is not included. Paragraph 8, Finances, of § 2. Local Government Authorities, contains some particulars of local government revenue and expenditure on roads, streets and bridges (see pages 682 and 685).

(ii) Aggregate Expenditure from State Road Funds. The following table shows expenditure on the construction and maintenance of roads, including payments to local government bodies, by each State during the years 1938-39 and 1951-52 to 1955-56, as summarized from the foregoing tables dealing with the receipts and payments of the various State road authorities. Expenditure on plant and materials, not charged to construction

and maintenance of roads and bridges and expenditure on debt charges and payments to State consolidated revenues are not included. In some instances, expenditure on works other than roads and bridges is included. Because of differing accounting methods, figures are not completely comparable as between States, nor, in some States, as from year to year.

ROADS AND BRIDGES: AGGREGATE EXPENDITURE FROM ROAD FUNDS. (£'000.)

Year ended 30th June—		N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tasmania.	Total.
1939		3,358	2,569	2,557	1,374	1,138	(b) 319	11,091
1952		9,006	6,576	7,379	3,267	3,564	1,550	31,272
1953		9,357	6,472	5,979	3,404	4,320	1,683	31,215
1954		11,972	7,237	6,235	4,708	3,591	2,096	35,839
1955		12,938	9,131	8,975	5,256	4,060	2,752	43,112
1956		13,679	10,659	9,772	6,145	5,768	2,832	48,855

<sup>(</sup>a) Excludes Sydney Harbour Bridge.

The foregoing particulars do not represent the total expenditure on roads and bridges in each State. To obtain this information, additions must be made on account of (a) State Government expenditure from revenue and loan through Departments or authorities other than the central road authority and (b) local government expenditure from revenue and loan, while, on the other hand, allowances must be made for grants and miscellaneous payments to other authorities (see (i) above).

(iii) State Net Loan Expenditure. In recent years, expenditure from State loan funds on roads and bridges has not been large, and it would appear, also, that a considerable proportion passes through the funds of the central road authorities and is therefore included in the figures of their financial operations in the foregoing sections. Gross loan expenditure by all State Governments during 1955-56 amounted to over £2,000,000, while net expenditure was about £350,000 less. Aggregate net loan expenditure on roads and bridges in each State to 30th June, 1956, amounted to the following approximate sums:—New South Wales, £22,000,000; Victoria, £20,000,000; Queensland, £11,000,000; South Australia, £5,000,000; Western Australia, £3,000,000; Tasmania, £10,000,000; total, £71,000,000.

### § 5. Water Supply, Sewerage and Drainage.

Note.—See also Chapter IX.—Water Conservation and Irrigation.

- 1. New South Wales.—(i) General. The two largest domestic water supply and sewerage systems are controlled by statutory boards each consisting of a president and a vice-president appointed by the State Government and five members elected by local councils. These are (a) the Metropolitan Water, Sewerage and Drainage Board, which administers the systems in the County of Cumberland, i.e., in Sydney and in the surrounding districts, and, in addition, has jurisdiction over territory extending along the South Coast beyond Wollongong to Lake Illawarra, and (b) the Hunter District Water Board, serving the Newcastle area. At Broken Hill, a similar board includes a representative of the mining companies. Other systems, apart from irrigation projects and water storage systems administered by the State Government, are controlled by county, municipal or shire councils.
- (ii) Water Supply—to 30th June, 1956. (a) Metropolitan. The storage reservoirs of the metropolitan system, with a combined available capacity of 124,944 million gallons, drain catchment areas of 376 square miles (Upper Nepean, 347 square miles and Woronora, 29 square miles). Water is drawn also from the Warragamba River, with a catchment of 3,383 square miles. This system is being developed, and building has commenced on a dam to have an overall height of 415 feet (greatest depth of water 340 feet) having a storage capacity of 460,000 million gallons and giving a net safe draught estimated at 263 million gallons per day in addition to 11 million gallons per day for riparian purposes. The existing temporary storage is supplied by a weir 50 feet high with a maximum storage of 579 million gallons. At 30th June, 1956, there were 112 service reservoirs in use with a

<sup>(</sup>b) Year 1939-40.

combined capacity of 554 million gallons. Rating for water for 1955-56 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 1s. 9d. per 1.000 gallons.

(b) Newcastle. The water supply is drawn from two sources (1) the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and (2) the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 111 million gallons. Water rating for 1955-56 was 1s. 6\frac{1}{4}d. in the \frac{1}{2}1 on assessed annual value for occupied properties and 1s. 3\frac{1}{2}d. in the \frac{1}{2}1 for unoccupied properties. The price of water to domestic and industrial consumers is 2s. per 1,000 gallons.

(c) Water Supplied, etc. The following tables show, for the Sydney and Newcastle systems, the number of properties, the estimated population supplied, and other details for the years 1938-39 and 1951-52 to 1955-56:—

WATER SUPPLY, SYDNEY(a): SERVICES.

		Improved Prop-	Esti-		Total		e Daily			
Year.		erties for which Water Mains available.	mated Popu- lation Supplied.	Average Daily Con- sumption.	Con- sumption	Per Pro- perty.	Per Head of Esti- mated Popu- lation.	Length of Mains.	Number of Meters.	
1938-39		350,161	1,466,000	Mill. gals. 106.3	Mill. gals. 38,790	Gallons. 304	Gallons. 72.5	Miles. 4,539	126,754	
1951-52 1952-53 1953-54 1954-55 1955-56	::	461,294 478,598 496,025 513,855 531,977	1,942,000 1,958,000 1,975,000 2,014,000 2,053,000	149.6	57,069 54,621 59,810 59,064 63,791	338 313 330 315 332	80.3 76.4 83.7 80.4 85.6	5,252 5,357 5,502 5,656 5,788	227,850 246,383 270,239 294,463 308,511	

(a) Includes part of South Coast.

#### WATER SUPPLY, NEWCASTLE: SERVICES,

				Enti	<b>A</b>	T-4-1	Averag Consur		
	Year.		Pro- perties Supplied.	Esti- mated Popu- lation Supplied.	Average Daily Con- sump- tion.	Total Con- sump- tion for Year.	Per Pro- perty.	Per Head of Esti- mated Popu- lation.	Length of Mains.
1938-39			48,370	193,480	Mill. gals.	Mill. gals. 4,331	Gallons. 245	Gallons. 61.3	Miles. 936
1951-52 1952-53 1953-54 1954-55 1955-56	:: :: ::	••	67,122 69,244 71,307 73,770 76,272	268,488 276,976 285,228 295,080 305,088	25.1 23.9 25.5 25.1 27.2	9,144 8,719 9,416 9,179 9,945	373 345 362 341 356	93.1 86.3 90.4 85.2 89.1	1,257 1,262 1,284 1,322 1,354

(iii) Sewerage and Drainage—to 30th June, 1956. (a) Metropolitan. Sydney and suburbs are served by 3 major sewerage systems and 5 minor systems consisting of 6 outfalls discharging direct into the Pacific Ocean and 2 treatment works. A further treatment works is in course of construction near Kurnell and is designed to serve the whole of the Cronulla Peninsula. In addition, 4 centres outside the metropolitan area (Camden, Campbelltown, Liverpool and Wollongong) are served by local treatment works.

Stormwater drainage channels under the control of the Metropolitan Water, Sewerage and Drainage Board at 30th June, 1956 were 175 miles long. Sewerage rating for 1955-56 was 9\frac{1}{2}d. in the £1 of assessed annual value and drainage rating \frac{1}{2}d. in the £1.

(b) Newcastle. The main sewerage system of the Newcastle area discharges into the Pacific Ocean at Merewether Gulf. In some of the outlying districts, treatment works have been installed.

Sewerage rates for 1955-56 were 1s. 1½d. in the £1 of assessed annual value of occupied lands and 10½d. in the £1 for unoccupied lands and drainage rates (on certain areas served) 1½d. in the £1.

(c) Particulars of Services. The following table gives, for the Metropolitan system, details of sewerage services and stormwater drains as at 30th June, 1939 and 1952 to 1956.

SEWERAGE AND DRAINAGE, METROPOLITAN(a): SERVICES.

At 30th June		I engths of Sewers.	Length of Stormwater Channels.			
			254,632	1,066,000	Miles. 2,561	Miles.
			309,995	1,266,000	3,000	176
			316,439	1,293,000	3.055	174
			324,737	1,354,000		175
			334,280	1,390,000		175
			344,655	1,425,000	3,349	175
				Sewerage Available.  254,632	Sewerage Available.	Control of the cont

<sup>(</sup>a) Includes part of South Coast.

At 30th June, 1956, 50,209 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle area). The total length of sewers under the Board's control was 655 miles, and the length of drains was 49 miles.

(iv) Finances, Sydney and Newcastle Systems. The following table shows the debt, revenue and expenditure of the Metropolitan Water, Sewerage and Drainage Board and the Hunter District Water Board for each of the services of water supply, sewerage and drainage during 1955-56 and for the three services combined during the years 1938-39 and 1951-52 to 1955-56.

WATER SUPPLY, SEWERAGE AND DRAINAGE, METROPOLITAN AND NEWCASTLE: FINANCES.

				(£.)				
		Capital			Expen	diture.		
Yea	Year.		Revenue.	Working Expenses.	Interest and Exchange.	Debt Redemp- tion.	Total.	Surplus(+) or Deficit(-).
			Mı	TROPOLITA	AN.(b)			
1955-	56					Ī		
Water Sewerage Drainage		69,102,688 28,413,666 c1,285,460	5,923,997 3,252,856 172,557	2,788,588 1,947,053 115,947	2,406,665 998,631 41,302	725,810 304,678 13,615	5,921,063 3,250,362 170,864	+ 2,934 + 2,494 + 1,693
Total	1955-56	98,801,814	9,349,410	4,851,588	3,446,598	1,044,103	9,342,289	$\frac{1}{+}$ 7,121
	1954-55 1953-54 1952-53 1951-52	91,434,271 84,474,951 77,117,666 70,670,899 43,769,741	8,507,664 7,891,016 6,672,577 6,199,094 2,926,694	4,732,625 4,365,926 3,494,464 3,313,807 957,422	3,109,747 2,878,004 2,618,630 2,343,923 1,727,708	641,164 598,634 554,435 540,680 241,564	8.483,536 7,842,564 6,667,529 6,198,410 2,926,694	+ 24,128 + 48,452 + 5,048 + 684
	1930-37	43,702,741	2,920,094	<u> </u>	<u> </u>	241,304	2,520,054	
				NEWCAST	LE.			
1955-	56		ļ		i			
Water Sewerage Drainage Total	1955–56 1954–55	9,710,068 3,271,699 193,990 13,175,757 11,842,265	1,081,178 418,866 34,547 1,534,591	675,480 282,169 23,824 981,473 943,382	320,802 108,058 6,343 435,203 382,663	60,078 21,128 1,561 82,767 73,330	1,056,360 411,355 31,728 1,499,443 1,399,375	+ 24,818 + 7,511 + 2,819 + 35,148 + 66,280
	1953-54 1952-53 1951-52 1938-39	10,439,017 9,431,369 8,794,710 4,574,880	1,245,444 1,119,775 858,729 385,732	828,021 726,137 572,382 167,620	332,628 294,769 278,211 188,185	66,407 59,747 55,888 20,886	1,227,056 1,080,653 906,481 376,691	+ 18,388 + 39,122 - 47,752 + 9,041
			1	I	•		1	<u> </u>

<sup>(</sup>a) Includes provision for renewals, long service leave, loss on exchange, etc. (b) Includes part of South Coast. (c) Excludes non-interest bearing capital in respect of stormwater drains transferred from Public Works Department—£2,219,823 at 30th June, 1956.

- (v) Country Water Supply and Sewerage Systems. At 31st December, 1954, country water supply services were conducted or under construction by 62 municipalities, 64 shires and 4 county councils, and country sewerage services by 57 municipalities and 20 shires. The capital indebtedness of these schemes was £17,560,325 at 31st December, 1954, namely, £12,455,748 for water and £5,104,577 for sewerage. Debt of the municipalities amounted to £9,498,540, shires to £4,327,433 and country councils to £3,734,352. Government advances amounting to £485,684 are included in these figures. Aggregate income and expenditure amounted to £2,822,749 and £2,067,653, respectively, in 1954.
- (vi) Other Water Supply and Sewerage Systems. The water supply and sewerage services for Broken Hill are operated by a statutory board, the Broken Hill Water Board. Its capital indebtedness at 31st December, 1955, was £2,981,865. In 1955, income (excluding subsidies, State Government £96,513 and Mining Companies £276,985) amounted to £176,033 and expenditure (excluding debt redemption £138,294) amounted to £409,266.

The following country water supply systems—South-West Tablelands, Junee and Fish River—are administered by the Department of Public Works. These supply water in bulk to municipalities and shires, the Railways Department, and other large consumers; only a small quantity is sold directly to private consumers. The capital indebtedness of these systems was £4,035,467 at 31st December, 1956.

The Mulwala Water Supply and Sewerage Service was constructed as an urgent wartime work for the Commonwealth, and the Bethungra Water Supply System is administered by the Department of Public Works in conjunction with the Junee supply.

- 2. Victoria.—(i) Melbourne and Metropolitan Board of Works. (a) General. The Board was established by Act of Parliament on 20th December, 1890. Since August, 1955, the Board has consisted of a Chairman and 50 Commissioners elected to represent the municipalities which lie wholly or partly within the metropolitan area. The Chairman is elected by the Commissioners for a four-year term. The principal functions of the Board until 1954 were to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage; to deal with main drains and main drainage works; and to control and manage the rivers, creeks and watercourses within the metropolitan area. The Board has carried out since December, 1954, the additional functions of a permanent planning authority and in June, 1956, it became the authority directly responsible for metropolitan main highways, bridges, parks and foreshores.
- (b) Water Supply. There are five storage reservoirs serving the metropolitan area—Yan Yean, 7,234 million gallons (available for consumption, 6,649 million gallons). Toorourrong, 60 million gallons; Maroondah, 6,289 million gallons (4,870 million gallons); O'Shannassy, 930 million gallons; and Silvan, 8,853 million gallons (8,823 million gallons); total, 23,366 million gallons (21,332 million gallons). Service reservoirs number 25, with a total capacity of 257 million gallons. Two major projects, which were under construction at 30th June, 1956, have been completed. One is the 18 mile conduit carrying water from the Silvan Reservoir to the existing Mt. Waverley service reservoir and to the new service reservoir (Mount View) south of Glen Waverley which is able to supply an additional 110 million gallons a day. The other project is a dam on the River Yarra immediately upstream from the confluence of the Yarra and Doctors Creek. This dam is 293 feet high and impounds 45,800 million gallons of water.

The water rate levied by the Board in 1955-56 was 8d. in the £1 on the net annual value of the properties served. The charge for water consumed in excess of the quantity which at 1s. per 1,000 gallons would equal the water rates payable on each property was 1s. 6d. per 1,000 gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1938-39 and 1951-52 to 1955-56.

WATER	SUPPLY.	<b>MELBOURNE:</b>	SERVICES.

	_	Number	Esti-	Average	Total Con-		e Daily nption.	Length of Aque- ducts,	ı
Year	•	of Houses Supplied.	mated Popu- lation Supplied.	Daily Con- sump- tion.	sump- tion for the Year.	Per House.	Per Head of Esti- mated Popu- lation.	etc., Mains and Reticu- lation.	Number of Meters.
				Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	
1938-39		285,408	1,133,000	76.8	28,040	269	67.8	3,234	189,617
1951-52 1952-53 1953-54 1954-55 1955-56	•••	364,248 378,439 390,035 405,464 424,500	1,350,000 1,382,000 1,404,000 1,460,000 1,528,000	107.4 102.4 110.6 110.3 113.0	39,293 37,383 40,354 40,270 41,377	295 271 283 272 266	79.5 74.1 78.8 75.6 74.0	4,075 4,134 4,213 4,300 4,381	256,462 264,916 266,395 273,856 289,567

(c) Sewerage and Drainage. Particulars of sewerage and drainage services for 1938-39 and 1951-52 to 1955-56 are shown below. The rate levied in 1955-56 in respect of sewerage was 1s. 1d. in the £1 on the net annual value of the property served. The drainage rate was 2d. in the £1.

SEWERAGE AND DRAINAGE, MELBOURNE: SERVICES.

	Number	Esti- mated		Total	Averag Pum	e Daily ping.	<b>7</b>		
Year.	Houses for which Sewers are	Houses lation for which Sewers		Sewage Pumped for the Year.	Per House.	Per Head of Esti- mated Popu- lation.	Length of Sewers, etc.	Length of Main Drains.	
			Mill. gals.	Mill. gals.	Gallons.	Gallons.	Miles.	Miles.	
1938–39	269,411	1,070,000	48.2	17,601	179.0	45.1	2,586	97	
1951–52 . 1952–53 . 1953–54 . 1954–55 . 1955–56 .	338,314 345,370 351,617	1,223,000 1,236,000 1,243,000 1,266,000 1,292,000	73.1 70.1 74.8	24,490 26,692 25,599 27,315 28,118	202.8 216.1 203.1 212.8 214.1	54.7 59.2 56.4 59.1 59.4	2,958 2,989 3,019 3,071 3,125	128 131 134 137 151	

The metropolitan sewerage system consists of the Main system (serving an area of 71,372 acres) and three subsidiary systems—the Sunshine system (serving an area of 1,526 acres), the Kew system (serving an area of 103 acres) and the South-eastern system (serving an area of 2,559 acres in Cheltenham, Parkdale, Mentone and Mordialloc). The Metropolitan Sewage Farm, 26,854 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 95 per cent. of the sewage flow of the metropolis before its discharge into Port Phillip Bay. The total capital cost (less depreciation) of the Farm to 30th June, 1956 was £3,025,374. Revenue during 1955–56 amounted to £122,623, cost of sewage disposal to £189,029, trading expenses to £99,578, interest to £122,303, and net cost of sewerage purification to £288,287. These financial particulars are included in the sewerage items of the summary below.

(d) Finances. The following table provides a summary for the year 1955-56 of the financial operations of the three services conducted by the Melbourne and Metropolitan Board of Works.

### MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES, 1955-56 (£.)

		Capital Cost of			Expen	diture.			
Service, etc	; <b>.</b>	Works and Buildings at 30th June.(a)	Revenue.	Working Expenses.	Interest and Exchange.	Debt Redemp- tion.	Total.	1 6	lus(+) or cit(-).
Water Sewerage Drainage General(b)	::	33,147,749 24,081,299 4,909,452 2,418,989	2,554,114 2,634,596 415,093	1,145,299	972,285 158,503	132,466	2,336,800 2,117,584 438,448 706,112	+ 5	17,314 17,012 23,355 06,112
Total		64,557,489	5,603,803	2,899,891	2,566,587	132,466	5,598,944	+	4,859

<sup>(</sup>a) Total loan indebtedness—1955-56, £52,986,275.

The following table shows the financial operations of the Melbourne and Metropolitan Board of Works (all services combined) for the years 1938-39 and 1951-52 to 1955-56:—

### MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES.

	Vana W				Expen	diture.		Surplus(+)
Year.		Works and Buildings at 30th June.	Revenue.	Working Expenses.	Interest and Exchange.	Debt Redemp- tion.	Total.	or Deficit(-).
1938–39		28,513,539	2,214,295	762,558	1,316,603	64,269	2,143,430	+ 70,865
1951-52 1952-53 1953-54 1954-55 1955-56	::	44,416,680 48,162,372 52,068,617 57,747,795 64,557,489	4,712,533	2,384,131 2,744,555	1,691,613 2,010,730	101,564 106,796 123,977	4,501,657 5,080,124	- 161,560 + 210,876 + 10,984

- (ii) Geelong Waterworks and Sewerage Trust. (a) General. The Geelong Waterworks and Sewerage Trust was constituted in 1908 and reconstituted under the Geelong Waterworks and Sewerage Act in 1910. It was further reconstituted in September, 1950, to include a Government nominee (Chairman) and provision was made for a commissioner to be elected by the ratepayers of the Shire of Corio, making a total of seven commissioners instead of five as formerly. The amount of loan money which may be raised is limited to £6,500,000 for water supply undertakings, and £1,250,000 for sewerage undertakings. The population supplied is estimated by the Trust at 86,000. This and other general information relates to 30th June, 1956.
- (b) Water Supply. The catchment area is about 32,000 acres. There are seven storage reservoirs and eleven service basins whose total storage capacity is 8,640 million gallons. The length of water mains and reticulation is 423 miles. The total expenditure on water supply to 30th June, 1956 was £1,959,544. Expenditure for 1955-56 comprised £116,121 for working expenses and £100,158 for interest, redemption and reserves, while revenue amounted to £206,974. The sinking fund appropriations at June, 1956, amounted to £161,371. The replacement and contingencies reserve amounted to £245,845. There is a water rate of 1s. 5d. in the £1 (with minima of 10s. for vacant land and £1 for tenements) on the net annual value of ratable properties.
- (c) Sewerage Works. The sewerage scheme consists of a main outfall sewer to the ocean at Black Rock, about 9 miles from Geelong, and 193 miles of main and reticulation sewers. The sewerage area is 10,559 acres, and the number of buildings within the sewered areas is 17,800, of which 17,716 have been connected. The total expenditure on sewerage works to 30th June, 1956, was £1,104,667. The revenue in 1955-56 amounted to £131,962 and the expenditure comprised £70,995 on working expenses and £63,531 on interest, redemption and reserves. Sinking fund appropriations at June, 1956, were £133,806.

<sup>(</sup>b) Statutory and general expenditure not

Replacement and contingencies reserve amounted to £235,128. A general rate of 1s. 4d. in the £1 is levied on the net annual value of ratable properties.

- (iii) The Ballarat Water Commission and the Ballarat Sewerage Authority. (a) General. The Ballarat Water Commission was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commission constitute the Sewerage Authority. The Commissioners number eight, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat and one being elected by the Councils of the Borough of Sebastopol and the Shires of Ballarat, Bungaree, Buninyong and Grenville. General and financial information given herein relates to the year ended 31st December, 1956.
- (b) Water Supply. The Water Supply District embraces an area of about 65 square miles, containing a population of about 53,000. The total storage capacity of the seven reservoirs is 5,605 million gallons and the catchment area is 22,562 acres.

The capital cost of construction of the waterworks was £2,122,890 to 31st December, 1956. The liabilities amounted to £1,149,720 at 31st December, 1956, including loans due to the Government totalling £1,100,508. The revenue for the year 1956, was £145,548. Working expenses during 1956 amounted to £64,358 and interest and other charges to £81,015. A rate of 1s. 1d. in the £1 is levied on the net annual value of all ratable properties, with a minimum of £1 per annum for land on which there is a building or water supply.

(c) Sewerage. The Ballarat sewerage district embraces the City of Ballarat and parts of the Shires of Ballarat and Bungaree and the Borough of Sebastopol. Work was commenced in 1922 and up to 31st December, 1956 the Authority had constructed a disposals works, a nightsoil depot, an ejector station and more than 100 miles of sewers. The capital cost of sewerage construction works to 31st December, 1956, was £748,363. The method of sewage disposal is by sedimentation, oxidation and sludge digestion. One hundred and fifty-four sewered areas had been declared as at 31st December, 1956. Assessments in the sewerage district numbered 15,748, while those in sewered areas numbered 12,356. There were 10,674 buildings connected.

The scheme is financed by debenture-issue loans from various financial institutions. The liabilities on account of loans secured for construction at 31st December, 1956, amounted to £595,026; redemption payments at that date totalled £231,547. An expenditure of £157,122 was incurred for house connexions, the whole of which has been redeemed. Revenue during 1956 amounted to £75,720 and expenditure, which included £36,634 on interest and redemption, was £73,907.

A sewerage rate of 1s. 4d. in the £1 is levied, with a minimum charge of £2 4s., on the net annual value of any ratable sewered property on which there is a building and £1 on any ratable sewered property on which there is no building.

(iv) Other Sewerage Authorities. At 30th June, 1955, 60 sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts in districts outside the areas under the control of the Melbourne and Metropolitan Board of Works, the Geelong Waterworks and Sewerage Trust, and the Ballarat Sewerage Authority, and systems were in operation in 30 districts (including five partly operating) serving a population of 269,000 persons.

The operations of the other 30 districts constituted at this date had either been suspended or not commenced.

(v) Water Supply in Country Towns and Districts. Most of the country waterworks are controlled by the State Rivers and Water Supply Commission, but in some instances the control is by waterworks trusts or by municipal corporations.

The waterworks controlled by the State Rivers and Water Supply Commission at 30th June, 1956, included 38 large reservoirs and 240 subsidiary reservoirs and service basins with a total storage capacity of 1,342,070 million gallons (4,929,550 acre feet). Length of channels was 15,122 miles (irrigation, 4,976 miles, domestic and stock 8,012 miles, drainage and flood protection, 2,134 miles) and of pipe lines 1,281 miles. The quantity of water delivered to water users during 1955–56 was 744,391 acre feet which was well below normal because of the wet summer. The Commission administered 65 rural districts during 1955–56 (29 irrigation districts, 31 waterworks districts, 4 flood protection districts and 1 drainage district), and the reticulated pipe supplies for domestic and industrial purposes in 130 urban districts. In addition, 127 urban districts were administered by waterworks trusts and 16 by local governing bodies. The population served in these groups of urban districts numbered, respectively, 194,990, 357,910 and 103,810 persons. The table below is a summary of the Commission's finances for operations in districts under its control for the years 1938–39 and 1951–52 to 1955–56.

### STATE RIVERS AND WATER SUPPLY COMMISSION, VICTORIA: FINANCES.(a)

	Total Loan				Payments.		
Year.	Capital Expenditure to 30th June.	Receipts.	Operating Expenses.	Interest on Capital Allotted.	Deprecia- tion.	Debt Redemp- tion.	Total,
1938-39	 24,223,037	560,680	476,085	145,105	27,553	4,922	653,665
1951-52		1,871,810		47,547		1,497	2,434,612
1952-53	 57,464,776	1,989,289	2,669,419	26,555	90,024	3,284	2,789,282
1953-54	 65,143,250	2,412,382	2,717,862	75,101	90,616	5,181	2,888,760
1954-55	 73,456,588	2,532,946	2,781,621	95,335	120,475	2,465	2,999,896
1955-56	 79,847,923	2,779,599	2,940,637	118,379	127,774	5,491	3,192,281

<sup>(</sup>a) Excludes waterworks and river improvement trusts and local governing bodies under the general supervision of the Commission.

The total loan capital expenditure of waterworks and river improvement trusts and local governing bodies to 30th June, 1956, was £10,806,505, making a grand total of £90,654,428 when added to the figure for works under the control of the Commission. The net loan capital after redemption payments of £3,032,252 was £87,622,176.

The financial operations of the State Rivers and Water Supply Commission form part of the Consolidated Revenue Fund, but are included in this section for convenience. The major proportion of the interest payable is borne by the State and is additional to that shown above. The net expenditure borne by the State during 1955-56 was £3,246,477.

- 3. Queensland.—(i) Brisbane City Council—to 30th June, 1956. (a) General. This organization conducts the water supply and sewerage systems of the City of Brisbane. Prior to 1928, water and sewerage activities had been controlled by the Metropolitan Water and Sewerage Board, but were then absorbed by the Brisbane City Council, which also supplies, in bulk, the whole of the water used by the City of Ipswich and the Town of Redcliffe.
- (b) Water Supply. Water storage facilities comprise the following (available capacities are shown in parentheses):—Somerset Reservoir, 200,000 million gallons (55,000 million gallons); Lake Manchester, 5,806 million gallons (5,725 million gallons); Brisbane River, 543 million gallons (484 million gallons); Pure Water Reservoir, Holt's Hill, 8.3 million gallons (8.3 million gallons); Enoggera Reservoir, 1,000 million gallons (600 million gallons); Gold Creek Reservoir, 407 million gallons (400 million gallons). There are sixteen service reservoirs with a capacity of approximately 41 million gallons. The Somerset reservoir is under the control of Stanley River Works Board and is a dual purpose project with a designed total holding capacity of 200,000 million gallons, 55,000 million gallons to be for water storage and 145,000 million gallons for flood mitigation. Water rating at 30th June, 1956, was 3\fmathfrak{1}{2}d. in the £1 of unimproved capital value for improved properties, and 2d. in the £1 for vacant lands, with a minimum charge of £5 5s. and £4 0s. Od. respectively. The following table is a summary of operations of the complete Brisbane City Council system (metropolitan area, Ipswich and Redcliffe) for the years 1938-39 and 1951-52 to 1955-56:—

### WATER SUPPLY, BRISBANE(a): SERVICES.

			Esti-		Total		e Daily	Length of		
Year.		Services Con- nected.	mated Popu- lation Supplied.	Average Daily Con- sumption.	Con- sumption for the Year.	Per Service.	Per Head of Esti- mated Popu- lation.	Trunk and Reticu- lation Mains.	Number of Meters.	
1938-39		81,389	345,903	Mill. gals. 15.9	Mill. gals. 5,791	Gallons. 195	Gallons. 45.9	Miles. 1,169	(b)	
1951-52 1952-53 1953-54 1954-55 1955-56		124,992 131,895 139,172 144,459 148,632	483,000 501,000 520,000 530,000 543,000	32.4 31.5 33.9 34.1 36.4	11,860 11,486 12,379 12,458 13,283	259 239 244 236 245	64.3	1,696 1,760 1,817 1,870 1,929	52,496 52,360 51,976 51,138 (b)	

<sup>(</sup>a) Includes Ipswich and Redcliffe.

(b) Not available.

(c) Sewerage. The sewage treatment works is situated at Luggage Point at the entrance to the Brisbane River. An activated sludge system of treatment was originally planned but, since the commencement of pumping operations, a sedimentation plant only has been used. Sewerage rating at 30th June, 1956, was 2½d. in the £1 of unimproved capital value for improved properties, and 2d. in the £1 for vacant lands, with a minimum charge of £6 and £5 respectively. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1938-39 and 1951-52 to 1955-56:—

#### SEWERAGE, BRISBANE: SERVICES.

	Year.		Premises Connected.	Estimated Population Served.	Total Sewage Pumped for the Year.	Length of Main, Branch, Reticulation etc., Sewers.	
1938–39	 	 	33,200	150,000	Mill. Galis.	Miles. 484	
1951-52	 	 	46,300	179,000	4,663	615	
1952-53	 	 	47,500	182,000	4,791	630	
1953-54	 	 	48,700	183,000	4,868	647	
1954-55	 	 	50,400	187,000	4,944	665	
1955-56	 	 	53,100	196,000	6,222	696	

(a) Not available.

(d) Finances. The following table shows particulars of the finances of the water supply and sewerage undertakings of the Brisbane City Council for the years 1938-39 and 1951-52 to 1955-56:—

WATER SUPPLY AND SEWERAGE, BRISBANE: FINANCES.

(£.)

		Gross			Expenditure.			
Service and `	Year.	Capital Cost to 30th June.		Working Expenses.	Interest, Redemp- tion, etc. Charges.	Total.	Surplus(+) or Deficit(-).	
Water Supply	_							
1938–39		4,849,732	606,244	129,219	280,827	422,366	+ 183,878	
1951-52		8,915,401	1,036,944	494,136	347,000	979,916	+ 57,028	
1952-53		9,861,885	1,280,390	587,695	403,349	1,164,278	+116,112	
1953-54		10,672,306	1,326,644	640,838	434,073	1,237,040	+ 89,604	
1954-55		12,248,875	1,296,624	697,625	492,951	1,275,644	+ 20,980	
1955-56		12,618,584	1,479,045	765,970	549,707	1,459,738	+ 19,307	
Sewerage—				·	,	, ,	,	
1938-39		5,992,936	240,963	52,792	403,386	485,974	- 245,011	
1951-52		9,794,052	499,935	127,417	302,252	467,774	+ 32,161	
1952-53		10,863,167	591,584	171,614	330,642	564,704	+ 26,880	
1953-54		11,898,902	603,141	163,397	349,692	552,651	+ 50,490	
1954-55		12,705,307	578,257	166,609	391,744	628,081	- 49,824	
1955-56		13,125,463	719,623	217,238	408,917	707,476	+ 12,147	

<sup>(</sup>ii) Country Towns. (a) Water Supply. In addition to the City of Brisbane, there were, at 30th June, 1955, 118 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

<sup>(</sup>b) Sewerage Systems. At 30th June, 1955, there were 13 cities and towns outside the metropolitan area—Bundaberg, Charleville, Cunnamulla, Goondiwindi, Hughenden, Ipswich, Mackay, Maryborough, Quilpie, Rockhampton, Toowoomba, Townsville and Warwick—with sewerage systems. Sewerage systems were in course of construction at Mt. Isa, Dalby, Barcaldine and Longreach.

(c) Finances. The receipts (other than loan) of water undertakings controlled by the cities and towns referred to above amounted to £1,750,102 in 1953-54. Expenditure amounted to £1,688,672, including £364,248 for debt charges. In addition, loan expenditure amounted to £1,105,034.

Finances of sewerage undertakings are incorporated in council general funds and are not available separately.

- 4. South Australia.—(i) General. The water supply and sewerage systems in this State were constructed and are maintained by the Engineering and Water Supply Department under the control of the Minister of Works. The works controlled comprise the Adelaide, Barossa, Baroota Creek, Beetaloo, Bundaleer, Tod River, Warren and other country water districts systems, the Morgan-Whyalla water supply system, the Adelaide metropolitan sewerage system, the Murray River Weirs water conservation, and the Metropolitan Flood Waters Scheme. In 1955–56, construction commenced on the Salisbury-Elizabeth Sewerage Scheme.
- (ii) South Australian Waterworks. (a) Services. The table hereunder shows particulars of the area, capacity, etc. of combined metropolitan and country waterworks for the years 1938-39 and 1952-53 to 1956-57:—

Year.		Assessr	nents.(a)	Area	Capacity		
		Number. Annual Value.		of Districts Supplied. (a)	of Reservoirs, Tanks, etc.	Length of Mains.	Number of Meters.
			£	Acres.	Mill. gals.	Miles.	
1938-39		185,625	6,302,445	11,857,968	23,814	6,384	97,074
1952-53		234,269	13,366,875	11,976,503	24,009	7,478	119,349
1953-54		237,742	14,319,989	11,985,353	24,013	7,555	125,144
1954-55		239,389	15,307,092	12,100,784	24,014	7,700	134,058
1955-56		243,809	20,827,954	12,106,795	24,014	7,777	150,317
1956-57		250,306	22,687,480	12,860,508	24,015	7.916	166,350

WATERWORKS, SOUTH AUSTRALIA: SERVICES.

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

(b) Finances. Figures for 1938-39 and 1952-53 to 1956-57 are shown in the following table.

### WATERWORKS, SOUTH AUSTRALIA: FINANCES.

(£.)

					Expenditure.			
Year.		Invested Capital to 30th June.		Working Expenses.	Interest and Debt Redemption.	Total.	Deficit.	
1938-39	•••	14,649,052	654,688	242,528	651,972	894,500	239,812	
1952-53		28,573,826	-, .,	1,377,212	789,517	2,166,729	751,016	
1953-54		32,156,877	1,505,690	1,424,169	883,876	2,308,045	802,355	
1954-55		37,353,231	1,725,017	1,855,026	1,095,914	2,950,940	1,225,923	
1955-56		41,501,133	2,082,694	1,920,666	1,328,068	3,248,734	1,166,040	
1956-57		45,239,197		2,295,444	1,485,486	3,780,930	1,462,858	

(iii) Adelaide Waterworks. At 30th June, 1957, the Adelaide waterworks supplied a district of 144,772 acres. The capacity of its five reservoirs and storage tanks was 14,469 million gallons and there were 1,982 miles of mains.

The Mannum-Adelaide pipeline conveys water from the River Murray to Angas Creek and supplements the Metropolitan and Warren systems, serving country areas en route. Another major project, the construction of a large reservoir on the South Para River, is still under construction but is nearing completion. This reservoir will provide additional storage to serve the lower northern areas of the State and will make some additional provision for the metropolitan area. The capacity of the new reservoir will be about 10,000 million gallons.

Particulars of finances for the years 1938-39 and 1952-53 to 1956-57 are shown below:—

### ADELAIDE WATERWORKS: FINANCES.

(£.)

	i	Invested			Expenditure.		Surplus (+)
Year.		Capital to 30th June.	Revenue.	Working Expenses.	Interest and Debt Redemption.	Total.	or Deficit (-).
1938-39		4,676,110	446,459	111,347	202,279	313,626	+ 132,833
1952–53 1953–54 1954–55 1955–56 1956–57		11,849,046 14,438,595 17,922,472 20,434,323 23,115,689	968,575 1,078,614 1,358,896	534,074 614,308 939,317 930,138 1,232,267	313,252 377,909 511,127 646,720 759,012	847,326 992,217 1,450,444 1,576,858 1,991,279	+ 60,851 - 23,642 - 371,830 - 217,962 - 484,687

(iv) Adelaide Metropolitan Sewerage. The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg and Port Adelaide areas, with drainage areas of 109 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. The total quantity of sewage pumped by the various stations was 6,342 million gallons during 1956-57. Other particulars for 1938-39 and 1952-53 to 1956-57 are shown hereunder:—

### ADELAIDE METROPOLITAN SEWERAGE: SUMMARY.

			Invested		E	xpenditure		
Year.	Length of Sewers.	Number of Con- nexions.	Capital to 30th June.	Revenue.	Working Expenses.	Interest and Debt Redemp- tion.	Total.	Surplus(+) or Deficit(-)
	Miles.		£	£	£	£	£	£
1938-39	923	80,745	3,361,034	268,880	77,023	150,273	227,296	+ 41,584
1952-53	1,206	120,510	5,860,255	551,843	399,327	162,015	561,342	- 9,499
1953-54	1,244	126,375	6,325,084	601,253	440,028	179,435	619,463	- 18,210
1954-55	1,292	131,932	6,974,042	641,194	468,969	205,594	674,563	- 33,369
1955-56	1,335	137,995	7,602,416	866,754	577,872	238,748	816,620	+ 50,134
1956-57	1,370	143,743	8,273,936	1,167,508	648,999	263,270	912,269	+ 255,239
	1			1		1		<u></u>

<sup>(</sup>v) Country Sewerage Schemes. In 1956-57, the total length of the Salisbury sewerage scheme was 42 miles and the number of its connexions 3,242. The Port Lincoln scheme, which is one mile in length, had 31 connexions in that year.

<sup>(</sup>vi) Country Water Supply. Water district systems outside Adelaide at 30th June, 1957, comprised an area of 12,715,736 acres, and the capacity of the reservoirs was 9,546 million gallons. These figures exclude the Morgan-Whyalla supply system, which obtains its water from the River Murray. The storage tanks of this system had a capacity of 44 million gallons.

The Uley-Wanilla sub-artesian basin has been utilized to augment the Tod River District supplies. Pumping began in 1947. In 1956-57, nine bores were in operation and 374 million gallons were pumped from the basin to meet the needs of Port Lincoln. At 30th June, 1957, £5,112,810 had been invested in the Tod River District.

Construction work is proceeding on the scheme to reticulate water to Yorke Peninsula. The section of the new 20 inch to 26 inch steel main between Bundaleer Reservoir and Bute is in service.

The following table gives financial information on country waterworks for 1938-39 and 1952-53 to 1956-57:--

### COUNTRY WATERWORKS, SOUTH AUSTRALIA: FINANCES.(a)

(£.)

		Invested			Expenditure.		
Year.	Year. C		Revenue.	Working Expenses:	Interest.	Total.	Deficit.
1938-39	· · ·	10,015,613	207,569	130,523	449,691	580,214	372,645
1952-53		14,018,673	407,944	757,727	394,750	1,152,477	744,533
1953-54		17,718,282	630,466	903,212	505,967	1,409,179	778,713
1954-55		19,430,759	646,403	915,709	584,787	1,500,496	854,093
1955-56		21,066,810	861,564	1,128,294	681,348	1,809,642	948,078
1956-57		22,123,508	963,406	1,215,103	726,474	1,941,577	978,171

(a) Excludes Morgan-Whyalla system.

- (vii) Morgan-Whyalla Water Supply Scheme. This scheme, which involved the laying of 223 miles of main, was officially opened on 31st March; 1944, the capital invested to 30th June, 1957, being £2,593,554. Particulars of this scheme, where applicable, are included in the tables of the combined waterworks in (ii) above. During 1956-57, the water used from the system between Hanson and Whyalla amounted 1,239 million gallons. Revenue for the year 1956-57 was £195,876, working expenses, etc., £175,519, interest charges, £83,983 and deficit, £63,626. Corresponding figures for 1955-56 were respectively, £182,398, £178,248, £83,734 and £79,584.
- 5. Western Australia.—(i) General. The water supply and sewerage systems of Western Australia are principally under the management of Government Departments, and are divided into the following categories:—(a) Metropolitan Water Supply, Sewerage and Drainage area bounded by Kwinana, Marmion, Greenmount and Serpentine; (b) Country Areas Water Supply consisting of the Goldfields and Agricultural Water Supply (formerly the Goldfields Water Supply), the Great Southern Towns Water Supply, and water supplies to other country towns (except those controlled by the Local Authority). Individual water supplies serve railways, isolated mines, stock routes and agricultural areas.
- (ii) Metropolitan Water Supply, Sewerage and Drainage. (a) General. The sources of the metropolitan water supply are the Canning Dam, Churchman's Brook, Wungong Brook, and Victoria Reservoir, supplemented by a number of artesian bores. The largest reservoir, the Canning Dam, has a capacity of 20,550 million gallons, about 5,000 million gallons more than that of the Mundaring Reservoir.

The sewage treatment works of both Perth and suburbs consist of primary sedimentation with separate sludge digestion and discharge of all effluent direct to the ocean. Fremantle treatment works consists of septic tanks with ocean outfall for effluent. There are three treatment works, situated at West Subiaco, Swanbourne and Fremantle.

(b) Water Supply. The following table shows particulars of water supply services for 1938-39 and 1951-52 to 1955-56.

METROPOLITAN WATER SUPPLY, WESTERN AUSTRA	ALL	4	:	SERVICES.
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Year.	Number of Services.	Esti- mated Popu- lation Supplied.	Average Daily Con- sumption.	Total Con- sumption for Year.	Average Daily Consumption.  Per Hea of Estimated Population.		Length of Mains.	Number of Meters.
1938–39	61,467	248,248	Mill. gals. 14.1	Mill. gals. 5,147	Gallons. 229	Gallons. 56.8	Miles. 953	40,014
1951–52 1952–53 1953–54 1954–55 1955–56	90,436 96,155 102,093 108,755 113,437	309,854 316,423 323,131 367,429 380,294	31.0 30.7 34.9 38.2 39.5	11,337 11,201 12,743 13,948 14,408	343 319 342 351 348	100.0 97.0 108.0 104.0 103.5	1,327 1,422 1,500 1,597 1,709	61,146 69,262 73,780 78,194 82,636

Water rating for 1955-56 was 1s. 9d. in the £1 on annual valuation.

(c) Sewerage and Drainage. Some particulars of the metropolitan sewerage and drainage services for 1938-39 and 1951-52 to 1955-56 are shown below:—

### METROPOLITAN SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA:

				DIJI	VICES.			
Year.				Houses Connected.	Estimated Population Served.	Sewage Pumped for the Year.(a)	Length of Sewers.	Length of Stormwater Drains.
						Mill. gals.	Miles.	Miles.
1938-39				36,652	162,457	1,030	444	31
1951-52				52,171	224,000	3,080	626	34
1952-53				54,467	229,700	3,333	648	34
1953-54				56,526	238,400	3,372	654	34
1954-55				58,543	232,000	3,214	675	34
1955-56				60,702	240,860	3,067	692	34

(a) Aggregate of quantities pumped by the various stations.

Sewerage rating for 1955-56 was 1s. 9d. in the £1 on annual valuation, while stormwater drainage rating was 4d.

(d) Finances. The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Department for the years 1938-39 and 1951-52 to 1955-56:—

# METROPOLITAN WATER SUPPLY AND SEWERAGE AND DRAINAGE, WESTERN AUSTRALIA: FINANCES. (£.)

				<del></del>				
		1			Expenditure.			
Service and	Year.	Capital Cost to 30th June.	Revenue.	Working Expenses.	Interest and Debt Redemp- tion.	Total.	Surplus(+) or Deficit(-).	
Water Supply	<del></del>							
1938-39		4,898,167	285,313	50,975	228,527	279,502	+	5,811
1951-52		7,665,863	543,872	288,525	284,820	573,345	_	29,473
1952-53		8,817,351	618,603	364,638	324,107	688,745	<b> </b> _	70,142
1953-54		9,874,822	811,500	408,714	380,729	789,443	+	22,057
1954-55		11,255,210	946,922	498,254	428,169	926,423	1+	20,499
195556		12,267,020	1,080,601	560,776	484,164	1,044,940	+	35,661
Sewerage Drainage	and							
1938–39	٠	3,497,938	174,950	30,630	149,714	180,344	_	5,394
1951-52		5,169,227	339,917	156,507	238,599	395,106	_	55,189
1952-53		5,449,248	402,808	182,184	252,256	434,440	-	31,632
1953-54		5,749,506	542,476	235,826	263,713	499,539	+	42,937
1954-55		6,170,669	601,802	254,062	281,590	535,652	+	66,150
1955-56		6,421,032	675,419	313,514	296,904	610,418	1+	65,001

(iii) Country Areas Water Supply. (a) Goldfields and Agricultural Water Supply. The source of supply for Kalgoorlie (370 miles from Perth), Coolgardie and adjacent goldfields, as well as for agricultural districts and some 65 towns situated on or near the pipe line and its branches, is the Mundaring Reservoir (26 miles from Perth) whose capacity is 15,100 million gallons. The Reservoir is linked by pipe line to the Metropolitan system, which thereby supplements its summer requirements.

(b) Great Southern Towns Water Supply. This system is currently under construction as part of the Comprehensive Water Supply Scheme to serve principally the towns on the Great Southern Railway between Brookton and Katanning. For this purpose, it is planned

to increase the storage capacity of Wellington Dam to 40,800 million gallons.

(c) Other Country Towns. Water is derived from stream flow, natural and artificial catchments, bores and wells. A total of 44 such supplies is administered by the Minister of Works.

The Comprehensive Scheme is now under construction in two main parts. The northern section is an enlargement and extension of the Goldfields and Agricultural Water Supply; and the Southern section is the Great Southern Towns Water Supply Scheme. When completed, over 4 million acres of agricultural land will be served, and increased supply to the Eastern Goldfields will permit expansion of the gold mining industry. The cost of the scheme now estimated to be about £10 million is being shared by the Commonwealth and State Governments. Expenditure on this work to 30th June, 1956 totalled £4.387,681.

The following table shows details of the Country Areas Water Supply for 1938-39 and 1951-52 to 1955-56:—

### COUNTRY AREAS WATER SUPPLY, WESTERN AUSTRALIA: SUMMARY.

Year.		Number of Services.	Total Con- sumption.	Length of Water Mains.	Number of Meters.	Capital Cost.	Revenue.	Expendi- ture.(a)	Surplus (+) or Deficit (-).
1938-39		13,670	Mill. gals. 1,735	Miles. 1,720	10,872	£ 5,527,890	£ 331,457	£ 298,531	£ + 32,926
1951-52 1952-53 1953-54 1954-55 1955-56		16,598 17,124 17,375 18,034 18,458	2,314 2,374 2,565 2,536 2,812	1,802 1,810 1,821 1,841 1,864	14,640 15,289 15,500 16,045 16,477	7,916,564 8,314,816 8,770,042 9,417,014 9,984,368	398,057	806,398 1,010,036 1,071,597 998,202 1,103,344	- 439,643 - 611,979 - 639,101 - 555,106 - 634,112

(a) Includes interest and debt redemption.

- (iv) Water Supply of Other Towns, etc. (a) Controlled by Public Works Department. During 1955-56, water supplied to other towns and districts, excluding minor water supplies, amounted to 950 million gallons, including service to adjacent mines, 31 million gallons, and railways, 69 million gallons. There were in all 17,852 services connected.
- (b) Controlled by Commonwealth and State Government Railways. Consumption for the year ended 30th June, 1956 was 212 million gallons. In addition, 358 million gallons were obtained from other sources, mainly the Country Areas Water Supply and the Metropolitan Water Supply.
- (c) Water Boards not Controlled by Government. During 1955-56, approximately 455 million gallons of water were supplied, the number of services being 5,140.
- (v) Agricultural Water Supply. From 1st July, 1904 to 30th June, 1956, 586 tanks were built, 1,159 wells sunk, and 5,630 bores (including artesian) put down. Of the bores put down, 1,604 yield fresh or stock water.
- (vi) Artesian and Sub-artesian Waters. Up to 30th June, 1956, the total number of bores put down in search of artesian or sub-artesian water (inclusive of operations by Defence Services) was 346, ranging in depth from 21 to 4,006 feet. Water (fresh or stock) was struck in 295 bores, 178 of which were artesian and 117 sub-artesian.
- 6. Tasmania.—(i) Waterworks. At the end of 1956-57, there were 64 municipal waterworks in Tasmania. The capacity of the reservoirs was 1,002 million gallons, the estimated population served was 243,000, the number of tenements served was 61,000. In addition, two regional schemes operated by the State Government were serving an estimated population of 28,000 in 7,000 tenements.
- (ii) Sewerage. At the end of 1956-57, there were 11 municipal sewerage schemes in operation in Tasmania. They served an estimated population of 155,000 and the number of tenements served was 39,000.

#### § 6. Harbour Boards and Trusts.

Note.—The number and net tonnage of all vessels which entered the major ports in each State during the years 1955-56 and 1956-57 are shown in Chapter XI.—Transport and Communication, Part I, Division A. §5. Shipping at Principal Ports. Particulars of oversea and interstate cargo discharged and shipped during 1956-57 are shown in Part I, Division A. §6 of the same chapter.

1. New South Wales.—(i) Maritime Services Board of New South Wales. (a) General. The Maritime Services Board of New South Wales is a corporate body of five Commissioners comprising three full-time members and two part-time members representing shipping and other interests. The Board was constituted on 1st February, 1936, under the Maritime Services Act 1935, to co-ordinate the port and navigation services of the State, which had previously been administered by the Sydney Harbour Trust and by the State Department of Navigation.

The Board exercises general control over intra-state shipping, including the survey and certification of vessels, the licensing of harbour craft, and the examination and issue of certificates to officers. It is responsible for the provision of pilotage services, lights, beacons, buoys and other port facilities, imposes and collects rates and charges on goods and vessels, and is vested with the general control and management of the navigable waters and ports within the State.

At the Port of Sydney, the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work. At other ports of New South Wales, such work is undertaken by the Department of Public Works.

(b) Port of Sydney. The entrance to Sydney Harbour, the principal port of New South Wales, is nearly a mile wide, and the depth of its navigable channel is not less than 80 feet. Between the entrance, known as "The Heads", and the Harbour proper, a distance of 4 miles, there are two separate channels, each 700 feet wide, the Western Channel not less than 42 feet deep (low water ordinary spring tide) and the Eastern Channel 41 feet deep. The foreshores, which have been reduced by reclamations, are 152 miles in length and the total area of the port is 13,600 acres, or 21 square miles, of which about one-half has a depth of 30 feet or more at low water ordinary spring tide. The mean range of tides is 3 feet 6 inches.

The wharves are situated in close proximity to the business centre of the city, about four or five miles from the Heads. At present, there are 6 dolphin berths each 550 feet long, and 122 effective commercial cargo berths with a total length of 49,948 feet controlled by the Board. Accommodation for harbour craft amounts to 4,835 feet while the length of other berths including oil and private wharves totals 25,463 feet. Depth of water at wharves is up to 40 feet. Special facilities for the storage and handling of staple products such as wheat, wool, etc., are provided and modern plant has been installed for replenishing ships' bunkers with oil or coal.

Docking facilities are available for the largest vessel affoat. The Captain Cook Graving Dock, opened in March, 1945, ranks amongst the largest graving docks in the world being 1,133 feet by 147 feet  $7\frac{1}{2}$  inches with a depth of 45 feet 2 inches over the sill at high water. There are also several smaller dry docks and floating docks in the port.

The following table shows particulars of the finances of the Board in respect of the Port of Sydney for 1938-39 and 1951-52 to 1955-56:—

MARITIME SERVICES BOARD: FINANCES OF THE PORT OF SYDNEY.
(£.)

			Revenue.		:	Expenditure	•		
Year.	at 30th June.	Wharfage and Tranship- ment Rates.	Tonnage Rates and Berthing Charges.	Total.	Adminis- tration and Mainten- ance.	Interest, Debt Redemption, Exchange, etc.	Total.	Surplus(+) or Deficit(-).	
						I	l		
1938-39	11,276,399	773,501	38,180	1,155,627	380,120	536,781	916,901	+ 238,726	
1951-52 1952-53 1953-54 1954-55 1955-56	12,194,585 12,562,700 12,799,104 13,408,326 13,775,278	971,553 1,482,492	334,530 254,637 333,320 515,480 459,783	2,354,154 2,021,121 2,471,540 3,093,315 3,042,924	1,455,711 1,529,050 1,517,811 1,735,504 1,740,698	533,401 546,590 550,654 593,478 644,783	2,189,112 2,075,640 2,318,465 2,978,982 2,910,481	+ 165,042 - 54,519 + 153,075 + 114,333 + 132,443	

<sup>(</sup>a) Excludes capital expenditure but includes transfers to the Renewals Fund Reserve Account: 1951-52, £200,000; 1953-54, £250.000; 1954-55, £650,000; and 1955-56, £525,000.

Capital expenditure for each of the years 1938-39 and 1951-52 to 1955-56 was £28,576, £496,489, £468,026, £473,516, £599,752, and £553,329 respectively. Expenditure on renewals and replacements from the Renewals Fund Reserve Account was: 1951-52, £291,454: 1952-53, £299,286; 1953-54, £317,493, 1954-55, £306,542 and 1955-56, £630,537.

- (c) Port of Newcastle. The Maritime Services Board of New South Wales is the port authority but other government bodies are responsible for certain functions and activities of a maritime character at Newcastle. These include—
  - (i) The Department of Public Works, which is the constructing, dredging and maintenance authority at Newcastle as well as at other New South Wales ports except Sydney;
  - (ii) The Department of Railways, which is responsible for the control of wharfage and shipping arrangements in connexion with the coal industry and the provision and maintenance of appliances necessary for the transport and shipment of coal.

An Advisory Committee consisting of eight members, appointed by the Governor, assists the Board in matters associated with the operation of the port. In respect of volume of trade, Newcastle ranks second in importance in New South Wales. It is primarily a coal-loading port, and the proximity to the coal fields has led to the establishment of important industries, including iron and steel works, in the district. Facilities are available for the shipment of wool, wheat and frozen meat, and a wharf is available for timber.

The area used by shipping is about 570 acres, excluding the entrance to the narbour and the inner basin, which together cover an area of 162 acres. The width of the harbour at the entrance is 1,200 feet, and the navigable channel, with a depth of 25 feet 6 inches at low water, is 350 feet wide. Wharfage accommodation amounts to 16,100 feet, the Maritime Services Board controlling 6,500 feet and the Railways Department 7,000 feet while 2,600 feet is privately owned. There are also several dolphin berths available for tie-up purposes. A floating dock of 15,000 tons capacity is available at the port.

- (d) Port Kembla. As from 3rd May, 1948, the Maritime Services Board assumed the administration and navigational control of Port Kembla, which had previously been administered by the New South Wales Department of Public Works. The Department, however, continues to be the constructing authority in respect of works, dredging and maintenance. An Advisory Committee consisting of seven members appointed by the Governor has been formed to assist the Board in the operation of the Port. In respect of volume of trade, Port Kembla ranks third in the ports of New South Wales. It has an area of approximately 330 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfage accommodation totalling 4,800 feet has been provided for large ocean-going vessels. No cargo sheds are available as the nature of trade at the port does not call for the provision of sheltered storage accommodation at the berths. It is the port of the southern coalfields and for the expanding industrial area in and about Wollongong. The developmental programme for Port Kembla includes the construction of an inner harbour to provide wharfage for the steelworks in addition to general cargo berths.
- (e) Botany Bay. The Maritime Services Board of New South Wales is the administrative and controlling authority. The port is primarily a discharging centre for the oil refinery at Kurnell and two berths are available as well as tanker mooring buoys. The entrance to the Bay is approximately 1½ miles wide, with a minimum depth of about 36 feet.
- (f) Other Ports. In addition to the ports of Sydney, Newcastle, Port Kembla and Botany Bay, the Board controls 28 outports along the coastline of 609 miles. The shipping trade of these outports is relatively small.
- (ii) Port Charges. The port charges payable in respect of shipping and ships' cargoes in New South Wales are imposed by the Commonwealth Government in terms of the Lighthouses Act and the Navigation Act, and by the State authorities under the Navigation Act of New South Wales, the Harbour and Tonnage Rates Act, and the Sydney Harbour Trust Act. Since 1st February, 1936, the State enactments have been administered by the Maritime Services Board. The gross collections by the State authorities amounted to £4,587,796 in 1955-56. These figures include the Port of Sydney revenue (see table above)

and State navigation service collections (£1,544,872 in 1955-56). Commonwealth Government revenue from light dues and navigation receipts, for the whole of Australia, amounted to £270,011 in 1955-56.

2. Victoria.—(i) Melbourne Harbor Trust. (a) General. Information regarding the origin and constitution of this Trust, which controls the Port of Melbourne, appears in Official Year Book No. 12, p. 970 et seq. The membership of the Board of the Melbourne Harbor Trust Commissioners was increased to five during 1954 by the appointment of a further part-time Commissioner to represent waterside workers' interests. At 31st December, 1956, the sheds available for wharfage accommodation had a length of 21,579 feet, covering an area of 1,561,162 square feet. The area of water in Port Philip Bay and the River Yarra under the control of the Trust is approximately 5,327 acres and the total length of wharves, piers and jetties in the port is 66,083 feet, giving an area of over 63 acres of wharfage, and 58,170 feet of effective berthing space. During 1956, work was continued on the new berths at Appleton Dock (ultimately to have eighteen berths), Victoria Docks, South Wharf and Williamstown. The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is about 31 to 34 feet, the maximum being about 40 feet.

(b) Finances. The following table shows particulars of the financial operations of the Trust during the years 1939 and 1952 to 1956.

### MELBOURNE HARBOR TRUST: FINANCES.

		Gross	Reve	enue.		Expen	diture.			
Yea	ar.	Loan Indebted- ness at 31st Decem- ber.	Wharfage and Tonnage Rates.		Adminis- tration and Mainten- ance.	tration Redemp- tion, Mainten-Exchange		Total.	Surplus (+) or Deficit (-).	
1939		4,018,527	689,100	843,899	282,533	270,650	129,160	837,577	+ 6,322	
1952		7,914,146	1,256,581	1,941,252	1,204,863	292,485	179,047	1,947,085	- 5,833	
1953		9,581,933	1,423,345	2,052,272	1,230,195	381,914	98,182	2,013,554	+ 38,718	
1954		9,641,361	1,800,811	2,593,347	1,232,574	418,818	479,393	2,509,947	+ 83,400	
1955		9,978,842					532,372	2,906,406	+112,642	
1956		11,296,811	1,841,176	2,676,698	1,649,047	483,905	145,825	2,662,047	+ 14,651	

<sup>(</sup>a) Includes statutory payments to Consolidated Revenue and Geelong Harbor Trust:—1939 £155,234; 1952, £270,690; 1953, £303,263; 1954, £379,162; 1955, £452,219;; 1956, £383,270, Excludes capital expenditure:—1939, £128,567; 1952, £2,246,097; 1953, £1,255,613; 1954, £1,255,625; 1955, £1,509,665; 1956, £1,609,928.

(ii) Geelong Harbor Trust. The Geelong Harbor Trust, which was constituted in 1905, was reconstituted in 1934 under the provisions of the Melbourne and Geelong Harbor Trusts Act 1934. The Trust is under the control of three Commissioners appointed by the Governor-in-Council. At 31st December, 1955, the minimum depth of all berths (except Yarra Pier 29 feet) was 32 feet low water. During 1956, a contract was arranged to carry out the dredging, to 36 feet low water, of the approaches to Refinery Pier.

Revenue for the year 1956 was £937,581, and revenue expenditure was £488,738. The value of the Trust's fixed assets less depreciation was £4,270,378 and £5,431,089 at 31st December, 1955 and 1956 respectively. Loans outstanding at the end of 1956 amounted to £2,990,219.

(iii) Other Ports. Apart from Melbourne and Geelong, Portland is the only Victorian port of other than minor importance.

- 3. Queensland,—(i) General. The ports of Queensland, except Brisbane and certain minor ports, are administered by Harbour Boards with members representing the towns and districts served by the ports. Brisbane and the minor ports are controlled by the State Treasury through the Department of Harbours and Marine, which supervises the engineering activities of the other ports.
- (ii) Brisbane. Brisbane accommodates comfortably, in its dredged and improved river, the largest vessels in the Australian trade. The main centres for shipping, although further downstream than formerly, because of the increasing size of vessels, are still within

easy access of the city. The maximum depths (low water ordinary spring tide) of the shipping channel decrease from 32 feet in the North-West channel to 20 feet in the Bulimba Reach to Victoria Bridge section. Depths at wharves vary between 23 and 33 feet. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1938-39 and 1951-52 to 1955-56 are shown below:—

## BRISBANE HARBOUR: FINANCES. (£'000.)

			İ	Rece	ipts.	Payı	ments.
	Year.		Loan Indebtedness at 30th June.	Harbour Dues.	Total.	Working Expenses.	Total (including Interest and Redemption).
1938–39			1,179	165	173	36	112
1951–52			1,862	276	326	348	463
1952-53			2,168	318	393	426	558
1953-54			2,528	603	753	460	611
1954-55			2,633	688	853	522	693
1955-56			2,899	701	817	582	772

In addition to Brisbane Harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, the Brisbane River, and ten smaller harbours not administered by harbour boards.

(iii) Harbour Boards. Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. From 1st January, 1953, the harbour boards adopted the financial year ended 30th June for accounting purposes instead of the calendar year as previously. Finances for each port for the year ended 30th June, 1956, are shown below, together with a summary for the years 1939, 1951 and 1952, for the period of eighteen months ended 30th June, 1954 and for the year ended 30th June, 1955.

### HARBOUR BOARDS, QUEENSLAND: FINANCES.

				(4.)				
			Loan	Reve	nue.	Expen (excludin		
Harbou	r Board.		Indebted- ness at 30th June. (a)	Wharf- age and Harbour Dues.	age and Harbour Total.		Total (including Interest and Redemption). (c)	Surplus(+) or Deficit(-).
Bowen		<del></del>	362,128	48,332	59,247	24,113	67,188	<b>-</b> 7,941
Bundaberg			76,545	2,935		5,768		- 1,705
Cairns	• •		233,968	170,435				-10,528
Gladstone			498,347	25,985	88,122	37,271	85,447	
Mackay			728,388	181,354	220,917	68,018	659,798	-438,881
Rockhampto	n		535,172	66,052		40,446	58,186	+ 23,305
Townsville			450,980	225,549	278,771	142,026	251,418	+ 27,353
Total,	1955-56		2,885,528	720,642	955,846	512,776	1,361,568	-405,722
"	1954-55		2,807,527	766,504	1,108,613	530,541	996,604	+112,009
,,	1954(b)		2,713,679	955,464	1,413,894	789,346	1,167,936	+245,958
17	1952		2,059,080	455,677		440,784		
,,	1951		1,786,774	402,903	599,505	370,040	534,095	+ 65,410
**	1939	••	1,548,144	249,510	401,439	139,752	343,083	+ 58,356

<sup>(</sup>a) Years 1939, 1951 and 1952, 31st December. (b) Eighteen months ended 30th June, 1954. (c) Includes expenditure on capital works from accumulated revenue.

4. South Australia.—The South Australian Harbors Board. All South Australian harbours are controlled by the South Australian Harbors Board, which consists of three Commissioners appointed by the Governor for a period of five years and eligible for reappointment. The Board is responsible to the Minister of Marine for the discharge of its duties and functions. The most important ports are the five deep sea ports of Port Adelaide, Port Pirie, Wallaroo, Port Lincoln and Thevenard. At a few ports, the wharves or jetties are privately controlled, the principal of these being Whyalla (controlled by the Broken Hill Pty. Co. Ltd. under a Private Act of Parliament), Ardrossan where the Broken Hill Pty. Co. Ltd. has installed a bulk loading plant for handling dolomite, grain and salt and Rapid Bay which is also controlled by the Broken Hill Pty. Co. Ltd. Maximum depths of water (low water ordinary spring tide) at the wharves of the main ports range from 20 to 24 feet at Port Pirie to 35 feet at Port Adelaide (Outer Harbour). The following table shows the finances of the Board for 1938-39 and 1952-53 to 1956-57:

THE SOUTH AUSTRALIAN HARBORS BOARD: FINANCES.

(£.)

		Capital	1	Ex	penditure fr	om Revenue	·,	Surplus(+)	
Year.		30th June.	Revenue.	Working Expenses.	Interest.	Debt Redemp- tion.	Total.	or Deficit(-).	
1938-39	•••	8,026,441	664,915	205,848	326,719	50,000	582,567	+ 82,348	
1952-53		10,047,582	1,240,679	1,083,322	286,456		1,369,778	- 129,099	
1953-54		10,782,702	1,382,276	1,280,709	312,333		1,593,042	- 210,766	
1954-55		11,604,213	1,842,796	1,315,349	352,005		1,667,354	+175,442	
1955-56		12,366,653	1,920,340	1,451,296	404,188		1,855,484	+ 64,856	
1956-57		13,232,185	2,112,718	1,427,882	434,042		1,861,924	+ 250,794	

(a) State Treasurer's Funds and Reserve employed.

5. Western Australia.—(i) Fremantle Harbour Trust. Fremantle Harbour is controlled by a board of five Commissioners appointed by the Government. The Inner Harbour has a maximum water depth of 36 feet at the entrance and 33 feet depth at the wharf face. Wharf berth accommodation is 10,432 feet. The Outer Harbour consists of various sections south of the Inner Harbour with jetty facilities including the Kwinana Oil Refinery jetties which are approached through the Success and Parmelia Channels each 500 feet wide and 38 feet deep. The depth of water at the berths is a minimum of 44 feet.

Gross earnings for the years 1955-56 and 1956-57 amounted to £2,056,141 and £2,515,118 respectively, working expenses to £1,838,650 and £2,031,368, interest charges to £174,280 and £209,519, debt redemption to £51,723 and £55,806 and renewals fund to £2,000 in each year. Special payments were £155,848 and £213,432 and the total amounts debited to loan capital account were £4,655,975 and £6,260,562.

- (ii) Albany Harbour Board. The Albany Harbour is controlled by a board of five members appointed by the Government. The depth of water in the Harbour is 30 feet but dredging to accomplish a water depth of 34 feet is nearing completion. Wharf accommodation consists of 563 feet and in addition the Deepwater Jetty has 2,500 feet of accommodation. Gross earnings for the years 1955-56 and 1956-57 amounted to £50,975 and £92,431 respectively, working expenses to £41,311 and £48,487, interest and sinking fund charges to £15,521 and £19,650 and amounts debited to loan capital account to £1,535,902 and £1,652,461.
- (iii) Bunbury Harbour Board. The Bunbury Harbour is controlled by a board of five members appointed by the Government. The depth of water in the Harbour is 27 feet and berthing accommodation is 3,700 feet. Gross earnings for the years 1955–56 and 1956–57 amounted to £33,955 and £47,338 respectively, working expenses to £45,978 and £39,197, interest charges to £29,084 and £32,719 and amounts debited to loan capital account to £1,458,788 and £1,521,691.
- (iv) Other Ports. The following ports are controlled by the State Government Harbour and Lights Department:—Geraldton, Yampi, Port Hedland, Carnarvon, Wyndham, Derby, Point Samson, Busselton, Onslow and Broome. The Port of Esperance is under the control of the Railways Commission.
- 6. Tasmania.—There are eight marine boards and two harbour trusts in Tasmania The marine boards control the ports of Hobart, Launceston, Stanley (Circular Head) Burnie and Wynyard (Table Cape), Devonport, Strahan, Currie (King Island), and Whitemark (Flinders Island) and the harbour trusts those of Smithton and Leven. Aggregate receipts of revenue accounts of all these authorities during the year 1955-56 were £1,068,087.

and expenditures £1,091,044 including loan charges £165,282. The total receipts of the Hobart Marine Board during 1955-56 were £496,201, loan charges amounted to £54,202 and total expenditure to £536,372. Launceston Marine Board receipts during 1955-56 amounted to £223,473, loan charges to £17,709 and total expenditure to £217,687. Loan indebtedness of all marine boards and trusts at 30th June, 1956, was £2,568,502, of which £815,130 was in respect of Hobart and £311,835 in respect of Launceston.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable oversea shipping. Depths of water at wharves vary, in general between 16 and 34 feet (low water ordinary spring tide), but at Hobart there is a depth of water of from 30 to 52 feet.

### § 7. Fire Brigades.

1. New South Wales.—A Board of Fire Commissioners, consisting of five members, one each representing the State Government, (President), insurance companies, local government authorities, volunteer firemen and permanent firemen, operates under the Fire Brigades Act 1909-1956, and 154 fire districts had been constituted at the end of 1956. Up to the end of 1949, the cost of maintenance of fire brigades was borne in proportions of one quarter, one quarter, and one half respectively by the Government, the municipalities, and the insurance companies concerned and the expenditure was so regulated that the proportion payable by the councils in a fire district should not, except in special circumstances, exceed the amount obtainable from \$\frac{1}{2}d\$. in the £1 rate on the unimproved capital value of ratable land in the fire district. In June, 1949, legislation was introduced (i) increasing the limit of the Board's borrowing power from £250,000 to £500,000, (ii) providing for the varying of the maximum rate that may be levied by councils and (iii) altering the basis of contributions so that from 1st January, 1950, local councils and the Government will each pay one-eighth and the insurance companies three-quarters.

Other legislation, introduced in September, 1949, to improve and modernize the law dealing with the prevention of bush fires and to build up the organization of the bush fire-fighting services, provided for the establishment of Fire Regions and a Bush Fire Fighting Fund to be financed from contributions by the Government, councils and insurance companies in the proportion of one-quarter, one-quarter and one-half, respectively. The contribution of any council shall not exceed one-twentieth of a penny in the £1 on the unimproved capital value of ratable land in the area of the council not being land within a fire district constituted under the Fire Brigades Act 1909–1956.

- At 31st December, 1956, the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 366 officers and 954 permanent and 2,510 volunteer firemen. Corresponding figures for the Sydney Fire District were 303, 895 and 355. The revenue for the year 1956 was £2,371,788, made up as follows:—From the Government, £294,253, municipalities and shires, £294,253; fire insurance companies and firms, £1,765,518; and from other sources, £17,764. The disbursements for the year were £2,269,436.
- 2. Victoria.—(i) General. The Fire Brigades Act of 1928 provided for a Metropolitan Fire Brigades Board and a Country Fire Brigades Board each consisting of nine members. In December, 1944, the latter Board was superseded by the Country Fire Authority under an Act of that title, and the number of members was increased to ten. The number of members of the Metropolitan Fire Brigades Board was increased in December, 1954, from nine to ten to include an employees' representative.
- (ii) Metropolitan Fire Brigades Board. Since 1st October, 1952, the Metropolitan Fire Brigades Board has received contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. Prior to 1st October, 1952, the Board received contributions in equal proportions from the Treasury, the municipalities and the insurance companies. On 30th June, 1956, the Board had under its control 44 stations, 709 permanent staff, 74 special service and clerical, etc., staff, and 15 part-time firemen. The total receipts for 1955-56 were £1,118,088 comprising contributions, £889,767, receipts for services, £115,470 and interest and sundries, £112,851. The expenditure was £1,174,584.
- (iii) Country Fire Authority. This authority, constituted in 1944, is responsible for the prevention and suppression of fires in the "country area of Victoria", which embraces the whole of the State outside the metropolitan fire district, excluding State forests and certain crown lands. The country area has been divided into 24 fire control regions, three of which (Ballarat, Bendigo and Geelong) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority has received contributions in the proportion of two-thirds from

insurance companies and one-third from the Treasury as from 1st January, 1954. Prior to that date the Treasury contributed two-thirds while the insurance companies contributed one-third. At 30th June, 1956, the Act applied to 169 insurance companies, 200 urban and 1,020 rural fire brigades. The effective registered strength of the brigades was 93,222 members.

The receipts for the year 1955-56 amounted to £397,169. Total expenditure other than loan amounted to £405,095.

- 3. Queensland.—(i) General. The Acts of 1920–1931 made provision for the retention of existing fire districts, and for the constitution of new districts. For each district, there must be a Fire Brigades Board consisting of seven members, and the cost of maintenance of each brigade is proportioned as follows:—The Treasury two-sevenths, insurance companies three-sevenths, and local authorities two-sevenths. All volunteer fire brigades in a district must be registered.
- (ii) Fire Brigade Boards. At 30th June, 1956, there were 72 Fire Brigade Boards. The total number of stations was 124 and full-time staff numbered 494, including 13 administrative, 93 officers and 388 firemen. Workshop staff numbered 16. Volunteers numbered 326. Part-time staff numbered 653 including 70 administrative, 96 officers and 487 firemen. The total revenue for the year 1955-56 was £639,023, received mainly from the following sources:—Government £170,532, local authorities £170,532, insurance companies £255,834. Loan receipts (Government and other) were £75,226. The total expenditure for the year was £650,514, the chief items being salaries and wages £465,935 and interest and redemption of loans £41,899.
- 4. South Australia.—The Fire Brigades Act 1936-1944 provides for a board of five members, and the expenses and maintenance of brigades are defrayed in the proportion of two-ninths by the Treasury (subject to certain limits when the contribution exceeds £10,000), five-ninths by insurance companies, and two-ninths by the municipalities concerned. At 30th June, 1956, there were altogether 35 fire brigade stations, of which 12 were metropolitan and 23 country.

The authorized strength of the permanent staff was 383, including 273 officers and men and 87 country auxiliary firemen. The total revenue for the year 1955-56 was £344,517, including contributions of £303,840 made up as follows:—insurance companies £183,014, Treasury £47,620 and municipalities £73,206. The Treasury contribution includes an additional grant of £35,670.

5. Western Australia.—In 1942, certain municipal and road board districts were constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 35 fire districts at 30th September, 1956. The contribution to the Board is made in the proportion of two-ninths from the Government, two-ninths from local government authorities, and five-ninths from insurance companies. The number of local government authorities and insurance companies who contributed numbered 59 and 143 respectively. The brigades throughout the State controlled by the Western Australian Fire Brigades Board at 30th September, 1956 numbered 52, with a staff of 1,533 including 252 permanent officers and firemen and 1,250 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1956, was £343,204 and the expenditure £345,886.

Under the Bush Fires Act, a Bush Fires Board (appointed April 1955 and superseding the Rural Fires Prevention Advisory Committee) consisting of ten members, five of whom are nominated by the Road Board Association, was set up to advise the Minister for Lands on bush fire control. The Act also provides for the registration of bush fire control officers, who numbered 1,009 at 30th June, 1956 and the establishment of bush fire brigades, the number of which was 627 at 30th June, 1956.

6. Tasmania.—The Fire Brigades Act 1945 provided for the creation of the Fire Brigades Commission of Tasmania to co-ordinate the activities of existing fire brigades boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of five members nominated or elected by the fire brigades boards and one member nominated by the Minister. Contributions towards the cost of operations are on the basis of one-third each from the Treasury, the municipalities, and the insurance companies concerned. The cost for the year 1955-56 amounted to £110,438. There were at 30th June, 1956, 24 brigades controlling 33 stations and their aggregate staffs numbered 512, including 85 permanent officers and 427 part-time firemen, including officers.

### CHAPTER XX.

### PRIVATE FINANCE.

#### A. CURRENCY.

#### § 1. General.

The Australian monetary system is based on the British system, of which the unit is the pound  $(\pounds)$  divided into 20 shillings (s.) each of 12 pence (d.). When the Australian currency was introduced in 1909 the Australian pound was specified as equivalent to 123.27447 grains of gold  $^{11}$ /<sub>12</sub>ths fine or 113.002 grains of fine gold and, until the depression in 1930, was identical with the pound sterling. There was a gradual depreciation of the Australian pound in terms of sterling from the beginning of 1930 until 3rd December, 1931, when it was stabilized at the rate of £125 Australian = £100 sterling. This relationship has been maintained until the present time. Following the depreciation, no action was taken to define the value of the Australian pound in terms of gold until 5th August, 1947, when the Australian Government advised the International Monetary Fund, in terms of the membership agreement, that the par value of the Australian pound was 2.86507 grammes (44.2148 grains) of fine gold. From 18th September, 1949, this was reduced to 1.99062 grammes (30.720 grains) of fine gold.

When the Commonwealth was established in 1901, the currency in Australia consisted of United Kingdom gold, silver and bronze coins, notes issued by the banks, and Queensland Treasury notes. Queensland Treasury notes were in circulation in Queensland only, having superseded bank notes in that State after the 1893 crisis. Under the Commonwealth Constitution, the control of currency, coinage and legal tender and the issue of paper money was vested in the Commonwealth. The Commonwealth assumed these powers by enacting the Coinage Act 1909 and the Australian Notes Act 1910.

Australian notes are legal tender in Australia for any amount. Australian silver coins are legal tender for any amount not exceeding forty shillings and Australian bronze coins are legal tender for any amount not exceeding one shilling.

#### § 2. Coinage.

1. Coins in Circulation.—Brief historical notes relating to the Australian Coinage are given in Official Year Book No. 37, pp. 557 and 558. For weight, metal, composition, etc., of Australian coins in circulation see Official Year Book No. 39, p. 697.

The silver coins issued prior to July, 1947, have a millesimal fineness of 925 (thirty-seven fortieths silver and three fortieths copper) and those issued since 1st July, 1947 (dated 1946 and later) have a millesimal fineness of 500 (one-half silver and one-half other metals).

From 1910 to 1916, Australian coins were minted in England by the Royal Mint, London, and the Mint, Birmingham Ltd., and in 1916 and 1917 by the Indian Mints. The minting of Australian coins was undertaken by the Australian Mints in 1916 and coins have been minted at the Melbourne branch of the Royal Mint from 1916 to the present time, at the Sydney branch from 1919 until that Mint closed in 1926 and at the Perth branch in 1922 and since 1940.

During the 1939-45 War, the two Australian mints were unable to meet the demand for Australian coins and some coins were minted in the United States of America and India. In 1951-52 and 1952-53, some coins were minted at the Royal Mint, London, to meet the heavy demand for coins. Details of Australian coins obtained from each mint to 30th June, 1957, are as follows:—Melbourne, £40,849,000; Perth, £1,345,000; Sydney, £488,000; United Kingdom Mints, £3,016,000; United States Mints, £6,000,000; Indian Mints, £169,000; Total, £51,867,000.

2. Issues of Australian Coins.—The net issues of Australian silver and bronze coin from 1910 to 30th June, 1957 were:—Crown (5s.), £276,000; Florin (2s.), £17,777,000; Shilling (1s.), £7,051,000; Sixpence (6d.), £4,801,000; Threepence (3d.), £5,568,000; Total silver coin, £35,416,000; Penny (1d.), £2,228,000; Half-penny (\frac{1}{2}d.), £706,000; Total bronze coin, £2,934,000. Except in the total no allowance has been made for £57,000 worth of damaged silver coin, for which denominations are not available, withdrawn since 1910.

3. Profits on Coinage of Silver and Bronze.—Australian silver and bronze coins are token coins and, as the face value of the coins is greater than the value of the bullion they contain, a profit is made from their issue. This profit forms part of the Commonwealth Consolidated Revenue. In the following table, details are given of the value of coins issued, the cost of bullion, the cost of minting and sundry expenses connected with the issue, and the profits made on the issue of coins during the years 1938-39 and 1952-53 to 1956-57.

AUSTRALIAN SILVER AND BRONZE COINS: PROFITS FROM ISSUE.
(£.)

ar.	Coin Issued.	Cost of Bullion.	Gross Profit,	Cost of Minting and Sundry Charges.	Net Profit.
		SILVER COIN			
	. 219,600	81,314	138,286	18,459	119,827
	1,709,600	971,471	738,129	180,608	557,521
		1,381,027	1,088,373	233,151	855,222
		1,187,041	940,759	172,552	768,207
	. 915,900		401,052		305,282
	. 5,646,915	4,815,693	831,222	245,241	585,981
	1	Bronze Coin	· · · · · · · · · · · · · · · · · · ·		
	. 41,800	7,838	33,962	26,025	7,937
	. 327,620	413,263	- 85,643	161,640	- 247,283
	. 61,368	71,421	- 10,053	94,963	- 105,016
	. 14,616	12,665	1,951	45,590	- 43,639
	. 174,889	163,393	11,496	117,347	105,851
• • •	. 51,560	61,957	- 10,397	58,788	- 69,185
		TOTAL.			
••	. 261,400	89,152	172,248	44,484	127,764
	2,037,220	1,384,734	652,486	342,248	310,238
		1,452,448	1,078,320	328,114	750,206
	2 142 416	1,199,706	942,710	218,142	724,568
	1,000,700	678,241	412,548	213,117	199,431
	6 (00 475	4,877,650	820,825	304,029	516,796
			Bullion.    Coin issued.   Bullion.	Coln Issued.   Bullion.   Gross Pront.	Coln Issued.   Bullion.   Gross Front.   Sundry Charges.

Note.—Minus sign (-) denotes a loss.

4. Australian Mints.—(i) General. Soon after the discovery of gold in Australia, a branch of the Royal Mint was established in Sydney. The formal opening took place on 14th May, 1855. The Melbourne branch was opened on 12th June, 1872, and the Perth Branch on 20th June, 1899. The States of New South Wales, Victoria and Western Australia provided an annual endowment in return for which the mint receipts were paid to the respective State Treasuries. Owing to losses incurred in its operations, the Sydney branch was closed at the end of 1926.

Since their establishment, the Australian branches of the Royal Mint have been primarily concerned with the refining of gold, minting of Imperial gold coins and the production of bars and ingots of gold bullion for export. The minting of Imperial gold coins was discontinued in September, 1931. In 1916, the Melbourne branch took over the minting of Australian silver and bronze coins from the Royal Mint, London. Australian coins were also minted at the Sydney Mint from 1919 to 1926 and at the Perth Mint in 1922 and from 1940 to the present time. The Melbourne branch has also minted token coins for the Territory of New Guinea and for New Zealand.

(ii) Gold Receipts and Issues. (a) Receipts. The receipts of gold at Australian mints during 1956 amounted to 965,734 fine ounces (Melbourne, 149,152 fine ounces; Perth, 816,582 fine ounces).

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- (b) Issues. The Australian mints issue gold bullion for the use of local manufacturers (jewellers, dentists, etc.,) and for export. Since September, 1931, when the United Kingdom departed from the gold standard, the minting and issue of gold coins by Australian mints has ceased. Australian exports of gold are mainly in the form of 400-oz. ingots, but in earlier years a considerable amount of gold was shipped to India in 10-oz. bars. Since early in the 1939-45 War, all gold has been acquired by the Commonwealth Bank and the export and use of gold has been subject to regulation by the Commonwealth Government. From December, 1951, export of a proportion of newly-mined gold for sale on premium markets overseas was permitted (see para. 5 below). The issues from Australian mints during 1956 amounted to 965,440 fine ounces (Melbourne, 148,074 fine ounces, Perth, 817,366 fine ounces).
- 5. Price of Gold.—The following table shows the average prices of gold and the average value of the sovereign in London and Australia for the years 1938-39 and 1952-53 to 1956-57. The average price of gold in Australia is based on the Commonwealth Bank's buying price for gold lodged with the mints.

		Lon	don.	Australia.					
Period.				Sovereign.					
	Average price per fine oz.	Average value of Sovereign.	Average price per fine oz.	Average value.	Equivalent to a premium of—				
1938–39		£stg. s. d. 7 6 9	£stg. s. d. 1 14 7	£A. s. d. 9 2 9	£A. s. d. 2 3 0	% 115.0			
1952-53		12 8 0	2 18 5	15 9 10	3 12 0	260.0			
1953–54	• •	12 8 3	2 18 5	15 10 4	3 12 1	260.4			
1954-55	• •	12 10 0	2 18 10	15 12 6	3 12 6	267.8			
1955–56		12 10 0	2 18 10	15 12 6	3 12 6	267.8			
1956–57		12 10 0	2 18 10	15 12 6	3 12 6	267.8			

PRICE OF GOLD: LONDON AND AUSTRALIA.

In December, 1951, arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on oversea premium markets. Under the arrangements, gold is acquired by the Commonwealth Bank in the usual manner and sold, at the Bank's buying price, to an association representing gold producers participating in the scheme. The association pays the Bank's handling charges and the costs of preparation of the gold and makes arrangements for export and sale. The gold can be sold only against payment in United States dollars. Profits earned by the association after meeting administrative expenses are distributed to members in proportion to the quantity of gold delivered to the Commonwealth Bank. Until August, 1952, when permission was given for the export of fine gold, gold exported under this arrangement was not to exceed a fineness of 22 carats (11/12 ths.).

The average prices per fine ounce in Australian currency (f.o.b.) obtained for gold exported under this scheme for each of the months during 1956-57 for which there were sales, were:—July, £15 12s. 10d.; August £15 13s. 11d.; September, £15 13s. 8d.; October, £15 13s. 8d.; November, £15 14s.; December, £15 13s. 4d.; January, £15 13s.; March, £15 12s. 10d.; April, £15 13s.; June, £15 13s.

### § 3. Notes.

- 1. General.—Brief historical notes relating to the circulation and issue of notes in Australia are given in Official Year Book No. 37, pp. 561 and 562. The issue of notes intended for circulation as money other than by the Commonwealth Bank is prohibited.
- 2. The Australian Note Issue.—(i) General. Notes in circulation in Australia are issued by the Commonwealth Bank through the Note Issue Department. The Bank is authorized to issue Australian notes in denominations of 5s., 10s., £1, £5, £10 and any multiple of £10. The Commonwealth Bank is not required to hold a specific reserve in gold against the note issue, but the assets of the Note Issue Department must be held or invested in gold, on deposit with any bank, or in securities of the Government of the United Kingdom, the Commonwealth or a State. In 1957, all the profits of the Note Issue Department were paid to the Commonwealth Consolidated Revenue Fund. A distribution of the profits prior to 1957 may be found in the section dealing with the Commonwealth Bank (see para. 5 (iv) page 728).

Australian notes are legal tender to any amount within Australia and have been issued in denominations of 10s., £1, £5, £10, £20, £50, £100 and £1,000. Notes of denominations higher than £10, however, have not been issued to the public since 1945.

(ii) Australian Notes in Circulation. Particulars of the average values of notes in circulation for the years 1938-39 and 1952-53 to 1956-57 are given in the following table:—

## AUSTRALIAN NOTE ISSUE. (£'000.)

_			Average of monthly statements for year-								
Denom	ination	-	1938-39.	1952-53.	1953–54.	1954–55.	1955-56.	1956-57.			
10s			4,141	9,738	9,936	10,175	10,496	10,867			
£1 .			21,124	68,286	69,038	69,646	70,564	72,384			
£5 .			11,718	152,679	168,032	176,383	180,565	171,067			
£10 .		}	5,126	88,257	91,911	101,443	113,809	131,569			
£20 .			111	6	6	6	4	4			
£50 .			1,259	55	51	49	46	44			
£100 .			2,238	60	57	55	50	49			
£1,000 .			2,855	649	683	799	802	901			
Held by E	Banks		15,454	36,400	38.996	40,880	42,909	44,433			
Held by F			33,118	283,330	300,718	317,676	333,427	342,452			
To	tal		48,572	319,730	339,714	358,556	376,336	386,885			

(iii) Commonwealth Bank—Note Issue Department. The following statement shows particulars of liabilities and assets of the Note Issue Department of the Commonwealth Bank as at 30th June, 1956 and 1957.

## NOTE ISSUE DEPARTMENT: LIABILITIES AND ASSETS, 30th JUNE. (£'000.)

Liabilities.	1956.	1957.	Assets.	1956.	1957.
Notes on Issue(a)	371,969	380,882	Gold and Balances held		
Special Reserve— Premium on gold			abroad (including money at short call)	120,831	137,427
sold	4,755	4,755	Government Securities	120,001	10.,
Other Liabilities(a)	3,525	9,540	(including Common-		
	-	•	wealth Treasury Bills)	259,368	257,693
			Other Assets	50	57
Total Liabilities	380,249	395,177	Total Assets	380,249	395,177

<sup>(</sup>a) Notes of a denomination not exceeding one pound which have been on issue for more than twenty years, and notes of a denomination exceeding one pound which have been on issue for more than 40 years are not included in the item "Notes on Issue" but are included in the item "Other Liabilities".

In 1956-57, the net profits of the Note Issue Department amounted to £10,053,635 and were paid to the Commonwealth Consolidated Revenue Fund.

### B. BANKING.

### § 1. Cheque-Paying Banks.

- 1. Banking Legislation.—(i) Commonwealth Legislation. Under Section 51 of the Commonwealth Constitution, the Commonwealth Parliament has power to legislate with respect to "Banking, other than State banking; also State banking extending beyond the limits of the State concerned, the incorporation of banks, and the issue of paper money". The principal Commonwealth Acts at present in force relating to Banking are—
  - (a) The Commonwealth Bank Act 1945-1953, which provides for the constitution and management of the Commonwealth Bank, Commonwealth Trading Bank and Commonwealth Savings Bank and the management of the Australian note issue; and

(b) The Banking Act 1945-1953, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth.

The Banking Act 1945 was assented to on 3rd August, 1945, and came into operation on 21st August, 1945. It applies to all banks, except State banks, operating in Australia or Territories of the Commonwealth. The objects of the Act are:—(a) To provide a legal framework, uniform throughout Australia, for regulating the banking system; (b) to safeguard depositors of the banks from loss; (c) to provide for the co-ordination of banking policy under the direction of the Commonwealth Bank; (d) to control the volume of credit in circulation and bank interest rates; (e) to mobilize and to provide machinery for the control of the foreign exchange and gold resources of the Australian economy. A summary of the main provisions of the Act is given in Official Year Book No. 37, p. 565.

The Banking Act 1953, assented to on 1st April, 1953, amended the Banking Act 1945. Details of the main amendments are given in Official Year Book No. 40, p. 616.

- (ii) State Legislation. State banking legislation relates to the incorporation of banks and the constitution and management of State banks. The Acts under which the various banks are incorporated differ. While some of the older banks were incorporated by special Act or Charter, e.g., the Bank of New South Wales by Act of Council 1817, The Bank of Adelaide by Act of the South Australian Parliament, and the Bank of New Zealand by Act of the General Assembly of New Zealand, most of the banks are incorporated under a Companies Act of the States or the United Kingdom. This is also the case with those banks which were reconstructed after the crisis of 1893. State banks, constituted under State Acts, transacting general banking business are The Rural Bank of New South Wales, the State Bank of South Australia and The Rural and Industries Bank of Western Australia.
- 2. Royal Commission on Monetary and Banking Systems.—A Royal Commission was appointed by the Commonwealth Government in November, 1935, to inquire into the monetary and banking systems in operation in Australia and to report whether any, and if so what, alterations were desirable in the interest of the people of Australia as a whole, and the manner in which any such alterations should be effected. The Commission presented its report on 15th July, 1937, and a summary of the recommendations appears in Official Year Book No. 31, p. 1010.
- 3. Presentation of Banking Statistics.—Because of the different purposes they serve in the Australian financial system, Australian banks have been divided for statistical purposes into four groups and a separate series is presented for each. These groups are:—
  - (a) The Commonwealth Bank. This is the Central Bank. It also provides special banking facilities through the Rural Credits, Mortgage Bank and Industrial Finance Departments. It transacted general banking business through a General Banking Division up to 3rd December, 1953, when that business was transferred to the Commonwealth Trading Bank of Australia. Statistics of the Central Banking Business (including the Note Issue Department), and Rural Credits, Mortgage Bank and Industrial Finance Departments are presented in separate series.
  - (b) The Commonwealth Trading Bank of Australia. This bank commenced operations on 3rd December, 1953. On that date, under the provisions of the Commonwealth Bank Act, 1953, it took over the business of the General Banking Division of the Commonwealth Bank. The statistics presented in the Commonwealth Trading Bank series include averages for the General Banking Division of the Commonwealth Bank up to 3rd December, 1953.

- (c) Private Trading Banks. This group was formerly known as the Nine Trading Banks but the number of banks included has been reduced to seven by amalgamations. With the Commonwealth Trading Bank, these banks provide the major part of the general banking facilities in Australia. The banks included in this group are—the Australia and New Zealand Bank Ltd. (an amalgamation of the Bank of Australaia Ltd. and the Union Bank of Australia Ltd.), The Bank of Adelaide, the Bank of New South Wales, The Commercial Bank of Australia Ltd., The Commercial Banking Company of Sydney Ltd., The English, Scottish. and Australian Bank Ltd. and The National Bank of Australasia Ltd. (which has absorbed The Queenland National Bank Ltd. and The Ballarat Banking Co. Ltd.).
- (d) Other Banks. This group consists of (i) three State Government Banks—The Rural Bank of New South Wales, the State Bank of South Australia and The Rural and Industries Bank of Western Australia, which, in their general banking business, specialize mainly in financing rural industries, (ii) one joint stock bank—The Brisbane Permanent Building and Banking Co. Ltd., which has specialized business in one district only, and (iii) branches of three oversea banks—the Bank of New Zealand, Comptoir National d'Escompte de Paris and the Bank of China, which transact limited business in Australia and are mainly concerned with financing trade, etc., between Australia and oversea countries.

In addition to the series mentioned above, a series for all cheque-paying banks is presented. This series covers the Commonwealth Trading Bank, the Private Trading Banks and the other cheque-paying banks included in the fourth group.

Unless otherwise stated, the statistics presented are averages of weekly returns. Averages of liabilities and assets are the averages of the liabilities and assets of the banks on the several weekly balance days during the period concerned. Averages of bank clearings and debits to customers' accounts are the averages of transactions for weeks ended on the balance days during the period.

4. Banks Transacting Business in Australia.—(i) Number of Branches. At 30th June, 1957, the 15 banks operating in Australia transacted all classes of banking business at 3,524 branches and 1,412 agencies. The Commonwealth Trading Bank and the Private Trading Banks have branches throughout the Commonwealth. The Rural Bank of New South Wales, the State Bank of South Australia and The Rural and Industries Bank of Western Australia, being State Government banks specializing mainly in financing rural industries, have branches only in their respective States. The Brisbane Permanent Building and Banking Co. Ltd., transacts business in Brisbane only. The remaining three banks are branches of oversea banks.

### CHEQUE-PAYING BANKS: NUMBER OF BRANCHES(a) AT 30th JUNE, 1957.

Banks.	New South Wales.	Vic- toria.	Q'land.	South Aust.	West. Aust.	Tas- mania.	Nor. Terr.	Aust. Cap. Terr.	Total.
Commonwealth Trading Bank of Australia Private Trading Banks Other Cheque-paying Banks	280 924 117	74 841 2	77 465 1	22 271 31	47 235 38	10 65	2 9	2 11	514 2,821 189
All Cheque-paying Banks— Metropolitan areas Elsewhere Total	521 800 1,321	434 483 917	116 427 543	116 208 324	129 191 320	16 59 75	11 11	13 13	1,332 2,192 3,524

(a) Includes Head Offices. Excludes 1,412 agencies.

(ii) Capital Resources, Profits and Dividends. The paid-up capital of cheque-paying banks (excluding the three oversea banks, the Bank of New Zealand, the Bank of China and the Comptoir National d'Escompte de Paris), together with their reserve funds, their profits and the amount of their last dividends, are shown in the following table. The information relates to the balance-sheet last preceding 31st October, 1956. All amounts are expressed in Australian currency.

# CHEQUE-PAYING BANKS: CAPITAL RESOURCES, PROFITS AND DIVIDENDS, 1955-56.

(£°000.)

Bank.	Paid-up Capital.	Re- serve Funds.	Balance of Profit and Loss Account. (b)	Total Share- holders' Funds. (c)	Reserve Liability of Share- holders. (d)	Net Profit for year. (e)	Net Divi- dends.
Commonwealth Trading Bank of Australia	5,429	2,435		7,864		708	
Private Trading Banks— Australia and New Zealand Bank Ltd. The Bank of Adelaide Bank of New South Wales The Commercial Bank of Australia Ltd. The Commercial Banking Co. of Sydney Ltd. The English, Scottish and Australian Bank Ltd. The National Bank of Australasia Ltd. The Queensland National Bank Ltd. (in vol. liq.) (g) The Ballarat Banking Co. Ltd. (in vol. liq.) (g)	12,801 1,750 17,560 6,223 6,000 3,765 10,089	8,120 1,750 12,000 3,610 6,500 3,765 7,500	2,211 205 1,175 473 505 832 1,001 130	23,132 3,705 30,735 10,306 13,005 8,362 18,590 130 15	10,667 1,750 17,560  6,000 2,510 2,700	1,006 215 1,980 556 648 386 951	883 175 1,375 487 540 297 908
Total Private Trading Banks	58,188	43,245	6,547	107,980	41,187	5,741	4,665
Other Cheque-paying Banks— The Brisbane Permanent Building and Banking Co. Ltd. The Rural Bank of New South Wales State Bank of South Australia The Rural and Industries Bank of Western Australia	1,000 16,214 4,105 8,460	275 10,292 1,200 221	68	1,343 26,506 5,305 8,681		86 111 79 27	80
Total Other Cheque-paying Banks	29,779	11,988	68	41,835		303	80
Grand Total	93,396	57,668	6,615	157,679	41,187	6,752	4,745

<sup>(</sup>a) For the Commonwealth Trading Bank, the amount shown in this column is the amount specified as capital in the Commonwealth Bank Act 1945-1953. This amount was appropriated out of Reserve Funds built up from profits of the Commonwealth Bank. For the State Bank of South Australia and The Rural and Industries Bank of Western Australia, the amounts shown in this column are capital funds provided by the respective State Governments. Capital of The Rural Bank of New South Wales consists of Inscribed Stock and Debentures issued by the Bank for capital purposes. (b) Includes dividends declared but not paid at date of balance-sheet. (c) For the Commonwealth Trading Bank and the State Banks, the amount shown in this column is total capital and reserves. (See footnote (a).) (d) Includes uncalled capital. (e) For the State Government Banks, the net profit is the profit positing off bank premises and payment of interest on capital. For the other Banks, the net profit is the profit before writing off bank premises. (f) Dividends paid and payable out of profits earned during 1955-56. (g) These banks are in process of liquidation consequent upon the amalgamation of their business with The National Bank of Australasia Ltd.

- 5. Commonwealth Bank of Australia.—(i) General. An account of the progress and development of the Commonwealth Bank is given in earlier issues of the Official Year Book (see No. 37, pp. 570 to 573). The general functions of the Bank are set out in section 8 of the Commonwealth Bank Act 1945–1953 which states—
  - "8. It shall be the duty of the Commonwealth Bank, within the limits of its powers, to pursue a monetary and banking policy directed to the greatest advantage of the people of Australia, and to exercise its powers under this Act and the Banking Act 1945 in such a manner as, in the opinion of the Bank, will best contribute to:—
    - (a) the stability of the currency of Australia; (b) the maintenance of full employment in Australia; and (c) the economic prosperity and welfare of the people of Australia."

In addition to its functions as a Central Bank, the Bank controls the Australian note issue through a Note Issue Department and provides special services through the Rural Credits Department, Mortgage Bank Department and Industrial Finance Department. The Commonwealth Bank also provided general banking facilities through the General Banking Division up to 3rd December, 1953. On that date, in accordance with the provisions of the Commonwealth Bank Act, 1953, the Commonwealth Trading Bank took over the business of the General Banking Division of the Commonwealth Bank. The Commonwealth Savings Bank, a separate institution providing for small depositors, is controlled by the Commonwealth Bank Board and is operated in conjunction with the Commonwealth Trading Bank.

- (ii) Management. Under the Commonwealth Bank Act 1911, the Bank was managed by a Governor. From 1924 to August, 1945, it was controlled by a Board of Directors. Under the Commonwealth Bank Act 1945, control was vested in a Governor, assisted by an Advisory Council. Since 21st August, 1951, under the Commonwealth Bank Act 1951, the policy of the Commonwealth Bank and the Commonwealth Savings Bank has been determined by the Commonwealth Bank Board consisting of the Governor (Chairman), the Deputy Governor, the Secretary to the Treasury and seven other members appointed by the Governor-General. The Bank is managed by the Governor who acts in accordance with the policy of the Bank and with any directions of the Board. The Board is required to inform the Government of the monetary and banking policy of the Bank. of a disagreement between the Government and the Board as to whether the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia, the Governor-General, acting with the advice of the Executive Council, may determine the policy to be adopted by the Bank. The Commonwealth Trading Bank is managed by a General Manager under the Governor of the Commonwealth Bank and its policy is determined by the Commonwealth Bank Board.
- (iii) Central Banking Business. Under the powers it possessed under the Commonwealth Bank Act 1911–1943, and under its war-time powers under the National Security Regulations, the Commonwealth Bank had gradually assumed the functions of a Central Bank. Part III. of the Commonwealth Bank Act 1945 formally constituted the Commonwealth Bank as a Central Bank and granted the Bank the necessary powers to carry on the business of a Central Bank. The capital for the Central Banking Business is £4,000,000 and such other sums as are transferred from the Reserve Fund. Since 1951 and until 1956, the profits of the Commonwealth Bank were distributed as follows:—(a) One-half to the National Debt Sinking Fund; (b) £500,000 per annum to the Capital accounts of the several departments of the Bank and the Commonwealth Trading Bank, distributed as follows:—Commonwealth Trading Bank, Mortgage Bank Department, and Industrial Finance Department each two-sevenths and the Rural Credits Department one-seventh; and (c) the balance to the Commonwealth Bank Reserve Fund. For the year ended 30th June, 1957, the profits were distributed one-half to the National Debt Sinking Fund and one-half to the Commonwealth Bank Reserve Fund.
- (iv) Note Issue Department. This Department was established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank. The Bank may, through this department, issue, re-issue and cancel Australian notes. Until June, 1951, all profits of this Department, with the exception of £2,000,000 and £1,200,000 paid to the capital accounts of the Rural Credits Department and Mortgage Bank Department respectively, were paid to the Consolidated Revenue Fund. For the years ended 30th June, 1952 to 1956, the profits were distributed as follows:—(a) £500,000 per annum to the capital accounts of the Commonwealth Trading Bank and the several departments of the Commonwealth Bank, distributed two-sevenths each to the Commonwealth Trading Bank, Mortgage Bank Department and Industrial Finance Department and one seventh to the Rural Credits Department, and (b) the balance to the Commonwealth Consolidated Revenue Fund. For the Year ended 30th June, 1957, all of the profits were paid to the Commonwealth Consolidated Revenue Fund.
- (v) General Banking Division. Under the Commonwealth Bank Act 1911–1943, no provision was made for the separation of the general banking business of the bank from its central banking business. Under the Commonwealth Bank Act 1945, the General Banking Division was set up to carry on the general banking business of the Bank and the accounts and transactions of this division were kept separate and distinct from the other accounts of the Bank. The capital of the General Banking Division was £4,000,000, and

such other sums as were transferred from the General Banking Division Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department. Transfers from these two sources increased the total capital to £4,572,000 at 30th June, 1953. The profits of the General Banking Division were distributed as follows:—(a) one-half was credited to the General Banking Division Reserve Fund, and (b) one-half was paid to the National Debt Sinking Fund. Under the Commonwealth Bank Act 1953, the business of the General Banking Division was transferred to the Commonwealth Trading Bank on 3rd December, 1953. (See also para. 6, p. 734, Commonwealth Trading Bank of Australia.)

- (vi) Rural Credits Department. The Rural Credits Department was established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce. The Bank may, through this department, make advances, upon the security of primary produce placed under the legal control of the Bank or other security associated with the production or marketing of primary produce, to co-operative associations or marketing boards formed under the laws of the Commonwealth or of a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not be more than one year. The capital of the Rural Credits Department is £2,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. At the 30th June, 1957, total capital was £2,714,000. Profits are distributed as follows:—(a) one-half is credited to the Rural Credits Department Reserve Fund, and (b) one-half is credited to the Rural Credits Department Fund for the promotion of primary production.
- (vii) Mortgage Bank Department. The Mortgage Bank Department was established in 1943 for the purpose of making long-term loans to primary producers. Through this department, the Bank may make a loan to any person engaged in farming, agricultural, horticultural, pastoral or grazing operations or other form of primary production, upon the security of a mortgage to the Bank of an estate or interest in land in the Commonwealth owned by the borrower. The term of the loan shall not be less than five years nor more than forty-one years. The capital of the Department is £4,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. Total capital at the 30th June, 1957, amounted to £5,428,000. Profits are credited to the Mortgage Bank Department Reserve Fund.
- (viii) Industrial Finance Department. The functions of the Industrial Finance Department, established in January, 1946, are:—(a) to provide finance for the establishment and development of industrial undertakings; (b) to assist in the establishment and development of industrial undertakings; and (c) to provide advice on the operations of industrial undertakings with a view to promoting the efficient organization and conduct thereof. To exercise these functions the Bank may, through the Industrial Finance Department, lend money and purchase and sell shares or securities in an industrial undertaking. The capital of this department is £4,000,000 and such amounts as are transferred from the profits of the Central Banking Business and the Note Issue Department. At the 30th June, 1957, total capital amounted to £5,429,000. The Treasurer, the Bank and the Savings Bank may advance money to the Industrial Finance Department. The amount that may be advanced by the Bank is limited to £1,000,000. The profits of the Department are credited to the Industrial Finance Department Reserve Fund.
- (ix) Housing Loans. Provision is made for the Bank, through the Commonwealth Trading Bank, to make loans to individuals or building societies for the erection or puchase of homes or for the discharge of mortgages on homes. These loans must be made at the lowest possible rate of interest. Loans to individuals are to be on cridit foncier terms, to be secured by first mortgage on an estate or interest in land owned by the borrower and to be repaid in periods of not less than five years nor more than 35 years. Loans to building societies are to be made on such security and on such terms and conditions as the Bank determines.
- (x) Liabilities and Assets—All Departments. Liabilities and assets of each Department of the Commonwealth Bank at 30th June, 1957, are shown in the following table. The

Commonwealth Trading Bank and the Commonwealth Savings Bank, which are operated as separate institutions, are not included (see § 1, para. 6 (ii) and § 2, para. 7 (ii) following):—

# COMMONWEALTH BANK OF AUSTRALIA: LIABILITIES AND ASSETS, 30th JUNE, 1957. (£'000.)

	(2	000.7				
Item.	Central Banking Business.	Note Issue Depart- ment.	Rural Credits Depart- ment.	Mortgage Bank Depart- ment.	Industrial Finance Depart- ment.	Total.(a)
	Liai	BILITIES.				
Capital	4,000 13,720	::	2,714 1,124	5,428 614	5,429 2,916	17,571 18,374
Special Reserve—Premium on gold sold	::	4,755 380,882	123			4,755 123 380,882
Special Accounts of Trading Banks Other deposits of Trading Banks Other (including provision for con-	340,334 31,196			::	.:	340,334 31,196
tingencies)	224,252	9,540	38,329	778	22,033	259,569
Total Liabilities	613,502	395,177	42,290	6,820	30,378	1,052,804
	Α	SSETS.				
Gold and balances held abroad (including money at short call)  Australian notes and coin and cash	327,421	137,427				464,848
balances Cheques and bills of other banks Commonwealth Government securities (including Commonwealth Treasury	2,153 12,795	! II	.:	89	303	2,545 12,795
Bills)	162,788	257,693		1,381	3,620	425,482
authorities	48,668					48,668
transit	9,547					9,54
written off Loans, advances, bills discounted, and	579			!		579
other assets (after deducting debts considered bad or doubtful)	49,551	57	42,290	5,350	26,455	88,340
Total Assets	613,502	395,177	42,290	6,820	30,378	1,052,804

<sup>(</sup>a) Inter-departmental accounts totalling £35,363,000 have been offset in the combined figures.

## COMMONWEALTH BANK OF AUSTRALIA: NET PROFITS. (£'000.)

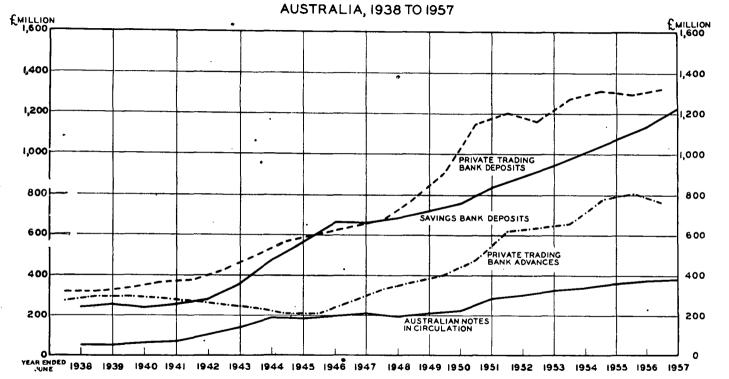
Year ended 30th June—	General Bank Depart- ment.	Central Banking Business.	Note Issue Depart- ment.	General Banking Division, (a) (b)	Rural Credits Depart- ment.	Mortgage Bank Depart- ment. (c)	Industrial Finance Department. (d)	Total.
1939	356		767	1	32			1,155
1953 1954 1955 1956		2,892 3,918 4,518 6,561 8,741	5,361 6,207 6,017 8,366 10,053	457	160 171 192 220 195	52 59 65 75 95	292 346 398 416 386	9,214 10,701 11,190 15,638 19,470

<sup>(</sup>a) Created 21st August, 1945. Previously combined under General Bank Department. (b) From 3rd December, 1953 business transferred to Commonwealth Trading Bank. (c) Commenced business 27th September, 1943. (d) Commenced business 2nd January, 1946.

<sup>(</sup>xi) Profits. Net profits of the various Departments of the Commonwealth Bank for the years ended 30th June, 1939 and 1953 to 1957, were as follows:—

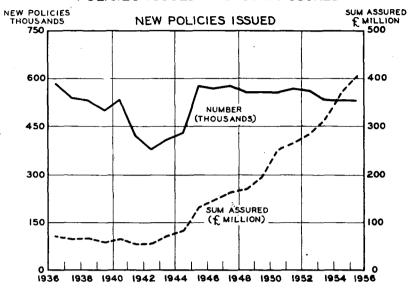
#### 73

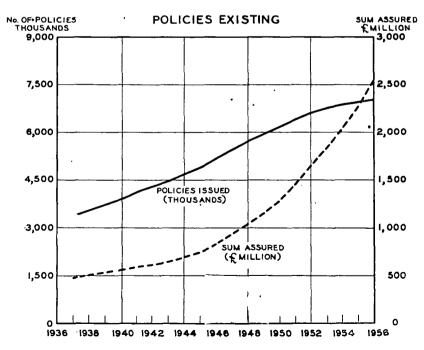
### BANK DEPOSITS AND ADVANCES AND NOTES IN CIRCULATION



# LIFE ASSURANCE: AUSTRALIA 1937 TO 1956

#### POLICIES ISSUED AND SUM ASSURED





The distribution of these profits for the years ended 30th June, 1953 to 1957 is given in the following table:—

### COMMONWEALTH BANK OF AUSTRALIA: DISTRIBUTION OF PROFITS. (£'000.)

То—	1953.	1954.	1955.	1956.	1957.
National Debt Sinking Fund	1,675	1,959	2,259	3,280	4,371
Commonwealth Consolidated Revenue Fund	4,861	5,707	5,517	7,866	10,054
Commonwealth Trading Bank		206	206	206	
Capital Account	••	285	286	286	• •
Fund	946	1,459	1,759	2,780	4,370
General Banking Division-			1		
Capital Account	286		]		
Reserve Fund	229	1	1		
Rural Credits Department-		1	- 1		
Capital Account	143	143	142	143	
Reserve Fund	80	85	96	110	97
Development Fund	80	86	96	110	97
Mortgage Bank Department—	<b>†</b>		1	,	
Capital Account	286	286	286	286	
Reserve Fund	51	59	65	75 -	95
Industrial Finance Depart-	;	į	-		
ment	1	-	1		
Capital Account	285	286	286	286	
Reserve Fund	292	346	398	416	386
Total	9,214	10,701	11,190	15,638	19,470

(xii) Central Banking Business—Average Liabilities and Assets. The average liabilities and assets of the Central Banking Business and Note Issue Department of the Commonwealth Bank for the years ended June, 1953 to 1957, are shown in the two tables which follow.

# COMMONWEALTH BANK OF AUSTRALIA: CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE LIABILITIES. (£'000.)

_		 		(2000.)				
Year ended June-		Capital and Reserve Funds.	Notes on Issue.	Special Accounts of Trading Banks.	Other Deposits of Trading Banks.	Other Lia- bilities.	Total Lia- bilities.	
1953		 	11,023	318,192	212,890	45,447	(a)287,361	874.913
1954		 	11,906	338,223	306,820	41,731	(a)283,397	982,077
1955		 	13,279	357,023	306,286	36,795	243,468	956,851
1956		 	14,945	374,096	272,841	35,630	208,717	906,229
1957		 ٠. ١	17,559	383,214	289,444	31,345	205,917	927,479

(a) Includes special deposit of General Banking Division 1952-53, £21,731,000; 1953-54, £14,265,000.

# COMMONWEALTH BANK OF AUSTRALIA: CENTRAL BANKING BUSINESS (INCLUDING NOTE ISSUE DEPARTMENT)—AVERAGE ASSETS. (£'000.)

1	Year ended June—		_	Gold and Balances held Abroad.	Aus- tralian Coin.	Cheques and Bills of other Banks.	Govern- ment and other Securities (including Common- wealth Treasury Bills).		Other Assets.	Total Assets.
1953 1954 1955 1956 1957		•••		363,576 512,615 415,896 298,885 349,663	2,538 2,105 2,380 2,364 1,892	6,595 6,895 7,009 6,505 5,360	434,771 407,979 459,839 515,716 508,841	130 2,514 3,488 3,746 3,805	67,303 49,969 68,239 79,013 57,918	874,913 982,077 956,851 906,229 927,479

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6. Commonwealth Trading Bank of Australia .-- (i) General. The Commonwealth Trading Bank was established by the Commonwealth Bank Act, 1953, and on 3rd December. 1953, took over the business of the General Banking Division of the Commonwealth Bank. The Commonwealth Trading Bank is a body corporate with its own General Manager who is appointed by the Governor-General on the recommendation of the Commonwealth Bank Board for a term of seven years. The General Manager, under the Governor of the Commonwealth Bank, is responsible for the administration of the Commonwealth Trading Bank in accordance with policy determined by the Commonwealth Bank Board. Under the Banking Act 1945-1953, the Commonwealth Trading Bank is subject to the same central banking controls as the private trading banks and is required to maintain a Special Account with the Commonwealth Bank on the same basis as those of the private trading banks. The capital of the Commonwealth Trading Bank is the total of the capital of the General Banking Division of the Commonwealth Bank immediately before 3rd December, 1953, and such other sums as are transferred from the Commonwealth Trading Bank Reserve Fund, or from the profits of the Central Banking Business and the Note Issue Department of the Commonwealth Bank. The net profits of the Commonwealth Trading Bank are divided as follows:—(a) one-half placed to the credit of the Commonwealth Trading Bank Reserve Fund, and (b) one-half paid into the National Debt Sinking

(ii) Liabilities and Assets. The liabilities and assets of the Commonwealth Trading Bank at 30th June, 1956 and 1957 are shown in the following table:—

COMMONWEALTH TRADING BANK OF AUSTRALIA: LIABILITIES AND ASSETS, 30th JUNE. (£'000.)

	,	<del>,                                    </del>		,	`
Liabilities.	1956.	1957.	Assets.	1956.	1957.
Capital	5,429	5,429	Coin, bullion, notes and	12.010	16.060
Reserve Fund Deposits, bills payable	2,435	2,735	cash at bankers Money at short call in	13,919	16,069
and other liabilities (including provision			London Special Account with	1,875	1,875
for contingencies) Balances due to other	221,713	243,253	Commonwealth Bank Cheques and bills of	31,150	39,150
banks	481	646	other banks and balances with and		
			due from other banks	2,161	3,064
			Treasury bills	7,000	8,000
			Public securities of Aus-	25 720	20 615
•			tralian Governments Bills receivable and	35,720	38,615
			remittances in transit	25,376	31,488
	1		Bank premises (at cost	, ,	
	1		less amounts written		
			off)	3,831	4,051
	1		Loans, advances and bills discounted (after		
			deducting provision	-	
			for debts considered		
	1		bad or doubtful)	105,217	106,252
			Other assets	3,809	3,499
Total	230,058	252,063	Total	230,058	252,063

<sup>(</sup>iii) Average Liabilities and Assets within Australia. The average liabilities and assets within Australia of the General Banking Division of the Commonwealth Bank for the year ended 30th June, 1953, and of the Commonwealth Trading Bank for the years ended 30th June, 1954 to 1957, are shown in the tables below.

# COMMONWEALTH TRADING BANK OF AUSTRALIA(a)—AVERAGE LIABILITIES WITHIN AUSTRALIA.(b) (£'000.)

				Deposits.			Bills payable	
	Year end	ed June—	Not Bearing Interest.	Bearing Interest.	Total.	Balances due to other Banks.	and all other Lia-bilities to the Public.	Total Lia- bilities.
1953 1954 1955 1956 1957		  	 96,664 120,885 130,909 135,617 140,125	22,817 35,352 43,549 46,243 44,423	119,481 156,237 174,458 181,860 184,548	3,820 2,034 309 314 389	8,569 11,766 16,148 17,496 18,160	131,870 170,037 190,915 199,670 203,097

<sup>(</sup>a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953. Territories of Papua and New Guinea.

(b) Includes

# COMMONWEALTH TRADING BANK OF AUSTRALIA(a)—AVERAGE ASSETS WITHIN AUSTRALIA.(b)

(£'000.)

Year ended June—	Cash and Cash	Special Account with Com-	Balances with other	and Gover	nwealth State nment rities.	Other Securi-	Loans, Ad- vances, and Bills	All other	Total
		mon- wealth Bar	Banks.	Trea- sury Bills.	Other.	ties.	Dis- counted.	Assets.	Assets.
1953	8,784 11,000 10,456 10,213 9,988	(d)21,731 (e)34,800 36,061 33,155 34,603	787 870	17,239 23,404 12,260 6,333 4,059	25,840 29,924 38,165 38,599 35,714	92 1,284 1,606 1,824 2,654	59,492 69,204 89,138 103,894 106,480	3,984 4,360 5,675 6,815 7,305	138,762 174,763 194,231 202,071 202,272

<sup>(</sup>a) General Banking Division of Commonwealth Bank prior to 3rd December, 1953. (b) Includes Territories of Papua and New Guinea. (c) Includes notes, cheques and bills of other banks. (d) Special deposit of General Banking Division. (e) Includes special deposit of General Banking Division. £14,265,000.

- (iv) Profits. The net profits (after writing off bank premises, £135,060 in 1956 and £158,210 in 1957) of the Commonwealth Trading Bank for the years ended 30th June, 1956 and 1957, were £550,251 and £600,888 respectively. These net profits were distributed one half to the National Debt Sinking Fund and one half to the Commonwealth Trading Bank Reserve Fund.
- 7. Private Trading Banks.—(i) Average Liabilities and Assets in Australia. The average liabilities and assets within Australia of the Private Trading Banks (see p. 726 for list of banks) for the years ended June, 1939 and 1953 to 1957, are shown in the following tables:—

PRIVATE TRADING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA. (£'000.)

					. 000.)				
Voca and	Year ended June—			Deposits.		Notes in	Balances due to	j and all	Total Lia-
rear end	ed June—	or Deposit Stock.	Not Bearing Interest.	Bearing Interest.	Total. Circulation. Other Banks. Other Liabilities to the Public.		bilities.		
1939		2,644	a 118,868	198,793	317,661	167	921	(b) 3,005	324,398
1953 1954 1955 1956 1957	  	226 14 9 6 6	943,747 1,035,707 1,047,677 1,032,332 1,028,509	218,699 239,774 262,986 263,107 299,499	1,162,446 1,275,481 1,310,663 1,295,439 1,328,008	158 158 158 158 158	10,628 3,360 3,282 6,528 7,343	14,247 14,980 16,432 16,913 18,685	1,187,705 1,293,993 1,330.544 1,319,044 1,354,200

<sup>(</sup>a) Includes other Liabilities.

<sup>(</sup>b) Excludes other Liabilities.

# PRIVATE TRADING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA. (£'000.)

Year ended June—		Cash and Cash Bal- ances.	Special Account with Commonwealth Bank.  Balances with Other Banks.  (a)		Commonwealth and State Government Securities.  Treassury Other. Bills.		Other Securi- ties. (b)	Loans, Ad- vances and Bills Dis- counted.	All other Assets.	Total Assets.
1939	•••	33,597		3,938	21,533	(c)20,477	(d)	e 288,109	(f)9,421	377,075
1953 1954 1955 1956 1957	•••	74,712 71,244 66,908 66,883 63,661	211,737 285,226 269,117 238,803 254,052	22,580 17,346 18,436 19,672 20,239	123,059 99,368 51,602 50,015 51,162	84,040 127,616 120,239 113,121 151,298	6,278 5,113 6,695	638,092 658,534 776,762 804,392 762,638	29,693 36,549 48,925 56,042 58,363	1,188,699 1,302,161 1,357,102 1,355,623 1,369,359

(a) Includes notes, cheques and bills of other banks. (b) Includes Local and Semi-Governmental ecurities. (c) Includes municipal securities. (d) Included with loans, advances and bills discounted. (e) See footnotes (d) and (f). (f) Landed and house property only. Other assets included with loans, advances and bills discounted.

(ii) Ratios of Assets and Liabilities to Total Deposits. The following table shows, for the Private Trading Banks, the ratios of certain assets and liabilities to total deposits for the years ended June, 1939 and 1953 to 1957. The ratios are based on the average liabilities and assets for the years shown.

### PRIVATE TRADING BANKS: RATIOS OF AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS.

(Per cent.)

Year ended June—		Cash and	Commonwealth and State Government Securities.		Special Account with	Advances.	Deposits.		
Year	Year ended June—		Cash Balances.	Treasury Bills.	Other.	Common- wealth Bank.	Advances.	Not Bearing Interest.	Bearing Interest.
1939		•••	10.6	6.8	(a) 6.5		90.7	37.4	62.6
1953 1954 1955 1956 1957		  	6.4 5.6 5.1 5.2 4.8	10.6 7.8 3.9 3.9 3.9	7.2 10.0 9.2 8.7	18.2 22.4 20.5 18.4 19.1	54.9 51.6 59.3 62.1 57.4	81.2 81.2 79.9 79.7 77.5	18.8 18.8 20.1 20.3 22.5

<sup>(</sup>a) Includes municipal securities.

(iii) Proportion of Non-Interest Bearing to Total Deposits. The following table shows, for each State, the proportion of non-interest bearing deposits to total deposits with the Private Trading Banks for each of the years ended June, 1939 and 1953 to 1957. The ratios are based on the average deposits for the years shown.

# PRIVATE TRADING BANKS: PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS.

(Per cent.)

Year end	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
1939	 43.5	30.3	45.4	26.1	45.7	36.5	61.1	23.2	37.4
1953 1954 1955 1956 1957	 84.3 83.9 81.9 81.6 79.1	79.2 79.6 78.1 78.6 76.5	82.5 82.7 82.6 81.3 80.1	72.4 72.3 71.6 71.2 69.4	84.4 83.1 84.1 82.3 77.6	78.5 79.7 80.1 79.8 79.7	87.0 89.5 88.7 86.5 82.6	82.6 88.2 89.6 88.1 79.8	81.2 81.2 79.9 79.7 77.5

<sup>(</sup>a) Includes Papua and New Guinea for 1953 and following years.

(iv) Ratio of Advances to Total Deposits. The ratio of advances to total deposits, for each State for the years ended June, 1939 and 1953 to 1957, is shown in the following table. The ratios are based on the averages of deposits and advances for the years shown.

PRIVATE TRADING BANKS: RATIO OF ADVANCES TO TOTAL DEPOSITS.

(Per cent.)

Year end June-		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Total.
1939		104.5	71.6	99.2	77.6	155.5	57.0	24.5	37.7	90.7
1953 1954		60.2 56.4	52.8 47.8	63.7	35.2 32.2	46.1 52.7	54.0 57.3	24.0 30.0	27.6 35.6	54.9 51.6
1955	::	66.1 71.6	51.8 53.4	68.5 67.8	37.2 39.0	71.6	61.9 60.1	55.8 59.5	49.5 43.9	59.3 62.1
1957	• • •	67.1	48.9	63.0	36.1	68.7	54.7	47.4	40.3	57.4

(a) Includes Papua and New Guinea for 1953 and following years.

8. Other Cheque-paying Banks.—Average Liabilities and Assets within Australia. The average liabilities and assets within Australia of "Other Cheque-paying Banks" (see p. 726 for list of these banks) for the years ended June, 1953 to 1957, are shown in the following tables.

## OTHER CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA.

(£'000.)

Year ended June—	Inter- minable Deposits		Deposits.		Notes in	Bal- ances	Bills payable and all	Total
Year ended June-	or Deposit Stock.(a)	Not Bearing Interest.	Bearing Interest.	Total.	culation.	due to other Banks.	other Liabilities to the Public.	Lia- bilities.
1953	19.286	35.848	15,302	51,150	···	622	525	71,583
1954	19,734	39,408	15,309	54,717		664	454	75,569
1955	20,520	41,415	16,069	57,484		554	461	79,019
1956	20,569	39,726	16,359	56,085		1,536	484	78,674
1957!	20,472	41,317	16.946 l	58,263		1,372	586	80,693

(a) Inscribed stock and debentures, Rural Bank of New South Wales and State Bank of South Australia.

## OTHER CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA. (£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks.	and Gover	onwealth State nment rities. Other.	Other Securi- ties. (b)	Loans, Advances and Bills Discounted.	All other Assets. (c)	Totai Assets.
1953 1954 1955 1957	4,640 5,091 4,586 3,992 3,857	1,153 1,090 1,108 883 788	2,176 2,409 2,198 1,588 2,267	3,911 7,326 5,641 4,119 3,906	13,141 13,240 13,295 13,816 15,068	882 1,169 1,378 817 825	64,731 65,982 72,189 75,825 77,697	3,792 3,815 4,923 5,332 5,599	94,426 100,122 105,318 106,372 110,007

(a) Includes notes, cheques and bills of other banks. (b) Includes Local and Semi-Governmental Securities. (c) Includes The Rural and Industries Bank of Western Australia and State Bank of South Australia accounts with State Treasuries.

9. All Cheque-paying Banks.—Average Liabilities and Assets within Australia. Particulars of the average liabilities and assets within Australia of all cheque-paying banks in Australia for the years ended 30th June, 1953 to 1957, are shown in the following tables. The series includes the Commonwealth Trading Bank (General Banking Division of the Commonwealth Bank to 3rd December, 1953), but the Central Banking business of the Commonwealth Bank is excluded.

# ALL CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA.(a) (£'000.)

	Inter- minable		Deposits.		Notes in	Bal-	Bills payable and all	Total	
Year ended June—	Deposits or Deposit Stock.	Not Bearing Interest.	Bearing Interest.	Total.	Cir- culation.	ances due to other Banks.	other liabilities to the Public.	Lia- bilities.	
1953	19,512	1.076.259	256.818	1,333,077	158	15,070	23.341	1,391,158	
1954	19,748	1,196,000	290,435	1.486.435		6.058	27,200	1,539,599	
1955	20,529	1,220,001	322,604	1,542,605		4,145	33,041	1,600,478	
1956	20,575	1,207,675		1,533,384		8,378	34,893	1,597,388	
<u> 1957</u>	20,478	1,209,951	360,868	1,570,819	158	9,104	37,431	1,637,990	

(a) Includes Territories of Papua and New Guinea.

# ALL CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA.(a) (£'000.)

Year ended June—	Cash and Cash Bal- ances.	Special Account with Com- mon- wealth Bank.	Bal- ances with other Banks.	and Gover	onwealth State Inment rities.	Other Securi- ties. (b)	Loans, Ad- vances and Bills Dis- counted.	All Other Assets.	Total Assets.
1953 1954 1955 1956	88,136 87,335 81,950 81,088 77,506	234,621 321,116 306,286 272,841 289,443	26,356 20,542 21,504 22,498 23,975	144,209 130,098 69,503 60,467 59,127	123,021 170,780 171,699 165,536 202,080	5,760 8,731 8,097 9,336 11,425	762,315 793,720 938,089 984,111 946,815	37,469 44,724 59,523 68,189 71,267	1,421,887 1,577,046 1,656,651 1,664,066 1,681,638

<sup>(</sup>a) Includes Territories of Papua and New Guinea. securities.

10. Commonwealth and Private Trading Banks (Major Trading Banks).—(i) Selected Average Assets and Liabilities within Australia. In the following tables, particulars of selected average assets and liabilities of the Commonwealth and Private Trading Banks are shown for each of the years ended June 1953 to 1957.

# COMMONWEALTH AND PRIVATE TRADING BANKS: SELECTED AVERAGE ASSETS AND LIABILITIES WITHIN AUSTRALIA.(a)

(£'000.)

Year Ended June-		Cash and Cash	Commonw State Gov Secur	ernment	Special Account with		Total Deposits.		
Year	Ended	I June	Balances.	Treasury Bills.	Other.	Common- wealth Bank.	Advances.	Not Bearing Interest.	Bearing Interest.
1953 1954 1955 1956 1957		::	83,496 82,244 77,364 77,096 73,649	140,298 122,772 63,862 56,348 55,221	109,880 157,540 158,404 151,720 187,012	233,478 320,026 305,178 271,958 288,655	697,584 727,738 865,900 908,286 869,118	1,040,411 1,156,592 1,178,586 1,167,949 1,168,634	241,516 275,126 306,535 309,350 343,922

<sup>(</sup>a) Includes Territories of Papua and New Guinea. Commonwealth Bank on current account.

(ii) Ratios of Selected Assets within Australia to Total Deposits. In the table below, ratios of selected assets to deposits are given for each of the years ended June, 1953 to 1957.

<sup>(</sup>b) Includes Local and Semi-Governmental

<sup>(</sup>b) Coin, bullion, notes and cash with

## COMMONWEALTH AND PRIVATE TRADING BANKS: RATIOS OF SELECTED ASSETS WITHIN AUSTRALIA(a) TO TOTAL DEPOSITS.(b)

#### (Per Cent.)

Year Ended June—		Cash and	Commony State Go Secur	vernment	Special Acount with	Advances.	Total Deposits.		
rear End	ied June—	Balances.	Treasury Bills.	Other.	Common- wealth Bank.	Advances.	Not Bearing Interest.	Bearing Interest.	
1953 1954 1955 1956 1957	::	6.5 5.7 5.2 5.2 4.8	10.9 8.6 4.3 3.8 3.7	8.6 11.0 10.7 10.3 12.4	18.2 22.4 20.6 18.4 19.1	54.4 50.8 58.3 61.5 57.5	81.2 80.8 79.4 79.1 77.3	18.8 19.2 20.6 20.9 22.7	

(a) Includes Territories of Papua and New Guinea.
(b) Based on averages of assets and liabilities for the years shown.
(c) Coin, bullion, notes and cash with Commonwealth Bank on current account.

11. Classification of Advances within Australia-Commonwealth Trading Bank of Australia and Private Trading Banks (Major Trading Banks) .- (i) States, June, 1957. A classification of bank advances made by the Commonwealth and Private Trading Banks at the end of June, 1957, is shown in the following table. In this table, advances to resident borrowers and non-resident borrowers are shown separately. Resident borrowers cover institutions (including branches of oversea institutions) engaged in business in Australia and persons permanently residing in Australia. Non-resident borrowers cover all other persons and institutions incorporated abroad, which though represented, do not carry on business in Australia. Advances to resident borrowers have been classified as business advances, advances to public authorities, personal advances and advances to non-profit organizations. Business advances have been further classified to the main industry of the borrower and include advances to partnerships, companies and other institutions engaged in business in Australia, advances to persons actively engaged in business on their own behalf if the advance is mainly for business purposes, advances to mutual, co-operative and benefit societies which distribute their profits or surpluses (if any) to members by way of dividends, rebates on charges for goods and services or increased benefits. Advances to public authorities cover advances to local and semi-governmental authorities including separately constituted government business undertakings but not Commonwealth or State Governments. Personal advances cover advances to persons for purposes other than carrying on a business. Advances to non-profit organizations cover advances to organizations which are not carried on for the purpose of making a profit or gain to their individual members, any income of the organization being used for the purposes of the organization or for the benefit of the community.

For the June, 1957, survey, the classification used in previous surveys was revised and because of changes in definition and regrouping of some classes, a complete review of the classification of all accounts was necessary. The main changes made in the classification were (a) the provision of separate classes for advances to non-residents and non-profit organizations and (b) changes in the definition of and grouping of several industrial classes. The main changes under (b) were:—

- (i) Manufacturing.—This class now includes motor repairs previously included in the class, Transport, Storage and Communication.
- (ii) Finance.—This class was previously Finance and Proper.y. The pr vious sub-class (a), Builders and Contractors, has been transferred to a new class 6, Building and Construction. The sub-class (b), Building Investment Companies and Housing Societies, has been restricted to Building and Housing Societies and the sub-class (c), Other (Banking and Insurance etc.), has been restricted to financial institutions only. Business services (e.g., Stock Brokers, Estate Agencies, etc.) previously included in this sub-class have been transferred to the class 7, Other Businesses. Holding companies also previously included are now classified to the main industry of their subsidiary companies.
- (iii) Commerce.—The sub-class, Retail Trade, now includes motor garages and service stations previously included in the class, Transport, Storage and Communication.

These revisions should be noted when comparing the figures for June 1957 with those for earlier periods.

# COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a)—STATES, END OF JUNE, 1957.

(£'000.)

Classification.	N.S.W. (b)	Vic.	Q'land (a)	S. Aust. (c)	W. Aust.	Tas.	Total Aust. (a)	Pro- portion of Total (Per cent.)
	^		dent Bori				ъ.	
A. Business Advance	ES CLAS	SIFIED A	CCORDIN	G TO N	AAIN IND	OUSTRY C	F BORR	OWER.
<ul> <li>Agriculture, Dairying and Grazing</li> <li>Manufacturing</li> </ul>	79,345 81,437	39,047 59,605	50,126 22,272	11,279 9,006	16,522 6,834	3,708 3,651	200,027 182,896	22.7 20.7
Transport, Storage and Communication Finance—	4,003	3,922	1,792	944	1,094	644	12,399	1.4
(a) Building and Hous-			<u> </u>					i I
ing Societies	12,505	10,521 8,843	890	309	141	254 660	25,360 27,172	2.9 3.1
(b) Other Total Class 4	12,688 25,193	19,364	$\frac{2,182}{3,072}$	1,275	1,524	914	52,532	6.0
5. Commerce —	25,175	17,507	3,072		1,005		02,002	
(a) Retail Trade (b) Wholesale Trade	33,517	24,298	13,302	5,979 5,825	7,435 4,462	2,991	87,522 99,939	9.9
Total Class 5	54,579 88,096	28,030 52,328	4,573 17,875	11,804	11,897	2,470 5,461	187,461	$ {21.2}^{11.3}$
. Building and Construc-	00,000			11,001		3,101		
tion	8,936 18,836	5,674 16,790	2,642 11,385	1,167 2,930	1,515 4,068	731 1,571	20,665 55,826	2.3 6.3
Unclassified	2,125	1,491	483	146	379	301	4,413	0.5
Total Business			100 647	30.000	42.074	76.001	715 654	01.1
Advances	307,971	198,221	109,647	38,860	43,974	16,981	715,654	81.1
<del>- 11:                                  </del>	B. At	VANCES	то Рив	LIC AUT	HORITIES.		,	<del>,</del>
Public Authorities (in- cluding Local Govern-	!			]	1		ļ	}
ment and Semi-Govern- mental Bodies)	6,198	7,251	1,859	260	258	752	16,578	1.5
C. Personal Advan	NCES CL	ASSIFIED	ACCORT	DING TO	Main	Purpose	OF AD	VANCE.
<ol> <li>Building or purchasing own home (Indivi- duals)</li> </ol>	40,522	22,388	10,746	3,567	7,982	1,617	86,822	9.9
<ol><li>All other (including Personal Loans)</li></ol>	19,928	16,321	5 765	2,604	3,862	1,224	49,704	5.6
Total	60,450	38,709	5,765 16,511	$\frac{2,004}{6,171}$	11,844	2,841	136,526	
							100,020	
D	). ADVAN	ICES TO	NON-PR	OFIT OR	GANIZATI(	ONS.		
Total	5,467	1	1	1	· · · · · · · · · · · · · · · · · · ·	ONS. 311	13,424	1.5
	5,467	3,539	2,271	513	<del></del>	311	13,424	1.5
Total	5,467	3,539	2,271	513	3   1,323 BORROWE	311 RS.		1
	5,467	3,539	2,271	513	3   1,323 BORROWE	311	832,182	1
Total	5,467 TOTAL A	3,539 ADVANCI 247,720 Non-	2,271 ES TO RE 130,288 Resident	sident E  45,804  Borrowe	3 1,323 BORROWEI	311 RS. 20,885		1
Total	5,467 TOTAL A	3,539 ADVANCI 247,720 Non-	2,271 ES TO RE 130,288 Resident	SIDENT E 45,804  Borrowe ESIDENT	3 1,323 BORROWEI 57,399	311 RS. 20,885		100.1
Total	5,467 TOTAL A 380,086 ADV	3,539 ADVANCE 247,720 Non- ANCES TO	2,271 ES TO RE 130,288 Resident Non-R	SIDENT E  45,804  Borrowe  ESIDENT	3 1,323  BORROWE  57,399  775.  BORROWI	311 RS. 20,885	882,182	100.0
Total  Total	5,467 TOTAL A 380,086 ADV	3,539 ADVANCE 247,720 Non- ANCES TO	2,271  2,271  S TO RE  130,288  Resident  NON-R  19	SIDENT E  45,804  Borrowe ESIDENT  1  Non-Re	BORROWE 57,399 19 ESIDENT E	311 RS. 20,885	882,182	100.c
Total  Total  Total  Total ADV	380,086  ADV 97  ANCES TO 380,183	3,539  ADVANCE  247,720  Non- ANCES TO  39  RESIDE  247,759	2,271 ES TO RE I 130,288 Resident D NON-R I9 ENT AND   130,307	SIDENT E 45,804 Borrowe ESIDENT I NON-RE 45,805	BORROWE 57,399 19 ESIDENT E	311 RS. 20,885 ERS 1 BORROWE 20,886	832,182   176   882,358	100.c

<sup>(</sup>ii) Australia, June, 1954 to June, 1957. The following table provides a classification of advances within Australia (including Papua and New Guinea) as at the end of June, 1954 to 1957.

# COMMONWEALTH TRADING BANK OF AUSTRALIA AND PRIVATE TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a) AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL.

					of June—			
Classification.	195	54. 	19	55.	19:	56.	19:	57.
	Amount (£'000).	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent.	Amount (£'000.)	Per cent
		Re.	sident Boi	rrowers.				
A. Business Advances	CLASSIFI					TRY OF	Borrowi	ER.
. Agriculture, Dairying and Grazing	192 340	24.3	220,879	23.8	213.013	23.7	200,027	22.
. Manufacturing	192,340 139,314	17.6	190,728	20.6	213,013 185,117	20.6	182,896	20
Communication	16,690	2.1	17,244	1.9	17,267	1.9	12,399	1 .
(a) Building and Housing Societies	24,418	3.1	25,993	2.8	26,208	2.9	25,360	2.
(b) Other  Total Class 4	40,815 65,233	5.2 8.3	46,272 72,265	7.8	46,217 72,425	5.2 8.1	27,172 52,532	<u>3.</u>
. Commerce—							1 1	
<ul><li>(a) Retail Trade</li><li>(b) Wholesale Trade b</li></ul>	74,861 57,678	9.4 7.3	86,962 73,827	9.4 7.9	86,310 72,062	9.6 8.1	87,522 99,939	9. 11.
Total Class 5 Building and Construc-	132,539	16.7	160,789	17.3	158,372	17.7	187,461	21.
tion	19,242	2.4	22,270	2.4	20,147	2.2	20,665	2.
. Other Businesses	52,460 9,874	6.6 1.2	70,813 (c)	7.6 (c)	70,307 (c)	7.9 (c)	55,826 4,413	6. 0.
Total Business Advances	627,692	79.2	754,988	81.4	736,648	82.1	715,654	81.
	R. Anv	ANCES	TO PUBLI	c Aim	ORITIES			****
ublic Authorities (incl.	2. 1.2.		i i		i i		1 1	
Local Government and Semi-Governmental Bo-			]					
dies)	9,871	1.2	11,378	1.2	18,096	2.0	16,578	1.
C. Personal Adva	nces Cla	SSIFIED	Accordi	NG TO	Main Pur	POSE O	ADVANC	E.
Building or purchasing	1		<u> </u>		1		<u> </u>	
own home (Individuals)	102,872	13.0	105,676	11.4	94,571	10.6	86,822	9.
All other (including personal loans)	52,083	6.6	55,399	6.0	47,910	5.3	49,704	5.
Total	154,955		161,075	17.4	142,481	15.9	136,526	15.
D	ADVANO	es to	Non-Pro	FIT ORG	SANIZATION	<b>1</b> S.		
Total	(d)	(d)	(d)	(d)	(d)	(d)	13,424	1.
			!		<u> </u>		<u> </u>	
7	TOTAL AD	VANCES	TO RESI	DENT B	ORROWERS		,	
Total	(d)	(d)	(d)	(d)	(d)	(d)	882.182	100.
		Non-R	esident B	orrowers	s.			
	Advance	s то N	on-Residi	ENT BOI	RROWERS.			
Total	(d)	(d)	(d)	(d)	(d)	(d)	176	(e)
TOTAL ADV	ANCES TO	RESID	ENT AND	Non-Re	SIDENT BO	RROWE	RS.	
Grand Total	792,518	100.0	927,441	100.0	897,225	100.0	882,358	100.

separately. (e) Less than 0.1 per cent.

Note:—The figures for June, 1957, for some classes are not strictly comparable with those for earlier periods. See para. 11 (i), page 739.

12. Interest on Deposits: Rates—Cheque-paying Banks.—Particulars of interest rates for fixed deposits since 1952 are shown hereunder.

#### BANK FIXED DEPOSIT RATES: AUSTRALIA.

(Per cent. per annum.)

				Deposits for—						
Date from w	hich Op	erativ <b>e</b> .		Three Months.	Six Months.	Twelve Months.	Twenty-four Months.			
29th July, 1952				1	11	11/2	(a) $1\frac{3}{4}$			
1st January, 1955				11/4	1 <del>1</del>	13	2			
15th March, 1956				2 <del>1</del>	2 <del>1</del>	23	3			
4th December, 1956				2 <del>1</del>	2 <del>1</del>	23	31/2			

(a) On first £10,000; rate on amounts in excess of £10,000 was 1½ per cent.

13. Clearing House Returns—Average Weekly Clearings.—The average weekly clearings in each capital city for the years ended June, 1939 and 1953 to 1957 are shown in the following table.

BANK CLEARINGS(a): AVERAGE WEEKLY CLEARINGS. (£'000.)

	r ended	Sydney.	Melbourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Total.
1939		17,832	15,415	4,212	2,953	2,055	623	43,090
1953		88,557	78,965	17,886	16,794	11,441	2,985	216,628
1954		97,191	87,505	20,736	18,027	13,249	3,393	240,101
1955		103,849	95,245	22,072	19,681	13,684	3,670	258,201
1956		109,975	101,153	22,488	21,021	14,089	3,962	272,688
1957		119,381	107,563	25,571	23,042	14,927	4,237	294,721

(a) Excludes transactions connected with the issue and redemption of Treasury Bills.

14. Debits to Customers' Accounts—All Cheque-paying Banks.—Statistics of debits to customers' accounts have been collected since September, 1945. Generally they represent the total of all cheques drawn by the customers of the banks. In the following table, the average weekly debits to customers' accounts of all cheque-paying banks are shown for each State for the years ended June, 1953 to 1957. In this table, debits to accounts of Australian Governments in capital cities are excluded, as they are subject to abnormal influences and are not uniform for each State.

# AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS: ALL CHEQUE-PAYING BANKS.

(Excluding Debits to Australian Government Accounts in Capital Cities.)
(£'000.)

Year er	nded June	_	N.S.W	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	A.C.T.	Total.
1953 1954		•••	151,938 171,709	131,998	43,796 51.032	30,063 32,802	22,091 25,339	8,850 9,938	580 775	389,316 446,480
1955	::		187,471	176,146	53,873	36,288	26,247	10,716	821	491,562
1956 1957	• •		200,852	185,369 195,455	56,028 62,743	39,564 42,685	26,918 28,571	11,615	1,025	521,371 562,660

15. Rates of Exchange.—(i) Oversea Exchange Rates. In the following table, the par of exchange (based on par values agreed with the International Monetary Fund) and average telegraphic transfer selling rates of exchange for Sydney on a number of oversea countries are shown. Generally, the averages, which are averages of daily quotations, are based on rates quoted by the Commonwealth Bank, but where these were not available rates issued by the Department of Customs and Excise have been used.

#### OVERSEA EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELE-GRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEA COUNTRIES.

Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1956-57.	Country.	Basis of Quotation.	Par of Ex- change.(a)	Selling Rate 1956-57.
Belgium Canada Ceylon Denmark Egypt Fiji Finland France French Oceania Germany, Fed. Rep. of Hong Kong India Indonesia Japan	Francs to £A.1. Dollars to £A.1. Pence A. to Rupee Kroner to £A.1. £A. to £F.100 Marks to £A.1. £Francs to £A.1. Francs to £A.1. Francs to £A.1. Pence A. to Dollar Pence A. to Rupee Rupiahs to £A.1. Yen to £A.1.	112.000 (b) 22.500 15.472 78.006 112.610 515.200 (b) (b) 9.408 18.750 22.500 (c) 806.400	110.830 2.143 22.797 15.340 77.490 113.000 509.090 780.330 138.610 9.286 18.802 22.719 24.701 791.990	Netherlands New Zealand New Zealand Norway Pakistan Portugal Singapore South Africa, Uniton of Sweden Switzerland United Kingdom United States of America U.S.S.R.	Guilders to £A.1 £A to £NZ.100 Kroner to £A.1 Pence A. to Rupee Escudos to £A.1 Pence A. to Dollar £A. to £SA.100 Kroner to £A.1 £A. to £Eng.100 Dollars to £A.1 B.A. to £Eng.100	8.512 (c) 16.000 22.500 (c) 35.000 125.000 11.588 (c) 125.000 2.240 (c)	8.439 124.538 15.810 22.719 63.789 35.276 125.788 11.452 9.712 125.500 2.220 8.924

<sup>(</sup>a) As at 30th June, 1956, established under International Monetary Fund Agreement.

(ii) Interstate Exchange Rates. Exchange rates between the capital cities and towns of each of the States and other States or parts thereof at 30th June, 1956, are shown below. Rates varied from 2s. per £100 between the nearer locations to 10s. per £100 between those more widely separated.

#### INTERSTATE BANK EXCHANGE RATES, 30th JUNE, 1957.(a)

(s. d. per £100.)

	And—								
Between—	New South Wales.	Victoria.	Brisbane and adjacent towns.	South Aust- ralia.	Perth and all but distant towns.	Tas- mania.	Aust. Cap. Terr.		
Sydney and New South Wales towns Melbourne and Victorian towns Brisbane and adjacent towns Adelaide and South Australian towns Perth and all but distant towns Hobart and Tasmanian towns Australian Capital Territory	2 6 2 6 5 0 7 6 5 0 2 0	2 6 5 0 2 6 5 0 2 6 2 0	2 6 5 0 7 6 10 0 7 6 2 6	5 0 2 6 7 6 2 6 5 0 5 0	7 6 5 0 10 0 2 6 7 6 7 6	5 0 2 6 7 6 5 0 7 6 5 0	2 0 2 0 2 6 5 0 7 6 5 0		

(a) Unchanged since 1st January, 1940.

There is no charge for transfers within a city or a town. In all States excepting Queensland and Western Australia, the exchange for transfers between towns in the same State is 2s. per £100. Queensland and Western Australia are divided into zones. The exchange rate for transfers between towns in the same zone is 2s. per £100, with higher rates for inter-zone transfers.

The exchange rate between Papua and New Guinea and the mainland is 10s. per £100 for all points.

<sup>(</sup>b) No par value

#### § 2. Savings Banks.

1. General.—The inauguration of savings banks in Australia dates from 1819, when a private savings bank was opened in Sydney. In 1832, the legislature created "The Savings Bank of New South Wales" under the control of trustees, and shortly after its establishment the funds of the private savings bank were transferred to the new institution. In the other States provision for placing deposits with savings banks dates from 1841 in Victoria; 1854 in Queensland; 1848 in South Australia; 1863 in Western Australia (a savings bank was opened in 1856 but was closed a year later); 1835 in Launceston; and 1845 in Hobart. These early banks functioned as trustee savings banks, but, with the exception of the Hobart and Launceston institutions, were later absorbed by, or amalgamated with, State government savings banks. The Commonwealth Savings Bank, established as a branch of the Commonwealth Bank in 1912 and separately constituted in 1928, absorbed the Tasmanian State Savings Bank in 1931.

Post Office savings banks were established in all States from 1864 onwards. These were separate government institutions except in South Australia, where the Post Office acted as agent for the savings bank. Since the federation of the Australian States in 1901, post offices have been controlled by the Commonwealth Government, but they continued to act as savings bank agencies for the State institutions until the establishment of the Commonwealth Bank in 1912. They now act as agents for the Commonwealth Savings Bank.

During 1956, four new savings banks, the Bank of New South Wales Savings Bank Ltd., the Australia and New Zealand Savings Bank Ltd., the C.B.C. Savings Bank Ltd., and The Rural and Industries Bank of Western Australia, were established. Three of these are associated with and operate from the same premises as existing private trading banks and the other is a division of a State bank—The Rural and Industries Bank of Western Australia. Savings banks operating at the end of 1957 were—the Commonwealth Savings Bank (in all States and Territories), the Bank of New South Wales Savings Bank Ltd. and the Australia and New Zealand Savings Bank Ltd. (in all States and Territories except South Australia and Tasmania), the C.B.C. Savings Bank Ltd. (in all States except South Australia and Tasmania, and in the Australian Capital Territory), The State Savings Bank of Victoria, The Savings Bank of South Australia, The Rural and Industries Bank of Western Australia, and the two trustee banks, The Launceston Bank for Savings and The Hobart Savings Bank.

The prime object of the foundation of savings banks in Australia was the encouragement of thrift, deposits of one shilling and upwards being accepted. Although depositors (other than non-profit organizations) may not operate on their accounts by means of cheques, they have practically all the other advantages of a current account and in addition receive interest on their minimum monthly balances. No charge is made by the banks for keeping the accounts.

Cheque facilities are available at most savings banks to non-profit organizations such as friendly, co-operative and charitable societies. As with other depositors, interest is allowed on the deposits of these organizations and no charge is made for keeping their accounts.

2. Branches and Agencies.—The number of branches and agencies in Australia of the various savings banks at the 30th June, 1957, are given in the following table.

ALL SAVINGS BANKS: NUMBER OF BRANCHES AND AGENCIES AT 30th JUNE, 1957.

Bank.		Branches.	Agencies.	
Commonwealth Savings Bank		[	544	5,586
Australia and New Zealand Savings Bank Ltd.		[	446	409
Bank of New South Wales Savings Bank Ltd.			617	213
C.B.C. Savings Bank Ltd.			337	79
The State Savings Bank of Victoria		/	280	559
The Savings Bank of South Australia			88	539
The Rural and Industries Bank of Western Aust			38	125
The Launceston Bank for Savings	• •		19	36
The Hobart Savings Bank	•••	]	20	13
Total			2,389	7,559

<sup>3.</sup> Number of Operative Accounts. The following table shows the number of operative savings bank accounts in existence at the end of June, 1956 and 1957. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

ALL SAVINGS BANKS: NUMBER OF OPERATIVE ACCOUNTS.(a)

e,	tate or Ten	ritory		At end of J	une.
	ate of Ter	mory.	 	1956.	1957.
New South Wales			 	2,461,962	2,608,653
Victoria			 	2,233,738	2,320,253
Queensland			 [	907,385	959,972
South Australia			 	822,150	839,075
Western Australia			 	446,419	473,548
Tasmania			 1	285,487	291,368
Northern Territory			 	10,549	11,643
Australian Capital T	erritory		 	21,271	23,233
Total			  -	7,188,961	7,527,745

<sup>(</sup>a) Excludes school bank accounts and inoperative accounts (i.e. accounts of less than £1 which have not been operated on for more than two years).

ALL SAVINGS BANKS: BUSINESS TRANSACTED IN AUSTRALIA. (£'000.)

	Y	ear ended	June, 195	6.	Year ended June, 1957.			
State or Territory.	Deposits During Year.	With- drawals During Year.	Interest Added to Accounts During Year.		Deposits During Year.	With- drawals During Year.	Interest Added to Accounts During Year.	
New South Wales Victoria Queensland South Australia Western Australia Tasmania Northern Territory Australian Capital Territory	365,600 351,896 133,639 103,921 57,629 29,985 2,301 3,998	338,250 128,439 102,854 54,491 29,431 2,158	7,782 2,686 2,997 1,167 848 31	386,554 386,176 132,700 135,756 57,934 37,211 1,656 3,010	421,338 382,750 150,796 129,708 65,576 31,942 2,655 4,595	367,130 142,281 126,591 62,279 31,383	9,773 3,393 3,528 1,462 989	422,184 411,569 144,608 142,401 62,693 38,759 1,894 3,302
Total	1,048,969	1,004,649	23,283	1,140,997	1,189,360	1,132,684	29,137	1,227,410

<sup>4.</sup> Business Transacted. The following table shows details of the business transacted in Australia by savings banks during the years ended 30th June, 1956 and 1957:—

5. Depositors' Balances.—The amount at credit of depositors' accounts and the average per head of population for each State and Territory at the end of June, 1939 and 1953 to 1957, are shown in the following table:—

#### ALL SAVINGS BANKS: DEPOSITORS' BALANCES IN AUSTRALIA.

At end of June.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total.
			Сомм		h Saving 000.)	s Bank.		_	
1939 1953 1954 1955	87,474 319,149 339,796 358,645	11,242 85,137 94,174 104,597	29,045 109,360 117,406 124,814	3,167 25,483 28,192 30,547	12,396 49,794 52,614 53,629	2,358 12,170 12,869 13,763	99 1,116 1,308 1,482	319 2,154 2,328 2,575	146,10 604,36 648,68 690,05
956 957	363,711 363,406	110,215 114,542	126,998 129,816	31,880 33,590	54,295 53,697	14,312 15,252	4,3 4,4	84 70	705,79 714,77
	· · · · · · · · · · · · · · · · · · ·		S		ings Bani 000.)	KS.			
939 953 954 955 956 957		69,219 234,834 245,607 260,151 264,317 266,276	  	24,230 88,392 94,757 101,145 103,876 108,811	635 2,302	••	:: :: ::	:: :: ::	93,44 323,22 340,36 361,29 368,82 377,38
		TRUSTEE	SAVINGS		Hobart (	AND LAU	NCESTON.		
939 953 954 955 956 957						6,038 19,908 21,078 22,046 22,899 23,507	::		6,03 19,90 21,07 22,04 22,89 23,50
			PF		vings Ba 000.)	NKS.			
956 1957	22,843 58,778	11,644 30,751	5,702 14,792	::	3,004 6,694	::		282 726	43,475 111,741
		·			ngs Bani 000.)	KS.			
1939 1953 1954 1955 1956	87,474 319,149 339,796 358,645 386,554 422,184	80,461 319,971 339,781 364,748 386,176 411,569	29,045 109,360 117,406 124,814 132,700 144,608	27,397 113,875 122,949 131,692 135,756 142,401	12,396 49,794 52,614 53,629 57,934 62,693	8,396 32,078 33,947 35,809 37,211 38,759	1,116 1,308 1,482 1,656	2,154 2,328 2,575 3,010	947,49 1,010,13 1,073,39 1,140,99
<u> </u>			Per		F POPULA	TION.	,		•
1956	94 6 4 99 5 1 102 15 1 108 15 8	42 16 8 133 11 8 138 11 1 144 11 4 148 4 9 153 18 11	89 1 3 92 16 7 96 16 3	45 18 6 146 15 9 154 4 11 160 13 9 159 19 10 163 1 10	82 4 9 81 8 9 85 10 6	35 1 5 105 9 10 109 19 0 113 15 11 116 8 3	70 8 79 8 84 6 90 10	3 75 3 8 3 76 15 8 5 79 8 4 0 87 5 11	35 4 107 9 112 8 116 13 121 0 127 5

- 6. Cheque Accounts.—At most savings banks, cheque facilities are available to non-profit organizations such as Friendly, Co-operative and Charitable Societies. Details of the transactions on these accounts during the year ended June, 1957, (excluding the Savings Bank of South Australia) together with the number of operative accounts and the amount on deposit at the end of June, 1957 were as follows:—Deposits during the year, £157,718,123; withdrawals during the year, £154,519,251; interest added during the year, £404,442; number of operative accounts at end of year, 49,617; amount on deposit at end of year, £23,906,135.
- 7. School Banking.—With the object of encouraging principles of thrift amongst children, agencies of the savings banks have been established at most of the schools throughout Australia. Particulars of operative accounts for the Commonwealth at the end of June of the years 1939 and 1953 to 1957, appear below:—

SCHOOL	SAVINGS	BANKS :	AUSTRALIA.

	At end of June		Deposits.	Deposits per Operative Account.			
1939	••			9,535	560,116	£ 1,090,703	£ s. d. 1 18 11
1953				8,148	684,527	4,375,185	6 7 10
1954				8,179	724,038	4,831,538	6 13 6
1955				8,210	761,974	5,280,808	6 18 7
1956				8,591	825,692	5,785,495	7 0 2
1957				8,294	895,139	6,429,490	7 3 8

8. Assets.—The assets within Australia of all Savings Banks as at the end of June 1956 and 1957, are given in the following table:—

ALL SAVINGS BANKS: ASSETS WITHIN AUSTRALIA.(a) (£'000.)

(000.)						
Item.						
			1956.	1957.		
			2,763	2,801		
			101,579	98,576		
			41,547	54,797		
			66	73		
surv B	ills)—		ļ	-		
-	,		675,198	706,062		
				199,186		
			85	57		
		-	181,915	202,076		
				10,602		
• •	••	• •	,,,,,,,	1		
• •	• •	• •	1,198,114	1,284,593		
				At End  1956.  2,763 101,579 41,547 66 675,198 177,110 85 181,915 8,505 9,346		

<sup>(</sup>a) Includes assets in Papua, New Guinea and Norfolk Island.

<sup>9.</sup> War Savings and Savings Certificates.—Sales of savings certificates and stamps under the War Savings and Savings Certificate schemes, particulars of which were given in earlier issues of the Official Year Book (see No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. This method of saving was replaced by special savings schemes to operate through the savings banks. Employers were asked to co-operate by forming employee savings groups and by making regular deductions from wages and salaries for payment into group savings bank accounts, and thence, at the end of each quarter to individual accounts. The total value of certificates outstanding at 30th June in each of the last five years was:—1953, £35,601,000; 1954, £30,310,000; 1955, £26,615,000; 1956, £23,366,000; 1957, £20,043,000.

- 10. Commonwealth Savings Bank of Australia.—(i) General. The Savings Bank Department of the Commonwealth Bank opened for business in Victoria on 15th July, 1912; in Queensland on 16th September, 1912; in the Northern Territory on 21st October, 1912; in Tasmania on 1st January, 1913, and in New South Wales, South Australia and Western Australia on 13th January, 1913. The Tasmanian State Savings Bank was absorbed by the Commonwealth Bank on 1st January, 1913, the Queensland State Savings Bank was taken over in 1920 and the New South Wales and Western Australian State Savings Banks in 1931. The Savings Bank Department was separated from the General Bank on 9th June, 1928, and established as a separate institution known as the "Commonwealth Savings Bank of Australia". It has since then operated independently, publishing its own balance-sheets and profit and loss accounts. The Commonwealth Bank Act 1927, which provided for the establishment of the Commonwealth Savings Bank as a separate institution, provided for a Commission of three members to manage the savings bank. This Commission was never appointed and the Commonwealth Bank Act 1945 placed the control of the Commonwealth Savings Bank under the Governor of the Commonwealth Bank.
- (ii) Balance-sheet, 30th June, 1956 and 1957. Particulars of the liabilities and assets of the Commonwealth Savings Bank as at 30th June, 1956 and 1957, were as follows:—

## COMMONWEALTH SAVINGS BANK(a): LIABILITIES AND ASSETS, 30th JUNE. (£'000.)

Liabilities.	1956.	1957.	Assets.	1956.	1957.
Reserve Fund	9,191	9,481	Cash Balances and		
Depositors' Balances	i	1	Money at Short Call	72,519	66,902
and Accrued Interest	712,342	721,494	Australian Notes and		
Contingency Account			Coin	803	942
and other Liabilities	20,802	17,968	Government Securities	469,129	467,088
		i	Securities of Municipal		}
			and other Public		}
		1	Authorities	78,584	82,213
		i	Bank Premises	5,890	7,334
	1		Loans and Advances	103,277	110,745
	Ĭ	ĺ	Other Assets	12,133	13,719
Total	742,335	748,943	Total	742,335	748,943

- (a) Includes branches in London, in the Territories of Papua and New Guinea, Norfolk Island, and in British Solomon Islands.
- (iii) Profits. Under the terms of the Savings Bank Amalgamation Agreements, the profits of the Commonwealth Savings Bank in New South Wales, Queensland, Western Australia and Tasmania are equally divided between the Bank and the former controlling authorities in those States. Net profits for the years ended 30th June, 1939 and 1953 to 1957, and the distribution of those profits are shown in the following table.

#### COMMONWEALTH SAVINGS BANK: DISTRIBUTION OF PROFITS.

					Authorit		Distribution of Published Profit.			
	ended June—	Total Profit.	New South Wales. (a)	Queens- land. (b)	Western Aus- tralia. (b)	Tas- mania. (b)	Total.	Pub- lished Profit.	National Debt Sinking Fund.	Savings Bank Reserve Fund.
1939		532,736	168,878	30,464	13,251	3,861	216,454	316,282	158,141	158,141
1953 1954 1955 1956 1957		1,525,475 2,031,371 1,855,901 1,251,153 890,419	497,082 629,614 587,959 453,105 394,386	94,795 155,365 130,415 60,347	23,544 33,217 26,284 12,211	4,984 12,439 6,327 304	620,405 830,635 750,985 525,967 394,386	1,200,736	552,458 362,593	452,535 600,368 552,458 362,593 290,193

<sup>(</sup>a) Paid to The Rural Bank of New South Wales. (b) Paid to State Consolidated Revenue Funds (c) After adding £84,353 due by State Authorities under Savings Bank Amalgamation Agreements.

<sup>11.</sup> State Savings Banks.—(i) General. State savings banks at present operating (with date of establishment shown in parentheses) are: The State Savings Bank of Victoria (1841); The Savings Bank of South Australia (1848); The Rural and Industries Bank of Western Australia (1956).

(ii) Assets. The assets of the State savings banks as at the date of their respective balance sheets are shown in the following table.

STATE SAVINGS BANKS: ASSETS, 1956 AND 1957.

	(£ 000.	<u>''                                   </u>					
1		1957.					
Particulars.	The State Savings Bank of Victoria including Crédit Foncier Dept. (a)	The Savings Bank of South Australia.	Rural and Industries Bank of Western Australia (Savings Bank Division).	Total.	Total.		
Cash, cash and fixed deposits at other							
Banks	42,478	16,842	(c) 607	59,927	56,564		
Government Securities (including							
Treasury Bills)	107,955	55,306	1,252	164,513	169,375		
Local and Semi-Governmental			j 1		[		
Securities	75,226	21,668	306	97,200	90,990		
Mortgages	54,619	20,710	610	75,939	72,339		
Landed and House Property	1,830	900	i	2,730	2,130		
All other Assets	2,221	835	17	3,073	2,847		
Total Assets	284,329	116,261	2,792	403,382	d 394,245		

<sup>(</sup>a) At 30th June. (b) At 30th September. Disposition of savings bank deposits only. (c) Includes Treasury Bills. (d) Details were: State Savings Bank of Victoria (including Crédit Foncier Department). £282,119,000, The Savings Bank of South Australia, £110,924,000, Rural and Industries Bank of Western Australia, £1,202,000.

STATE SAVINGS BANKS: PROFIT AND LOSS ACCOUNTS, 1956 and 1957. (£'000.)

(2000	<del>"</del> - — —			
		1957.		1956.
Particulars.	State Savings Bank of Victoria including Crédit Foncier Depart- ment. (a)	Savings Bank of South Australia.	Total.	Total.
Receipts—				
Total-Interest, Dividends, Rents, and all				
other	10,030	4,070	14,100	12,904
Expenditure—				
Interest allotted to Depositors including provision for accrued interest  Expenses of Management and all other	6,534	2,721	9,255	7,971
Expenditure	3,389	1,011	4,400	4,218
Total	9,923	3,732	13,655	12,189
Profit for year	107	338	445	715
Balance of profit and loss account brought			1	
forward	197	160	357	291
Total	304	498	802	1,006
Distribution of Profits—				
Amount written off Bank Premises	5	(b)	(b) 5	(c) 3
Amount carried to Reserves and Deprecia-	1	l	ļ	
tion Funds	132	335	467	646
Balance of Profit and Loss Account carried	1			
forward	167	163	330	357

<sup>(</sup>a) Year ended 30th June.
(b) Not available, included with expenses of management, &c.
(c) Incomplete, see footnote (b).

<sup>(</sup>iii) Profit and Loss Accounts. Details of the profit and loss accounts of the State savings banks excluding the Rural and Industries Bank of Western Australia, included in the above table are given below for the years 1956 and 1957.

12. Trustee Savings Banks, Hobart and Launceston.—(i) General. Two Trustee Savings Banks, Hobart and Launceston, operate within Tasmania. These banks commenced business in 1845 and 1835 respectively.

(ii) Assets. The assets of the Trustee Savings Banks as at the 31st August, 1956 and 1957, are set out in the following table:—

TRUSTEE SAVINGS BANKS: ASSETS AT 31st AUGUST, 1956 AND 1957.

		1956.		
Particulars.	The Hobart Savings Bank.	The Launces- ton Bank for Savings.	Total.	Total.
Cash, Cash and Fixed Deposits with other Banks	1,393	1,564	2,957	3,245
Government Securities (including Treasury Bills)	3,679	3,095	6,774	6,501
Local and Semi-Governmental Securities	5,432	3,392	8,824	8,349
Mortgages	2,801	3,693	6,494	6,382
Landed and House Property	342	126	468	323
All other Assets	153	134	287	272
Total	13,800	12,004	25,804	(a) 25,072

<sup>(</sup>a) Separate details were: The Hobart Savings Bank, £13,489,000 and the Launceston Bank for Savings, £11,583,000.

(iii) Profit and Loss Accounts. Details of the profit and loss accounts of the Trustee Savings Banks for the year ended 31st August, 1956 and 1957, are given below:—

TRUSTEE SAVINGS BANKS: PROFIT AND LOSS ACCOUNTS, YEARS ENDED
31st AUGUST, 1956 AND 1957.
(£'000.)

		1957.		1956.	
Particulars.	The Hobart Savings Bank.	The Launces- ton Bank for Savings.	Total.	Total.	
Receipts-			-		
Total—Interest, Dividends, Rents and all other	503	469	972	894	
Expenditure—					
Interest allotted to Depositors	349	304	653	595	
Expenses of Management	126	105	231	210	
All other Expenditure	2	1	3	3	
Total	477	410	887	808	
Profit for Year	26	59	85	86	
Balance of Profit and Loss Account brought			1		
forward	54	53	107	106	
Total	80	112	192	192	
Distribution of Profits-					
Amount written off Bank Premises	10	19	29	33	
Amount carried to Reserves and Depreciation	ļ				
Fund	16	40	56	53	
Balance of Profit and Loss Account carried			1		
forward	54	53	107	106	

<sup>13.</sup> Private Savings Banks.—(i) General. The Bank of New South Wales Savings Bank Limited and the Australia and New Zealand Savings Bank Limited on the 18th January, 1956, and the C.B.C. Savings Bank Limited on the 2nd June, 1956, were granted authority under section 8 of the Banking Act 1945–1953 to carry on banking business subject to the following conditions:—

<sup>1.</sup> The Savings Bank shall not, in the course of that business, receive a deposit from a company or other body engaged in or formed for the purpose of trading or acquiring pecuniary profit.

- 2. The Savings Bank shall not, in the course of that business, permit a cheque to be drawn on an account maintained with the Savings Bank, not being an account maintained by a local authority, friendly society, co-operative society, or any other society, body or club.
- 3. The Savings Bank shall not, in the course of that business, place money on deposit in Australia (whether fixed or in current account) with a bank other than a bank specified in Part I. of the First Schedule to the Banking Act 1945-1953, the Commonwealth Bank of Australia, or the Commonwealth Trading Bank of Australia.
- 4. The Savings Bank shall at all times maintain in investments of the following kinds an amount which, together with cash on hand in Australia and moneys on deposit in Australia with banks, is not less than the amount on deposit in Australia with the Savings Bank:—
  - (a) securities issued by the Government of the Commonwealth, including Commonwealth Treasury Bills;
  - (b) securities issued by the Government of a State;
  - (c) securities issued or guaranteed by an authority constituted by or under a Commonwealth or a State Act;
  - (d) loans to building societies the repayment of which is guaranteed by the Commonwealth or a State; and
  - (e) loans for housing or other purposes on the security of land in Australia.
- 5. The Savings Bank shall at all times maintain in investments of the following kinds an amount which, together with cash on hand in Australia and moneys on deposit with the Commonwealth Bank of Australia, is not less than seventy per centum of the amount on deposit in Australia with the Savings Bank:—
  - (a) securities issued by the Government of the Commonwealth, including Commonwealth Treasury Bills;
  - (b) securities issued by the Government of a State; and
  - (c) securities issued or guaranteed by an authority constituted by or under a Commonwealth or a State Act.
- 6. The Savings Bank shall at all times maintain in investment in Commonwealth Treasury Bills an amount which, together with moneys on deposit with the Commonwealth Bank of Australia, is not less than ten per centum of the amount on deposit in Australia with the Savings Bank.
- For the purposes of these conditions, the amount on deposit in Australia with the Savings Bank includes interest credited to the accounts of depositors.

The Bank of New South Wales Savings Bank Limited and the Australia and New Zealand Savings Bank Limited commenced business on the 19th January, 1956 and the C.B.C. Savings Bank Limited on 16th July, 1956.

(ii) Assets. The assets of the private savings banks as at the date of their respective balance-sheets are shown in the following table:—

PRIVATE SAVINGS BANKS: ASSETS 1956 AND 1957.

	(£'000.)				
			1956.		
Particulars.	The Australia and New Zealand Savings Bank Ltd. (a)	The Bank of New South Wales Savings Bank Ltd. (a)	C.B.C. Savings Bank Ltd. (b)	Total.	Total.
Cash at Bankers—					
Commonwealth Bank	3,465	5,250	1,583	10,298	4,620
Other Banks	4,774	9,954	3,237	17,965	11,179
Government Securities-	1	,	,	-	
Treasury Bills	399	3,000	200	3,599	4,049
Other	16,798	39,959	11,628	68,385	36,215
Local and Semi Governmental	1	1			1
Securities	8,337	8,953	988	18,278	7,554
Loans and Advances (including		, , , , ,			
accrued Interest and other	1	* •			
accounts)	5,931	6,076	290	12,297	2,076
Total	39,704	73,192	17,926	130,822	(c)65,693

<sup>(</sup>a) At 30th September. (b) At 30th June. This bank commenced business in July, 1956. (c) Separate details were:—The Australia and New Zealand Savings Bank Ltd., £23,191,000; the Bank of New South Wales Savings Bank Ltd., £42,502,000.

(iii) *Profit and Loss*. Details of the profit and loss accounts of the private savings banks included in the above table are given below for the years 1956 and 1957.

#### PRIVATE SAVINGS BANKS: PROFIT AND LOSS.(a)

(£.)

	Year.		The Australia and New Zealand Savings Bank Ltd.(b)	The Bank of New South Wales Savings Bank Ltd.(b)	C.B.C. Savings Bank Ltd.(c)	Total.
1956			24,705	.37,135	(d)	61,840
1957	• •	• •	80,810	131,567	31,657	244,034

<sup>(</sup>a) Net profit after allowing for all expenses and providing for reserves and contingencies, etc. (b) Year ended 30th September. (c) Year ended 30th June, commenced business in July 1956. (d) See footnote (c).

14. Classification of Depositors' Balances.—The classification of deposits published by savings banks does not permit a fully detailed analysis with respect to Australia as a whole, but information supplied to the Royal Commission on Monetary and Banking Systems, for all savings banks except the Hobart trustee savings bank, shows that at 30th June, 1936, the amount on deposit in accounts with balances of less than £100 represented 21 per cent. of the total deposits; balances of over £100 but under £250, 21 per cent.; over £250 but under £500, 23 per cent.; over £500 but under £1,000, 25 per cent.; while those of over £1,000 accounted for 10 per cent. School, penny bank and small inoperative accounts were excluded in determining these percentages.

A similar classification as at 30th June, 1936, 1939 and 1953 to 1957, but relating only to the combined State Savings Banks of Victoria and South Australia, is shown below.

STATE SAVINGS BANKS: CLASSIFICATION OF DEPOSITS.

(Per cent.)

At	At 30th June-		£100 and under. £101-£300. £				£301–£500.	Total under £501.	£501–£1,000.	Over £1,000.
1936			19.54	26.13	17.84	63.51	27.42	9.07		
1939			20.27	27.15	17.90	65.32	26.14	8.54		
1953				43.88		43.88	32.73	23.39		
1954				42.17		42.17	32.03	25.80		
1955				40.45		40.45	30.34	29.21		
1956				39.93		39.93	29.90	30.17		
1957			İ	38.43		38.43	28.83	32.74		

15. Rates of Interest on Deposits.—The following table shows the rates of interest allowed by Savings Banks at the 30th June, 1953 to 1957.

#### SAVINGS BANKS: INTEREST RATES ON DEPOSITS.

#### (Per cent. per annum.)

£501 to £1,000	of nk nk nd	1953.	1954	1955.	1956.	1957.
Victoria. Bank of New South Wales Savings Ba Ltd.(a), Australia and New Zealand Savings Ba Ltd.(a), C.B.C. Savings Bank Ltd.(b), Rural as Industries Bank of Western Australia(c)—Ordinary Accounts(d)—  £1 to £500 £501 to £1,000 £1,001 to £1,500 Friendly and other Society Accounts— £1 to £2,000	nk nk nd	24	24			
£Î to £500 £501 to £1,000 £1,001 to £1,500 Friendly and other Society Accounts— £1 to £2,000	·· i .	21	24			
£1,001 to £1,500 Friendly and other Society Accounts— £1 to £2,000			-4	21	23 23	2 <del>1</del> 2 <del>1</del> 1 <u>1</u>
Friendly and other Society Accounts— £1 to £2,000	1	11	21 11	2 <u>1</u> 11	21	2∄
£1 to £2,000	- 1	Nil	14	17	1-∳	1 1
		İ			1	
	••	2½ 1½	2 <del>1</del> 11	2 <u>4</u> 11	23 13	23 13
		11	17	11 1	14	13
Deposit Stock(d)(e)—		[		_		
	• •	13	11	2	24	23
Savings Bank of South Australia-	- 1	ŀ		! !		
Ordinary Accounts(d)—	- 1			1	!	
		21	21/2	21/2	21	23
	••	11/2	1+	21/2	24	21
	_	113	2½ 1½ 1½ 1½	2 <del>1</del> 2 <del>1</del> 1 <del>1</del> 1 <u>1</u>	22 22 22 23 23	27
	1	Nii	1 ½	1+	22	21 21 21 21 21
Friendly and other Society Accounts—		۱ ۵۰			1	
	•••	24	27	22	2 <del>1</del> 21	24
00.004 1	•••	2½ 2½ 1½	2½ 2¼ 1¾	2½ 2½ 1½	24	2 <del>3</del> 2 <del>3</del> 11
	••	12	1.4	1.2	11/2	1 2
Deposit Stock(d)—	1			2	21	
£10 to £2,000	• •	11	11	2	21/2	2 <del>1</del>
	i	1				
Ordinary Accounts(d)—		21	21	23	3	•
		21/2	Nil	2 <del>}</del> Nil		3
£501 to £1,500	1	Nil	1411	INII	Nil	11
Friendly and Other Society Accounts—	1	21	21	21		•
£1 to £500(f)		2 <del>1</del> Nil	2 <del>1</del> Nil	Nil	Nil 3	3 1 <del>1</del>

<sup>(</sup>a) Commenced Savings Bank business on 19th January, 1956. (b) Commenced Savings Bank business on 16th July, 1956. (c) Commenced Savings Bank business on 5th April, 1956. (d) No interest is payable on amounts in excess of the maximum amount shown. (e) State Savings Bank of Victoria only. (f) Prior to the 1st March, 1957, the maximum amount on which interest was payable was £450.

#### C. COMPANIES.

Note.—Statistics available in regard to companies relate to (a) Trustee, Executor and Agency Companies; (b) Building and Investment Societies; and (c) Co-operative Societies.

#### § 1. Trustee, Executor and Agency Companies.

The following table shows, for the years 1939 and 1952 to 1956, particulars of the assets and liabilities of certain trustee companies transacting business in Australia and New Zealand. Details have been extracted from a summary of the last published balance-sheets for the various years, as shown in the Australasian Insurance and Banking Record-

# TRUSTEE, EXECUTOR AND AGENCY COMPANIES. AUSTRALIA AND NEW ZEALAND.

Particulars.	1939.	1952.	1953.	1954.	1955.	1956.
Number of Companies	23	24	24	24	24	24
Liabilities— Capital paid-up Reserves and Undistributed	£ 1,408,452	£ 1,528,452	£ 1,528,452	£ 1,528,452	£ 1,530,952	£ 1,555,952
Profits Other Liabilities	1,254,262 621,069	1,511,596 1,000,752	1,533.107 1,107,642	1,583,874 1,133,959	1,807,231 1,038,225	1,813,444 1,541,308
Total Liabilities	3,283,783	4,040,800	4,169,201	4,246,285	4,376,408	4,910,704
Assets— Deposits with Government, Public Securities, Fixed						
Deposits, etc	966,847	1,393,241	1,463,523	1,479,961	1,423,758	1,398,921
Mortgages Property	547,705 1,104,216	294,206 1,140,149	276,590 1,149,490	262,155 1,170,708	277,296 1,385,657	258,917 1.506,365
Cash	102,300	478.812	481,606	559,982	544,744	661,230
Other Assets	562,715	734,392	797,992	773,479	744,953	1,085,271
Total Assets	3,283,783	4,040,800	4,169,201	4,246,285	4,376,408	4,910,704
Total Trust Fund Assets	£'000. (a)157,256	£'000. (a)208,168	£'000. (b)219,155	£'000. (b)219,466	£'000. (b)226,874	£,000. (b)238,317

(a) Nine offices only.

(b) Ten offices only.

#### § 2. Building and Investment Societies.

1. Summary.—During 1955, returns were received from 1,116 societies, but the information was not exhaustive, as particulars regarding a number of organizations were not included. In the following table, general information is given relating to the societies for the year 1954-55.

#### BUILDING AND INVESTMENT SOCIETIES: SUMMARY, 1954-55.

Particulars.		N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Societies making returns—								
	No.	31	17	. 5	. 5	6	5	69 1,047
Terminating ]	No.	1,018	2	10	15	2		1,047
Total ]	No.	1.049	19	15	20	8	5	1.116
Iotal	10.	7,049						
Number of shareholders		115,961	11,726	26,140	24,397	25,901	8,745	212,870
shares		b 2,214,623	1,191,764	9,222,632	127,518	(c)	115,527	(c) 51,579
borrowers		(d) 12,380	17,201	10,747	3,947	4,396	2,908	\$1,579
Income for year from inter	est,	1 ' 1		1				
etc	£	1,249,143	804,683	279,779	85,143	186,578	131,250	2,736,576
Working expenses for year	£	869,121	634,935	122,639	74,621	40,200	22,624	1.764.140
Amounts of deposits dur	ing	1	-		-	,	'	' '
year	£	478,713	940,600	691,405	622,809	831,092	685,571	4,250,190
Repayment of loans dur	ing	'	-		-	,	·	
year	£	2,078,967	2,627,378	1,154,952	349,817	638,189		7,432,567
Loans granted during year	£	e 3,862,109	2,785,921	1,814,721	574,085	909,936	1.051.356	10,998,128

<sup>(</sup>a) Year 1955; excludes Co-operative Housing Societies, for details of which see para. 3.
(b) Terminating societies only. (c) Not available. (d) Permanent societies only. (e) Incomplete

"Other terminating societies" not available.

2. Liabilities and Assets.—Particulars of liabilities and assets in 1954-55 of the 1,116 societies mentioned in the previous paragraph are shown below.

#### BUILDING AND INVESTMENT SOCIETIES: LIABILITIES, 1954-55.

(£.)

State.		Paid-up Capital and Subscriptions.	Reserve Funds.	Deposits.	Bank Overdrafts and Other Liabilities.	Total Liabilities.
New South Wales Victoria(a)		25,977,845 4,177,221	2,272,645 (b)1,449,375	1,205,836 2,148,243	80,054,399 7,304,812	109,510,725 15,079,651
Queensland		5,209,980	106,948	157,965	937,748	6,412,641
South Australia		2,169,837	230,360	361,364	25,530	2,787,091
Western Australia		2,429,483	83,253	927,058	(c) 272,472	3,712,266
Tasmania	••	1,568,120	163,764	713,232	286,812	2,731,928
Total		41,532,486	4,306,345	5,513,698	88,881,773	140,234,302

(a) Year 1955. (b) Includes balances of Profit and Loss Accounts, £140,487. (c) Includes net accumulated profits, £138,147.

#### BUILDING AND INVESTMENT SOCIETIES: ASSETS, 1954-55.

(£.)

State.		Advances on Mortgage.	Landed and House Property, Furniture, etc.	Cash in Hand and on Deposit	Other Assets.	Total Assets.
New South Wales		a107,452,758	(b)	(b)	2,057,967	109.510.725
	• •					
Victoria(c)	• •	14,733,089	167,739		157,127	15,079,651
Queensland		a 6,099,296	125,432	41,530	146,383	6,412,641
South Australia		2,514,743	37,572	104,019	130,757	2,787,091
Western Australia		3,533,446	51,657	42,800	84,363	3,712,266
Tasmania	••	2,598,836			109,993	2,731,928
Total		136,932,168	401,012	214,532	2,686,590	140,234,302

(a) Includes Starr-Bowkett and other terminating societies:—New South Wales, £95,144,668; Queensland, £1,198,001. (b) Not available. Included in Other Assets. (c) Year 1955.

3. Co-operative Housing Societies, Victoria.—In addition to the information shown above, the following details of co-operative housing societies in Victoria have been extracted from the 10th Annual Report of the Registrar of Co-operative Housing Societies. At 30th June, 1955, 266 co-operative housing societies were registered in Victoria with 24,422 members who had subscribed for 860,142 shares giving a nominal share capital subscribed of £45,178,814. For the twelve months ended 30th April, 1955, returns were submitted by 260 societies, the total income of those societies being £188,971, and total expenditure £172,760. The liabilities at 30th April, 1955 of the societies submitting returns were:—bank overdraft, £28,525,635; subscriptions, £4,081,762; surplus interest and management expenses, £406,022; other liabilities, £662,137, total liabilities, £33,675,556. Assets at the same date consisted of:—advances, £33,434,593; other assets, £240,963; total assets £33,675,556.

#### § 3. Co-operative Societies.

Co-operative societies are divided into three classes—(i) those engaged in the manufacture and marketing of primary products and trade requirements; (ii) those engaged in retailing general household requirements; and (iii) those engaged in activities covered by both classes (i) and (ii). The first class may be described briefly as Producers' Co-operative Societies and the second as Consumers' Co-operative Societies. The particulars given for New South Wales relate to societies registered under the Co-operative Act 1923–1950. A summary of the business of all co-operative societies for the years 1954–55 or 1955 for all States except Western Australia is given in the following tables. For Western Australia, details of the business during 1940–41 (the latest year available) are given. Separate particulars for each of the three types of Co-operative Societies are given in the annual bulletin Finance (see No. 47, pages 173 and 174).

	CO-OPERA	TIVE SOC	CIETIES.			
Particulars.	N.S.W. 1954-55.	Vic. 1954-55.	Q'land. 1954-55.	S. Aust. 1955.	W. Aust. 1940-41.	Tas. 1954–55.
		SUMMARY.				
Number of Societies  "Branches "Members  Gross Turnover (Sales)  Other Income  Total Income  Total Purchases during Year Other Expenditure  Total Expenditure  £ Rebates and Bonuses Dividends on Share Capital	292 (a) 200,223 105,437,143 105,962,672 105,962,672 } 102,860,188 102,860,188 1,866,885 327,956	78 65,456 27,602,268 1,421,189 29,023,457 {22,978,844 4,950,028 27,928,872 269,308	94 124,323 54,496,198 1,772,928 56,269,126 46,253,084 10,458,129	(a) 109,661 13,596,378 814,976 14,411,354 10,943,783 2,965,213 13,908,996 557,177	36 7 21,663 8 2,548,776 6 698,449 4 3,247,225 8 3,2254,419 8 850,741 6 3,105,160 7 15,472	3,286 890,014 95,736 985,756 746,904 253,089 999,993
	Liabili	ries and As (£.)	SSETS.			
Linbilities— Paid-up Capital Loan Capital Bank Overdrafts Accumulated Profits Reserve Funds Sundry Creditors Other Liabilities	8,367,966 6,172,381 5,832,859 10,032,318	318,718 2,068,000 727,121 2,842,213	5,052,763 2,711,364 6,017,302 1,117,922 5,080,284 7,307,699 527,952	2,118,310 989,489 532,063 1,208,512 1,015,260	225,009 61,388 22,814 322,255 374,533	119,928 239,850 35,161 20,780 129,203
Total Liabilities	30,405,524	11,953,460	27,815,286	9,549,030	1,932,514	944,571
Assets— Land and Buildings Machinery, Plant and other Fixed Assets Stocks Stocks Stocks Cash in hand and on deposit. Profit and Loss Account Other Assets	12,856,576 9,568,672 6,210,859  1,769,417	2,136,082 3,089,684 468,565 519,072	7,869,855 4,065,177 8,993,553	1,188,184 3,295,958 1,248,451 488,455	247,143 351,437 468,608 191,383 50,025	70,828 153,963 310,936 14,020 525
Total Assets	30,405,524	11,953,460	27,815,286	9,549,030	1,932,514	944,571

(a) Not available.

#### D. INSURANCE.

#### § 1. Introductory.

1. Legislation.—Section 51 of the Commonwealth Constitution confers the necessary powers on the Commonwealth Parliament to legislate with respect to "insurance other than State insurance; also State insurance extending beyond the limits of the State concerned". Commonwealth legislation includes the Marine Insurance Act 1909 defining the limits of marine insurance and regulating the terms of contracts, etc., the Insurance

Act 1932-1937 requiring the lodgment of deposits by insurance companies, and the Life Insurance Act 1945-1953 generally regulating life assurance business in Australia. The Marine Insurance Act 1909 and the Insurance Act 1932-1937 have limited application, and, except for life assurance business, which is regulated by the Life Insurance Act 1945-1953, insurance business is conducted under State laws.

2. Insurance Act 1932-1937.—Companies, persons or associations of persons carrying on insurance business in Australia or in any Territory of Australia are required to lodge a deposit with the Commonwealth Treasurer.

Money deposited is invested by the Treasurer in prescribed securities selected by the depositor, and all interest is paid to depositors. Deposits remain as security against liability to policy holders, and are available to satisfy judgments obtained in respect of policies.

Deposits held by States on 1st February, 1932, could, however, remain with the States subject to the conditions embodied in the laws of the States, and depositors to the extent of the value of these deposits were exempt from liability to make deposits under the Commonwealth Act.

The following are not regarded as insurance businesses under the Act:-

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; and friendly society, union and association schemes involving superannuation or insurance benefits to employees.

This Act does not apply to State insurance within the limits of the State concerned, and, under the Life Insurance Act 1945-1953, ceased to apply to life assurance business.

3. Life Insurance Act 1945-1953.—The objects of this Act are:—(a) To replace all State legislation on the subject of life assurance and to provide uniform legislation for the whole of Australia; (b) to appoint an Insurance Commissioner to exercise active supervision of the activities of life assurance companies, with a view to securing the greatest possible protection for policy holders; (c) to set up adequate machinery for dealing with any company that fails to maintain a required minimum standard of solvency.

The Act was assented to on 16th August, 1945, and came into operation on 20th June, 1946. A summary of the provisions of the Act is given in Official Year Book No. 37 (pages 595 to 597).

The main amendment by the Life Insurance Act, No. 94 of 1953 was to repeal Part VI. of the principal Act, which provided for the establishment of a Commonwealth Government Insurance Office.

4. Deposits under Insurance Acts.—Deposits lodged under the Insurance Acts at 30th June, 1957, totalled £6,840,422, comprising £1,212,162 held by the Commonwealth in respect of Life Assurance and £5,405,970 held by the Commonwealth and £222,290 held by the States in respect of other forms of insurance. The deposits consisted of government, local and semi-governmental securities £5,069,772, fixed deposits £1,000, bank guarantees and undertakings £1,337,000 and titles and mortgages £432,650.

#### § 2. Life Assurance.

1. General.—Statistical returns have been collected from life assurance institutions since 1907. Until 1946, these returns were collected under the Census and Statistics Act. Since 1947, returns lodged under the Life Insurance Act 1945-1953 have been used to compile life assurance statistics. This change in method of collection has resulted in some slight changes in definition and, as a result, the statistics for 1947 and later years are no in all cases strictly comparable with those for earlier years. In earlier years, statistics o

revenue and expenditure and of assets and liabilities, although generally related only to the life assurance business of the offices making the returns, included, in some cases, a small amount of other classes of business. Under the Life Insurance Act 1945–1953, companies transacting life assurance business are required to set up separate statutory funds for their life assurance business. As a result of this, it has been possible to separate life assurance business from other classes of business. Except where otherwise indicated, the figures in the succeeding paragraphs refer to Australian business only. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

- 2. Offices Transacting Business.—The number of offices which transacted life assurance business in Australia during 1956 was 24, including five oversea companies. Of the nineteen Australian offices, six are purely mutual, including one which transacts general business in respect of which share capital is used, eleven are public companies, and two are State Government institutions. Of the total offices, eleven transacted ordinary business only and the remainder both ordinary and industrial business. Where possible ordinary and industrial business have been kept separate.
- 3. Australian Business—Policies in Existence.—In the following table, details of policies on the registers in each State and in the Australian Capital Territory are given for the year 1956—

LIFE ASSURANCE: POLICIES EXISTING IN AUSTRALIA, 1956.

	1			<del></del>			
	Assura	nce and En	dowment P	olicies.	An	nuity Polic	ies.
State or Territory.(a)	Number of Policies.	Sum Assured. (£'000.)	Bonus Additions. (£'000.)	Annual Premiums. (£'000.)	Number of Policies.	Annuities per Annum. (£.)	Annual Prem- iums. (£.)
	(	Ordinary	DEPARTM	MENT.			
New South Wales	1,202,098	752,239	61,530	25,793	4 984	1,605,973	442,283
Victoria	909,596			21,929		5,865,833	
Queensland(b)	559,504			10,433	992		
South Australia( $c$ )	313,037			7,302	900		
Western Australia	213,686			4,957	530		
Tasmania	108,894			2,535	674		
Australian Capital Ter-		-		, i			•
ritory	12,591	62,494	1,256	714	1,745	349,222	34,065
Total	3,319,406	2,223,258	170,673	73,663	17,291	8,172,202	1,762,485
	I	NDUSTRIAI	DEPART	MENT.		·	
New South Wales	1,356,523	118,273	3,506	5,672			
Victoria	1,163,876			4,694			
Queensland(b)	442,305			1,832			
South Australia(c)	397,506	31,296	980	1,503			٠.
Western Australia	233,685	21,057	584	992			
Tasmania	95,846	8,001	259	375			
Australian Capital Ter-							l .
ritory	11,799	1,371	43	64	••		•••
Total	3,701,540	315,440	9,575	15,132	•••		

<sup>(</sup>a) Location of register of policies.
(c) Includes Northern Territory.

<sup>(</sup>b) Includes Territories of Papua and New Guinea.

The following table shows particulars of policies existing at the end of the years 1939 and 1952 to 1956 inclusive:—

LIFE ASSURANCE: POLICIES EXISTING IN AUSTRALIA.

			Assu	rance and En	dowment Pol	icies.	Annuity Policies.		
At I	End of Y	ear—	Number of Policies.	Sum Assured. (£'000.)	Average per Policy.	Annual Premiums. (£'000.)	Number of Policies.	Annuities per Annum. (£.)	
			<u> </u>		DEPARTMEN				
1939	•••	•••	1,243,378	427,291	344	(a) 13,954	3,826	384,584	
1952			2,731,284	1,378,474	505	47,634	16,240	5,587,112	
1953			2,892,842	1,552,706	537	53,186	16,971	5,975,783	
1954			3,033,250	1,741,160	574	59,593	16,965	6,267,828	
1955			3,183,644	1,970,750	619	66,551	17,135	7,198,873	
1956	••		3,319,406	2,223,258	670	73,663	17,291	8,172,202	
				Industrial	DEPARTME	NT.			
1939	•••		2,491,742	111,862	45	(a) 6,490	2	58	
1952			3,872,726	270,323	70	13,682	1	13	
1953			3,880,768	285,594	74	14,232			
1954			3,826,745	296,994	78	14,583			
1955			3,765,851	307,370	82	14,901			
1956			3,701,540	315,440	85	15,132			

<sup>(</sup>a) Annual premium income.

4. New Policies issued in Australia.—During 1956, 316,620 new policies for £372,436,000 were issued in the Ordinary Department. The average amount per policy was £1,176 as compared with an average of £619 per policy for all ordinary policies existing at the end of 1955.

In the Industrial Department, 211,411 new policies were issued during 1956, assuring £32,977,000. The average amount per policy was £156 as compared with an average of £82 per policy for all industrial policies existing at the end of 1955.

In the following table, details are given of new policies issued in each State and the Australian Capital Territory during 1956 for each class of business:—

LIFE ASSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1956.

		Assuran	ce and En	dowment	Policies.		Annuity	Policies.	
State or Territor	y.(a)	Number	Sum	Prem	iums.	Number		Prem	iums.
		of Policies.	Assured.	Single.	Annual.	of Policies.	ties per	Single.	Annual.
			(£'000.)	(£'000.)	(£'000.)		(£'000.)	(£'000.)	
			ORDINA	RY DEP	ARTMENT.				
New South Wales		121,641	121,639	205	4,084	399	490	129	111
Victoria		80,501	110,923	147	3,446	829	1,185	553	251
Queensland(b)		50,737	52,271	188	1,511	50 j	9	21	2
South Australia(c)		28,781	34,666	50	1,179	37	9 ]	22	2
Western Australia		20,703	23,289	26	788	51	14	7	3
Tasmania		12,461	14,783	7	468	40	16	13	5
Australian Capital	Terri-	1					- 1		
tory		1,796	14,865	2	170	186 ′	128	48	18
Total		316,620	372.436	625	11,646	1,592	1,851	793	392
			Industr	IAL DEP	ARTMENT				
New South Wales		87,085	13,780		660	1	1	•••	
Victoria		56,911	8,860		415				
Queensland(b)		27,499	4,036		192				
South Australia(c)		21,359	3,251		151	!		;	
Western Australia		12,761	2,029		93	[	!		
Tasmania		4,687	806		37	1			
Australian Capital	Terri-		1	,		- 1	1		
tory		1,109	215		10_				
Total		211,411	32,977		1,558	<del></del> 1			

<sup>(</sup>a) Location of register of policies. Northern Territory.

<sup>(</sup>b) Includes Papus and New Guines.

<sup>(</sup>c) Includes

New policies issued in Australia during each of the years 1939 and 1952 to 1956 were as shown in the following table:-

LIFE ASSURANCE: NEW POLICIES ISSUED IN AUSTRALIA.

		Assura	nce and En	dowment 1	Policies:	Annuity Policies.					
Ye	ar.	Number	Sum	Prem	iums.	Number	Annui-	Prem	iums.		
		of Policies.	Assured. (£'000.)	Single. (£'000.)	Annual. (£'000.)	of Policies.	ties per Annum. (£'000.)	Single. (£'000.)	Annual. (£'000.)		
			(	ORDINARY	DEPART	MENT.					
1939		142,157	48,263	(a)	(a)	420	87	(a)	(a)		
1952		298,797	233,186	365	8,240	2,602	1,741	600	418		
1953		300,295	252,080	518	8,765	1,724	968	552	224		
1954		297,468	278,504	489	9,773	1,389	939	639	232		
1955		314,545	335,473	541	11,003	1,619	1,599	773	386		
1956		316,620	372,436	625	11,646	1,592	1,851	793	392		
			In	NDUSTRIAL	DEPART	MENT.					
1939		385,498	18,542	(a)	(a)						
1952		270,391	34,367		1.579				١		
1953		260,948	34,570		1,592				١		
1954		236,936	33,407		1,541						
1955		216,896	33,175		1,532						
1956		211,411	32,977		1,558		i i				

<sup>(</sup>a) Not available.

LIFE ASSURANCE: POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA, 1956.

		Assuran	ce and End	lowment.		Annuity Poli	cies.
State or Territory.(a)		Number of Policies.	Sum Assured.	Annual Prem- iums. (£'000.)	Number of Policies.	Annuities per Annum.	Annual Prem- iums. (£'000.)
		Ordinary	( , , , , ,		<u></u>	(2000.)	(2 000.)
New South Wales		71,014	43,523	1,660	1 484	168	69
Victoria		47,363	35,537	1,306	569	650	144
Queensland(b)		27,883	18,423	574	23	4	1
South Australia(c)		14,476	10.234	396	41	3	
Western Australia		12,154	7,991	329	180	35	9
Tasmania		6,986	5,035	173	30	5	2 2
Australian Capital Territory		982	-815	96	109	13	2
Total		180,858	119,928	4,534	1,436	878	227
	I	NDUSTRIAL	. DEPART	MENT.			
New South Wales		106,388	10,047	533		· · i	···
Victoria		88,020	7,492	405			
Queensland( $b$ )		30,898	2,794	150		[	
South Australia( $c$ )		25,630	2,101	113			
Western Australia		17,863	1,716	87	• •	[	• •
Tasmania		6,681	693	36			
Australian Capital Territory		242	64	3		_ · · _ <u> </u>	
Total		275,722	24,907	1,327			· · ·

<sup>(</sup>a) Location of register of policies.

<sup>5.</sup> Policies Matured or Otherwise Discontinued in Australia.—The volume of business discontinued from various causes in each year is always large. In the following table, details are given of ordinary and industrial life assurance policies matured or otherwise discontinued in each State and the Australian Capital Territory during the year 1956.

<sup>(</sup>b) Includes Papua and New Guinea.

<sup>(</sup>c) Includes

Northern Territory.

Nore.—Minus sign (-) indicates excess of transfers to registers or other adjustment to number and

Policies matured or otherwise discontinued in Australia during each of the years 1939 and 1952 to 1956 were as shown in the following table.

LIFE ASSURANCE: POLICIES MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA.

		 	III AU	DIKALA					
			Assuran	ce and End Policies.	lowment	Ar	Annuity Policies.		
	Year.		Number of Policies.	Sum Assured.	Annual Prem- iums.	Number of Policies.	Annuities per Annum.	Annual Prem- iums.	
		 	<u> </u>	(£'000.)	(£'000.)		(£'000.)	(£'000.)	
		 	Ordinary	DEPART	MENT.				
1939		 	80,912	24,786	(a)	275	17	(a)	
1952		 	121,228	66,694	2,473	821	500	179	
1953		 	138,737	77,848	3,213	993	579	135·	
1954(b)		 	157,060	90,050	3,366	1,395	647	137	
1955		 	164,151	105,883	4,045	1,449	668	228	
1956		 	180,858	119,928	4,534	1,436	878	227	
		 I	NDUSTRIAI	DEPART	MENT.				
1939		 	262,096	12,132	(a)	1			
1952		 	240,381	17,638	967		·	l	
1953		 	252,906	19,299	1,042	1			
1954(b)		 	290,959	22,007	1,190	ļ	<u>'</u>		
1955(b)		 	277,790	22,799	1,214		1		
1956		 	275,722	24,907	1,327	j	١		

(a) Not available. (b) Includes policies in existence at beginning of year which were discontinued as a result of the winding up of two companies.

The number of policies and sums assured, excluding annuities, discontinued during the years 1939 and 1952 to 1956 and the cause for discontinuance are given in the following table:—

LIFE ASSURANCE: POLICIES(a) MATURED OR OTHERWISE DISCONTINUED IN AUSTRALIA—CAUSE OF DISCONTINUANCE.

	-	ear.		Death or Maturity.	Surrender.	Forfeiture.	Other.	Total.
		ORE	INARY	DEPARTMEN	ит: Пимве	R OF POLIC	IES.	
1939		••		22,529	18,409	39,382	- 128	80,192
1952				39,150	48,879	33,734	- 535	121,228
1953				40,836	53,064	37,027	7,810	138,737
1954				45,386	62,238		(b) 8,149	157,060
1955				48,224	67,929	42,941	5,057	164,151
1956				52,876	72,659	44,073	11,250	180,858
		Ordi	NARY D	EPARTMENT	: SUM ASS	URED. (£'0	00.)	
1939		•••		5,612	5,863	13,414	- 103	24,786
1952			••	12,044	28,824	21,458	4,368	66,694
1953				13,107	34,026	25,792	4,923	77,848
954				14,904	41,344	28,770	(b) 5,032	90,050
1955				16,012	50,065	35,467	4,339	105,883
1956				18,042	53,378	37,766	10,742	119,928
		Indt	JSTRIAL	DEPARTMEN	т: Нимве	R OF POLIC	IES.	
1939	• • •			73,585	33,766	154,328	417	262,096
1952		• •		136,117	43,769	60,402	93	240,381
1953				146,134	51,044	55,289	439	252,906
1954				157,150	51,917	59,828	(b) 22,064	290,959
1955			+	167,060	54,895	54,922	(b) 913	277,790
1956				171,748	60,531	61,276	17,833	275,722
		Indus	TRIAL D	EPARTMENT	: SUM AS	SURED. (£'	000.)	
1939				2,759	1,372	7,976	25	12,132
1952				5,728	3,914	7,983	13	17,638
1953				6,285	5,383	7,569	62	19,299
1954				6,849	5,877	8,484	(b) 797	22,007
1955				7,517	6,574	8,675	(b) 33	22,799
1956				7,944	7,828	9,994	859	24,907

(a) Excludes annuities. (b) See note (b) to previous table.

Note.—Minus sign (-) indicates excess of transfers to registers or other adjustment to number and value of policies.

6. Premiums and Claims, Australia.—(i) Premiums. (a) Ordinary Business. Details of revenue from premiums in respect of the ordinary business of all offices doing business in Australia are shown in the following tables for each State and the Australian Capital Territory for the year 1956:—

# ORDINARY LIFE ASSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS, 1956. (£'000.)

		nce and t Premiums.	Consider Ann	T-1-1	
State or Territory.(a)	Single Premiums.	Other Premiums.	Single Premiums.	Other Premiums.	Total.
New South Wales	216	25,910	133	608	26,867
Victoria	167	21,879	513	1,186	23,745
Queensland(b)	123	10,199	21	26	10,369
South Australia(c)	50	7,172	22	21	7,265
Western Australia	27	4,912	5	28	4,972
Tasmania	6	2,468	13	29	2,516
Australian Capital Territory	1	1,283	48	47	1,379
Total	590	73,823	755	1,945	77,113

<sup>(</sup>a) Location of register of policies. (c) Includes Northern Territory.

(b) Industrial Business. Details of revenue from premiums in respect of the industrial business of all offices doing business in Australia are shown in the following table for each State and the Australian Capital Territory for the year 1956:—

#### INDUSTRIAL LIFE ASSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS, 1956. (£'000.)

Carlo - To			Assurance and End	owment Premiums.	Total.	
State or Terr	itory.(a)	:	Single Premiums.	Other Premiums.	I otai.	
New South Wales	•••	i	3	5,651	5,654	
Victoria		!	2	4,685	4,687	
Queensland				1,806	1,806	
South Australia				1,484	1,484	
Western Australia			1	990	991	
Tasmania			• •	374	374	
Australian Capital T	erritory	:		6	6	
Total		;	6	14,996	15,002	

<sup>(</sup>a) Location of register of policies.

(c) Ordinary and Industrial Business. The following table shows, for each of the years 1939 and 1952 to 1956, the aggregate Australian income from premiums in respect of both ordinary and industrial business of all offices doing business in Australia:—

LIFE ASSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS. (£'000.)

			Ordi	nary Departm		Ordinary	
	Ye	ear.	Assurance and Endowment Premiums.	Considera- tion for Annuities.	Total.	Industrial Department.	and Industrial Depart- ments Combined.
1939	•••		 13,954	184	14,138	6,490	20,628
1952			 47,091	1,870	48,961	13,379	62,340
1953			 53,114	2,029	55,143	13,888	69.031
1954			 59,761	2,178	61,939	14,285	76,224
1955		٠.	 66,811	2,529	69,340	14,614	83,954
1956			 74,413	2,700	77,113	15,002	92,115

<sup>(</sup>b) Includes Territories of Papua and New Guinea.

(ii) Claims, etc., Paid. Details of the claims, etc., paid on policies in each State and the Australian Capital Territory during the year 1956 are shown in the following table:—

LIFE ASSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1956.
(£'000.)

·				. 000.)				
			Cla	ims.				
State or Terr	itory.(a)		Death or Disability	Maturity.	Sur- renders.	Annuities.	Cash Bonuses.	Total.
		(	ORDINARY	DEPARTM	IENT.		·	
New South Wales			4,185	3,870	2,723	171	70	11,019
Victoria			3,409	3,765	2,295	201	62	9,732
Queensland(b)			1,706	1,500	843	23	18	4,090
South Australia(c)			939	913	492	28	13	2,385
Western Australia	• •		785	574	416	18	14	1,807
Tasmania			294	308	213	16	2	833
Australian Capital	Territory		85	103	141	15	1	345
Total	• •		11,403	11,033	7,123	472	180	30,211
		I	NDUSTRIAL	DEPART	MENT.			
New South Wales			361	2,961	511		)	3,833
Victoria			268	2,748	367	] ]		3,383
Queensland(b)			111	849	154			1,114
South Australia(c)			93	682	107			882
Western Australia			57	414	98			569
Tasmania			16	205	33			254
Australian Capital	Territory			2			• • •	2
Total			906	7,861	1,270			10,037

<sup>(</sup>a) Location of register of policies.

Northern Territory.

In the following table details are given of claims, etc., paid on policies in Australia for each of the years 1939 and 1952 to 1956:—

LIFE ASSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA. (£'000.)

	Y	ear.		Claims.	Surrenders.	Annuities.	Cash Bonuses.	Total.
			·	ORDINARY	DEPARTMEN	т.		
1939				7,935	1,843	220	260	10,258
1952				15,576	3,287	379	107	19,349
1953				16,739	3,982	391	126	21,238
1954				18,854	4,938	404	129	24,325
1955				20,105	6,109	430	218	26,862
1956	••	••		22,436	7,123	472	180	30,211
				Industrial	DEPARTMEN	VT.	<u> </u>	
1939	••	••		3,132	499		!	3,631
1952				6,284	772			7,056
1953				6,879	927	:		7,806
1954				7,527	972	;		8,499
1955				8,311	1,056			9,367
1956				8,767	1,270	!		10,037

<sup>(</sup>b) Includes Papua and New Guinea.

<sup>(</sup>c) Includes

7. Total Revenue and Expenditure.—(i) Total Revenue. The following table shows particulars of the total life assurance revenue derived by life assurance offices from sources within and beyond Australia during each of the years 1939 and 1952 to 1956:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL REVENUE. (£'000.)

			· · · · · · · · · · · · · · · · · · ·	000.7									
Year.			Assurance and Endowment Premiums.	Consideration for Annuities Granted.  Interest, Dividends and Rents.		All other Revenue.	Total Revenue.						
ORDINARY BUSINESS.													
			21,568	303	9,901	17	31,789						
			64,980	2,372	20,175	106	87,633						
			72,389	2,614	22,508	2.545	100,056						
						676	109,880						
			89,353	3,240	29,196	548	122,337						
• •			98,689	3,488	33,557	416	136,150						
			Industri	AL BUSINESS	J (								
••	••		7,863	••	2,127	61	10,051						
			15,437		4,120	26	19,583						
			15,975		4,415	603	20,993						
			16,402		4,812	219	21,433						
••			16,757		5,195	179	22,131						
			17,174		5,637	28	22,839						
				Assurance   Endowment   Premiums.	Year.   Assurance and Endowment Premiums.   Sideration for Annuities Granted.	Year.   Assurance   Consideration for Annuities Granted.   Dividends and Rents.   Granted.   Dividends and Rents	Year.   Assurance Endowment Premiums.   Consideration for Annuities Granted.   Dividends and Rents.   All other Revenue.						

<sup>(</sup>a) Gross includes taxes thereon and rates.

### ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL EXPENDITURE. (£'000.)

		\-	. 000.)				
Year.	Claims and Annuities paid.	Surren- ders.	Cash Bonuses paid to Policy- holders.	Com- mission.	Transfers to Profit and Loss Account including Share- holders' Dividends.	All other Expendi- ture.(a)	Total Expendi- ture.
	 	ORDINA	RY BUSIN	ESS.			
••	 12,320	2,668	380	1,483	125	3,867	20,843
	 24.034	4.691	161	5,479	120	10,355	44,840
				5,964	122	11,793	49,598
			178				54,254
			280				59,280
	 33,233	9,506	267	7,968	165	13,509	64,648
· · · · · · · · · · · · · · · · · · ·	 	Industr	IAL BUSIN	ESS.	I		
	 3,763	576		1,619	72	1,278	7,308
	 7.594	878		2.405	75	3,030	13,982
					130	3,978	15,930
				2,399	88	3,408	16,115
• •					28		16,955
••	 10,490	1,417	• • •	2,515	65	3,430	17,917
	 	Year. and Annuities paid.	Year. Claims and Annuities paid.  ORDINAL	Claims and Annuities paid.   Surrenders.   Cash Bonuses paid to Policyholders.	Year.         Claims and Annuities paid.         Surrenders.         Cash Bonuses paid to Policy-holders.         Commission.           ORDINARY BUSINESS.           .         12,320         2,668         380         1,483           .         24,034         4,691         161         5,479           .         25,905         5,636         178         5,964           .         28,772         6,739         178         6,724           .         30,398         8,187         280         7,419           .         33,233         9,506         267         7,968           INDUSTRIAL BUSINESS.           .         3,763         576         .         1,619           .         7,594         878         .         2,405           .         8,348         1,053         .         2,421           .         9,124         1,096         .         2,399           .         9,994         1,185         .         2,406	Year.         Claims and Annuities paid.         Surrenders. Policyholders.         Cash Bonuses paid to Policyholders.         Commission.         Industrial Bounders Policyholders         Commission.         Industrial Business           .         12,320         2,668         380         1,483         125           .         24,034         4,691         161         5,479         120           .         25,905         5,636         178         5,964         122           .         28,772         6,739         178         6,724         132           .         30,398         8,187         280         7,419         173           .         33,233         9,506         267         7,968         165           Industrial Business.           .         3,763         576         .         1,619         72           .         3,348         1,053         .         2,405         75           .         8,348         1,053         .         2,421         130           .         9,124         1,096         .         2,399         88           .         9,994         1,185         2,406         28	Year.         Claims and Annuities paid.         Surrenders. paid to expendicy holders.         Composition of policy holders.         Composition of policy holders.         Composition of policy holders.         Transfers to profit and Loss Account including Shareholders' Dividends.         All other Expendiculation.            12,320         2,668         380         1,483         125         3,867            24,034         4,691         161         5,479         120         10,355            25,905         5,636         178         5,964         122         11,709            28,772         6,739         178         6,724         132         11,709            30,398         8,187         280         7,419         173         12,823            33,233         9,506         267         7,968         165         13,509           INDUSTRIAL BUSINESS.            3,763         576          1,619         72         1,278            7,594         878          2,405         75         3,030            8,348         1,053          2,421         130         3,978<

<sup>(</sup>a) Includes other expenses of management, licence fees, rates and taxes, etc.

<sup>(</sup>ii) Total Expenditure. The next table supplies details of the total expenditure, both within and beyond Australia, of life assurance offices during each of the years 1939 and 1952 to 1956:—

- 8. Liabilities and Assets.—(i) General. The liabilities of the Australian offices consist mainly of their assurance funds, but in the case of public companies there is a further liability on account of the shareholders' capital. The assets consist chiefly of government and municipal securities, mortgages, loans on policies, landed and house property, etc. Loans on personal security are granted by very few of the Australian offices. Separate details of liabilities and assets in respect of Australian business are not available.
- (ii) Total Liabilities and Assets. In the two tables which follow, the details of liabilities and assets relate to all business (Australian and overseas) of Australian companies, the life assurance business of the two State Government offices, all business of the Provident Life Assurance Co. Ltd. (incorporated in New Zealand) and the Australian business only of the Prudential Assurance Co. Ltd. (incorporated in England). For various reasons several offices do not attempt the dissection of liabilities and assets between the industrial and ordinary branches, and, therefore, the figures in the following tables relate to the ordinary and industrial branches combined. Details of the total liabilities of life assurance offices for the year 1956 are given in the following table:—

ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL LIABILITIES, 1956. (£'000.)

	Item.				Life Assurance Business.	Other Classes of Business.	Total Liabilities.
Shareholders' Capital-							
Authorized					••	5,278	5,278
Less Unissued						2,597	2,597
Subscribed Capital						2,681	2,681
Paid-up—							
In Money						2,311	2,311
Otherwise than in M	loney					79	79
Total					••	2,390	2,390
Life Assurance Statutory	Funds-	_					
Ordinary Department					768,366		768,366
Industrial Department					129,060		129,060
Total					897,426		897,426
Funds in respect of Othe	r Classe	s of Bu	siness			1,399	1,399
General Reserves					18,427	1,993	20,420
Profit and Loss Account	Balance	e				244	244
Total, Sharehola	lers' Ca	pital, A	ssurance	Funds			
and Reserves					915,853	6,026	921,879
Other Liabilities				ļ			
				[	3,335	2,868	6,203
Staff Provident and Su	регаппи	ation F	unds		267	320	587
Claims admitted or int	imated	but not	paid		10,414	220	10,634
Annuities due but not	paid				4		4
Premiums Paid in Adva	ance an	d in Sus	spense		964	13	977
Sundry Creditors	• •		• •		3,299	277	3,576
	··	• • •	• •	• • [	2,402	1,007	3,409
Reserves and Provision	s for Ta	axation	• •		4,240	184	4,424
All Other Liabilities	• •	• •	• •	• •	630	7	637
Total Liabilities		••			941,408	10,922	952,330

The following table furnishes details of the total assets of life assurance offices for the year 1956.

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ORDINARY AND INDUSTRIAL LIFE ASSURANCE: TOTAL ASSETS, 1956. (£'000.)

Item.	Life Assurance Business.	Other Classes of Business.	Total.	Amount of Total Assets held in Australia.
Freehold and leasehold property, office	40.550	505	44 104	21.116
premises, furniture, etc	40,568	626	41,194	31,115
Loans-				
On Mortgage	307,646	158	307,804	230,688
On Policies of the Company including	ŀ	1		
Advances of Premiums	39,335	]	39,335	29,315
Other Loans	27,224	851	28,075	27,663
Total Loans	374,205	1,009	375,214	287,666
Investments				
Government Securities—				
Australia	215,501	6,246	221,747	210,782
Other	49,991	105	50,096	
Securities of Local and Semi-Govern-				
mental Bodies	149,983	199	150,182	115,541
Other Investments	94,924	1,946	96,870	80,961
Total Investments	510,399	8,496	518,895	407,284
Cash on Deposit, Current Account and in				
hand	1,670	132	1,802	1,626
Other Assets	14,566	659	15,225	11,796
Total Assets	941,408	10,922	952,330	739,487

<sup>(</sup>iii) Assets held in Australia. Details of assets held in Australia for the years 1939 and 1952 to 1956 are set out in the following table:-

#### ORDINARY AND INDUSTRIAL LIFE ASSURANCE(a): ASSETS HELD IN AUSTRALIA.

(£'000.)

Particulars.	1939. (b)	1952.	1953.	1954.	1955.	1956.
Landed and house property	12,823	15,776	16,840	18,060	22,345	30,290
Government and municipal sec-				Ì		
urities	115,712	271,892	301,254	320,754	320,471	326,323
Other investments	6,700	48,218	51,885	58,173	71,756	80,961
Loans on mortgages	61,720	136,006	149,507	165,555	197,710	230,688
Loans on companies' policies	22,445	20,580	21,745	23,096	25,661	29,315
Other loans	(c)	19,998	22,008	22,085	23,923	27,663
All other assets	8,116	12,128	11,685	12,609	13,958	14,247
Total Assets held in Australia	227,516	524,598	574,924	620,332	675,824	739,487

<sup>(</sup>a) Life assurance and other classes of business. (b) Australian assets. other investments.

<sup>(</sup>c) Included with

<sup>9.</sup> Loans.—In the following table, details are given of new loans granted by life assurance companies during each of the years ended 31st December, 1953 to 1957. The information has been compiled from monthly returns furnished by each company. New loans granted by the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office are not included. Advances of premiums are also excluded.

# LIFE ASSURANCE COMPANIES: NEW LOANS GRANTED. (£'000.)

Particulars.	1953.	1954.	1955.	1956.	1957.
	CLASS OF	SECURITY.	<u> </u>		
Mortgage of Real Estate	26,859	33,216	50,081	47,707	48,969
Companies' Policies	3,477	3,725	4,793	5,903	6,334
Other	3,967	4,113	3,415	4,250	4,431
Total	34,303	41,054	58,289	57,860	59,734
	STATE OR T	erritory.(a	)		
New South Wales	18,633	17,699	25,884	22,542	26,454
Victoria	9,638	12,196	17,534	20,121	17,115
Queensland(b)	1,841	4,158	3,400	4,548	4,696
South Australia(c)	1,754	2,765	4,800	4,698	5,724
Western Australia	1,694	3,005	4,581	3,550	3,318
Tasmania	731	1,176	2,018	2,324	2,334
Australian Capital Territory	12	55	72	77	93
·					

(a) State or Territory of location of mortgage, registration of policy, or residence of borrower.

(b) Includes Papua and New Guinea.

(c) Includes Northern Territory.

#### § 3. Fire. Marine and General Insurance.

1. General.—The following statistics which are in respect of the Australian business of companies operating in Australia and State Government insurance offices, conform to the following definitions and should be interpreted in accordance therewith.

(a) Premiums represent the full amount receivable in respect of policies issued and renewed in the year, less returns, rebates and bonuses paid or credited to policy-holders during the year. They are not adjusted to provide for premiums unearned at the end of the year and consequently the amounts differ from "earned premium income" appropriate to the year. When business is increasing, as in recent years, premiums receivable (as shown in the statistics) are greater than "earned premium income" appropriate to the year. The converse applies when business is declining.

(b) Claims or losses include provision for outstanding claims and represent claims or losses incurred in the year. Salvage and other amounts recoverable have been deducted.

(c) Contributions to Fire Brigades, Commission and Agents' Charges, and Expenses of Management represent mainly charges paid during the year.

(d) Taxation represents mainly payments made during the year, and includes income tax, pay-roll tax, licence fees, stamp duty (where paid by the company), etc. Income tax paid during the year is based on the income of earlier years.

The tables contain selected items of statistics and the information shown is not suitable for the construction of a "profit and loss" statement or "revenue" account.

In cases where the business is underwritten in one State and the risk is situated in another the business is included in the State in which the policy was issued.

During 1956-57, revenue from premiums amounted to £138,111,000 and that from net interest on investments, etc., to £5,052,000, a total of £143,163,000. Expenditure on claims amounted to £82,577,000, contributions to fire brigades £3,562,000, commission and agents charges £13,862,000, expenses of management £22,465,000 and taxation £4,992,000, a total of £127,458,000.

2. States.—The following table shows, for each State, the aggregate premium income less reinsurances and returns, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1938-39 and 1952-53 to 1956-57.

FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS—STATES (£'000.)

State.			1938-39.	1952-53.	1953–54.	1954–55.	1955–56.	1956–57.
G	ROSS	PREMIUM	is, Less F	REINSURAN	ICES AND	RETURNS		
New South Wales(a)	·		6,943	35,130	38,381	42,696	48,726	53,050
Victoria			4,505	28,215	30,775	33,946	39,110	45,583
Queensland			2,327	10,733	12,016	13,801	15,377	16,702
South Australia			1,245	7,275	8,041	9,115	10,244	11,836
Western Australia			1,373	5,779	6,224	6,854	7,362	7,585
Tasmania			457	2,214	2,547	2,813	3,151	3,355
Total			16,850	89,346	97,984	109,225	123,970	138,111
GRO	OSS (	CLAIMS O	R Losses,	Less Am	OUNTS RI	COVERABI	E.	
New South Wales(a)			3,842	17,848	20,981	23,302	28,888	32,753
Victoria			2,194	15,208	16,709	20,303	23,081	26,542
Queensland			1 071	5,650	5,981	8,234	8,717	10,707
South Australia			487	3,021	4,835	6,402	5,441	6,208
Western Australia			731	3,085	3,078	3,671	4,064	4,723
Tasmania '			204	953	1,084	1,372	1,655	1,644
Total			8,529	45,765	52,668	63,284	71,846	82,577

<sup>(</sup>a) From 1947-48 excludes Workers' Compensation Insurance in coal-mining industry in New South Wales.

3. Classes of Insurance.—The following statement shows premiums and claims in respect of the principal classes of risks, for the years 1938-39 and 1952-53 to 1956-57:—

FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS—PRINCIPAL CLASSES OF RISK, AUSTRALIA.

(£'000.)

Class of Risk.		1938–39.	1952–53.	1953–54.	1954–55.	1955-56.	1956-57
GROSS PRI	MIUN	is, Less F	REINSURAN	ICES AND	RETURNS		···
Fire		5,597	21,366	22,170	23,603	25,807	27,919
Workers' Compensation(a)		4,361	19,310	20,279	22,133	25,660	28,976
Motor Vehicle—		· ·	,	1	}	]	
Compulsory Third Party		7 2 240	7,106	8,496	10,480	12,789	14,772
Other		3,848	21,934	25,805	29,409	32,659	37,851
Marine		1,018	5,940	6,056	6,637	7,179	6,916
Personal Accident		554	2,184	2,479	2,911	3,391	3,990
All other		1,472	11,506	12,699	14,052	16,485	17,687
Total		16,850	89,346	97,984	109,225	123,970	138,111
GROSS CLAI	MS O	R Losses,	Less Am	ounts Ri	COVERABI	.е.	.,
Fire		2,223	6,731	5,842	6,859	7,191	9.037
Workers' Compensation(a)		2,972	10,934	14,542	18,641	20,383	23,515
Motor Vehicle—		1	1				
Compulsory Third Party		7 224	7,007	9,525	10,538	12,131	13,755
Other		2,324	13,436	13,950	17,239	21,924	25,452
Marine		243	3,420	2,263	2,706	2,878	3,130
		264	741	912	1,075	1,295	1,700
Personal Accident				l			
Personal Accident All other	• • •	503	3,496	5,634	6,226	6,044	5,988

<sup>(</sup>a) From 1947-48 excludes Workers' Compensation in coal-mining industry in New South Wales.

The volume of business measured by the amount of premium income shows that fire insurance represented 20.8 per cent. during 1955-56 and 20.2 per cent. during 1956-57, workers' compensation 20.7 per cent. during 1955-56 and 21.0 per cent. during 1956-57, motor vehicles (including compulsory third party insurance) 36.7 per cent. in 1955-56 and 37.8 per cent. in 1956-57, and marine insurance 5.8 per cent. in 1955-56 and 5.0 per cent. in 1956-57.

#### E. RETAIL HIRE PURCHASE OPERATIONS OF FINANCE BUSINESSES.

1. General.—Information relating to hire purchase operations in Australia is given in the following tables. Information in more detail may be found in the annual bulletin—Finance, and in monthly bulletins relating to hire purchase operations.

The statistics (the collection of which commenced in 1953) relate to businesses which finance the retail sale of goods, but do not retail goods themselves. These businesses cover public and private companies, partnerships, banks and other finance businesses. Businesses which finance hire purchase exclusively for their own employees are not included. All types of goods sold to final purchasers are included whether producer goods (such as plant and machinery) or consumer goods.

2. New Retail Agreements 1956-57.—Details of new retail agreements made during the year ended 30th June, 1957, are given in the following table.

### HIRE PURCHASE FINANCE COMPANIES: NEW RETAIL AGREEMENTS—STATES.

YEAR E	NDED	30th	JUNE.	1957.
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ŀ	Nu	mber of	Agreeme	ents.	Value of Goods. (£'000.)(a)				Amount Financed. (£'000.)(b)			
State.	Motor Veh- icles, Trac- tors, etc.(c)	Plant and Mach- inery. (d)	House-hold and Personal Goods.	Total.	Motor Veh- icles, Trac- tors, etc.(c)	Plant and Mach- inery. (d)	House- hold and Per- sonal Goods. (e)	Total.	Motor Veh- icles, Trac- tors, etc.(c)	Plant and Mach- inery. (d)	House- hold and Per- sonal Goods. (e)	Total.
N.S.W.(f) Vic Qld S.A.(g) W.A	107,306 81,730 53,684 38,636 20,790 14,260	5,529 5,445 2,219 1,385	157,857 133,344 61,147 60,417	82,592	59,133 37,402 26,780 13,523	3,739 2,231 1,813 963	15,007 8,044 5,114 4,338	77,879 47,677 33,707 18,824	37,069 22,395 15,990 8,326	2,371 1,412 1,020 604	12,075 6,269 4,214 3,522	51,515 30,076 21,224 12,452
Aust	316,406	23,034	688,733	1028173	224,546	14,739	53,287	292,572	136,628	9,223	42,746	188,597

<sup>(</sup>a) Value at net cash or list price (excluding hiring charges and insurance). (b) Excludes hiring charges and insurance. (c) Includes new and used motor cars, motor cycles, commercial vehicles, tractors, caravans, motor:parts and accessories. (d) Includes farm machinery and implements, earthmoving equipment, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), etc. (e) Includes furniture and furnishings, domestic refrigerators, electrical goods, radios, musical instruments, bicycles and other household and personal goods. (f) Includes Australian Capital Territory. (g) Includes Northern Territory.

3. Balances outstanding on Retail Agreements at 30th June,—Details of the balances outstanding on retail agreements at 30th June, 1953 to 1957, are given below:—

### HIRE PURCHASE FINANCE COMPANIES: BALANCES OUTSTANDING ON RETAIL AGREEMENTS—STATES.

(Including Hiring Charges and Insurance.) (£'000.)

As at 30th Ju	ine—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
1953 (c) 1954 1955 1956 1957	:: :: ::	35,246 50,883 69,240 79,176 85,412	20,052 30,806 44,590 56,025 64,042	15,087 22,385 29,067 32,046 36,551	8,532 13,318 18,416 21,412 25,038	6,765 10,154 14,151 15,388 15,488	3,108 4,772 7,012 8,163 9,010	88,790 132,318 182,476 212,210 235,541

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Excludes balances outstanding on agreements originally financed by retailers but subsequently assigned to finance companies. At 31st March, 1954, these balances amounted to less than £1 million in Australia.

#### F. CAPITAL RAISINGS BY AUSTRALIAN COMPANIES.

1. General.—Information relating to capital raised by companies in Australia is given in the following tables. More detailed information may be found in the annual bulletin—Finance, Part I., and in quarterly bulletins dealing with capital raisings.

The statistics (the collection of which commenced in July, 1954) relate to capital raised by companies through issues of shares, and, in the case of listed companies, through the issue of debentures, notes and similar securities and the acceptance of deposits and, in the case of unlisted companies, by way of loans secured over the entire assets of the company. Capital obtained by way of bank overdraft, trade credit, temporary advances, and loans secured over part only of the assets of the company is not included, and, in the case of unlisted companies, capital raised through loans not secured over any of the assets of the company is excluded.

Separate statistics are given for listed and unlisted companies. Listed companies are companies incorporated in Australia or the Australian territories and listed on one or more of the Australian stock exchanges. All other companies incorporated in Australia, including subsidiaries of listed companies, are classified as unlisted companies. Companies incorporated overseas, whether listed on an Australian stock exchange or not, are excluded from the statistics of share issues. However, subsidiaries of oversea companies if incorporated in Australia, are included. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits includes, in addition to capital raised by Australian companies, capital raised in this way from Australian sources by oversea public companies through their Australian offices.

The following are explanatory notes relating to some of the items shown in the tables:—

New Money. This is the net amount of cash transferred from the investing public to the companies. For this purpose the investing public includes banks, life insurance companies and government and private superannuation funds but excludes other Government agencies. Subscriptions by associated companies, whether local or overseas, are excluded. In the tables which follow, the amount of new money is obtained by deducting from the total cash raised the "amount not involving a net transfer of funds from the investing public."

Amounts not involving new money. These amounts include cash subscriptions received by issuing companies from associated companies. Such subscriptions represent intercompany transfers only, and do not involve a receipt of funds from the "investing public". Also included are amounts which, although subscribed by the "investing public" (i.e. subscribers other than "associated companies"), are not retained by the issuing company or its associates, but are used to redeem shares, debentures or unsecured notes, etc., or are used to purchase, from individuals, existing shares, debentures, etc., in other companies, including existing shares, etc., in associated and subsidiary companies. The funds used in this way are thus returned to another section of the "investing public", and do not represent a net transfer of cash from the "investing public" to the companies. (Besides these purchases of existing shares, etc., from individuals, purchases of existing shares, etc., from companies other than associates of the issuing company might also be included in this item, but the amounts involved are small and separate details have not been collected.)

2. Listed Companies (a).—Details of New Capital raised through issues of shares, debentures, or registered notes or accepting deposits for each of the years 1954-55 to 1956-57 are given in the following table.

LISTED AUSTRALIAN COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES, DEBENTURES, OR REGISTERED NOTES, ETC.(b) OR ACCEPTING DEPOSITS(c).

(f million)

	.,				Debentures, Registered Notes and Deposits.					
Year.		Value of Issues Com- menced.	Non- Cash Issues Com- menced. (d)	Cash Issues Com- menced.	Cash Raised During Period. (e)	Amounts Not In- volving New Money.	New Money.	Total Amount Raised. (f)	Amounts Not Involving New Money. (f)	New Money.
1954–55 1955–56 1956–57	::	113.5 104.7 110.4	40.1 35.7 57.7	73.4 69.0 52.7	68.1 68.0 51.0	8.4 8.8 7.3	59.7 59.2 43.7	63.9 119.8 143.7	36.4 69.8 92.3	27.5 50.0 51.4

(a) Includes companies incorporated in the Australian Territories. (b) Includes convertible notes. (c) Deposits accepted by banks, life assurance companies, pastoral companies and building societies are not included. (d) Includes bonus issues, conversion issues in exchange for existing shares, etc. (e) Amounts paid up on issues commenced during the year plus calls on issues commenced in earlier years. (f) Includes non-cash issues.

3. Unlisted Companies.—Details of new capital raised by unlisted companies through issues of shares and loans secured by charges over the companies' entire assets are given in the following table for each of the years 1954-55 to 1956-57.

# UNLISTED COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES' ENTIRE ASSETS.

(£ million.)

				Loans secured by charges over the Companies' Entire Assets.						
Year.		Value of Issues Com- menced.	Non- Cash Issues Com- menced. (b)	Cash Issues Com- menced.	Cash Raised During Period. (c)	Amounts Not In- volving New Money.	New Money.	Total Amount	Amounts Not Involving New Money. (d)	New Money.
1954–55 1955–56 1956–57	::	131.7 144.8 130.1	34.2 54.7 56.6	97.5 90.1 73.5	87.2 86.2 69.9	55.4 57.2 41.8	31.8 29.0 28.1	7.0 7.7 6.1	2.5 1.9 1.9	4.5 5.8 4.2

 <sup>(</sup>a) Excludes companies incorporated in the Northern Territory and Australian External Territories.
 (b) Includes bonus issues, conversion issues, issues in exchange for existing shares, etc.
 (c) Amounts paid up on issues commenced during year plus calls on issues commenced in previous years.
 (d) Includes non-cash issues.

4. Listed and Unlisted Companies.—A summary of new money raised by listed and unlisted companies during each of the years 1954-55 to 1956-57 as shown in the preceding tables is given below.

LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED. (£ million.)

		Lis	ted Compan	ies.	Unli	nies.		
Year.		Share Capital.	Debentures Registered Notes and Deposits, etc.	Total.	Share Capital.	Loans Secured by Charges over the Companies' Entire Assets.		Grand Total.
1954–55 1955–56 1956–57	 	59.7 59.2 43.7	27.5 50.0 51.4	87.2 109.2 95.1	31.8 29.0 28.1	4.5 5.8 4.2	36.3 34.8 32.3	123.5 144.0 127.4

#### G. FRIENDLY SOCIETIES.

- 1. General.—The total membership of friendly societies in Australia is just over 500,000 but as certain benefits, such as medical attendance and free medicines, and in many cases funeral expenses, are granted to members' families as well as to members themselves, this figure must be more than doubled to arrive at an estimate of the number of persons who receive some direct benefit from these societies, even when due allowance is made for young and unmarried members. Legislation has conferred certain privileges on friendly societies, but, on the other hand, it insists on their registration, and it is the duty of the Registrars in the various States, prior to registering a new society, to see that its proposed rules conform to the law, and that the scale of contribution is sufficient to provide the promised benefits. Societies are obliged to forward to the Registrar annual returns about their membership and their finances, and reports are published in most of the States dealing with the returns received.
- 2. Societies, Members and Revenue.—The following table sets out the number of societies, members, etc., and revenue and expenditure and funds of registered societies for the year 1954-55. More detailed information is available in *Finance*, *Part I.*, Bulletin No. 47.

#### FRIENDLY SOCIETIES(a): 1954-55.

Particulars.	New South Wales. (b)	Victoria.	Queens- land.	South Aus- tralia.	Western Aus- tralia.	Tas- mania. (c)	Total.
	No.	No.	No.	No.	No.	No.	No.
Registered Societies	38	151	23	15	13	20	
Branches	2,130	1,325	513	676	282	145	5,071
Benefit members at end of year	162,735	174,406	54,588	59,149	22,585	17,569	491,032
Average benefit members during year	166,496	176,013	55,407	60,247	22,932	17,899	498,994
Members who received sick pay	(d)	36,268	9,878	12,645	4,088	2,234	(d)
Total weeks sick pay granted	(d)	474,184	123,861	177,838	57,036	29,934	(d)
Average weeks per member sick	(d)	13.1	12.5	14.1	13.9	13.4	(d)
Deaths of benefit members	(d)	2,530	1,000	1,054	337	311	(d)
Proportion of deaths per 1,000 mem-						1	
bers (average)	(d)	14.4	18.1	17.5	14.7	17.4	(d)
Revenue-	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Entrance fees, levies and members'	ì		l	i		l	1
contributions	1,790	1,443	410	543	367	78	4,631
Interest, dividends and rents	312	365	} 126	∫ 180	45	28	} 1,407
All other revenue	154	53	120	19	81	44	1,40
Total	2,256	1,861	536	742	493	150	6,038
Expenditure—							
Sick pay	226	276	82	87	27	16	714
Medical attendance and medicine	1,019	667	173	247	280	40	2,426
Sums payable at death	132	67	48	54	18	22	341
Administration	459	352	121	135	51	36	1,154
All other expenditure	59	162		93	8	23	345
Total	1,895	1,524	424	616	384	137	4,980
Total Funds	8,005	9,682	3,078	4,395	1,343	706	27,209

<sup>(</sup>a) Excludes juvenile branches, dispensaries, medical institutes and certain miscellaneous societies. Receipts and payments of subsidy under the Commonwealth medical and hospital benefit schemes are excluded. (b) Includes Australian Capital Territory. (c) Year 1955. (d) Not available.

#### H. PROBATES AND LETTERS OF ADMINISTRATION.

The following particulars give some idea of the number and value of estates of deceased persons in each State for the latest year for which information is available. Owing to differences in legislation in the various States, the figures are not entirely comparable.

#### PROBATES AND LETTERS OF ADMINISTRATION.

Particu	ılars.		New South Wales. 1955-56. (a)	Victoria. 1955.	Queens- land. 1954–55.	South Australia. 1955.	Western Australia. 1955.	Tasmania. 1955. (b)
Probates-								
Estates		No.	18,757	9;660	1,931	2,754	2,158	1,053
Gross Value		£.000	(c)	65,906	17,259	17,168	11,587	6,400
Net Value		£'000	91,728	62,100	(c)	16,066	10,582	5,954
Letters of Admi .:	tration	_	· '	1	l ',	'		
Estates		No.	(c)	2,489	279	830	351	145
Gross Value		£'000	(c)	(c)	893	1,647	1,288	360
Net Value		£'000	(c)	(c)	(c)	1,478	1,100	337
Total—			(-)	7		.,	., .,	l
Estates		No.	18,757	12,149	2,210	3,584	2,509	1,198
Gross Value		£'000	(a)	65,906	18,152	18,815	12,876	6,760
Net Value		£'000	91,728	62,100	(c)	17,544	11,682	6,291

<sup>(</sup>a) Total estates of deceased persons assessed for death duty. (b) Est Department. (c) Not available,

#### I. LOTTERIES AND BETTING.

#### § 1. Lotteries.

State Governments operate lotteries in New South Wales, Queensland and Western Australia. Tattersalls Lotteries and Tasmanian Lotteries are operated under Government licences in Victoria and Tasmania respectively.

New South Wales State Lotteries are conducted in accordance with the New South Wales State Lotteries Act, 1930 and the first drawing took place on 20th August, 1931. Net profits of the lotteries, with the exception of the net profits of the Opera House lotteries introduced in November, 1957, are paid to the Consolidated Revenue Fund from which grants are made to hospitals. The net profits of the Opera House lotteries are to be paid to the Sydney Opera House Appeal Fund.

<sup>(</sup>b) Estates dealt with by Taxation

Tattersalls Lotteries, which were previously conducted in Tasmania, were transferred to Victoria in 1954 and the first drawing in Melbourne took place on 8th July, 1954. The Tattersalls Consultations Act, 1953, provides that prizes in each consultation shall not be less than sixty per cent. of total subscriptions to that consultation, and that a duty equal to thirty-one per cent. of subscriptions shall be paid into the Consolidated Revenue Fund from which an equivalent amount will be paid out into the Hospitals and Charities Fund and the Mental Hospitals Fund in such proportions as the Treasurer determines from time to time.

In Queensland, the Golden Casket Art Union commenced in 1916 with the specific object of augmenting the funds of the Queensland War Council. Subsequently, Anzac Cottages and Nurses Quarters Funds benefited until 1920 but since then net profits have been paid to the Department of Health and Home Affairs (Hospitals, Motherhood and Child Welfare Trust Fund) and used for the maintenance of hospitals, grants to institutions, and for motherhood and child welfare purposes. A stamp duty is imposed on tickets sold. The proceeds of this are paid to Consolidated Revenue Fund.

In Western Australia, lotteries are conducted by the Lotteries Commission under the Lotteries Control Act of 1932. Profits are paid by the Commission to hospitals and other charities.

In Tasmania, lotteries are subject to the provisions of the Racing and Gaming Act 1950–1952. With the transfer of Tattersalls from Hobart to Melbourne, Tasmanian Lotteries commenced operations under Government licence and the first drawing took place on 30th June, 1954. The stamp duty on tickets sold and the tax on prize money are paid into Consolidated Revenue.

Details of ticket sales, prizes allotted, and taxes paid and other net contributions to State Government revenues relating to lotteries drawn during each of the years ended 30th June, 1953 to 1957 are given in the following table:—

LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES.

					2 000.)			
Year	ended 3	30th June.	New South Wales.	Victoria.	Queens- land.	Western Australia.	Tasmania.	Total.
			·	TICKE	r Sales.		·	
1953		]	10,335		5,650	975	4,800	21,760
1954			10,610		5,760	1,100	4,763	22,233
1955			11,268	8,450	6,115	1,112	1,703	28,648
1956			11,728	8,850	6,045	1,112	3,875	31,610
1957	• •		12,830	9,200	6,175	1,163	3,525	32,893
			'	Prizes A	ALLOTTED.			
1953		!	6,584		3,609	530	2,922	13,645
1954		i	6,767		3,679	596	2,899	13,941
1955		1	7,180	5,070	3,908	603	1,036	17,797
1956		'	7,472	5,310	3,863	605	2,359	19,609
1957	• •	]	8,211	5,520	3,946	654	2,146	20,477
T	AXES .	PAID AND	OTHER NE	T CONTRIBU	TIONS TO S	TATE GOVE	RNMENT REV	ENUES.
1953			3,434		1,699	310	1,398	6,841
954			3,469		1,731	357	1,387	6,944
955				(a) 2,620	1,836	364	496	9,005
1956		::	3,842	2,744	1,798	362	1,129	9,875
1957			4,184	2,852	1,822	353	1,027	10,238

<sup>(</sup>a) Includes £25,000 paid to Tasmanian Government in respect of incomplete lotteries at date of transfer of Tattersalls Lotteries to Victoria.

#### § 2. Betting.

Estimates of totalizator investments and investments with licensed bookmakers for the years ended 30th June 1953 to 1957 are given in the following table.

### TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS.

(£'000.)

Year	r ended June—	New South Wales.	Victoria.	Queens- land.	South Australia.	Western Australia.	Tasmania.	Total.
			Totaliza	TOR INVE	STMENTS.(a)	)		
1953 1954 1955 1956 1957		 14,190 14,202 13,101 13,645 13,213	10,314 10,172 9,442 10,669 11,573	2,888 2,925 2,713 2,530 2,361	2,337 2,497 2,332 2,267 2,172	3,019 3,002 2,912 2,263 2,177	839 993 981 1,004 976	33,587 33,791 31,481 32,378 32,472
		Inve	STMENTS V	VITH LICE	SED BOOK	MAKERS.(b	)	
1953 1954 1955 1956 1957		 110,080 114,402 112,876 113,225 113,170	50,000 55,000 45,000 52,000 52,715	© © © © ©	24,642 27,197 26,721 30,019 29,933	(c) (c) (c) (c) (d)24,012 25,564	10,764 11,662 10,828 11,577 11,505	(c) (c) (c) (c) (c)

<sup>(</sup>a) Estimated from taxes on totalizators. (b) Estimated from taxes on betting with licensed bookmakers. (c) Not available. (d) Eleven months ended 30th June, 1956.

### J. GOVERNMENT, SEMI-GOVERNMENTAL AND PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES.

# § 1. Government and Semi-Governmental Pension and Superannuation Schemes.

The Commonwealth and all State Governments have established pension or superannuation schemes for their employees. These schemes are operated through funds to which both the Government and the employees make contributions. Employees of semi-governmental authorities are in some cases covered by the Commonwealth or State Government scheme and in other cases by a separate scheme of the authority.

In the following table, aggregate details are given, for the year 1955-56, of the receipts, expenditure, accumulated funds and number of contributors and pensioners of the Commonwealth and State Government and main semi-governmental schemes. The funds included are:—

- (a) Commonwealth.—The Superannuation Fund and Defence Forces Retirement Benefits Fund.
- (b) New South Wales.—State Superannuation Fund, Government Railways Superannuation Fund and Police Superannuation and Reward Fund.
- (c) Victoria.—The State Superannuation Fund, Police Superannuation Fund, Police Pensions Fund, Melbourne Harbor Trust Superannuation Account, Geelong Harbor Trust Superannuation Fund, Melbourne and Metropolitan Board of Works Superannuation Fund, State Electricity Commission Provident Fund, Gas and Fuel Corporation Superannuation Fund, Metropolitan Fire Brigades Board Superannuation Fund, Country Fire Authority Superannuation Fund and Port Phillip Pilots' Sick and Superannuation Fund.
- (d) Queensland.—Public Service Superannuation Fund and Police Superannuation Fund.
- (e) South Australia.—South Australia Superannuation Fund, Police Pensions Fund and Public Service Superannuation Fund.
- (f) Western Australia.—The Superannuation Fund.
- (g) Tasmania.—Public Service Superannuation Fund (Old and New Funds),
  Police Provident Fund and State Teachers' Superannuation Fund.

GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES, 1955-56.

Particulars.	C'wlth.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Receipts-								
Contributions—	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
Employees			2,993					
Government	3,969						265	
Interest	1,904	2,223	1,309	272	395	144,	118	
Other	165	5	51	5	5	2	5	238
Total	12,898	13,919	8,373	1,186	2,174	1,007	783	40,340
Expenditure—					1			
Pension Payments	4,930		4,020	439	1,066	599.	324	17,940
Gratuities or Rewards	190		50		l		9	318
Refund of Contributions	884			73	95		75	1,973
Other		59	2		42	1 1	3	106
Total	6,004	7,263	4,314	512	1,203	630	411	20,337
Funds at end of Year	52,875	55,032	35,749	6,148	10,151	3,846	3,039	166,840
Contributors at end of								
Year—	No.	No.	No.	No.	No.	No.	No.	No.
Males	122,801	88,360 ح	<b>∫</b> 44,131	10,748		7,162	5,743	2210 110
Females	13,603	ر 80,300	₹ 5,985	3,864	1,360	575	1,837	318,117ع
Total	136,404	88,360	50,116	14,612	13,308	7,737	7,580	318,117
Pensioners at end of Year-	<del></del>							
Males	9,083	1	6 8,362	1,090	2,841	2.399	814	in .
Female ex-employees	899	24,587	1,136		445	174	185	1 71 000
Widows	5,796	£4,38/	5,982	281	2,288	1,299	490	71,080 م
Children	1,427	J	լ 645	46	251	166	113	IJ
Total	17,205	24,587	16,125	1,698	5,825	4,038	1.602	71,080

For details of the individual funds summarized above see Finance, Bulletin No. 47, issued by this Bureau.

#### § 2. Parliamentary Pension and Superannuation Schemes.

Pension and superannuation schemes have been established for members of the Commonwealth and State Parliaments. Details of these schemes, except for Tasmania, are given in pp. 91 to 99 of Official Year Book No. 38. Details of the Tasmanian scheme, which came into operation in November, 1955, are given in Chapter III.—General Government, p. 72 of this Year Book. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or States contribute. Details of the receipts, expenditure, funds and number of contributors and pensioners for the year 1955-56 are given in the following table:—

PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES. 1955-56.

	1	•	r				1	` _
Particulars.	C'with.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Receipts—	£	£	£	£	£	£	£	£
Contributions—	43,464	15,204	15,564	7 404	4176	6,958	5,096	97,866
Members				7,404	4,176		3,090	
Government	19,912	7,951	15,586	7,404	7,676	6,240	··	64,769
Interest	7,042	2,629	• • •	8,981	2,697	1,348	33	22,730
Other	<u> </u>	l				[i		<u> </u>
Total	70,418	25,784	31,150	23,789	14,549	14,546	5,129	185,365
Expenditure—	-			1	1			
Pension Payments (a)	29,288	13,474	31,150	2,721	4,084	7,508		88,225
Refund of Contribut-	1 ,	,	,	_,	.,	.,		10,
ions	1	2,729	١	1	1,233	l	i	3,962
Other	1	( -		1	75	1 :: :	105	180
omer		•••		• • •	1		105	100
Total	29,288	16,203	31,150	2,721	5,392	7,508	105	92,367
Funds at end of Year	207,515	71,662		210,574	73,285	37,965	5,024	606,025
	No.	No.	No.	No.	No.	No.	No.	No.
Contributors at end of Year		97	100	71	59	80	49	639
Pensioners at end of Year-	22	22	(1)	1.2	9	19	1	(1)
Ex-members	22	23	(b)	13	3		•••	<u>\%</u>
Widows	16	14	(b)	l		14		_(0)_
Total	38	37	(b)	13	16	33		$-\frac{\binom{(b)}{(b)}}{\binom{(b)}{(b)}}$

<sup>(</sup>a) Including lump sum payments.

<sup>(</sup>b) Not available.

#### K. SURVEY OF PRIVATE SUPERANNUATION SCHEMES, 1955-56. SURVEY OF PRIVATE PENSIONS AND RETIRING ALLOWANCE SCHEMES, 1955-56.

1. General: In this section, details are given of the results of a survey of private pension and retiring allowance schemes conducted by businesses during 1955-56 or their latest financial year. The previous survey in this field related to 1951-52, details of which may be found in Finance, Bulletin No. 44. The main differences between the two surveys are set out in paragraph 7, page 781.

For the 1955-56 survey separate information was requested for the following:—

(i) Schemes operated wholly through life assurance companies.

(ii) Schemes not operated wholly through life assurance companies but through a separate fund.

(iii) Direct payments by the employer of pensions and/or retiring allowances. The survey was based on a sample of businesses subject to pay-roll tax, that is, all those with a payroll of over £120 per week or employing (in male units) about 7 employees. To assist in sampling and analysis, businesses were divided into the following sizes on the basis of their monthly payrolls:-

(i) Small Businesses—Payroll of more than £500 and less than £3,000 monthly or employing between 7 and 40 employees.

(ii) Medium Businesses-Payroll over £3,000 but under £20,000 monthly of employing between 40 and 250 employees.

(iii) Large Businesses-Payroll over £20,000 monthly.

Forms were sent to all the large businesses and to a selected number of small and medium businesses. Government airlines and banks were included if contributing to their own separate funds rather than to State or Commonwealth Superannuation Funds: but other government business undertakings were excluded. Also excluded from the survey were Rural Industries, Private and Domestic Services and Statutory Coal Miners' Pension Funds.

The figures shown in the tables, with the exception of those in the table in paragraph 2, are estimated totals for the whole field from which the sample was drawn. Some indication of the extent of the field surveyed is given by the fact that the figures relate to businesses employing approximately 85 per cent. of the total number of employees in private employment excluding rural wage earners and female private domestics.

In view of the comparatively small number of small businesses covered, some of the percentage distributions of these numbers in the tables in paragraphs 1 to 4 should be regarded as giving no more than a very broad picture of the situation. The tables showing details of the financial operations of the various types of schemes are less subject to error since they are weighted heavily by the operations of large firms in which the coverage is practically complete.

2. Number of Businesses and Superannuation Schemes Surveyed.—The following table shows the number of businesses from whom satisfactory returns were received and the percentage which operated a pension or retiring allowance scheme of any of the types described in paragraph 1 above.

From this table it can be seen that 92 per cent. of all large businesses have some form of scheme. The percentage falls to 64 per cent. in the medium size group and to 28 per cent. for small businesses. This tendency for the percentage to fall substantially in the smaller size groups is common to all industries.

The percentage of businesses operating schemes was greatest in the wholesale and retail trading group. This was the same as the pattern found in the 1951-52 survey. Schemes were relatively fewest in the building industry component of the "other industries" group where only 11 per cent. of the small businesses, 35 per cent. of the medium size businesses and 41 per cent. of the large businesses had a scheme of any type.

NUMBER OF BUSINESSES AND SUPERANNUATION SCHEMES SURVEYED (a)

			<del>55-56.</del>					
	Numbe	er of Busi	nesses Su	rveyed.	Percentage with Superannuation Schemes.			
Industry.	Total.	Small.	Medium.	Large.	Small Businesses.	Medium. Businesses.	Large Businesses.	
Manufacturing Wholesale and Retail Trade Other Industries All Industries	1,411 713 815 2,939	395 261 327 983	547 269 271 1,087	469 183 217 869	26 39 21 28	% 66 74 49 64	94 97 81 92	

<sup>(</sup>a) State branches and subsidiary companies who completed a return are treated as separate businesses, even though they may have contributed to a scheme organized by their head office or parent company.

3. Type of Superannuation Scheme.—The following table shows the relative importance of the three main types of schemes. This table shows that the most common types of schemes are those organized wholly through life assurance companies. They account for 75 per cent. of the schemes of small businesses, 71 per cent. of the schemes of medium sized businesses and 52 per cent. of the schemes of large businesses. This general pattern applies to all the industrial groups shown in the above table and to all the industries combined.

Among large businesses, schemes organized wholly through life assurance companies are relatively less important than among the smaller businesses and a correspondingly greater proportion of schemes are organized through separately constituted funds. Only 18 per cent. of the schemes operated by the smaller businesses are run entirely through separate funds as against 32 per cent. for large businesses.

Schemes organized through a separate fund are relatively most important in the "other industries" group while the combination of a life assurance scheme and a separate fund within the one business is of greatest importance in the wholesale and retail trading industries.

TYPE OF SUPERANNUATION SCHEME.(a) 1955-56. PROPORTION OF TOTAL SCHEMES IN EACH INDUSTRY-SIZE GROUP.

Industry.	1	Size of Business.	Life Assurance Scheme Only.	Separate Fund Only.	Life Assurance Scheme and SeparateFund.	Total.
	1		%	%	%	%
	٢	Small	75	20	5	100
Manufacturing	₹!	Medium	76	15	9	100
	[ ]	Large	60	27	13	100
5771 - 11	Data !!	Small	77	14	9	100
Wholesale and	Retail {	Medium	72	15	13	100
Trade	[]	Large	41	29	30	100
	اح	Small	72	23	5	100
Other Industries		Medium	57	30	13	100
	U	Large	43	47	10	100
	ſi	Small	75	18	7	100
All Industries		Medium	71	18	11	100
	[]	Large	52	32	16	100

<sup>(</sup>a) State branches and subsidiary companies who completed a return are treated as separate businesses, even though they may have contributed to a scheme organized by their head office or parent company.

SUPERANNUATION SCHEMES ORGANIZED WHOLLY THROUGH LIFE ASSURANCE COMPANIES, 1955-56: DATE OF COMMENCEMENT. PROPORTION OF TOTAL SCHEMES IN EACH INDUSTRY-SIZE GROUP.

		Date o	f Commend	ement of S	cheme.	,
Industry.	Size of Business.	Before 1940.	1940–45.	1946–50.	1951–56.	Total.
		%	%	%	%	%
(1	Small		4	37	59	100
Manufacturing	Medium	5	26	35	34	100
	Large	12	44	26	18	100
7	Small	2	25	41	32	100
Wholesale and Retail Trade	Medium	11	27	35	27	100
	Large	20	35	35	10	100
۲	Small	6	6	31	57	100
Other Industries	Medium	14	14	42	30	100
· · · · · · · · · · · · · · · · · · ·	Large	21	39	27	13	100
Ì	Small	2	13	37	48	100
All Industries	Medium	8	25	36	31	100
<u> </u>	Large	16	41	28	15	100

<sup>(</sup>ii) Schemes organized through Separately Constituted Funds. In the following table, a summary of the dates at which schemes organized through separately constituted funds continenced is given. From this table it can be seen that a much higher percentage were in existence prior to 1940 than was the case with schemes organized wholly through life assurance companies. Whilst this pattern applies to businesses of all sizes, it is particularly noticeable in the case of large businesses.

<sup>4.</sup> Date of Commencement of Schemes.—(i) Schemes organized wholly through Life Assurance Companies. A summary of the dates at which schemes organized wholly through life assurance companies commenced is given in the following table. From this table it can be seen that for small and medium sized businesses the majority of the schemes commenced since 1945. For large businesses more than half were commenced prior to 1945 and an appreciable number prior to 1940.

# SUPERANNUATION SCHEMES ORGANIZED THROUGH SEPARATELY CONSTITUTED FUNDS, 1955-56: DATE OF COMMENCEMENT.

#### PROPORTION OF TOTAL SCHEMES IN EACH INDUSTRY-SIZE GROUP.

		Date o	f Commend	ement of S	cheme.	
Industry.	Size of Business.	Before 1940.	1940-45.	1946–50.	1951–56.	Total.
		%	%	%	-%	%
(	Small	13	17	22	48	100
Manufacturing	Medium	13	30	35	22	100
	Large	43	28	13	16	100
· · · · · · · · · · · · · · · · · · ·	Small	5	10	57	28	100
Wholesale and Retail Trade	Medium	10	36	26	28	100
\ \	Large	38	39	12	11	100
?	Small	i	8	15	77	100
Other Industries	Medium	22	11	32	35	100
į	Large	65	12	16	7	100
Ì	Small	7	12	33	48	100
All Industries	Medium	14	28	32	26	100
Į	Large	47	27	14	12	100

In analysing the figures contained in the two preceding tables, it should be remembered that the larger firms generally have been in operation longer than the smaller ones and, to that extent, a larger proportion of long established schemes would be expected.

5. Financial Operations of Private Superannuation Schemes.—(i) Schemes operated wholly through Life Assurance Companies. The following table shows details of schemes operated wholly through life assurance companies. In these schemes, the whole of the amounts contributed by both employee and employer are used to pay premiums on life assurance policies which will mature either on the death or retirement of the employee.

From this table it can be seen that while the relationship of the employees' to the employers' contribution varies between industries, in each industrial group the employers contribute much more than the employees. In many cases, employees do not contribute and the total premiums are paid by the employer. Between the 1951-52 and 1955-56 surveys, the relationship of employees' to employers' contribution for all industries combined has not altered. In both surveys, it was found that employees contributed 39 per cent. and employers 61 per cent. of the total contributions.

SUPERANNUATION SCHEMES ORGANIZED WHOLLY THROUGH LIFE ASSURANCE COMPANIES 1955-56: NUMBER OF EMPLOYEES COVERED AND AMOUNTS CONTRIBUTED.

				Contr	ibutions.	
Industry.		Number of Employees Covered.	Emplo	yees.	Emplo	oyers.
			Total.	Average Per Head.	Total.	Average Per Head.
Manufacturing—		No.	£'000.	£	£'000.	£
Engineering and Vehicles		34,900	1,097	31	1,621	46
Textiles and Clothing		9,400	285	30	437	46
Food, Drink and Tobacco		17,900	464	26	671	37
Paper and Printing		16,900	457	27	756	45
Chemicals and Oil Refining		6,200	199		263	42
Other Manufacturing		16,500	500	30	695	42
Total Manufacturing		101,800	3,002	29	4,443	44
Transport		14,600	621	43	958	66
Wholesale Trade		46,800	1,631	35	2,503	53
Retail Trade		19,800	463	23	898	45
Finance and Property		6,900	286	41	434	63
Other Industries		13,000	393	30	704	54
All Industries		202,900	6,396	32	9,940	49
Percentage of total contribution						
1955-56 Survey	%		39		61	
1951-52 Survey	%	1	39	<u>.</u>	61	

(ii) Schemes operated through separately constituted funds. (a) Income and expenditure. The following table shows details of the estimated income and expenditure of schemes organized through separate funds. On the income side, the most important item is the employers' contribution which accounts for 50 per cent. of the total income. This is more than twice the amount of the employees' contributions whereas in funds run through life assurance companies, employers contribute about 55 per cent. more than employees. As in the previous survey, total contributions to schemes run through separate funds exceeded total contributions to schemes run through life assurance companies. This difference, however, has been considerably narrowed since the 1951-52 survey reflecting a slower rate of growth in the schemes run through separately constituted funds.

On the expenditure side, lump sum payments and refunds increased and exceeded pensions by a substantial margin. Total payments from the funds, however, were only 26 per cent. of income and approximately £19½ million was added to accumulated funds. The percentage of total income added to accumulated funds decreased slightly when compared with the 1951-52 survey.

## INCOME AND EXPENDITURE OF SUPERANNUATION SCHEMES ORGANIZED THROUGH SEPARATELY CONSTITUTED FUNDS, 1955-56.

INCOME. (£'000.)

	Contri	butions.	Property	Income.		
Industry.	Employees.	Employers.	Govern- ment Bond Interest.	Other Interest Rent and Dividends.	Other Income.(a)	Total Income.
Manufacturing-						
Engineering and Vehicles	724	1,414	350	364	73	2,925
Textiles and Clothing	23	156	15	28	19	241
Food, Drink and Tobacco	321	550	107	375	24	1,377
Paper and Printing	78	157	21	30	6 (	292
Chemicals and Oil Refining	315	564	125	133	37	1,174
Other Manufacturing	487	1,038	119	260	113	2,017
Total Manufacturing	1,948	3,879	737	1,190	272	8,026
Transport	130	316	19	53	16	534
Wholesale Trade	975	2,707	573	601	71	4.927
Retail Trade	228	723	74	374	78	1,477
Finance and Property	2,186	4,686	1,497	1,419	186	9,974
Other Industries	285	919	189	126	31	1,550
All Industries	5,752	13,230	3,089	3,763	654	26,488
Percentage of Total Income:-						<del></del>
1955-56 Survey %	22	50	12 }	14	2	100
1955-56 Survey % 1951-52 Survey %	23 '	55 (	8	12	2 '	<b>10</b> 0

EXPENDITURE.

		(2 000.)	<u></u>			
Industry.	Pensions.	Lump Sum Payments.	Refunds.	Other(b) Expendi- ture.	Total Expendi- ture.	Increase in Fund.
Manufacturing—	141	412	100	162	050	0.000
Engineering and Vehicles	141	413	152	153	859	2,066
Textiles and Clothing	2	59	3	25	89	152
Food, Drink and Tobacco	215	61	60	54 22	390	987
Paper and Printing	8	39	3	22	72	220
Chemicals and Oil Refining	79	135	59	16	289	885
Other Manufacturing	114	213	109	233	669	1,348
Total Manufacturing	559	920	386	503	2,368	5,658
Transport	30	48 أ	59	45	182	352
Wholesale Trade	235	630	199	71	1,135	3,792
Desail Tando	46	304	76	84	510	967
Elector and Decements	1,480	194	42Ĭ	250	2,345	7,629
Other Industries	198	53	78	139	468	1,082
All Industries	2,548	2,149	1,219	1,092	7,008	19.480
Percentage of Total Expendi-	·					
1955–56 Survey %	36	31	3	3	100	••
1955–56 Survey % 1951–52 Survey %	46	29		ج آ	100	::

<sup>(</sup>a) Includes profit on sale of investments and receipts from assurance companies for surrendered policies, etc. (b) Includes loss on sale of investments, administrative expenses paid from funds, and life assurance premiums paid.

(b) Assets. In the following table an analysis of the investments held by separately constituted funds is given. The largest single avenue of investment is in Commonwealth Securities. However, there has been a marked reduction in the proportion of Commonwealth Securities to total assets. While there has been a big increase in investment in local and semi-government securities, government securities as a whole have declined in relative importance in favour of company shares and debentures.

ASSETS OF SEPARATELY CONSTITUTED SUPERANNUATION FUNDS, 1955-56.
(£ million.)

Industry.		Cash and Bank Balances.	C'wth. Bonds.	Local and Semi- Govt. Securi- ties.	Loans on Mort- gage.	Deben- tures.	Shares in Companies.	Other Assets.	Total Assets.
Manufacturing Transport Wholesale Trade Retail Trade Finance and Property Other Industries		1.7 0.5 1.6 1.5 7.2 0.5	9.3 0.8 11.0 1.7 27.4 1.1	13.2 0.4 9.7 0.8 14.9 2.9	1.8 0.7 1.3 7.7 0.2	5.8 0.1 1.9 0.4 7.8 1.7		3.7 0.4 2.1 3.5 0.9 0.4	46.1 2.4 30.0 10.8 70.9 8.1
All Industries		13.0	51.3	41.9	11.7	17.7	21.7	11.0	168.3
All Industries— 1951–52 Survey(a)	• •	7.4	40.6	18.4	7.0	6.6	11.4	5.2	96.6
1955-56 Survey 1951-52 Survey	%	8 8	30 42	25 19	7 7	11	13	6 5	100 100

<sup>(</sup>a) See para. 7, page 781.

Between the 1951-52 and 1955-56 Surveys, the average pension paid increased slightly from £274 to £283 per annum. Over the same period the average retiring allowance increased from £208 to £341 per annum.

NUMBER OF EMPLOYEES COVERED BY AND BENEFICIARIES FROM SEPARATELY CONSTITUTED FUNDS 1955-56.

	Industry				Number of Employees Covered by Fund.	Number of Pensions Paid.(a)	Number of Retiring 4 Allowances Paid.(a)
Manufacturing—		_					
Engineering and Veh	icles				31,200	800	1,100
Textiles and Clothing		• • •	• • •		4,600	(b)	400
Food, Drink and Tol				• • •	9,200	700	200
Paper and Printing				• •	3,900	100	100
Chemicals and Oil R	efining				6,800	200	300
Other Manufacturing		••	••	••	16,500	700	600
Total Manufactu	ring	••	• •	••	72,200	2,500	2,700
Transport					3,200	100	200
Wholesale Trade			• •		29,100	1,000	1,400
Retail Trade					17,200	200	1,400
Finance and Property	• •		• •		51,100	4,100	300
Other Industries	••	••	••	••	12,800	1,100	300
All Industries	••	••	• •	••	185,600	9,000	6,300

<sup>(</sup>c) Persons covered and the number of Pensions and Retiring Allowances paid. In the table which follows, details are given of the number of persons covered by Schemes organized through separately constituted funds and the number of pensions and retiring allowances paid.

6. Direct Payments of Pensions and Retiring Allowances.—Some businesses make direct payments of pensions and retiring allowances either instead of, or in addition to, operating a scheme through a life assurance company or a separately constituted fund. Details of such payments are shown in the following table.

Total direct payments made by employers amounted to £4,111,000. Of this total, pensions accounted for 46 per cent. and retiring allowances for 54 per cent. These were exactly the same percentages as were found from the 1951-52 survey. However, over the same period average pensions have increased by 37 per cent. and average retiring allowances by 90 per cent.

#### DIRECT PENSIONS AND RETIRING ALLOWANCES, 1955-56.

			Pensi	ons.	Retiring Allowances.		
Industry.			Amount.	Number.	Amount.	Number.	
Manufacturing— Engineering and Vehicles Textiles and Clothing Food, Drink and Tobacco Paper and Printing Chemicals and Oil Refining Other Manufacturing			£'000. 124 44 192 84 30 75	600 200 1,100 400 200 900	£'000. 185 93 117 148 25 113	200 200 300 200 100 200	
Total Manufacturing	• •		549	3,400	681	1,200	
Transport Wholesale Trade Retail Trade Finance and Property Other Industries		  	95 343 80 724 108	400 1,700 200 2,400 500	84 472 219 573 183	100 600 700 800 100	
All Industries			1,899	8,600	2,212	3,500	
Average per Head— 1955–56 Survey 1952–52 Survey (a)		••	£ 22 16	1	£ 632 333		

<sup>(</sup>a) See para. 7 below.

In the 1951-52 survey, businesses were classified into two size groups, those with a monthly payroll of between £2,000 and £10,000, and those with a monthly payroll in excess of £10,000. In the present survey there were three groups, also determined by the size of the monthly payroll. These groups were, those with a monthly payroll of between approximately £500 and £3,000, from £3,000 to £20,000, and over £20,000. After taking into consideration the increased level of wages, the medium and large size businesses in the present survey would cover a slightly smaller field (relatively) than the 1951-52 survey. If the coverage of the present survey had been the equivalent of the 1951-52 survey, most,

<sup>7.</sup> Main differences between 1951-52 and 1955-56 Surveys.—The more important differences between the two surveys were:—

<sup>(</sup>i) The wider field covered by the 1955-56 survey. The 1951-52 survey covered businesses with a monthly payroll in excess of about £2,000 whereas the present survey covers businesses with a payroll in excess of £120 per week or approximately £500 per month.

but not all, of the figures for small businesses would have to be omitted from the present survey. Some of the more important figures for small businesses included in this survey, were approximately:—

Schemes run through life assurance c	ompanies	_	£
Contributions by employees	•••		 850,000
Contributions by employers	• •		 1,450,000
Separately constituted funds—			
Contributions by employees			 150,000
Contributions by employers			 850,000
Total Receipts			 1,200,000
Total Assets at end of year			 7,100,000

- (ii) Industrial classification. Some minor variations have been made in the classification of businesses to industrial groups.
- (iii) Treatment of businesses which contribute to a common fund. In the 1951-52 survey, each branch and subsidiary included in the sample was classified to the industry of the parent company or the predominant industry of the group and the common scheme was counted once only. In the present survey, each branch and subsidiary was allocated to its own industry and was treated as having a separate scheme of its own. In both surveys, subsidiaries were counted as separate businesses, but in the present survey State Branches were also counted as separate businesses.
- (iv) Employees contributing to or covered by superannuation schemes. The 1951-52 survey refers to the number of employees contributing to, and the present survey the number of employees covered by, schemes operated through life assurance offices or separate funds.

#### CHAPTER XXI.

#### PUBLIC FINANCE.

Note.—The subject of "Public Finance" is dealt with in this Chapter under the two major divisions of Commonwealth Finance and State Finance. The close financial relations between the Commonwealth and States, however, particularly since the Financial Agreement has been in operation, demand also a combination of these two divisions under the heading of Commonwealth and State Finance. Under the Financial Agreement, the Commonwealth assumed the liability to bondholders for the States' Debts existing at the date of the Agreement and now arranges for all borrowings for and on behalf of the Commonwealth or any State and for all conversions, renewals, redemptions and consolidations of the Public Debts of the Commonwealth and the States. In view of this, it has been found convenient to deal with the Commonwealth and State Public Debt in a separate division.

The subject of income taxes is also dealt with in a separate division.

#### A. COMMONWEALTH FINANCE.

#### § 1. General.

1. Financial Provisions of the Constitution.—The main provisions of the Constitution relating to the initiation and development of the financial system of the Commonwealth are contained in Sections 81 to 105A of the Commonwealth Constitution (see pp. 17-20 of this Year Book). Two other sections which have a most important bearing on questions of Commonwealth finance are Sections 69 and 51.

Section 69 provides for the transfer from the States to the Commonwealth of certain specified departments, and Section 51, in outlining the powers of the Commonwealth Parliament, implies the transfer or creation of other departments. Section 87 deals with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Official Year Book and on pp. 804-808 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The majority of the tables relating to Commonwealth Finance have been compiled from the annual Budget Papers as presented to Parliament by the Treasurer of the Commonwealth.

2. Accounts of Commonwealth Government.—The Commonwealth Government bases its accounts upon three funds, the Consolidated Revenue Fund, the Trust Fund and the Loan Fund.

#### § 2. Commonwealth Consolidated Revenue Fund.

#### I. Nature of Fund.

- 1. Provisions of the Constitution.—The provisions made for the establishment of a Commonwealth Consolidated Revenue Fund, and the means to be adopted for operating on the fund, are contained in Sections 81 to 83 of the Constitution (see p. 17 of this Year Book).
- 2. Annual Results of Transactions.—In the early 1920's, receipts and expenditure of the Consolidated Revenue Fund each ranged between £60 million and £70 million. After allowing for special appropriations amounting to one or two million pounds each year utilized for a variety of purposes, e.g., for debt redemption, naval construction, main roads, science and industry investigations, prospecting for oil and precious metals, civil aviation, etc., the receipts and expenditure of the Fund were balanced. In the later twenties and early thirties, when receipts and expenditure were each about £70 million or £80 million a year, there were annual deficiencies, which by the end of 1930-31 had accumulated to more than £17 million.

In the years 1931-32 to 1938-39, receipts and expenditure ranged from £70 million to £95 million and were in balance after allowing for special appropriations of up to £3.5 million a year for reduction of the accumulated deficiency, non-recurring grants to the States, post office works and the provision of defence equipment. The amount applied towards reduction of the accumulated deficiency was approximately £1.5 million and the balance of the deficiency (approximately £15.7 million) was funded in 1937-38.

For most of the 1939-45 War years and thereafter, the Consolidated Revenue Fund was balanced, all available revenue after charging expenditure on ordinary services being used for defence, war and repatriation purposes.

During the years 1951-52 to 1955-56, the Fund was balanced after special payments of £98.5 million to the National Debt Sinking Fund, £13.4 million to the War Pensions Trust Account, £56.3 million and £70.1 million to the Debt Redemption Reserve Trust Account, and £61.6 million to the Loan Consolidation and Investment Reserve Trust Account. The amounts so transferred were subsequently invested wholly or partly in special loans for State works requirements.

Receipts and expenditure increased from £95 million in 1938-39 to £377 million in 1944-45. By 1950-51, they had risen to £842 million and by 1953-54 to £1,023 million. Receipts and expenditure for 1955-56 were £1,138 million.

#### II.-Revenue.

1. General.—The following table shows details of the revenue from each source and the amount per head of population under each of the main headings during the years 1938-39 and 1951-52 to 1955-56. Taxation constitutes the main source of Commonwealth revenue e.g. 88.2 per cent. in 1955-56.

# COMMONWEALTH CONSOLIDATED REVENUE FUND: SOURCES OF REVENUE. (£°000.)

Source.	1938–39.	1951–52.	1952-53.	1953-54.	1954-55.	1955 56.
Taxation	74,111	934.011	895,464	900,450	937.608	1,003,780
Per head of population	£10 13 9	£109 10 4	£102 10 6	£101 3 5		£107 15 0
Business Undertakings	17,892	64,955	70,933	75,126	80,210	87,821
Per head of population	£2 11 9	£7 12 4	£8 2 5	£8 8 10	£8 16 6	£9 8 7
Territories(a)	356	1,558	1,779	2,195	2,419	2,249
Per head of population	£0 1 0	£0 3 8	£0 4 1	£0 4 11	£0 5 4	£0 4 10
Other Revenue—						25 4 10
Interest, etc	1,144	3,795	5,415	8,797	12,428	14,179
Coinage	128	895	310	750	725	199
Defence	151	499	2,188	2,809	4,106	3,820
Atomic Energy Commission		• • •	1,174	2,791	1,082	30
Civil Aviation— Recoups for Airmail Ser-		ļ	ł			
vices	ir .	\$ 2,827	3,074	3,437	3,767	(b)
Other	} 6	420	427	876	877	1,159
Health	18	51	43	80	86	94
Patents, Trade Marks, etc	68 31	143	183	187	211	267
Bankruptcy Wartime Trading Profits—	31	27	31	49	54	60
Wool			42,361	1		
Commerce and Agriculture	١٦	r 34	121	106		• • •
Shipping and Transport	} 158	260	255	391	321	329
Net Profit on Australian Note						
Issue	767	3,381	4,861	5,707	5,516	7,866
Accounts	١	179	761	4,190	8,237	1.981
Australian Shipping Board	1			4,170	0,25	1,501
Transfer of Surplus Funds		٠		4,000		3,000
Joint Coal Board-Repay-						
ment of Advances	• • •		500	3,342	3,550	2,488
Tea Importation Board— Repayment of Advance	1		İ	i	ļ	2,000
Other	235	3,793	10,187	7,507	6,244	7,036
Total	2,706	16,304	71.891	45,019	47,204	44,508
Per head of population	£0 7 9	£1 18 2	£8 4 7	£5 1 2	£5 3 10	£4 15 7
Grand Total	95,065	1.016.828		1.022,790	1	1.138,358
Per head of population		£119 4 6			£117 8 7	1 /
- Population	12.17. 17. 3	(	17	[-,,-	1	

<sup>(</sup>a) Excludes Railways. master-General's Department.

<sup>(</sup>b) Transactions relating to Airmail Services now included in Post-

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on p. 797.

2. Taxation.—(i) Total Collections. (a) Amount. Collections under each heading for the years 1938-39 and 1951-52 to 1955-56 are shown below:—

# COMMONWEALTH TAXATION: TOTAL NET COLLECTIONS. (£'000.)

Heading.		1938–39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Customs		31,161 16,472	113,936 99,981	70,720 113,104	94,757 125,460	101,254 143,149	87,508 168,264
Sales Tax		9,308 1,489	95,459 6,199	89,067 1,250	95,689 221	100,446	110,001
Pay-roll Tax Income Taxes(a)	• •	11,883	37,170 551,142	40,171 554,737	40,384 528,181	41,455 532,916	45,543 573,988
Estate Duty Gift Duty	• • •	1,915	7,778 1,202	8,393 1,162	9,825 1,386	9,614 1,618	10,120 1,820
Entertainments Tax Special Industry Taxes(b)		1,883	6,161 14,983	6,708 10,152	1,977 2,570	7,145	—1 6,537
Total Taxation		74,111	934,011	895,464	900,450	937,608	1,003,780

<sup>(</sup>a) Includes Social Services Contribution, War-time (Company) Tax, Super Tax, Undistributed Profits Tax and Wool Deduction. (b) Used for purposes of industries concerned. The taxes are as follows:—Flour Tax, Wool Levy, Wool Contributory Charge, Wheat Export Charge, Miscellaneous Export Charges, Stevedoring Industry Charge, Tobacco Industry Charge and Gold Tax.

Note.-Minus (-) indicates an excess of refunds.

(b) Proportion of each Class on Total Collections. The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1938-39 and 1951-52 to 1955-56:—

### COMMONWEALTH TAXATION: PROPORTION OF EACH CLASS TO TOTAL NET COLLECTIONS.

#### (Per Cent.)

	Headir	ıg.		1938-39.	1951–52.	1952–53.	1953–54.	1954-55.	1955-56
Customs			•••	42.1	12.2	7.9	10.5	10.8	8.7
Excise				22.3	10.7	12.6	13.9	15.3	16.8
Sales Tax				12.6	10.2	10.0	10.6	10.7	11.0
Land Tax				2.0	0.7	0.2			
Pay-roll Tax	ς .				4.0	4.5	4.5	4.4	4.5
Income Tax	es(a)			16.0	59.0	61.9	58.7	56.8	57.2
Estate Duty	· ´			2.6	0.8	0.9	1.1	1.0	1.0
Gift Duty					0.1	0.1	0.2	0.2	0.2
Entertainme	nts Tax	κ			0.7	0.8	0.2		
Special Indi	istry Ta	exes(b)	• •	2.4	1.6	1.1	0.3	0.8	0.6
Total	Taxati	ion		100.0	100.0	100.0	100.0	100.0	100.0

<sup>(</sup>a) See note (a) to previous table

<sup>(</sup>b) See note (b) to previous table.

<sup>(</sup>ii) Customs Revenue. The classification of customs receipts by Tariff Divisions published in earlier issues of the Official Year Book was discontinued in 1955-56. In the following tables, customs duty receipts have been dissected according to the classification used for Oversea Trade Statistics. For years prior to 1955-56, refunds and drawbacks were not classified by statistical classes and consequently details of gross receipts only are available for those years. The following table shows gross receipts for the years 1938-39 and 1951-52 to 1955-56 according to statistical classes.

# COMMONWEALTH CUSTOMS REVENUE: CLASSIFICATION OF GROSS RECEIPTS.

(£'000.)

	(					
Classes.	1938–39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Foodstuffs of animal origin	266	321	132	267	371	432
Foodstuffs of vegetable origin	1,069	1,393	1,153	1,405	1,558	1,346
Spirituous and alcoholic liquors	1,105	2,639	1,981	2,256	2,621	2,712
Tobacco, cigars and cigarettes Live animals	4,097	25,018	19,206	18,902	15,839	12,546
Animal substances (not foodstuffs)	17	51	2	7	7	18
Vegetable substances and fibres	74	532	245	384	209	256
Yarns, textiles and apparel	3,057	14,403	3,874	11,589	13,614	12,200
Oils, fats and waxes	9.956	26,022	25,731	27,168	23,137	19,336
Pigments, paints and varnishes	38	85	38	170	138	145
Rocks and minerals	40	53	34	31	45	34
Metals, metal manufactures and machinery	4,830	26,043	12,256	18,275	26,356	23,202
Rubber and leather and manufactures thereof	431	1,368	757	1,179	1,495	1,410
Wood and wicker, raw and manufactured	780	681	276	814	1,568	1,569
Earthenware, cement, china, glass and stone-						
_ ware	493	2,067	630	1,713	2,207	2,309
Pulp, paper and board, paper manufactures and stationery	491	1,001	380	896	1,452	1,246
Sporting material, toys, fancy goods, jewellery and time pieces	390	2,413	684	2,039	2,912	2,822
Optical, surgical and scientific instruments,	3,00	2,415	004	2,039	2,712	2,022
photographic goods	239	1,018	643	944	1,155	1,242
Chemicals, pharmaceutical products, essential	237	1,010	0.13	244	1,133	1,272
oils and fertilizers	377	1,240	497	911	1,228	1,227
Miscellaneous goods	652	1,530	640	913	2,140	2,532
Primage	4,109	10,189	7,200	8,636	8,681	7,734
Other receipts	132	1,119	710	822	586	608
Total—Gross Customs Revenue	32,643	119,186	77,069	99,321	107,319	94,926
Refunds and drawbacks	1,482	5,250	6,349	4,564	6,065	7,418
Total—Net Customs Revenue	31,161	113,936	70,720	94,757	101,254	87,508

The following table gives details of gross customs receipts, refunds and drawbacks, and net customs receipts for the year 1955-56:—

## COMMONWEALTH CUSTOMS REVENUE: CLASSIFICATION OF REFUNDS AND NET RECEIPTS, 1955-56.

(£'000.)

Classo	Classes.							
Foodstuffs of animal origin					432	14	418	
Foodstuffs of vegetable origin					1,346	41	1,305	
Spirituous and alcoholic liquors	••		• •		2,712	1	2,711	
Tobacco, cigars and cigarettes					12,546	30	12,516	
Live animals								
Animal substances (not foodstuffs)	• •	••			18	15	. 3	
Vegetable substances and fibres		••			256	16	240	
Yarns, textiles and apparel			• • •		12,200	540	11,660	
Oils, fats and waxes		•••	• •		19,336	403	18,933	
Pigments, paints and varnishes					145	40	105	
Rocks and minerals					34	33	1	
Metals, metal manufactures and mag	chinery		• • •		23,202	5,053	18,149	
Rubber and leather and manufacture			••		1,410	116	1,294	
Wood and wicker, raw and manufac					1,569	36	1.533	
Earthenware, cement, china, glass as		ware			2,309	74	2,235	
Pulp, paper and board, paper manu					1,246	80	1.166	
Sporting material, toys, fancy goods					2,822	30	2,792	
Optical, surgical and scientific instru	ments.	photogra	phic good	ls	1,242	38	1,204	
Chemicals, pharmaceutical products					1,227	134	1,093	
Miscellaneous goods				••	2,532	244	2,288	
Primage		• • •		• •	7,734	473	7,261	
Other receipts	••	••	••		608	7	601	
Total					94,926	7,418	87,508	

(iii) Excise Revenue. Net excise receipts for the years 1938-39 and 1951-52 to 1955-56 were as follows:—

COMMONWEALTH	EXCISE	REVENUE:	CLASSIFICATION	OF	NET	RECEIPTS.
		(£'00	0.)			

Partic	ulars.		1938–39.	1951–52.	1952-53.	1953-54.	1954-55.	1955-56.
Beer			7,289	56,941	65,826	71,060	76,362	85,315
Spirits			1,604	8,890	6,680	6,355	6,496	7,325
Tobacco			3,868	13,845	16,036	16,211	15,141	14,849
Cigars and cigar	ettes		2,419	13,848	17,890	23,081	29,030	36,516
Cigarette papers			531	1,035	1,019	1,072	1,007	896
Petrol			582	3,419	3,823	5,549	12,898	21,190
Matches			82	1.058	955	1,083	1.096	1,061
Playing cards		- :: 1	11	55	40	53	51	47
Coal				499	552	579	600	566
Miscellaneous	• •		86	341	283	417	468	499
Total			16,472	99,981	113,104	125,460	143,149	168,264

- (iv) Other Taxation. (a) General. Taxes other than customs and excise are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises an office in each State assessing the returns of taxpayers whose interests are restricted to that State only, and a Central Office assessing taxpayers whose interests are in more than one State.
- (b) Sales Tax. The sales tax was first imposed in August, 1930. The operation of the tax is controlled chiefly by a system of registration of taxpayers whereby all manufacturers and wholesale merchants, who are the taxpayers under the Act in respect of goods sold in Australia, must be registered with the Department. The tax on imports subject to sales tax is collected by the Customs Department at ports of entry.

Since the inception of the tax, certain exemptions have been allowed. These exemptions, which have been extended from time to time, relate mainly to goods of an essential nature or those for use in primary production. The most recent exemptions were those granted from 4th September, 1957.

A general rate of Sales Tax is levied on all goods other than those specified in the schedules of the Sales Tax (Exemptions and Classifications) Act 1935-1957. These schedules set out details of goods exempt from sales tax and those subject to special rates. The general and special rates which operated from 8th September, 1949, were:—

Period.		General Rate.	Special Rates.
8th September, 1949 to 12th October, 1950		8t per cent	25 per cent.
13th October, 1950 to 26th September, 1951		81 per cent	10, 25 and 331
27th September, 1951 to 6th August, 1952		12½ per cent	per cent. 20, 25, 33\frac{1}{2}, 50 and 66\frac{2}{3} per
7th August, 1952 to 9th September, 1953	••	12½ per cent	cent. 20, 33\frac{1}{2} and 50 per cent.
10th September, 1953 to 18th August, 1954		12½ per cent	163 per cent.
19th August, 1954 to 14th March, 1956		12½ per cent	10 and 163 per
			cent.
15th March, 1956 to 3rd September, 1957		12½ per cent	$10, 16\frac{2}{3}, 25$ and
From 4th September, 1957		12½ per cent	30 per cent. 8\frac{1}{3}, 16\frac{2}{3}, 25 and 30 per cent.

For particulars of rates applicable from the inception of Sales Tax in August, 1930, to 7th September, 1949, see Official Year Book No. 37, p. 617.

Particulars of the net amount of sales tax payable, and the sales of taxable and exempt goods in each State for 1955-56, are given in the following table. The figures relate to sales during the period 1st July to 30th June. The figures for sales tax payable differ from those for net collections shown on p. 785, because the latter include some adjustments in respect of earlier years tax and include only tax payable on returns lodged during the year, which in general cover sales for the period June to May.

### SALES TAX AND AMOUNT OF SALES, 1955-56. (£'000.)

Particulars.	N.S.W. (a)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N. Terr.	Total.
Net Sales on which Sales				ì			1	
Tax was payable at—								1 .
10 per cent	62,693	50,382	17,349	16,509	9,381	2,810	33	159,157
121 per cent	161,710	116,949	52,945	39,465	24,853	8,801	306	405,029
16 <sup>2</sup> per cent	72,092	54,466	22,117	25,839	8,991	1,571	26	185,102
25 per cent.(b)	7.370	4,682	1,483	1,070	636	186	4	n 15,431
30 per cent.(b)	12,082	11,394	4,281	4,859	1,188	251		34,055
Total	315,947	237,873	98,175	87,742	45,049	13,619	369	798,774
Sales of Exempt Goods	i							
by Registered Persons	721,345	548,182	239,034	170,916	116,615	58,654	2,119	1,856,865
Total Sales of Taxable and			:					
	1,037,292	786,055	337,209	258,658	161,664	72,273	2,488	2,655,639
Sales Tax Payable	43,965	33,323	13,694	12,615	6,058	1,765	49	111,469
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(a) Includes Australian Capital Territory.

(b) Operative from 15th March, 1956.

Sales of taxable and exempt goods and sales tax payable for Australia as a whole, are shown in the following table for the years 1938-39 and 1951-52 to 1955-56:—

## SALES TAX AND AMOUNT OF SALES. (£'000.)

	Year.	 	Net Sales on which Sales Tax was Payable.	Sales of Exempt Goods by Registered Persons.	Total Sales of Taxable and Exempt Goods.	Sales Tax Payable.
1938-39	 	 	196,491	280,656	477,147	9,363
1951-52	 	 	623,390	1,321,696	1,945,086	91,332
1952-53	 	 	555,390	1,342,279	1,897,669	86,085
1953-54	 	 	687,946	1,466,323	2.154,269	96,079
1954-55	 	 	766,940	1,699,342	2,466,282	101,427
1955-56	 • •	 	798,774	1,856,865	2,655,639	111,469

In the foregoing tables, sales include goods transferred to stock for sale by retail, goods imported by persons other than registered taxpayers, and goods used in the business of the taxpayer. Exempt sales relate to goods exempted from sales tax under the Sales Tax (Exemptions and Classifications) Act 1935-1957. The figures shown in the foregoing tables do not represent the total sales of all commodities, as vendors trading in exempt goods only are not required to be registered and consequently the volume of their sales is not included in the statistics above. In addition, non-taxable sales (i.e. goods sold by one registered taxpayer to another registered taxpayer) are excluded.

(c) Land Tax. Commonwealth Land Tax was levied annually from 1910-11 to 1951-52 on the unimproved value of land. It was abolished from 1st July, 1952. For rates of tax payable from 1942-43 to 1951-52, see Official Year Book No. 40, 1954, p. 669. Receipts for the years 1938-39 and 1951-52 to 1955-56 were as follows:—1938-39, £1,489,000; 1951-52, £6,199,000; 1952-53, £1,250,000; 1953-54, £221,000; 1954-55, £13,000; 1955-56, £356.

(d) Pay-roll Tax. The Pay-roll Tax Act 1941 and the Pay-roll Tax Assessment Act 1941–1942 imposed a pay-roll tax of 2½ per cent. on all wages and salaries in excess of £20 per week paid by an employer after 30th June, 1941. Employers who are liable for tax are required to register and to furnish a monthly return of all wages paid. These measures formed part of the Commonwealth scheme of child endowment, the revenue from the tax being designed to provide part of the money required. The exemption was increased to £80 per week (£4,160 per annum) from 1st October, 1953, to £120 per week (£6,240 per annum) from 1st September, 1954, and to £200 per week (£10,400 per annum) from 1st September, 1957.

Receipts from pay-roll tax for the years 1951-52 to 1955-56 were, 1951-52, £37,170,000; 1952-53, £40,171,000; 1953-54, £40,384,000; 1954-55, £41,455,000; 1955-56, £45,543,000.

(e) Income Taxes. Details of taxes on income are given in division E of this Chapter. (f) Wool Sales Deduction. The Wool Sales Deduction Act 1950 and the Wool Sales Deduction (Administration) Act 1950 came into operation on 2nd December, 1950, and required that a deduction be made from the sale value of wool'sold or exported, the amount deducted being set off against the Income Tax and Social Services Contribution assessed in respect of the income of the year 1950-51. These Acts were repealed by the Wool Sales

Deduction Legislation Repeal Act 1951 which came into operation on 17th November, 1951, and provided for the refund to producers, etc., of amounts paid on the value of wool sold or otherwise disposed of, after 30th June, 1951. The amount of deduction collected in 1951-52 was, £5,963,000. In 1952-53 and 1953-54, refunds amounted to £2,223,000 and £239,000 respectively.

(g) Estate Duty. The Commonwealth Estate Duty was first levied in 1914. Particulars of exemptions allowed and the rates imposed prior to November, 1957, are given in earlier issues of the Year Book (see No. 43, p. 758).

Under the Estate Duty Assessment Act 1914–1957, Estate Duty is assessed on the net value of the estate less a statutory exemption determined in accordance with the following formula:—(a) where the whole of the estate passes to the widow, children (including adopted children, step-children and ex-nuptial children), or grand-children of the deceased, the sum of £5,000 decreasing by £1 for every £3 by which the value exceeds £5,000 and ceasing to apply at £20,000; (b) where no part of the estate passes to the widow, children or grand-children, the sum of £2,500 decreasing by £1 for every £3 by which the value exceeds £2,500 and ceasing to apply at £10,000; and (c) where part only of the estate passes to the widow, children or grand-children, the statutory exemption is to be calculated proportionately under (a) and (b).

An amendment to this Act, assented to on 20th November, 1957, provided for rebates of duty on estates which become liable for duty on two or more occasions within a period of five years.

The rates of duty levied under the Estate Duty Act 1914-1941 increase as the value of the estate increases as follows:—£1 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent. to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; over £500,000, 27.9 per cent.

Total collections for the years 1938-39 and 1951-52 to 1955-56 were as follows:—1938-39, £1,915,000; 1951-52, £7,778,000; 1952-53, £8,393,000; 1953-54, £9,825,000; 1954-55, £9,614,000; 1955-56, £10,120,000.

Particulars of the number and value of estates and duty assessed, for each of the assessment years 1938-39 and 1951-52 to 1955-56, are given in the following table:—

#### ESTATE DUTY ASSESSMENTS.

Particulars.		1938-39.	1951-52.	1952-53.	1953-54.	1954–55.	1955–56.
Number of Estates Gross Value Assessed Deductions. Statutory Exemption Dutiable Value Duty Payable Average dutiable value Average duty per estate	£'000 £'000 £'000 £'000 £'000	9,681 65,699 12,630  53,069 2,002 5,482 207	16,289 144,073 22,083 18,672 103,318 7,978 6,343 479	19,663 175,672 27,795 22,566 125,311 9,249 6,373 470	19,621 187,905 31,010 22,976 133,919 10,089 6,825 514	12,878 176,853 30,136 23,290 123,427 10,310 9,584 801	11,069 178,361 31,281 23,802 123,278 10,882 11,137 983

(h) Gift Duty. The Gift Duty Act 1941-1947 and the Gift Duty Assessment Act 1941-1957 impose a gift duty on all gifts made after the 29th October, 1941. A gift has been defined as any disposition of property, which is made otherwise than by will, without adequate consideration in money or money's worth. There is a liability on both the donor and the donee to furnish a return, and both are jointly and severally liable for payment of the duty.

The following rates of duty are levied under the Gift Duty Act 1941-1947 and relate to the value of all gifts made by the donor within a period of eighteen months:—Not exceeding £2,000, nil; £2,001 to £10,000, 3 per cent.; £10,001 to £20,000, 3 per cent to 6 per cent.; £20,001 to £120,000, 6 per cent. to 26 per cent.; £120,001 to £500,000, 26 per cent. to 27.9 per cent.; £500,001 and over, 27.9 per cent.

An amendment which operated from 3rd June, 1947 provides that gift duty will not exceed one-half of the amount by which the value of the gift exceeds £2,000.

Total receipts from gift duty for the years 1951-52 to 1955-56 were as follows:— 1951-52, £1,202,000; 1952-53, £1,162,000; 1953-54, £1,386,000; 1954-55, £1,618,000; 1955-56, £1,820,000.

(i) Entertainments Tax. The Commonwealth levied an Entertainments Tax from 1st October, 1942 to 30th September, 1953. Details of rates are given in earlier issues of the Official Year Book (see No. 40, pp. 672 and 673).

Entertainments tax receipts during the three years 1951-52 to 1953-54 were as follows:—1951-52, £6,161,000; 1952-53, £6,708,000; 1953-54, £1,977,000. There was an excess of refunds over payments of £2,000 in 1954-55 and of £1,000 in 1955-56.

(j) Flour Tax. Particulars of the rates of flour tax which operated from 4th December, 1933 to 21st December, 1947 are given in Official Year Book No. 37, pp. 618 and 619. Because of the rise in wheat prices, the rate was declared to be nil as from 22nd December, 1947.

(k) Wool Levy. The Wool Tax Act 1936 and Wool Tax Assessment Act 1936 provided for a levy on all wool grown in Australia and shorn on or after 1st July, 1936. Details of this levy are given in earlier issues of the Official Year Book. This levy was suspended from 1st July, 1946, until 30th June, 1952, while the Wool Contributory Charge was imposed.

With the repeal of the Wool Contributory Charge, however, a levy on wool produced in Australia was re-introduced from 1st July, 1952. The Wool Tax Acts (Nos. 1 and 2) of 1952 provide for the payment of a levy of four shillings a bale until 30th June, 1953, after which date the rate of tax may be varied within prescribed limits. There was no variation to 30th June, 1957. The purpose of the tax is to provide funds for publicity and research previously provided by the Wool Contributory Charge. Collections during 1952-53, 1953-54, 1954-55 and 1955-56 were £675,000, £772,000, £784,000 and £851,000

(1) Wool Contributory Charge. The Wool (Contributory Charge) Act 1945 and the Wool (Contributory Charge) Assessment Act 1945 imposed a charge on all wool produced in Australia and sold, manufactured or exported. Wool sold by the Australian Wool Realization Commission was not liable to the charge. Details of the rate of the charge and collections made were given in earlier issues of the Official Year Book (see No. 40, p. 675).

The various Wool (Contributory Charge) Acts were repealed by the Wool Tax Assessment Act of 1952 and the charge superseded by the wool levy. Collections during the years 1951-52 and 1952-53 were as follows:-1951-52, £2,230,000, and 1952-53, £28,000.

(m) Wheat Export Charge and Wheat Tax. A summary of the provisions of the Wheat Export Charge Acts 1946, 1948 and 1952 is contained in previous issues of the Official Year Book (see No. 40, p. 676 and No. 41, p. 604).

The Wheat Export Charge Act 1954 repealed previous Acts and provided for an export charge on wheat and wheat products for the seasons 1953-54 to 1957-58 inclusive. The charge levied is based on the difference between the cost of production and the export price with a maximum levy of 1s. 6d. per bushel. Under the Wheat Industry Stabilization Act 1954, to which the Wheat Export Charge Act is complementary, the Commonwealth Government guarantees a return to wheat-growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia during each of the five seasons. Collections from the wheat export charge are paid into the Wheat Prices Stabilization Fund, out of which payments will be made to the Australian Wheat Board, when required, for the purpose of building up the average export price for any season to the guaranteed price. If the Fund is exhausted, additional payments will be made from the Consolidated Revenue Fund.

Collections of the wheat export charge amounted to £12,202,000 in 1951-52, £8,139,000 in 1952-53, nil in 1953-54, £5,063,000 in 1954-55, and £4,294,000 in 1955-56.

(n) Miscellaneous Export Charges. These consist of charges levied on exports of apples and pears (Apple and Pear Export Charges Act 1938-1947), canned fruits (Canned Fruits Export Charges Act 1926-1952), dairy produce (Dairy Produce Export Charges Act 1924-1937), dried fruits (Dried Fruits Export Charges Act 1924-1929), eggs (Egg Export Charges Act 1947) and meat (Meat Export Charge Act 1935-54) and on grapes used in the manufacture of wine (Wine Grapes Charges Act 1929-1954). The collections are paid into funds to be applied for the purposes of Export Boards established under various Acts, in controlling the quantity and quality of produce exported.

Collections for the last five years were as follows:—1951-52, £72,000; 1952-53, £166,000;

1953-54, £168,000; 1954-55, £300,000; and 1955-56, £414,000.
(o) Stevedoring Industry Charge. The Stevedoring Industry Charge Act 1947 and the Stevedoring Industry Charge Assessment Act 1947 imposed a charge of 4½d. per manhour on the employer of a waterside worker after 22nd December, 1947.

The amounts received are paid to the Stevedoring Industry Board for the payment of attendance money to waterside workers and for other expenses of the Board.

Since 1947, the charge has been amended as follows:—11th October, 1949, a reduction to 2½d. a man-hour; 11th December, 1951, an increase to 4d. a man-hour; 28th October, 1952, an increase to 11d. a man-hour; 4th May, 1954, a reduction to 6d. a man-hour; 30th October, 1956, an increase to 1s. 7d. a man-hour; and from 21st May, 1957, an increase to 2s. a man-hour.

Collections during the years 1951-52 to 1955-56 were as follows:—1951-52, £551,000; 1952-53, £1,144,000; 1953-54, £1,630,000; 1954-55, £998,000; and 1955-56, £973,000.

(p) Gold Tax. Particulars of the Gold Tax which operated from 15th September,

1939, to 20th September, 1947, are given in Official Year Book No. 39, p. 767.

(q) Tobacco Industry Charge. The Tobacco Charge Acts Nos. 1, 2 and 3, 1955 and the Tobacco Charges Assessment Act 1955, which came into operation on 1st January, 1956, provided for charges on tobacco leaf grown in Australia.

The Tobacco Charge Act No. 1, 1955 imposed a maximum charge of ½d. per pound on all Australian tobacco leaf sold to a manufacturer.

The Tobacco Charge Act No. 2, 1955 imposed a charge at twice the rate to be levied under the Tobacco Charge Act No. 1, on all Australian tobacco leaf purchased by a manufacturer. The Tobacco Charge Act No. 3, 1955, imposed a charge on all Australian tobacco leaf grown by a manufacturer and appropriated by him for manufacturing purposes. Where the manufacturer grew, in Australia, not less than nine-tenths of the tobacco leaf used by him in manufacturing, the charge was at the rate imposed by the Tobacco Charge Act No. 1. In other cases the charge was at twice that rate.

The charges collected under the Tobacco Charges Assessment Act 1955 were paid into the Tobacco Industry Trust Account which was established by the Tobacco Industry Act 1955. Moneys in this account are used for the promotion of the tobacco industry.

Collections in 1955-56 amounted to £4,739.

3. Business Undertakings.—(i) Postmaster-General's Department. Particulars of net receipts for each of the financial years 1938-39 and 1951-52 to 1956-57 are contained in the following table:—

POSTMASTER-GENERAL'S DEPARTMENT: NET RECEIPTS. (£'000.)

				(* 000.)				
Particulars.		1938–39.	1951–52.	1952-53.	1953-54.	1954–55.	1955–56.	
Private boxes and Commission on and postal note Telegraphs . Telephones Postage Miscellaneous	money	orders	74 289 1,372 8,040 6,636 955	827 5,066 31,059 20,687 1,568	169 859 4,547 35,177 21,821 1,825	887 4,710 37,113 22,893 2,020	180 862 4,934 40,402 24,139 2,308	935 4,960 44,351 (a)26,597 2,313
Total	••		17,366	59,371	64,398	67,798	72,825	79,341

<sup>(</sup>a) Includes revenue for Airmail Services previously received by Department of Civil Aviation.

Further particulars of the Postmaster-General's Department's receipts to 1956-57 are given in Chapter XI.—Transport and Communication (Part II, Division A. Posts, Telegraphs, Telephones. Cable and Radio Communication).

(ii) Broadcasting Services. Following the amendment of the Australian Broadcasting Act 1942–1946 by Act No. 64 of 1948, the Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter XI.—Transport and Communication).

Details of net receipts for the years 1951-52 to 1955-56 are shown in the following table:—

### BROADCASTING SERVICES: NET RECEIPTS.

		 , 000.,				
Particulars,		1951-52.	1952–53.	1953–54.	1954–55.	1955-56.
Listeners' Licence Fees Broadcasting Station Licence Miscellaneous	 Fees	 2,776 20 9	3,770 23 13	3,827 25 15	3,831 27 17	3,846 35 16
Total		 2,805	3,806	3,867	3,875	3,897

(iii) Commonwealth Railways. The Commonwealth Government is responsible for four railways—the Trans-Australian, the Central Australia, the North Australia and the Australian Capital Territory. The following table shows the amounts paid to the credit of the Consolidated Revenue Fund on account of each of these railways for the years 1938-39 and 1951-52 to 1955-56:—

### COMMONWEALTH RAILWAY REVENUE.

			(£'0l	JU.)			
Railway.		1938-39.	1951-52.	1952-53.	1953–54.	1954–55.	1955–56.
Trans-Australian Central Australia North Australia Aust. Cap. Territory	•••	331 138 50 7	1,479 1,241 49 10	1,372 1,290 42 25	1,825 1,553 68 15	1,928 1,483 70 29	2,545 1,937 86 15
Total	••	526	2,779	2,729	3,461	3,510	4,583

Further particulars to 1956-57 are given in Chapter XI.—Transport and Communication (Part I. Division B. Government Railways).

4. Other Sources of Revenue.—Revenue derived by the Consolidated Revenue Fund from the Territories of the Commonwealth during 1955-56 amounted to £2,249,000 (Australian Capital Territory, £1,512,000; Northern Territory, £737,000). Of other sources of revenue, amounting in 1955-56 to £44,508,000, the following are noteworthy:—Interest, £14,179,000; Defence, £3,820,000; Net Profit on Australian Note Issue, £7,866,000; Joint Coal Board—Repayment of Advances, £2,488,000; Tea Importation Board—Repayment of Advance, £2,000,000; Australian Shipping Board, Transfer of Surplus Funds, £3,000,000; and Surplus Balances of Trust Accounts, £1,981,000.

#### III.-Expenditure.

1. Details of Expenditure from Consolidated Revenue.—The following table shows details of the expenditure from the Consolidated Revenue Fund during the years 1938-39 and 1951-52 to 1955-56.

COMMONWEALTH CONSOLIDATED REVENUE FUND: EXPENDITURE. (£'000.)

		(2 000.)		_		
Department, etc.	1938–39.	1951–52.	1952-53.	1953-54.	1954–55.	1955-56.
Defence Services(a)	7,514	124,635	173,346	161,759	153,303	153,071
War (1914-18 and 1939-45) and Repatriation Services(b)	19,252	105,801	(c) 131,134	120,144	120,151	124,524
Subsidies and Bounties	236	31,341	25,332	21,320	21,539	17,393
Cost of Departments(d)	9,299	71,469	74,545	72,171	79,337	88,766
National Welfare Fund	(e) 16,428	171,709	165,511	176,565	189,319	214,866
National Debt Sinking Fund Special Payment		98,500			••	
Debt Redemption Reserve Trust Account		••		56,271	70,151	
Loan Consolidation and Invest- ment Reserve Trust Account	ļ	••	: , ••	••		61,613
Business Undertakings— Postmaster-General— Airmail Services Other Broadcasting Services Railways	211 14,667 (f) 1,331	2,413 61,878 4,135 3,491	4,556	2,863 69,381 4,684 3,527	2,946 73,300 4,871 3,622	3,860- 81,767 5,590 3,721
Territories	1,100	9,773	9,838	11,153	12,971	14,603
Capital Works and Services—Defence	1,349 141 3,851 (f) 142 739 493	45,126 27,861 28,819 251 2,637 5,153 45,152	42,317 28,167 28,427 202 4,746 4,821 35,927	28,513 27,073 25,986 281 3,382 4,511 31,467	33,003 30,131 25,839 273 3,100 5,168 29,455	38,479 30,242 28,970 817 2,674 8,049 31,148
Payments to or for States	15,669	161,701	184,204	195,648	200,729	220,542
Other Expenditure(g)	2,643	14,983	53,687	6,091	8,233	7,663
Grand Total	95,065	1,016,828	1,040,067	1,022,790	1,067,441	1,138,358
Per Head of Population	£ s. d.	£ s. d. 119 4 6	£ s. d, 119 1 7	£ s. d. 114 18 4	£ s. d.	£ s. d. 122 4 0

<sup>(</sup>a) Excludes debt charges, Pension and Superannuation payments and Defence Division of the Department of the Treasury. (b) Excludes Government contributions under Superannuation Act. (c) Includes £13,400,000 special payment to War Pensions Trust Account. (d) Revised to include Pension and Superannuation payments relating to Defence and War and Repatriation Services. (e) Invalid and Age Pensions and Maternity Allowances. (f) Provided in part from Postmaster-General's Department votes and balance from Broadcasting Trust Account. (g) Includes assistance to Primary Producers.

Further details of the expenditure in each section are given in paragraphs 2 to 14 following.

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on p. 797. In this diagram, Public Debt Charges (interest and debt redemption, etc.) are shown as a separate item, whereas, in the table above, these charges are included in the section to which they relate.

Details of Commonwealth expenditure on public debt charges for 1938-39 and 1951-52 to 1955-56 are shown in the following table:—

PUBLIC DEBT CHARGES(a): COMMONWEALTH EXPENDITURE.

		(£'000.)				
Item.	1938~39.	1951-52.	1952–53.	1953–54.	1954–55.	1955-56.
War (1914-18 and 1939-45) Debt(b)—						
Interest and Exchange Debt Redemption	7,616 2,049	43,902 15,002	43,354 21,256	43,698 19,981	43,234 15,273	43,514 16,299
Other(c)	224	215	279	249	376	214
Total	9,889	59,119	64,889	63,928	58,883	60,027
Business Undertakings— Postmaster-General's Depart- ment—				' <del></del>		
Interest and Exchange Debt Redemption	1,758 1,129	1,437 2,257	1,349 2,371	1,207 2,313	1,303 1,655	885 1,438
Other(c)				13	253	
Total	2,887	3,694	3,720	3,533	3,211	2,323
Railways— Interest and Exchange	455	415	413	406	410	388
Debt Redemption Other(c)	75 11	141	148		163 19	
Total	541	556	562	561	592	560
Territories— Interest and Exchange	318	219	218	238	234	233
Debt Redemption Other(c)	58 4					133
Total	380	329	333	359	361	366
Works and Other Purposes— Interest and Exchange	3,226	3,259	4,149	5,308	6,089	8,175
Debt Redemption	613	791 46	718	708 133	556 145	625
Otner(c)						
Total	3,876	4,096	4,933	6,149	6,790	8,877
Total— Interest and Exchange	13,373	49,232	49,483	50,857	51,270	53,195
Debt Redemption Other(c)	3,924 276	18,301 261	24,608 346	23,278 395	17,774 793	18,667 291
Grand Total	17,573	67,794	74,437	74,530	69,837	72,153

<sup>(</sup>a) Excludes payments to or for States under the Financial Agreement. See pp. 805-808.
(b) Includes repatriation debt.
(c) Redemption, conversion and loan management, etc., expenses.

<sup>2.</sup> Defence Services.—Details of the expenditure on Defence Services by the Departments of Defence, Navy, Army, Air, Supply and Defence Production are shown in the following table. The expenditure shown under Department of Supply includes the former Departments of Shipping and Fuel, Supply and Development, Supply and Shipping, and Munitions. This table covers expenditure by the service and associated departments only, and includes the cost of maintaining forces in Korea and at other oversea posts.

The figures represent the combined expenditures from revenue, trust and loan funds for the years 1938-39 and 1951-52 to 1955-56.

### DEFENCE SERVICES(a): COMMONWEALTH EXPENDITURE FROM REVENUE, TRUST AND LOAN FUNDS.

(£'000.)

Item.	1938–39	1951-52.	1952-53.	1953–54.	1954-55.	1955-56.
Department of Defence	61	476	601	634	644	761
Department of the Navy— Naval Forces—Pay, maintenance, Naval construction and additions		30,386	36,406	34,642	34,311	35,273
the fleet Buildings, works, etc.	1,643	3,302 2,812	5,436 2,510	5,996 1,665	6,422 1,674	4,884 1,636
Administrative and miscellane expenditure	ous 31	1,269	2,988	2,731	4,970	6,392
Total	4,699	37,769	47,340	45,034	47,377	48,185
Department of the Army— Military Forces—Pay, maintenant		-				
etc	2,941	28,490	58,287	44.719	38.653	39,808
Arms, armament, ammunition	1,129	17,926	26,174	44,719 15,201	18,435	16,374
Buildings, works, etc.	418	8,769	6,039	3,313	2,938	3,466
Administrative and miscellane expenditure	71	812	1,103	1,201	1,679	2,161
expenditure		312	1,103	1,201	1,0/5	2,101
Total	., 4,559	55,997	91,603	64,434	61,705	61,809
Department of Air-		-	l			
Air Force—Pay, maintenance, e		19.998	23,762	21,539	22,744 22,708	24,081
Aircraft, equipment and stores	1,049	23,502	25,881	22,886	22,708	23,541
Buildings, works, etc Administrative and miscellane	489	3,883	4,521	3,312	2,587	3,013
expenditure	12	1,025	1,169	1,122	1,377	1,760
Total	2,854	48,408	55,333	48,859	49,416	52,395
Department of Supply— Defence research and developm Strategic stores and equipment		6,434	6,786	7,444	9,307	10,680
serve		10,049	· <u>.</u>		٠:	•:
Buildings, works, etc Administrative and miscellaneous	463	270	372	200	175	225
expenditure	1,212	3,050	4,245	4,160	4,199	4,458
		-	- 1,245			-,,,,,,,,
Total	1,675	19,803	11,403	11,804	13,681	15,36 <b>3</b>
Administration of National Serv	ice					
Act cp p		173	212	218	199	218
Department of Defence Production(b)		7,135	9,171	7,288	5,252	12,334
Defence Equipment and Supplies(c) Civil Defence		• •	••	12,000	8,000 33	
Recruiting Campaign			::	••		372
Other	:: ::	::	::	::		24
Total Defence Services— Consolidated Revenue Fund	8,863	169,761	215,663	190,271	186,307	191,550
Trust Funds	(d) 3,072	105,701	2.5,005		100,301	,
Loan Fund	1,913		::			
Grand Total	13,848	169,761	215,663	190,271	186,307	191,550

<sup>(</sup>a) Excludes expenditure on debt charges, pension and superannuation payments, and Defence Division of the Department of the Treasury. (b) Included with Department of Supply prior to 1951-52. (c) Paid to credit of Defence Equipment and Supplies Trust Account. (d) Expenditure from excess receipts of previous years appropriated for Defence Equipment Trust Account.

<sup>3.</sup> War and Repatriation Services.—Expenditure from Consolidated Revenue and Loan Fund for War and Repatriation Services and Post-war Charges in relation to both the 1914-18 and 1939-45 Wars is shown in the following table for the years 1938-39 and

1951-52 to 1955-56. Expenditure on the maintenance of forces in Korea and at other oversea posts and the cost of arms and equipment is included in Defence Services (see paragraph 2).

WAR AND REPATRIATION SERVICES AND POST-WAR CHARGES: COMMON-WEALTH EXPENDITURE FROM CONSOLIDATED REVENUE AND LOAN FUNDS. (£'000.)

Item.	1938–39.	1951-52.	1952–53.	1953–54.	1954-55.	1955–56.
Public Debt Charges—						
Interest and Exchange	7.616	43,902	43,354	43,698	43,234	43,514
Debt Redemption	2,049	15,002	21,256	19,981	15,273	16,299
Other	224	215	279	249	376	214
Total Public Debt Charges(a)	9.889	59,119	64,889	63,928	58,883	60,027
War Gratuities		42	15			
War and Service Pensions	8,228	33,566	36,577	39,425	44,548	47,307
Commonwealth Reconstruction Train-	,,,,,,	,		,	,.	,
ing Scheme		1,807	974	502	314	221
War Service Land Settlement		5,641	6,567	5,506	4,789	8,790
Re-establishment loans for agricultural						
purposes		188	140	115	106	71
Repatriation Department—						
Repatriation benefits	631	9,758	10,822	11,500	11,720	12,278
Other benefits	119	298	388	443	486	473
Administration and general expenses	315	3,196	3,464	3,597	3,671	3,974
Expenditure recovered(b)	-71	-1,615	-1,534	-1,281	-1,226	-1,082
Total Repatriation Department	994	11,637	13,140	14,259	14,651	15,643
War Service Homes-Salaries and						
general expenses	98	631	622	685	815	948
Other Departments—Miscellaneous ex-						
penditure(c)	43	1,153	1,288	804	472	369
International Payments(d)		102	48	40	41	36
Other Administrations—Recoverable						
expenditure(e)		1,071	-842	-921	-429	-1,266
Miscellaneous Credits		-2,853	S	$\mathcal{G}$	$\mid \mathcal{B} \mid$	SS
Credits from the Disposals Commission		-1,183			(/)	<u>_(/)</u>
Capital Works and Services—			202		400	
Repatriation Department	36	271	203	227	132	242
War Service Homes Act 1918-1949	105	27,590	27,964	26,846	29,999	30,000
Total Capital Works and Services	141	27,861	28,167	27,073	30,131	30,242
Total, War and Repairiation Services and Post-war Charges—						
Consolidated Revenue Fund	19,393	133,662	145,901	147,217	150,282	154,766
Loan Fund	15,555	5,120	5,684	4.199	4,039	7,622
Cound Total	19,393	138,782	151,585	151,416	154,321	162,388
Grand Iotal	17,373	130,702	221,203	131,410	137,321	104,000

<sup>(</sup>a) Excludes Interest and Redemption on War (1914-18) Debt due to the United Kingdom Government, payment of which was suspended in 1931. (b) From Service Departments and Australian Soldiers' Repatriation Trust Account. (c) Revised to exclude Government contributions under Superannuation Act. (d) Excludes International Monetary Fund Charges. (e) Munitions, stores, etc., supplied to the Government of United Kingdom and other administrations. Includes repayments and waivure of war-time indebtedness of other administrations. (f) Receipts credited to Defence revenue.

Note.—Minus sign (-) indicates excess of credits or repayments over expenditure.

4. Subsidies and Bounties.—The following table shows details, for the years 1938-39 and 1951-52 to 1955-56, of Commonwealth expenditure from revenue on subsidies, bounties and assistance to primary producers. Expenditure on special relief such as drought, frost, flood and bush fire, etc. (see table, p. 800, for more important items), is not included, nor is expenditure from the proceeds of certain taxes on primary products and profits from marketing schemes, which have been paid to trust funds for the purpose of price or other stabilization schemes or for distribution to producers (see paragraph 14, p. 808). Further information relating to these schemes and other assistance to, primary producers is given in Chapter XXII.—Agricultural Production.

Details of price stabilization subsidies and of various forms of assistance to primary producers for earlier years may be found on pp. 414 and 1014-15 respectively of Official Year Book No. 38.

SUBSIDIES	AND	BOUNTIES	:	COMMONWEALTH	EXPENDITURE.
				(£°000.)	

Item.	1938–39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
Subsidies—					·	
Price Stabilization—						
Tea	• • •	5,577	4,683	4,180	5,077	1,734
Coal		1,519	1,114	200	185	27
Wheat Shipped to Tasmania—						
Freight Subsidy		143	210	192	••	
Total		7,239	6.007	4,572	5,262	1,761
Assistance to Primary Production-						
Dairy Industry(a)		17,843	15,719	15,400	15,750	14,500
Nitrogenous Fertilizers		1,521	289	175		
Other		. 9	519			
Total		19,373	16,527	15,575	15,750	14,500
Assistance to Gold-mining Industry					97	401
Total Subsidies	•••	26,612	22,534	20,147	21,109	16,662
Bounties-						
Tractor		103	38	145	82	55
Wool Products		2,254	i			
Wheat-for Stock Feed	1	2,368	2,759	1,010		
Sulphuric Acid	1	2,000	-,		306	513
Other	(b) 236	4		18	42	163
Total Bounties	236	4,729	2,798	1,173	430	731
Grand Total	236	31,341	25,332	21,320	21,539	17,393

<sup>(</sup>a) Dairy products.

5. Total Cost of Departments.—Expenditure under this heading covers expenditure by departments, other than the defence and repatriation departments and business undertakings, on administrative services and other activities. Expenditure on defence (other than interest and debt redemption in respect of the defence departments, which is included in the expenditure of the Department of the Treasury), war and repatriation services, subsidies and bounties, social services paid from the National Welfare Fund, business undertakings, Commonwealth territories and capital works and services is excluded.

Information on the functions of departments and the acts administered by the Ministers of departments was published in Official Year Book No. 37, pp. 76-86, and particulars of subsequent changes in departmental structure were given in later issues (see No. 43, p. 81).

In the following table, details are given of that expenditure on the branches of each department which might be termed running expenses. Miscellaneous expenditure and debt charges, etc., are not included in this table but are in the one following.

COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPART-MENTS—SALARIES, WAGES AND GENERAL EXPENDITURE. (£'000.)

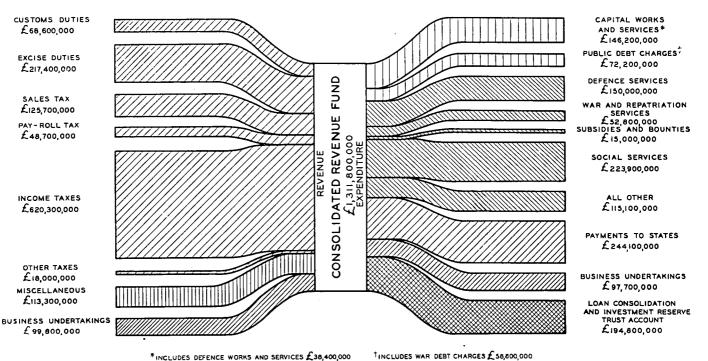
Department.	1938 -39.	1951-52.	1952–53.	1953-54.	1954-55.	1955–56.
Governor-General	28	64	81	88	82	94
Parliament—						
Cost of Parliament	279	1,062	1,193	1,184	1,282	1,420
Electoral Office	105	341	441	434	427	532
Total	384	1.403	1.634	1,618	1.709	1,952
Prime Minister—	1					
Department	62	210	246	256	268	314
Audit Office	38	289	(a)	(a)	(a)	(a)
Public Service Board	51	405	429	440	485	597
National Library	4	96	107	121	136	160
High Commissioner's Office—Uni	ted	1				
Kingdom	81	621	621	612	587	658
Commonwealth Grants Commissi	on 5	14	15	15	17	19
Office of Education		200	148	149	156	194
Security Services		276	331	332	362	422
Total	241	2,111	1.897	1,925	2,011	2,364
External Affairs-	1	<del>-</del>				<u> </u>
Department	20	442	427	429	456	501
Oversea representation		1,160	1,301	1,280	1,232	1,444
Total	20	1,602	1,728	1,709	1,688	1,945

For footnotes see next page.

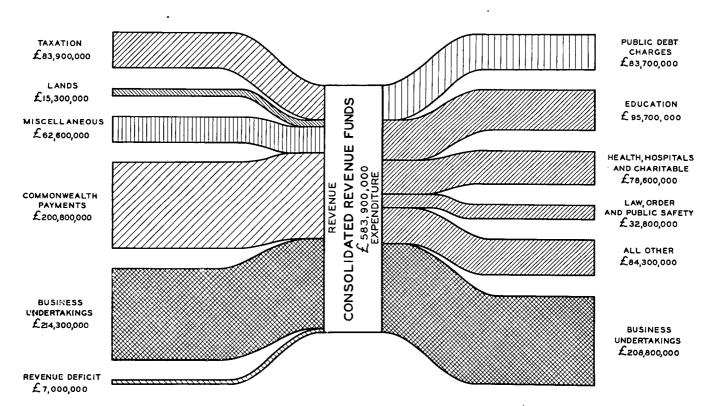
<sup>(</sup>b) Includes Raw Cotton Bounty, £115,000 and Sulphur Bounty, £88,000.

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### COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30TH JUNE, 1957



### STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30TH. JUNE, 1957



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#### COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPART-MENTS—SALARIES, WAGES AND GENERAL EXPENDITURE—continued. (£'000.)

			()	E'000.)				
Depar	rtment.		1938-39	1951-52.	1952-53.	1953-54.	1954-55.	1955–56.
Treasury— Department Taxation Branch	and Bo	ards of Re	. 59	430	540	530	569	665
view Bureau of Censu Commonwealth	s and St		. 616 . 61		6,668 530	6,674 594	6,741 646	7,489 776
Board .		•••••	. : 9	73	78	80	82	89
Total .	•		. 745	7,081	7,816	7,878	8,038	9,019
Attorney-General- Department .			. 20	149	187	199	223	264
Crown Solicitor High Court .			20 28 34	205	227 87	237 85	264 96	315
Bankruptcy Adm	inistratio	on .	. 44	78	97	113	122	109 146
Court of Concilia Patents, Trade !	ition and Marks ar	Arbitratio	n 24 s 71	168 319	175 334	174 381	180 379	199 388
Other Branches .			.   37	241	233	244	329	401
Total .	•		258	1,250	1,340	1,433	1,593	1,822
Interior Department .			296	1,083	1,212	1,204	1,248	1,096
Meteorological B Observatory			1	440	438 67	515 72	540 76	601
Forestry Branch			10	86	88	90	93	88 116
News and Information	mation E		393	(b)	(b)	(b)	(b) 1,957	271
Works				1,669	1,805	1,881 1,939	$-\frac{1,937}{2,110}$	2,172 2,436
Civil Aviation .				3,571	3,788	2,511	2,504	2,933
Trade and Customs			721	2,953	3,244	3,390	3,676	(d)4,021
Health— Department .			1	353	405	445	471	537
Quarantine . Health Services .			} 135	161	198	222	222	238
Total .			135	857	1,082	459 1,126	7,198	1,383
Trade—			135	- 857	1,002	1,120	7,130	
Department . Tariff Board .			(e) (f)	(e) (f)	(e) (f)	(e) (f)	(e)	428
Commercial Int	telligence	Service		(7)			(J)	68
Ahroad .  Total .			(e)	(e)	(e)	(e)	<u>(e)</u>	453
rotai . Primary Industry—	•	• •	<del></del>	.  <del></del>		— <del>::</del>	· ·	949
Department Inspection of goo Division of Agric and Division of	cultural :	Economics	(e)	(e)	(e)	(e)	(e)	294 1,007
duction .  Total .			<del> </del>	i			···	1,469
Commerce and Agri	culture-			1	- ''			)
Department Inspection of goo Commercial Int	ds for ex	port	58 175	333 582	388 689	407 740	452 841	
Abroad . Division of Agri- and Division o	cultural	Économics	47	299	334	364	393	(g)
duction .	-			122	123	140	152	}
Total .	• . •		280	1,336	1,534	1,651	1,838	
Social Services—De Shipping and Transp		••	139	1,974	2,300	2,395	2,475	2,669
Department .				161	144	135	144	173
Marine Branch . Ship Construction	 n .		208	748	792 91	813   91	816 17	898 16
Total .			208	994	1,027	1,039	977	1,087
Territories-Departi			(h)	158	193	166	167	204
Immigration—Departation  Labour and National		. Depart	(c)	1,230	1,269	1,193	1,384	1,734
ment		· Depuri		1,773	1,785	1,732	1,774	1,986
National Developme Department	nt		1	452	448	385	361	357
Bureau of Minera	l Resour	ces		480	698	434	379	522
Total		Litualisasi S		932	1,146	819	740	879
Commonwealth Scie Research Organiz	ntıjıc ana ation— L	i inaustrial Depar:meni	195	2,895	3,260	3,537	3,994	4,723
Atomic Energy Com Total All Deg	mission		3,837	35,334	38,319	253 38,283	430	641 46,482
Total All Det	)ar tinents	·	5,057	, 33,334	30,319	30,203	40,343	********

(a) Allocated to Departments.
(b) Included with Interior—Department.
(c) Included with Department of the Interior.
(d) Department of Customs and Excise.
(e) See Department of Commerce and Agriculture.
(f) Included with Department of Trade and Customs.
(g) See Departments of Trade and Primary Industry.
(h) Included with Prime Minister's Department.

The following table gives details of miscellaneous expenditure included in the total cost of departments. It covers such items as interest and debt redemption in respect of departments (including defence departments) which is included under expenditure by the Department of the Treasury, repairs and maintenance of buildings, and special expenditure for which the Commonwealth is committed, such as contributions to international organizations, payment of Commonwealth scholarships, etc. The costs of social services, which are paid from the National Welfare Fund, are not included in this table (see pp. 801-2 for this information).

# COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPARTMENTS—MISCELLANEOUS EXPENDITURE.(a) (£'000.)

Australian National University   19	1938–39. 1951–52. 1952–53. 1953–54. 1954–55. 1955–56.	1951–52.	193839.		epartment.	Dep
Cost of elections	1 10 7 6 25 29	10	1			
Other						
Total	12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				• • •	
Prime Minister—  Commonwealth Scholarship Scheme and financial assistance to University students   Australian National University   19	· · · · · · · · · · · · · · · · · · ·			••	• •	
Commonwealth Scholarship Scheme and financial assistance to University students   Australian National University	15 268 271 276 41 337	268	15_	••	• •	
financial assistance to University students Australian National University Bush fire and flood relief, etc.  Total  External Affairs— United Nations and Allied Organizations . Australian National Antarctic Research Expeditions International development and relief Contributions to other international agencies, etc.  Total  Treasury— Interest (including exchange) Debt Redemption(c) Other (d)  Attorney-General Interior— Interior— Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.  Other  Maintenance and development of civil aviation Domestic and international air services— Mails subsidies, etc.  Meteorological maintenance services and other  Total  Trada Customs  Miscellaneous expenditure on health Miscellaneous expenditure on health Miscellaneous expenditure on health Miscellaneous expenditure on health Trada  Trada  Trada  Miscellaneous expenditure on health Miscellaneous		1		<b>~</b>		
Australian National University   19	theme and   742   964   017   094   1 111	742				
Bush fire and flood relief, etc.   19   43   75   108   598   Other       268   1,569   2,108   2,550   2,786   External Affairs— United Nations and Allied Organizations   (b) 46   715   597   632   647   Australian National Antarctic Research Expeditions   145   152   224   213   International development and relief   4,859   4,271   3,574   3,429   Contributions to other international agencies, etc.   4   94   105   112   170   Total     50   5,813   5,125   4,542   4,459   Treasury— Interest (including exchange)     614   792   718   708   556   Other(a)     259   1,435   2,090   2,086   4,093   7 total     4,102   5,486   6,957   8,103   10,738   I Interior— Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.   102   239   292   354   373   Total     102   239   292   354   373   Total     102   239   292   354   373   Total     102   239   292   354   373   Total     102   239   292   354   373   Total     102   239   292   354   373   Total     102   239   292   354   373   Total     102   2,526   2,671   3,883   4,080   3,573   3,543   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080   4,080			••			
Other         Total          249         334         569         875         456           External Affairs— United Nations and Allied Organizations. Australian National Antarctic Research Expeditions International development and relief          4,859         4,271         3,574         3,429           Contributions to other international agencies, etc.          4         94         105         112         170           Total          50         5,813         5,125         4,459         4,459           Treasury— Interest (including exchange)          3,229         3,259         4,149         5,309         6,089           Debt Redemption(c)          614         792         718         708         556           Other(d)          259         1,435         2,090         2,086         4,093           Interior— Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.          102         239         292         354         373           Total           102         239         292         354         373           Total           102         239         292			19			
External Affairs	040 0 004 0 000 000 404 004		249		ou rener, ever	Other
United Nations and Allied Organizations					••	
United Nations and Allied Organizations . Australian National Antarctic Research Expeditions	100   1505   2500   2500   35270			••	••	
Expeditions		715	(b) 46	anizations	and Allied Org	United Nations ar
International development and relief	1 145 1 163 1 334   313 1 340	145	l	nc Kesearch	ionai Antarc	
Contributions to other international agencies, etc.  Total  Total  Solution  Maintenance and development of civil aviation  Domestic and international air services— Mails subsidies, etc.  Solution  Meteorological maintenance services and other  Total  Total  Solution  Solution  Meteorological maintenance services and other  Total  Total  Solution  Solution  Meteorological maintenance services and other  Total  Total  Solution  Solut			1	relief	velonment and	
agencies, etc.	vernational	.,007		international		
Treasury	1 4 04 105 112 170 120	94	4			
Treasury—  Interest (including exchange)	50 5,813 5,125 4,542 4,459 6,352	5.813	50			Total
Interest (including exchange)   3,229   3,259   4,149   5,309   6,089   5 6   6   6   792   718   708   5 5 6   6   6   792   718   708   5 5 6   6   792   718   708   5 5 6   7   7   7   7   7   7   7   7   7				• •	• •	
Debt Redemption(c)	3,229 3,259 4,149 5,309 6,089 8,174	3,259	3,229		ng exchange)	
Other(d)         Total         259         1,435         2,090         2,086         4,093         1           Attorney-General         18         74         71         86         81         1           Interior—Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.         231         302         318         358           Other         102         239         292         354         373           Total         102         239         292         354         373           Works         (e)         106         104         119         116           Civil Aviation—         Maintenance and development of civil aviation         162         2,526         2,671         3,883         4,080           Domestic and international air services—Mails subsidies, etc         56         3,274         3,968         3,573         3,543           Meteorological maintenance services and other         8         610         678         611         603           Total         226         6,410         7,317         8,067         8,226           Trade and Customs         37         98         131         165         146         (e)           Subsidy, cattle tick contro	614   792   718   708   556   625	792	614			
Attorney-General          18         74         71         86         81           Interior—Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.          231         302         318         358           publicity, etc.          102         239         292         354         373           Total           102         470         594         672         731           Works          (e)         106         104         119         116           Civil Aviation—            162         2,526         2,671         3,883         4,080           Domestic and international air services—Mails, subsidies, etc           56         3,274         3,968         3,573         3,543           Meteorological maintenance services and other          8         610         678         611         603           Total            37         98         131         165         146         (16           Health—Subsidy, cattle tick control	259 1,435 2,090 2.086 4.093 2,896				••	Other(d)
Interior	4,102 5,486 6,957 8,103 10,738 11,695	5,486	4,102			Total
Interior	18 74 71 86 81 75	74	18			Attorney-General
Other departments in Canberra—Transport services, fuel, light and power; oversea publicity, etc.   102   239   292   354   373   373   292   354   373   3					• •	•
Services, fuel, light and power; oversea publicity, etc	-Transport		1	a—Transport	nts in Canber	
publicity, etc.	r: oversea		1	wer : oversea	light and po	services, fuel, I
Total						publicity, etc.
Works         (e)         106         104         119         116           Maintenance and development of civil aviation         162         2,526         2,671         3,883         4,080           Domestic and international air services— Mails subsidies, etc         56         3,274         3,968         3,573         3,543           Meteorological maintenance services and other         8         610         678         611         603           Total         226         6,410         7,317         8,067         8,226           Trade and Customs         37         98         131         165         146         (e)           Health—         50         53         53         53         250         55         76         85           Miscellaneous expenditure on health         93         295         369         377         472         76         85           Total         176         410         477         505         807         76         85           Trade         (h)         (h)         (h)         (h)         (h)         (h)         (h)         (h)						Other
Maintenance and development of civil aviation			102		• •	Total
Maintenance and development of civil aviation         162         2,526         2,671         3,883         4,080           Domestic and international air services—Mails, subsidies, etc         56         3,274         3,968         3,573         3,543           Meteorological maintenance services and other         8         610         678         611         603           Total           226         6.410         7,317         8,067         8,226           Trade and Customs           37         98         131         165         146         (Health—Subsidy, cattle tick control          69         53         53         53         250         53         53         250         377         472         Other           14         62         55         76         85         77         76         85         77         77         7505         807         77         77         70         70         77         70         70         77         70         80         70         70         70         70         70         70         70         70         70         70         70         70         70         70 <td> (e) 106 104 119 116 129</td> <td>106</td> <td>(e)</td> <td></td> <td>••</td> <td></td>	(e) 106 104 119 116 129	106	(e)		••	
aviation	at of civil		<u> </u>	ent of civil	nd develop	
Mails subsidies etc       56       3,274       3,968       3,573       3,543         Meteorological maintenance services and other       8       610       678       611       603         Total        226       6,410       7,317       8,067       8,226         Trade and Customs        37       98       131       165       146       (         Health—        59       53       53       53       250         Miscellaneous expenditure on health       93       295       369       377       472         Other        14       62       55       76       85         Total        176       410       477       505       807         Trade         (h)       (h)       (h)       (h)       (h)	162   2,526   2,671   3,883   4,080   4,617	2,526	162			aviation
Meteorological maintenance services and other         8         610         678         611         603           Total            226         6.410         7,317         8,067         8,226           Trade and Customs            37         98         131         165         146         (           Health—	r services—			air services—		
other       8     610     678     611     603       Total       226     6.410     7,317     8,067     8,226       Trade and Customs       37     98     131     165     146     (       Health—       69     53     53     53     250       Miscellaneous expenditure on health Other      93     295     369     377     472       Other      14     62     55     76     85       Total      176     410     477     505     807       Trade       (h)     (h)     (h)     (h)     (h)		3,274	56			
Total	1 9 610 679 611 602 407	610				
Trade and Customs          37         98         131         165         146         (           Health—         Subsidy, cattle tick control         69         53         53         53         250           Miscellaneous expenditure on health         93         295         369         377         472           Other          14         62         55         76         85           Total          176         440         477         505         807           Trade           (h)         (h)         (h)         (h)         (h)	· · · · · · · · · · · · · · · · · · ·		1	••	•••	
Health—         Subsidy, cattle tick control       69       53       53       250         Miscellaneous expenditure on health Other       14       62       55       76       85         Total       176       410       477       505       807         Trade       (h)       (h)       (h)       (h)       (h)       (h)				••		
Subsidy, cattle tick control      69     53     53     250       Miscellaneous expenditure on health      93     295     369     377     472       Other       14     62     55     76     85       Total       176     410     477     505     807       Trade       (h)     (h)     (h)     (h)     (h)	37 98 131 165 146 (g)102	98	37	••	1.f	
Miscellaneous expenditure on health      93     295     369     377     472       Other       14     62     55     76     85       Total       176     410     477     505     807       Trade       (h)     (h)     (h)     (h)     (h)     (h)	69 53 53 53 250 552		-			
Other        14     62     55     76     85       Total        176     410     477     505     807       Trade        (h)     (h)     (h)     (h)     (h)					ick control	Subsidy, cattle tic
Total	14 62 66 96 100					
Trade (h) (h) (h) (h)	176 410 477 506 907 1170		1			
				••	• •	
	(h) (h) (h) (h) 199	(h)	(h)			_
Primary Industry—	. 241	1				Primary Industry-
Dairy Industry—Efficiency grant Wood Use Promotion and Research (h) (h) (h) (h)	14 14 14 14 14 14 14 14 14 14 14 14 14 1	(2)	11 00			
Trick and a second seco	arch   \$ 0.5   0.5   0.5   0.5   125	(11)	} \mathcal{m}			
Fisheries development	1   345		11		pment	
			1		• •	
	1,137	l	··-	••		
Commerce and Agriculture— Dairy Industry—Efficiency grant 293 244 238 241		201	i			
Dairy Industry—Efficiency grant 293 244 238 241   Wool use publicity, promotion and research 74 341 371 386 392			****			
Other 173 177 335 519 364					ary, promotio	Other
		1	***	••	•••	J
Total 247 811 950 1,143 997	247 811 950 1,143 997	811	247		••	Total

#### COMMONWEALTH CONSOLIDATED REVENUE FUND: COST OF DEPART-MENTS—MISCELLANEOUS EXPENDITURE(a)—continued.

(£'000.)

	Dep	artment.			1938–39.	1951-52.	1952–53.	1953-54.	1954-55.	1955–56.
Social Service Compassion Homes for Other	nate al	lowances, etc.	Assis	tance	} 186	{ 87 53	104 58	116 67	546 66	535 61
Total	• •				186	140	162	183	612	596
Shipping and Shipping su Railway fa Oversea Co	ibsidies, or re and f	etc. reight con			::	186 487	186 510	148 569	170 631	607 593
port Other	• •	::	••	••	2	80	46	49	52	828 44
Total	••				7	753	742	766	853	2,072
Territories					())	1	1	•	2	1
Immigration— Assisted mi Other migra Other	gration	vities 	::	 	(e) (e) (e)	8,892 3,365 281	6,400 3,096 274	3,644 1,960 205	5,791 1,649 255	6,270 2,035 315
Total				••	(e)	12,538	9,770	5,809	7,695	8,620
Labour and N	Tational S	Service	••			106	95	87	89	109
National Deve Joint Coal I Other		-::	::	::	::	716 257	1,031 194	621 71	282 172	246 140
Total						973	1,225	692	454	386
Commonwealth search Orga Miscellan Other	nization-			i	28	83 16	102 17	98 18	110 24	100 29
Total	• •				28	99	119	116	134	129
Total,	All Depa	rtments			5,463	36,135	36,226	33,888	38,992	42,284

<sup>(</sup>a) Includes rent, repairs and maintenance. Pension and superannuation contributions and interest and debt redemption in respect of the various departments are included under the Department of the Treasury. (b) League of Nations. (c) Unallocated debt charges, in respect of all departments including defence departments. (d) Includes pension and superannuation contributions in respect of all departments, including defence departments. (e) Included with Department of the Interior. (f) Expenditure from Postmaster-General's Department. (g) Department of Customs and Excise. (h) See Department of Commerce and Agriculture. (i) See Departments of Trade and Primary Industry. (j) Included with Prime Minister's Department.

<sup>6.</sup> National Welfare Fund.—The National Welfare Fund was established for the purpose of providing a fund for the payment of Commonwealth social services benefits. During the year 1949-50, an amount equivalent to the total collections of pay-roll tax and social services contribution was paid to the fund from Consolidated Revenue. During 1950-51, the social services contribution was amalgamated with the normal income tax and it became necessary to base the contributions on another formula. For the year 1950-51, the amount paid to the fund was the total of collections of pay-roll tax and social services contribution plus £30,000,000. In 1951-52, the amount paid to the fund was the amount paid in 1950-51 increased in the same proportion as collections of pay-roll tax increased over the collections of pay-roll tax in 1950-51. By an amendment to the National Welfare Fund Act 1943-1950, the amount to be paid to the fund in 1952-53 and subsequent years was changed to the amount of moneys paid out of the fund. In addition to these payments from Consolidated Revenue, the fund received a small amount of interest from investments.

In the following table, details are given of the income and expenditure of the National Welfare Fund and the balance in the fund at the end of each year for the years 1951-52 to 1955-56. A dissection of expenditure into the various types of benefits is given in Chapter XV.—Welfare Services (see p. 546).

NATIONAL WELFARE FUND: RECEIPTS, EXPENDITURE AND BALANCES. (£'000.)

				1	Income.			
	Year.		Contribution from Consolidated Revenue.	Interest on Invest- ments.	Total.	Expendi- ture.	Balance in Fund at end of Year.	
1951-52	· · ·			171,709	1,129	172,838	137,608	185,027
1952-53				165,511	1,809	167,320	165,511	186,836
1953-54				176,565	2,094	178,659	176,565	188,930
195455				189,319	2,108	191,427	189,319	191,038
1955-56				214,866	2,086	216,952	214,866	193,124

- 7. National Debt Sinking Fund.—During 1951-52, a special appropriation of £98,500,000 was paid to the National Debt Sinking Fund for investment in a special loan raised to finance State works expenditure.
- 8. Debt Redemption Reserve Trust Account.—Section 4 of the Appropriation Act (No. 2), 1953-1954 provided for payments from Consolidated Revenue Fund of such sums as the Treasurer may determine. These sums are appropriated to the Debt Redemption Reserve Trust Account for the purpose of expenditure in redeeming any securities forming part of the National Debt of the Commonwealth.

The following payments were made to the Trust Account from Consolidated Revenue Fund.—1953-54, £56,271,000; 1954-55, £70,151,000. There was no expenditure from the Trust Account until November, 1955, when the total balance of £126,422,000 was paid to the credit of the Loan Consolidation and Investment Reserve. The balance of the Trust Account at 30th June, 1954 and 1955 formed part of General Trust Funds which were invested in special loans to finance Commonwealth and State works programmes.

9. Loan Consolidation and Investment Reserve Trust Account.—The Loan Consolidation and Investment Reserve Act 1955 established the Loan Consolidation and Investment Reserve Trust Account for the purpose of repurchase or redemption of securities representing portion of the public debt of the Commonwealth.

In 1955-56, the Account was credited with a transfer from the Debt Redemption Reserve Trust Account, £126,422,000, a payment from Consolidated Revenue Fund of £61,613,000 and Interest, etc. amounting to £2,399,000. Expenditure from the Trust Account on repurchase of securities was £28,701,000. The major portion of the balance of the Trust Account at 30th June, 1956, was invested in Commonwealth securities in special loans to finance Commonwealth and State works programmes.

10. Business Undertakings.—(i) Postmaster-General's Department. From the beginning of 1949-50, Broadcasting Services were separated from the Postmaster-General's Department. Prior to 1949-50, part of the expenditure on these services was included with the Postmaster-General's Department. Details of the expenditure of this Department for the years 1938-39 and 1951-52 to 1955-56 are given in the following table:—

POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE. (£'000.)

Item.	1938–39.	1951–52.	1952–53.	1953–54.	1954-55.	1955-56.
Salaries, stores and materials, mail, engineering services, etc.	11,485	58,686	64,157	66,619	70,568	80,644
Superannuation, Pensions, etc.	392	1,061	1,056	1,214	1,490	1,606
Rents, repairs, etc	114	850	984	878	977	1,054
Interest and Exchange	1,758	1,437	1,349	1,220	1,556	885
Debt Redemptions	1,129	2,257	2,371	2,313	1,655	1,438
Total Working, etc., Ex- penses	14,878	64,291	69,917	72,244	76,246	85,627
Capital Works and Services	3,851	28,819	28,427	25,986	25,839	28,970
Grand Total	18,729	93,110	98,344	98,230	102,085	114,597

Further details of expenditure for 1956-57 on account of the Postmaster-General's Department appear in Chapter XI.—Transport and Communication (Part II., Division A., Posts, Telegraphs, Telephones and Cable and Radio Communication).

(ii) Broadcasting Services. Since 1949-50, all expenditure on broadcasting services has been brought together in one section. Previously these services had been financed partly by the Postmaster-General's Department and partly from the Wireless Broadcasting Trust Account. Details of expenditure for the years 1951-52 to 1955-56 are shown in the following table.

COMMONWEALTH BROADCASTING SERVICES: EXPENDITURE. (£'000.)

Item.	1951-52.	1952–53.	1953-54.	1954–55.	1955-56
Australian Broadcasting Control Board Australian Broadcasting Commission—	-	56	77	83	106
Salaries, general and programme expenses  Technical and other Services—Postmaster	2,254	2,497	2,590	2,702	3,250
General	12	1,988	2,006 11	2,068 18	2,210 24
Total Working, etc., expenses	4.135	4,556	4,684	4,871	5,590
Capital Works and Services	251	202	281	273	817
Grand Total	4,386	4,758	4,965	5,144	6,407

(iii) Railways. The Commonwealth Railways, previously administered by the Department of the Interior, were transferred in March, 1950, to the newly-formed Department of Fuel, Shipping and Transport, which became the Department of Shipping and Transport in May, 1951. The expenditure on railways for the years 1938-39 and 1951-52 to 1955-56 is shown below.

COMMONWEALTH RAILWAYS: EXPENDITURE.

		. 000.)				
Item.	1938-39.	1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
Working expenses—					1	
Trans-Australian	494	1,540	1,285	1,352	1,412	1,705
North Australia	55	91	115	139	158	183
Central Australia	214	1,178	1,297	1,359	1,322	1,152
Aust. Capital Territory	7	37	46	43	40	45
Interest and Exchange	455	415	413	406	410	388
Debt Redemption	75	141	148	155	163	172
Superannuation	14	43	44	50	58	59
Miscellaneous(a)	17	46	42	23	59	17
Total Working, etc., ex-						
penses	1,331	3,491	3,390	3,527	3,622	3,721
Capital Works and Services	142	2,637	4,746	3,382	3,100	2,674
Grand Total	1,473	6,128	8,136	6,909	6,722	6,395

(a) Includes loan redemption and conversion expenses, 1952-53, £1,000; 1954-55, £19,000.

Additional details of the financial operations of the Commonwealth Railways to 1956-57 are given in Chapter XI.—Transport and Communication (Part I., Division B. Government Railways).

11. Territories.—The following table shows the expenditure on account of Commonwealth Territories for the years 1938-39 and 1951-52 to 1955-56. The Australian Capital Territory is administered by the Department of the Interior, and the Department of Territories controls the Northern Territory and the external territories. The expenditure has been grouped in one table for convenience. Information in greater detail will be found in the annual bulletin. Finance.

### COMMONWEALTH TERRITORIES: EXPENDITURE. (£'000.)

Territory.	1938–39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
Administration and Maintenance of Services—		; <del></del>				
Australian Capital Territory(a)	637	2,157	2,462	2,652	2,786	2,663
Northern Territory (a)	403	2,068	2,448	2,622	2,829	3,275
Papua New Guinea	49	} 5,532	4,888	5,821	7,322	8,623
Norfolk Island	5	16	40	58	34	30
Cocos (Keeling) Islands	١ ا	1				12
Total	1,100	9,773	9,838	11,153	12,971	14,603
Capital Works and Services—						
Australian Capital Territory(a)	244	3,851	3,246	2,642	3,342	5,181
Northern Territory(a)	495	1,281	1,206	1,452	1,818	2,861
Papua and New Guinea		21	369	417	8	5
Cocos (Keeling) Islands						2
Total	739	5,153	4,821	4,511	5,168	8,049

(a) Excludes Railways, see para 10 (iii).

12. Capital Works and Services.—In the following table, details are given of Commonwealth expenditure on capital works and services during each of the years 1938-39 and 1951-52 to 1955-56. The table covers all expenditure on capital works and services made from the Consolidated Revenue Fund, the Loan Fund and Trust Funds.

## COMMONWEALTH EXPENDITURE ON CAPITAL WORKS AND SERVICES FROM REVENUE, TRUST AND LOAN FUNDS.

		(£'000.)			1		
Particulars.		1938-39.	1951–52.	1952–53.	1953-54.	1954–55.	1955–56
Defence and War—		<u> </u>	ļ				<del></del>
Navy		2,076	6,415	9,847	9,248	11,746	11,288
Army		1,547	18,410	20,960	11,172	14,033	12,467
Air Force		1,538	3,883	4,521	3,312	2,587	3,013
Munitions and other		1,173	a 16,418	6,989	4,781	4,637	11,711
Repatriation Services—							
War Service Homes		105	27,590	27,964	26,846	29,999	30,000
Other			271	203	227	132	242
Postmaster-General's Department		3,849	28,818	28,427	25,986	25,837	28,969
Broadcasting Services			251	202	281	273	817
Railways—		1 .			l		
Commonwealth		142	2,634	4,742	3,381	3,099	2,669
Territories—		1					1
Australian Capital Territory		488	3,851	3,237	2,630	3,338	5,177
Northern Territory		244	1,281	1,206	1,452	1,818	2,861
Papua-New Guinea			20	369	417	8	5
Cocos (Keeling) Islands							2
Other—			1	0-	2 404		
Ships, yards and docks		-300	2,413	1,786	3,494	3,228	3,589
Civil Aviation		419	6,424	6,096	4,933	3,657	3,881
Snowy Mountains Scheme			10,393	13,600	13,170	13,200	15,146
Immigration			7,243	2,279	558	208	319
Coal Industry Act 1946			4,100	26			.:
Health		35	490	416	409	383	639
Subscriptions to Capital(b)				1,049	1,000	1,000	1,200
Advances(c)			2,389	4,180	2,451	2,403	205
All other works, buildings, etc.		243	11,700	6,493	5,453	5,376	6,170
Total		11,559	154,994	144,592	121,201	126,962	140,370
Source of Funds—		1	1			1	
Consolidated Revenue Fund		6,715	154,999	144,606	121,214	126,969	140,379
Y		1,598	-5	-14	-13	-7	-9
T T 4-(4)	• • • • • • • • • • • • • • • • • • • •	3,246		1	1 .5		1
m-+-1			154,994	144.503	121,201	126.062	7.40 270
Total	· · · · · · · · · · · · · · · · · · ·	11,339	134,994	144,592	121,201	126.962	140,370

<sup>(</sup>a) Includes Strategic Stores and Equipment Reserve, £10,049,000. (b) Excludes Commonwealth New Guinea Timbers Ltd. included under Territories. (c) Excludes Overseas Telecommunications Commission included under Postmaster-General's Department. (d) From National Defence Contributions Trust Account and other trust funds.

Note.—Minus sign (-) indicates excess of credits or repayments over expenditure.

13. Payments to or for the States.—(i) General. An outline of the provisions of the Constitution requiring the Commonwealth to make payments to the States, and of the systems which followed, is given in earlier issues of the Official Year Book (see No. 37,

pp. 633 to 638). In the following paragraphs, reference is made to the arrangements at present in operation.

(ii) Amounts Paid. (a) Year 1955-56. The table below shows particulars of the amounts paid to each of the States as grants for the several purposes referred to in subsequent paragraphs.

COMMONWEALTH PAYMENTS TO OR FOR THE STATES, 1955-56.(a) (£'000.)

		(~	000.)				
Particulars.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	Total.
Financial Agreement— Interest on States' Debts	2,918	2,127	1,096	704	473	267	7,585
Sinking Fund on States'	1,540	-	524	500	420		
Debts(b) Special Grants	1,546	972	534	560 5,400	428 8,900	270 4,200	4,310 18,500
Tax Reimbursement Grants	54,209	36,044	22,518	12,681	11,252	4,874	141,578
Special Financial Assistance	7,110	3,398	2,123	1,195	1,060	461	15,348
Commonwealth Aid Roads(c)	7,282	4,660	5,097	2,976	5,178	1,326	26,519
Tuberculosis Act 1948—Re-	i		<b>.</b>	1	{	1	
imbursement of Capital	969	74	468	122	21.		4 550
Expenditure	868	74	400	122	216	10	1,758
tribution to Capital Ex-	1			i	i	i	
penditure	209	446	66	12	10	30	773
Western Australian Water-		***	00	]		30	7.73
works Grant		!	)	]	682	]	682
Coal Mining Industry-Long	!						
Service Leave(d)	441	1	84	[	29	10 [	565
Contribution to South Aus-	ĺ			i	ł	1	
tralia-Port Augusta to							
Port Pirie Railway	}			20	•• }	••	20
Encouragement of Meat Pro-	ŀ		113	1	190		303
Course to Timburusities	644	415	196	197	134	65	1,651
T-4-1	75,227	48,138	32,295	23,867	28,552	11,513	219,592
Total	اعامودا	70,130	J2,273 (	40.007	20,332	11,313	417,394

<sup>(</sup>a) Excludes relief to primary producers and other payments for medical research, etc. (b) Paid to National Debt Sinking Fund. (c) Paid to Trust Fund; excludes £950,000 for road safety practices and Commonwealth strategic roads. (d) Paid to Trust Fund.

## COMMONWEALTH PAYMENTS TO OR FOR THE STATES.(a) (£'000.)

Particulars.	1938–39.	1951-52.	1952-53.	1953–54.	1954-55.	1955-56.
Financial Agreement—	ļ- <del></del> -					
Interest on States' Debts	7,585	7,585	7,585	7,585	7,585	7,585
Sinking Fund on States' Debts(b)	1,478	2,557	3,011	3,463	3,947	4,310
Special Grants	2,020	10,522	15,934	15,400	12,300	18,500
Tax Reimbursement Grants		86,268	108,623	120,415	130,046	141,578
Special Financial Assistance		33,577	27,146	21,915	19,902	15,348
Grants for Road Construction, etc.(c)	4,266	14,647	15,107	16,457	21,461	26,519
Commonwealth Aid Roads (Supple-				'		,
mentary) Trust Account				5,000		٠
Tuberculosis Act 1948—Reimburse-				1		
ment of Capital Expenditure		734	1,292	1,380	1,709	1,758
Mental Institutions - Contribution to			[	' '		•
Capital Expenditure	l ., !			:		773
Price Control Reimbursement		937	1.056	84		
Local Public Works-Interest and			•			
Sinking Fund	100					
Youth Employment	200					
Western Australian Waterworks		289	224	333	366	682
Coal Mining Industry-Long Service						
Leave $(d)$		499	552	579	600	565
Imported Houses-Grants		1,788	1,530	615	88	
Contribution to South Australia-Port			, ,		İ	
Augusta to Port Pirie Railway	20	20	20	20	20	20
Encouragement of Meat Production		205	398	413	261	303
Grant to Universities		1,473	1,125	1,389	1,544	1,651
		-,		,	,	-,021
Total	15,669	161,101	183,603	195,048	199,829	219,592

<sup>(</sup>a) Excludes relief to primary producers and other payments for medical research, etc.
(b) Paid to National Debt Sinking Fund. (c) Excludes expenditure on strategic roads and road safety practices, 1951-52 to 1953-54, £600,000; 1954-55, £900,000; 1955-56, £950,000. (d) Paid to Trust Fund.

Particulars of special Commonwealth grants for the relief of primary producers are not included in the foregoing tables. For details see Chapter XXII.—Agricultural Production. See also para. 4, Subsidies and Bounties, and para. 14, Other Expenditure, of this subsection.

<sup>(</sup>b) 1938-39 and 1951-52 to 1955-56. The following table shows particulars of payments by the Commonwealth to or on behalf of the States during each of these years.

(iii) Financial Agreement. Details of the Financial Agreement between the Commonwealth and the States are given in Official Year Book No. 37, pp. 685 to 690. Under this Agreement, the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State Debts for a period of 58 years from 1st July, 1927. This amount is to be distributed amongst the States as follows:—New South Wales, £2,917,411; Victoria, £2,127,159; Queensland, £1,096,235; South Australia, £703,816; Western Australia, £473,432; Tasmania, £266,859.

These amounts are equal to the sums paid by the Commonwealth to each State in the year 1926-27 at the rate of 25s. per head of population, the rate at which the Commonwealth had contributed annually to the States since 1st July, 1910, as compensation for the States relinquishing, after Federation, the right to levy Customs and Excise Duties.

In addition, under the Financial Agreement, the Commonwealth agreed to make certain contributions to the National Debt Sinking Fund for redemption of State Debts. Details of these payments are given in division D of this Chapter (§ 2, p. 825).

(iv) Special Grants. The Constitution provides in Section 96 for the granting of special financial assistance to the States. Prior to 1933, financial assistance of varying amounts was granted by the Commonwealth to South Australia, Western Australia and Tasmania. Details of this may be found in earlier issues of the Official Year Book (see No. 40, p. 695).

In 1933, the Commonwealth Government appointed the Commonwealth Grants Commission of three members to inquire into and report upon claims made by any State for a grant of financial assistance and any matters relevant thereto.

Applications have been received from South Australia, Western Australia and Tasmania each year from 1933 onwards and the recommendations of the Commission in respect of the years 1938-39 and 1952-53 to 1956-57 are shown in the following table. Commencing with 1949-50, the Commission has divided the grants recommended into two parts. One part is the Commission's estimate of the indispensable need of the claimant State for the year in which the payment is to be made after allowing a sufficient margin for safety. The other part is an adjustment of this estimate for an earlier year after an examination of the audited accounts for that year. Thus the grants for 1956-57 include an estimate of the indispensable need of the claimant State for 1956-57 and an adjustment to the estimated grant for 1954-55.

### COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED.

(£'000.)									
Particulars.	•	1938–39.	1952-53.	1953-54.	1954–55.	1955-56.	1956–57.		
South Australia—		<del></del>			!				
Estimated grant		1,040	6,600	6,300	3,350	5,940	5,760		
Adjustment(a)			-257	-200	-1,100	540	40		
Net grant recommended		1,040	6,343	6,100	2,250	5,400	5,800		
Western Australia-									
Estimated grant		570	8,200	7,350	7,100	8,875	9,102		
Adjustment(a)			-159	450	350	25	98		
Net grant recommended		570	8,041	7,800	7,450	8,900	9,200		
Tasmania—									
Estimated grant		410	1,550	1,650	3,200	4,384	3,657		
Adjustment(a)				<u>-150</u>	-600	-184	-157		
Net grant recommended		410	1,550	1,500	2,600	4,200	3,500		
Grand Total		2,020	15,934	15,400	12,300	18,500	18,500		

(a) Adjustment to estimated grant paid two years previously.

(v) Tax Reimbursement Grants. Details of the States Grants (Income Tax Reimbursement) Act 1942 and the States Grants (Entertainments Tax Reimbursement) Act 1942 are given in earlier issues of the Official Year Book (see No. 37, pp. 635 to 637). These Acts provided for grants to the States as compensation for vacating the fields of Income Tax and Entertainments Tax. Grants under these Acts ceased after 1945-46 and were replaced by grants under the States Grants (Tax Reimbursement) Act 1946-1948.

This Act provided for reimbursement grants of certain specified amounts to be paid to the States during 1946-47 and 1947-48. For 1948-49 and subsequent years, the grants were assessed on the aggregate paid in 1947-48 (£45,000,000) increased in accordance with a formula based on increases in population and average wages. Details of the formula and of the treatment of arrears of State income taxes were given in earlier issues of the Official Year Book (see No. 40, p. 696).

In 1950-51, an amount of £5,000,000 was paid to the States under the States Grants (Additional Tax Reimbursement) Act 1950. As this was considered as a non-recurring grant, the formula outlined above was not amended.

(vi) Special Financial Assistance Grants. During the years 1951-52 to 1955-56, there were heavy additions to the financial needs of the States and special assistance grants amounting to £33,577,000, £27,146,000, £21,915,000, £19,902,000 and £15,348,000 respectively were made. For details of amounts paid to each State during 1955-56 see p. 805 and for payments during 1951-52, 1952-53, 1953-54 and 1954-55 see Official Year Books No. 40, p. 698, No. 41, p. 619, No. 42, p. 783 and No. 43, p. 775.

(vii) Grants for Road Construction. (a) Main Roads Development Act 1923-25, Federal Aid Roads Acts 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937, Commonwealth Aid Roads and Works Act 1947-1949 and Commonwealth Aid Roads Act 1950. Details of these Acts are given in earlier issues of the Official Year Book (see No. 38, pp. 787-8 and No. 41, p. 62) and in the annual bulletin Finance.

(b) The Commonwealth Aid Roads Act 1954 repealed the Commonwealth Aid Roads Act 1950 and provided for payment to the States, for a period of five years from 1st July, 1954, of an amount equivalent to 7d. per gallon on all petrol except aviation spirit which is entered for home consumption and which is subject to Customs and Excise duties as specified in Customs Tariff Items 229 c and 229 (d) (2) and Excise Tariff Item 11. Out of this amount, the following grants are to be made to the States, for construction and maintenance of roads and the purchase of roadmaking plant:—

- (a) Sixty per cent. of the amount, less £900,000 per annum, for expenditure on roads, and
- (b) Forty per cent. of the amount for expenditure on roads in rural areas other than highways, trunk or main roads.

The States may spend from the Commonwealth road grants up to £1,000,000 per annum on works connected with transport by road or water. Five per cent. of the grants is payable to Tasmania and the remainder is to be divided among the other five States, three-fifths according to population and two-fifths according to area. In addition, the Commonwealth may spend each year £800,000 on strategic roads and £100,000 on the promotion of road safety practices.

An amendment to the Commonwealth Aid Roads Act 1954 increased the allocation for road safety purposes to £150,000 per year as from 1st July, 1955.

- (viii) Tuberculosis Act 1948. Reimbursement of Capital Expenditure. The Tuberculosis Act 1948 provided for the reimbursement by the Commonwealth of capital expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis, as from 1st July, 1948.
- (ix) States Grants (Mental Institutions) Act 1955. This Act provides for financial assistance to the States for capital expenditure on mental institutions to a maximum amount of £10,000,000. Each State is entitled to one-third of expenditure on buildings or equipment of a mental institution made on or after 1st July, 1955.
- (x) Other Payments. (a) Price Control Reimbursement. These grants were made from 1948-49 to 1953-54 to reimburse the States for expenditure incurred in administering prices, rents and land sales controls.
- (b) Western Australian Waterworks. The Western Australia Grant (Water Supply) Act, 1948, provides for grants to Western Australia not exceeding an aggregate of £2,150,000 for the development of the agricultural areas, great southern towns and Goldfields Water Supply scheme. The amount provided by the Commonwealth is not to exceed half the total expenditure on the scheme.
- (c) Coal Mining Industry—Long Service Leave. To provide funds for the payment for long service leave in the coal mining industry, the Commonwealth imposed an excise duty of 6d. a ton on coal produced from 1st November, 1949. The rate of duty was raised to 7½d. a ton from 26th August, 1951 and to 8d. a ton from 30th May, 1952. The proceeds of this excise duty are paid to a trust fund out of which the States are reimbursed for expenditure incurred in granting long service leave to employees in the coal mining industry.
- (d) Imported Houses. A subsidy is paid to the States for houses imported by a State or a housing authority of a State after 12th October, 1949. The amount of the subsidy is the amount by which the cost of imported houses exceeds the cost of building comparable houses from local materials. The subsidy is limited to £300 a house and in aggregate to 30,000 houses or £9,000,000.
- (e) Contribution to South Australia—Port Augusta to Port Pirie Railway. The Port Augusta to Port Pirie Railway Act 1935-1950 approved an agreement between the Commonwealth and South Australia to provide for the extension of the Trans-Australian Railway by the construction of a railway in South Australia from Port Augusta to Port Pirie. As a contribution towards reimbursing South Australia for the cost of the section to be constructed by the State, and for any additional expense incurred by the State in carrying out

the Agreement, the Act provided for a payment by the Commonwealth to the State of South Australia of £20,000 per annum for twenty years, the first payment being made after the opening of the Railway in 1937-38.

(f) Encouragement of Meat Production. To develop meat production in Queensland and Western Australia, grants are made to these States for the provision and improvement of roads and other facilities for the movement of live-stock. Provision is made for the Commonwealth to meet the cost of the construction and improvement of certain specified roads in both States and the construction of eight cattle loading and unloading points in Queensland. Provision is also made for the Commonwealth to meet half the cost of improving watering facilities on specified stock routes in both States. The amount of the grants for improving watering facilities on stock routes is limited to £75,000 in Queensland and £31,500 in Western Australia. These limits were extended as from 20th April, 1954 to £150,000 in Queensland and £50,000 in Western Australia.

(g) Grants to Universities. The States Grants (Universities) Act 1951 provides for grants to be made to the States for the purpose of financial assistance to Universities during the three years 1950-51 to 1952-53. The Act was superseded by the States Grants (Universities) Act 1953 which came into operation on 1st January, 1953, and which increased

the assistance payable.

14. Other Expenditure.—Expenditure under this item represents the proceeds of special industry taxes and profits from marketing schemes which are paid to trust funds or other authorities for the purposes of the industries concerned. Advance payments in respect of sales of uranium paid to the Atomic Energy Commission are also included.

Information relating to the taxes levied is given in sub-section II.—Revenue, of this section (see p. 790). Details of expenditure from the trust funds are given in § 3., Commonwealth Trust Funds. Details of the price stabilization and other assistance schemes for primary industries may be found in Chapter XXII.—Agricultural Production. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

# OTHER EXPENDITURE: RECEIPTS AND EXPENDITURE FROM COMMONWEALTH CONSOLIDATED REVENUE FUND.

	(£ 000.	<u></u>				
Receipts from-	Expenditure on—	1951–52.	1952–53.	1953–54.	1954–55.	195556.
Taxes-				4.50		
Export Charges Stevedoring Industry	Export Control Boards (a) Stevedoring Industry	• • •	166	168	301	414
Charge	Board	551	1,144	1,630	998	973
Tobacco Charge	Tobacco Industry (b)				.,	5
Wheat Export Charge	Wheat Industry Price	12 202	9 120		5.062	4.004
	Stabilization (c)	12,202	8,139	•••	5,063	4,294
Wool Contributory	Disposals Plan	486	ر ک			
Charge	Wool Reserve Prices Fund	1,744			•••	٠.
Wool Tax	Wool Use Promotion		675	772	784	851
Total		1,983	10,152	2,570	7,146	6,537
Other—	Atamia Easana Cam					
Advance Payments— Sales of Uranium	Atomic Energy Com-		1,174	2,791	1,082	30
Australian New Guinea	Inission	1	',	_,,,,,	1,002	50
Production Trust	Papua and New Guinca	ļ				
Account	Copra Fund		••	•••	••	836
Dried Vine Fruits Sup- port Price Agreement-						
United Kingdom Go-						
vernment	Dried Fruits Board					107
Meat Export Deficiency		1	1	Ì		
Payments — United Kingdom Govern-	]	1				
ment	Australian Meat Board	١				153
Hide and Leather In-	Tradition of the state of the s		1	1	1	133
dustries - Moneys		ł		1	ł	ł
paid by Hide and Leather Industries	Hide and Leather Indus-	1	Ì	ļ		
Board	tries Trust Fund	١		١	5	
Wool Disposals Profit	Wool Industry-Distribu-		''		1	
	tion of War-time Trad-	J		)		]
Wool Stores-Moneys	ing Profits	• • •	42,361		• • •	
paid by Wool Real-	1		1	1		1
ization Commission	Australian Wool Bureau	l	١	730		
Total			43,535	3,521	1,087	1,126
Grand Total	1	14,983	53,687	6,091	8.233	7,663

(a) Paid to Apple and Pear Export Fund, Canned Fruits Export Fund, Dairy Produce Export Fund, Dried Fruits Export Fund, Egg Export Fund and Wine Export Fund. Prior to 1952-53 these charges were treated as refunds of Revenue and not shown separately. (b) Paid to Tobacco Industry Trust Fund. (c) Paid to Wheat Prices Stabilization Fund.

#### § 3. Commonwealth Trust Funds.

1. Receipts, Expenditure and Balances, 1955-56.—The following table shows the opening and closing balances, and receipts and expenditure of some of the more important Trust Funds of the Commonwealth for the year ended 30th June, 1956.

# COMMONWEALTH TRUST FUNDS: RECEIPTS, EXPENDITURE AND BALANCES, 1955-56. (£'000.)

Fund.	Balance at 30th	Year ended	1 30th June, 56.	Balance at 30th	
	June, 1955.	Receipts.	Expenditure.	June, 1956.	
Australian New Guinea Production	1,538	50	1,583	5	
Coal Mining Industry Long Service Leave	927	594	311	1,210	
Coinage	3,891	1,091	1,091	3,891	
Commonwealth Aid Roads	2,591	27,469	26,581	3,479	
Commonwealth Aid Roads (Supplementary)	3,118			3,118	
Debt Redemption Reserve	126,422	Dr126,422a	İ		
Defence Equipment and Supplies	20,000			20,000	
Defence Forces Retirement Benefits	7,188	2,623	1,326	8,485	
Enemy Subjects	1,496	80	257	1,319	
Hide and Leather Industries	5		5		
Insurance Deposits	4,758	597	320	5,035	
International Development and Relief	228	4,011	3,901	338	
Korean Operations Pool	10,390	5,586	5,976	10,000	
Lend-Lease Settlement	1,450	38	77	1,411	
Loan Consolidation and Investment	.,			2,112	
Reserve		190,434	28,701	161,733	
National Debt Sinking Fund	204,029	73,843	39,536	238,336	
National Welfare	191,038	216,952	214,866	193,124	
Parliamentary Retiring Allowances	167	70	29	208	
Public Trustee and Custodian	170	33	2	201	
Strategic Stores and Equipment Reserve	48,876		239	48,637	
Superannuation	38,802	10,489	4,903	44,388	
Temple Society	632	13	217	428	
Tobacco Industry		52	1	51	
War Gratuity	203		45	158	
War Service Homes		31,015	31,015		
War Service Homes—Insurance	327	204	188	343	
Wheat Industry Stabilization	293			293	
Wheat Prices Stabilization	5.089	4,515		9.604	
Wool Contributory Charge	8	.,		8	
Wool Disposals Profit	168	47	12	203	
Wool Industry	6.936	226	448	6,714	
Wool Research	279	594	873		
Other	52,379	398,973	395,682	55,670	
Total	733,398	843,177	758,185	818,390	

<sup>(</sup>a) Transferred to Loan Consolidation and Investment Reserve Trust Fund.

2. Summary, 1938-39 and 1951-52 to 1955-56.—In the following table, the balances and total receipts and expenditure of the Trust Funds are shown for each of these years.

## COMMONWEALTH TRUST FUNDS. (£'000.)

Particulars.	1938–39•	1951-52.	1952–53.	1953–54.	1954–55.	1955-56.
Balances brought forward Receipts Expenditure Balance carried forward	84,167 85,550	363,051 725,282 598,604 489,729	489,729 709,973 633,131 566,571	566,571 764,365 683,646 647,290	647,290 792,431 706,323 733,398	733,398 843,177 758,185 818,390

#### § 4. Commonwealth Loan Fund.

Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Official Year Book (see No. 37, p. 640). In the following table, details are given of the net expenditure from the Commonwealth Loan Fund for the years 1938–39 and 1951–52 to 1955–56 and of the aggregate expenditure to 30th June, 1956. The figures shown represent "net" loan expenditure, i.e., after adjustments have been made for refunds of amounts expended in earlier years.

## COMMONWEALTH NET EXPENDITURE FROM LOAN FUND. (£'000.)

Particulars.	1938–39.	1951–52.	1952-53.	1953–54.	1954–55.	1955–56.	Total to 30th June, 1956.
War Loans— Defence and War (1914-18, 1939-45) Services Other Loans—		(a)5,120	(a)5,684	(a)4,199	( <u>a</u> )4,039	(a)7,622	2,013,340
Capital Works and Services— Defence(b)	1,912						8,682
War Service Homes(b) Other	::	::	::	::			7,329 47
Postmaster-General's Department Broadcasting Services	-1	-1	-1	::	-2		40,422 104
Railways	-7	-3 -1	-4 -9	1 -12	-1 -4	-5 -4	13,744 8,716
Other— Ships, Yards and Docks Civil Aviation	-305		::	::		::	7,694 213
Immigration	-1	::	::	-:-		::	1,681 4,223
Other Purposes— Assistance to States— Farmers Debt Adjustment	2,000						7,967
Housing	-4	26,547	30,000	37,200	29,150	33,200	240,559 5,976
Wheat Bounty Emergency Wheat Storage	::				_ ::	3,182	3,430 3,182
Total Capital Works and Services and Other Purposes	3,594	26,542	29,986	37,187	29,143	36,373	353,969
International Bank Dollar Loan(d) Swiss Loan(e) Canadian Loan(f)		23,831	17,935	21,468 5,792	23,575 5,930	19,369 6,459	110,222 11,722 6,459
Grand Total	3,594	55,493	53,605	68,646	62,687	69,823	2,495,712

<sup>(</sup>a) Financial assistance to the States in connexion with War Service Land Settlement. (b) Excludes amounts charged to War Loan Fund. (c) Includes administration and other public buildings, Australian Capital Territory. (d) Payment to National Debt Sinking Fund. See pp. 840 and 841. (e) Payment to Swiss Loan Trust Account. See p. 838. (f) Payment to Canadian Loan Trust Account. See p. 839.

Note.—Minus sign (-) indicates excess of repayments to Loan Fund.

Information relating to the Public Debt of the Commonwealth is given in Division D, Commonwealth and State Public Debt, of this chapter.

#### B. STATE FINANCE.

#### § 1. General.

1. Functions of State Governments.—In comparing the financial returns of the States, allowances must be made for the various functions discharged by the respective Governments, and for local conditions in each case. Direct comparisons of the revenue, expenditure and debt of the individual States are difficult, owing to the fact that functions which in one State are assumed by the Central Government are in another relegated to

municipal or semi-governmental bodies which are vested with certain defined borrowing powers and whose financial transactions are not included with those of the Central Government. Care, therefore, is needed in making comparisons, and the particulars contained in this Chapter should be read with those contained in Chapter XIX.—Local Government. In many respects, moreover, the budgets of the Australian Governments differ materially from those of most European countries, owing to the inclusion therein of the revenue and expenditure of departments concerned in rendering public services, such as railways, tramways, water supply, etc., which in other countries are often left to private enterprise.

2. Accounts of State Governments.—The various financial transactions of the States are in each case mainly concerned with one or other of three Funds—the Consolidated Revenue Fund, the Trust Fund, and the Loan Fund. All revenue (except certain items paid into special funds) collected by a State is paid into its Consolidated Revenue Fund, from which payments are made under the authority of an annual Appropriation Act passed by the Legislature, or by a permanent appropriation under a special act.

Figures in § 2 following relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These latter are as follows:—Railways, Tramways and Omnibuses, and Sydney Harbour Trust Section of the Maritime Services Board. Adjustments have been made to the Budget figures, however, in order to obviate duplications caused by inter-fund payments. In previous issues of the Year Book, payments from the Commonwealth National Welfare Fund—Hospital Benefits, were deducted from both revenue and expenditure. These payments are now included and figures for previous years have been adjusted accordingly. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

The Trust Fund comprises all moneys held in trust by the Government, and includes such items as superannuation funds, road funds, insurance companies' deposits, etc.

The Loan Fund is debited with all loan moneys raised by the State, and credited with the expenditure therefrom on public works or other purposes.

3. Inter-relation of Commonwealth and State Finances.—A statement in some detail, covering the inter-relation of Commonwealth and State Finances during the period from the inception of Federation to the passing of the Financial Agreement Act 1928, was published in Official Year Book No. 22, pp. 379-380. Changes in the financial relations between the Commonwealth and States since the passing of the Financial Agreement Act have been described in issues of the Official Year Book from year to year (see also pp. 825-827).

#### § 2. State Consolidated Revenue Funds.

#### I.—Revenue.

- 1. General.—The principal sources of State revenue are:—
  - (a) Taxation; (b) The business undertakings controlled by the State Governments; (c) Sale of and rental from crown lands; (d) Payments by Commonwealth Government under the Financial Agreement, Special Grants and Tax Reimbursement Acts, etc.; (e) Interest on advances; and (f) Miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue for the States as a whole is the group of business undertakings, the principal contributors being the government railways and tramways. Next in magnitude are Commonwealth payments under the Tax Reimbursement Acts, followed in order by taxation receipts, Commonwealth special financial assistance and special grants, and lands receipts. With the introduction of uniform taxation by the Commonwealth in 1942-43, the States vacated the fields of income and entertainment taxation, and payments by the Commonwealth under the Income and Entertainments Tax Reimbursements Acts and, from 1946-47, under the Tax Reimbursement Act, replaced revenue previously received from those sources. The Commonwealth, however, ceased to impose Entertainments Tax in 1953-54 and in the same year Victoria, Western Australia and Tasmania re-imposed an Entertainments Tax.

2. Revenue Received.—The following table shows particulars of the total amounts, and the amounts per head of population, of consolidated revenue received by the several States during the years 1938-39 and 1951-52 to 1955-56.

#### STATE CONSOLIDATED REVENUE.

Year.		N.S.W.(a)	Victoria.	Q'land	•	S. Au	st.	w.	Au	st.	T	as.		To	ota <b>i.</b>	
		·	7	OTAL R		UE.									*****	_
1938-39	•	51,099	26,985	19,33	0	12,3	04	1	0,9:	50		3,61	5	12	4,28	3
1951-52		168,935	81,661	55,75	3	37,5	88	3.	3,9	55	1	0,46	9	38	8,36	51
1952-53		182,848	96,995	63,17	1	44,2	51	3	8,72	25	1	2,06	1	43	8,05	1
1953-54		188,692	106,748	69,69	6	48,3	76	4	3,59	96	1	3,28	5	47	0,39	3
1954-55		195,438	116,789	73,82	0	48,6	84	4	6,0′	70	1	4,49	5	49	5,29	16
1955–56	• •	204,399	123,152	75,66	9	55,3	52	4	9,6	12	1	7,82	7	52	6,01	1
			Per He	EAD OF I	Рори <i>d.</i>	LATIO	N.									
1938-39	••	18 13 7	14 8 3	19 3	6  2	20 13	6,	23	9	0	15	4	2	17	19	-:
1951–52		51 0 2	35 7 1	44 19	4 5	0 11	4	57	11	3	35	13	ِو او	45	15	1
1952-53		54 6 4	40 17 8	49 13	1 5	7 14	7	63	7	2	39	17	4	50	8	i
1953-54		55 8 2	44 1 2	53 11	10 6	11 11	0	69	2	5	42	18	8	53	2	6
1954–55		56 9 10	46 18 9	55 14	0 6	50 5	10	70	19	10	46	6	3	54	15	6
1955-56		57 19 11	48 0 4	55 18	10 6	66 6	8	74	3	1	55	17	0	56	15	6

(a) See § 1, para. 2, p. 811.

3. Sources of Revenue.—(i) General. Classifying the revenue of the several States in the manner indicated in para. 1 above, particulars for the year 1955-56 were as follows:—

#### STATE CONSOLIDATED REVENUE: SOURCES, 1955-56.

Source of Revenue.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
		To	TAL REVE	NUE.	<u> </u>		
Taxation(b)	24,051	22,904	9,627	8,075	4,155	3,595	72,407
Business Under-	24,031	22,504	9,021	0,075	4,133	3,393	12,407
takings	89,496	44,160	30,404	18,435	17.405		199,900
Lands	5,340	2,322	3,748	546	1,249	424	13,629
Interest, n.e.i	1,292	4,138	1,973	4,066	1,534	2,917	15,920
Commonwealth		l .			!!!		-
Grants—	1		[	ľ		1	
Tax Reimburse- ments	54,209	36,044	22,518	12,681	11,252	4 074	141 570
Other(a)	10.028	5,526	3,417	7,529	10,434	4,874 4,928	141,578 41,862
Commonwealth Na-	10,020	3,320	3,417	1,525	10,434	4,720	41,002
tional Welfare	1			1			
Fund Payments(d)	5,321	1,124	584	570	403	212	8,214
Miscellaneous	14,662	6,934	3,398	3,450	3,180	877	32,501
Total	204,399	123,152	75,669	55,352	49,612	17,827	526,011

### PER HEAD OF POPULATION. (£ s. d.)

							٠~	٠.		,											
Taxation(b)	6	16	6	1 8	18	7	7	2	4	1 9	13	7	6	4	2	111	5	3	1 7	16	4
Business Under-				ł			!			1			1						ĺ		
takings	25	7	10	17	4	4	22	9	7	22	1	10	, 26	0	4				21	11	6
Lands	1	10	4	0		1	2	15	5	0	13	1	1	17	4	1	6	6	1	9	5
Interest, n.e.i	0	7	4	1	12	3	1	9	2	4	17	5	2	5	11	9	2	9	1	14	4
Commonwealth	ļ			!			į									1			_		
Grants—	1			ļ			l			[			ŀ			]			ŀ		
Tax Reimburse-	l			1			ŀ			ŀ			1			ì			ł		
ments	15	7	7	14	1	1		13	0	15	3	11 6			4	15	5	5	15	5	8
Other( $c$ )		16	11	2	3	1	2	10	6	9	0	6	15	11	11	15	8	9	4	10	4
Commonwealth Na-										!			1			ł					
tional Welfare	1			ĺ			•			1			1			1					
Fund Payments(d)	1	10	2	0	8	9	0	8	8	0	13	8	0	12	0	0	13	4	0	17	9
Miscellaneous	4	3	3	2	14	2	2	10	2	4	2	8	4	15	0	2	15	0	3	10	2
Total	57	19	11	48	0	4	55	18	10	00	6	-8	74	3	1	55	17	0	56	15	6

<sup>(</sup>a) See § 1, para. 2, p. 811. (b) In all States certain taxation collections are not paid into Consolidated Revenue Fund. For total collections see next page. (c) Includes payments under Financial Agreement, Special Grants, Special Financial Assistance, Grants to Universities, etc. (d) Consolidated Revenue Fund receipts only: Excludes payments to Trust Funds.

(ii) Revenue from Taxation. (a) General. The following table shows, for the year 1955 -56, particulars of all State taxation collections irrespective of whether such moneys have been paid into the Consolidated Revenue Funds or not. For this reason, the particulars hereunder differ from those shown in the tables relating to the Consolidated Revenue Funds and represent a comprehensive statement of all taxation collections by the Government in each State. In this and the succeeding statements of taxation, the collections have been grouped according to the nature of the tax rather than the method of collection. For example, stamp duties on betting tickets and bookmakers' licences have been included under "Racing Tax" instead of under "Stamp Duties" and "Licences" respectively. Commonwealth payments under the State Grants (Tax Reimbursement) Act are not included.

STATE REVENUE FROM TAXATION; TOTAL NET COLLECTIONS(a) 1955-56, (£'000.)

Tax.	N.S.W.	Victoria.	Q'land,	S. Aust.	W. Aust.	Tas.	Total.
Motor Taxes— Registration Fees and Taxes Drivers', etc., Licences Other	9,091 824	4,887 400 1,491	(b) 4,343 (b) 144 852	3,074 329 74	1,291 119 106	734 45 150	23,420 1,861 3,638
Total Motor	10,880	6,778	5,339	3,477	1,516	929	28,919
Probate and Succession Duties Stamp Duties, n.e.i. Land Income (Arrears) Liquor Lotteries Racing Entertainments Licences, n.e.i. Other	9,753 8,260 2 18 2,972 2,923	7,102 4,381 3,250 25 2,310 2,793 2,066 1,054 245	2,948 2,549 1,387 13 787 305 294	1,846 1,274 567  62  1,167	1,107 1,195 529 1 301  622 256 40 103	632 522 234 17 185 1,158 358 136 4	23,388 18,181 5,969 74 6,617 4,256 7,430 1,446 667 1,054
Grand Total	34,931	30,004	14,724	8,497	5,670	4,175	98,001

<sup>(</sup>a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. (b) As from October, 1952 no charge has been made for drivers' licences. Instead an annual driving fee is charged upon registration of a vehicle.

Of the total taxation collections detailed above, the following were paid into special funds:—

STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS, 1955-56.
(£'000.)

T	ax.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor Stamp Duties, Liquor Lotteries Racing Other	::	::	10,880	6,778 180 142	4,343 7  761	422	1,412   i03	305  101 174	23,718 180 135 101 596 864
Total	••		10,880	7,100	5,097	422	· ———	580	25,594

The table hereunder shows, for the year 1955-56, the proportions of collections under individual classes of tax to the total taxation revenue:--

STATE REVENUE FROM TAXATION: PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1955-56.

(Per C	ent.)
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Tax.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Motor	31.15	22.59	36.26	40.92	26.73	22.25	29.51
Probate and Succession					1		
Duties	27.92	23.67	20.02	21.73	19.52	15.14	23.86
Stamp Duties, n.e.i	23.65	14.60	17.31	14.99	21.07	12.51	18.55
Land	0.01	10.83	9.42	6.68	9.34	5.60	6.09
Income (Arrears)	0.04	0.08	0.09		0.03	0.41	0.08
Liquor	8.51	7.70	5.34	0.73		4.42	6.75
Lotteries		9.31	2.07			27.73	4.34
Racing	8.37	6.89	2.00	13.73	10.97	8.58	7.58
Entanta in anta		3.51			4.51	3.26	1.48
1	0.35		i.33	0.71	0.71	0.10	0.68
Other							
Other		••	6.16	0.51	1.82		1.08
Grand Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(b) 1938-39 and 1951-52 to 1955-56. Prior to federation, customs and excise duties constituted the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the most productive State taxes were the various income taxes which, in 1941-42, included unemployment relief, State development and hospital taxes. Since 1941-42, the States have been reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Details of the reimbursement grants are given on pp. 806 and 812. Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Official Year Book.

The total amounts and the amounts per head raised from all sources of taxation by the several State Governments, including amounts not paid into the Consolidated Revenue Fund, during the years 1938-39 and 1951-52 to 1955-56 are shown in the following table:—

STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS.(a)

Year.		N.S.V	<b>v.</b>	Victor	ria.	C	)'lan	d.	s.	Au	st.	w	. Au	st.		Tas.		1	`ota	1.
				T	OTA	LN		Coi 000.		7110	NS.									
1938-39(b)		20,2	63	12,0	)23	}	8,6	557		4,1	199		3,5	97		1,7	79	. ;	50,:	518
1951-52		24.8	40	16,9	43	i	9.6	72		5.1	151		3,4	55		3.0	89		63.	150
1 <b>952–5</b> 3		27,6	78	19.1		1	11,6				341		3,9			3,4			71.	
1953-54		29,7	49	22,3	00		12,8				116			82	,	3,9			80,4	40
1954-55		32,0	79	27.4	197		13,6				20			10		3,1			89.4	48
1955–56	••	34,9	31	30,0	004	•	14,7	24			<b>1</b> 97			70		4,1	75	!	98,	00
			<u>'</u>	PE	R I		_		PU d.)	LAT	ion.	r								
1938-39( <i>b</i> )		7 8	2	6 8		8	11	6	7	1	1	7	14	1	7	9	8	7	6	
1951–52		7 10	0	7 6	9	7	16	0	6	18	7	5	17	2	10	10	7	7	8	10
1952–53		8 4	5	8 1	6	9	2	5	6	19	4	6	8	õ	11	9	2	8	3	- 9
195354	•••	8 14	9	9 4	ĩ	9	17	1	8	15	10	7	8	5	12	14	9	. ğ	1	
1954–55	••	9 5	5	11 1	1	10	5	11	9	16	2	8	ō	7	10	0	4	9	17	1
1955-56		9 18	3 i	11 14	0	10	17	8	10	3	7	8	9	6	13	1	7	10	11	

<sup>(</sup>a) Excluding Commonwealth Tax Reimbursements.

<sup>(</sup>b) Includes Income Taxes.

The following table shows, for the years 1938-39 and 1951-52 to 1955-56 the aggregate amounts collected by the several State Governments, under the various forms of State taxation and includes amounts paid to funds other than Consolidated Revenue.

STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS.(a)

		(£ 000.)				
Tax.	1938-39.	1951–52.	1952–53.	1953-54.	1954–55.	1955–56.
Motor Probate and Succession Duties Stamp Duties, n.e.i Land Income Taxes Liquor Lotteries Racing	6,961 5,000 3,466 1,408 29,796 1,045 532 1,251	20,523 15,394 12,228 2,511 (b) 155 3,681 1,642 5,990	23,321 17,756 12,297 3,416 (b) 132 4,429 1,756 6,794	25,877 18,700 14,543 4,138 (b) 92 5,346 1,804 7,503	27,783 21,602 16,027 4,998 (b) 55 5,563 3,478 6,992	28,919 23,388 18,181 5,969 (b) 74 6,617 4,256 7,430
Entertainments Licences and all other Total	633 426 50,518	1,026 63,150	1,257	906	1,341 1,650 89,486	1,446 1,721 98,001

<sup>(</sup>a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds. Excludes Commonwealth Tax Reimbursements. (b) Arrears of State income taxes.

Details of taxation collections paid into special funds and included in the above table are shown below:—

STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS. (£'000.)

Tax.	1938–39.	1951-52.	1952-53.	1953–54.	1954–55.	1955-56.
Unemployment Relief Hospital Motor Stamp Duties, n.e.i Liquor Lotteries Racing	 1,119 264 5,858  92 	16,934 137 149	19,316 122 173	20,774 155 185	22,879 181 208	23,718 180 135 101 596
Other	 7,589	357 18,165		765	847 24,664	864 25.594

(iii) Business Undertakings. (a) 1955-56. A very large proportion of State gross revenue is made up of receipts from business undertakings under the control of the Governments. The principal of these are railways and tramways, harbour works, water supply and sewerage, and electricity supply and, in addition, State batteries for the treatment of auriferous ores in Western Australia and various minor revenue-producing services rendered by the Governments of all States are included. For the year 1955-56, the revenue from these sources was £199,900,000 or 38.0 per cent. of the revenue from all sources. Details of revenue are as follows:—

STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1955-56. (£'000.)

Source.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Total.
Railways(b)	11,067	(c) 37,300	30,404	13,025	13,052 951	::	169,167 12,018
Harbours, Rivers, Lights Water Supply, Sewerage, Irrigation and Drainage	3,043	3,061		1,930 3,251	289		5,833 8,997
Electricity Supply Other		2,103 1,125	::	229	372	::	2,159 1,726
Total	89,496	44,160	30,404	18,435	17,405	••	199,900

<sup>(</sup>a) Tasmanian transport services are under the separate control of the Transport Commission.
(b) The following contributions to Railways revenue from Consolidated Revenue Fund are excluded—
New South Wales, £1,000,000: South Australia, £4,050,000.
(c) Includes electric tramways operated by the Railways Department.
(d) Includes Harbour Trust Fund contribution, £409,000.

(b) 1938-39 and 1951-52 to 1955-56. The total revenue from Business Undertakings and the revenue per head in each State are shown in the following table:—

#### STATE REVENUE FROM BUSINESS UNDERTAKINGS.

Year.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			Т	OTAL REV	ENUE.			
				(£'000.	)			
1938–39		24,676	11,649	7,642	4,937	5,633	(a) 511	55,04
1951-52		82,454	29,180	22,391	12,918	12,430		159,37
1952-53		86,223	36,845	24,868	15,346	11,475		174,75
1953-54		88,616	41,163	28,952	16,733	15,271		190,73
1954–55		87,929	44,021	30,805	17,807	16,695		197,25
1955-56		89,496	44,160	30,404	18,435	17,405		199.90

#### PER HEAD OF POPULATION.

(£ s. d.)

	 1		į			{			- 1						1			-			
1938-39	 9	0	5	6	2	6	7	11	7	8	5	10	12	1	4	(a)2	3	0	7	19	2
1951-52	 24	17	11	12	12	8	18	1	2	17	7	7	21	1	6			- !	18	15	7
1952-53	25																	- [	20	2	2
1953-54	 26	0	5	16	19	10	22	5	3	21	5	10	24	4	3			- 1	21	10	10
1954-55	 25	8	4	17	13	10	23	4	10	22	1	1	25	14	7			- 1	21	16	4
1955-56	 25	7	10	17	4	4	22	9	7	22	1	10	26	0	4			- 1	21	11	6

<sup>(</sup>a) Includes Tasmanian transport services which were subsequently placed under the control of the Transport Commission.

In the table below, particulars of total State revenue from Business Undertakings for the various types of undertakings are shown for the years 1938-39 and 1951-52 to 1955-56:—

#### STATE REVENUE FROM BUSINESS UNDERTAKINGS.

(£'000.)

Source.	1938-39.	1951–52.	1952–53.	1953-54.	1954-55.	1955-56.
Railways, Tramways and						
Omnibuses	48,134	146,700	161,459	176,127	179,878	181,185
Harbour Services	2,357	4,569	4.058	4,782	5,887	5,833
Water Supply, Sewerage,	1	1	•	1	1	
Irrigation and Drainage	2,543	5,568	6,142	6,535	7,872	8,997
Other	2,014	2,536	3,098	3,291	3,620	3,885
Total	55,048	159,373	174,757	190,735	197,257	199,900

<sup>(</sup>iv) Lands. The revenue from the sale and rental of crown lands has, with few exceptions, been treated from the earliest times as forming part of the Consolidated Revenue Funds, and has been applied to meet ordinary expenses. The following table shows the revenue from sales and rentals of crown lands for the year 1955-56.

#### N.S.W. Q'land. S. Aust. W. Aust. Tas. Total. Source. Victoria. 85 459 198 106 56 Sales 14 Conditional Purchases 256 147 406 2,499 3,677 312 437 182 25 Rentals(a) 7,132 . . 1,144 1,092 864 5,136 Forestry 1,659 377 Other 65 266 157 8 496 Total 5,340 2,322 3,748 546 1,249 424 13,629

## STATE LAND REVENUE, 1955-56. (£'000.)

(a) Includes mining royalties, rents, etc.

The total land revenue for all States for the years 1938-39 and 1951-52 to 1955-56 respectively was:—£4,144,000, £11,722,000, £12,589,000, £11,903,000, £12,308,000, and £13,629,000.

(v) Commonwealth Grants. Commonwealth grants to the States represent a considerable proportion of the States' Revenue. In 1955-56, the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £183,440,000 (34.9 per cent.). This was made up of the contribution towards interest on States' debts under the Financial Agreement, £7,585,000, special grants to the States of South Australia, Western Australia and Tasmania, £18,500,000, special financial assistance, £15,348,000, tax reimbursement grants, £141,578,000, grants to Universities, £393,000 and other grants, £36,000.

In addition to these, the States receive a number of other grants which are paid to trust funds. The main items in this class are the contribution towards the sinking fund on States' debts (£4,310,000 in 1955-56) paid to the National Debt Sinking Fund and grants for Commonwealth Aid Roads (£26,519,000 in 1955-56) paid to State trust funds.

More detailed information concerning Commonwealth grants to the States is given on pp. 804-808.

- (vi) Commonwealth National Welfare Fund Payments. The States also receive payments from the Commonwealth in respect of Hospital and Pharmaceutical Benefits, Nutrition of Children and reimbursement of maintenance expenditure on Tuberculosis Sanatoria. These receipts are paid into Consolidated Revenue Funds or Trust Funds according to the varying accounting procedures in the States. In 1955-56, the total amount paid to State Consolidated Revenue Funds was £8,214,000 (1.6 per cent.). This was made up of Hospital Benefits, £2,578,000; Pharmaceutical Benefits, £549,000; Nutrition of Children, £1,042,000; and Tuberculosis—Reimbursement of maintenance expenditure, £4,045,000.
- (vii) Interest and Miscellaneous. In addition to the foregoing, there are in each State several miscellaneous sources of revenue, including such items as interest, fines, fees, etc. In 1955-56, interest, mainly from loans to local governing bodies, on public account balances and for soldier land settlement amounted to £15,920,000, whilst "Miscellaneous" revenue which includes fines of the courts and fees for services, amounted to £32,501,000.

#### II.-Expenditure.

- 1. General.—The principal heads of State expenditure from Consolidated Revenue Funds are:—
  - (a) Interest, exchange and debt redemption charges in connexion with public debt; (b) Working expenses of railways, tramways and other business undertakings; (c) Education; (d) Health and charitable expenditure; (e) Justice; (f) Police; (g) Penal establishments; and (h) all other expenditure, under which heading is included public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions and miscellaneous.

In earlier years, the working expenses of railways and tramways were the most important item of State Governmental expenditure but for a period prior to 1941-42 public debt charges were the heaviest item. Since then, however, railways and tramways expenditure has again taken the major place. In the year 1955-56, the working expenses of the railways, tramways and omnibuses were 34.2 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in importance were education, 16.1 per cent.; public debt charges, 14.7 per cent.; charitable, public health and hospitals, 13.1 per cent.; and law, order and public safety, 5.3 per cent.

2. Total Expenditure.—The total expenditure from the Consolidated Revenue Funds of the several States and the expenditure per head of population during each of the years 1938-39 and 1951-52 to 1955-56 are shown in the following table:—

STATE EXPENDITURE: CONSOLIDATED REVENUE FUNDS.

Year	•	N.S.W.(a)	Victoria.	Q'la	ınd.	S. A	ust.	W.	Aust	• ;	•	Γas.		T	ota	ŀ.
			To	TAL E	XPEN 2'000.)		E.									
1938–39		53,558	27,773	19	,316	12	,701	1	1,17	0 :		3,64	11	12	8,1:	59
1951-52		168,837	84,067	55	,708	37	,499	3	4,54	7	1	0.87	71	39	1,52	29
1952-53		182,751	97,360		.980		,226		9,23			1,76			8,3	
1953-54		188,564	106,037	69	,353	46	,566	4	3,699	9	1	3,27	70	46	7,48	39
1954-55		197,586	115,453	73.	,602	50	,918	4	6,554	1	1.	4,70	)7	49	8,82	20
1955–56		211,232	126,398	77	,392	56	,782	5	1,44	3	1	7,71	2	54	0,9	59
	-		Per H	IEAD (		PULA	TION.									
1938–39	••	19 11 7	14 16 8	<del>`-</del> -	3 3		6 10	23	18	5	15	6	5	18	10	-
1951-52		50 19 7	36 7 11	44 1	18 7	50	9 0	58	11	4	37	1	2	46	2	
952-53		54 5 9			0 1		13 11	64		10	38	17	8		8	
953-54		55 7 5			6 7	59	4 11	69	5	8	42	17	9	52	15	:
954-55		57 2 3		55 1	0 8	63	1 2	71	14	9	46	19	9	55	3	
1955-56		59 18 8	49 5 7	57	4 4	68	0 11	76	17	10	55	9	10	58	7	

<sup>(</sup>a) See § 1, para. 2, p. 811.

3. Details of Expenditure.—(i) 1955-56. The following table shows the total expenditure and expenditure per head of population for each of the principal items:—

#### STATE EXPENDITURE: DETAILS, 1955-56.

Particulars.	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Total.
	•	FOTAL EX	PENDITUI	RE.			
Public Debt (interest, ex change, debt redemption	, !	) i					
_ etc.)		19,160	11,053	11,786	8,102	5,017	79,540
Railways Tramways and Omnibuses.		36,199	32,899	14,751	15,756	••	170,226
Harbours and Rivers, etc.		442	• •	1,332	1,173 458	••	15,010 4,421
Water Supply, Sewerage		742	• •	1,332	430	••	4,421
Irrigation and Drainage		2,783		2,558	2,309		7,650
Other Business and Indus-		· '					1
_ trial Undertakings		1,017		210	1,144	1,123	3,494
Education		23,275	10,194	7,441	7,391	3,628	87,110
Health and Charitable		20,760	9,750	5,761	5,945	2,886	70,888
Justice		1,433	879	377	417	227	6,031
Police		5,102	3,197	1,364	1,500	726	18,788
Penal establishments		681	244	322	233	117	3,207
Public Safety		47	305	66	95	45	930
Adjustment of surplus of	f i						
previous years(c)					25	—184	159
All other expenditure	27,618	15,499	8,871	10,814	6,894	4,127	73,823
Total	211,232	126,398	77,392	56,782	51,443	17,712	540,959
	<del>-                                    </del>			····	1		<u> </u>

<sup>(</sup>a) See § 1, para. 2, p. 811. (b) Tasmanian transport services are under the separate control of the Transport Commission. (c) Balance of Special Grant, 1953-54. The Special Grant for 1955-56 was brought into the Western Australian Consolidated Revenue Fund and the first part, £25,000, in respect of 1953-54 transferred to offset the Net Accumulated Deficit. The Special Grant for 1955-56 taken into Tasmanian Consolidated Revenue Fund was £4,384,000, although the Commonwealth payment was £4,200,000. The difference was offset in the Tasmanian accounts against the adjusted surplus for 1953-54.

STATE EXPENDITURE: DETAILS, 1955-56-continued.

Particulars.	N	.s.v	v.	Vie	tor	ia.	Q.	land	1.	S.	Aus	st.	W.	Au	st.	7	as.	i	T	ota	I.
			:	Pi	R		AD (	of I	Pop d.)		TIC	N.									
Public Debt (interest, exchange, debt redemption, etc.) Railways Framways and Om-	6 20	18 0	7 9	7 14	9	5	8 24	3 6	6 5	14 17	2 13	6	12 23	2 11	2 0	15	14	4	8 18	117	
nibuses Harbours and Rivers,		18 12	6	0		6	!			1		11	I	15 13	1 8				1	12	
Water Supply, Sewer- age, Irrigation and Drainage Other Business and Industrial Under-			,	1	1	8		••		3	1	4	3		0					16	
takings Education Health and Chari-	9	iġ	8	0 9	7	11 6	7	iò	9	0 8	5 18	0 4	11	14 1	2 0	3 11	10 7	4 4	0 9	7 8	
table ustice olice enal establishments bublic safety Adjustment of sur-	7 0 1 0 0	6 15 19 9 2	4 4 2 2 1	8 0 1 0 0	1 11 19 5	11 2 9 4 4	7 0 2 0 0	4 13 7 3 4	2 0 3 7 6	6 0 1 0	18 9 12 7 1	1 0 8 9 7	8 0 2 0 0	17 9 4 7 2	9 11 10 0 10	9 0 2 0 0	0 14 5 7 2	3 6 4		13 12 0 6 2	
plus of previous years All other expenditure	7	iė	8	6	ó	10	6	ii	2	12	į į	2	10	8	9 8	-0 12	11 18	6 7	-0 7	0 19	
Total	59	18	8	49	5	7	57	4	4	68	0	11	76	17	10	55	9	10	58	7	-

<sup>(</sup>ii) 1938-39 and 1951-52 to 1955-56. Combined expenditure by the several States for these years on each of the principal items is shown in the following table:—

## STATE EXPENDITURE. (£'000.)

1938-39.	1951–52.	1952-53.	1953–54.	1954–55.	1955-56.
40,158	50,545	54,449	61.225	70,394	79,540
20 120	151 710	165.063		,	i
1 '	,		. ,		185,236
1 000	3,007	3,133	3,910	4,444	4,421
1.076	5 233	6 151	6.438	7.051	7,650
1 ,,,,,,,	,,,,,,,	,,,,,,,	0,150	,,001	,,050
1,035	2,809	3,405	3,522	3,554	3,494
12,639	50,972	61,700	67,162	76,249	87,110
15,307	50,282	56,737	60,672	67,338	70,888
1,323	4,240	4,731	5,071	5,349	6,031
3,733	12,575	14,837	15,688	16,679	18,788
646	2,300	2,537	2,747	2,928	3,207
297	962	930	867	852	930
					i
:	126	-159	300	-250	-159
13,127	56,708	63,977	69,672	70,317	73,823
128.159	391 529	438 313	467 489	498 820	540,959
	40,158 38,138 680 1,076 1,035 12,639 15,307 1,323 3,733 646 297	40,158 50,545  38,138 151,710 680 3,067  1,076 5,233  1,035 2,809 12,639 50,972 15,307 50,282 1,323 4,240 3,733 12,575 646 2,300 297 962  13,127 56,708	40,158 50,545 54,449  38,138 151,710 165,863 680 3,067 3,155  1,076 5,233 6,151  1,035 2,809 3,405 12,639 50,972 61,700 15,307 50,282 56,737 1,323 4,240 4,731 3,733 12,575 646 2,300 2,537 297 962 930  126 —159 13,127 56,708 63,977	40,158 50,545 54,449 61,225  38,138 151,710 165,863 170,209 680 3,067 3,155 3,916  1,076 5,233 6,151 6,438  1,035 2,809 3,405 3,522 12,639 50,972 61,700 67,162 15,307 50,282 56,737 60,672 1,323 4,240 4,731 5,071 3,733 12,575 14,837 15,688 646 2,300 2,537 2,747 297 962 930 867  . 126 —159 300 13,127 56,708 63,977 69,672	40,158 50,545 54,449 61,225 70,394  38,138 151,710 165,863 170,209 173,915 680 3,067 3,155 3,916 4,444  1,076 5,233 6,151 6,438 7,051  1,035 2,809 3,405 3,522 3,554 12,639 50,972 61,700 67,162 76,249 15,307 50,282 56,737 60,672 67,338 1,323 4,240 4,731 5,071 5,349 3,733 12,575 14,837 15,688 16,679 646 2,300 2,537 2,747 2,928 297 962 930 867 852  126 —159 300 —250 13,127 56,708 63,977 69,672 70,317

#### Division III.—Surplus Revenue.

The following table shows for each of the years 1938-39 and 1951-52 to 1955-56 the total amount and amount per head of population of the surplus or deficit of each State:—

STATE SURPLUS REVENUE.

			U1/112 .	JORI ZOL	- KEVEIN			
Year	•	N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
			1	OTAL AM (£'000				
1938–39		-2,459	_ 787	14	- 397	- 221	- 26	- 3,876
1951-52		98	- 2,406	45	89	- 592	-402	- 3,168
1952–53		97	<b>– 365</b>	191	25	- 508	298	- 262
1953-54		128	711	343	1,810	- 103	15	2,904
1954–55		-2,148	1,336	218	-2,234	- 484	-212	- 3,524
1955–56	••	-6,833	- 3,246	-1,723	- 1,430	- 1,831	115	<b>— 14,948</b>
			PER H		OPULATION.	,		
1938–39		-0 18 0	-0 8 5	0 0 3	-0 13 4	-0 9 5	-0 2 3	-0 11
1951–52		0 0 7	-1 0 10	0 0 9	0 2 4	-1 0 1	-175	-0 7
1952-53		0 0 7	-0 3 1	0 3 0	0 0 8		0 19 8	
1953-54		0 0 9	0 5 10		2 6 1	-0 3 3	0 0 11	0 6
1954–55		-0 12 5	0 10 9	0 5 3 0 3 4	-2 15 4	-0 14 11	-0 13 6	-0 7 10
1955–56		-1 18 9	-1 5 3	-1   5   6	-1 14 3	-2 14 9	0 7 2	-1 12 4
		) <u> </u>			<u> </u>	1 1		

(a) See § 1, para. 2, p. 811.

Note.-Minus sign (-) indicates deficit.

#### § 3. State Trust Funds.

In addition to the moneys received as revenue and paid to the credit of the Consolidated Revenue Funds, considerable sums are held by the State Governments in trust for various purposes. The balances of trust funds held at 30th June for each of the years 1939 and 1952 to 1956 were as follows:—

STATE TRUST FUND BALANCES.

At	At 30th June—		N.S.W.(a)	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
1939		•••	15,684	8,189	3,062	1,448	3,744	530	32,657
1952			39,419	20,084	35,097	1,896	10,537	625	107,658
1953			53,240	22,456	38,652	2,573	11,646	1.320	129,887
1954			63 284	29,023	47,518	4,131	12,957	1,671	158,584
1955			63,435	30,649	50,235	4,127	10.667	739	159,852
1956			52,993	29,850	46,825	4,517	12,689	838	147,712

(a) Special Deposits Account and Special Accounts.

#### § 4. State Loan Funds.

1. General.—As far back as 1842, revenue collections were supplemented by borrowed moneys, the earliest loan being raised by New South Wales for the purpose of assisting immigration, at rates of interest varying from 2\frac{1}{2}d. to 5\frac{1}{2}d. per £100 per diem, or approximately

from 4½ per cent. to 8 per cent. per annum. State public borrowing however is mainly due to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions which in other countries are usually entrusted to local authorities or left to private enterprise. Foremost amongst these are the construction and control of the railway systems. Loan moneys have also been largely used for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State loan expenditure and public debt thus differ very materially from those of most European countries, and from those of the Commonwealth, where such expenditure was very largely incurred for defence or war purposes. As shown above, the State debts consist chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and are to a very large extent represented by tangible assets.

Statements relating to "gross" loan expenditure are shown below. The gross expenditure represents the amounts disbursed during each year. Details of "net" loan expenditure, i.e., gross expenditure less any credits to the Loan Fund during the year on account of repayments of advances to local governing bodies, settlers, etc., the sale of assets, and transfers from other funds may be found in *Finance*, Bulletin No. 47, 1955-56. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made. (See also following page).

2. Gross Loan Expenditure.—(i) 1955-56. Particulars of gross loan expenditure on works, services, etc., are shown in the following table:—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1955-56.
(£'000.)

Particulars.	N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Public Works and Services— Railways	13,750	7.067	4 221	2.500	1001	188	32,690
Tramways and Omnibuses	1.150		4,321	2,500 500		162	1.847
Roads	} 150	1 100	}		1	۱۰۰۰	1,077
Bridges	J	1	100		1	822	6,547
Harbours and Rivers	1,845	403	34	} 920	∫ 987	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	0,547
Lights and Lighthouses Water Supply	`	7,374	1,758	J	11	283	,
Sewerage	> 2,278	3 7,374 406		4,723 931	1,888 356		<b>}</b> 19,997
Electricity Supply	11.250	1.000		6,000		7.878	27,153
Public Buildings	12,562	13,224		3,756		2,007	37,113
Loans and Grants to Local	•	•	1	-,	-,	_,	•
Bodies	166	121		••	•••		6,458
Housing(b)	131	105		2,902		5,192	11,032
Other Public Works, etc. Primary Production—	269	294		112	250	298	1,223
Soldier Settlement	3,856	3,900	466	2		48	8,272
Land for Settlement			160	66	::	70	226
Advances to Settlers		• • • • • • • • • • • • • • • • • • • •		228	::	135	363
Water Conservation	`			588	390		} 10.121
Irrigation and Drainage	6,581	••	1,719	€ 680	163		J ''' -
Vermin-proof Fencing	• • • • • • • • • • • • • • • • • • • •	••	(c) 90	(d)			90
Agriculture	300	• •			38		338
Agricultural Bank			740	1,773	30 100	240	770
Forestry Mines and Mineral Re-	193	800	1,719	1,773	100	240	4,827
sources	350	12	30	2,961	194		3,547
Other	536	69		60	13	1	679
Other Purposes		(e) 2,450		217	1,451	100	4,218
Total Public Works, Ser-							
vices, etc.	55,369	39,131	21,655	29,019	14,983	17,354	177,511
Per Head of Population	£15 14 2	£15 5 2	£16 0 2	£34 15 6	£22 7 11,	£54 7 4	£19 Ś 2

<sup>(</sup>a) Expenditure from Loan Funds and on account of Loans; includes expenditure from Loan Funds, from Treasurer's Advance Account and from State Loans Repayment Fund. (b) Excludes expenditure from Commonwealth loans under Commonwealth-State Housing Agreement. (c) £90,000 transferred to Barrier Fences Trust Fund. (d) Included with Advances to Settlers. (e) Includes Gas and Fuel Corporation advances and share capital, £1,170,000, and Rural Finance Corporation, for advances to rural industries, £920,000.

(ii) 1938-39 and 1951-52 to 1955-56. Particulars of gross loan expenditure on works, etc., for these years are shown in the following table:—

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC.

																				_
Year	·.	N.S.W.		Victor	ia.	Q	land	l.	S.	Aus	it.	w	. Au	ıst.		Tas.		1 1	ota	ı.
				Gr	ross	Lo	AN (£'0			טדוכ	RE.									
1938-39		8,78	•	3,2	18		3,39	3		2,52	29 i		1,7	83		1,68	37	21	,39	9
1951-52 1952-53 1953-54 1954-55 1955-56		65,35- 54,55 60,02 53,33- 55,36	l l	55,0 41,5 45,6 40,9 39,1	75 65 52	23,662 21,854 20,630 20,498 21,655		2 2 2	1,19 5,39 5,45 6,89 9,01	3 52 97	1 1 1	8,7; 9,0 5,8; 6,4; 4,9;	12 24 33	1 1 1	6,88 9,83 5,33 7,21 7,33	30 56	182 182 175	),93 !,21 !,94 5,32 7,51	5 8 7	
				PE	R F	IEAD (£	-		 )PUI !.)	ATI	on.		-							
1938-39		3 4	3	1 14	5	3	7	4	4	5	0	3	16	4	7	2	0	3	1	11
1951-52 1952-53 1953-54 1954-55 1955-56	•••	19 14 16 4 17 12 15 8 15 14	1 6 4	23 17 7 10 8 16 6 9 5 5	6 11 2	17 15 15	1 3 17 9 0	8 7 3 4 2	41 33 32 33 34	19 2 7 6 15	5 6 8 2		16 2 1 6 7	0 2 10 6 11	57 65 49 54 54	12	0 11 7 10 4		17 19 13 7 3	0 4 3 9 2

<sup>(</sup>a) See footnote (a) to previous table.

The above tables do not include particulars of expenditure on loan discounts and flotations, the funding of deficits, the retirement of treasury bills, and similar items of a nature other than works, services, etc. Summaries of the gross and net expenditure and repayments in respect of all loan purposes for the years 1953-54 to 1955-56 are shown in paragraph 3 following.

3. Total Loan Expenditure.—The following table shows particulars, in summary form, of the total loan expenditure in each State during each of the years, 1953-54 to 1955-56.

STATE LOAN EXPENDITURE: SUMMARY. (£'000.)

Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.							
	1953–54.													
Works and Services-	1			i										
Gross Expenditure .	. 60.021	45,665	20,630	25,452	15,824	15,356	182,948							
Net Expenditure .	EC 737	42,510	18,451	22,061	14,194	13,437	167,380							
Repayments	3,294	3,155	2,179	3,391	1,630	1,919	15,568							
Other than Works, etc.(a)-		'	•	,	! ' .	•								
Gross Expenditure .		139		61	111	552	1,230							
Net Expenditure .	. 367	139		61	101	335	1,003							
Repayments			• •		(b) 10	217	227							
Total Loan Expenditure-	1						<del></del>							
Gross	. 60,388	45,804	20,630	25,513	15,935	15,908	184,178							
Net	. 57,094	42,649	18,451	22,122	14,295	13,772	168,383							
Repayments	2 204	3,155	2,179	3,391	1,640	2,136	15,795							

For footnotes see next page.

### STATE LOAN EXPENDITURE: SUMMARY—continued. (£'000.)

		(2	000.,				
Particulars.	' N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
		19.	54–55.				
Works and Services							ı
Gross Expenditure .		40,952	20,498	26,897	16,433	17,211	175,327
Net Expenditure .		38,780	18,024	23,444	14,731	14,252	160,545
Repayments		2,172	2,474	3,453	1,702	2,959	14,782
Other than Works, etc.(a)-				1		1	
Gross Expenditure .		242		100	128	444	1,263
Net Expenditure .	. 349	242		62	117	437	1,207
Repayments			••	38	(b) 11	7	5€
Total Loan Expenditure		,					
Gross	. 53,685	41,194	20,498	26,997	16,561	17,655	176,590
Net	. 51,663	39,022	18,024	23,506	14,848	14,689	161.752
Repayments	2,022	2,172	2,474	3,491	1,713	2,966	14,838
		19:	55–56.	·	· · · · · ·		
Works and Services—					Ī		
Gross Expenditure .	. 55,369	i 39.131	21,655	29.019	14,983	17,354	177,511
Net Expenditure			19,015	24,152	13,314		155,87
Repayments	6 610		2,640	4.867	1.669		21,63
Other than Works, etc.(a)-	5,015	2,700	2,070	. 4,007	1,005	4,055	21,05
Gross Expenditure .		31	. 1	107	160	252	559
Net Expenditure		31	94	9	146	223	51
Repayments		1 31	- 93	98	(b) 14	29	4:
			, ,	1 1	(0) 14	2)	<del>  "</del>
Total Loan Expenditure—	i	i	i		i		
Gross	. 55,377	39,162	21.656	29,126	15,143	17,606	178.07
Net	40 550	36,374	19,109	24,161	13,460	13,524	156.38
Repayments	F (10	2,788	2,547	4,965	1,683		21,68
	1 5,517	1 -,,,,,,	-,- */	.,,,,,,,,	1,,,,,,,	1 .,00	,00

<sup>(</sup>a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.
(b) From Consolidated Revenue Fund.

Information relating to the State Public Debt is given in division D. Commonwealth and State Public Debt (pp. 827 and 829).

#### C. COMMONWEALTH AND STATE FINANCE.

1. Revenue and Expenditure.—(i) Consolidated Revenue Funds. The following tables show the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1938-39 and 1951-52 to 1955-56. In these tables, the combined Commonwealth and State totals have been adjusted to exclude major duplications, but the separate Commonwealth and State figures are as shown in other divisions of this Chapter. The items excluded from the total figures are:—payments made by the Commonwealth to the States and included in the State Consolidated Revenue Funds on account of tax reimbursements, interest under the Financial Agreement special grants, special financial assistance, coal strike emergency grants, price control reimbursements, grants to universities, tuberculosis capital expenditure, National Welfare Fund payments, and estimated payments of pay-roll tax by the States to the Commonwealth. There are other relatively minor payments for which adjustments have not been made and the adjusted figures are therefore still slightly overstated.

COMMONWEALTH AND STATES: REVENUE AND EXPENDITURE.

				Revenue.		Expenditure.				
Year ended	30th	June-	Common- wealth.	States.	TotaL	Common- wealth.	States.	Total.		
1939			£'000. 95,065	£'000. 124,283	£m. 209.6	£'000. 95,065	£'000. 128,159	£m. 213.5		
1952			1,016,828	388,361	1,256.1	1,016,828	391,529	1,259.3		
1953			1,040,067	438,051	1,305.8	1,040,067	438,313	1,306.1		
1954			1,022,790	470,393	1,314.3	1,022,790	467,489	1,311.4		
1955			1,067,441	495,296	1,378.5	1,067,441	498,820	1,382.1		
1956			1,138,358	526,011	1,466.7	1,138,358	540,959	1,481.6		

(ii) Loan Expenditure. The aggregate gross loan expenditures of the Commonwealth and States on works and services for the years 1938-39 and 1951-52 to 1955-56 are shown in the following table:—

# COMMONWEALTH AND STATE GROSS LOAN EXPENDITURE: WORKS AND SERVICES.(a) (£'000.)

Gross Loan Exp	1938–39.	1951–52.	1952-53.	1953–54.	1954-55.	1955-56.		
Commonwealth(b) State			3,913 21,399	31,667 210,938	35,684 182,215	41,399 182,948	33,189 175,327	44,003 177,511
Total	••	••	25,312	242,605	217,899	224,347	208,516	221,514

<sup>(</sup>a) Excludes expenditure on loan flotations, funding deficits, etc. (b) Includes expenditure on Defence, War (1939-45) and Repatriation Services. Excludes payments to National Debt Sinking Fund from proceeds of loan from International Bank of Reconstruction and Development, payments to Swiss Loan Trust account from proceeds of Swiss Loan and payments to Canadian Loan Trust account from proceeds of Canadian Loan (see pp. 838-839).

2. Taxation.—The following table shows the combined Commonwealth and State taxation, and the amount per head of population, for the years 1938-39 and 1951-52 to 1955-56. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds have been included.

#### COMMONWEALTH AND STATE TAXATION: TOTAL NET COLLECTIONS.(a)

Particulars.	1938-39.	1951-52.	1952–53.	1953–54.	1954–55.	1955–56.								
· · · · · · · · · · · · · · · · · · ·	NET COLLECTIONS. (£'000.)													
Customs and Excise Duties Sales Tax Land Tax Pay-roll Tax Income Taxes Probate and Succession Duties Stamp Duties n.e.i. Motor Taxes Liquor Taxes Racing Entertainments Tax Licences, n.e.i., and other Taxes	47,632 9,308 2,897 41,679 6,916 3,466 6,961 1,045 1,251 633 2,841	213,917 95,459 8,710 37,170 551,297 23,172 12,228 20,523 3,681 5,990 6,161 18,853	183,824 89,067 4,666 40,171 554,869 26,149 12,297 23,321 4,429 6,794 6,708 14,327	220,217 95,689 4,359 40,384 528,273 28,525 14,543 25,877 5,346 7,503 2,883 7,251	244,403 100,446 5,011 41,455 532,968 31,216 16,027 27,783 5,563 6,992 1,339 13,891	255,772 110,001 5,969 45,543 574,062 33,508 18,181 28,919 6,617 7,430 1,445 14,334								
Total	124,629	997,161	966,622	980,850	1,027,094	1,101,781								

#### PER HEAD OF POPULATION.

	(£ s. d.)	_
Customs and Excise Duties Sales Tax Land Tax Pay-roll Tax Income Taxes Probate and Succession Duties Stamp Duties n.e.i. Motor Taxes Liquor Taxes Racing Entertainments Tax Licences, n.e.i., and other Taxes	6 17 5 25 1 8 21 0 11 24 14 10 26 17 9 27 9 1 1 6 10 11 3 10 10 3 11 10 15 0 11 1 0 0 11 1 6 2 10 0 8 4 1 0 5 0 10 8 0 9 10 0 11 0 0 12 10 0 0 12 10 0 19 11 2 14 4 2 19 10 3 4 1 3 8 8 8 3 11 11 0 10 0 10 0 12 10 0 19 11 2 14 4 2 19 10 3 4 1 3 8 8 8 3 11 11 0 10 0 0 1 8 8 1 8 2 1 12 8 1 15 3 1 19 0 0 10 1 0 0 10 0 10 0 10 0 10 0	5
Total	17 19 5 116 18 5 110 13 5 110 4 1 112 19 10 118 5 5	;

<sup>(</sup>a) For separate details of Commonwealth and State taxation collections, see pp. 785 and 813.

#### D. COMMONWEALTH AND STATE PUBLIC DEBT.

#### § 1. General.

Under the Financial Agreement between the Commonwealth and the States in 1927, the Commonwealth and State Public Debts were amalgamated and the Commonwealth Government accepted responsibility for the State Public Debts. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf and the debt is redeemed from the National Debt Sinking Fund to which both the Commonwealth and the States make contributions. Under the agreement, the Commonwealth arranges for all borrowings on behalf of the Commonwealth and the States, and Commonwealth securities are issued for all money borrowed.

In the statistical tables relating to Public Debt, the units of currency for debt outstanding and interest payable, except in § 3, para. 5, are :-Debt in Australia-£ Australian; Debt in London-£ Sterling; Debt in New York-£ (converted from dollars at the rate of \$4.8665 to £1); Debt in Canada—£ (converted from dollars at the rate of \$4.8665 to £1); Debt in Switzerland—£ (converted from Swiss francs at the rate of 1,000 Swiss francs = £A.102 1s. 10d).

The totals shown represent the total "face" or "book" value of the debt without adjustment on account of the difference in currency mentioned above.

In § 3, para. 5 only, details of the debt for the Commonwealth and each State are given in Australian currency.

#### § 2. The Financial Agreement between the Commonwealth and the States.

- 1. General.—Full details of the Financial Agreement between the Commonwealth and the States are given in earlier issues of the Official Year Book (see No. 37, pp. 685-690). In this issue, a summary of the main provisions only is given.
- 2. Australian Loan Council.—The Australian Loan Council was set up to co-ordinate the public borrowings of the Commonwealth and the States. It consists of the Prime Minister of the Commonwealth, or another Minister nominated by him in writing, as Chairman, and the Premier of each State, or Ministers nominated by them in writing. Each year the Loan Council examines the loan programmes of the Commonwealth and the States and determines the total amount to be borrowed during the year. Borrowings by the Commonwealth for defence purposes are not subject to decisions of the Loan Council.
- 3. Loan Raisings for the Commonwealth and States .- Subject to the decisions of the Loan Council, the Commonwealth arranges for all borrowings for or on behalf of the Commonwealth or any State, and for all conversions, renewals, redemptions, and consolidations of the Public Debts of the Commonwealth and of the States.

If the Loan Council unanimously decides, however, a State may borrow outside Australia in the name of the State, and may issue securities for the amount so borrowed. The Commonwealth then guarantees that the State will fulfil all its obligations to bondholders in respect of the money so borrowed and the money is deemed to be borrowed by the Commonwealth for and on behalf of the State.

Subject to any maximum limits decided upon by the Loan Council for interest, brokerage, discount and other charges, the Commonwealth or any State may-

- (i) borrow within its own territory, for any purpose, money from any authorities, bodies, funds or institutions (including Savings Banks) constituted or established under Commonwealth or State law or practice:
- (ii) borrow from the public by means of counter sales of securities; and
- (iii) use any available public moneys.

However, any securities issued for money so borrowed or used must be Commonwealth securities on terms approved by the Loan Council.

- 4. Taking over of State Public Debts.—The Commonwealth took over on 1st July, 1929-
  - (a) the balance then unpaid of the gross public debt of each State existing on 30th June, 1927; and
  - (b) all other debts of each State existing on 1st July, 1929, for money borrowed by that State deemed by the Agreement to be money borrowed by the Commonwealth for and on behalf of the State,

and in respect of these debts assumed, as between the Commonwealth and the States the liabilities of the States to bond holders.

- 5. Transferred Properties.—In relation to State properties transferred to the Commonwealth under Section 85 of the Constitution, the States as from 1st July, 1929, were discharged from any liability in respect of principal, interest or debt redemption on so much of the debts bearing interest at 5 per cent. per annum, taken over by the Commonwealth as amounted to the agreed value of these properties, namely £10,924,323.
- 6. Payment of Interest.—For a period of 58 years from 1st July, 1927, the Commonwealth agreed to contribute the sum of £7,584,912 each year towards the interest payable on the State debts. The balance of the interest payable on the State debts is paid to the Commonwealth by the States.
- 7. Sinking Fund.—(i) State Public Debt existing at 30th June, 1927. A sinking fund at the rate of 7s. 6d. per annum for each £100 of the net public debts of the States existing on 30th June, 1927, and conversions thereof, was established under the terms of the Agreement. The Commonwealth contributes annually from revenue 2s. 6d. per £100 on the net public debts of the States existing at 30th June, 1927, and each State contributes annually 5s. per £100 on the net public debt of such State at 30th June, 1927. The payments of the Commonwealth and of all States except New South Wales will continue for a period of 58 years from 1st July, 1927, and those of New South Wales for a similar period from 1st July, 1928.
- (ii) New Borrowings. On new borrowings after 1st July, 1927, (except those for redemptions or conversions, or funding a State deficit) a sinking fund at the rate of 10s. per £100 per annum was established and the State and the Commonwealth contribute from revenue equal shares for a period of 53 years from the date of raising. (New South Wales did not commence sinking fund contributions in respect of new loans raised in the financial year 1927-28 until 1st July, 1928.)
- (iii) Loans raised to meet a Revenue Deficit. In respect of any loan (except any of the loans referred to in para. (iv) below) raised by a State after 30th June, 1927, to meet a revenue deficit accruing after that date, no sinking fund contribution is made by the Commonwealth, but the State makes a sinking fund contribution at the rate of not less than 4 per cent. per annum of the loan for a period sufficient to provide for the redemption of the loan, the contributions being deemed to accumulate at the rate of 4½ per cent. per annum compound interest.
- (iv) Loans raised to meet Revenue Deficits between 30th June, 1927 and 1st July, 1935. In respect of loans raised by a State or by the Commonwealth on behalf of a State, on the security of Commonwealth Treasury Bills, to meet a revenue deficit accruing after 30th June, 1927, and before 1st July, 1935, special contributions are payable. Details of these contributions are given in Official Year Book No. 37, pp. 688 and 689.
- (v) National Debt Commission. The sinking funds established are controlled by the National Debt Commission, which may arrange with any State to act as its agent in connexion with payments due to bond holders. Except where the conditions relating to sinking funds, redemption funds, and funds of a like nature held by a State on 30th June, 1929, precluded such transfer, all such funds were transferred to the National Debt Commission.
- (vi) Operation of Sinking Fund. Sinking fund contributions made in respect of the debts of a State, and funds of that State transferred to the National Debt Commission, are not accumulated but must be applied, whenever expedient, to the redemption and repurchase of loan securities. When such a loan security is repurchased or redeemed by the National Debt Commission, it is cancelled, and the State, in addition to sinking fund contributions otherwise payable, pays a further annual sinking fund contribution at the rate of 4½ per cent. on the face value of the cancelled security for the balance of the period during which the original contribution is payable in respect of that debt.
- (vii) Oversea Debt. Sinking fund contributions in respect of oversea debt shall be calculated at the mint par of exchange prevailing on 1st July, 1927.

8. Borrowing by Semi-Governmental Authorities.—It was realized at the inception of the Loan Council that, in the interests of co-ordinated borrowing, the Council should be advised of borrowing of large amounts by semi-governmental authorities. In May, 1936, all resolutions passed by the Loan Council in connexion with semi-governmental borrowings were consolidated into one set of rules, which superseded all previous resolutions. This set of rules provides, inter alia, for the submission of annual loan programmes in respect of semi-governmental authorities proposing to raise £100,000 or more in a year, for the consideration of such programmes in conjunction with the loan programme of the Government concerned, and for the fixing of the terms of individual semi-governmental loans coming within the scope of the annual programme.

#### § 3. Commonwealth and State Public Debt Outstanding.

1. Public Debt, Annual Interest Payable and Average Rate of Interest at 30th June, 1956.—In the following table, details are given of the Commonwealth and State Public Debt, annual interest payable and average rate of interest at 30th June, 1956.

## COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1956.

	1	I	Maturing in—	-		
Particulars.	Australia.	London. New York		Canada.	Switzer- land.	Total.
		DEBT.				_
	£A.'000.	£stg.'000.	£'000.(a)	£'000.(a)	£'000.(a)	£'000.(a)
Commonwealth Debt— War (1914-18) Debt(b)— Stock and Bonds Other Debt(c)	122,252 94	7,534 ··	::		::	129,786 94
Total War (1914-18) Debt	122,346	7,534		••	••	129,880
War (1939-45) Debt— Stock and Bonds Treasury Bill, Internal Treasury Bills, Public Other Debt(d)	982,598 220,290 165,000 31,459	5,725 				988,323 220,290 165,000 31,459
Total War (1939-45) Debt	1,399,347	5,725		•••	••	1,405,072
Works and Other Purposes— Stock and Bonds Treasury Bills, Internal International Bank Dollar Loan	256,977 11,310		9,087	3,082	12,251	330,193 11,310 50,112
Total Works and Other Purposes	268,287	48,796	59,199	3,082	12,251	391,615
Total Commonwealth Debt	1,789,980	62,055	59,199	3,082	12,251	1,926,567
State Debt— Stock and Bonds Debentures Treasury Bills and Debentures	1,614,876 36,366	258,140 4,691	22,336	::	::	1,895,352 41,057
-Short-term Balance of Debts of States		21,377	••	••	••	21,377
taken over by Common- wealth and still represented by State Securities	;	4,241				4,241
Total State Debt	1,651,242	288,449	22,336			1,962,027
Grand Total Com- monwealth and State Debt	3,441,222	350,504	81,535	3,082	12,251	3,888,594

<sup>(</sup>a) See § 1, p. 825. (b) Excludes War (1914-18) Debt due to United Kingdom Government (£79.724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931. (c) War and Peace Savings Certificates and Stamps and War Gratuity Bonds. (d) Advance Loan Subscriptions, National Savings Bonds, War Savings and Savings Certificates, War Savings and National Savings Stamps.

## COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1956—continued.

		N	Aaturing in—	-		
Particulars.	Australia.	London.	New York.	Canada.	Switzer- land.	Total.
	Debt Per	HEAD OF	POPULATIO	on.		
Commonwealth Deht-	£ s. d. (Aust.)	£ s: d. (Stg.)	£ s. d.	£ s. d. (a)	£ s. d.	£ s. d.
War (1914-18) Debt(b) War (1939-45) Debt Works and Other Purposes	12 19 6 148 8 8 28 9 2	0 16 0 0 12 1 5 3 6	6 5 7	 0 6 7	 1 6 0	13 15 6 149 0 9 41 10 10
Total Commonwealth Debt	189 17 4	6 11 7	6 5 7	0 6 7	1 6 0	204 7 1
Total State Debt	176 2 9	30 15 5	2 7 8	••	••	209 5 10
Grand Total Com- monwealth and State Debt	365 0 4	37 3 7	8 13 0	0 6 7	1 6 0	412 9 6
	Annuai	INTEREST	PAYABLE.			
	£A.'000.	£Stg.'000.	£'000.(a)	£'000.(a)	£'000.(a)	£'000.(a)
Commonwealth Debt— War (1914–18) Debt(b) War (1939–45) Debt Works and Other Purposes	4,181 37,502 9,678	227 229 1,628	2,592		  475	4,408 37,731 14,489
Total Commonwealth Debt	51,361	2,084	2,592	116	475	56,628
Total State Debt	60,479	9,303	828			70,610
Grand Total Com- monwealth and State Debt	111,840	11,387	3,420	116	475	127,238
Annual In	TEREST PA	YABLE PER	R HEAD OF	POPULATI	on.	
	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d.	£ s. d (a)	£ s. d.
Commonwealth Debt— War (1914-18) Debt(b) War (1939-45) Debt Works and Other Purposes	0 8 10 3 19 6 1 0 7	0 0 6 0 0 6 0 3 5	 0 5 6	 0 0 3	 o i o	0 9 4 4 0 0 1 10 9
Total Commonwealth Debt	5 8 11	0 4 5	0 5 6	0 0 3	0 1 0	6 0 1
Total State Debt	6 9 1	0 19 10	0 1 9			7 10 8
Grand Total Com- monwealth and State Debt	11 17 3	1 4 2	0 7 3	0 0 3	0 1 0	13 9 11
Average Rate	OF INTER	EST PAYAB	LE (PER £	00 Per A	NNUM).	
Commonwealth Debt-	£ s. d. (Aust.)	£ s. d. (Stg.)	£ s. d.	£ s. d. (a)	£ s. d. (a)	£ s. d.
War (1914-18) Debt(b) War (1939-45) Debt Works and Other Purposes	3 8 5 2 13 7 3 12 2	3 0 5 4 0 0 3 6 9	4 7 7	 3 i5 0	3 i7 6	3 8 0 2 13 9 3 14 0
Total Commonwealth Debt	2 17 5	3 7 2	4 7 7	3 15 0	3 17 6	2 18 10
Total State Debt	3 13 3	3 4 6	3 14 1			3 12 0
Grand Total Com- monwealth and State Debt	3 5 0	3 5 0	4 3 11	3 15 0	3 17 6	3 5 5

<sup>(</sup>a) See § 1, p. 825. (b) Excludes War (1914-18) Debt due to United Kingdom Government (£79,724,220). Repayment of this debt and interest thereon (£3,919,774) was suspended in 1931.

2. Public Debt and Annual Interest Payable, 1939 and 1952 to 1956.—In the following table, details are given of the Public Debt and annual interest payable, including the average rate of interest, at 30th June, 1939 and 1952 to 1956. A dissection of debt for these years into debt payable in Australia, London, New York, Canada and Switzerland may be found in the annual bulletin Finance.

### COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE.

	PAYAE	LE AT 3	UTH JUNE			
Particulars.	1939.	1952.	1953.	1954.	1955.	1956.
	·	DEBT. (£'000.) (	a)			·
Commonwealth Debt— War (1914-18) Debt War (1939-45) Debt Works and Other Purposes	186,214 131,313	156,095 1,484.915 227,809	152,333 1,472,777 263,105	145,964 1,464,767 307,124	134,079 1,444,832 344,806	129,880 1,405,072 391,615
Total Commonwealth Debt	317,527	1,868,819	1,888,215	1,917,855	1,923,717	1,926,567
State Debt	897,772	1,395,676	1,543,648	1,688,948	1,825,727	1,962,027
Grand Total Common- wealth and State Debt	1,215,299	3,264,495	3,431,863	3,606,803	3,749,444	3,888,594
	Annual	(£'000.)	PAYABLE.			·
Commonwealth Debt— War (1914-18) Debt War (1939-45) Debt Works and Other Purposes	7,376 5,150	5,022 37,509 7,159	4,884 38,853 8,507	4,851 38,758 10,490	4,501 38,580 12,488	4,408 37,731 14,489
Total Commonwealth Debt	12,526	49,690	52,244	54,099	55,569	56,628
State Debt	33,644	41,631	48,140	55,022	64,046	70,610
Grand Total Commonwealth and State Debt	46,170	91,321	100,384	109,121	119,615	127,238
Average Rate		EST PAYAB		100 Per A	.nnum).	
Commonwealth Debt— War (1914-18) Debt War (1939-45) Debt Works and Other Purposes	3 19 3 3 18 5	3 4 5 2 10 7 3 2 11	3 4 2 2 12 9 3 4 8	3 6 6 2 12 11 3 8 4	3 7 5 2 13 5 3 12 6	3 8 0 2 13 9 3 14 0
Total Commonwealth Debt	3 18 11	2 13 3	2 15 4	2 16 5	2 17 10	2 18 10
State Debt	3 14 11	2 19 8	3 2 4	3 5 2	3 10 2	3 12 0
Grand Total Common- wealth and State Debt	3 16 0	2 16 0	2 18 6	3 0 6	3 3 10	3 5 5

<sup>(</sup>a) See § 1, p. 825.

<sup>3.</sup> State Public Debt and Annual Interest Payable at 30th June, 1956.—In paragraphs 1 and 2, totals only of the States' Public Debt are given. In the following table, the total debt of each State and the amounts outstanding per head of population at 30th June, 1956, the annual interest payable and the average rate of interest payable are shown according to the place of flotation.

#### STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1956.

	!	Maturing	Ma	Maturing Overseas.					
State.		in Australia.	London.	New York.	Total Overseas.	Grand Total.			
		D	ЭЕВТ.						
	1	£A.'000.	£Stg.'000.	£'000.(a)	£'000.(a)	£'000.(a)			
New South Wales		565,261	122,112	10,763	132,875	698,136			
Victoria		397,577	44,705	3,431	48,136	445,713			
Queensland	;	204,989	43,554	4,256	47,810	252,799			
South Australia		216,659	35,316	2,448	37,764	254,423			
Western Australia		151,838	35,770	1,125	36,895	188,733			
Tasmania	1	114,918	6,992	313	7,305	122,223			
Total	••	1,651,242	288,449	22,336	310,785	1,962,027			
	Dei	BT PER HEA	D OF POPU	LATION.					
		£ s. d.	£ s. d.	£ s. d.	£ s. d.	£ s. d.			
	ļ	(Aust.)	(Stg.)	(a)	(a)	(a)			
New South Wales	i	159 1 6	34 7 3	3 0 7	37 7 10	196 9 4			
Victoria	!	152 12 4	17 3 3	1 6 4	18 9 7	171 1 11			
Queensland	11	149 11 1	31 15 6	3 2 1	34 17 7	184 8 8			
South Australia		255 6 9	41 12 5	2 17 8	44 10 1	299 16 10			
Western Australia		224 3 0	52 16 1	1 13 3	54 9 4	278 12 4			
Tasmania		359 10 4	21 17 6	0 19 7	22 17 1	382 7 5			
Total	.,	176 2 9	30 15 5	2 7 8	33 3 1	209 5 10			
	••		50 15 5						
		Annual In	EREST PAY	ABLE.					
		£A.'000.	£Stg.'000.	£'000. (a)	£'000. (a)	£'000. (a)			
New South Wales		20,427	3,914	414	4,328	24,755			
Victoria		14,886	1,446	121	1,567	16,453			
Queensland		7,380	1,445	148	1,593	8,973			
South Australia	• • • • • • • • • • • • • • • • • • • •	7,989	1,118	92	1,210	9,199			
Western Australia		5,465	1,149	41	1,190	6,655			
Tasmania	• • • • • • • • • • • • • • • • • • • •	4,332	231		243	4,575			
Total	••	60,479	9,303	· '	10,131	70,610			
Average	RATE OF	INTEREST 1	PAYABLE (PI	er £100 Per	ANNUM).				
	· · ·	£ s. d.	£ s. d.	£ s, d.	£ s. d.	£ s. d.			
		(Aust.)	(Stg.)	(a)	(a)	(a)			
New South Wales		3 12 3	3 4 1	3 16 10	3 5 2	3 10 11			
Victoria		3 14 11	3 4 8	3 10 9	3 5 1	3 13 10			
Queensland		3 12 0	3 6 4	3 9 7	3 6 8	3 11 0			
South Australia		3 13 9	3 3 3	3 15 3	3 4 1	3 12 4			
Western Australia		3 12 0	3 4 3	3 12 11	3 4 6	3 10 6			
Tasmania		3 15 5	3 6 1	3 14 4	3 6 6	3 14 10			
Total		3 13 3	3 4 6	3 14 1	3 5 2	3 12 0			
		(a) See	§ 1, p. 825.						

<sup>(</sup>a) See § 1, p. 825.

<sup>4.</sup> State Public Debt, 1939 and 1952 to 1956.—In the following table, the debt of each state and the amounts outstanding per head of population at 30th June, 1939 and 1952 to 1956 are shown.

STATE	PURI	IC	DERT
SIMIL	FUBL		DEDI.

				~												
30	th June	_	N.S.W.	Victoria.	Q'ła	and.	S. A	ust.	w.	Aust.	7	as.		T	otal	
			·			EBT.	'		<u> </u>		,		_			_
					£'00	00.)(a	)									_
1939		••	359,844	179,698	127	,503	108	,887	9:	5,473	. 2	6,36	7	89	7,7	72
1952			522,491			,310	173	,436	13	8,288	7	1,65	2	1,39	5,6	76
1953			568,923	339,520	204	.255	193	.750	15	3,072	8	4,12	8	1.54	3.6	48
1954			614,495	376,964		,396		.619	16	5,783		7,69		1.68	8.9	48
1955			655,599			,474		,769		7,881		9.80		1.82		
1956			698,136			,799		,423		8,733		2,22		1,96		
				DEBT PER	HEAD (£ s.	OF d.)(	Popul a)	LATIC	N.							_
1939			130 18	7 95 13 3	3 125	4 11	182	10 6	203	2 4	111	1	2,	129	3	1
1952			156 9	2 129 0	6 148	14 5	229	14 0	230	10 9	241	16	5	162	7	9
1953 •				8 141 14 1		3 3		14 11		13 6			4	175	19	1
1954					1 167	3 9	268	o o		2 7	316	18	1	188	i8	~ 6
1955		.,				17 5	286	9 š		$\bar{2}$ $\dot{3}$			10		10	4
1956				4 171 1 1.		8 8		16 10		12 4	382	7	5	209	5	10
			'	(a	) See §	1, p. 1	325.		!						_	_

In some States, certain public utilities such as tramways, water supply and sewerage, harbour services, etc., are controlled by boards or trusts, which, in addition to receiving advances from the central Government, raise loans by public borrowing on their own behalf, while in other States these services are controlled by the central Government. Comparison of the debts of the States is therefore difficult, but on page 834 figures showing the aggregate debts of the States, including these local and semi-governmental authorities, are shown

for the years 1938-39 and 1951-52 to 1955-56.

5. Public Debt and Interest Payable in Australian Currency.—In the foregoing tables relating to Commonwealth and State public debt, the debt outstanding in London is expressed in sterling, debt outstanding in New York and Canada is expressed in pounds converted from dollars at the rate of \$4.8665 to £1 and debt outstanding in Switzerland is expressed in pounds converted from Swiss francs at the rate of 1,000 Swiss francs = £A.102 1s. 10d. This method of showing the debt does not indicate the amount that the Australian Government would have to find to repay the debt at current rates of exchange. In the following table, the public debt and the interest payable are shown in terms of Australian currency throughout. Debt in London, New York and Switzerland has been converted to Australian currency at the selling rate of exchange on 30th June, 1956.

COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE AT 30th JUNE, 1956: AUSTRALIAN CURRENCY. (£A.'000.)

			Maturing in -			
Particular			mataring in-	-		Total.
Particulars,	Australia.	London.	New York.	Canada.	Switzer- land. (d)	I Otal.
		DEBT.				
Commonwealth Debt-						
War (1914-18) Debt	122,346	9,455			• • •	131,801
War (1939-45) Debt	1,399,347	7,185				1,406,532
Works and Other Purposes	268,287	61,239	129,391	6,870	12,402	478,189
Total Commonwealth Debt	1,789,980	77,879	129,391	6,870	12,402	2,016,52.
State Debt—						
New South Wales	565,261	153,251	23,524			742,030
Victoria	397,578	56,104	7,499		• •	461,18
Queensland South Australia	204,989	54,660	9,303	• •	• •	268,95 266,33
Wortern Australia	216,659 151,837	44,322 44,891	5,350 2,460	• •	• •	199,180
Tremonio	114,918	8,775	685	••	• • •	124,378
Total State Debt	1,651,242	362,003	48,321		<del></del>	2,062,060
Commonwealth and State Debt-	1,00		!			
Short-term Debt	396,600	32,715	1	}		429,31
Other Debt	3,044,622	407,167	178,212	6,870	12,402	3,649,27
Grand Total Commonwealth	1				•	
and State Debt	3,441,222	439,882	178,212	6,870	12,402	4,078,588

<sup>(</sup>a) Converted at rate of £Stg.100 = £A.125 10s. (b) Converted at rate of \$2.2265 = £A. (c) Converted at rate of \$2.1835 = £A.1. (d) Converted at rate of 9.676 francs = £A.1.

# COMMONWEALTH AND STATE PUBLIC DEBT AND INTEREST PAYABLE AT 30th JUNE, 1956: AUSTRALIAN CURRENCY—continued. (£A.'000.)

		(LA. 000	·)			
	1					
Particulars.	Australia. London. New York. Canada. (a) (b) (c)				Switzer- land. (d)	Total.
	Annua	L INTEREST	PAYABLE.			
Commonwealth Debt War (1914-18) Debt War (1939-45) Debt Works and Other Purposes Total Commonwealth Debt State Debt New South Wales Victoria	4,181 37,502 9,678 51,361 20,427 14,886 7,380 7,989 5,465 4,332 60,479	285 287 2,044 2,616 4,913 1,814 1,814 1,403 1,442 290 11,676	5,666 5,666 904 265 323 201 90 26 1,809	257 257 257	 480 480 	4,466 37,789 18,125 60,380 26,244 16,965 9,517 9,593 6,997 4,648 73,964
and State Debt	111,840	14,292	7,475	257	480	134,344

(a) Converted at rate of £Stg 100 = £A.125 10s. (b) Converted at rate of \$2.2265 = £A1. (c) Converted at rate of \$2.1835 = £A.1. (d) Converted at rate of 9.676 francs = £A.1.

## COMMONWEALTH AND STATE PUBLIC DEBT AT 30TH JUNE, 1956: AMOUNTS AT EACH RATE OF INTEREST.

				M	aturing in	-				
Rate of Inte	rest.	Aust	ralia.	Lon	don.	New	York.	Other Overseas.	Total.	
		Com- mon- wealth.	State.	Com- mon- wealth.	State.	Com- mon- wealth.	State.	Com- mon- wealth.	Com- mon- wealth.	State.
Per cent.	••	£A.'000.	£A.'000.	£Stg.'000	£Stg.'000	£'000.(b)	£'000.(b)	£'000.(b)	£'000.(b)	£ 000.(b)
5.1 5.0 4.75	::	18,525			3,200 1	21,371	••		18,525	3,200 29,046
4.625 4.5 4.2625	•••	164,878	613,588		11,790	8,838	4,876		21,371 8,838 165,139	630,254
4.25	::	71 41	563	5,725	22,663	19,904	1,065	(c) 6,126		24,291
3.875 3.75 3.625	::	53,665 	703 119,547 107	6,951	•••	3,416		(d) 9,207	73,239	703 121,268 107
3.5 3.4875 3.375			7,109 2	••	46,038 	1,099 3,208	7,085 5,135	••	1,099 3,208	60,232 2 5,135
3.25 3.2391 3.125	::	828,292 15,340 252,210	163,062 474,935	33,767	56,827	1,102	2,454	::	863,161 15,340 252,210	222,343 474,935
3.1 3.0 2.8347	• • •	51,758 8,025	3,810 196,761	15,612	90,669	::	::	::	67,370 8,025	3,810 287,430
2.75 2.7125 2.5	::	::	417	••	37,327 19,932		::			37,327 417 19,934
2.325 1.5 1.0		396,600	1,728 3,497		::	::	::	::	396,600	1,728 3,497
Miscellaneous Total Debt		396,600 511 1,789,980	36,366 1.651,242	62,055	288,449	59,199	22,336	15,333	396,600 511 1,926,567	36,366 2 1,962,027

(a) Excludes War (1914-18) Debt due to United Kingdom Government, £79,724,000 (rate of interest 4.91667 per cent.). (b) See § 1, p. 825. (c) Swiss debt. (d) Swiss debt £6,125,000; Canadian debt, £3,082,000. (e) Consists of overdue debt, War (1914-18) and (1939-45) Savings Stamps and National Savings Stamps, etc.

<sup>6.</sup> Public Debt at each Rate of Interest.—The following table shows particulars of the amounts of debt for Commonwealth and State purposes at 30th June, 1956, at each rate of interest:—

<sup>7.</sup> Dates of Maturity.—(i) Commonwealth. In the following table, the Commonwealth Public Debt at 30th June, 1956 is classified according to the earliest and the latest years of maturity.

## COMMONWEALTH PUBLIC DEBT AT 30th JUNE, 1956(a): CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.

		F	Barliest Y	ear.		Latest Year.				
Year of Maturi	ty.	Matu	ring in—		Total.	Maturing in—			Total.	
	Aus- tralia.	Lon- don.	New York.	Other Overseas.					Other Overseas.	Total.
	£A.'000.	£Stg.	£'000 b	£'000. (b)	£'000. (b)	£A.'000.	£Stg.	£'000 <i>b</i>	£'000.(b)	£'000. (b)
Before 30th Jun	ne.	000.	!			}	000.			
	. 828,292 . 519,10	2'23,117	1,102 4,308		852,511 523,411	485,911	6,951	1,102	·:	493,964
	. 49,484	ŀ]			49,484			٠		84,083
1050 60	: ::	1 ::	::	· ·	::	233,057 227,135		•••		233,057 227,135
	.			•••	''	227,130	• • •	••		22.,100
	. 70,34				76,072	219,610				235,776
	68,61		• • •	• • •	74,437			3,209		156,747
1962–63 . 1963–64 .	. 86,970	η	• • •	• •	86,970			• •	• • •	73,879
1963–64 . 1964–65 .	:   ::	292	::	(d) 6,125	6,417	70,347 62,160		::	::	76,072 62,160
196566 .	11.02	17 200	ļ	(4) 6 126	24.457	· ·				24 112
1066 67		17,309	1	(d) 6,126	34,457 11,588	24,113 11,588		1,099	• • •	24,113 18,509
10/7 /0	20.05			••	30,877		3,022		l i	30,877
1049 40	. 71,45			::	71,455	71,455			(d) 6,126	77,581
1969-70 an		1			,1,455	11,433	١	i ••	(4) 0,120	77,501
latam	. 18,17	9,790	3,677	(e) 3,082	34,724	18,175	27,391	3,677	(f) 9,207	58,450
Miscellaneous			h 50,112		74,164			h 50,112		74,164
Total .	4 800 00	62,055	59,199	15,333	1,926,567	1.789,980	62,055	59,199	15,333	1,926,567

<sup>(</sup>a) See note (a) to previous table. (b) See § 1, p. 825. (c) Includes Short-term Debt. (d) Swiss debt. (e) Canadian debt. (f) Swiss debt £6,125,000; Canadian debt, £3,082,000. (g) Consists of advance loan subscriptions, overdue debt, debt repayable in half-yearly instalments, War Savings and Savings Certificates, War Savings Stamps, National Savings Stamps and Peace Savings Certificates. (h) International Bank Dollar Loans to be repaid in half-yearly instalments from 1st September, 1955 to 1st September, 1975, 1st June, 1957 to 1st December, 1972, 1st March, 1957 to 1st December, 1972, 1st March, 1957 to 1st December, 1970.

(ii) States. Particulars of State Public Debt at 30th June, 1956 have been classified in the following table according to the earliest and the latest years of maturity.

STATE PUBLIC DEBT AT 30th JUNE, 1956: CLASSIFIED ACCORDING TO EARLIEST AND LATEST YEARS OF MATURITY.

			Earlies	t Year.			Latest	Year.	
Year of Maturit	у.	М	aturing in	_		М	aturing in	_	
		Aus- tralia.	London.	New York.	Total.	Aus- tralia.	London.	New York.	Total.
		£A.'000.	£Stg.	£'000.(a)	£`000.(a)	£A.'000.	£Stg. '000.	£'000.(a)	£'000.(a)
Before 30th June, 19	56	145,447	58,178					<u>.</u>	400.054
1956–57	• •	215,808	(b)26,068	12,220			(b)26,068		
1957–58 1958–59	• •	91,285	12.025	•••	91,285				110,003 54,618
1050 60	• •	1,668 2,732	13,935	ŀ	15,603 2,732	74,564			74,564
	• •								
1960-61	• •	106,925		• • •	118,715	63,509			81,947
1961–62	• •	195,327	23,489		218,816	48,000	41.400	5,135	
1962–63 1963–64	• •	294,665	12,871		307,536	188,805	11,790	· · ·	200,595
1064 66	• •	4,076	10,000		14,076	106,722	10.070	· · ·	106,722
	• •	2,105	12,896	• • •	15,001	177,424	,		190,294
1965–66	• •	62,972	64,977		127,949	168,832	10,000		178,832
1966–67	• •	63,100			63,100	63,100	23,489	7,085	93,674
1967-68	• •	130,173	15,950		146,123	130,173	25,549		155,722
1968-69	• •	205,152			205,152				205,152
1969–70	• •	3,242	18,441	1,721				1,721	
1970-71		44,683		4,876		44,683		4,876	
1971-72		2,177	12,175		14,352	2,177	15,950		18,127
1972-73	• •	2,711			2,711	2,711			2,711
1973–74	• •	3,336		• •	3,336	3,336	12,175		15,511
1974-75	• •	4,378	• •	••	4,378	4,378	31,337		35,715
1975-76	• •	7,338	4,351		11,689	7,338		!	7,338
1976-77		6,001			6,001	6,001			6,001
1977–78	• •	7,088			7,088	7,088	4,351		11,439
1978-79 and later	• •	23,581			23,581	23,581		• • • • •	23,581
Miscellaneous (c)	••	25,272	3,328	1,065	29,665	25,272	3,328	1,065	29,665
Total	••	1,651,242	288,449	22,336	1,962,027	1,651,242	288,449	22,336	1,962,027

<sup>(</sup>a) See § 1, p. 825. (b) Short-term debt. (c) Consists of overdue indefinite and interminable debt, debt due at Treasurer's option and half-yearly drawings.

8. Short-term Debt.—(i) Amount. Particulars of the short-term debt (Treasury Bills and Debentures) of the Commonwealth and States in London and in Australia at 30th June, 1939 and at intervals from 30th June, 1952, to 30th June, 1956, are shown in the following table. This debt is included in the public debt as shown elsewhere.

COMMONWEALTH	AND	STATE	SHORT-TERM	DEBT.(a)
--------------	-----	-------	------------	----------

Date.		Maturing in	a Australia.	(£A.'000.)	Maturing in London. (£Stg.'000.)			
Date.		Common- wealth.	States.	Total.	Common- wealth.	States.	Total.	
30th June, 1939	••		50,228	50,228	4,220	23,155	27,375	
,, ,, 1952		153,280		153,280	970	22,868	23,838	
,, ,, 1953		225,000		225,000	720	22,868	23,588	
" " 1954		190,000		190,000	470	22,868	23,338	
,, ,, 1955		160,000		160,000	220	26,068	26,288	
30th September, 1955		180,000	2,400	182,400	220	26,068	26,288	
31st December, 1955		255,000	7,400	262,400	220	26,068	26,288	
31st March, 1956	٠.	280,000	6,400	286,400	45	26,068	26,113	
30th June, 1956		165,000		165,000		26,068	26,068	

- (a) Excludes Overdrafts and Internal Treasury Bills.
- (ii) Interest Rates. (a) London. The rates of interest payable on Treasury Bills and Debentures in London during the following periods were: 1938-39—minimum rate, 2 per cent., maximum rate, 2½ per cent.; 1949-50 to 1950-51—minimum rate, 2 per cent., maximum rate, 2½ per cent. On 8th November, 1951, the rates were increased to—minimum rate, 2½ per cent., maximum rate, 2½ per cent.
- (b) Australia. The Treasury Bill rates in Australia were as follows:—1\frac{1}{2} per cent. from 1st January, 1935; 1\frac{1}{2} per cent. from 1st May, 1940; 1\frac{1}{2} per cent. from 1st May, 1943; 1 per cent. from 1st March, 1945; \frac{3}{2} per cent. from 1st May, 1949; 1 per cent. from 1st August, 1952.
- 9. State and Municipal and Semi-Governmental Authority Public Debt.—For the reasons indicated on p. 831, direct comparisons of the debts of the several States should be made with caution. The table following shows, for 1938-39 and 1951-52 to 1955-56, particulars of the debts of the States and the debts due to the public by municipal and semi-governmental authorities in each State.

STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT.

<u> </u>	State.			State.	Municipal.	Semi-Governmental.	Total.
			Ι	ЭЕВТ.			
			(£'0	00.) (b)			
			19	55–56.			
New South Wales		••	•••	698,136	65,511	180,764	944,411
Victoria				445,713	26,755	297,445	769,913
Queensland				252,799	61,473	48,884	363,156
South Australia				254,423	3,132	20,351	277,906
Western Australia				188,733	6,390	11,147	206,270
Tasmania		• •		122,223	8,505	10,550	141,278
		1955-56		1,962,027	171,766	569,141	2,702,934
		1954-55		1,825,727	159,697	504,725	2,490,149
	Total<	1953-54		1,688,948	142,628	439,616	2,271,192
10(a		1952-53		1,543,648	127,041	381,880	2,052,569
•		1951-52		1,395,676	112,176	316,191	1,824,043
		[ 1938–39		897,772	78,126	120,512	1,096,410

<sup>(</sup>a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts. (b) See § 1, p. 825.

### STATE AND MUNICIPAL AND SEMI-GOVERNMENTAL AUTHORITY PUBLIC DEBT—continued.

		TOBLA					
State:.				State:	Municipal.	Semi-Gov- ernmental.	Total.
		<b>Девт</b> Рег	R HEAT	OF POPUL	ATION.		
				) (b) 4-56.			
New South Wales	•••		1	196.5	18.4	50.9	· 265.8
Victoria				171.1	10.3	114.2	295.6
Queensland		***		184.4	44.8	35.7	264.9
South Australia			i	299.8	3.7'	24.0	327.5
Western Australia				278'. 6	9.4	16.5	304.5
Tasmania		• •		382.4	26.6	33.0	442.0
	1	1955-56		209.3	18.3	60.7	288.3
		1954-55		199.5	17.4	55.2	272. 1
	Tatal	1953-54		188.9	16.0	49.2	254.1
	Total≺	1952-53		175.8	14.4	43.5	233.7
	j	1954-52		162.2	13.0	36.7	211.9
		1938-39	1	129.2	11.2	17.4	157.8

<sup>(</sup>a) Due to the public and excludes amounts due to Central Government. Includes bank overdrafts.

(b) See § 1, p. 825.

#### § 4. Commonwealth Loan Raisings.

1. General.—Under the Financial Agreement between the Commonwealth and the States, the Commonwealth is responsible for raising all loan moneys required by both the Commonwealth and the State Governments. Details of loan transactions given in this section relate, therefore, to all loans raised for the Commonwealth and the States.

2. New Loans Raised, 1953-54 to 1955-56.—(i) Australia. The following table shows details of new loans raised in Australia by the Commonwealth during the three years 1953-54 to 1955-56.

COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA.

						Allocati	ion of Pr	oceeds.
Month of Raising.	Amount Invited.	Sub-	Rate of In- terest	Year of Maturity.	Price of Issue	Commo	nwealth.	
	invited.	scribed.	per annum.	waturny.	per £100.	War (1939– 45) etc.	Other Pur- poses.	States.
1953–54—	£'000.	£'000.	%		£	£'000.	£'000.	£'000.
September (Eighteenth Security Loan)  March (Nineteenth Security	50,000	( >>,00>		1955 1966	100 100	}	6,850	59,468
Loan)	35,000	8,603 43,462		1957 1967	98 10s. 100	}	65	52,000
June(b)	80,000	1 / 1 / OOD	3-	1957 1967	98 10s. 100	5,407	30,475	44,118
1954-55— August (Twentieth Security		1				'		
Loan)	37,594	$\begin{cases} 7,177 \\ 39,321 \end{cases}$	3. 44	1957 1967	98 10s.	} :	-7	46,505
November (Twenty-first Security Loan) March (Twenty-second Security	50,106	5,698 31,461	3 - 4 <del>1</del>	1957 1968	98 15s. 100	} ··		37,159
Loan)	40,000			1957 1968	99 5s. 100	\\ \ \	1	44,095
June(b)	48,000	2 10'000	3	1957 1968	99 5s. 100	3,452	29,201	15,347
1955-56		( 30,000	77	1700	100	Ρ.		
August (Twenty-third Security Loan)	35,000	16,050 16,408 7,173	3 4½ 4½	1956 1965 1970	99 15s. 100 100	} '	4	39,627
November (Twenty-fourth Security Loan)	30,000	8,519 14,639	3	1956 1965	98 15s. 100	<b> </b> }	17	28,032
May (Twenty-fifth Security	30,000	4,891 12,907	4½ 4½ 3¾	1970 1957	100 99 10s.	{ ;	34	33,000
	1	20,127	5 33	1963 1957	99 10s. 99 10s.	<b> </b> {		•
June (b)	93,205	17,205	5*	1963	99 10s.	8,354	36,003	48,848

<sup>(</sup>a) Includes loans raised for redemption of Treasury Bills, but excludes conversion loans, loans for redemption of debt maturing in London, short-term debt and certain miscellaneous debt (see below).

(b) Special issue. For details see following paragraph.

Note.—Minus sign (-) indicates an excess of allocations over receipts.

The loans of £80,000,000, £48,000,000 and £93,205,000 issued in June, 1954, 1955 and 1956 respectively were for the purpose of fulfilling an undertaking given by the Commonwealth that the States would have access to loan funds for their works programmes up to the approved Loan Council borrowing programmes. These programmes totalled £200,000,000 in 1953-54, £180,000,000 in 1954-55 and £190,000,000 in 1955-56. Subscriptions to these special loans came from the following sources:—

#### SPECIAL LOANS: SOURCE OF FINANCE.

•	1953-54.	1954–55.	1955-56.
	£	£	£
National Debt Commission—			
Investment of Australian currency proceeds of			1
International Bank Loan	18,000,000	22,150,000	10,800,000
Swiss Loan Trust Account	5,750,000	6,150,000	
Canadian Loan Trust Account			6,405,000
Loan Consolidation and Investment Reserve	ļ	)	
Trust Account	١		62,000,000
Other Commonwealth Trust Moneys-Investment	56,250,000	19,700,000	14,000,000
Total	80,000,000	48,000,000	93,205,000

Finance for the approved Loan Council programmes from 1953-54 to 1955-56 was provided from the following sources—

LOAN COUNCIL PROGRAMME(a): SOURCE OF FINANCE.

			1	1 .	1
			1953–54.	1954–55.	1955-56.
			£	£	£
Public Loans, domest	ic raisings, e	tc	125,647,000	130,527,000	98,808,000
Oversea Loans an	d Special	Commonwealth	+		
Assistance			74,353,000	49,473,000	91,192,000
		Total	200,000,000	180,000,000	190,000,000

(a) Excludes amounts provided for War Service Land Settlement; 1953-54, £5,407,000; 1954-55, £3,452,000; and 1955-56, £8,354,000; and for Emergency Wheat Storage 1955-56, £3,198,000.

In addition to the new loans raised, as shown in the foregoing tables, and the redemption and conversion loans shown in the following section, there were other miscellaneous debt operations during 1955-56, namely:—Savings Certificates and War Saving Certificates (Five and Seven Years' Series), decrease of £3,250,000; War Savings and Savings Stamps, decrease of £1,000; National Savings Bonds and Stamps, decrease of £2,000,000; "Over the Counter Sales" (small amounts borrowed by the States by virtue of certain statutory rights) £5,498,100. Advance loan subscriptions in hand increased from £5,175,000 at the end of 1954-55 to £7,943,000 at the end of 1955-56.

- (ii) London. No new loans were raised in London during the period 1953-54 to 1955-56.
- (iii) New York. A cash loan was raised in New York in June, 1956. This loan was the first since May, 1928, other than loans raised from the International Bank for Reconstruction and Development (see para. 4, below). The following table gives details of the new loan.

#### COMMONWEALTH NEW LOAN RAISED IN NEW YORK:

Month of Raising.	Amount of Loan.	Rate of Interest per annum.	Price of Issue per \$100.	Year of Maturity.	Allocation of Proceeds.	
					Common- wealth.	States.
	\$.000.	%	\$		\$'000.	<b>\$</b> '000.
1955–56— June	6,972	41/2	98.50	1,971	1,270	5,702

3. Conversion and Redemption Loans, 1953-54 to 1955-56.—(i) Australia. Particulars of conversion loans raised in Australia during the three years 1953-54 to 1955-56 are given in the following table:—

## COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA.

		Old I	.oan.		New Loan.					
Month of Raising.		Amount. Rate of Interest per annum		Amount.	Rate of Interest per annum.	Price of Issue per £100.	Year of Maturity.	in Annual Liability for Interest.		
		£A.'000.	%	£A.'000.	%	£		£A.'000.		
1953-54 September		32,926	2	{ 12,237   16,739	3 44	100 100	1955 1966	} 541		
March		15,188	2	6,563 7,634	3 4½ 3 4½	98 10s. 100	1957 1967	256		
1954–55 August		12,406	3≩	{ 686 4,273	3	98 10s. 100	1957 1967	} 27		
November		{ 11,871 63,023	2 37	11,662 48,302	4½ 3 4½ 3	98 15s. 100	1957 1968	399		
March		198,942	2	64,652 124,222	3 4 <del>1</del>	99 5s. 100	1957 1968	3,752		
1955-56— November		{ 23,407 106,081	37 }	32,297 41,815 39,889	3 4½ 4½ 3¾ 5	99 15s. 100 100	1956 1965 1970	} 1,059		
June		6,795	3	<b>4,500</b> 2,295	3 <del>3</del> 5	99 10s. 99 10s.	1957 1963	80		

(ii) London. The following table shows particulars of a loan raised in London during the year 1953-54 for the purpose of redeeming and converting London loans. There were no loans raised for this purpose in 1954-55 or 1955-56.

### COMMONWEALTH LOAN RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON.

	Old 1	Loan.		New Loan.						
Month of Raising.		Rate of Interest	Amount r	aised in—	Rate of Interest	Price of Issue	Year of	in Annual Liability for In- terest and		
	Amount.	per annum.	Australia.	London.	per annum.	per per 1		Exchange.		
	£Stg.	%	£A.'000.	£Stg.	%	£		£A.'000.		
1953-54— November	10,796	31		10,796	4	99 10s.	1966–68	68		

<sup>(</sup>a) No account has been taken of cost of issuing the conversion loans at a discount. Exchange calculated at £A.125.375 = £Stg.100.

(iii) New York. During 1946-47, four loans totalling \$128,000,000 were raised in New York to redeem loans which became due for redemption or which the Commonwealth had the option of redeeming. No further loans were raised in New York for this purpose until December, 1954. The following table shows particulars of redemption loans raised in 1954-55 and 1955-56.

#### COMMONWEALTH LOANS RAISED IN NEW YORK FOR REDEMPTION OF EXISTING LOANS.

	Old	Reduction in Annu Old Loan. New Loan. Liability for Interest.(a)							
Month of Raising.	Amount. Rate of Interest per annum.		Amount.	Rate of Interest per annum.	Year of Maturity.	United States of America Currency.			
1051 55	\$'000.	%	\$'000.	%	₹.		\$'000.	£A.'000.	
1954-55— December	25,000	5	25,000	33	99	1969	312	(b) 141	
.1955-56— June	20,000	31	18,028	4 <del>1</del>	98.5	19.71	-161	(c) - 72	

(a) The cost of issuing the new loans at a discount has not been taken into account. (b) Converted at selling rate of exchange on 30th June, 1955, \$2.2159 = £A.1. exchange on 30th June, 1956, \$2.2265 = £A.1. (c) Converted at selling rate of

Note.—Minus sign (-) denotes increase in liability for interest.

4. International Bank for Reconstruction and Development Loans .- To provide dollar funds for the purchase of certain types of capital equipment and plant which were indispensable to the furtherance of development in Australia and which could be obtained only in the United States of America and Canada, the Commonwealth Government, in August, 1950, arranged a loan of \$100,000,000 from the International Bank for Reconstruction and Development. The loan is for a term of 25 years with interest at 4½ per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. addition, there is a commitment charge of 3 per cent. per annum on the amount of the loan not withdrawn from time to time. Repayment of the loan is to be made in half-yearly instalments commencing on 1st September, 1955. The last instalment is payable on 1st September, 1975. At the 31st December, 1953, the whole of the loan had been drawn.

In July, 1952, a further loan of \$50,000,000 was arranged. This loan is for a term of 20 years with interest at 43 per cent. per annum on the amount of the loan withdrawn and outstanding from time to time. There is also a commitment charge of ‡ per cent. per annum similar to that of the previous loan. Repayment of the loan is to be made in halfyearly instalments from 1st June, 1957 to 1st December, 1972. At 30th September, 1954, the whole of the loan had been drawn.

In March, 1954, a third loan of \$54,000,000 was arranged. This loan is for a term of 15 years with interest and commitment charges similar to those for the previous loan for \$50,000,000. Repayment of the loan will be made in half-yearly instalments from 1st March, 1957 to 1st March, 1969. At 30th September, 1955 the whole of the loan had been drawn.

In March, 1955, a fourth loan of \$54,500,000 was arranged. This loan is for a term of 15 years with interest at 4\frac{1}{2} per cent. per annum. There is also a commitment charge of 3 per cent. per annum similar to that of previous loans. Repayment is to be made in half-yearly instalments from 15th March, 1958 to 15th March, 1970. Up to 30th June, 1956, \$43,010,000 had been drawn on the loan.

The capital equipment and plant purchased from the proceeds of these loans are made available to Commonwealth and State Government departments and agencies and private firms and individuals for use in the development of Australian resources. Subject to a special import licence being obtained, the goods are imported and distributed through normal channels and payment made through the Australian banking system. Periodically, schedules of dollar payments for goods imported against loan licences are submitted to the International Bank for Reconstruction and Development. These schedules form the basis for periodical drawings by the Commonwealth against the loan. The amounts drawn are paid to the Commonwealth Bank to replace the dollar funds used in making the purchases. In return, the Commonwealth Government receives Australian currency from the Commonwealth Bank. This is paid to the Commonwealth National Debt Sinking Fund out of which the loans will subsequently be redeemed.

5. Swiss Loan.—To foster industrial development in Australia and to stimulate trade relations between the two countries, the Commonwealth Government arranged for the issue in Switzerland in November, 1953, and February, 1955, of two public loans each of 60,000,000 Swiss francs. The loans were underwritten by a Swiss banking group headed by the Swiss Bank Corporation, the Crédit Suisse and the Union Bank of Switzerland. Certain Swiss taxes connected with the issue and servicing of the loan were paid on an agreed basis by the Australian Government.

The first loan was for a period of 15 years with an option on the part of the Australian Government to repay the loan in full or in part after 12 years. The rate of interest was 4 per cent. and the issue price £99. Bondholders have the option of requiring payment either in Australian pounds or in the foreign currency equivalent of Australian pounds.

The second Swiss loan was for a period of 15 years with an option to redeem after 10 years. The rate of interest was 3\frac{3}{4} per cent. and the issue price £99 10s. Bonds and interest are payable only in Swiss francs.

The loans were both fully subscribed and Swiss franc proceeds, after deducting borrowing expenses, were sold by the Commonwealth Government to the Commonwealth Bank in return for an equivalent amount of Australian currency. A trust account, named the Swiss Loan Trust Account, was opened and the proceeds from the two loans were transferred to this account and were used in assisting the Loan Council borrowing programmes for the 1953-54 and 1954-55 financial years. The Swiss Loan Trust Account will also be used as a sinking fund for the loans, and, when the time comes for repayment, the trust account investments can be realized. The provisions of the National Debt Sinking Fund Act do not apply to the loans.

6. Canadian Loan.—In October, 1955, the Commonwealth Government arranged for the issue in Canada of a public loan of 15,000,000 Canadian dollars raised to assist Australia's development programme. The loan was underwritten by Wood, Gundy & Company Limited of Toronto, Canada.

The loan was for a period of 15 years with an option on the part of the Australian Government to repay the loan in full or in part at any time prior to 1st November, 1970. The rate of interest was 4 per cent. payable half-yearly and the issue price. \$98.50. Bonds and interest are payable in Canadian dollars.

The loan was fully subscribed and the net Canadian dollar proceeds were sold to the Commonwealth Bank for Australian currency. A trust account, named the Canadian Loan Trust Account, was opened and the Australian currency proceeds of the loan were transferred to this account and used in assisting the Loan Council borrowing programme in 1955-56.

The Canadian Loan Trust Account will provide the necessary sinking fund payments and, when the time comes for these sinking fund payments and for the final repayment, the Trust Account investments will be realized to provide funds for that purpose. The provisions of the National Debt Sinking Fund Act do not apply to this loan.

7. Summary of Loan Transactions, 1951-52 to 1955-56.—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1951-52 to 1955-56.

COMMONWEALTH LOAN TRANSACTIONS: SUMMARY.

		Year	ended 30th .	June	
Details.	1952.	1953.	1954.	1955.	1956.
New Loans-					
New Loans (a) raised in—					
Australia £A.'000.	223,695	175,287	198,387	175,755	193,921
New York(b) $\dots$ \$'000.	53,380	40,223	48,144	52,821	50,355
Switzerland Francs '000.		·	60,000	60,000	
Canada \$'000.					15,000
Miscellaneous Debt in Aust-				1	,
ralia (c) £A.'000.	7,405	24,512	13,273	3,429	8,269
Net Increase in Short Term Debt-	.,	,	1	,	0,200
Australia—Public £A.'000.	42,600	71,720	-35,000	-30,000	5,000
Internal £A.'000.	-37,000	-75,610	29,000	34,600	-8,200
London £Stg.'000.	-250	-250	-250	2,950	-220
Loans raised for Conversion or Re-	1			_,,,,,	
demption of existing Debt maturing			i	i i	1
in—	İ	1	1	i i	
Australia £A.'000.	71,234	47,211	43,171	253,793	120,496
London—	, ,,,,,,,,,,	77,211	,,,,,,,	233,173	120,100
Raised in Australia £A.'000.	:			i	i
London £Stg.'000.		11,790	10,796	••	
New York \$'000.	• •	11,750	10,770	25,000	18,028
145M TOTY \$ 000.	<u> </u>	<u> </u>	<u> </u>	25,000	10,020

<sup>(</sup>a) Includes loans raised for redemption of Treasury Bills. No new loans were raised in London during this period. (b) Amounts drawn of \$100,000,000, \$50,000,000, \$54,000,000 and \$54,500,000 loans from International Bank for Reconstruction and Development. (e) "Over the Counter Sales", Instalment Slock, National Savings Bonds, War Savings and Savings Certificates and net increase in debt on account of advance loan subscriptions and, until the discontinuance of sales, War Savings and Savings Stamps and National Savings Stamps.

Note.—Minus sign (-) denotes a decrease in debt.

#### § 5. National Debt Sinking Fund.

1. Commonwealth Public Debt.—Particulars relating to the creation of sinking funds are included in issues of the Official Year Book prior to No. 23.

The old sinking funds were merged in the National Debt Sinking Fund on 11th August, 1923. Particulars of receipts and expenditure of the Commonwealth Account for the years 1938-39 and 1951-52 to 1955-56 were as follows:—

NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT. (£'000.)

		(£ 000.)				
Item.	1938–39.	1951-52.	1952-53.	1953–54.	1954-55.	1955-56.
Receipts— From Consolidated Revenue	3,918	(a)116,928	18,471	18,154	14,115	15,412
Loans and Advances Repaid	17	2,094	2,508	2,276	2,007	2,212
War Service Homes Money Repaid Half Net Profit Common-	629	4,046	4,050	5,326	5,734	5,865
wealth Bank	321	1,336	1,764	2,127	2,835	3,112
Reparation Moneys Interest on Investments Loan (International Bank for	32	76	(b) 2,144	(b) 3,371	(b) 2,662 4,621	(b) 7,997
Reconstruction and Development) Act Other Contributions	14	23,831 12	17,935 10	21,467 6	23,575	19,369
Total Receipts	4,931	148,323	46,882	52,727	55,552	53,969
Expenditure— Securities Repurchased and Redeemed in—						
Australia	4,230	25,382	16,011	16,993	36,218	17,955
London New York	608 214	411 448	436 455	722 8,998	609 4,488	(c) 1,525
Total Expenditure	5,052	26,241	16,902	26,713	41,315	19,778
Balance at 30th June	1,131	132,079	162,059	188,073	202,310	236,501
Face Value of Securities Re- purchased and Redeemed in-						
Australia	4,199	26,882	16,860	18,561	37,312	19,149
London New York	498 167	335 211	363 212	593 4,152	2,065	(c) 699
Total Face Value	4,864	27,428	17,435	23,306	39,869	20,088

(a) Includes £98,500,000 Consolidated Revenue Fund special appropriation. (b) Includes interest received under National Debt Sinking Fund (Special Payment) Act 1951, £1,562,000 in 1952–53, £1,970,000 in 1953–54, £2,149,000 in 1954–55 and £3,683,000 in 1955–56. (c) Includes instalment repayments of loans from International Bank for Reconstruction and Development. Net cost £1,407,000; Face value, £645,000.

2. State Public Debt.—(i) States, 1955-56. A sinking fund for the redemption of the debt of the States was established under the Financial Agreement. Details of contributions to be made to this fund are given on p. 826. Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1955-56 are shown below.

NATIONAL DEBT SINKING FUND: STATE ACCOUNT, 1955-56. (£'000.)

		(~ 000.)					
Item.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Total.
Receipts-							
Contributions under Financial							
Agreement—	1	0.70			400		
Commonwealth	1,546	972	533	561	428	270	4,310
States	5,507	3,469	1,895	2,397	1,418	730	15,416
Interest from States on can-	1 _ !				1 -		
celled Securities	1 7	10	4	2	2	1	26
Special Contributions by States	81	2		2	1 1 1	1	90
Interest on Investments, etc	10	7	5	4	4	2	32
Total Receipts	7,151	4,463	2,437	2,966	1,853	1,004	19,874
Expenditure—				]	]		
Securities Repurchased and Re-	1				i		
deemed in-	1 1				1		
Australia	6,833	4,156	2,419	2,410	1,943	895	18,656
London	33	84	33	179	1,,,,,,,,		329
New York	279	49	76	356	. 9	4	773
Total Expenditure	7,145	4,289	2,528	2,945	1,952	899	19,758
Balance at 30th June, 1956	514	583	216	243	122	157	1,835
Face Value of Securities Repurchased				1	1		
and Redeemed in-	1		1	Į.		ļ	l
Australia	7,064	4,308	2,500	2,477	1,975	911	19,235
London	29	72	29	145	1,,,,,		275
New York	129	22	36	163	. 4	2	356
Total Face Value	7,222	4,402	2,565	2,785	1,979	913	19,866

(ii) All States, 1938-39 and 1951-52 to 1955-56. The following table is a summary of the transactions of the National Debt Sinking Fund (State Account) for the years 1938-39 and 1951-52 to 1955-56:—

# NATIONAL DEBT SINKING FUND: STATE ACCOUNT. (£'000.)

Item.	1938–39.	1951-52.	1952-53.	1953-54.	1954-55.	1955–56.
Receipts— Contributions under Financial						
Agreement— Commonwealth States	1,478 4,327	2,557 10,325	3,011 11,362	3,463 12,357	3,947 13,680	4,310 15,416
Interest from States on cancelled Securities Commonwealth Contributions	15	41	49	45	18	26
under Federal Aid Roads and Works Act Special Contributions by	69		••			••
States	61 56	151	155 25	203 33	90 16	90 32
Total Receipts	6,006	13,078	14,602	16,101	17,751	19,874
Expenditure— Securities Repurchased and Redeemed in— Australia	4,008	9,280	10,602	13,576	14,540	18,656
London New York	1,722 347	474 430	973 483	1,362 4,792	898 2,688	329 773
Total Expenditure	6,077	10,184	12,058	19,730	18,126	19,758
Balance at 30th June	1,885	3,179	5,723	2,094	1,719	1,835
Face Value of Securities Repur- chased and Redeemed in-						
Australia London New York	3,996 1,561 285	9,661 420 220	11,644 838 241	14,445 1,154 2,214	14,780 732 1,236	19,235 275 356
Total Face Value	5,842	10,301	12,723	17,813	16,748	19,866

#### E. TAXES ON INCOME.

Note.—The following section contains details of taxes on individuals and companies for the 1957-58 financial year.

1. General.—A description of the development of income taxes in Australia appeared in Official Year Book No. 35, p. 926. Since July, 1942, the Commonwealth, under the uniform tax arrangement, has been the only authority imposing taxes on income. Taxes on income are assessed and imposed under the Income Tax and Social Services Contribution Assessment Act 1936-1957 and the Income Tax and Social Services Contribution Act 1957. The latter Act is an annual measure and its primary purpose is to declare the rates of tax and contribution payable for the financial year. The rates for the financial year are levied, in the case of companies, on the income of the preceding year. Thus tax for the financial year 1957-58 is levied on the income of individuals in 1957-58 and on the income of companies in 1956-57.

- 2. Present Taxes.—For individuals, a single tax known as the Income Tax and Social Services Contribution is levied. All companies are liable for primary income tax and in addition, private companies are subject to tax on undistributed income.
- 3. Assessable Income,—Income taxes in Australia are levied, primarily, on all income derived from Australian sources by any person, rather than on income derived from all sources by Australian residents. Thus a non-resident is taxed on income derived in Australia, while a resident is, in general, not taxed on income other than dividends derived from overseas, if the income is taxed in the country in which it is derived.

Certain types of Australian income are exempt from tax in Australia, the more important being (i) pensions, child endowment and other payments under the Social Services Act 1947-1957 and the Tuberculosis Act 1948, (ii) income from gold-mining and uranium mining, (iii) twenty per cent. of certain mining profits, (iv) dividends paid out of exempt mining profits, and (v) income received from a scholarship, bursary or other education allowance.

No amount is included in assessable income on account of a house occupied by its owner. Profits derived from the sale of property are not assessable income if such property was not purchased with a view to resale at a profit.

The further tax on property income imposed on individuals in cases where the total taxable income exceeded £400 and the amount of property income exceeded £100 was discontinued from the 1953-54 financial year.

Expenses incurred in earning income, certain subscriptions to business associations, and trade union dues, are allowable deductions. Losses incurred in previous years may be carried forward as a deduction.

Because of uncongenial climatic conditions, isolation, and high cost of living, taxpayers living in certain areas are allowed an additional deduction. Two zones,have been prescribed, and the allowances are Zone A, £180 and Zone B, £30. A deduction of £180 is also allowed to members of the defence forces serving for more than one half of the year of income at declared localities outside Australia.

Income Tax and Social Services Contribution is levied on the taxable income remaining after making these deductions and the concessional deductions to which reference is made in paragraph 4 following.

4. Concessional Deductions.—Concessional allowances for dependants, medical expenses, life assurance and superannuation contributions, etc., are made by way of a deduction from income. The maximum deduction allowed for each dependant, for a parent or parent-in-law, or for a housekeeper employed by the taxpayer for the financial year 1957-58 is shown in the following table.

#### CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.

(£.)

Depend		Maximum Deduction (a)				
Spouse	,		• ••			:143
Daughter-housekeeper (b)						143
Housekeeper (b) having care	of taxpa	yer's ch	ildren un	der 16	years	
of age						143
Parent or Parent-in-law .					** . *	143
One child under 16 years of a	age					91
Offic Citing under 10 years of 4						.65
	s of age					
Other children under 16 year		• •				9.1

<sup>(</sup>a) These deductions are allowed only if the dependant, parent or parent-in-law is a resident of Australia. If the dependant is maintained for part only of the year a partial deduction is allowed.

(b) Of a widower or widow.

(c) Child, step-child, brother or sister over 16 years of age. The amount of the deduction is reduced by any invalid pension received.

(d) The amount of the deduction is reduced by the value of any assistance provided by the Commonwealth or a State.

When the dependant or person maintained derives separate income, the amount of the concessional deduction allowable is reduced as follows:—

In the case of a spouse or daughter-housekeeper, by £2 for every £1 by which the separate net income exceeds £65; for each parent or parent-in-law maintained, by £1 for each £1 of separate income; and for each dependent child or invalid relative, by £2 for every £1 by which the separate net income exceeds £52.

For the 1957-58 financial year, medical expenses paid by a taxpayer who is a resident, in respect of himself or dependants, including children under 21 years of age, up to £150 for each person, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or a hospital, in respect of an illness or operation, payments for dental services not exceeding £30 for any one person, payment for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, and the remuneration of an attendant of a person who is blind or confined to bed or invalid chair.

Other concessional deductions allowed to resident taxpayers include, (i) payments of life, etc., insurance premiums and contributions to superannuation funds and friendly societies, not exceeding an aggregate of £300, (ii) payments to medical or hospital benefits funds, (iii) funeral expenses of a dependant not exceeding £30 and (iv) expenditure incurred for the full-time education of children or dependants who are less than 21 years of age (maximum £100 per child or dependant).

In addition to concessional deductions, all taxpayers (residents and non-residents) are allowed a deduction from income of rates and taxes on land which are annually assessed, gifts to charitable, benevolent or patriotic funds and one-third of amounts paid as calls to certain mining, forestry and oil-prospecting companies.

5. Effective Exemptions from Tax.—For the financial years 1950-51 to 1957-58, resident taxpayers without dependents were exempt from Income Tax and Social Services Contribution if their income did not exceed £104. The effect of the deductions for dependents was to exempt taxpayers up to the incomes shown hereunder.

RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM TAX.

Taxpayer	with—		Income Tax and Social Services Contribution— Financial Years 1950-51 to 1952-53.	Income Tax and Social Services Contribution— Financial Years 1953–54 to 1956–57.	Income Tax and Social Services Contribution— Financial Year 1957–58.	
No dependants				104	104	104
Wife				208	234	247
Wife and one child				286	312	338
" " two children				338	364	403
", ", three children				390	416	468
" " four children		•		442	468	533

For the 1957-58 financial year, an aged person (i.e., a man who has attained the age of 65 years or a woman who has attained the age of 60 years) is exempt from Income Tax and Social Services Contribution if his net income (i.e., gross income less expenses of earning that income) does not exceed £410. A married couple both of whom qualify by age for the concession, are exempt from tax if their combined net incomes do not exceed £819.

6. Rates of Income Tax and Social Services Contribution on Individuals.—The following table shows the rates of income tax and social services contribution for the financial years 1953-54 to 1957-58.

INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—INDIVIDUALS: RATES OF INCOME TAX AND SOCIAL SERVICES CONTRIBUTION—1953-54 TO 1957-58.

Total Taxabl	e Income.	1953-	54.	1954-55 to	1957-58.
Column 1.	Column 2.	Tax and Contribution	Tax and Contribution on each £1	Tax and Contribution	Tax and Contribution on each £1
Exceeding—	Not Exceeding—	on Amount in Column 1.	of Balance of Income.	on Amount in Column 1.	of Balance of Income.
£	£	£ s. d.	d.	£ s. d.	d.
Nil	100	Nil	1	Nil	1
100	150	0 8 4	4	0 8 4	3
150	200	1 5 0	9	1 0 10	7
200	250	3 2 6	13	2 10 0	11
250	300	5 16 8	17	4 15 10	15
300	400	976	22	7 18 4	20
400	500	18 10 10	28	16 5 0	26
500	600	30 4 2	33	27 1 8	30
600	700	43 19 2	38	39 11 8	34
700	800	59 15 10	42	53 15 0	38
800	900	77 5 10	46	69 11 8	42
900	1,000	96 9 2	50	87 1 8	46
1,000	1,200	117 5 10	56	106 5 0	52
1,200	1,400	163 19 2	64	149 11 8	59
1,400	1,600	217 5 10	71	198 15 0	65
1,600	1,800	276 9 2	78	252 18 4	71
1,800	2,000	341 9 2	85	312 1 8	77
2,000	2,400	412 5 10	93	376 5 0	85
2,400	2,800	567 5 10	100	517 18 4	92
2,800	3,200	733 19 2	107	671 5 0	99
3,200	3,600	912 5 10	114	836 5 0	105
3,600	4,000	1,102 5 10	121	1,011 5 0	111
4,000	4,400	1,303 19 2	128	1,196 5 0	117
4,400	5,000	1,517 5 10	136	1,391 5 0	124
5,000	6,000	1,857 5 10	144	1,701 5 0	132
6,000	8,000	2,457 5 10	151	2,251 5 0	139
8,000	10,000	3,715 12 6	158	3,409 11 8	145
10,000	16,000	5,032 5 10	165	4,617 18 4	152
16,000	upwards_	9,157 5 10	168	8,417 18 4	160

For primary producers, the rate of Income Tax and Social Services Contribution for the current year is determined by the average of the taxable incomes for the five years up to and including the current year. A taxpayer may elect not to have these averaging provisions applied to his assessment, but the election once made, is irrevocable. The application of the averaging provisions is limited to that part of the taxable income which does not exceed £4,000, and when the taxable income exceeds £4,000, the balance is taxed at ordinary rates. When the taxable income is less than £4,000, the rate of tax for averaging purposes is limited to the rate on a taxable income of £4,000.

Commencing with 1953-54, the taxable income, including any abnormal receipts, of actors, artists, composers and inventors, is taxed at the rate appropriate to the normal taxable income plus one-third of the abnormal receipts.

Interest on Commonwealth Loans issued prior to 1st January, 1940, is subject to the condition that it shall not be taxed at rates higher than those for 1930-31. Interest on Commonwealth Loans issued after 1st January, 1940, and interest on certain State semi-governmental loans issued free of State income tax receive a rebate of 2s. in the £1.

The minimum amount of Income Tax and Social Services Contribution payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

7. The Income Tax (International Agreements) Act 1953.—This Act provided for relief from double taxation of incomes flowing between Australia and the United States of America. It also provided similar relief in respect of the United Kingdom, which had been covered by the Income Tax Assessment Act since 1947.

8. Taxes on Specified Incomes.—The following table shows the Income Tax and Social Services Contribution payable by taxpayers, with various incomes and numbers of dependants, on income derived in each year from 1951-52 to 1957-58:—

#### COMMONWEALTH TAXES ON INCOME.

(£.)

					(2.)			
				In	come Tax and	l Social Service	es Contribution	on.
	Inc	come.		1951-52 Financial Year.	1952–53 Financia Year.	1953-54 Financial Year.	1954-55 to 1956-57 Financial Years.	1957-58 Financial Year.
	Inco	ME FROM	Person	IAL EXERTIO	n.—Taxpay	ER WITH NO	DEPENDANT	rs.
150				1.80	1.65	1.25	1.05	1.05
200				4.35	3.95	3.10	2.50	2.50
250				8.05	7.30	5.85	4.80	4.80
300				12.80	11.65	9.35	7.90	7.90
350				18.80	17.10	13.95	12.10	12.10
400				24.75	22.50	18.55	16.25	16.25
500				39.45	35.85	30.20	27.10	27.10
600				56.80	51.65	43.95	39.60	39.60
800				99.00	90.00	77.30	69.60	69.60
1,000				148.50	135.00	117.30	106.25	106.25
1,500		• •		309.80	281.65	246.85	225.85	225.85
2,000			• •	515.20	468.35	412.30	376.25	376.25
3,000				1,021.20	928.35	823.10	753.75	753.75
5,000		••		2,297.20	2,088.35	1,857.30	1,701.25	1,701.25
		e from P	ersona	L Exertion	iTaxpaye	R WITH DE	PENDENT W	FE.
150			• •					1
200								
250				1.70	1.55	0.75	0.65	0.50
300			•• ]	4.10	3.75	2.00	1.60	1.25
350			]	7.70	7.00	4.20	3.60	2.80
400				12.45	11.30	7.25	6.05	5.25
500				24.25	22.05	15.80	13.75	12.65
600				38.85	35.30	26.70	23.85	22.40
800				76.15	69.25	55.05	49.50	47.65
1,000				121.90	110.80	90.70	81.85	79.55
1,500				271.85	247.15	209.30	191.35	188.26
2,000				469.40	426.75	366.25	334.55	330.35
3,000				964.00	876.35	765.15	700.10	694.75
5,000				2,224.70	2,022.45	1,783.60	1,634.10	1,627.35
Іпсоме	FROM_F	ersonal	Exerti	on.—Taxpa	YER WITH I	DEPENDENT	Wife and (	ONE CHILD.
150							••	
200		• •	• • •	• • •			• • •	
250		• •						• •
300			• • •	0.95	0.85			• •
350				2.75	2.50	1.10	0.95	0.60
400			٠.	5.65	5.15	2.80	2.25	1.50
500				14.95	13.60	8.80	7.40	5.80
600				27.40	24.90	17.80	15.60	13.40
800				60.45	54.95	42.85	38.60	35.35
1,000				103.30	93.90	75.90	68.30	64.20
1.500				246.10	223.75	188.50	172.20	165.80
2,000				435.10	395.55	338.85	309.70	302.00
3,000				921.10	837.35	730.60	668.20	658.20
5,000		• • •		2,170.35	1,973.05	1,739.40	1,593.80	1,580.35
2,000	••	••		_,1,0.55	2,575.00	_,,,,,,,,,	_,	_,,

#### COMMONWEALTH TAXES ON INCOME—continued.

(£.)

				Inc	ome Tax and	Social Servic	es Contributio	n.
	Income.		1951-52 Financial Year.	1952-53 Financial Year.	1953-54 Financial Year.	1954-55 to 1956-57 Financia! Years.	1957-58 Financial Year.	
INCOME	FROM PE	RSONAL I	Exertio	n.—Taxpay	er with De	PENDENT W	ife and Two	CHILDREN
150								-
200	• •	• • •	• • •				' ::	
250	• •	· · ·						• •
300		• • •					: []	
350		• • •		0.90	0.80			
400		• • •		2.65	2.40	1.10	0.90	
500				9.55	8.70	5.30	4.35	2.55
600				20.70	18.80	13.05	11.25	8.00
800				50.90	46.30	35.70	32.10	27.20
1,000				91.50	83.20	66.80	60.10	53.90
1,500				228.90	208.15	174.60	159.40	149.85
2,000				413.45	375.85	321.95	294.35	282.80
3,000				893.70	812.45		648.25	633.30
5,000		••	• •	2,134.15	1,940.15	1,709.95	1,566.90	1,546.75
		INCOME	FROM	Property.—	-Taxpayer	with no Di	EPENDANTS.	
150				1.80	1.65	1.25	1.05	1.05
200	• •		• • •	4.35	3.95	3.10	2.50	2.50
250		• •		8.05	7.30	5.85	4.80	4.80
300				12.80	11.65	9.35	7.90	7.9
350				18.80	17.10	13.95	12.10	12.10
400				24.75	22.50	18.55	16.25	16.2
500				44.95	40.85	30.20	27.10	27.1
600				67.80	61.65	43.95	39.60	39.6
800				121.00	110.00	77.30	69.60	69.6
1,000				181.50	165.00	117.30	106.25	106.2
,500				379.50	345.00	246.85	225.85	225.8
,000				621.50	565.00	412.30	376.25	376.2
3,000				1.200.85	1,091.70	823.10	753.75	753.7

Pay-as-you-earn.—Individual taxpayers pay tax on a pay-as-you-earn basis. A similar scheme does not operate for companies.

<sup>(</sup>a) Salary and Wage Earners. Salary and wage earners are subject to instalment deductions for payment of tax at current rates out of weekly (or fortnightly) earnings. Employers are required to deduct tax and contribution from each payment of wages and salary to an employee at the appropriate rate in accordance with a prescribed instalment scale. This scale shows the amount to be deducted according to the income and number of dependants of the employee.

Under the group scheme of deduction, which covers most employers of more than ten persons, the amount deducted is remitted to the Taxation Department, and after 30th June each year each employee is given a group certificate by his employer showing the amount of deductions made during the year. This certificate is forwarded to the Taxation Department with the employee's return of income for the year. If the tax assessed on the basis of this return is less than the amount shown on the group certificate a refund is forwarded to the employee with his assessment. If the tax assessed is greater than the amount shown on the group certificate the employee is required to pay the balance.

Under the stamp scheme used by small employers, a stamp deduction sheet in two parts is used. Each four weeks the employer purchases stamps (also in two parts) for the amount of the deductions made each pay day and sticks one part on each half of the sheet. At the end of the year, the employer gives the employee one half of the sheet and sends the other half to the Taxation Department. The employee's half is then used in the same way as a group certificate.

(b) Taxpayers with Income other than Salary and Wages. These taxpayers pay provisional tax in respect of income other than salary and wages. Collection of tax and contribution for the current year is made at the same time as collection and assessment for the previous year is adjusted. The notice of assessment shows an amount of provisional tax and contribution for the current year. This provisional amount is an approximation to the tax and contribution which will be payable after the return of income for the current year has been lodged. It is ascertained by assuming that the income of the current year will be the same as that for the previous year (for which a return has already been lodged) but the rates for the current year are applied to the income and not the rates for the year in which it was derived. The assessment notice shows the provisional tax and contribution paid in the previous year as a credit against the tax and contribution assessed on the basis of the return for that year. On receipt of his assessment the taxpayer may elect to substitute his estimate of income for the current year and pay tax on the basis of this estimate. To protect the revenue, a penalty is imposed if the taxpayer elects to pay provisional tax on an estimate of income more than 20 per cent. lower than the income of the previous year and he underestimates his income by more than 20 per cent.

Employees with income of £100 or more from sources other than salaries and wages are required to pay provisional tax in respect of that income.

- 10. Lodgment of Returns and Assessment of Tax.—All persons with assessable income in excess of £104 are required to lodge returns by the 31st July each year (31st August for business incomes). Income Tax and Social Services Contribution payable is assessed, and assessment notices showing the amount payable are issued, during the year following the year of income (in most cases from September to June following the lodgment of the return). The approximate amount payable, however, has already been collected during the income year—from employees by deductions from wages and from non-employees by a provisional tax. The amount shown on the assessment notice is therefore adjusted against the amount already collected and any difference either collected or refunded.
- 11. Company Income Taxes.—(i) General. For taxation purposes, companies are divided into two main groups—public and private. A private company is defined as a company in which all the issued shares are held by not more than twenty persons or which is capable of being controlled by not more than seven persons, and which is not a company in which the public is substantially interested or a subsidiary of a public company. All

other companies are regarded as public companies. Both public and private companies pay primary Income Tax and Social Services Contribution assessed on a taxable income ascertained by the same principles as for individuals.

Dividends received are assessable income, but resident companies receive a rebate at the average rate on the amount of dividends included in the taxable income. This rebate is not allowed to non-resident companies.

(ii) Rates of Tax. The rates of Primary Tax, in the case of public companies, and Primary and Additional Tax for private companies, for the financial years 1953-54 to 1957-58, are shown in the table below.

Super Tax and Undistributed Income Tax ceased to be levied on public companies in the 1951-52 financial year and Additional Income Tax and Social Services Contribution ceased in the 1953-54 financial year. For details see Official Year Book No. 39, p. 846 and No. 40, p. 743.

RATES OF TAX: COMPANIES, 1953-54 TO 1957-58 FINANCIAL YEARS.

(Pence per £.)

	Rate	Rate of Income Tax and Social Services Contribution—									
Type of Company	1953-54	to 1955-56.	195	56–57.	195	1953-54 to 1957-58.					
	Up to £5,000.	On Remainder of Taxable Income.	Up to £5,000.	On Remainder of Taxable Income.	Up to £5,000.	On Remainder of Taxable Income.	Undistri- buted Amount— Additional Tax.				
Private Co-operative Non Profit(a)—	48 60	72 84	60 72	84 96	54 66	78 90	120 · ·				
Friendly Society Dispensaries Other(b) Life Assurance—	60 60	84 84	72 72	96 96	66 66	66 90	::				
Mutual Other— (1) Mutual Income (2) Other Income(c) Other	48 (d) 72 (d) 72	72 72 84 84	60 60 (d) 84 (d) 84	84 84 96 96	54 54 (d) 78 (d) 78	78 78 90 90					
Interest paid to a Non Resident(e)	84	84	96	96	90	90	••				

<sup>(</sup>a) Incomes not exceeding £104 are exempt from tax. (b) Where the taxable income does not exceed £208 (1953-54 to 1955-56), £228 (1956-57) or £231 (1957-58) the tax may not exceed one half (1953-54 to 1955-56, 1957-58) or eleven-twentieths (1956-57) of the amount by which the taxable income exceeds £104. (c) The rate of 72d. (1953-54 to 1955-56), 84d. (1956-57) or 78d. (1957-58) is levied on the amount by which the £5,000 exceeds the mutual income. (d) For non-resident companies dividends included in this part of the taxable income are taxed at 60d. (1953-54 to 1955-56), 72d. (1956-57) and 66d. per £1 (1957-58). (A resident company is allowed a rebate of tax in respect of dividends received.) (e) If the non-resident is not a company, tax is paid only on income in excess of £104.

A private company incurs liability for additional tax on its undistributed income if it fails to make a sufficient distribution of income within a specified period after the close of the year of income. The tax is levied on the undistributed amount which, for practical purposes, is the taxable income less—

- (a) Primary income tax and social services contribution payable:
- (b) Retention allowance (i.e., the proportion of the reduced distributable income which a company may retain without incurring liability for undistributed income tax); and
- (c) Certain dividends paid by the company.

For the financial years 1953-54 to 1957-58, the retention allowance is the following proportion of the reduced distributable income :-

On the first £1,000 or part, 50 per cent.

On the next £1,000 or part, 40 per cent.

On the next £1,000 or part, 35 per cent. On the next £1,000 or part, 30 per cent.

On the balance, 25 per cent., and

Ten per cent. of distributable income from property, except dividends from other private companies.

For the financial years 1953-54 to 1957-58, the reduced distributable income is calculated by deducting from the taxable income the primary tax payable and the amount of all property income included in taxable income. The additional tax imposed on undistributed income was imposed at a flat rate of 10s. in the £1 on the undistributed amount.

12. Yield of Income Taxes.—(i) Collections from Income Taxes. The following table shows the collections of taxes imposed on income for the years 1938-39 and 1951-52 to 1955-56 :--

#### INCOME TAX COLLECTIONS.

(£'000.)

					Total.					
	Y	ear.			Common- wealth.(a)	State.(b)	Total.			
1938–39		• •	••		11,883	29,796	41,679			
1951-52					551,142	155	551,297			
1952-53					554,737	132	554,869			
1953-54					528,181	92	528,273			
1954-55					532,916	52	532,968			
1955-56					573,988	74	574,062			

<sup>(</sup>a) Includes Social Services Contribution, War Time (Company) Tax, Super Tax, Undistributed Profits Tax and Wool Deduction. (b) Amounts shown for years other than 1938-39 are arrears of State Income Taxes.

(ii) Commonwealth Income Tax Assessed. The amounts of Commonwealth Taxes assessed on the income of recent years are shown in the following table. The amounts are shown under the year in which most of the assessments were made, i.e., the year following the income year. Income taxes assessed on income for past years and for the years shown after the close of the normal assessing period, are not included.

#### COMMONWEALTH INCOME TAXES ASSESSED. (£'000.)

Тах.	1939-40.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
Individuals— Income Tax and Social Services Contribution	(a) 7,423	b 376,742	340,175	351,147	320,174	316,027
Companies— Income Tax Additional Tax on Undistributed In-	8,041	156,163	151,246	119,348	158,887	174,997
come of Private Companies	688	11,219	5,824	4,266	4,001	3,654
Totai	16,152	544,124	497,245	474,761	483,062	494,678

<sup>(</sup>a) Income Tax.

<sup>(</sup>b) Includes assessments issued to 30th June, 1955.

(iii) Commonwealth Income Tax and Social Services Contribution, 1955-56 Assessment Year. The following tables show, for the 1955-56 assessment year, details of the number of taxpayers, income, and net income tax and social services contribution assessed for individuals and resident and non-resident companies.

COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION: 1955-56 ASSESSMENT(a)—NUMBER OF TAXPAYERS, ACTUAL INCOME, TAXABLE INCOME AND NET INCOME TAX AND SOCIAL SERVICES CONTRIBUTION ASSESSED—INDIVIDUALS.

(Incomes derived in year 1954-55.)

Grade of Actual Income(b) and	Numl	er of Taxp	ayers.	Actual Income.	Ta	xable Inco	me.	Net Income Tax and Social
State or Territory of Assessment.	Males.	Females.	Total.	Total.	Salary and Wages.	Other Income.	Total.	Services Contri- bution Assessed
££	No.	No.	No.	£'000.	£'000.	£'000.	£'000.	£'000.
105 200	56,298	108,510	164,808	25,561	20,623	3,981	24,604	214
201- 300	82,800	134,163	216,963	54,614	43,014	8,107	51,121	965
301- 400	101,405	147,074	248,479	87,288	67,189	12,799	79,988	2,521
401- 500	115,640	164,587	280,227	126,709	95,088	18,759	113,847	4,984
501- 600	136,468	185,641	322,109	176,936	132,756	23,596	156,352	8,521
601- 700	204,466	110,477	314,943	205,381	144,319	27,583	171,902	10,737
701- 800 801- 900	348,163 386,446	57,837 30,781	406,000	305,215	212,737	31,015	243,752	16,723
801 900 901 1.000	326,177	17,229	417,227 343,406	354,658 325,540	245,737 221,228	32,457 32,331	278,194 253,559	21,140 21,132
1,001- 1,100	246,270	11.654	257.924	270.098	177,520	30.942	208,462	18.807
1,101- 1,200	166,808	7,904	174,712	200,414	124,942	29,229	154,171	15,032
1,201-1,300	112,172	6,397	118,569	147,878	87,357	27,378	114,735	12,084
1,301- 1,400	74,997	4,894	79,891	107,618	58,936	25,069	84,005	9,478
1,401 – 1,500	52,959	3,876	56,835	82,264	41,072	23, <del>5</del> 63	64,635	7,787
1,501~ 2,000	122,837	11,994	134,831	229,309	89,257	95,844	185,101	26,06
2,001- 3,000 3,001- 4,000	70,096 25,032	9,647 3,768	79,743 28,800	191,412 98,899	41,817	120,738	162,555	30,953 21,499
4,001- 5,000	11,789	1.803	13,592	60,428	15,843 9,093	71,216 45,098	\$7,059 54,191	15,799
5,001-10,000	14 963	2,465	17,428	115,005	15,767	89,015	104,782	39,381
10.001-15.000	2,214	378	2,592	30,764	.3,810	24,499	28,309	13,441
15,001 and over	1,231	240	1,471	36,076	3,314	27,922	31,236	17,469
Total Residents	2,659,231	1,021,319	3,680,550	3,232,067	1,851,419	801,141	2,652,560	314,734
Central Office	8,144	4,725	12,869	39,311	5,709	28,982	34,691	12,323
New South Wales	987,051	394,737	1.381.788	1,220,194	737,416	266.861	1.004.277	117,501
Victoria	753,327	316,652	1,069,979	936,299	547,813	227,485	775,298	89,807
Queensland	377,391	122,105	499,496	420,245	214,788	121,481	336,269	39,174
South Australia	245,589 186,821	87,820 62,118	333,409	293,754 209,591	159,382	82,547	241,929	27,63
Western Australia Tasmania	85,505	28,129	248,939 113,634	92,946	118,006 54,937	51,714 19,500	169,720 74,437	18,864 7,579
Nor. Territory	4,837	1,213	6,050	6,059	3,967	870	4,837	556
Aust. Cap. Terr.	10,566	3,820	14,386	13,668	9,401	1,701	11,102	1,293
Total Residents Total Non-Re-	2,659,231	1,021,319	3,680,550	3,232,067	1,851,419	801,141	2,652,560	.314,734
sidents	2,547	2,547	5,094	6,598	620	5,444	6,064	1,29
Grand Total	2,661,77.8	1,023,866	3,685,644	3,238,665	1,852,039	:806,585	2;658,624	316,02

<sup>(</sup>a) Assessments in respect of 1954-55 incomes issued to 30th September, 1956. Assessments issued after that date are not included. (b) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income."

COMMONWEALTH INCOME TAX AND SOCIAL SERVICES CONTRIBUTION, 1955-56 ASSESSMENT(a)—NUMBER OF TAXPAYERS, ACTUAL INCOME, TAXABLE INCOME AND NET TAX ASSESSED—RESIDENT AND NON-RESIDENT COMPANIES.

#### (Incomes derived in 1954-55.)

Grade of Taxable Income.(b Territory of Assess		ate or	Number of Taxpayers.	Actual Income.	Taxable Income.	Net Tax Assessed.(c)
££			No.	£'000.	£'000.	£°000.
1- 5,000			20,022	39,231 +	30,733	6,188
5,001- 10,000			4,311	31,686	30,579	.6,980
10,001- 20,000			2,945	42,161	41,077	10,601
20,001- 50,000			2,166	70,504	67,782	18,749
.50,001-100,000			916	64,400	63,150	18,044
100,001–200,000			518	73,964	71,020	20,620
200,001-500,000			303	93,873	91,941	26,662
500,001-1,000,000			70 i	51,638	47,169	14,751
1,000;001 and over	• •		73	191,529	173,984	52,402
Total			31,324	658,986	617,435	174,997
Central Office			3,037	332,599	301,737	-89,080
New South Wales			12,652	135,931	132,672	35,81
Victoria			8,433	95,564	92,997	25,04
Queensland			2,158	33,383	31,731	9,36
South Australia			2,905	32,849	32,071	8,11
Western Australia			1,280	18,628	16,448	4,77
Tasmania			687	8,978	8,851	2,63
Northern Territory			35	241	184	4
Australian Capital Territo	ory		137	813	744	11
Total			31,324	658,986 !	617,435	174,99

<sup>(</sup>a) Assessments in respect of 1954-55 incomes issued to 31st December, 1956. Assessments issued after that date are not included. (b) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (c) Excludes additional tax levied on the undistributed income of Private Companies £3,654,000.

<sup>(</sup>iv) Commonwealth Income Tax on Residents—Grades of Income.—Individual income taxes assessed on residents are distributed according to grades of actual income in the following table. The year shown in each case refers to the year in which assessment was made, i.e., the year following the income year. The figures relate only to assessments made on the income of the previous year during the normal assessing period. Assessments issued after the normal assessing period are not included.

## COMMONWEALTH INCOME TAXES ON RESIDENT INDIVIDUALS IN GRADES OF ACTUAL INCOME.

	. 1939–	40.	1952-5	3.(a)	1953–5	4.(a)	1954-5	5.(a)	1955-56.(a)	
Grade of Actual Income.(b)	No. of Tax- payers.	Тал.	No. of Tax- payers.	Tax.	No. of Tax- payers.	Тах.	No. of Tax- payers.	Tax.	No. of Tax- payers.	Tax.
- £ £		£'000.		£'000.		£'000.		£'000.		£'000.
105- 200	1	2 000.	200.711	434	171,542	333	166,549		164,808	214
201- 300	(c) 47,732	27	270,729	1,985	236,185		220,238		216,963	965
301- 400	104,210	126	307,080	4,860	267,598	3,790	247,650		248,479	2,521
401- 500	68,168	182	363,271	9,569	309,511	7,403	281,456	5,614		4,984
501 - 600	38,939	197	371,461	13,350	338,499		329,867		322,109	8,521
601- 700	3 d 29,912	294	£ 486,388	22,031	386,310		339,308			10,737
701- 800	[ ],512		( 434,/11	24,955	512,708		472,930		406,000	
801- 900	be 23,070	460	306,206		387,149	25,140		23,229		21,140
901~ 1,000 1,001~ 1,100	1		ኒ 196,872	17,093	248,599	19,636	308,464	20,564	343,406	21,132 18,807
1,101- 1,200	}f 10,922	372	214,482	25,203	290,659	30,365	382,728	33,422	257,924 174,712	15,032
1,201- 1,300	10,722	3,2	217,702	23,203	250,055	30,303	302,120	33,422	118,569	12,084
1,301- 1,400	1	200	00.200	14.000	100 201		104.005		70,001	9,478
1,401- 1,500	g 6,281	306			106,361			17,922	56.835	7,787
1.501 - 2.000	7,987	691	72,535		86,565					26,067
2,001- 3,000	4,549	686	56,460		65,865					30,953
3,001- 4,000	2,045	615	23,868	24,598	27,722	25,628	27,762			21,499
4,001- 5,000	984	484	12,018	19,168	13,877	19,983	13,155	16,681	13,592	15,799
5,001-10,000	1,298	1,321 504	15,086 2,354	47,391 17.027	17,527 2,624	49,956		42,617	17,428	39,381
10,001-15,000 15,001-30,000	(h) 205 92	393		14,357	1,302		2,795 1,286	16,212 13,716	2,592 1,246	13,441 11,857
30,001-50,000	(i) 39	316		4.196	200	4,383	1,280		1,240	2,877
50,001 and over	8	141	168	3,680	63	2,412			68	2,735
,		• • •		-,000		_,		_,002	00	_,,,,,,
<b></b>	245 441	5 115	2 415 961	220 020	2 450 066	250.055	2545 104	210 100	0.500.550	
Total	346,441	7,115	3,415,861	338,930	3,470,866	350,055	3,545,184	319,108	3,680,550	314,734

<sup>(</sup>a) Includes Social Services Contribution. (b) Actual income is defined briefly as "Gross Income including exempt income less expenses incurred in gaining that income". (c) Grade £251-£300. (d) Grade £601-£750. (e) Grade £751-£1,000. (f) Grade £1,001-£1,250. (g) Grade £1,251-£1,500. (h) Grade £15,001-£25,000. (i) Grade £25,001-£50,000.

#### CHAPTER XXII.

#### AGRICULTURAL PRODUCTION.

Note.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

#### § 1. Introductory.

In general, statistics in this chapter relating to agricultural production are derived from "census" returns supplied by approximately 250,000 farmers who utilize one acre or more of land for agricultural or pastoral purposes and the latest figures available are those for the year 1956–57. The returns are collected by the Statisticians of each State and by the Commonwealth Statistician in respect of the Northern Territory and the Australian Capital Territory. The returns are collected on a substantially uniform basis in all States at 31st March, each year, and relate to areas sown and crops produced in the previous twelve months. Where harvests are not completed by March (e.g. potatoes) provision is made in some States for a special collection after the harvest is completed and in others for the inclusion of the total estimated yield expected from the complete harvest. In cases where additional data are available from marketing authorities or other sources, these are used in conjuction with the "census" returns. The statistics published in this Chapter are therefore shown in agricultural years. For most purposes there will be little error involved in considering them as applying to years ending on 30th June.

#### § 2. Progress of Agriculture.

1. Early Records.—In an "Account of Live Stock and Ground under Crop in New South Wales, 19th August, 1797", Governor Hunter gives the acreage of crops as follows:—Wheat, 3,361 acres; maize, 1,527 acres; barley, 26 acres; potatoes, 11 acres; and vines, 8 acres.

The following details of crops were collected in 1808:—Wheat, 6,874 acres; maize, 3,389 acres; barley, 544 acres; oats, 92 acres; peas and beans, 100 acres; potatoes, 301 acres; turnips, 13 acres; orchards, 546 acres; and flax and hemp, 37 acres.

A brief reference to the attempts at cultivation by the first settlers in New South Wales and to the discovery of suitable agricultural land on the Parramatta and Hawkesbury Rivers prior to the year 1813 and west of the Blue Mountains thereafter is contained in early issues of the Official Year Book. (See No. 22, p. 670.)

By the year 1850, the area of crops had increased to 491,000 acres, of which 198,000 acres were cultivated in what is now the State of New South Wales, and 169,000 acres in Tasmania. At the end of 1850, the area under cultivation in Victoria, which was then the Port Phillip District of New South Wales, was 52,190 acres.

The gold discoveries of 1851 and subsequent years had at first a very disturbing effect on agricultural progress, the area of crops declining from 491,000 acres in 1850 to 458,000 acres in 1854. The demand for agricultural products occasioned by the large influx of population was, however, soon reflected in the increased area cultivated, for at the end of 1858 the land under crop in Australia exceeded a million acres.

2. Progress of Cultivation.—The following table shows the area of crops in each of the States and Territories of Australia at decennial intervals since 1860-61 and during each of the eleven seasons 1946-47 to 1956-57. On page 863 there is a graph showing the area of crops in Australia from 1900-01 onward.

#### AREA OF CROPS.

('000 Acres.)

Season		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1860-61 1870-71 1880-81 1890-91 1900-01		246 385 606 853 2,447	387 693 1,549 2,032 3,114	52 114 225 458	359 802 2,087 2,093 2,370	25 55 64 .70 201	153 157 141 157 224			1,174 2,144 4,561 5,430 8,814
1910-11 1920-21 1930-31 1940-41	::	3,386 4,465 6,811 6,375	3,952 4,490 6,716 4,467	667 780 1,144 1,734	2,747 3,231 5,426 4,255	855 1,805 4,792 4,027	287 297 268 254	2	 2 5 6	11,894 15,070 25,164 21,118
1946-47 1947-48 1948-49 1949-50		6,512 7,168 5,711 5,670	5,103 5,023 4,645 4,480	1,617 1,849 1,953 2,057	3,885 3,852 3,757 3,617	3,590 4,026 4,215 4,399	361 342 345 368	(a) (a) (a) (a)	9 11 10 10	21,077 22,271 20,636 20,601
1950-51 1951-52 1952-53 1953-54 1954-55		4,761 4,704 4,837 5,425 5,394	4,351 4,271 4,286 4,480 4,394	2,077 2,022 2,422 2,361 2,593	3,676 3,696 3,581 3,778 3,895	4,650 4,693 4,816 4,633 5,112	290 291 303 330 301	(a) (a) (a) (a)	6 6 6 5	19,811 19,683 20,251 21,013 21,695
1955-56 1956-57	::	5,660 3,789	4,542 3,637	2,604 2,469	3,972 3,979	5,342 5,232	326 288	1	7 5	22,454 19,400

(a) Not available.

The progress of agriculture was practically uninterrupted from 1860-61 to 1915-16, when, as the result of a special effort to raise wheat during the 1914-18 War, 18.5 million acres were cultivated in Australia. Four years later the area of crops declined to 13.3 million acres owing to the accumulation of wheat stocks because of the difficulty of securing freight space during the war years. After the termination of hostilities, the area again began to expand and rose steadily to the record area of 25.2 million acres in 1930-31. Thereafter, the slump in wheat prices seriously depressed the agricultural industry and the area of crops receded to just under 20 million acres in 1935-36.

By 1938-39, the industry had recovered from the depression and the total area under cultivation reached the high level of 23.5 million acres. Thereafter, as a result of war-time man-power shortages and shipping difficulties, the area declined to less than 16 million acres in 1943-44. After 1943-44, production gradually increased again until, in 1947-48, 22.3 million acres were sown to crops. This upward trend was reversed after 1948-49, largely as a result of the transfer of many primary producers from agricultural to pastoral production following on high prices for wool. In recent years, the area sown increased from 19.7 million acres in 1951-52 to 22.5 million acres in 1955-56 but in 1956-57, due largely to the excessively wet conditions in the Eastern States, the area sown dropped to 19.4 million acres. As the area under wheat in Australia constitutes a large proportion of the total area cropped (55 per cent. during the ten years ended 1955-56) fluctuations in the latter follow broadly the same pattern as changes in wheat areas.

- 3. Area under Sown Pastures.—In all the States, there are considerable areas of grasses mainly sown on land from which scrub has been cleared or on land which it is desired to rest from cultivation. These areas, which are not included in "area of crops", have expanded from about 5.3 million acres in 1929-30 to about 32.6 million acres in 1956-57.
- 4. Australian Agricultural Council.—Arising out of a conference of Commonwealth and State Ministers on agricultural and marketing matters, held at Canberra in December, 1934, a permanent organization known as the Australian Agricultural Council was formed. The Council consists of the Commonwealth Ministers for Primary Industry and for Territories and the State Ministers of Agriculture, with power to co-opt the services of other Commonwealth and State Ministers as required. The principal functions of the Council are:—(i) the promotion of the welfare and development of agricultural industries generally; (ii) exchange of information on agricultural production and marketing; (iii) the improvement

of the quality of agricultural products and the maintenance of high grade standards; (iv) to ensure, as far as possible, balance between production and available markets; and (v) organized marketing, etc.

In addition, a permanent Standing Committee on Agriculture was formed to advise the Council to secure co-operation and co-ordination in agricultural research, to advise State and Commonwealth Governments on the initiation and development of agricultural research, and to secure co-operation between all Governments in respect of quarantine measures against pests and diseases of plants and animals.

#### § 3. Distribution, Production and Value of Crops.

1. Area of Crops in States and Territories.—The following table shows the areas in the several States, the Northern Territory and the Australian Capital Territory of each of the crops for the season 1956-57.

AREA OF CROPS, 1956-57.

(Acres.)

Crop.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas	N.T.	A.C.T.	Aust.
Cereals for Grain—	1			<del></del>			'- <del></del>		·
Barley—				!					
2 Row	30,634	325,004	113,651	1,150,500					1,705,098
6 Row	13,501 53,225	20,279	17,653	71,237	264,826				388,029
Maize	33,223	2,727	125,606	427 100	10				181,576
Oats	420,501	612,587	27,523	427,192	1,051,486	16,559	• • •	144	2,555,992
Panicum, Millet and					1				65 100
Setaria	50.427	507	64,602				• •	• •	65,109
Rice	50,477	10.410		41,871	5,267	185	• •		50,477 70,413
Rye	3,556						309		
Sorghum	34,585 1,742,334	1,565,220	171,705		2 764 496			65	206,659 7,874,246
Wheat Hav	1,742,334	1,303,220					,	2 160	1,861,362
Green Fodder	366,573	781,952 (a) 66.093	45,506	298,794 (b)363,562	242,217 752,072		2	772	
Other Ctests Fedder	5,793					18,988		1 112	86,043
Grass Seed—	3,793	13,200	9,710	34,049	4,213	10,700	• • •		00,043
Taraana	27,688	(c)	1,115	24,688	(d)	ا			(e) 53,496
Ø1	15,761		1,113	10,132		2,648		• •	52,417
O41	5,492			5,097			• • •	84	
Industrial Crops—	3,452	13,002	0,303	3,097	1,524	3,400	• • •	, ,	35,550
Broom Millet	3,809	140	275						4,224
C C 1	2,776		162,189		93	l :: •	• •	' ::	165,265
0-4	2,,,,	::	11,338		, ,,	::			11,338
Flax—			11,550			!	• • •		,550
For Fibre	I	2,196		1,864	1,757	i			5,817
For Linseed	2,404	1,143	86,265	290		! !! !	- ::		90,102
Hops	2, 101	401			(d)	1,438			(e) 1,839
Peanuts	419		25,017		( <del>d</del> )	.,	208		(e) 25,644
Sugar-cane—	''			''	! ""	!		1	,,
For Crushing	9,182	1	360,932			l l		i	370,114
Other (excluding	,,,,,,	1	,,					•	
fodder)	9,941	١	119,184	1	٠	!			129,125
Sunflower Seed	6	237	9,392	2		l	106		9,743
Tobacco	1,031	2,935	7,029		1,176	!	1	٠	12,172
Other	7	502		125		405			1,422
Vegetables for Human	İ	l	,						•
Consumption—	1	İ	1	1		!		ı	
Onions	532	4,503	3,258	608	428	28		5	
Potatoes	14,959		12,925	5,677	8,558	19,125		, 100	
Other Vegetables	52,847	41,808	37,124	12,500	8,136	19,180	83	122	171,800
Vineyards—								;	l
Bearing	16,335	41,749	2,627	55,434	8,234	1	4	!	124,383
Not Bearing	1,059	3,153	- 289 <sup>l</sup>	1,975	762	· · · i	• •		7,238
Orchards and other			'			i		i	i
Fruit Gardens—			1					1	!
Bearing	72,364	47,308	27,290	25,310	18,967	21,486	53		
Not Bearing	15,556	16,011	12,271	8,688	3,073	1,508	41	19	57,167
Nurseries and Cut									
Flowers	906				275	112	• • •	13	
All other Crops	1,522	3,005	6,750	621	997	880	1	8	13,784
'			·!	;				· ·	
ı			1						
Total Area	3,789,417	3,636,949	2,468,613	3,978,913	5,232,489	288,521	810	4,594	19,400,306
1				. !				1	ı

<sup>(</sup>a) Excludes pasture land sown to lucerne and oats for grazing.
(b) Excludes pasture land sown to lucerne for grazing.
(c) Not available. Included in "All other Crops".
(d) Not available for publication. Included in "All other Crops".

2. Relative Areas of Crops in States and Territories.—The proportion of each of the major crops cultivated in the various States and Territories to the total area of crops for the season 1956-57 is shown in the next table. In four of the States, namely, New South Wales, Victoria, South Australia and Western Australia, wheat-growing for grain is by far the most extensive crop. In Queensland, the most extensive crops are green fodder, wheat, and sugar-cane, and in Tasmania, hay and green fodder.

As pointed out previously, wheat is the main crop in Australia, the area thereof, for

grain only, representing 41 per cent. of the total area of crops in 1956-57.

RELATIVE AREAS OF CROPS, 1956-57.

				(Fer cer	u.,					
Crop.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust
Wheat (Grain)	••	46.0	43.0	14.6	36.2	52.8	1.4		1.4	40.6
Green Fodder(a)		21.4	1.8	25.9	9.1	14.4	16.8	0.2	16.8	13.8
Oats (Grain)		11.1	16.8	1.1	10.7	20.1	5.7		3.1	13.2
Barley (Grain)		1.2	9.5	5.3	30.7	6.6	2.5	١	1	10.8
Hay		9.7	21.5	1.8	7.5	4.6	42.7	0.2	68.9	9.6
Sugar-cane, Crushed		0.2		14.6			٠.		١	1.9
Total Orchards and F	ruit				ļ					
Gardens		2.3	1.7	1.6	0.9	0.4	8.0	11.6	2.5	1.4
Sorghum		0.9	١	7.0				38.1	<b>.</b>	1.1
Maize (Grain)		1.4	0.1	5.1			·		1	0.9
Total Vineyards		0.5	1.2	0.1	1.5	0.2		0.5		0.7
Potatoes		0.4	1.1	0.5	0.1	0.2	6.6		2.2	0.5
All other	••	4.9	3.3	22.4	3.3	0.7	16.3	49.4	5.1	5.5
Total		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>(</sup>a) Includes green forage except in Victoria and in South Australia where pasture land sown to lucerne is excluded.

AREA OF PRINCIPAL CROPS: AUSTRALIA. ('000 Acres.)

				( 000 21616	31)			
Cro	р.		Average, ten years ended 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
	—       	    Con-	428 295 1,393 22 14,345 2,994 1,272	1,123 174 2,764 35 10,209 1,761 2,196	1,482 179 2,137 39 10,751 1,935 2,415	1,391 170 2,574 39 10,673 1,984 2,733	1,510 168 3,354 41 10,166 2,241 2,649	1,705 182 2,556 50 7,874 1,861 2,685
sumption— Onions Potatoes Other vegeta		ouman	130	8 135	7 128	8 107	7 94	9 101
consumption Industrial Crops-	on		(a) 83	152	131	136	155	172
Cotton Hops Sugar-cane Tobacco Vineyards Orchards All other Crops			43 1 332 12 118 276 206	6 2 434 8 137 271 836	9 2 482 8 138 273 897	8 2 502 10 136 276 946	13 2 499 11 135 279 1,130	11 2 499 12 132 270 1,279
Total			21,958	20,251	21,013	21,695	22,454	19,400

(a) Incomplete. Market gardens and pulse only.

<sup>3.</sup> Area of Principal Crops in Australia.—The area of the principal crops during each of the five seasons ended 1956-57, compared with the average for the ten years ended 1938-39, is shown hereunder:—

- 4. Size Classification of Principal Crops.—A special series of tabulations relating to rural holdings in Australia was compiled for 1955-56 and published in full detail in a series of mimeographed bulletins, Size Classification of Rural Holdings, 1955-56. Condensed tables also appear in the bulletin Primary Industries—Part I.—Rural Industries No. 51. The tables show a classification by size (area) of crop and size (area) of holding for wheat, oats, barley, sugar-cane, tobacco, potatoes, other vegetables for human consumption, vineyards, and orchard and non-orchard fruit.
- 5. Weights and Measures.—Details of the weights and measures used in recording production of agricultural commodities appear in the introduction to the bulletin *Primary Industries—Part I.—Rural Industries*.
- 6. Production of Crops in States and Territories.—The following table shows production of crops in the various States and Territories for the season 1956-57.

#### PRODUCTION OF CROPS, 1956-57.

Cro	p.	•	Unit of Quantity.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for Grain	1—		1								ī	
Barley—			l		1						1	
2 Row	• •	• •	'000 bus.	566	7,164	2,594	32,393	936	217	• •		43,870
6 Row				215	385	366	1,610	2,814	18			5,40
Maize			,, ,,	1,945	81	3,468				• •	1	5,49
Oats			,, ,,	6,274	9,555	553	8,318	10,441	253		2	35,39
Panicum, Mille	et and Se	taria .	,, ,,		6	954					1	96
Rice			, ,	4,262				(a)			1	(c) 4,262
Rye				28	130		252	30	2			44
Sorghum		• •	, ,	671		4,243				5	1	4.919
Wheat			,, ,,	28,490	35,282	7.061	31,432	32,100	89		1	134,45
Hay			, tons	538	1,423	´96	453	289	238		6	3,04
Grass Seed		• • •	,,								_	.,
Lucerne			cwt.	16,698	(b)	528	15.520	(a)	8			(c)32.75
Clover			,,	41,272	16,370		16,494	30,522	1,929			106,58
Other				3,763	22,817	12,829	8,673	1,222	6,193		23	55,52
Industrial Crops		••	"	3,703	22,017	12,027	0,0.5	1,222	0,120	••	23	00,02
Broom Millet-								i	- 1		1	
Fibre		• •	İ	21,761	575	1,032	}	- 1	- 1			23,36
Grain	• •	• •	bus.	15,657	222	1,032				• •	• • •	15,87
Canary Seed	• •	• • •	Dus.	29,085		1.557,273	2.004	317	• • •	• •	• • •	1.588,67
Cotton, Ungin		• •	'000' 1ь.			3,809	2,004	(a) 11		• •	• • •	(c) 3,809
	nea	• •	000 10.			3,609		(4)		• •	• • •	(c) 3,003
Flax—				<b>\</b>	4.013		4,606	2,051	١ ١		1	10,67
Straw	• •	• • •	ton	622	4,013 306	اروم تيزو	4,606	′ '		• •		
Linseed		• • •	"	022		17,644	/0	::	10:174			18,64
Hops (Dry We	ignt)	• •	cwt.	امدندا	6,056	153 500		(a)	19,174			(c)25,230
Peanuts	٠٠	• • •	1000".	4,674		173,522		• •		339		178,53
Sugar-cane for		18 · ·	'000 tons	294		8,978		}	· · · j	.:	• • •	9,27
Sunflower Seed		• • •	cwt.	7	777	51,236		أمنف		108		52,13
Tobacco, Drie			'000 1ь.	805	2,777	4,344		819				8,74
Vegetables for I	Iuman '	Con-		i 1	ı							
sumption-											l	
Onions			ton	2,669		14,279		4,606	114	••	32	54,12
Potatoes	• •		••	54,459	227,307	49,499	43,665	53,741	89,700	2	601	518,97
Vineyards—		i			1	· i		1	i		1	1
Grapes—		1	,					- 1			I	
For Drying			,,	39,860	216,189		47,800	8,784	{			312,63
Table	• •			3,620	6.354	3,287	1,080			7		16,11
Wine			;;	19,427	12,537	151		5,825	(			166,46

<sup>(</sup>a) Not available for publication.

7. Production of Principal Crops in Australia.—The following table shows the production of the principal crops for the five years ended 1956-57, and the average for the ten years ended 1938-39:—

<sup>(</sup>b) Not available.

<sup>(</sup>c) Incomplete; see footnotes to individual States.

PRODUCTION	ΛR	DDINCIDAL.	CDODC .	ATICTO ATEA
PRODUCTION A	I I I	PRINCIPAL	LKUPS:	AUNIKALIA.

Сгор.	Unit of Quantity.	Average, ten years ended' 1938-39.	1952–53.	1953–54.	1954–55:	1955–56.	1956–57
Cereals for Grain—							
Barley, 2 Row	'000 bus.	7,480	29,633	35,923	25,622	35,469	43.870
Maize	,, ,,	7,228	4,967	5,079	5,076	4,755	5,494
Oats	,, ,,	16,437	43,623	32,961	32,834	56,487	35,396
Rice	,, ,,	2,005	3,964	4,069	5,080	4,725	4,262
Wheat	11 22	169,398	195,208	197,960	168,617	195,443	134,455
Hay	,, tons	3,490	2,765	3,049	2.856	3.625	3,043
Vegetables for Human	1,5	1		-,	,		
Consumption—			ļ	į.			
Onions	,, ,,	43	48	46	49	40	54
Potatoes	,, ,,	351	431	548	468	402	519
Industrial Crops—	., .,		i			1	
Cotton, Unginned	,, lb.	15,667	2.184	5.132	3,597	5,359	3,809
Hops, (dry weight)	cwt.	18,989	(a)32,116	(a)24,666	(a)34,075	(a)34,374	(a)25,230
Sugar-cane for Crushing	'000 tons	4,588	6,967	9,014	10,087	8,901	9,272
Tobacco (Dried leaf)	., łb:	5,113	6,485	7,669	6,822	6,105	8,745
Vineyards—	,,	_,	1 .,	1,000	-,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
Grapes	,, tons	381	560	529	460	379	495
Wine made(b)	gals.	16.104	30,023	31,666	23,964	22,895	30,780
Dried Vine Fruits	tons	70	101	90	81	59	80

<sup>(</sup>a) Excludes-Western Australia. (b) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

8. Yield per Acre of Principal Crops in Australia.—The following table shows the yield per acre for Australia of the principal crops for the five years ended 1956-57 and the average for the ten years ended 1938-39.

YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA.

Crop.	Unit of Quantity.	Average, ten years ended 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
- · · · · · · · · · · · · · · · · · · ·							
Cereals for Grain—							
Barley, 2 Row	bushel.	17.5	26.4	24.2	18.4	23.5	25.7
Maize	,,	24.5	28.5	28.4	29.9	28.4	30.3
Oats	,,,	11.8	15.8	15.4	12.8	16.8	13.8
Rice	,,	93.0	114.8	104.6	131.3	114.7	84.4
Wheat	. ,,	11.8	19.1	18.4	15.8	19.2	17.1
Hay	ton	1.17	1.57	1.58	1.44	r.62	1.63
Vegetables for Human Con-				l .		Į	
sumption	ŧ				1	i	
Onions	.,	5.54	5.90	6.29	6.13	5.69	5.78
Potatoes		2.71	3.18	4.27	4.36	4.29	5.14
Industrial Crops—		1			•		1
Cotton Unginned	lb.	366	372	572	429	403	336
Hops (dry weight)(a)	cwt.	17.88	19.31	15.18	19.87	20.22	13.97
Sugar-cane for Crushing(a)	ton	19.24	24.89	26.47	26.95	23.88	25.05
Tobacco (Dried leaf)	lb.	463	819	930	706	540	718
Vineyards—					1	1	1
Grapes(a)	ton	3.45	4.49	4.15	3.61	2.97	3.76

<sup>(</sup>a) Per acre of productive crops.

<sup>9.</sup> Gross Value of Principal Crops in Australia.—The following table shows the gross value of principal crops at the principal markets in Australia for the five years ended 1955-56 and the average for the ten years ended 1938-39.

## GROSS VALUE OF PRINCIPAL CROPS: AUSTRALIA.(a) (£'000.)

Crop.	te	Average en years ended 938-39.	1951–52.	1952–53.	1953–54.	1954–55.	1955-56.
Cereals for Grain-	_   -			1		1	
Barley		1,214	17,739	27,512	21,011	18,257	20,994
Maize		1,537	3,809	4,039	3.868	3,615	3,464
Oats		1,937	19,005	15,301	12,345	14,066	
Rice	1	392	2,108	3,338	3.198	3,430	3,406
Wheat		30,125	120,734	154,656	138,135	107,528	126,091
Нау	]	11,413	26,193	29,249	33,230	30,878	34,807
Green Fodder		2,775	(b) 6,934	(b) 6,209	(b) 7,720	(b) 6,436	(b) 5,950
Vegetables for Human Consun	1p-		1	1			
tion	-		1	1		!	
Onions		245	2,019	1,106	1,662	1,586	1,973
Potatoes		2,314	15,982	14,706	12,075	13,449	25,895
Other vegetables for hum			1		1		1
consumption	(c)	2,203	27,123	24,543	22,915	23,385	27,993
Industrial Crops—			ł			•	
Cotton, Unginned		298	127	107	316	208	307
Hops			(b) 517	(b) 1,021	(b) 802		(b) 1,102
Sugar-cane		7,895	19,635	30,495	39,619	39,706	35,786
Tobacco (Dried leaf)	!	474	2,379	2,578	3,816	3,823	3,200
Vineyards		3,907	14,084	15,751	13,488	12,293	10,511
Orchards		7,953	43,838	42,032	46,415	46,568	48,349
All other Crops	••	2,651	10,098	10,465	11,520	13,301	15,736
Total Gross Value	[	77,490	332,324	383,108	372,135	339,635	384,937

<sup>(</sup>a) Excludes Northern Territory prior to 1954-55. Includes amounts paid as bounty, relief, &c. (b) Incomplete, excludes Western Australia. (c) Incomplete. Market gardens and pulse only.

10. Value of Production and Indexes of Price and Quantum of Production:—(i) Gross and Net Values, 1955-56. Values of agricultural production for each State are shown for 1955-56 in the following table. A more detailed reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used will be found in Chapter XXX.—Miscellaneous.

In computing the net value of production, no deduction has been made for the cost of maintenance of farm buildings and fences, nor for the depreciation of farm plant; consequently, the figures stated are inflated to that extent.

GROSS, FARM AND NET VALUES OF AGRICULTURAL PRODUCTION, 1955-56.
(£'000.)

		Gross Pro-		Gross Pro-	Used in 1	Materials Process of action.	Net value
State.		duction valued at Principal Markets.	Marketing Costs.	duction valued at Farm.	Seed used and Fodder for Farm Stock.	Value of other Materials used.	of Production.
New South Wales Victoria Queensland South Australia Western Australia Tasmania Northern Territory Australian Capital Terr	:: :: :: :: :: itory ::	89,671 88,902 76,248 55,285 54,855 19,774 42 160	19,172 13,322 9,024 7,865 7,895 3,024	70,499 75,580 67,224 47,420 46,960 16,750 42 157	4,606 2,779 2,866 2,340	(b) 3,047 4,509 9,084 3,283 7,270 (b) 612 	63,647 66,465 55,361 41,271 37,350 15,170 42 149
Australia	• •	384,937	60,305	324,632	17,366	27,811	279,455

<sup>(</sup>a) No deduction has been made for depreciation and maintenance. for costs of power, power kerosene, petrol and other oils.

<sup>(</sup>b) No allowance made

(ii) Net Values, 1929-30 to 1955-56. In the following table, the net value of agricultural production and the net value per head of population are shown by States for the years 1951-52 to 1955-56 in comparison with the averages for the ten years ended 1938-39:—

NET VALUE OF AGRICULTURAL PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
			NET VA	LUE.(a) (	£'000.)				
Average, ten ye 1929-30 to 1938- 1951-52 1952-53 1953-54 1954-55 1955-56	58,333 66,623 68,342 48,711 63,647	64,084 65,067 65,624 61,516 66,465	10,189 35,622 53,684 55,471 59,656 55,361	6,540 46,903 51,244 41,700 39,180 41,271	4,903 31,027 28,977 28,119 23,483 37,350	1,824 10,716 10,803 9,204 11,240 15,170	(b) (b) (b) (b) 45 42	(b) (b) (b) (b) 88 149	47,268 246,685 276,398 268,460 243,919 279,455
Average, ten ye 1929-30 to 1938- 1951-52 1952-53 1953-54 1954-55 1955-56	17 12 19 15 1 20 1	2 5 14 11 3 27 15 0 0 27 8 7 4 27 1 8 7 24 14 6 2 25 18 3	28 14 6 42 3 11 42 13 1 45 0 3	63 2 0		7 18 5 36 10 8 35 14 2 29 14 11 35 18 3 47 10 6	(b) (b) (b) (b) 2 14 6 2 8 1	(b) (b) (b) (b) 2 16 4 4 8 7	7 1 29 1 3 31 16 1 30 6 4 26 16 8 29 19 11

<sup>(</sup>a) No deduction has been made for depreciation and maintenance.

(iii) Indexes of Quantum and Price of Agricultural Production. Indexes of quantum and price of agricultural production are shown in the following table. The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1938-39. The price indexes relate to average "prices" of farm products realized at the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. Further details on weights used, &c., are to be found in Chapter XXX.—Miscellaneous.

INDEXES OF QUANTUM(a) AND PRICE OF AGRICULTURAL PRODUCTION.

(Base: Average 3 years ended June, 1939 = 100.)

Particulars.			1951–52.	1952–53.	1953–54.	1954-55.	1955-56.
Quantum Produced—			i				
Wheat			97	119	120	102	119
Other Crops			107	123	134	131	144
Total, All Crops	••		103	121	129	120	134
Total per Head o	f Popu	ılation	83	95	99	91	99
Price—							
Wheat			378	397	349	319	319
Other Crops			338	337	305	314	339
Total, All Crops			355	364	324	316	330

<sup>(</sup>a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (1936-37 to 1938-39.)

#### § 4. Wheat.

1. Royal Commission on the Wheat Industry.—A Royal Commission was appointed in January, 1934, to inquire into and report upon the economic condition of the industries of growing, handling and marketing wheat, and the manufacturing, distributing and selling of flour and bread. A searching inquiry was made by the Commission and the results of its investigations were submitted in a series of five reports. The first and second reports covered the wheat-growing industry, the third that of baking, the fourth the flour-milling industry, while the fifth, completed in February, 1936, dealt with the history of the Commission's investigations and traversed the principal recommendations submitted.

<sup>(</sup>b) Not available.

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- 2. Wheat Costs of Production Committee.—A Wheat Costs of Production Committee was appointed by the Commonwealth Government in February, 1947, to inquire into and report upon:—(i) the reasonable costs of production of wheat per bushel in Australia's main wheat-growing districts, and (ii) whether basic items of costs could be established as an index to periodical variations in costs of the production of wheat. The Committee in its report to the Commonwealth Government in March, 1948, found that the cost of growing wheat in the Commonwealth at that time was 6s. a bushel at sidings and advised that basic items of cost could be established as an index to periodical variations in wheat production costs.
- 3. Licensing of Areas Sown to Wheat, and Acreages Sown.—Details of the operations of the Wheat Stabilization Board in licensing wheat growing during the seasons 1941-42 to 1948-49 will be found in Official Year Book No. 38, pp. 940, 941. The Board ceased to function on 31st December, 1948.
- 4. Legislation relating to Wheat Industry.—(i) Stabilized Marketing. A detailed survey of legislation relating to stabilization of the wheat industry, including controls exercised during the 1914–18 and 1939–45 Wars and legislation establishing the Wheat Stabilization Plan in 1948, was given in the Appendix to Official Year Book No. 37 (pp. 1295–99).
- (ii) The Australian Wheat Board. The Australian Wheat Board was constituted in September, 1939, under National Security (Wheat Acquisition) Regulations to purchase, sell, or dispose of, wheat or wheat products, manage and control all matters connected with the handling, storage, protection, shipment, etc. of wheat acquired, and such other matters as were necessary to give effect to the regulations.

The Board was reconstituted, with similar powers, under the Commonwealth Wheat Stabilization Act 1948, to administer the stabilization plan. The new Board commenced to function on 18th December, 1948.

- (iii) Wheat Stabilization Plan. (a) 1947-48 to 1952-53. Details of the Wheat Stabilization Plan which operated during the seasons 1947-48 to 1952-53 inclusive were published in Official Year Book No. 40, pp. 841 and 842, and previous issues. All contributions paid into the Fund established as a part of the plan have now been refunded.
- (b) 1953-54 to 1957-58. Agreement was reached in July, 1954, at a conference of Premiers and Ministers for Agriculture on the terms of a new wheat industry stabilization plan. The plan was submitted to polls of wheat growers in the mainland producing States, 94 per cent, of growers voting in favour of the plan.

The necessary legislation was subsequently passed by Commonwealth and State Governments and the plan operated from the 1953-54 season.

The principal features of the plan are as follows:—

- The period of the Wheat Stabilization Plan to be five years, 1953-54 to 1957-58 inclusive.
- (ii) The Australian Wheat Board will be the sole authority for marketing wheat within Australia and wheat and flour for export from Australia.
- (iii) The Commonwealth Government will guarantee a return to growers of the ascertained cost of production in respect of up to 100 million bushels of wheat exported from Australia from each of the crops covered by the plan.
- (iv) The home consumption price will not be less than the guaranteed price. Subject to this understanding, the home consumption price will be fixed at 14s. a bushel, bulk f.o.r. ports, but will vary downwards to conform with the International Wheat Agreement price current at the commencement of each season. If no international agreement is operating, the home consumption price will vary downwards with the current export price fixed by the Wheat Board.
- (v) A premium of 3d. a bushel on wheat grown in Western Australia and available for export from that State to places outside Australia will be paid in recognition of the natural freight advantage applying to that State.
- (vi) The home consumption price will be loaded by an amount necessary to cover the cost of freight on wheat to Tasmania.
- (vii) A Stabilization Fund will be established by means of an export tax of 1s. 6d. a bushel when wheat export prices exceed the costs of production by this amount or more, and by that portion of 1s. 6d. by which the export prices exceed the costs of production when the excess is less than 1s. 6d. a bushel.
- (viii) The maximum amount of the Stabilization Fund will be £20 million. As the Fund accumulates beyond this figure, repayments will be made to the oldest contributing pool.
- (ix) When average export realizations fall below costs of production, export returns will be raised, in respect of up to 100 million bushels, first by drawing upon the Stabilization Fund and when that Fund is exhausted the Commonwealth Government will make the necessary payments.

(iv) Wheat Industry Research. In 1957, the Commonwealth Parliament passed legislation providing for a levy of a farthing a bushel on wheat handled by the Australian Wheat Board. This money, contributed by the growers, is to be spent by the Wheat Research Committees recently set up in the wheat growing States.

The Commonwealth Government has undertaken to supply additional funds for research (with a maximum of £1 for £1 against the growers' contribution) and has set up the Wheat Industry Research Council to make recommendations on the appropriate expenditure of the Commonwealth contribution.

The Council had its inaugural meeting in February, 1958, and it was considered that possible avenues of research would include the breeding of better varieties, cereal chemistry, soil fertility, mechanization, the industry's cost structure and marketing problems.

5. Marketing of Wheat.—(i) Wheat Acquired and Disposed of. (a) Wheat Acquired. Particulars of wheat acquired by the Australian Wheat Board from the 1951-52 to 1956-57 harvests are shown in the following table:—

AUSTRALIAN WHEAT BOARD: WHEAT ACQUIRED, 1951-52 TO 1956-57. ('000 Bushels.)

Pool.	Harvest.	New South Wales.	Victoria.	Queens- land.	South Aus- tralia.	Western Aus- tralia.	Tas- mania.	Aus- tralia.
16	1952–53	51,608	47,460	16,776	32,171	31,703	87	179,805
17	1953–54	57,844	52,219	9,102	27,711	36,161	161	183,198
18 and 18	1954–55	32,385	46,431	14,605	28,636	30,628	65	152,750
19	1955–56	51,789	39,079	14,098	26,107	49,649	39	180,761
20	1956–57	24,014	32,931	5,837	29,154	28,171	22	120,129

(b) Wheat Disposal. Details relating to the disposal of wheat during the years ended 30th November, 1953 to 1957, are shown in the following table:—

AUSTRALIAN WHEAT BOARD: DISPOSAL OF WHEAT, 1953 TO 1957.(a) ('000 Bushels.)

Particulars.	1953.	1954.	1955.	1956.	1957.
Sold for export as flour Sold for local consumption as flour	. 59,517	40,547	63,171	95,399	66,972
	. 41,255	26,871	(b) 34,024	(b) 34,950	(b) 32,334
	. 39,108	35,860	38,012	39,832	41,162
	. 20,605	20,261	18,560	17,090	21,459

<sup>(</sup>a) Years ended 30th November. exported.

(ii) Finance. The Wheat Acquisition Regulations empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. The Wheat Industry Stabilization Act 1948 included similar provisions for advances to the reconstituted Board established under that Act.

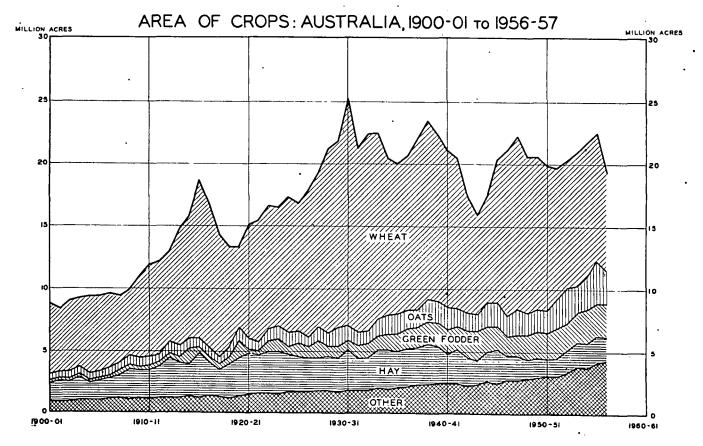
AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, POOLS Nos. 16 to 20.

	 	(~-,)			
<b>.</b>	No. 16 Pool.(a)	No. 17 Pool.(a)	No. 18 Pool.(b)	No. 19 Pool.(b)	No. 20 Pool.(b)
Particulars.	(1952-53 Harvest.)	(1953-54 Harvest.)	(1954-55 Harvest.)	(1955-56 Harvest.)	(1956–57 Harvest.)
Paid to growers Rail freight Expenses	 127,177,779 11,154,989 5,941,989	99,892,850 12,737,501 7,597,362	10,000,449	93,256,242 12,415,324 8,586,786	53,164,953 6,257,321 6,614,491
Total Payments	 144,277,757	120,227,713	100,990,435	114,258,352	66,036,765
Value of sales delivered	 144,277,757	c 129,388,146	d 100,822,482	118,421,404	58,597,889

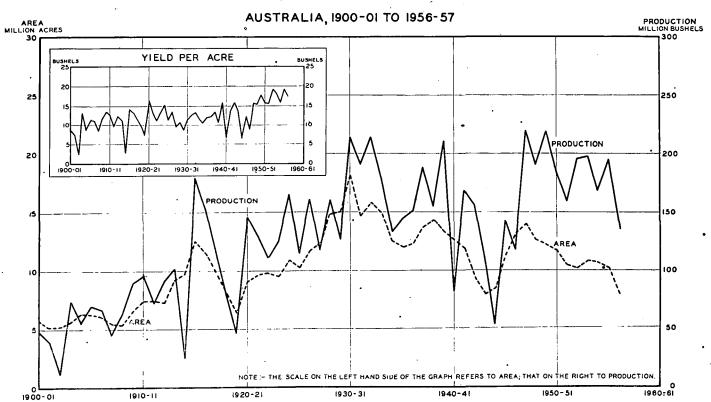
<sup>(</sup>a) Complete. (b) Incomplete. (c) Includes £9,160,433 paid to Wheat Prices Stabilization Fund under Wheat Export Charge Act 1954. (d) Subject to addition of £188,525 withdrawn from Wheat Prices Stabilization Fund.

<sup>(</sup>b) Includes wheat equivalent of manufactured wheat products

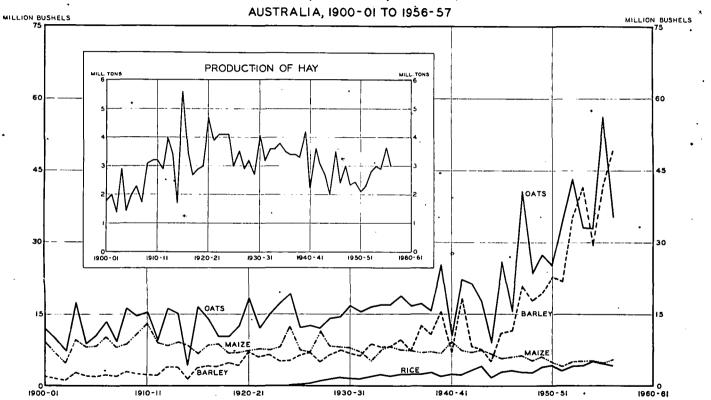




### WHEAT (GRAIN): AREA, PRODUCTION AND YIELD PER ACRE



### PRODUCTION OF OATS, BARLEY, MAIZE, RICE AND HAY



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(iii) Advances to Growers. Details of advances made to wheat growers in respect of the various pools are published in Statistical Bulletin: The Wheat Industry, Australia, last issued in April, 1958.

6. International Wheat Agreements.—Details of the first and second International Wheat Agreements operative from 1st August, 1949, to 31st July, 1953, and from 1st August, 1953, to 31st July, 1956, respectively, were published in Official Year Book No. 42 (see pp. 840-1) and previous issues.

A new International Wheat Agreement covering a period of three years from 1st August, 1956, to 31st July, 1959, came into force on 1st August, 1956. The 1956 Agreement is identical in form with the 1949 and 1953 Agreements, although amendments have been made to many of the more important provisions.

The annual quota of 395 million bushels determined by the 1953 International Wheat Agreement was reduced in the new Agreement by almost a quarter to 303 million bushels.

As previously, 44 importing countries submitted figures for inclusion but many quotas were substantially less than those in the previous Agreement. The number of exporting countries was increased to six. Argentina and Sweden were the two additional exporting countries included and France was given a substantial quota instead of the nominal one it had in the 1953 Agreement.

As a result of the reduction in quantities submitted by importing countries and the participation of France, Argentina and Sweden, there has been a substantial reduction in the export quotas available for Australia, Canada and the United States. Australia's original quota was reduced from 45 million bushels under the 1953 Agreement to 30 million bushels.

The new Agreement was to be ratified by both exporting and importing countries on 1st December, 1956. On that date, 37 importing countries had ratified and Iceland had joined the Agreement as an importer although not included in the original list. Of the remaining seven countries which submitted import quotas, three countries (Lebanon, the Netherlands and Panama) had ratified the Agreement by 31st March, 1957, bringing the total to 41, while Brazil was given a further extension of time by the Executive Council administering the Agreement and finally ratified on 31st December, 1957. Three countries (Ceylon, Colombia and Jordan) will not ratify the Agreement. All six exporting countries have acceded.

In accordance with the terms of the Agreement, the original quotas allotted to exporting countries were reduced in conformity with the reduction in importers' quotas. The adjustment was made on the basis of ratifications as at 1st December, 1956. This pro rata adjustment gave Australia an export quota of 25.6 million bushels but this was increased to 29.3 million bushels when countries which had indicated their intention of doing so formally ratified the Agreement. The quota for 1957-58 and 1958-59 was set at 29.4 million bushels.

Particulars of guaranteed sales and purchases and transactions actually recorded during 1956-57 are shown in the following table.

INTERNATIONAL WHEAT AGREEMENT: GUARANTEED SALES AND PURCHASES AND TRANSACTIONS RECORDED FOR 1956-57.(a) (Million Bushels.)

	Exporti	ng Cou	intries.			Importi	пд Соцг	tries.	
Cour	ntry.		Guaran- teed Sales.(b)	Sales Recorded.	Cou	ntry.		Guaran- teed Pur- chases. (c)	Pur- chases Recorded.
United States of Canada Australia France Argentina Sweden	of Amer	ica	128.1 99.7 29.3 16.0 14.3 6.2	123.4 58.4 26.2 0.9 5.9	Germany Japan Netherlands Belgium Remaining Countries	imp	orting	55.1 36.7 25.7 16.5	55.1 37.5 18.3 6.9 97.0
Total			293.6	214.8	Total	••		293.6	214.8

<sup>(</sup>a) Wheat and wheat flour as wheat. (b) Quantities which exporting countries must sell if required by importing countries to do so at the maximum price. (c) Quantities which importing countries must buy if required to do so at the relevant minimum price.

<sup>7.</sup> Wheat Farms.—(i) Number. Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1952-53 to 1956-57, compared with the average for the five years ended 1938-39, are shown in the following table. It should be noted that a farm worked on the share system or as a partnership is included as one holding only.

NUMBER	OF	FARMS	GROWING	20	<b>ACRES</b>	AND	<b>UPWARDS</b>	OF	WHEAT	FOR
				- (	GRAIN.					

State.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
New South Wales		15,657	13,167	14,865	13,784	   14,086	10,197
Victoria		12,393	10,049	10,900	10,547	9,714	7,674
Queensland		2,403	4,970	3,918	4,570	4,186	3,131
South Australia	• •	12,255	8,432	8,473	8,892	8,571	7,852
Western Australia		8,859	7,751	7,786	7,979	7,962	7,943
Tasmania		269	95	149	114	78	45
Australian Capital 7	Terri-	]		'			
tory	••	(a)	9	17	10	9	4
Australia	••	51,836	44,473	46,108	45,896	44,606	36,846

(a) Not available.

(ii) Size Classifications of Wheat Holdings.—A special series of tabulations relating to rural holdings in Australia was compiled for 1955-56 and published in full detail in a series of mimeographed bulletins, Size Classification of Rural Holdings, 1955-56. Condensed tables also appear in Primary Industries, Part I.—Rural Industries, Bulletin No. 51. The tables relating to wheat holdings show area under wheat for grain (classified by size), and the number of such holdings also under oats and barley and the number with sheep, beef cattle and pigs.

8. Area, Production and Yield per Acre.—(i) Area. Wheat is the principal crop grown in Australia, and its progress since 1860-61 has been almost continuous. Prominent features in its early development were the increase in population following the discovery of gold and the redistribution of labour after the surface gold had been won. The economic depression of 1893 interrupted its progress, but its subsequent recovery was assisted by the invention of mechanical appliances, the use of superphosphates as an aid to production, and the introduction of new and more suitable varieties for Australian conditions. The establishment of closer settlement schemes and the settling of returned soldiers and others on the land were additional factors in its expansion.

The area, production and yield per acre of wheat for grain in each State are shown below for the years 1952-53 to 1956-57 in comparison with the averages for the ten-year periods ended 1938-39 and 1955-56:—

WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
			Area ('0	00 Acres	3).			
Average, 1929-30				•		1		
to 1938-39	4,302	3,063	277	3,526	3,158	17	2	14,345
1952–53	2,702	2,232	724	1.544	2,999	7	1	10,209
1953–54	3,357	2,389	580	1,528	2,885	10	2	10,751
1954–55	2,919	2,390	688	1,689	2,979	7	1	10,673
1955–56	2,937	2,141	582	1,609	2,890	6	1	10,166
Average, 1946-47					i		1	•
to 1955-56	3,557	2,690	551	1,868	2,898	7	2 '	11,573
1956–57	1,742	1,565	360	1,438	2,765	4	• •	7,874
		Produ	JCTION ('	000 Bush	iels).(a)	<u>'</u>	· · · · · · ·	
Average, 1929-30			1					
to 1938-39	55,935	38,416	4,118	34,700	35,812	374	43	169,398
1952-53	56,670	50,335	18,662	33,919	35,458	156	8	195,208
1953-54	63,681	53,698	10,180	30,409	39,700	263	2Š	197,960
1954–55	37,718	48,484	16,478	31,463	34,300	159	15	168,617
1955–56	57,149	41,083	14,922	28,891	53,250	129	19	195,443
Average, 1946-47	2.,	1.,005	,,, ==	23,051	1 23,200			,
to 1955-56	55,572	49,326	11,315	29,784	38,566	144	43	184,750
1956-57	28,490	35,282	7,061	31,432	32,100	89	1	134,455

WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE-continued.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
		Yield	PER ACE	E (BUSHE	LS).(a)			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	13.0 21.0 19.0 12.9 19.5	12.5 22.6 22.5 20.3 19.2	14.9 25.8 17.6 24.0 25.7	9.8 22.0 19.9 18.6 18.0	11.3 11.8 13.8 11.5 18.4	21.7 23.4 27.2 21.7 20.7	20.6 12.7 18.5 19.4 25.5	11.8 19.1 18.4 15.8 19.2
to 1955-56 1956-57	15.6 16.4	18.3 22.5	21.0 19.6	15.9 21.9	13.3 11.6	20.6 22.7	21.5	16.0 17.1

(a) 60 lb. per bushel.

A graph showing the expansion of the area sown to wheat for grain in Australia since 1900-01 appears on p. 864 while a map showing the distribution of areas growing wheat for grain throughout Australia in 1954-55 appeared on p. 833 of Official Year Book No. 43. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39 and 1947-48 appeared respectively in Official Year Books No. 22, p. 695, No. 34, p. 451 and No. 39, pp. 977-8.

(ii) Production. Apart from the variations in the area sown, the size of the wheat harvest in Australia is largely determined by the nature of the season and inconsistencies in this respect are reflected in the yearly production.

The main wheat-producing States of Australia are New South Wales, Victoria, South Australia and Western Australia. Queensland production normally approaches local demands, but Tasmania imports wheat from the mainland to satisfy its needs, though it ships flour made from local wheat which is particularly suitable for biscuits. Normally the production of wheat greatly exceeds Australian requirements, and from half to two-thirds of the crop is exported.

Australia's wheat production in 1956-57 was 134.5 million bushels, representing an average yield of 17.1 bushels per acre. This was 50.3 million bushels less than the average for the ten years ended 1955-56 and 34.9 million bushels less than the average for the ten years ended 1938-39.

(iii) Yield per Acre. Short-term variations in yield per acre are due chiefly to the vagaries of the seasons. The best yields per acre for single seasons since 1901 were obtained in 1920-21, 16.1 bushels; in 1942-43, 16.8 bushels; in 1949-50, 17.8 bushels; in 1952-53, 19.1 bushels; in 1953-54, 18.4 bushels and in 1955-56, 19.2 bushels (the record).

(iv) Decennial Averages, 1861-70 to 1948-57. The following table shows the average area, production and yield per acre for decennial periods since 1861.

WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA.

	Period.		Агеа.	Production.	Yield per Acre	
				'000 Acres.	'000 Bushels.	Bushels.
1861-70				831	10,622	12.8
1871-80				1.646	17,711	10.8
1881-90				3,258	26,992	8.3
891-1900				4,087	29,934	7.3
901-10			1	5,711	56,058	9.8
911-20			[	8,928	95,480	10.7
921-30				11,291	135,400	12.0
931-40				14,176	177,758	12.5
941-50			/	11,358	145,599	12.8
948-57				11,042	186,469	16 9

It should be noted that with improved farming methods, including the proper tillage of the soil, rotation of crops, the growing of suitable varieties and the application of fertilizers, average yields per acre in the five decades since 1901 have shown a continued improvement.

9. Varieties of Wheat Sown.—(i) General. The breeding of wheat suitable to local conditions has long been established in Australia. Farrer (1845–1905) did invaluable work in pioneering this field and the results of his labour and the continued efforts of those who have since followed him have proved of immense benefit to the wheat industry of Australia. Their efforts have resulted in better average yields, a greater uniformity of sample with which have accrued certain marketing advantages, as well as an improvement

in the quality of wheat grown. More than 1,000 different varieties of Australian wheats have been catalogued by the Commonwealth Scientific and Industrial Research Organization, but the number of principal varieties grown during each season is restricted to about 45.

- (ii) States, 1956. The principal varieties of wheat sown and the percentage of each to the total area sown in the five main producing States during 1956 were as follows:—New South Wales, Gabo (24.4), Bencubbin (22.1), Glenwarie (11.1); Victoria, Insignia (54.1), Pinnacle (19.5), Quadrat (11.5); Queensland, Festival (24.7), Charter (15.3), Gabo (12.0); South Australia, Gabo (25.5), Insignia (18.4); Western Australia, Gabo (23.4), Bungulla (20.1), Bencubbin (15.1). A detailed table of wheat varieties sown in these five States appears in the annual bulletin Primary Industries—Part I.—Rural Industries.
- 10. F.A.Q. Standard of Wheat.—Up until the 1957-58 season, the Chambers of Commerce in each of the four main wheat-producing States have determined the "f.a.q." (fair average quality) standard for each season's crop. This standard is used as a basis for sales of each crop and it varies from year to year and from State to State.

Samples of wheat have been obtained each year by the Chambers of Commerce from the different wheat districts and mixed to give a representative sample of the whole crop. From this representative sample the f.a.q. weight is determined by the use of the Schopper I-litre scale chondrometer. It is proposed that, commencing with the 1958-59 season, the f.a.q. standard should be determined by State committees comprising representatives of the Australian Wheat Board, the silo authorities, the growers and State Departments of Agriculture. "F.a.q." is an Australian term, and the method differs from that of other countries which sell according to sample, or (as in Canada) according to grades which are fixed and do not vary from year to year.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1957-58 season's crop was as follows—New South Wales, 64\frac{1}{4} lb.; Victoria, 65\frac{1}{2} lb.; South Australia, semi-hard, 66 lb., soft, 65\frac{1}{2} lb.; and Western Australia, 64\frac{1}{4} lb.

- 11. Price of Wheat.—(i) Home Consumption. The price charged by the Australian Wheat Board for wheat sold to millers for gristing into flour for consumption in Australia and for wheat sold as stock feed was as follows:—Year ended 30th November, 1954, 14s. 1½d.; 1955, 14s. 1½d.; 1956, 13s. 5½d.; 1957, 13s. 9½d.; 1958, 14s. 4d. These prices include an amount used to meet freight charges incurred on wheat shipped to Tasmania (1½d. from 1954 to 1957; 2d. in 1958). The figure quoted for 1958 does not apply to New South Wales and Queensland where, because of the necessity of meeting the extra cost of importing wheat from Canada and Western Australia, the prices were 18s. 4½d. and 16s. 9½d. respectively.
- (ii) Export Wheat Prices—Australian Wheat Board's Basic Selling Price.—The monthly average of the Wheat Board's basic export selling prices for f.a.q. bulk wheat f.o.b. basis was 13s. 5\frac{1}{4}d. for the season ended 31st July, 1957, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The maximum and minimum prices fixed under the 1956-59 International Wheat Agreement are expressed in terms of "Canadian currency per bushel, at the parity of the Canadian dollar determined for the purposes of the International Monetary Fund for No. 1 Manitoba Northern wheat in bulk in store Fort William—Port Arthur." Expressed in terms of Australian currency the maximum price for f.a.q. Australian wheat sold under the Agreement is approximately 18s. per bushel. The direct currency conversion of the minimum price is 12s. but this price will vary according to movements in transportation costs.

Details of export wheat prices in previous years, including those received for wheat sold under the terms of the 1949-1953 International Wheat Agreement, are given in Official Year Book No. 40, pp. 849-50, and Statistical Bulletin: *The Wheat Industry, Australia*, No. 93, of April, 1958, and in previous issues of these publications.

12. Value of the Wheat Crop.—The estimated gross value of the wheat crop in each State and in Australia during the season 1955-56 and the value per acre are shown below.

WHEAT FOR GRAIN:	VALUE OF	CROP(a),	1955-56.
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Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000 Value per acre	36,372 £12 7 8	26,046 £12 3 3	9,903 £17 0 6	19,257 £11 19 5	34,420 £11 18 3	£12 17 0	£17 11 10	126,091 £12 8 1

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms.

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13. Production and Disposal of Wheat in Australia.—In the following table, details are given of the production of wheat and its disposal during each of the years ended 30th November, 1953 to 1957 in comparison with the average for the three years ended November, 1937 to 1939. The particulars respecting local consumption refer to sales actually executed by the Australian Wheat Board, whilst those respecting exports represent actual shipments. (For particulars of production and yield from 1900-01 see graph, p. 864.)

WHEAT: PRODUCTION AND DISPOSAL, AUSTRALIA. (Million Bushels.)

	Average, Three Years	Year ended 30th November-					
Particulars.	ended 30th Nov. 1939.	1953.	1954.	1955.	1956.	1957.	
Opening stocks (including flour as wheat) Production	10.2 164.7	16.9 195.2	37.7 198.0	94.9 168.6	95.0 195.4	84.2 134.5	
Total Available Supplies	174.9	212.1	235.7	263.5	290.4	218.7	
Exports—					1	!	
Wheat	75.0	60.7	38.5	64.8	93.7		
Flour as wheat(a)	30.6	41.4	27.9	35.0	36.8		
Breakfast foods and other products(b)	(c)	0.8	0.8	1.0	1.4	1.6	
Local Consumption—			l		ļ		
Flour as wheat	30.9	39.1	34.4	38.0		41.2	
Stock feed	9.3	18.4	17.6	16.5		19.6	
Seed	14.6	10.8	10.8	10.9		7.9	
Breakfast foods and other products(b)	(c)	2.2	1.6	2.0	1.7	1.9	
Balance retained on farm (excluding							
seed)	(d)	4.6	4.0	5.0	4.5		
Closing stocks (including flour as wheat)	14.5	37.7	94.9	95.0	84.2	41.5	
Total Disposals	174.9	215.7	230.5	268.2	287.5	223.2	
Excess (+) or Deficiency (-) of Disposals in respect of Available Supplies a		+3.6	-5.2	+4.7	-2.9	+4.5	

<sup>(</sup>a) Includes wheatmeal from 1953, and sharps from July, 1954. (b) In terms of wheat. (c) Included with flour (local consumption). (d) Included with stock feed. (e) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

<sup>14.</sup> Exports of Wheat and Flour.—(Note: Statistics in this paragraph relate to years ended 30th June). (i) Quantities. The following table shows particulars of the exports of wheat and flour and total of both in terms of wheat for each of the years 1952-53 to 1956-57 compared with the average for the five years ended 1938-39. For the sake of convenience, flour has been expressed at its equivalent in wheat, 1 ton of flour being taken as equal to 46.3 bushels of grain. Wheat and flour have been imported in substantial quantities on only two occasions since 1900; in 1902-3 the wheat harvest was as low as 12,378,000 bushels, and wheat and flour representing 12,468,000 bushels of wheat were imported, whilst an equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. During the five years ended 1956-57, exports in terms of wheat averaged 99,285,000 bushels, compared with the average of 106,432,000 bushels for the five years ended 1938-39.

#### WHEAT AND FLOUR: EXPORTS FROM AUSTRALIA.

			Quan	tity.	Value. (£'000.)			
Year.			Flor	our.				
		Wheat.	As Flour. As Wheat. (b)		Total as Wheat.	Wheat.	Flour.	Total.
		'000	Tons.	,000	,000		:	
		bushels.	(2,000 1b.)	bushels.	bushels.			
Average, 193	34-35	!					!	
to 1938-39		76,473	c 647,073	29,959	106,432	14,813	(c)5,058	19,871
1952-53		59,508	d 872,313	40,388	99,896	51,970	'd 37,548	89,518
1953-54		36,058	785,520	36,370	72,428	30,957	30,602	61,559
1954-55		63,133	683,520	31,647	94,780	45,222	21,184	66,406
1955-56		71,041	684,229	31,680	102,721	46,456	20,273	66,729
1956-57		91,107	766,655	35,496	126,603	60,058	22,234	82,292
			1	i	1		1	

<sup>(</sup>a) White flour, sharps and wheatmeal for baking. (b) One ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat. (c) Excludes sharps and wheatmeal for baking. (d) Excludes sharps.

#### WHEAT: EXPORTS FROM AUSTRALIA.

#### ('000 Bushels.)

Country to which Exported.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.		
United Kingdom	1	45,195	21,956	11,520	19,134	20,442	26,699
India		1,662	10,767	7,038	17,416	5,562	23,274
New Zealand	!	1,537	5,808	7,753	7,979	9,067	10,915
Pakistan		(a)	3,580	1,274			6,195
Other Commonwealth Country	ries i	7,863	7,180	4,131	6,738	6,235	5,727
Germany, Federal Republic	of	(b) 235	2,847	1,888	5,084	8,189	7,950
Japan	;	6,472	2,509	227	2,034	11,261	3,427
Other Foreign Countries		13,509	4,861	2,227	4,748	10,285	6,920
Total		76,473	59,508	36,058	63,133	71,041	91,107

<sup>(</sup>a) Included with India.

## FLOUR: EXPORTS FROM AUSTRALIA. (Tons of 2,000 lb.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1952–53. (b)	1953-54.	1954–55.	1955–56.	1956~57.
United Kingdom	142,912	139,947	65,659	80,832	67,136	80,735
Ceylon	16,915	261,846	222,512	112,484	115,899	181,137
Malaya, Federation of	63,309	65,101	72,376	88,546	81,740	71,963
Mauritius	10,992	25,684	32,192	20,102	12,659	27,660
Singapore	(c)	67,249	64,934	77,956	54,707	47,243
Other Commonwealth Countries	89,168	135,138	94,403	90,797	86,238	102,189
Indonesia	d 83,760	90,774	133,406	95,510	178,098	115,660
Sudan	12,181	11,797	5,777	20,580	14,415	28,762
Other Foreign Countries	227,836	74,777	94,261	96,713	73,337	111,306
Total	647,073	872,313	785,520	683,520	684,229	766,655

<sup>(</sup>a) Excludes sharps and wheatmeal for baking. (b) Excludes sharps. (c) Included with Federation of Malaya. (d) Netherlands East Indies.

<sup>(</sup>ii) Destination. (a) Wheat. The following table shows the exports of wheat to various countries for each of the five years ended 1956-57 and the average for the five years ended 1938-39.

<sup>(</sup>b) Pre-war Germany.

<sup>(</sup>b) Flour. The following table shows the exports of flour to various countries for each of the five years ended 1956-57, and the average for the five years ended 1938-39. The figures relate to exports of white flour, sharps and wheatmeal for baking.

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15. Stocks of Wheat and Flour.—Stocks of wheat and flour in terms of wheat held by each State at 30th November for the years 1939 and 1953 to 1957 are shown in the following table. These data relate to stocks held at mills, sidings, ports and depots as recorded by the Australian Wheat Board.

# WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT): STOCKS AT 30th NOVEMBER.(a)

#### ('000 Bushels.)

30th	Novem	ber—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1939			6,674	4,702	549	6,134	2,513	241	20,813
1953		•••	9,888	11,550	2,237	7,576	6,307	188	37,746
1954		• • •	26,458	26,937	2,487	15,413	23,499	125	94,919
1955			17,483	28,434	4,049	18,470	26,278	256	94,970
1956			21,365	22,821	1,973	15,223	22,534	265	84,181
1957			8,982	13,304	203	13,732	5,056	215	41,492

(a) One ton of flour is treated as equivalent to 46.3 bushels of wheat.

16. Bulk Handling and Storage of Wheat in Australia.—(i) Description and Development of the Bulk Handling System. A detailed description of the bulk handling system including its advantages and disadvantages compared with other methods of handling appeared on pp. 954–8 of Official Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, but until recently no efforts were made to introduce such a system in the other States.

Late in 1953, it became clear that Australia could not clear its stocks of wheat as quickly as in past years and in April, 1954, the Commonwealth Government arranged to finance the construction of additional storage space in New South Wales, Victoria and South Australia (Western Australia and Queensland were later included in the scheme). The Australian Wheat Board was authorized to control the expenditure of the money provided, amounting to  $\mathfrak{L}3\frac{1}{2}$  million.

- (ii) Bulk Handling and Storage in the States. Particulars of the operation of the bulk handling and storage system and projected extensions in the States concerned are set out below:—
- (a) New South Wales. Bulk handling facilities are operated by the Grain Elevators Board of New South Wales. The capacity of storages in the country for the 1957-58 season totalled 57,558,000 bushels and comprised 180 elevators (25,228,000 bushels), 4 subterminals (16,500,000 bushels), 71 bulkheads (7,130,000 bushels) and 12 bulk depots (8,700,000 bushels). In addition, port terminal facilities provided storage for 4,200,000 bushels at Newcastle and 7,500,000 bushels at Sydney, making a total capacity of 69,258,000 bushels for the State.

The Grain Elevators Board has advanced its plans for major works, i.e., for supplementary bins to the existing small capacity silos, as well as for new installations to replace temporary bulkheads in certain areas.

(b) Victoria. The Victorian Grain Elevators Board operates 186 elevators with a storage capacity of 25,874,000 bushels and a terminal elevator at Geelong with a capacity of 4,100,000 bushels. Storages for 18,000,000 bushels, adjacent to the permanent terminal, have been constructed at Geelong.

Temporary measures for extending bulk handling facilities have been adopted and subterminals constructed or acquired at Dunolly, Murtoa and Warracknabeal with a capacity of 22,000,000 bushels. Temporary bulkheads have also been used and in the 1957-58 season there were 23 in use with a total storage for 2,684,000 bushels.

In 1957-58, 98.5 per cent. of the total crop was received in elevators, compared with 98.6 per cent. in 1956-57 and 28.1 per cent. in 1939-40.

(c) Queensland.—Bulk storages in this State are controlled and operated by the State Wheat Board. The capacity in the country for the 1957-58 season totalled about 2,500,000 bushels.

Expansion of bulk facilities is proceeding. Several bagged wheat sheds are being converted into bulkhead type storages and a further 1,000,000 bushels capacity will be available in temporary steel mesh bins being erected.

A new bulk terminal storage is being erected at Pinkenba with a capacity of 1,300,000 bushels and is expected to be completed towards the end of 1958.

(d) South Australia. Since the formation of the South Australian Co-operative Bulk Handling Ltd. in 1955, steady progress has been maintained in the expansion of the system.

The present capacity of bulk storages is 1,000,000 bushels at Ardrossan; 1,500,000 at Wallaroo and 5,660,000 in the country; a combined total of 8,160,000 bushels.

For the 1957-58 season, wheat was received in bulk at 13 installations in the country in addition to the terminals at Ardrossan and Wallaroo. To date, the only bulk shipping facility to operate is that at Ardrossan, but it is expected that the Wallaroo shipping facility will be completed in July 1958.

At Port Lincoln, a terminal storage of 1,250,000 bushels and a shipping facility are under construction, and two country storages are also being erected on Eyre Peninsula, each with a capacity of 400,000 bushels in readiness for the 1958–59 season. For the 1958–59 season, the South Australian Co-operative Bulk Handling Ltd. will have an initial capacity to handle 10,210,000 bushels of wheat in bulk.

(e) Western Australia. The bulk handling system is operated by Co-operative Bulk Handling Ltd., which is a company controlled by growers. In 1957-58, there were 280 sidings equipped with bulk handling facilities and 29,280,000 bushels, which comprised the whole of the marketable harvest, were received.

The system of storage at country stations in Western Australia comprises fixed installations of galvanized iron bins, and iron and timber horizontal bulkheads. In addition, a type of temporary roofed bulkhead, consisting of timber and iron is used. This latter type of storage can be transferred to suit operational requirements, and therefore lends flexibility to the system. Terminal installations comprise concrete silos, and timber and iron horizontal bulkheads, with the exception that one port is equipped with iron silos instead of concrete. Plans are in hand to increase the number of vertical concrete cell type storages at the main ports.

- (f) Tasmania. In order to meet the change to bulk handling of wheat in the mainland exporting States, the Tasmanian Government is constructing three import grain elevators, one each at Hobart, Launceston and Devonport. Each elevator will have a capacity of 300,000 bushels.
- 17. World Area and Production of Wheat.—The details in the following table of the world area and production of wheat by principal countries and by continents have been compiled from official sources so far as they are available, but more particularly from the records published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service. The harvests shown for countries in the Northern Hemisphere are those reaped during the period March to October whilst those for the Southern Hemisphere cover the period November to February following.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES.

		Area.(a)		I		Yield per Acre.			
Continent and Country.	Average 1935-39.	1955.	1956.( <i>b</i> )	Average 1935-39.	1955.	1956.(b)	Aver- age 1935- 39.	1955.	1956. (b)
	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
North America— Canada United States	25,595 57,293			312,399 758,629		573,060 997,207		22.9 19.8	25.2 20.0
Total(c)	84,170	72,000	74,950	1,086,000	1,486,000	1,612,000	12.9	20.6	21.5

See next page for footnotes.

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WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES—continued.

		Area.(a)		I	Production		Yiel	d per A	cre.
Continent and Country.	Average 1935-39.	1955.	1956.(b)	Average 1935-39.	1955.	1956.(b)	Aver- age 1935- 39.	1955.	1956. (b)
F	'000 acres.	'000 acres.	'000 acres.	'000 bushels.	'000 bushels.	'000 bushels.	bus.	bus.	bus.
Europe— France Italy Spain	12,560 12,577 (d)11,253	11,252 12,300 10,536			380,830 349,210 150,000	240,000 318,980 155,000		33.8 28.4 14.2	34.5 25.9 14.6
Total(c) .	74,850	71,880	67,400	1,600,000	1,820,000	1,600,000	21.4	25.3	23.7
U.S.S.R.	104,000	(e)	(e)	1,240,000	(e)	(e)	11.9	(e)	(e)
Africa—Total(c)	13,850	16,870	17,610	143,000	193,000	215,000	10.3	11.4	12.2
Asia— China	(f)25,460	(e) 27,517 10,653 17,445	30,386 11,298	117,000	(e) 327,710 118,420 253,530	(e) 319,910 124,470 235,160			(e) 10.5 11.0 13.0
Total(c)	114,190	137,970	142,870	1,558,000	1,875,000	1,885,000	13.6	11.6	13.2
South America— Argentina	15,834	10,037	13,325	221,769	192,900	260,880	14.0	19.2	19.6
Total(c)	20,490	17,030	20,290	281,000	304,000	362,000	13.7	17.9	17.8
Oceania— Australia	13,128	10,166	7,874	169,744	195,443	134,455	12.9	19.2	17.1
Total(c)	13,349	10,234	7,936	176,873	198,093	137,155	13.2	19.4	17.3
World Total(c)	424,900	475,990	484,180	6,085,000	7,425,000	7,810,000	14.3	15.6	16.1

<sup>(</sup>a) Figures refer to harvested areas as far as possible. (b) Preliminary. (c) Totals (estimates) include allowances for any missing data for countries shown and for other producing countries not shown. (d) 1935 only. (e) Not available. See footnote (c). (f) Average of less than five years.

18. Exports—Principal Countries.—The following table shows the quantities of wheat exported from the chief exporting countries for the period 1934-38 and the years 1955 and 1956 according to statistics recently published by the Food and Agriculture Organization of the United Nations, and the United States Office of Foreign Agricultural Service.

While Australia's production of wheat averages about 3 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. During the five years 1934-38, Australia's share of world wheat exports was 16 per cent., but in 1955 and 1956, the proportion had fallen to a little more than 10 per cent.

WHEAT(a): EXPORTS, PRINCIPAL COUNTRIES.

			Average,	1934–38.	19:	55.	19:	56.
Export	ing Country.		Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
			'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
Canada	٠.		175,294	27.6	228,652	24.8	341,085	28.8
Argentina			122,740	19.3	136,464	14.7	94,356	8.0
Australia			102,406	16.1	93,548	10.1	131,209	11.0
United States of	of America		46,274	7.3	271,530	29.3	465,497	39.3
U.S.S.R. (Russ	sia)		26,631	4.2	(b) 18,739	2.0	(c)	(c)
France			18,316	2.9	107,546	11.6	52,432,	4.4
All other	* •	••	143,993	22.6	69,445	7.5	100,382	8.5
Total	••		635,654	100.0	925,924	100.0	1,184,961	100.0
World Product	ion (mil. bus	i.)	(d) 6,08	35	7,42	25	7,81	0
Proportion of duction to			2.		% 2.	6	% 1.	

19. Imports-Principal Countries.-The principal importers of wheat, together with quantities imported, for the periods indicated, are shown in the following table:-

WHEAT(a): IMPORTS, PRINCIPAL COUNTRIES.

			Average,	1934–38.	195	5.	19	56.
Importing Co	untry.		Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.	Quantity.	Proportion of World Total.
			'000 bushels.	%	'000 bushels.	%	'000 bushels.	%
United Kingdom			208,737	33.8	185,514	20.2	197,677	17.9
Brazil			36,387	5.9	68,158	7.5	55,004	5.0
Italy			26,043	4.2	27,998	3.1	23,662	2.2
Germany, Federal R	epublic.	c of	(b)25,606	(b) 4.1	89,469,	9.8	109,163	9.9
Netherlands			22,593		30,901		34,391	3.1
Japan			11,552	1.9	85,721	9.4	86,015	7.8
India and Pakistan			1,826	0.3	16,314	1.8	43,247,	3.9
Egypt			588		514	0.1	(c)	(c)
All other	• •	• • •	283,950	46.0	408,475	44.7	554,968	50.2
Total			617,282	100.0	913,064	100 0	1,104,127	100.0

<sup>(</sup>a) Includes flour expressed in terms of wheat. (b) Pre-war Germany. (c) Included in "All Other."

OATS.

# § 5. Oats.

1. Area, Production and Yield per Acre.—Oats are usually next in importance to wheat amongst the grain crops cultivated in Australia, but while wheat grown for grain in 1956-57 accounted for 40.6 per cent., oats grown for grain represented only 13.2 per cent. of the area of all crops. The area, production and yield per acre of oats for the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table:—

OATS FOR	GRAIN:	AREA.	PRODUCTION	AND	YIELD PER	ACRE.

Season.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
	<u> </u>		Area ('0	00 Acres	s).			<u>'</u>
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	229 730 507 657 902	478 756 584 644 871	5 57 13 36 36	282 369 280 340 425	369 832 733 874 1,091	30 20 20 23 29	  	1,393 2,764 2,137 2,574 3,354
to 1955-56	564 420	619 613	26 28	318 427	681 1,051	22 17	••	2,230 2,556
		PRODI	UCTION ('	000 Busн	IELS).(a)			<u>'</u>
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 1955-56 1956-57	3,578 12,326 8,533 7,667 16,537 8,697 6,274	5,750 12,599 9,852 10,021 14,858 10,550 9,555	68 1,303 199 597 743 463 553	2,233 6,666 4,321 4,508 7,280 4,600 8,318	3,973 10,440 9,590 9,585 16,516 8,507 10,441	831 286 461 452 548 456 253	4 3 5 4 5 6 2	16,437 43,623 32,961 32.834 56,487 33,279 35,396
		YIELD	PER AC	RE (BUSH	ELS).(a)			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47 to 1955-56	15.7 16.9 16.8 11.7 18.3 16.3	12.0 16.7 16.9 15.5 17.1 17.0	12.8 23.1 14.8 16.4 20.8 17.8 20.1	7.9 18.0 15.4 13.3 17.1 14.4 19.5	10.8 12.5 13.1 11.0 15.1 12.5 9.9	28.2 14.3 22.9 20.0 19.1 20.7 15.3	22.4 17.2 18.6 20.4 17.1 14.9 12.5	11.8 15.8 15.4 12.8 16.8 14.9 13.8

(a) 40 lb. per bushel.

A graph showing the production of oats appears on p. 865.

Due to the extremely wet conditions early in the season, which affected most crops in the Eastern States during 1956-57, the area and production of oats were markedly smaller than in 1955-56, particularly in New South Wales.

The production of oats for grain in Australia during 1955-56 was a record (56,487,000 bushels). Pre-war the average was approximately 16,000,000 bushels whilst the crop in 1956-57 was 35,396,000 bushels.

During the five seasons ending 1955-56, an average of 8.4 million bushels were exported; 1.9 million bushels were used in factories for oatmeal; and 7.5 million bushels were used for seed purposes; leaving a balance of 22.3 million bushels for stock feed (principally-unprocessed) and carry-over.

The largest yield per acre recorded for Australia in the ten years ended 1956-57 was that of the season 1947-48, amounting to 19.3 bushels per acre, this being the highest yield since 1920-21. The yield per acre recorded in the abnormally dry season 1944-45, namely 4.4 bushels, is the lowest ever recorded for Australia.

2. Price of Oats.—The average wholesale price in the Melbourne market for oats of good milling quality in 1956-57 was 7s. 4d. per bushel. This represents an increase of 8.0 per cent. on the price in 1955-56 (6s.  $9\frac{1}{2}$ d.) and an increase of 112.5 per cent. on the price in 1938-39 (3s.  $5\frac{1}{2}$ d.).

3. Value of Oat Crop.—The estimated gross value of the oat crop in each State for the 1955-56 season and the value per acre were as follows:—

OATS:	VALUE	OF	CROP.	1955-56.
-------	-------	----	-------	----------

Particulars.	N.S.W. Vic.	Q'land.	S. Aust.	W. Aust. Tas.	A.C.T.	Aust.
Aggregate value £'000	6,615	427	2,061	5,350 247	3 £6 7 9	19,373
Value per acre	£7 6 8 £5 7 3	£11 17 3	£4 17 0	£4 18 1 £8 12		£5 15 6

4. Exports.—The production of oats in Australia is sufficient to admit of a regular export trade. The quantities and values of oats exported from Australia during the years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 are shown hereunder:—

OATS: EXPORTS, AUSTRALIA.

Par	Particulars.   Average, 1934-35 to 1938-39.			1953–54.	1954–55.	1955–56.	1956–57.
Quantity	'000 bus.	286	11,846	3,275	2,872	9,608	8,165
Value	£'000	36	4,851	1,219	1,376	3,578	2,972

In 1956-57, the principal countries of destination of the exports were the Federal Republic of Germany, the Netherlands, the United Kingdom and New Zealand. Imports of oats are not recorded separately.

- 5. Oatmeal, etc.—The production of oatmeal amounted in 1956-57 to 15,430 tons equivalent to about 1,728,000 bushels of oats, or about 4.9 per cent. of the total production.
- 6. World Production.—The world's production of oats for the year 1957, according to preliminary details released by the United States Department of Agriculture, amounted to 4,050 million bushels, harvested from 121.4 million acres, representing an average yield of 33.4 bushels per acre. This compared with the estimated production in the previous year of 4,275 million bushels from an area of 122.6 million acres giving an average yield of 32.3 bushels per acre. The world's average production, for the years 1934 to 1938 amounted to 3,588 million bushels from 143 million acres giving an average yield of 25.09 bushels per acre.

# § 6. Maize.

- 1. States Growing Maize.—Maize is grown for grain chiefly in Queensland and New South Wales, the area so cropped in these States during the 1956-57 season being 178,831 acres, or 98 per cent. of the total for Australia. In all States except South Australia, the crop is grown to some extent for green fodder, particularly in connexion with the dairying industry.
- 2. Area, Production and Yield per Acre.—Although maize for grain is grown extensively in other countries, the area sown to maize for grain in Australia has averaged only 188,710 acres during the ten years ended 1955-56. Compared with the previous year, the area in 1956-57 increased by 14,135 acres but it was still considerably less than the comparatively large areas of 414,914 and 400,544 acres sown in 1910-11 and 1927-28 respectively.

There has been a considerable increase in recent years in the growing of maize from hybrid strains of seed. Varieties have been developed which are capable of producing yields per acre considerably in excess of the older open pollinated types. The expansion in areas sown to hybrid maize necessitates a parallel development in the specialized industry of growing hybrid strains for seed.

The area, production and yield per acre of maize for grain in each State for the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are given in the following table. Separate details for hybrid and other varieties are shown for New South Wales, Victoria and Queensland for 1956-57.

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
	·'		AREA	(ACRES).				
Average, 1929-30	1		1	i	1			
to 1938–39	114,881	18,413	161,380	12	15		7	294,708
1952-53	60,647	5,175	108,230		13	9	• •	174,074
1953–54	58,556	5,613	114,735	٠٠ ۾	21	64 8		178,989
1954-55	50,617	4,379	114,673	2 6	8 6	65		169,687
1955-56 Average, 1946-47	55,678	3,535	108,146	9		69	4	o 167,441
	68,009	5,458	115,176	2	45	19		188,710
to 1955-56	00,003	3,430	113,170		73	,	•	100,710
Hybrid	34,874	2,214	58,789	h .		_		
Other		7513		} 6	10	2	•••	181,576
	<u>-</u>	Prod		000 Bush	IELS).(b)			
Average, 1929-30	1 1		!	1	1 1			ī <b>-</b>
to 1938-39	3,072	631	3,525	١	l l			7,228
1952-53	2,113	204	2,650					4,967
1953-54	1,737	298	3,042			2		5,079
1954-55		229	3,080	• ••	i		••	5,076
1955-56	1,868	176	2,710		!	1	• • •	4,755
Average, 1946-47	2016	240	2,922	i	1 .	'	'	e 170
to 1955-56 1956-57—	2,015	240	2,922		1 1	• • •	• • •	5,178
Hybrid	1,359	68	2.005	ĺn			!	
Other	احمماا	13	1,463		l i	• • •		5,494
	3501		<del></del>	RE (BUSH	IELS).(b)			
Average, 1929-30	1 1		i	i ·				
to 1938-39	26.7	34.3	21.8	29.8	10.0		8.5	24.5
1952-53	34.8	39.3	24.5		22.6	12.0		28.5
1953-54	29.7	53.1	26.5		12.9	29.6		28.4
1954–55	34.9	52.3	26.9	1	9.8	21.6	i	29.9
1955-56	33.5	49.7	25.1	12.5	15.0	19.4	80.0	28.4
Average, 1946-47				,	]			
to 1955-56	29.6	44.0	25.4	10.3	10.4	23.5	23.7	27.4
1956-57	1			_				•
Hybrid	39.0	30.9	34.1	8.3	12.0	30.0		30.3
Other	31.9	24.2	21.9	.,	1			

(a) Includes 3 acres in the Northern Territory.

(h) 56 lb. per bushel.

The average yield for Australia for the ten-year period ended 1955-56 was 27.4 bushels per acre. Among principal producing countries during 1956, the United States of America averaged 45.4 bushels per acre and Italy 40.1 bushels.

3. Price of Maize.—The average wholesale price of maize in the Melbourne market in 1956-57 was 17s. 0\frac{1}{2}d. per bushel compared with 16s. 5d. in 1955-56. In 1938-39, the comparable price for maize of similar quality was 5s. 2\frac{1}{2}d.

4. Value of Crop.—The estimated gross value of the crop in each State for the 1955-56 season and the value per acre were as follows:—

MAIZE FOR GRAIN: VALUE OF CROP. 1955-56.

MAILE FOR GRAINT. TIESE OF CROT, 1965 St.										
Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.		
Aggregate value Value per acre	£'000		135 £38 3 9	1,809 £16 14 6		::	£30 15 5	3,464 £20 13 9		

5. Exports of Maize and Maize Products.—Details of exports of maize for the five years ended 1956-57 compared with the average of the five years ended 1938-39 are shown below.

BALLTTE .	EVDODTE	AUSTRALIA.
MAIZE:	EXPURIS.	AUSTRALIA.

	Particula	Particulars.		1952-53.	1953–54.	1954–55.	1955–56.	1956–57.
Quantity		'000 bus.	57	782	504	458	185	32
Value		. £'000	9	703	353	301	119	26

Imports of Maize are not recorded separately.

Exports of cornflour, which prior to the 1939-45 War were very small, increased considerably during the war years, the principal country of destination being New Zealand. In 1956-57, 1,585,000 lb., valued at £50,102, were exported, compared with an annual average of only 37,000 lb. during the five years ended 1938-39. It should be noted that these figures include some quantities of "cornflour" made from wheat. Imports of cornflour into Australia are not recorded separately.

6. World Production.—According to preliminary details released by the Food and Agriculture Organization of the United Nations, world production of maize in the year 1956, excluding that of the U.S.S.R., amounted to 6,397 million bushels, harvested from 232 million acres, giving an average yield per acre of 27.6 bushels. This compared with production in the previous year of 6,248 million bushels from 236 million acres, yielding an average per acre of 26.5 bushels. Production (including that of the U.S.S.R.) over the years 1934 to 1938 averaged 4,525 million bushels from 218 million acres, giving an average yield per acre of 21.0 bushels.

The United States of America is the most important maize-producing country in the world and during the three years ended 1956 the area sown to maize in that country averaged 79 million acres or 34 per cent. of the world total. During the same period, production averaged 3,246 million bushels or about 53 per cent. of the world total. These figures are not strictly comparable with those for other countries included in the abovementioned world totals as the area, and an estimate of grain equivalent, of maize used as green fodder are included. In recent years, maize grain actually harvested in the United States has amounted to about 90 per cent. of the total crop.

A graph showing the production of maize in Australia appears on p. 865.

# § 7. Barley.

1. Area, Production and Yield per Acre.—The area sown to barley for grain expanded considerably during the ten years preceding the 1939-45 War—from 383,000 acres in 1930-31 to 836,000 acres in 1939-40. This increase was followed by a decline to 443,000 acres in 1943-44, but the area sown has increased in succeeding years, and in 1956-57 reached the record level of 2,093,000 acres. Victoria was originally the principal barley-growing State, but since 1913-14 its place has been taken by South Australia which accounted for 58 per cent. of the Australian acreage in 1956-57. There has been a substantial increase in the acreage sown in most States in recent years particularly in Western Australia and Queensland. Small areas of barley are sown for hay, and larger quantities are sown for green forage but these are not included in this section. The production of barley for grain in Australia in 1956-57, at 49,278,000 bushels was the highest ever recorded. The area, production and yield per acre of barley for grain in the several States for the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table:—

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
			Area ('0	00 Acres	).			
Average, 1929–30 to 1938–39  1952–53  1953–54  1954–55  1955–56 Average, 1946–47 to 1955–56	11 18 32 37 54	107 235 375 280 309	8 72 56 87 146 49	331 937 1,122 1,020 1,042	31 107 209 260 337	7 8 9 7 6	  	49: 1,37 1,80: 1,69: 1,894
1956-57— Malting (2-Row) Other (6-Row) Total	31 13 44	325 20 345	114 17 131	1,150 72 1,222	79 265 344	6 1 7		1,70: 38: 2,09:

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BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE-continued.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
		Prod	UCTION ('	000 Bush	ELS).(a)			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47 to 1955-56	173 341 680 500 1,120	1,976 4,734 7,932 4,946 6,877 4,694	132 2,109 1,139 2,573 4,216	5,714 25,902 28,492 18,376 24,598	371 1,742 2,733 2,805 4,653	186 217 296 200 191		8,553 35,045 41,272 29,400 41,655 26,193
Malting (2-Row) Other (6-Row) Total	566 215 781	7,164 385 7.549	2,594 366 2,960	32,393 1,610 34,003	936 2,814 3,750	217 18 235		43,870 5,408 49,278
		YIELD	PER ACI	RE (BUSHI	ELS).(a)			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 4verage, 1946-47 to 1955-56	16.6 19.4 21.4 13.6 20.7	18.4 20.2 21.2 17.6 22.2	16.7 29.3 20.3 29.5 29.0 25.7	17.3 27.6 25.4 18.0 23.6	11.9 16.3 13.1 10.8 13.8	25.2 27.0 31.4 27.5 30.2 28.7	18.9	17.3 25.5 22.9 17.4 22.0 20.8
Malting (2-Row) Other (6-Row) Total	18.5 15.9 17.7	22.0 19.0 21.9	22.8 20.8 22.5	28.2 22.6 27.8	11.9 10.6 10.9	33.1 34.0 33.2		25.7 13.9 23.5

<sup>(</sup>a) 50 lb. per bushel.

For Australia as a whole, 81 per cent. of the area of barley for grain in 1956-57 was sown with malting or 2-row barley while the remainder consisted of 6-row, or feed, varieties. The proportion, however, varied considerably in the several States. The consumption of barley during the season 1955-56 was as follows:—malt works, 7,829,000 bushels; flour and other grain mills, 592,000 bushels; distilleries, 42,000 bushels; exports, 28,246,000 bushels; leaving a balance of 4,946,000 bushels for feed, seed and other purposes.

The following table sets out the acreage and production of malting and other barley in Australia during the seasons 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56.

BARLEY, MALTING AND OTHER: AREA AND PRODUCTION, AUSTRALIA.

Season.	Area.			Production.			Yield per Acre.		
	('000 Acres.)			('000 Bushels.)			(Bushels.)		
geason.	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).	Other (6-row).	Total.	Malting (2-row).		Total.
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average 1946-47	428 1,123 1,482 1,391 1,510	67 254 321 300 384	495 1,377 1,803 1,691 1,894	7,480 29,633 35,923 25,622 35,470	1,073 5,412 5,349 3,778 6,185	8,553 35,045 41,272 29,400 41,655	17.5 26.4 24.2 18.4 23.5	16.0 21.3 16.7 12.6 16.1	17.3 25.5 22.9 17.4 22.0
to 1955–56	1,067	193	1,260	22,993	3,200	26,193	21.6	16.6	20.8
1956–57	1,705	388	2,093	43,870	5,408	49,278	25.7	13.9	23.5

A graph showing the production of barley appears on p. 865.

During the last ten-year period shown, the average area of barley of the malting, or 2-row, class was nearly six times the corresponding figure for barley of the 6-row, or feed, class. The yield per acre for malting barley was 30 per cent. higher than that for 6-row barley.

2. Australian Barley Board.—Following the outbreak of war in 1939, the Australian Barley Board, representative of the whole industry, was formed, and the Commonwealth

Government acceded to its request to acquire the entire 1939-40 barley crop, which was placed under the control of the Board. A pool was established from which proceeds were distributed with appropriate margins for different grades of barley.

The Board was responsible for the marketing and storage of barley, and, like the Australian Wheat Board, appointed licensed receivers to receive grain on its behalf and to act as agents for all local and oversea sales.

Following the decision of the Commonwealth Government not to acquire barley in the smaller producing States after 1941-42, the Governments of Western Australia and Oueensland established State Barley Boards to control marketing in these States.

The Commonwealth Government did not acquire barley after the 1947-48 crop, and the Victorian and South Australian Governments formed a joint board under the same name as the former Commonwealth board to market the 1948-49 and subsequent crops of the two States. Details of the seasons from 1951-52 to 1956-57 are shown in the table below.

# AUSTRALIAN BARLEY BOARD: BARLEY RECEIVED, SOLD, ETC.

Pool.		Quantity Received.	Quantity. Sold.(a)	Total Advances made per Bushel on 2-row No. 1 Grade less freight.	Total Net Payments to Growers.
		'000	'000		
		bushels.	bushels.	s. d.	£
No. 13 (1951-52 Crop)		19,340	19,488	15 8.28	14,563,936
,, 14 (1952–53 ,, )		29,087	29,103	16 2.01	21,359,168
15 (1052 54 )		34,430	34,586	10 4.101	15,417,374
,, 16 (1954–55 ,, )		20,679	20,709	12 10.92	11,953,430
,, 17 (1955–56 ,, )		29,357	29,454	10 3.441	12,990,173
10 (1056 57 )		39,029	38,974	(b) 9 3	15,088,785

<sup>(</sup>a) Includes surplus in out-turn. (b) As at 31st December, 1957. At that date it was estimated that the amount still to be paid to growers was 10.518d. per bushel.

- 3. Prices.—The average wholesale price for 2-row English malting barley in the Melbourne market during 1956-57 was 14s. 1d. compared with 14s. 7½d. in 1955-56 and 3s. 5¾d. in 1938-39.
- 4. Value of Barley Crop.—The estimated gross value of the barley crop in each State for the 1955-56 season and the value per acre are shown in the following table:—

# BARLEY FOR GRAIN: VALUE OF CROP, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Aggregate value £'000 Value per acre	£13 7 0		1,913 £13 3 0	12,613 £12 2 0	£6 7 0	151 £23 18 0	20,994 £11 2 0

5. Exports.—Exports of barley during the five years ended 1956-57 averaged 23,124,000 bushels, South Australia being the principal exporting State and Japan, the United Kingdom and the Federal Republic of Germany the principal countries to which barley was shipped. Particulars of Australian exports for the years 1952-53 to 1956-57 together with the average for the five years ended 1938-39 are shown in the following table:—

BARLEY: EXPORTS, AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954-55.	1955–56.	1956-57.
Quantity	'000 bus.	3,279	22,239	26,949	18,867	21,065	26,501
Value	£'000	483	19,245	14,870	10,357	10,471	12,745

Imports of barley are not recorded separately.

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In addition to exports of barley grain, there is also an export of Australian pearl and Scotch barley, the total for 1956-57 amounting to 354,724 lb., valued at £12,221, consigned mainly to Malaya.

6. Malt.—(i) Production. Details of the quantity of grain used and the production of barley malt are given in the following table:—

BARLEY	MALT:	GRAIN	USED	AND	MALT	PRODUCED.	AUSTRALIA.
Direction	WILLIAM .	OWNE	COED		1714	TRODUCED	. AUSTRALIA.

Particulars.	1938–39.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.				
Grain used'000 bus. Malt produced	3,730	6,063	6,505	7,118	7,629	7,803				
'000 bus.(a)	3,621	6,073	6,620	7,078	7,517	7,782				

(a) 40 lb. per bushel.

- (ii) Exports. Since 1952-53, the production of malt in Australia has been sufficient to meet local requirements and to provide a margin for export. Exports amounting to 451,687 bushels (value £502,046) and 748,598 bushels (value £764,630) were recorded in 1955-56 and 1956-57 respectively.
- 7. World Production.—In comparison with the barley production of other countries, that of Australia is extremely small. The main producers in 1956 were the United States of America, France and Canada. China is also normally a major producer, but details for 1956 are not available. Australian production in that year was only a little more than one per cent. of the world total.

According to preliminary results compiled by the Food and Agriculture Organization of the United Nations, world production of barley in the year 1956, excluding that of the U.S.S.R., amounted to 3,316 million bushels harvested from 138.1 million acres, equivalent to a yield per acre of 24.0 bushels. This compared with the production of 3,051 million bushels in the previous year from 136 million acres, giving a yield per acre of 22.4 bushels. Production, including that of the U.S.S.R., over the years 1934–38 averaged 2,273 million bushels from 114.6 million acres, representing an average yield of 19.8 bushels per acre.

#### § 8. Rice.

The rice-growing areas of the world are confined almost entirely to Asia although rice is grown in limited quantities in other countries. In Australia, rice was first cultivated at the Yanco Experimental Farm in New South Wales, but it was not grown commercially until 1924–25 when 16,240 bushels were produced from 153 acres. Favoured by high average yields and protected by tariff, rice culture made rapid progress in the Murrumbidgee Irrigation Area until local requirements were met and a small surplus became available for export. The acreage to be sown in this area is controlled, as the quantity of water available is limited.

The area sown in 1956-57 was a record at 50,477 acres, the previous highest area being 41,182 acres in 1943-44. Production was 4,262,000 bushels in 1956-57 which was 818,000 bushels less than the record production of 5,080,000 bushels in 1954-55.

A graph showing the production of rice appears on p. 865.

The bulk of Australia's exports of rice in 1956-57 was shipped to Papua and New Guinea, the Pacific Islands, the United Kingdom and New Zealand. During the years prior to 1938-39 exports were largely to the United Kingdom.

Details relating to area, production and trade for the years 1952-53 to 1956-57, compared with the averages for the years 1934-35 to 1938-39, are shown in the following table:—

	No. of Hol-		Production (Paddy Rice).		(D-14-, D:)		Average Yield		orts.	Exports.	
Season.	dings Growing Rice. (b)	Area.	Quan- tity.	Gross Value. (c)	(Paddy) per Acre.	Un- cleaned.	Cleaned.	Un- cleaned.	Cleaned.		
Average, 1934–35 to 1938–39 1952–53 1953–54 1954–55 1955–56	(e) 313 496 539 573 620 652	Acres.  22,823 34,519 38,909 38,690 41,182 50,477	7000 Bushels. (d) 2,274 3,964 4,069 5,080 4,725 4,262	£'000. 450 3,338 3,197 3,430 3,405 3,069	Bushels. (d) 99.7 114.8 104.6 131.3 114.7 84.4	Cwt. 1,896 121 (5) (5)	Cwt. 34,171 1,985 (f) (f)	Cwt. 8,354 1,898 16,748 55,867 179,297 177,123	Cwt. 242,724 475,739 692,222 552,065 678,929 408,634		

<sup>(</sup>a) Rice-growing in Australia has been practically confined to New South Wales with very small acreages only being sown in Queensland, Western Australia and the Northern Territory in recent seasons. (b) Twenty acres or more in area. (c) Excludes the value of straw. (d) Forty-two lb. per bushel. (e) 1938-39 figure, previous years not collected. (f) Not available.

In 1956, the Commonwealth Government entered into an agreement for the development of large scale rice-growing in the Northern Territory. The agreement, which was made with a company financed by American and Australian interests, granted a 30 year lease over 750,000 acres of sub-coastal plains east of Darwin and provided for the development of 500,000 acres of land for rice-growing within 15 years.

# § 9. Sorghum for Grain.

The growing of sorghum for grain on an extensive scale is a recent development in Australia. No details of the area and production of this cereal are available prior to 1939-40, but the output was of little importance. The climatic conditions of Queensland and northern New South Wales are particularly suited for the growing of sorghum and so far, development has been restricted mainly to these areas, and more particularly to Queensland which accounts for the greater portion of the area sown. The grain produced is fed to livestock and has become an important source of supply for supplementing other coarse grains for the feeding of livestock. Other sorghums are grown in Australia mainly as green fodder, hay and silage (sweet sorghums and Sudan grass) and for the production of brush for broom manufacture (broom millet). Particulars of the area and production of sorghum grown for grain are given in the following table.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE, AUSTRALIA.

Season.			Area.		P	roduction.	(a)	Yield per Acre.(a)		
Scasor		N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.	N.S.W.	Q'land.	Total.
		Acres.	Acres.	Acres.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.	Bushels.
1939-40		(c)	4,397	(d)4,397	(c)	57,936	(d) 57,936		13.2	(d) 13.2
1952-53		4,982	190,619	195,601	88,905	3,239,133	3,328,038	17.9	17.0	17.0
1953-54		7,053	181,819	188,872	129,063	4,039,779	4,168,842	18.3	22.2	22.1
1954-55		13,069	202,532	215,688	272,604	5,082,762	5,356,335	20.9	25.1	24.8
1955-56		23,697	155,527	179,298	662,973	3,960,195	4,624,273	28.0	25.5	25.8
1956-57		34,585	171,705	206,659	671,331	4,243,227	4,919,247		24.7	23.8

<sup>(</sup>a) 60 lb. per bushel. (b) Includes small areas sown and quantities produced in other States. (c) Not available. (d) Queensland only.

# § 10. Potatoes.

1. Area, Production and Yield per Acre.—Victoria possesses particular advantages for the growing of potatoes, as the rainfall is generally satisfactory and the climate is unfavourable to the spread of Irish blight; consequently, the crop is widely grown. The principal areas of that State are the central highlands, and the south-western and Gippsland districts. Tasmania comes next in order of acreage sown, although the production exceeded that of Victoria in some of the war years. New South Wales occupies third place in acreage and production. The area of these three States accounted for 73 per cent. of the total for Australia in 1956-57.

The area sown, production and yield per acre of potatoes in each State during the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown hereunder:—

POTATOES: AREA, PRODUCTION AND YIELD PER ACRE.

POT	ATOES	: ARE	A, PRO	DUCTIO	ON AND	YIELD	PER A	CRE.	
Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
	,	<u>'</u>	<b>A</b> i	REA (AC	RES).			<u>'</u>	
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	19,199 18,119 16,513 13,897 13,270	54,658 52,851 52,745 44,075 37,020	11,039 11,641 9,382 9,621 10,202	5.042 9,231 7,023 6,037 5,373	4,953 8,079 8,068 7,563 6,826	34,684 35,347 34,524 26,209 20,842	(a) (a) (a) (a) 5	30 127 112 71 74	129,605 135,395 128,367 107,478 93,607
to 1955–56 1956–57	18,390 14,959	49,352 39,704	10,710 12,925	6,710 5,677	7,136 8,558	33,006 19,125	(a)	111	125,415 101,048
			Prod	UCTION (	(Tons).				
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55	44,122 51,132 58,046 47,700 44,162	150,238 133,148 213,714 206,577 163,239	18,100 35,051 32,628 30,651 37,561	20,202 43,880 45,044 38,362 36,460	23,410 52,759 53,708 43,565 42,079	94,500 114,500 144,300 101,000 77,930	(a) (a) (a) 4	63 663 514 330 439	350,633 431,133 547,954 468,189 401,870
Average, 1946-47 to 1955-56 1956-57	55,366	177,712 227,307	30,371 49,499	38,103 43,665	44,155 53,741	127,940 89,700	(a) 2	605 601	474,252 518,974
		··	YIELD 1	PER ACR	e (Tons)	•		·	
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56	2.30 2.82 3.52 3.43 3.33	2.75 2.52 4.05 4.69 4.41	1.64 3.01 3.48 3.19 3.68	2.50 4.75 6.41 6.35 6.79	4.73 6.53 6.66 5.76 6.16	2.72 3.24 4.18 3.85 3.74	(a) (a) (a) 0.80	2.09 5.22 4.59 4.65 5.93	2.71 3.18 4.27 4.36 4.29
Average, 1946-47 to 1955-56 1956-57	3.01 3.64	3.60 5.73	2.84 3.83	5.68 7.69	6.19 6.28	3.88 4.69	(a) 	5.45 6.01	3.78 5.14
	<del></del>		·	Not avail	able.	·	·		

(a) Not available.

After the outbreak of war in the Pacific in December, 1941, the area sown to potatoes increased rapidly and reached a maximum of 241,803 acres in 1944-45. Areas sown in subsequent seasons were considerably less, however, and showed a general decline to the figure for the 1956-57 season, 101,048 acres.

The average yield in Australia in 1956-57 was a record at 5.14 tons exceeding the previous record yield of 4.36 tons in 1954-55.

2. Gross Value of Potato Crop.—The estimated gross value of the potato crop of each State for the 1955-56 season and the value per acre are shown in the following table.

POTATOES:	VALIE	OF CROP.	1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000 Value per acre £	1,727 130	12,486,	1,653 162	-		,	31 415	25,895 277

- 3. Consumption.—The annual consumption of potatoes in Australia during each of the three years 1954-55 to 1956-57 amounted to 417,100 tons, 368,900 tons and 467,500 tons respectively, or 102.8 lb., 88.7 lb. and 109.8 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 53,500 tons annually over this period. Consumption during the three years ended 1938-39 averaged 318,500 tons (103.8 lb. per head of population) excluding 37,000 tons for seed. New South Wales, Queensland and, in some seasons, South Australia do not produce the quantities necessary for their requirements and must import from Tasmania and Victoria which have a surplus.
- 4. Marketing.—Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948 with the completion of sales of the 1947–48 crop.

Potato Marketing Boards were subsequently established in all States under separate State legislation. The Queensland Board was not extended when its term ended in 1954, and the New South Wales Board was voted out by growers in 1956. As the Victorian Board does not acquire the State crop, potato marketing is conducted now chiefly on an open marketing system.

5. Exports.—Prior to the 1939-45 War, small quantities of potatoes were exported, principally to the Pacific Islands and Papua. After the war, the export trade expanded considerably. It reached a peak in 1952-53 but then declined. Details showing exports for the years 1952-53 to 1956-57 and the annual average for the period 1934-35 to 1938-39 are given in the following table:—

POTATOES: EXPORTS, AUSTRALIA.

Pa	rticulars.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
Quantity		tons	1,884	37,570	4,010	3,473	3,478	3,958
Value		£'000	17	1,237	155	109	225	263

Imports of potatoes are not recorded separately.

### § 11. Onions.

1. Area, Production and Yield per Acre.—Australia's supply of onions comes chiefly from Victoria, which accounted for 48 1 per cent. of the total area and 49.5 per cent. of the quantity produced in 1956-57. Queensland came next with 34.8 per cent. of the area and 26.4 per cent. of the production, leaving a balance of 17.1 per cent. of area and 24.1 per cent. of production distributed among the remaining four States. The Victorian crop consists almost entirely of brown onions of good keeping qualities, and the bulk of the crop is grown in a small section of the Western Division of the State, where soil conditions have been found to be particularly suitable for onion growing on a commercial scale. Details of the area, production and yield per acre are given in the following table for the years 1952-53 to 1956-57 together with averages for the ten-year periods ended 1938-1939 and 1955-56.

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ONIONS: AREA, PRODUCTION AND AVERAGE YIELD.

Season.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
			Aı	REA (ACI	RES).	,		-	
Average, 1929-30	to				1				
1938–39		124	6,159	840	450	109	5	3	7,690
1952–53		363	3,866	2,813	552	414	49	9	8,066
1953-54		270	3,641	2,497	471	375	18	7	7,279
954–55		285	3,970	2,807	512	390	21	9	7,994
955-56		318	3,337	2,480	524	321	22	8	7,010
Average, 1946-47	to	1	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	,					1 .,
1955-56	. <b>.</b>	337	4.654	2,460	522	399	28	6	8,400
1956-57		532	4,503	3,258	608	428	28	5	9,362
<del></del>		·	Prod	UCTION	(Tons).				
1020 20		1							!
Average, 1929-30	to	254	25 42 .	2.540	2 414	014	20		12.50
1938–39	• •	354	35,431	2,548	3,414	814	20	11	42,59
1952–53		1,171	23,690	11,542	5,500	5,409	196	55	47,56
1953-54		1,325	22,783	11,957	4,975	4,626	87	14	45,76
1954-55		1,340	26,091	12,243	4,790	4,322	107	71	48,96
1955–56		1,759	20,299	9,157	4,911	3,547	140	42	39.85
Average, 1946-47	to	, , , , ,	,	, , , , , ,	.,	1 ' 1		1	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
1955–56		1,395	29,110	10,645	5,142	4,090	145	34	50,56
1956–57		2,669	26,811	14,279	5,611	4,606	114	32	54,12
		<u> </u>	YIELD :	PER ACR	e (Tons)	<u>                                     </u>			<u> </u>
Average, 1929-30	to		1	İ				1	
1938–39		2.85	5.75	3.03	7.59	7.47	4.00	3.67	5.5
.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	••				,	,		5.07	1 5.5
1952-53		3.23	6.13	4.10	9.96	13.07	4.00	6.11	5.9
1953–54		4.91	6.26	4.79	10.56	12.34	4.83	2.00	6.2
1954–55		4.70	6.57	4.36	9.36	11.08	5.10	7.89	6.1
1955–56		5.53	6.08	3.69	9.37	11.05	6.36	5.25	5.69
Average, 1946-47	to			"."	,		5.50		1 5.0
19.55-56		4.14	6.25	4.33	9.85	10.25	5.18	5.67	6.0
		5.02	5.95	4.38	9.23	10.76	4.07	6.40	5.7
1956–57	• •	3.02	3.93	4.50	3.23	10.70	4.07	0.40	3.7

2. Gross Value of Onion Crop.—The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1955-56 season:—

ONIONS: VALUE OF CROP, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value	107	940	532	211	175	6	2	1,973
Value per acre £	335	282	215	403	544	274	210	281

<sup>3.</sup> Consumption.—The annual consumption of onions in Australia averaged 47,715 tons or 11.5 lb. per head of population during the three years ended 1956-57, compared with 40,600 tons or 13.2 lb. per head during the three years ended 1938-39. These figures exclude an estimated wastage which averaged 2,500 tons and 2,100 tons respectively.

4. Exports.—Onions are the only root crop, other than potatoes, in which any considerable oversea trade is carried on by Australia. In 1956-57, exports amounted to 2,473 tons, valued at £114,106, and were shipped mainly to Singapore, New Caledonia, Fiji and Papua. The quantity of exports in 1955-56 was 981 tons, valued at £54,944. Imports of onions are not recorded separately.

# § 12. Hay.

1. General.—(i) Area and Production. As already stated, the chief crop in Australia, in terms of area, is wheat grown for grain. Up to and including 1946-47, hay was next, but in recent years it has dropped in relative importance. In 1956-57, the areas planted to green fodder, oats for grain and barley were larger than that sown to hay.

In 1956-57, the hay area represented 9.6 per cent. of the total area cropped. A graph showing the area sown to hay crops since 1900-01 appears on p. 863. In most European countries, the hay consists almost entirely of meadow and other grasses, but, in Australia, a very large proportion consists of oats, lucerne and wheat. The area, production and yield per acre of hay of all kinds in the several States during the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown below:—

HAY: AREA, PRODUCTION AND YIELD PER ACRE.

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
			Area ('0	00 Acres	s).			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	757 388 450 524 562	1,111 753 807 739 879	68 66 71 76 63	541 214 262 257 326	432 227 219 289 269	83 110 123 96 137	2 3 3 3 5	2,994 1,761 1,935 1,984 2,241
to 1955–56 1956–57	438 367	691 782	62 45	273 299	231 242	103 123	3 3	1,801 1,861
		Pr	ODUCTION	T 000') ı	ons).			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	959 579 639 680 846	1,263 1,245 1,361 1,208 1,526	104 136 140 171 137	577 318 369 330 461	464 290 294 305 384	120 192 241 158 261	3 5 5 4 10	3,490 2,765 3,049 2,856 3,625
to 1955-56 1956-57	586 538	1,124 1,423	124 96	379 453	281 289	180 238	5	2,679 3,043
		Yı	ELD PER	Acre (T	ons).			
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 Average, 1946-47	1.27 1.49 1.42 1.30 1.51	1.14 1.65 1.69 1.63 1.74	1.54 2.05 1.99 2.25 2.17	1.07 1.48 1.41 1.28 1.41	1.07 1.28 1.34 1.05 1.42	1.44 1.75 1.96 1.64 1.91	1.21 1.54 1.52 1.33 2.08	1.17 1.57 1.58 1.44 1.62
to 1955-56 1956-57	1.34	1.63 1.82	2.00	1.39	1.22	1.74 1.94	1.56 1.81	1.49 1.63

Owing to various causes, particularly the variation in the relative prices of grain and hay and the favourableness or otherwise of the season for a grain crop, the area of hay is apt to fluctuate considerably. The area under hay in Australia during the season 1915-16, 3,598,000 acres, was the largest on record, whilst the average for the ten-years ended 1955-56 was 1,801,000 acres.

A graph showing the production of hay appears on p. 865.

(ii) Varieties Grown. Information regarding areas cut for hay in 1956-57 is given in the following table.

HAY: AREA UNDER VARIOUS KINDS GROWN, 1956-57. (Acres.)

State.	Wheaten.	Oaten.	Lucerne.	Other.	Total.
New South Wales	. 32,891	46,079	142,696	144,907	366,573
Victoria	. 19,332	122,844	58,361	581,415	781,952
Queensland	. 4,420	2,709	34,520	3,857	45,506
South Australia	. 36,618	107,725	23,721	130,730	298,794
Western Australia	. 49,782	119,899	522	72,014	242,217
Tasmania	. 2,054	12,664	1,219	107,213	123,150
Australian Capital Territory.	. 47	448	1,375	1,298	3,168
Australia	. 145,144	412,368	(a)262,416	1,041,434	a1,861,362

<sup>(</sup>a) Includes two acres in the Northern Territory.

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1956-57 were 22 per cent. for oaten, 8 per cent. for wheaten, 14 per cent. for lucerne, and 56 per cent. for other hay. In that year, oaten hay predominated in Western Australia, lucerne in Queensland, and meadow and grass in the remaining States.

2. Value of Hay Crop.—The following table shows the estimated gross value, and the value per acre, of the hay crop of the several States for the 1955-56 season:—

HAY: VALUE OF CROP, 1955-56.

Particulars.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000 Value per acre	9,949 £27 3 0	14,061 £18 0 0	1,921 £42 4 0	3,473 £11 12 0	3,076 £12 14 0	2,248 £18 5 0		34,807 £18 14 0

3. Farm Stocks of Hay.—Details of stocks of hay held on farms are now collected at the annual census of farm production. Particulars of stocks so held at 31st March in each year 1953 to 1957 are given in the table below.

STOCKS OF HAY HELD ON FARMS.

(Tons.)

31st March—		N.S.W. Vic.		Q'land.	nd. S. Aust. W. Aust.		Tas.	A.C.T.	Australia.
1953		628,977	1,347,363	97,492	402,477	186,523 <sup>!</sup>	145,375	5,119	2,813,326
1954		700,367	1,479,299	106,794	420,423	216,023	185,549	4,775	3,113,230
1955		809,263	1,553,289	156,115	447,102	207,664	145,112	3,269	3,321,814
1956		830,619	1,870,214	149,187	474,456	306,586	270,138	7,778	3,908,978
1957		775,464	2,008,678	156,599	555,681	222,941	296,257	7,617	4,023,237
	,		' '						1

4. Exports.—Under normal conditions, hay, whether whole or in the form of chaff, is somewhat bulky for oversea trade, and consequently does not figure largely amongst the exports of Australia. During 1956-57, exports amounted to 2,867 tons, valued at £55,558. Imports are not recorded separately.

# § 13. Green Fodder.

1. Nature and Extent.—Considerable areas are devoted to the growing of green fodder, mainly in connexion with the dairying industry. Consequently, green fodder ranks after wheat and oats (for grain) as the third most important crop, in area, grown in Australia. The areas recorded in respect of green fodder include areas of crops cut for feeding to livestock as green fodder, or ensilage, together with areas fed off to stock as green forage. Included with the latter are areas which may have been sown with the intention of harvesting

for grain, but which, due to adverse seasonal conditions, showed no promise of producing grain or even hay and were fed off to live-stock. The principal crops cut for green fodder are oats, wheat and lucerne, while small quantities of barley, sorghum, maize, rye and sugarcane are also so used. In 1956-57, the area under green fodder (2,684,894 acres) consisted of oats (1,566,665 acres), lucerne (453,835 acres), wheat (103,686 acres), sorghum (77,398 acres), maize (37,392 acres), barley (133,711 acres), rye (32,387 acres), sugar-cane (1,436 acres) and other crops (278,384 acres). Particulars concerning the area of green fodder in the several States during each of the years 1952-53 to 1956-57 are given in the following table, together with the average for the period of ten years ended 1938-39.

# GREEN FODDER: AREA.

(Acres.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W.Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1929-30 to 1938-39 1952-53 1953-54 1954-55 1955-56 1956-57	482,989 661,767 761,552 934,395 826,789 813,642	(a) 40,303 56,210 77,135 75,815 66,093	663,097 649,607 689,469		574,790 507,756 639,086 666,398	60,127 70,945 54,401	(a) (a) (a) (a) 32 	1,218 988 970	(a) 2,196,179 2,415,261 2,732,547 2,648,799 2,684,894

(a) Not available.

2. Value of Green Fodder Crops.—The value of these crops is variously estimated in the several States, and the Australian total for the season 1955-56, excluding Western Australia, may be taken as approximately £5,950,000.

# § 14. Sugar-cane.

1. Area.—Sugar-cane growing appears to have commenced in Australia in or about 1862, and is confined to New South Wales and Queensland. A brief outline of the development of the industry was included in earlier issues of the Official Year Book (see No. 38, p. 985). The area of sugar-cane in Australia for the seasons 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table. In 1956-57, the total area of sugar-cane (excluding areas cut for green fodder) was 499,239 acres which was slightly below the record area of 501,859 acres in 1954-55.

# SUGAR-CANE: AREA.(a) (Acres.)

	New South Wales.			Queensland.			Australia.			
Season.	Area crushed.	Area of stand- over and newly- planted cane.	Area cut for plants.	Area crushed.	Area of stand- over and newly- planted cane.	Area cut for plants.	Area crushed.	Area of stand- over and newly- planted cane.	Area cut for plants.	Total.
Average, 1929-30 to 1938-39 1952-53 1953-54 1955-56 Average,	9,106 5,202 7,787 6,566 7,522	9,023 8,581 6,869 8,078 8,728	140 277 468 474 670	229,327 274,757 332,703 367,640 365,252	75,409 131,724 120,929 107,512 104,782	9,368 13,353 12,846 11,589 12,111	238,433 279,959 340,490 374,206 372,774	84,432 140,305 127,798 115,590 113,510	9,508 13,630 13,314 12,063 12,781	332,373 433,894 481,603 501,859 499,063
1946-47 to 1955-56 1956-57	7,521 9,182	7,944 9,419	363 522	284,292 360,932	104,280 106,734	12,344 12,450	291,813 370,114	112,224 116,153	12,707 12,972	416,74 499,23

(a) Excludes areas cut for green fodder.

- 2. Productive and Unproductive Cane.—The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1956-57 amounted to 1,436 acres. The whole area planted is not cut for crushing during any one season, there being always a considerable amount of young and "stand-over" cane as well as a small quantity required for plants. Thus the season in which the highest acreage is recorded may not show the greatest area of productive cane cut for crushing.
- 3. Production of Cane and Sugar.—For Queensland, statistics of the production of sugar-cane are not available for seasons prior to 1897-98. In that season, the total for Australia was 1,073,883 tons, compared with 9,272,168 tons in the 1956-57 season. The record production was 10,086,517 tons in 1954-55.

The average production of cane during the ten seasons ended 1955-56 was 6,934,839 tons, and of raw sugar 940,631 tons. Particulars of the total production of cane and sugar for the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are as follows.

# SUGAR-CANE: PRODUCTION OF CANE AND SUGAR.

#### (Tons.)

	Sassan		New Sou	th Wales.	Queen	nsland.	Australia.		
Season.			Cane.	Sugar.(a)	Cane.	Sugar.(a)	Cane.	Sugar.(a)	
Average.	1929-30	to		i ———					
1938-39			241,402	30,317	4,461,988	626,789	4,703,390	657,106	
1952-53			125,714	14,272	6,841,536	934,614	6,967,250	948,886	
1953-54			263,249	34,004	8,751,063	1,220,383	9,014,312	1,254,387	
1954-55			222,213	26,301	9,864,304	1,301,245	10,086,517	1,327,546	
1955-56			284,539	36,028	8,616,163	1,135,685	8,900,702	1,171,713	
Average,	1946-47	to	ŕ						
1955–56		٠	275,853	33,996	6,658,986	906,635	6,934,839	940,631	
195657			294,087	35,918	8,978,081	1,171,879	9,272,168	1,207,797	

(a) Raw sugar at 94 net titre.

The production of raw sugar in Australia in 1956-57 amounted to 1,207,797 tons manufactured from 9,272,168 tons of cane, compared with the record production of 1,327,546 tons in 1954-55.

Official annual data are not available regarding the total number of persons engaged in the sugar industry in New South Wales and Queensland. The number of separate holdings growing 5 acres or more of cane was 6,868 in 1956-57.

According to data obtained from the population census of 30th June, 1954, the number of persons engaged in the sugar-cane industry in New South Wales and Queensland comprised 20,185 males and 431 females, a total of 20,616 persons, of whom 4,245 were employers and 5,118 were self-employed.

4. Average Production of Cane Sugar.—Owing to climatic variation, comparison between the average yields of cane per productive acre in Queensland and New South Wales cannot be made accurately except on an annual basis. In New South Wales, the crop matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 14 months is sufficient. Allowing for the disparity in maturing periods the average annual yields of cane per productive acre during the ten years ended 1955-56 were 36.68 tons for New South Wales, and 23.42 tons for Queensland. Similarly, the yields of sugar per acre crushed for the same period were estimated at 4.52 tons and 3.19 tons respectively. Apart from the consideration mentioned above, the yields of cane and sugar per acre crushed for Australia for the ten years ended 1955-56 were 23.76 tons and 3.22 tons respectively, as compared with 19.73 tons and 2.76 tons for the ten years ended 1938-39.

SUGAR-CANE	AND	SUGAR:	YIELD	PER	ACRE.
		(Tons.)			

		New	South V	/ales.	Qı	reenslan	d.	Ì	Australi	a.
Season.		Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.	Cane per acre Crushed.	Sugar per acre Crushed.	Cane to each ton of Sugar.
Average, 1929-30	) to									
1938-39		26.51	3.33	7.96	19.46	2.73	7.13	19.73	2.76	7.15
1952-53		24.17	2.74	8.81	24.90	3.40	7.32	24.89	3.39	7.34
1953-54		33.81	4.37	7.74	26.30	3.67	7.17	26.47	3.68	7.19
1954-55		33.84	4.01	8.45	26.83	3.54	7.58	26.95	3.55	7.60
1955–56		37.83	4.79	7.90	23.59	3.11	7.59	23.88	3.14	7.60
Average, 1946-4	7 to									
1955–56		36.68	4.52	8.11	23.42	3.19	7.34	23.76	3.22	7.37
1956-57		32.03	3.91	8.19	24.87	3.25	7.66	25.05	3.26	7.68

5. Quality of Cane.—The quantity of cane required to produce a ton of sugar varies with the variety planted, the district, and the season. For the ten years ended 1955-56, it required on the average 7.37 tons of cane to produce one ton of sugar, or 13.6 per cent. of its total weight, as compared with 7.15 tons for the ten years ended 1938-39. As the result of the systematic study of cane culture in Queensland and improvements in field and mill methods, the sugar content of the cane has been considerably increased since the turn of the century, when over 9 tons of cane were required to produce 1 ton of sugar. It is believed that it is the highest sugar content obtained anywhere in the world.

The Bureau of Sugar Experiment Stations in Queensland is rendering useful serviceto the sugar industry by advocating and demonstrating better methods of cultivation and themore scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

6. Production and Utilization.—Details of the production and utilization of raw sugar for the three years ended 1938-39 and each year 1952-53 to 1956-57 are shown below. It should be noted that the details of sugar production refer to the annual periods shown, without regard to the season in which the sugar was produced and include the small quantities of beet sugar produced in certain of these years. Consumption is shown in terms-of refined sugar, including that consumed in manufactured products.

RAW SUGAR: PRODUCTION AND UTILIZATION, AUSTRALIA.

Year.			Changes	Pro-	Exports.	Miscel- laneous	Consum Austra	
			in Stocks.	duction.	(a)	Uses.(b)	Total.(c)	Per Head.
			'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.
Average,	1936-37	to	1					
1938-39			+ 6.2	779.3	435.3	11.2	326.6	106.5°
1952-53			+ 3.8	948.3	500.8	18.6	425.1	109.0°
1953~54		٠.	+40.8	1243.6	738.7	17.8	446.3	112.3
1954-55			-27.1	1218.1	761.2	21.7	462.3	114.0
1955-56			+38.4	1158.0	617.0	21.7	480.9	115.7
1956-57			+18.6	1217.7	698.8	20.0	480.3	112.8
			) .					

<sup>(</sup>a) Includes sugar content of manufactured products. in refining. (c) In terms of refined sugar.

7. Consumption in Factories.—The quantity of sugar used in factories in 1955-56-amounted to 266,065 tons compared with 252,012 tons in 1954-55 and 123,883 tons in 1938-39. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1955-56, consumption by factories engaged in the production of jams, jellies and preserved fruit (including condiments, pickles, etc.) amounted to 71,056 tons and by those producing confectionery, ice cream, etc., amounted to 52,784 tons.

<sup>(</sup>b) Includes industrial uses and losses:

8. Control of Cane Production in Queensland.—Agreements between the Commonwealth and Queensland Governments have fixed the wholesale price of sugar and sugar products from time to time. Details of prices are shown in para. 14 of this section (see

The Queensland Government acquires the whole of the sugar production of that State and New South Wales by legislation and private agreement respectively. The net proceeds

of all sugar sold are pooled and a uniform price paid to mills.

Sugar production barely met local requirements in 1923 but increased rapidly until 1925 when approximately 44 per cent. of the production was exported. Steps were taken by the Government to restrict planting of new areas and production was fairly stable until 1929. In that year, the pool was reorganized and mills received full pool price for sugar up to the amount of their previous maximum production, further supplies being acquired at

Between 1929 and 1939, production rose by more than 70 per cent. despite the restrictions mentioned above and the fact that export prices were generally less than half

the pool price.

- In 1939, following the International Sugar Agreement, which limited exports, the Queensland Government limited the pool (mill peaks) to 737,000 tons in respect of Queensland production. Mill quotas were allotted on the understanding that mills would allot quotas to individual growers. Mill peaks have been raised to 942,300 tons in 1950, 1,045,000 tons in 1953 and 1,170,900 tons in 1954. These latter increases followed the negotiation of the Commonwealth Countries Sugar Marketing Agreement of 1949, which allowed the Queensland Government to initiate a planned expansion of the industry.
- 9. Sugar Agreement in Australia-Embargo on Imports, etc.-Reference was made in Official Year Book No. 37 (pp. 940-41) to the agreement operating between the Commonwealth and Queensland Governments in respect of the sugar industry in Australia. Briefly, the agreement places an embargo on sugar importations and fixes the price of sugar consumed in Australia. The current agreement operates for a five year period from 1st September, 1956 to 31st August, 1961.
- 10. International Sugar Agreement.—The International Sugar Agreement of 1937 was superseded by the International Sugar Agreement of 1953 which came into force on 1st January, 1954. Details of the 1937 Agreement were given in Official Year Book No. 40, pp. 881 and 882, and previous issues.
- The new agreement, which was negotiated by 38 countries, is for a five year period ending 31st December, 1958. It was amended by protocol operating from 1st January, 1957. It is designed to assure supplies of sugar to importing countries at equitable and stable prices and also to increase the consumption of sugar throughout the world. Basic export quotas of exporting countries are established. The mechanism for the adjustment of quotas under the 1953 Agreement revolved largely around a minimum and maximum price. Under the Agreement as amended, no minimum or maximum prices are established but a number of different prices at which action may or must be taken are stipulated. The International Sugar Council has considerable discretion to adjust quotas during the quota year.

The British Commonwealth, as a whole, has been granted an export quota of 2,375,000 tons, rising to 2,500,000 tons in 1958, which is not subject to the fluctuations mentioned above. The allocation of this total between exporting members of the British Commonwealth is a matter for the countries and territories themselves, Australia's share being fixed at 637,215 tons for 1958. Details of the marketing arrangements for Australian sugar are given in para. 15 below.

11. Net Return for Sugar Crop.—Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1938-39 and 1952-53 to 1956-57 will be found in the following table:-

RAW SUGAR(a): NET RETURNS, AUSTRALIA.

Year.		Proportion Exported. (b)	Net Value of Exports per Ton. (b)	Average Price per Ton for Whole Crop.	Estimated Value of Crop	
			Per cent.	£ s. d.	£ s. d.	£'000.
1938-39			55.78	8 4 3	15 3 11	12,806
1952-53			49.66	41 2 0	42 12 9	40,781
1953-54			58.39	38 13 9	42 10 8	52,572
1954-55			59.11	37 8 0	41 6 11	53,984
1955-56			53.46	38 11 4	42 9 0	53,244
1956-57			56.01	41 6 5	46 14 3	57,686

The estimated value of the raw sugar produced has been based upon details taken from the audited accounts of the Queensland Sugar Board. The values stated represent the gross receipts from sales in Australia and overseas, less refining costs, freight, administrative charges, etc., and export charges, but including concessions to the fruit industry and other rebates which in 1956-57 amounted to £601,207. The value thus obtained represents the net market value of all raw sugar sold, which is divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively.

12. Exports of Sugar.—Particulars of the exports of cane sugar (raw and refined) for the five years ended 1938-39 and for each year from 1952-53 to 1956-57 are as follows:—

SUGAR:	EXPORTS,	AUSTRALIA.
--------	----------	------------

Particu	lars.	Average, 1934-35 to 1938-39.	1952-53.	1953–54.	1954–55.	1955–56.	1956-57.
Quantity	tons	377,930	459,370	706,801	737,184	592,229	675,282
Value	£'000	3,481	21,655	31,592	31,148	24,723	28,780

13. Sugar By-products.—Large quantities of molasses are produced as a by-product in the sugar mills. Details for a series of years of the quantities produced and the amounts used for distilling, fuel, manure and other purposes will be found in Chapter VII.—Manufacturing Industry.

Other by-products include industrial chemicals and building boards. These boards are made from the residue of crushed fibre after removal of the sugar content from sugarcane and possess high insulating and sound-absorbing properties which make them particularly suitable for use in walls and ceilings.

14. Sugar Prices.—The prices of sugar in Australia from 1952 to 1956 in the case of raw sugar; and from 1952 to 1961 in the case of refined sugar (as determined under the Sugar Agreement in Australia—See para. 9 above) are shown in the following table.

SUGAR: PRICES IN AUSTRALIA.

		D .	C 04 NI		201				
		Raw	Sugar, 94 Ne	i itre.	Refined Sugar.				
Year. Average Return per Ton Rec Millers and Growers fo				Wholesale	Retail				
		Home Consump- tion.	Exports.(a)	Whole Crop.	Date of Determination.	Price per Ton.	Price per lb.		
		£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.		
1952		44 3 0	41 2 0	42 12 9	24.3.52 to 12.10.52	65 12 10	8		
1953 .		47 18 6	38 13 9	42 10 8	13.10.52 to 13.5.56	73 16 11	9		
1954		47 1 0	37 8 0	41 6 11	14.5.56 to 31.8.61	82 1 0	10		
1955		46 18 0	38 11 6	42 9 0			1		
1956		53 11 6	41 6 5	46 14 3		: 1			
			1	j			1		

(a) Including "Excess" Sugar.

15. Marketing Arrangements.—From 1939 to 1952, the British Ministry of Food purchased Australia's surplus raw sugar at prices negotiated annually and varying from £ stg. 11 5s. in 1939 to £ stg. 38 10s. in 1952 including tariff preference (for prices in other years see earlier issues of the Year Book).

On 1st January, 1953, the British Commonwealth Sugar Agreement became effective. This agreement, which has been extended to 1965, provides for Australia to export a maximum of 600,000 tons per annum. The United Kingdom agrees to take 300,000 tons at an annually negotiated price, the balance being sold at world prices, plus tariff preferences. The negotiated prices for 1957 and 1958 were £ stg. 42 3s. 4d. and £ stg. 43 16s. 8d. respectively.

The Sugar Bill introduced into the House of Commons on 5th July, 1955, provided for the reversion of dealings in sugar in the United Kingdom to a trader to trader basis as

from 1st January, 1957. However, under the Bill, a Sugar Board was created which is responsible for the purchase of the negotiated price sugar which the United Kingdom Government has contracted to take under the British Commonwealth Sugar Agreement.

VINEYARDS.

16. Fruit Industry Sugar Concession Committee and Sugar Rebates.—The Fruit Industry Sugar Concession Committee was established by agreement between the Commonwealth and Queensland Governments and administers a fund contributed by the Queensland Government on behalf of the Sugar Industry.

A rebate of £2 4s. per ton of refined sugar used in processing approved fruit products is paid to Australian manufacturers provided they buy the fresh fruit at prices not lower than those declared by the Committee as reasonable.

An export sugar rebate is also paid by the Committee to exporters of approved fruit products to ensure that manufacturers do not pay higher prices for Australian sugar than the price for which the cheapest imported sugar could be landed duty free in Australia.

Under the Sugar Agreement 1956-1961, the Queensland Government contributes to the fund £120,000 annually and also reimburses the Committee for the actual expenditure on export sugar rebates. Any money remaining in the fund after the payment of rebates and administrative expenses may be used by the Committee for the promotion of the use and sale of fruit products, or for scientific research for the purpose of increasing the yield per acre of Australian fruit.

17. Bulk Handling of Sugar.—A terminal for the bulk loading of sugar was opened at Mackay in 1957; additional bulk terminals are in course of construction at Bundaberg, Townsville and Lucinda Point.

Bulk unloading facilities are in operation at Pyrmont refinery, Sydney. The three raw sugar mills in New South Wales despatch all their raw sugar production in bulk.

# § 15. Vineyards.

1. Progress of Cultivation.—(i) Area of Vineyards. Since the early days of Australian settlement, the expansion of the cultivation of vines has been most rapid in Victoria and South Australia, the area under vineyards in the 1957 season in these two States comprising 78 per cent. of the total area. The purposes for which grapes are grown in Australia are (a) for wine-making, (b) for table use, and (c) for drying. The total area of vines in the several States during each of the years 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table.

VINEYARDS: AREA. (Acres.)

S	eason.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Aust.(a)
Average,	1929–30	to						
1938-39			15,777	40,563	2,142	54,156	5,666	118,304
1952-53			18,006	45,968	2,808	60,603	9,233	136,618
1953-54			18,128	45,777	2,884	62,121	9,202	138,112
1954-55			18,205	45,757	2,896	60,612	9,015	136,485
1955-56			18,099	44,817	2,916	59,862	9,107	134,801
Average,	1946-47	to	Í			,	,	•
1955–56	• •		17,278	45,063	2,980	60,355	9,474	135,150
1956-57		ļ	;	:				
Wine		1	7,402	5,052	297	43,089	2,908	58,748
Table			2,557	2,516	2,619	310	1,563	9,565
Drying			7,435	37,334	• •	14,010	4,525	63,304
Tota	1		17,394	44,902	2,916	57,409	8,996	131,617

<sup>(</sup>a) Excludes particulars for Australian Capital Territory and Northern Territory.

(ii) Wine Production, Bounties, etc. The total production of wine (beverage and distillation) in Australia has shown a marked increase in recent years, rising from 14.3 million gallons in 1938-39 to 30.7 million gallons in 1956-57. In the same period, consumption of beverage wine in Australia has expanded from 4.5 million gallons (0.7 gallons per head of population) to 10.9 million gallons (1.2 gallons per head of population). For many years prior to the 1939-45 War, a bounty was paid on wine shipped overseas under the provisions of the Wine Export Bounty Act 1930, as amended from time to time. Details of the bounty, payment of which was discontinued in 1947, may be found in Official Year Book No. 39, p. 992.

The quantity of wine produced in the several States during the 1952-53 to 1956-57 seasons, together with the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table:—

WINE: PRODUCTION.(a) ('000 Gallons.)

Season.		N.S.W.	N.S.W. Victoria.	Queensland.	S. Aust.	W. Aust.	Australia.
Average, 192	9–30						
to 1938-39		2,099	1,449	36	12,127	393	16,104
1952-53		4,250	2,267	42	22,733	731	30,023
1953-54		5,066	2,327	59	23,497	717	31,666
1954-55		2,271	1,612	61	19,208	812	23,964
1955-56	]	2,327	1,342	37	18,403	786	22,895
Average, 194	6-47		ŕ	!	•		· .
to 1955-56		4,147	2,573	41	22,561	701	30,023
1956-57		3,412	2,369	38	24,038	886	30,743

<sup>(</sup>a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

2. Imports and Exports of Wine.—(i) Imports. Imports for 1956-57 amounted to 33,505 gallons valued at £74,407 compared with 48,547 gallons valued at £106,462 in the previous year and an average of 36,685 gallons valued at £39,577 for the five years ended 1938-39.

During 1956-57, Italy supplied 14,491 gallons valued at £16,079, France supplied 11,687 gallons valued at £42,922, and Spain supplied 2,427 gallons valued at £6,380. The bulk of the sparkling wines were obtained from France.

(ii) Exports. Exports in 1956-57 totalled 1,750,349 gallons, of which the United Kingdom received 1,307,538 gallons, New Zealand 56,688 gallons, Canada 292,864 gallons, and other countries 93,259 gallons.

Exports for the five years ended 1956-57 are shown in the following table in comparison with average exports during the five years ended 1938-39:—

WINE: EXPORTS FROM AUSTRALIA.

Year.		Qu	antity (Gallo	ns).	Value (£).			
		Sparkling.	Other.	Total.	Sparkling.	Other.	Total.	
Average, 19 to 1938-39	34–35	3,772	3,559,094	3,562,866	5,400	938,195	943,595	
1952-53		7,373	1,160,088	1,167,461	21,277	742,649	763,926	
1953-54		4,842	1,390,118	1,394,960	16,631	886,228	902,859	
1954-55		5,570	1,258,503	1,264,073	19,670	797,767	817,437	
1955-56		5,997	1,197,995	1,203,992	19,833	714,235	734,068	
1956-57		6,701	1,743,648	1,750,349	23,737	1,108,314	1,132,051	

3. Oversea Marketing of Wine.—(i) The Wine Overseas Marketing Act 1929–1954. This Act was introduced to place the oversea marketing of surplus wine on an orderly basis. The Australian Wine Board (formerly The Wine Overseas Marketing Board), consisting of representatives from wineries and distilleries, grape-growers and the Commonwealth Government, supervises the sale and distribution of Australian wine exported and recommends conditions under which export licences should be issued. The Board has a London agency which advises on marketing conditions.

During 1954, the Act was amended to enable the Board to engage in the sales promotion of wine in Australia in addition to overseas.

- (ii) The Wine Grapes Charges Act 1929-1957. This Act provides for the imposition of a levy on all grapes used in Australia for the manufacture of wines or spirit used for fortifying wine. The proceeds of the levy are used to defray the administrative and other expenses of the Board, and provision is made for such exemptions from the levy as the Board may recommend.
- 4. Other Viticultural Products.—(i) Table Grapes. Grapes for table use are grown in all States except Tasmania, but the area of this type is only about 7 per cent. of the productive area of vines. The quantities of table grapes produced during the season 1956-57 in each State are shown in § 3 of this chapter. (See p. 857).
- (ii) Raisins and Currants. The quantities of raisins (sultanas and lexias) and currants dried during each of the seasons 1952-53 to 1956-57 and the averages for the ten-year periods ended 1938-39 and 1955-56 are shown in the following table. Production in 1956-57 was 79,857 tons, compared with 58,871 tons in 1955-56.

# RAISINS(a) AND CURRANTS: PRODUCTION.

(Tons.)

	N.S.	Wales.	Vict	oria.	South	Aust.	Wester	n Aust.	Aust	tralia.
Season.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.	Raisins.	Currants.
Average, 1929-30 to 1938-39	4,234	796	35,235	7,995	11,494	8,007	697	1,789	51,660	18,587
1952–53 1953–54 1954–55 1955–56	9,551 8,261 7,873 4,313	990 591 663 725	55,098 51,073 49,368 29,417	6,589 4,669 4,675 5,150	18,486 16,451 12,287 11,699	7,256 6,326 3,654 5,009	302 259 60 95	2,461 2,284 2,172 2,463	83,437 76,044 69,588 45,524	17,296 13,870 11,164 13,347
Average, 1946–47 to 1955–56 1956–57	6,352 9,380	836 585	42,007 50,085	6,009 3,954	10,712 9,716	5,278 3,941	354 148	2,567 2,048	59,425 69,329	14,690 10,528

(a) Sultanas and lexias.

5. Production and Disposal of Dried Vine Fruit.—As the production of dried vine fruit is far in excess of Australia's requirements, considerable quantities are available for export. The quantities disposed of in Australia and overseas, as recorded by the Commonwealth Dried Fruits Control Board for the season ended December, 1956, totalled 57,449 tons, Australian consumption amounting to 16,190 tons and oversea exports 41,259 tons. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The following table shows the oversea exports of raisins and currants during each of the years 1952-53 to 1956-57 compared with the average for the five years ended 1938-39.

RAISINS	AND	CURRANTS(a	):	EXPORTS,	AUSTRALIA.
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Year.		Raisi	ins.	Curra	ants.	Total Raisins and Currants.		
r ear.		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
Average, 193	4–35	Tons.	£'000.	Tons.	£'000.	Tons.	£'000.	
to 1938–39		43,191	1,686	15,054	549	58,245	2,235	
1952-53		58,886	6,395	10,387	1,053	69,273	7,448	
1953-54		51,693	5,561	10,731	1,039	62,424	6,600	
1954-55		59,934	6,720	8,373	917	68,307	7,637	
1955-56		51,734	6,224	9.561	1,151	61,295	7,375	
1956–57	••	38,496	5,377	6,521	831	45,017	6,208	

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian raisins and currants are the United Kingdom, Canada and New Zealand, the quantities exported thereto in 1956-57 being 23,917 tons, 13,624 tons and 5,608 tons respectively.

- 6. Post-war Contracts.—Agreements were negotiated between the Governments of the United Kingdom and Australia for the purchase of Australia dried vine fruits during the period 1946–1953. Up to and including 1951, the quantity of fruit to be purchased was limited but in 1952 and 1953 there was no restriction. In April, 1953, it was agreed to extend the contract for one year but in August, 1953 the United Kingdom Government abolished all controls and on 1st December of that year exports reverted to a trader to trader basis. The British Ministry of Food agreed, however, to subsidize returns from sales of fruit of the 1954 crop sold in the United Kingdom up to 31st May, 1955, if average returns were less than the level of prices agreed upon.
- 7. Oversea Marketing of Dried Fruits.—(i) The Dried Fruits Export Control Act 1924–1953. This Act was passed to organize oversea marketing of Australian dried vine fruits. The Dried Fruits Control Board, consisting of growers and Government representatives and members with commercial experience and experience in marketing dried fruits, controls the sale and distribution of dried fruit exports and recommends the conditions under which export licences are issued.

In conjunction with its London agency the Board has improved dried fruit marketing overseas by its system of appraisement, regulation of shipments and advertising.

(ii) Dried Fruits Export Charges Act 1924–1929. This Act provides for a levy on exports of dried fruits to defray costs and expenses incurred by the Board. Provision is made for exemption from the levy upon recommendations by the Board.

# § 16. Orchards and Fruit-gardens.

1. Area.—The largest area of orchards and fruit-gardens prior to the 1939-45 War was 281,899 acres which was attained in 1933-34. Since then the acreage has varied but it has not fallen below 260,000 acres. The peak was reached in 1947-48 when 290,000 acres were planted; in 1956-57 the area was 270,000 acres.

# ORCHARDS AND FRUIT-GARDENS: AREA.

					(Acres.)					
Season		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 192: 1938-39 1952-53 1952-53 1953-54 1954-55 1955-56 1956-57	9-30	84,025 90,131 90,761 91,124 93,482 87,920	76,643 67,234 66,180 66,091 65,214 63,319	32,437 37,280 39,979 42,517 41,253 39,561	29,365 28,649 29,758 30,507 32,998 33,998	20,703 21,492 21,542 21,475 21,943 22,040	32,627 26,075 24,818 23,687 23,795 22,994	(a) (a) (a) 102 104 94	69 108 111 122 118 113	275,869 270,969 273,149 275,625 278,907 270,039

2. Varieties of Crops.—The varieties grown differ in various parts of the States, ranging from such fruits as pineapples, papaws and mangoes in the tropics, to strawberries, raspberries and currants in the colder parts of the temperate zone. In New South Wales, citrus fruits (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums pears and cherries are extensively grown. The principal varieties grown in Victoria are apples, peaches, pears, oranges, plums and apricots. In Queensland, pineapples, apples, bananas, oranges, mandarins, peaches and plums are the varieties most largely cultivated. In South Australia, in addition to apples, oranges, apricots, plums, peaches and pears, almonds and olives are extensively grown. In Western Australia, apples, oranges, pears, plums, peaches, lemons, apricots and figs are the chief varieties. In Tasmania, apples occupy over three quarters of the fruit-growing area, but small fruits, such as currants, raspberries and gooseberrics are extensively grown, while the balance of the area is mainly taken up with pears, apricots and plums. The following table shows the acreage—bearing and non-bearing—of the principal kinds of fruit, and the quantity of fruit produced.

# ORCHARDS AND FRUIT-GARDENS, 1956-57.

Fruit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
	F	Area, Bi	EARING A	NO NON	-BEARING	(Acres	i).		
Apples Apricots Bananas Cherries	15,296 1,836 20,802 2,382	19,622 4,419 1,761	10,055 317 5,815 8	699	12,720 416 331 40	17,809 885  63	33	96 2 	81,965 12,493 26,981 4,953
Oranges Mandarins Lemons and	26,165 1,839	5,115 130	3,458 1,393	156	3,973 246		20		46,606 3,764
Limes Other Nuts Peaches Pears Pineapples Plums and Prunes Small Fruits Other Fruits	2,527 628 347 5,819 3,230 412 4,477 8 2,152	1,523 284 588 10,251 13,227 2,332 594 3,473	412 80 224 1,498 445 11,894 1,346 241 2,375	290 342 3,744 3,532 1,992 1,378 113 2,892	580 145 198 850 1,000  1,011 13 517	65 1,600 133 2,383 52	5 3   27 	2 5 5 2	5,337 1,482 5,107 22,020 21,499 12,333 10,679 3,352
Total	87,920	63,319	39,561	33,998	22,040	22,994	94	113	270,039
			Pr	ODUCTIO	on.				
Apples '000 bus. Apricots ,, ,, Bananas ,, ,, Cherries ,, ,,	1,348 256 3,063 106	2,622 275  87	723 16 525	1,008 775 	1,688 54 34 2	3,401 41 	3	2 	10,792 1,417 3,625 240
Citrus— Oranges ,, ,, Mandarins ,, ,,	3,646 181	711 14	362 129	1,426 29	357 15	::	1		6,503 368
Lemons and Limes,, ,, Other Nuts '000 lb. Peaches '000 bus. Pears	393 140 125 689 380 71	159 54 253 879 3,432	73 20 74 73 56 3,560	55 68 1,824 453 295	88 21 38 80 151	 5 5 292	1		769 303 2,319 2,179 4,606 3,635
Pineapples , , ,			. 1		- 1	}	:		
Dingganalog	283	128	50	108	88	17		• •	674

<sup>3.</sup> Principal Fruit Crops.—The area and production of the principal fruit crops during the seasons 1952-53 to 1956-57, and the gross value of production for seasons 1951-52 to 1955-56, compared with the average for the ten seasons 1929-30 to 1938-39 are shown hereunder.

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PRINCIPAL	FRUIT	CROPS:	AREA, PRODUCT	ION AND	GROSS	VALUE OF
			PRODUCTION.			

Season.	Apples.	Apricots.	Bananas.	Citrus Fruits.	Peaches.	Pears.	Plums and Prunes.
A	REA, BEAR	UNG AND	Non-bea	RING (AC	RES).		
Average, 1929-30 to 1938-39	100,258	11,632	23,353	50,706	23,390	20,725	15,912
1952-53	80,210 80,684 79,971 82,336 81,965	12,899 12,881 13,106 13,087 12,493	27,724 28,799 30,480 29,331 26,981	57,605 57,479 57,703 59,271 57,189	23,755 23,685 24,079 23,454 22,020	21,404 21,040 21,247 22,030 21,499	11,485 11,546 11,477 10,915 10,679
	Pro	DUCTION	('000 Bus	SHELS).	<u>'</u>		<u> </u>
Average, 1929-30 to 1938-39	10,013	1,014	2,270	5,011	1,984	2,130	948
1952–53 1953–54 1954–55 1955–56	9,231 12,469 11,678 13,464 10,792	1,265 1,744 1,544 1,383 1,417	2,244 3,322 3,139 4,736 3,625	6,064 7,445 7,086 8,212 7,943	2,677 3,335 3,080 2,582 2,179	3,513 4,442 4,708 4,206 4,606	913 996 820 842 674
	Gros	S VALUE	OF PROD	uction.			
Average, 1929-30 to 1938-39	2,677	326	1,072	1,808	679	559	286
1951–52	13,346 11,939 14,683 13,969 16,594	2,307 2,003 2,788 2,010 2,286	6,742 6,171 7,311 7,350 5,749	8,355 8,050 7,400 8,639 8,556	3,274 3,305 3,489 3,606 3,365	3,752 3,911 4,455 4,628 4,681	1,379 1,586 1,351 1,220 1,380

4. Production of Jams and Jellies and Preserved Fruit.—In Austra'ia considerable quantities of fruit are used in the production of jams and jellies and preserved fruit. During 1955-56, output of jams and jellies amounted to 84,096,000 lb. whilst output of preserved fruit, excluding preserved apples, amounted to 283,611,000 lb. Production of preserved apples was 20,296,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 231,548 tons in 1955-56.

- 5. Consumption of Fruit and Fruit Products.—Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1956-57 are shown in Chapter XXX.—Miscellaneous, of this Year Book.
- 6. Imports and Exports of Fruit.—(i) General. The imports of fresh fruit into Australia are negligible, whilst those of dried fruit consist mainly of dates.
- A considerable export trade in both fresh and dried fruit is carried on by Australia with oversea countries. The values of the shipments in 1956-57 amounted to £8,585,355 and £6,586,536 respectively. Apples constitute the bulk of the fresh fruit exported, although the exports of citrus fruit and pears are considerable.
- (ii) Fresh Fruit. Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1952-53 to 1956-57 and the average of the five years ended 1938-39 are shown in the following table:—

FRESH AND FROZEN FRUIT: EXPORTS, AUSTRALIA.

	App	les.	Pea	rs.	Citr	us.	Tota	l.(a)
Year.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.	'000 bus.	£'000.
Average, 1934–35 to 1938–39	4,591	1,396	632	268	533	234	5,865	1,98
952–53 953–54	4,696 4,728	6,740 6,089	1,209	1,675 2.045	433 533	742 809	6,181 6,596	9,56 9,38
954-55	4,265	5,444	1,407	2,183	525	783	6,283	8,77
955-56 956-57	5,023 3,969	6,513 5,582	1,012	1,470 1,731	585 613	869 926	6,689 5,670	9,13 8,58

<sup>(</sup>a) Total, including exports of all other fresh and frozen fruit.

(iii) Dried Tree Fruit. The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the years 1952-53 to 1956-57, compared with the average for the five years 1934-35 to 1938-39, are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq.

DRIED TREE FRUIT(a): IMPORTS AND EXPORTS. AUSTRA	TRALIA	AUST	RTS.	EXPORT	AND	IMPORTS	:	FRUIT(a):	TREE	DRIED
--	--------	------	------	--------	-----	---------	---	-----------	------	-------

Year.			Im	ports.	:	Exports.		
	AII.		-	Quantity.		Value.	Quantity.	Value.
Average, 1934-	-35 to	1938–39		'000 lb. 12,225		£'000.	'000 lb. 4,315	£*000.
1952–53			(b) (b) (b)	5,851 11,638 13,176 8,627 7,052	(b) (b) (b)	142 303 373 204 158	3,966 6,526 6,576 3,681 2,887	403 795 804 428 378

- (a) Excludes raisins and currants referred to separately under Vineyards, § 15, para. 5. (b) Imports
- (iv) Jams and Jellies. Exports of jams and jellies reached large proportions immediately following the 1939-45 War and in 1946-47 amounted to 65,434,000 lb., compared with the average for the five years ended 1938-39 of 7,118,000 lb. Since 1949-50, when exports totalled 65,229,000 lb., there has been a marked decline and in 1956-57 exports amounted to only 6,725,000 lb., valued at £439,000. Imports of jams and jellies are negligible.
- (v) Preserved Fruit. The total quantity of fruit preserved in liquid, or partly preserved in liquid or pulped, imported into Australia during 1956-57, was 1,222,000 lb. valued at £77,946. Large quantities of fruit preserved in liquid are normally exported from Australia, the value of shipments in 1938-39 amounting to £1,271,525. In 1956-57, the value of exports was £10,079,000. In addition, the exports of pulped fruits during 1956-57 amounted to 1,707,160 lb., valued at £175,460. Quantities of fruit preserved in liquid exported from Australia in 1956-57 amounted to 134,002,000 lb. compared with average exports of 68,896,000 lb. for the five years ended 1938-39. Exports in 1956-57 were principally made up of pears (57,461,000 lb.), peaches (32,896,000 lb.), pineapples (18,185,000 lb.) and apricots (12,087,000 lb.)
- 7. Marketing of Apples and Pears.—(i) Apple and Pear Organization Act 1938-1953. This Act, which was passed by the Commonwealth Parliament at the request of the apple and pear industry, provides for the establishment of an Australian Apple and Pear Board comprised of representatives of growers, exporters, employees and the Commonwealth Government. Oversea representatives may also be appointed by the Board.

The function of the Board is the organization and control of exports of fresh apples and pears and it has the power to regulate shipments, determine export quotas and allocate consignments from each State.

- (ii) Apple and Pear Export Charges Act 1938-1957. This Act provides for an export levy to meet the expenses of the Board.
- (iii) Apple and Pear Acquisition. Exports of apples and pears were seriously curtailed during the war and the 1940 to 1948 crops were acquired and marketed under National Security and Defence Regulations. Details of the acquisition scheme will be found on pp. 1003 and 1004 of Official Year Book No. 38 and in earlier issues.
- 8. Oversea Marketing of Canned Fruit.—(i) The Canned Fruits Export Control Act 1926–1956. This legislation was introduced with the object of organizing the oversea marketing of canned fruit. The Australian Canned Fruits Board, comprising members representing the Commonwealth Government and canners of apricots, peaches, pears, pineapples and fruit salad, was appointed with functions mentioned above and also to recommend conditions under which export licences are issued.

The system of marketing adopted by the Board has resulted in the satisfactory disposal of the exportable surplus of canned fruits.

(ii) The Canned Fruits Export Charges Act 1926-1956. This Act provides for a levy on exports to meet the Board's expenses. Provision has been made for certain exemptions when recommended by the Board.

# § 17. Vegetables for Human Consumption.

1. Area and Production of Fresh Vegetables.—Details of the areas planted and production of individual kinds of vegetables, excluding potatoes and onions referred to in §§ 10 and 11 of this chapter, are shown below for the seasons 1954-55 to 1956-57.

FRESH VEGETABLES(a) FOR HUMAN CONSUMPTION: AUSTRALIA.

	195	54–55.	195	5–56.	195	6–57.
Vegetable.	Area Sown.	Production.	Area Sown.	Production.	Area Sown.	Production.
	Acres.	Tons.	Acres.	Tons.	Acres.	Tons.
Asparagus	3,966	4,776	4,140	4,994	4,098	4,601
	nd Í	1	,	, ,		1
Runner	14,192	19,516	15,609	21,722	18,000	26,064
Beans, Navy	1,064	222	1,022	90	999	273
Beetroot	1,899	11,172	2,134	12,580	2,264	13,917
Cabbages and Bruss	els					
Sprouts	6,185	66,284	6,444	65,949	7,413	77,938
Carrots	4,002	32,223	4,196	34,448	5,027	41,814
Celery(b)	525	7,368	590	7,527	648	8,509
Cucumbers(b)	1,267	4,436	1,461	5,205	1,538	5,255
Cauliflowers	6,689	72,488	6,675	70,425	7,295	78,540
Lettuces	3,997	14,313	4,228	15,412	4,393	16,114
Parsnips	1,306	10,679	1,391	11,006	1,619	12,631
Peas, Blue	5,699	3,112	5,887	3,760	8,325	5,090
Peas, Green	36,929	35,235	44,136	44,233	48,614	48,437
Pumpkins	20,795	60,428	25,335	62,698	27,513	79,101
Tomatoes	14,873	84,343	16,774	89,029	19,314	141,960
Turnips, Swede a	nd					1
White	4,782	21,967	5,896	26,862	5,427	22,688
All Other	7,413		9,380		9,313	
Total	135,583		155,298		171,800	

<sup>(</sup>a) Excludes potatoes and onions.

2. Production of Canned and Dehydrated Vegetables.—Total production of canned vegetables in 1956-57 amounted to 97,152,000 lb., which was considerably higher than pre-war production, and approximately 82 per cent. of the peak war-time production. The principal canned vegetables produced in 1956-57 were green peas 24,760,000 lb., green beans 10,312,000 lb., baked beans (including pork and beans) 19,965,000 lb., tomatoes 11,796,000 lb. and asparagus 7,146,000 lb.

The production of dehydrated vegetables, which was initiated during the 1939-45 War by the Commonwealth Government, rose to a maximum of 22,000,000 lb. in 1945-46, but by 1955-56 had declined to approximately 392,000 lb.

3. Imports and Exports of Vegetables.—Oversea exports of pulse and fresh vegetables during 1956-57 consisted of:—Pulse, 12,078 tons, £619,000, onions, 2,473 tons, £114,000, potatoes, 3,959 tons, £263,000; other vegetables, 1,618 tons, £176,000. Imports of pulse amounted to 5,190 tons, valued at £342,000, whilst imports of fresh vegetables were 1,878 tons, valued at £320,109.

In 1956-57, exports of vegetables preserved in liquid consisted of:—Peas, 202,000 lb., £18,000; tomatoes, 321,000 lb., £15,000; other vegetables, 1,793,000 lb., £210,000.

4. Consumption of Vegetables.—Details of the estimated consumption of vegetables for a series of years ending with 1956-57 are shown in Chapter XXX.—Miscellaneous, of this Year Book.

# § 18. Tobacco.

1. States, Area and Production.—Tobacco has been grown in Australia for a considerable number of years. As early as the season 1888-89, the area of this crop amounted to 6,641 acres, of which 4,833 were in New South Wales, 1,685 in Victoria, and 123 in Queensland. Thereafter, the industry fluctuated for many years reaching a peak in 1932-33 when 26,272 acres were planted.

In 1956-57, the area planted was 12,172 acres which was 8 per cent. more than the average for the ten years ended 1938-39. Owing to improvement in average yields, however, the production of dried leaf in 1956-57 was 71 per cent. higher than the pre-war average.

<sup>(</sup>b) Incomplete; excludes New South Wales.

In the following table, particulars of the area and production of tobacco are given by States for each of the seasons 1952-53 to 1956-57, together with averages for the ten-year periods ended 1938-39 and 1955-56:—

	Date Co.						
Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
		AREA	(Acres).		·		
Average, 1929-30 to 1938-39 1952-53	501	6,237 1,613 2,246 2,471 2,876 1,579 2,935	2,865 4,339 4,065 5,135 6,301 3,754 7,029	292   	502 1,525 1,434 1,418 1,235 1,029 1,176	89 	11,259 7,922 8,246 9,661 11,306 6,844 12,172
	PRODUCTIO	N OF D	RIED LEAI	F ('000 It	o.).		
Average, 1929–30 to 1938–39 1952–53	860 514 587 618 547 441 805	2,354 1,472 2,155 868 1,135 1,060 2,777	1,400 3,431 4,015 4,332 3,702 3,000 4,344	  	361 1,068 912 1,003 721 786 819		5,114 6,485 7,669 6,821 6,106 5,287 8,745

(a) Includes small amounts produced in Northern Territory from 1954-55 onwards.

2. The Tobacco Industry.—(i) Marketing. In the early days, purchase of the leaf at the farms was the usual practice but towards the later part of the 1930's the auction system was introduced by arrangement between the growers' associations and the manufacturers.

On the 9th May, 1941, the Australian Tobacco Board was constituted under the National Security (Australian Tobacco Leaf) Regulations for the purpose of facilitating and regulating the marketing of Australian grown tobacco leaf. All leaf was under the control of the Board, the growers being paid on the valuation as appraised by the Board. The Board ceased to function on the 24th September, 1948 and subsequent crops have been marketed at open auction in the respective States. Queensland has had its own Tobacco Leaf Marketing Board since 1948 and leaf sold in that State has a reserved price, determined by the Board's appraiser. Growers in New South Wales voluntarily submit their leaf to the Queensland Board.

(ii) Central Tobacco Advisory Committee. The Australian Agricultural Council formed the Standing Advisory Committee on Tobacco during 1950. This Committee consisted of representatives of tobacco growers, tobacco manufacturers and Commonwealth and State Governments. Its main functions were to review the industry and make recommendations on its problems.

The Committee was reconstituted by the Agricultural Council during 1952-53 and its terms of reference were as follows:—

- "To report annually to the Agricultural Council, through the Standing Committee on Agriculture and also to the Commonwealth Minister for Trade and Customs, through the Chairman of the Council, on the following:—
  - (i) The percentage of Australian tobacco which should be incorporated in locally manufactured tobacco under Customs regulations, having regard to the anticipated volume of Australian production of usable leaf available for absorption by the manufacturing industry;
  - (ii) The progress of the industry during the year with particular reference to—
    (a) marketing problems encountered,
    - (b) a review of prices being paid to farmers in relation to quality of leaf,
    - (c) such other problems as may be retarding the progressive development of the industry, such as the volume of importation of manufactured tobacco and cigarettes."
- (jii) Industry Inquiries. The tobacco industry has been the subject of a number of investigations during the past 30 years. The Tariff Board inquired into the industry in 1923, 1926, 1931 and 1940 and reports were issued in respect of the last three inquiries.
- (iv) Commonwealth Grants. Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, were given in Official Year Book No. 40, pp. 895, 896 and in previous issues.

(v) Research and Investigations. The Commonwealth Scientific and Industrial Research Organization has been investigating many fundamental problems connected with tobacco culture. One of the major achievements of this organization was the development of a technique to control "Field Blue Mould" and investigations are now being made into the control of this disease in the field. State Departments of Agriculture are also carrying out investigations over a wide range of problems, being concerned mainly with variety trials, irrigation, disease and pest control, crop rotation and cultural practices.

In 1955, the Central Tobacco Advisory Committee formulated a programme for increased research and advisory activities. The capital costs of establishing this programme are estimated at £168,000 of which the Commonwealth Government has agreed to contribute £84,000 and tobacco manufacturers the remaining £84,000. It has been estimated that to maintain the programme, it will cost approximately £63,000 per annum, of which the Commonwealth Government is contributing £21,000, tobacco growers £14,000 and tobacco manufacturers £28,000 per annum. A Tobacco Industry Trust Account has been established to receive these contributions. This programme commenced in 1956.

(vi) War Service Land Settlement. Tobacco growing under the War Service Land Settlement Scheme commenced in 1949 and is being carried out on 67 farms in Queensland. Each farm is designed to have a minimum of 40 acres of suitable land to permit ten acres being cropped annually on a one in four rotation.

Due to technical difficulties in certain districts in Western Australia tobacco growing under the War Service Land Settlement Scheme has been considerably curtailed.

- (vii) Tobacco Factories. Manufacturers of Australian cigarettes and tobacco are granted a lower rate of duty on imported tobacco leaf provided it is blended with a prescribed minimum percentage of Australian leaf. These percentages rose from 3 per cent. for cigarettes and 5 per cent. for tobacco in November, 1946, to 7½ per cent. and 17½ per cent. respectively from 1st July, 1955. Originally, the Commonwealth Government announced that the percentages to apply, from 1st July, 1958, would be 14½ per cent. and 22½ per cent. respectively but subsequently the rates were revised to 15½ per cent. and 16½ per cent. because of the adverse effects of climatic conditions on the Australian crop, particularly in relation to leaf for tobacco as distinct from that intended for cigarette manufacture. In 1956-57, the quantity of cured leaf used in tobacco factories in Australia amounted to 47.9 million lb. of which 5.6 million was of local origin, the balance being imported, chiefly from the United States of America.
- 3. Oversea Trade.—Imports of tobacco and manufactures thereof into Australia during 1956-57 were valued at £14.2 million, including 40.8 million lb. of unmanufactured tobacco valued at £13.6 million. Exports of tobacco and manufactures thereof during 1956-57 were valued at £482.000.

# § 19. Hops.

Hop-growing in Australia is practically confined to Tasmania and some of the cooler districts of Victoria, the total area for 1956-57 being 1,839 acres, of which 1,438 acres were in Tasmania, and 401 acres in Victoria. A small area was also grown in Western Australia, but the details are not available for publication. The Tasmanian area, though still small, has increased during the present century, the total for 1901-2 being 599 acres. The cultivation of hops was much more extensive in Victoria some 60 years ago than at present, the area in 1883-84 being 1,758 acres.

The production of hops in Australia is insufficient to meet local requirements, and additional supplies are imported to meet the needs of the brewing industry. In the following table, details of the production, imports and exports of hops and the quantity of hops used in breweries are shown for each of the years 1952-53 to 1956-57 in comparison with the average for the five years ended 1938-39.

HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA.

			Produ	ction.			Net	Quantity
Year.		Quantity. Gross Value.		Imports.	Exports.	Available Supplies.	used in Breweries.	
			Cwt.	£'000.	Cwt.	Cwt.	Cwt.	Cwt.
Average,	1934-35	to						i
1938-39			20,576	173	1,020	78	21,518	18,992
1952-53			32,116	1,021	12,512	11	44,617	40,845
1953-54			24,666	802	14,675	59	39,282	43,525
1954-55			34,075	1,106	10,311		44,386	42,976
1955-56			34,374	1,102	16,880		51,254	43,638
1956-57			25,230	·	3,074		28,978	(b)

(a) Disregards movements in stocks.

(b) Not yet available.

The Tariff Board conducted an inquiry into the hop-growing industry and issued a report on 12th June, 1945.

# § 20. Flax.

1. Flax for Fibre.—During the 1914-18 and 1939-45 Wars, there was an acute shortage of flax fibre and the expansion of production was encouraged by the Commonwealth Government, the area sown reaching a maximum of more than 61,000 acres in 1944-45.

The growing of flax for fibre purposes is now confined to the States of Victoria, South Australia and Western Australia. In Victoria and South Australia, production is directed and controlled by the Flax Commission which took over the Commonwealth flax undertakings from the Flax Production Committee on the 1st November, 1954. In Western Australia, the industry is carried on by a Co-operative Company.

Following on the Tariff Board's Report on Flax Fibre dated the 5th August, 1954, the Government introduced a bounty on flax fibre for a period of two years to permit the modernization of plant and machinery. The amount of the bounty is related to the difference between oversea prices and local production costs and it came into operation on the 1st November, 1954. The Tariff Board conducted a further inquiry into flax fibre in 1956 and in its report dated 8th February, 1957, recommended the continuance of bounty payments for a further period of three years. The Government decided, however, in May 1957, that a complete examination should be made of the possible future of the industry, from the economic, defence and other viewpoints. It decided that bounty payments should continue until 31st October, 1957, while the enquiry was proceeding.

In November, 1957, the Government approved a three year extension of bounty assistance to flax producers and decided that the Commonwealth should withdraw from the field of flax fibre production by selling or closing the mills operated by the Flax Commission, as and when this was practicable.

One important factor which influenced the Government in making the last-mentioned decision was the view expressed by the defence authorities that the industry no longer has the same defence significance as it had when the Flax Commission was first established.

Details of the area under flax and the production of straw are given in the following table:—

FLAX FOR FIBRE: AREA AND PRODUCTION.

		Season.			Victoria.	S. Aust.	W. Aust.	Australia.
				AREA	(Acres).			
Average,	1934–35	to 1938-39			1,021			(a) 1,030
1952-53					2,840	1,618	2,423	6,881
1953-54					9,550	3,040	3,105	15,695
1954-55					5,878	1,314	464	7,656
1955-56					2,550	526	1,594	4,670
1956–57		• •			2,196	1,864	1,757	5 817
			Produc	топ (Т	ONS OF STR	AW).		
Average,	1934-35	to 1938-39			61	!		61
952-53					4,379	2,967	2,856	10,202
953-54					12,984	4,647	4,470	22,101
954-55					7,799	1,888	500	10,187
955-56					4,637	1,150	1,875	7,662
1956-57					4,013	4,606	2,051	10,670

<sup>(</sup>a) Includes nine acres of unproductive flax in Queensland.

2. Flax for Linseed.—Prior to 1948-49, the growing of flax for linseed oil had not been developed extensively in Australia. Since then however, action has been taken to develop this industry, the ultimate objective being the production of sufficient linseed to meet Australia's total oil requirements. Development of the industry proceeded rapidly until 1951-52 when the record total of 53,741 acres was sown. In 1952-53, there was a decline in the acreage and a further decline in 1953-54 when 6,343 acres only were sown. Since then an increase to £70 per ton, f.o.r. ports, in the guaranteed price notified to growers by the crushers early in each season has led to an increase in the area sown to 19,403 acres in 1954-55, 47,727 acres in 1955-56, and 90,102 acres in 1956-57.

The question of assistance to the industry was investigated by the Commonwealth Tariff Board in 1953 and their conclusions are contained in their Report on Linseed and Linseed Products dated 23rd October, 1953.

Details of the area and production of flax for linseed are shown in the following table for the seasons 1952-53 to 1956-57.

FLAX FO	)R	LINSEED:	AREA	AND	PRODUCTION.

S	eason.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.
-				AREA	(ACRES)				
1952-53			15,439	1,063	25,875	3,961	1		46,338
1953-54			1,400	1,226	3,647	70			6,343
1954-55			1,826	1,829	15,569	171		8	19,403
1955-56			1,817	580	45,202	128	l		47,727
1956–57			2,404	1,143	86,265	290			90,102
			Produ	JCTION (	TONS OF	Linseed).			
1952-53			2,678	176	6,526	551			9,931
1953-54			256	202	359	5	l I		822
1954-55			355	358	4,705	28		2	5,448
1955–56			400	94	12,738	15	1 1		13,247
1956-57			622	306	17,644	76	i [		18.648

# § 21. Peanuts.

The production in Australia of peanuts, or groundnuts, is mainly confined to Queensland, although small quantities are grown in New South Wales, Western Australia and the Northern Territory. Details of the area and production are given in the table below.

PEANUTS: AREA AND PRODUCTION, AUSTRALIA.

Season.		Aı	ea (Acre	s).		Production (Tons).				
season.	N.S.W.	Qld.	W.A.	N.T.	Aust.	N.S.W.	Qld.	W.A.	N.T.	Aust.
Average, 1929-3 to 1938-39	0 29	8,320	100	(a)	8,449	(b) 11	3,715	24	(a)	3,750
1953-54	. 789 . 1,525 . 769 . 414 . 419	18,920 36,617 37,971 31,493 25,017	(c) (c) (c) (c)	(a) (a) 780 544 208	19,719 d 38,142 d 39,520 d 32,451 d 25,644	718 346 174	8,438 17,866 14,001 8,633 8,676	(c) (c) (c) (c)	(a) (a) 135 40 17	8,854 d 18,584 d 14,482 d 8,847 d 8,927

<sup>(</sup>a) Not available. (b) Average for five years. (d) Excludes Western Australia.

The gross value of the 1955-56 crop was £888,000 which was approximately £301,000 less than in 1954-55. This decrease was largely the result of the low level of production at 8,847 tons. This was due to very wet conditions at harvest time in Queensland where the yield per acre was the lowest ever recorded in that State.

Formerly, considerable quantities of peanut kernels were imported annually, chiefly from India, for oil expression purposes. These imports were suspended from 1946 to 1949, but have since been resumed on an increasing scale. Total supplies available for consumption in Australia in 1956-57, 9,813 tons (shell equivalent), consisted of 8,846 tons grown locally in the 1955-56 season and 967 tons imported.

# § 22. Cotton.

1. General.—The production of cotton in Australia is restricted to Queensland, where cultivation began in 1860. Details of areas sown for years prior to 1930 and of Government financial assistance to growers up to 1940 appear in Official Year Book No. 39 and earlier issues.

Australia produces only portion of its requirements of raw cotton, the balance being obtained in 1956-57 chiefly from the United States of America, Mexico, Pakistan, Brazil and India. Efforts have been directed towards increasing production by an extension of area, the introduction of irrigation methods, and payment of bounties, but so far have not met with much success. Production increased very considerably during the early years of the 1939-45 War, reaching a peak of 17,550,000 lb. unginned cotton in 1939-40, but has since fallen away. The expansion of the industries connected with the spinning and weaving of cotton is referred to in Chapter VII.—Manufacturing Industry.

<sup>(</sup>c) Not available for publication.

The Raw Cotton Bounty Act 1940 provided an extension until 31st December, 1946, of assistance previously granted by way of bounty. The Act was amended in August, 1946 to provide a guaranteed net average return to cotton-growers of 15d. per lb. of raw cotton for five years from 1st January, 1947. It was superseded by the Cotton Bounty Act 1951, which guaranteed a net average return of 9½d per lb. of seed cotton for five years from 1st January, 1951. The 1951 Act was amended in 1952 to provide for a guaranteed return of 14d. per lb. of seed cotton for the 1953 crop, and for variation by regulation of the guaranteed return, in succeeding seasons, with a minimum of 9½d. per lb. The Cotton Bounty Act, as amended in 1955, extended the period of the guaranteed return for three years to 31st December, 1958. The guaranteed return has remained at 14d. per lb. of seed cotton since the 1953 season and the Government has announced that the guaranteed return for 1957 and 1958 seasons will not be less than 14d. per pound.

2. Area and Production.—The area under cultivation and the production in Queensland for the years 1952 to 1956 are shown hereunder together with the average for the period of ten years ended 1939. Details of the production of ginned cotton are derived from published statistics of the Queensland Cotton Marketing Board.

COTTON: AREA AND PRODUCTION IN QUEENSLAND.

		 		Average Yield per Acre Sown.					
Season ended December—		Area Sown.	Unginned.		<u>;</u>	Ginned— Equiva-			
				Quantity.	Gross Value.	Ginned.	lent in Bales. (a)	Unginned.	Ginned.
			Acres.	'000 lb.	£'000.	'000 lb.	Bales.	lb.	lb.
Average	e, 1930 to	1939	58,436	16,617	291	5,564	11,181	284	95
1952			5,866	2,184	107	755	1,483	372	129
1953			8,965	5,132	316	2,068	4,229	572	231
1954			8,377	3,597	208	1,365	2,819	429	163
1955			13,290	5,359	307	2,164	4,386	403	163
1956			11,338	3,809	(b)	1,460	3,046	336	129

<sup>(</sup>a) Bales of approximately 500 lb.

3. Consumption of Raw Cotton.—The following table shows the expansion which has taken place in the consumption of raw cotton in Australia since 1938-39.

RAW COTTON: PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA. ('000 lb.)

					<u> </u>		
Year.				Production.	Imports.	Total.	Consumption of Raw Cotton in Spinning.
Average,	1936-37 to	1938-39		5,180	9,882	15,062	12,523
1951-52				549	43,296	43,845	39,030
1952-53				755	24,796	25,551	31,128
1953-54				2,068	44,203	46,271	43,994
1954-55				1,365	43,218	44,583	47,098
1955-56				2,164	37,614	39,778	45,262

# § 23. Financial Assistance to Primary Producers.

Note.—See also Chapter XXI.—Public Finance, page 795.

Direct financial assistance to primary producers by the Commonwealth Government takes the form of bounties, subsidies and other financial assistance. Brief details of some of the more important payments are given below:—

(i) Cotton Bounty. The Cotton Bounty Act provides for payment of a bounty on seed cotton delivered by growers to processors. The present rate of bounty is designed to give growers an average return of 14d. per lb. The total payment in 1956-57 was £150,665 in respect of 6,390,685 lb. of cotton. In 1955-56, the total payment was £67,284 in respect of 5,650,785 lb.

(ii) Tractor Bounty. Under the Tractor Bounty Act, bounties are payable on tractors produced and sold for use in Australia. In 1956, the period for payment of bounty was extended for three years from 24th October, 1955. The rate of bounty, which has increased from time to time, varies according to the belt horse-power of the engine. A further

<sup>(</sup>b) Not yet available.

amendment to the Act in 1956 widened the Scheme to include tractors of higher belt horse-power than previously. Payments in 1956-57 amounted to £158,303 on 797 tractors as compared with €55,034 on 253 tractors in 1955-56.

- (iii) Dairy Products Bounty. Under the provisions of the Dairy Industry Assistance Act 1952, a subsidy is paid to dairymen to ensure them a return equal to the average cost of production of their produce. The Dairy Industry Act 1957, provided for continuation of the scheme for a further five years. In 1956-57, total payments amounting to £13,499,974 were made compared with £14,499,587 in 1955-56.
- (iv) Flax Fibre Bounty. From 1954 to 1957, a bounty was paid on scutched flax fibre produced from flax grown in Australia. In 1957, the Act was amended to provide for the calculation of the bounty payable on the basis of fibre sold, in lieu of fibre produced. In 1956-57, payments amounted to £49,823. Expenditure in 1955-56 was £58,070.

Other forms of financial assistance to primary producers include payments for Cattle Tick Control, the Dairy Industry Extension Grant, Flood, Drought and Bush Fire Relief, Food Production, Expansion of Agricultural Advisory Services and Assistance to the Tobacco Industry.

#### § 24. Fertilizers.

1. General.—In the early days of settlement in Australia, scientific cultivation was little understood. It was common, as in other new countries, for the land to be cropped continuously to a degree of exhaustion. This practice is very much less in evidence now than in the early days of Australian agricultural development. Under the guidance of the State Departments of Agriculture and the relevant Commonwealth authorities, such as the Bureau of Agricultural Economics and the Commonwealth Scientific and Industrial Research Organisation, scientific farming is now much more widely practised. The importance of fallowing, crop rotation, and the application of suitable fertilizers in adequate quantities is now appreciated by farmers. The introduction of the modern seed-drill, acting also as a fertilizer-distributor, has greatly facilitated the use of artificial manures and much land formerly regarded as useless for cultivation has now been made productive. During the last few years, the application of fertilizers from aircraft, particularly to pastures, has become a feature of modern farm technique, and has enabled the artificial fertilization of some areas which would not be readily accessible to ground machinery. For further details, see § 25 below.

In order to protect the users of artificial fertilizers, legislation has been passed in each of the States regulating the sale and prohibiting the adulteration of fertilizers. A list of these Acts and their main features is given in Official Year Book No. 12, p. 378.

2. Imports and Exports.—The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate and is sufficient for local requirements.

The chief sources of Australia's supplies of rock phosphate are Nauru, Christmas Island (Indian Ocean) and Gilbert and Ellice Islands. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1956-57, compared with average imports for the period 1934-35 to 1938-39, are shown in the following table:—

AKII	FICIAL	FERTILIZ	FK2: IMI	OKIS IN	ITU AUSI	KALIA.	
Fertilizer.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
Ammonium Sulph	26,090	384	11,187	35,056	9,466	28,251	
-	£'000	215	10	242	764	228	624
Potash Salts	tons	10,641	14,467	22,234	27,403	39,099	38,246
	£'000	82	314	397	489	652	638
Rock Phosphate	tons	635,097	1,271,139	1,143,330	1,086,884	1,418,527	1,321,607
	£'000	776	2,478	2,432	2,166	2,828	2,804
Sodium Nitrate	tons	7,199	7,848	6,948	11,714	14,102	11,219
-	£'000	63	185	183	250	323	252
Other	tons	3,430	1,837	6,935	399	506	785
<del>- ••••</del>	£'000	8	15	151	14	16	20
Total	tons	682,457	1,295,675	1,190,634	1,161,456	1,481,700	1,400,108
	£'000	1,144	3,002			4,047	4,338

Exports of fertilizers (practically all of which are manufactured locally) amounted to 16,622 tons valued at £380,000 in 1956-57 compared with 1,962 tons valued at £37,000 in 1955-56 and 4,826 tons valued at £34,000 for the average of the five years ended 1938-39.

3. Quantities Used Locally.—Information regarding the area fertilized with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1956-57 season is given in the following table. Details of the area manured with natural manure (stableyard, etc.) are no longer collected.

#### AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1956-57.

State of Tarrite on	Area Fe	rtilized ('000	Acres).	Fertilizers Used (Tons).			
State or Territory.	Crops.	Pasture Lands.	Total.	Crops.	Pasture Lands.	Total.	
New South Wales Victoria	1,336 2,906	4,096 8,729	5,432 11,635	67,716 151,314	224,545 493,516	292,261 644,830	
Queensland South Australia	466 3,400	16 3,677	7,077	102,418 175,350	1,497 214,602	103,915 389,952	
Western Australia Tasmania Northern Territory	5,100 135	4,854 897	9,954 1,032	254,661 21,263 54	227,320 68,335	481,981 89,598 54	
Australian Capital Territory	2	44	46	186	2,619	2,805	
Total	13,345	22,313	35,658	772,962	1,232,434	2,005,396	

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1952-53 to 1956-57, compared with the average for the five years ended 1938-39, are shown in the next table. These details include the quantity used in the top-dressing of pasture lands.

#### QUANTITY OF ARTIFICIAL FERTILIZERS USED.

(Tons.)

Season.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Total.
Average, 1934–35 to 1938–39	148,277 196,124 251,440 273,548 307,608 292,261	305,969 619,327 592,403 635,290 653,591 644,830	50,651 82,222 96,358 91,700 99,075 103,915	200,566 284,226 325,085 350,351 380,783 389,952	230,713 409,959 405,012 450,823 468,108 481,981	30,272 64,439 71,015 75,748 82,967 89,598	(a) (a) (a) 54 67 54	2,304 2,672 2,982	966.724 1,657,851 1,743,617 1,880,186 1,995,181 2,005,396

(a) Not available.

4. Local Production.—Complete information regarding local production of fertilizers is not available. The number of firms engaged in the manufacture of chemical fertilizers in Australia for the year 1955-56 was 54, made up as follows:—New South Wales, 15; Victoria, 9; Queensland, 8; South Australia, 8; Western Australia, 6; and Tasmania, 8. The production of superphosphate in Australia during 1956-57 amounted to 1,975,000 tons.

#### § 25. Aerial Agriculture.

During recent years, aircraft have been used in agriculture for topdressing and seeding (principally of pastures) and for spraying and dusting of crops and pastures. During the year ended 31st March, 1957, the first year for which data are available, the total area treated by aircraft was 1,465,959 acres—1,002,605 acres were topdressed and/or seeded and 463,354 acres were sprayed or dusted with insecticides, fungicides and herbicides. The following table shows details of area treated and materials used in topdressing and seeding for each State for the year ended 31st March, 1957.

APPIAL ACDICULTUDE	OPERATIONS DURING 1956-57
APRIAL AURIE III. IIIRE	COPPERATIONS DURING 1956-57

	1	1	1	1		1	1	
Item:	Unit.	N.S.W.	Vic.	Q'land.	S.Aust.	W.Aust.	Tas.	Total.
Total Area Treated	Acres	 . 746,083	230,781	177,427	104,886	178,032	28,750	1,465,959
Topdressing and			;	!		<i>t</i>		}
Seeding—	1	1	i			l i		•
Area Treated with—	1		ı					
Superphosphate		611,018			58,052	39,454	28,750	
Seed	,,	137,201	16,642	64,955	180	10,936	12,650	242,564
Other	,,	8,660		325				8,985
Total(b)	<u></u>	646,563	164,326	65,280	58,232	39,454	28,750	1,002,605
Materials used								
Superphosphate .	Tons.	34,666	11,745	l i	4,209	1,708	2,380	54,708
Seed	lbs.	184,337		159,034	360		25,300	
Spraying and Dusting—								
Area Treated with-								
Insecticides	Acres.	3,654	9,826	50,817	33,057	37,674	·	135,028
Fungicides	1		,,020	6,676	5,147			11,823
Herbicides	"	95,866				100,904		322,534
Total(b)	,,,	99,520		112,147		138,578		463,354

<sup>(</sup>a) Includes Northern Territory. operation is counted once only.

#### § 26. Ensilage.

- 1. Government Assistance in Production.—The several State Governments devote a considerable amount of attention to the education of the farming community with regard to the value of ensilage. Monetary aid is afforded in the erection of silos, and expert advice is supplied in connexion with the design of the silos and the cutting and packing of the ensilage.
- 2. Quantity Made and Stocks Held on Farms.—Information regarding production and farm stocks of ensilage for the years ended 31st March, 1955, 1956 and 1957 are given in the following table.

ENSILAGE: PRODUCTION AND FARM STOCKS.

			(Tons.)			<del></del> -,		
Period.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Total.
Production during—  1954–55 season  1955–56 "  1956–57 "	102,790 86,125 106,521	86,373 127,878 187,220	36,191	35,457	12,312	23,991 47,282 60,454	395	270,947 345,640 464,204
Farm Stocks, as at— 31st March, 1955	99,238 101,179 135,302	(a) (a)	23,609 43,155 74,705	17,963 26,664	4,837 8,918	18,422 42,863 67,153	85 415	(a) (a) (a)

(a) Not available.

The drought of 1902-3 drew increased attention to the value of stocks of ensilage, and in the following seasons there was an increase both in the number of holdings on which ensilage was made and in the quantity produced. The accumulated stocks proved of great value during the 1914 drought, though far less than would have been the case if more attention had been paid to production during the previous years when there was a surplus of green fodder. The quantities made since that date have fluctuated considerably, but the output increased up to 1939-40 in which year the production was 303,495 tons. During subsequent seasons, output declined to the extremely low level of 94,744 tons during the drought year 1944-45, rising to 180,622 tons in 1947-48 but decreasing again in succeeding years to 110,474 tons in 1951-52. Since then production has increased substantially each year up to 1956-57 when a record quantity of 464,184 tons was made.

<sup>(</sup>b) Area treated with more than one type of material in one

#### § 27. Agricultural Colleges and Experimental Farms.

Agricultural colleges, administered by State Departments of Agriculture, have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agricultural work and livestock husbandry. Students are required to undertake a considerable amount of practical work in addition to lectures and theory. A secondary function of the colleges is agricultural research and experimentation. To a lesser degree, they carry out extension work in the form of public field days. Upon graduation, students receive diplomas in agriculture, dairying, etc., according to the course undertaken.

Experimental farms have been set up by State Departments of Agriculture in all States. They are primarily concerned with agricultural research and experimentation, each farm concentrating on problems specific to the district in which it is located. The results of the work undertaken are passed on to farmers at field days, which are held at regular intervals, through publication in various agricultural or scientific journals and through the agricultural extension officers of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations scattered throughout Australia, and sometimes undertakes joint research with the appropriate State authorities. It also has a number of regional laboratories throughout the country. These laboratories conduct research into agronomic problems as they occur in each particular region. The most recently established laboratory is the one at Mareeba, Northern Queensland, which is concerned with all aspects of the culture and production of tobacco. The State Departments of Agriculture study problems of particular significance within their own boundaries. The universities also carry out valuable research work on their own experimental farms.

#### § 28. Tractors on Rural Holdings.

The growth of mechanization in agriculture is indicated by the increase in the number of tractors on rural holdings from 41,943 in 1939 to 211,845 in 1957, an increase of 405 per cent.

The table below sets out the total number of tractors on rural holdings in 1939, and the number of wheeled type and crawler tractors for the five years ended 1957. More detailed information showing the number of tractors classified according to age, horse-power and type of fuel used was compiled for the years ended 31st March, 1954 and 1957. This information is shown in *Primary Industries*, Part 1,—Rural Industries, Bulletin No. 51.

			TRACT	ORS O	N RUR	AL HOL	DINGS.			
	March—	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
			,	VHEELED	Түре	<b>FRACTORS</b>				
1953 1954 1955 1956 1957		39,229 41,195 45,619 50,005 52,477	37,484 41,953 45,824 49,584 51,614	29,822 32,535 35,024 37,443 (b)	16,729 18,228 20,074 21,155 22,826	15,381 16,577 17,832 18,537 19,352	4,550 5,111 5,699 6,272 6,967	(a) (a) (a) 70 83	158 163 172 193 191	143,353 155,762 170,244 183,259 (b)
		·	CRAWI	ER OR	TRACK T	YPE TRA	CTORS.			
1953 1954 1955 1956 1957		3,179 3,221 3,479 4,001 4,232	1,271 1,214 1,430 1,645 1,606	4,176 4,547 4,945 5,313 (b)	3,021 2,614 3,036 3,190 3,186	2,932 3,093 3,334 3,654 3,556	547 660 745 843	(a) (a) (a) 32 31	8 7 9 10 8	15,029 15,243 16,893 18,590 (b)
				Тот	AL TRAC	TORS.				
1939 1953 1954 1955 1956 1957	: ::	12,926 42,408 44,416 49,098 54,006 56,709	8,802 38,755 43,167 47,254 51,229 53,220	8,541 33,998 37,082 39,969 42,756 44,873	5,969 19,750 20,842 23,110 24,345 26,012	5,680 18,313 19,670 21,166 22,191 22,908	(a) 4,992 5,658 6,359 7,017 7,810	(a) (a) (a) (a) 102 114	25 166 170 181 203 199	(d) 41,943 158,382 171,005 187,137 201,849 211,845
T	) Not availa	ble.	(b) Not ye	et availabl	le. (c	) At comm	nencemen	of year.	(d)	Excludes

#### § 29. Number and Area of Rural Holdings and Employment Thereon.

Tasmania.

Note.—In New South Wales, in 1955-56, the lists of rural holdings used in the collection of agricultural and pastoral statistics were reconciled with lists of ratable land of one acre or more in extent recorded by country shires for rating purposes. This reconciliation led to

the addition of a number of holdings to the annual collection. To permit continuity of comparison of the statistics included in paras. 1, 3 and 4 of this Section, number and area of holdings, employment, and wages and salaries paid, as recorded for the additional holdings in 1955-56, are set out below.

Number of holdings			4,784
Area of holdings, (acres)			3,131,462
Persons engaged on rural holdings at 31s			
March, 1956—	Male.		Female.
Permanently			
Owners, lessees or sharefarmers	2,943		94
Relatives of owner, etc., not receive	ing		
wages or salary	323		153
Employees, including managers a	ınd		
relatives working for wages or sale	агу 584		15
Total	3,850		262
	<del></del>		
Temporarily	1,068		112
Wages and salaries paid during 1955-56-			
To permanent employees	£340,000	1	£13,000
To temporary employees	£319,000	٠٠ ٢	£13,000

The above data show the only items of agricultural and pastoral statistics which were materially affected by the inclusion of the additional land holdings.

1. Number and Area.—A holding in Australia has been defined by statisticians on a more or less uniform basis and discrepancies which exist are not of sufficient importance to vitiate comparisons. For the purpose of these statistics, a holding may be defined as land of one acre or more in extent, used in the production of agricultural produce, the raising of livestock or the products of livestock.

There are considerable fluctuations from time to time in numbers of very small holdings and it is very difficult to determine in some cases whether or not they are rural holdings within the definition.

In addition, in the very dry parts, such as the far west of New South Wales and Queensland and the remoter parts of South Australia and Western Australia, there are large areas of marginal lands sporadically occupied under short-term lease or other arrangement and the areas so occupied tend to fluctuate with the seasons. Similarly, there are rugged areas in the mountain country of some states which are also occasionally occupied.

The following table shows the recorded number and area of the holdings in each State for the seasons 1938-39 and 1952-53 to 1956-57.

DIIDAT	HOLDINGS:	MILIMPED	ANTO	ADEA
KUKAL	MUDIALIS :	NUMBER	AINI	AREA.

Season	N S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.(a)
	 1	Nt	JMBER O	f Rurai	Holdin	GS.			
938–39 952–53 953–54 954–55 955–56 956–57	 75,365 72,940 73,371 73,759 73,071 (c)77,855 77,812	72,452 69,353 69,392 69,551 69,528 69,509	41,503 42,382 42,850 43,284 43,459 43,292	31,280 28,832 29,220 28,092 28,585 27,936	21,052 19,655 20,132 20,876 21,323 21,385	11,680 11,812 11,818 11,743 11,647 11,538	(b) (b) (b) (b) 229 230	204 213 213 212 222 223	253,53 245,18 246,99 247,51 248.00 c 252,84 251,92
		Тота		of Run 000 Acr	AL HOLD	INGS.			
938-39 952-53 953-54 954-55	 174,660 167,907 168,996 169,444 169,124 c 172,255	40,791 37,868 37,546 37,814 37,857	317,782 358,332 361,520 362,200 367,464	144,682 152,689 150,314 149,379 149,965	211,720 215,858 221,805 228,883 229,734	6,778 6,559 6,511 6,604 6,628	(b) (b) (b) (b) (b) 160,153	371 394 391 390 389	896,7 939,6 947,0 954,7 1,121,3
956–57	 172,411	37,659	368,689	149,932	232,689	6,508	168,447	390	(c) 1,136,7

2. Special Tabulation Relating to Rural Holdings.—(i) Classification by Size of Holding. Some of the information obtained from the 1955-56 Agricultural and Pastoral Census was classified by size of rural holding, and the results of these tabulations are shown in detail

in Primary Industries Part I—Rural Industries, Bulletin No. 51. The table below shows the number and area of Rural Holdings in each State according to size of holding in 1955-56:—

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES, 1955-56.

Area Series (Acres).	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
			Nимве	R OF H	LDINGS.				
1- 9 10- 49 50- 99 100- 149 150- 999 1,000- 4,999 5,000- 9,999 10,000-19,999 50,000-99,999 50,000-99,999	4,569 9,301 5,468 4,744 16,405 11,984 20,202 2,548 1,089 948 437 160	2,881 11,605 7,609 7,179 20,084 11,190 8,435 381 95 49 11	1,038 3,555 4,216 3,805 14,359 5,300 5,535 1,342 1,283 1,815 645 566	1,936 5,516 2,374 1,311 4,644 4,481 6,836 799 304 164 70 150	2,443 688 728 3,257 1,950 8,497 976 198 63 32	796 2,120 2,003 1,588 3,334 791 777 135 67 30 6	25 23 6  4 3 1 1  150	23 26 7 3 23 29 97 8 3 3	13,330 34,589 22,371 19,358 62,110 35,728 50,380 6,190 3,039 3,073 1,206
Total	77,855	69,528	43,459	28,585	21,323	11,647	229	222	252,848
				of Hou					<u></u> -
1- 9 10- 49 50- 99 100- 149 150- 499 500- 999 1,000- 4,999 5,000- 9,999 10,000-19,999 20,000-49,999 50,000-99,999	24 241 393 575 4,744 8,644 42,112 17,147 14,694 30,422 29,912 23,347	16 292 553 864 5,664 7,888 15,173 2,501 1,301 1,417 700 1,488	6 100 318 465 3,990 3,661 11,918 9,402 18,430 56,932 44,315 217,927	10 135 171 159 1,400 3,251 14,260 5,381 4,156 4,841 5,154 111,047	9   52   49   87   935   1,443   20,308   6,344   2,535   1,995   2,262   193,715	4 57 144 190 860 540 1,688 909 870 911 455	1 2 1 2 1 5 5 43 403 159,697	1 1 1  7 22 191 59 35 73	69 879 1,629 2,340 17,601 25,451 105,651 41,748 42,021 96,634 83,201 707,221
Total	172,255	37,857	367,464	149,965	229,734	6,628	160,153	389	1,124,445

The previous occasion upon which such a classification was made was for the 1949-50 season. The following table compares, for Australia as a whole, the number and area of holdings in 1949-50 and-1955-56 according to the size of the holdings. The 1949-50 figures exclude the Northern Territory which affects comparisons mainly in the larger size groups.

RURAL HOLDINGS: NUMBER AND AREA CLASSIFIED IN AREA SERIES, AUSTRALIA.

			Number of	f Holdings.	Area of Holdings ('000 Acres)		
Area Series	(Acres).		194950.(a)	1955–56.(b)	1949-50.(a)	1955–56.(b)	
1- 9			14,830	13,330	73	69	
10 49			33,908	34,589	853	¦ 879	
50- 99			21,847	22,371	1,583	1,629	
100~ 149			18,774	19,358	2,273	2,340	
150- 499			60,537	62,110	17,174	17,601	
<b>500</b> - 999			33,985	35,728	24,183	25,451	
1,000- 4,999			47,404	50,380	98,771	105,651	
5,000- 9,999			5,819	6,190	39,330	41,748	
10,000-19,999			2,945	3,039	40,865	42,021	
20,000-49,999			2,793	3,073	87,721	96,634	
50,000-99,999		'	1,110	1,206	77,243	83,201	
100,000 and over	• •	;	1,315	1,474	538,537	707,221	
Total			245,267	252,848	928,606	1,124,445	

<sup>(</sup>a) Excludes Northern Territory.

<sup>(</sup>b) See NOTE at beginning of § 29.

(ii) Classification by Type. An experimental classification of holdings by type was carried out for New South Wales for 1955-56 in conjunction with the classification by size referred to above. This was the first attempt at a detailed classification of this kind in Australia although a very simple classification into the three categories—agricultural, pastoral or dairying (on the basis of main activity)—had been performed in some earlier years. It is probable that the methods used in the 1955-56 experimental classification will serve as the basis for an Australia wide classification in 1959-60 and thereafter at five yearly intervals.

In the experimental classification carried out in New South Wales, gross receipts at the farm (estimated from data shown on the annual statistical returns) were used as the measure of the relative importance of each type of farming activity on each holding. Holdings for which the total farm value was less than £400 were treated as "sub-commercial" and these together with unused holdings, holdings used for intermittent grazing, and holdings attached to hospitals, prisons, etc., were not classified by type of farming activity. Having eliminated these types of holdings, farms were classified in the manner set out in the following paragraph.

Briefly, if a single activity accounted for 50 per cent. or more of the total gross receipts, that activity determined the main holding type. Where no single activity accounted for 50 per cent. of the total gross receipts, the holdings were classified as "multi-purpose". Principal exceptions to this general rule were holdings reporting sheep and wheat, or dairy cows and pigs. In the former case, the holding was treated as a composite sheep-wheat type if the combined receipts obtained from these activities accounted for 75 per cent. or more of the total gross receipts, and provided the gross receipts obtained from sheep were no more than 4 times and not less than ½ of the gross receipts obtained from wheat. In the latter case, if the combined receipts obtained from dairying and pigs represented 50 per cent or more of total gross receipts, the holding was classified as dairying. Subsidiary activity was recorded where receipts were 50 per cent or more of the gross receipts obtained from the major activity.

The following table sets out details of the number of holdings in New South Wales in 1955-56 classified according to each type of activity. It also shows the area of holdings and the number of permanent male workers in each type.

NEW SOUTH WALES RURAL HOLDINGS CLASSIFIED ACCORDING TO TYPE OF ACTIVITY, 1955-56.

				Total Number	er of Holdings.	Area	Number of	
Туг	Type of Holding.				Proportion of All Holdings (%)	of Holdings ('000 acres).	Permanent Male Workers	
Sheep-Whea	at			10,048	12.9	17,252	17,736	
Sheep				22,951	29.5	132,122	41,111	
Wheat				712	0.9	758	1,025	
Beef Cattle				4,236	5.5	9,983	4,967	
Dairying				14,968	19.2	4,611	23,196	
Fruit				5,246	6.7	386	7,804	
Vegetables				2,244	2.9	383	3,527	
Poultry				2,713	3.5	121	3,231	
Other (one m	ain puri	oose)		1,638	2.1	506	2,556	
Multi-purpos				1,208	1.5	1,301	2,280	
Sub-commerc	ial, etc.(	(a)	٠.	11,891	15.3	4,832	6,249	
All Ru	ral Hold	lings		77,855	100.0	172,255	113,682	

<sup>(</sup>a) Includes sub-commercial holdings, unused holdings, specialholdings (experiment at farms, farms at institutions, etc.) and holdings used for intermittent grazing.

<sup>3.</sup> Employment on Rural Holdings.—The following table shows, for each State of Australia, the recorded number of persons working on rural holdings as at 31st March, 1957. Additional particulars relating to the number of males employed in agriculture are available up to 1941—42 in Official Year Book No. 36, p. 852, and previous issues. Similar details for later years are not available.

PERSONS ENGAGED ON RURAL HOLDINGS AT 31st MARCH, 1957.

Particulars.	N.S.W. (a)	Vic.	Qld.	S.A	W.A.	Tas.	N.T.(b)	A.C.T.	Aust.
Permanent— Owners, Lessees or Share- farmers Males Females Relatives of Owner, Lessee or Share-farmer over 14 years of age.	73,520 1,380			25,805 2,621	20,084 341	8,984 608	173, 29.	156, 7	244,111 19,792
not receiving wages or salary Males Females Employees, including Managers and Rela-	7,788 6,811	5,732 1,470		2,335 707	1,512 668	124 40		15, 9	21,734 15,088
tives working for wages or salary Males Females	31,686 827			8,265 557	8,702 183	4,457 215	510 51	135 17	90,599 6,493
Total Permanent— Males Females	112,994 9,018		68,926 18,591	36,405 3,885	30,298 1,192	13,565 863	697 101		356,444 41,373
Persons	122,012	100,943	87,517	40,290	31,490	14,428	798	339	397,817
Temporary— Males Females	25,545 1,942	17,356 1,629	17,239 1,129	14,985 3,747	4,467 215	5,004 2,213	1,604. 445	67 4	86,267 11,324
Persons	27,487	18,985	18,368	18,732	4,682	7,217	2,049	71	97,591
Total Persons	149,499	119,928	105,885	59,022	36,172	21,645	2,847	410	495,408

(a) See Note at beginning of § 29. (b) 1,434 male and 443 female full-blood aboriginals employed are included as temporary employees.

The next table shows for Australia as a whole the number of persons working full-time on rural holdings as at 31st March of the six years 1952 to 1957.

PERSONS ENGAGED ON RURAL HOLDINGS, AUSTRALIA.

			As at 31	it March-	-	
Particulars.	1952.(a)	1953.(a)	1954.(a)	1955.(a)	1956.	1957.
Permanent—						
Males—				į		
Owners, Lessees or Share-farmers	236,330	241,368	241,149	240,879	245,621	244,111
Relatives of Owner, Lessee or				· 		
Share-farmer over 14 years of	1					
age, not receiving wages or	1					,
salary	24,589	23,157	22,736	23,529	21,232	21,734
Employees, including managers	ì					
and relatives working for wages						
or salary	88,264		93,748			
Total, Males		356,389				
"Females	46,603	48,234	49,782	46,656	42,104	41,373
Total Permanent	395,786	404,623	407,415	402,543	398,291	397,817
Temporary-						
Total, Males	88,356	91,656	86,644	87,400	84,607	86,267
"Females	8,576	8,037	8,365	9,238	9,638	11,324
Total Temporary	96,932	99,693	95,009	96,638	94,245	97,591
Grand Total	492,718	504,316	502,424	499,181	492,536	495,408

(a) Excludes Northern Territory.

4. Salaries and Wages Paid to Employees on Rural Holdings.—Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings have been collected uniformly in all States from 1949-50. Details are set out below for each State for the year 1956-57, and for Australia as a whole for the years 1953-54 to 1956-57.

RURAL HOLDINGS: SALARIES AND WAGES(a) PAID TO EMPLOYEES, 1956-57. (£'000.)

Particulars.	N.S.W. (b)	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—Males Females Temporary(c)—Males Females	20,118 251 15,776 406	635	12,434 1,221 17,942 235	5,166 190 4,677 268	5,463 64 5,143 54	2,803 63 1,564 182	26		58,707 2,457 54,429 1,500
Total	36,551	22,111	31,832	10,301	10,724	4,612	741	221	117,093

(a) Including value of keep. paid to contractors.

(b) See NOTE at beginning of § 29.

(c) Includes amounts

RURAL HOLDINGS: SALARIES AND WAGES(a) PAID TO EMPLOYEES, AUSTRALIA. (£'000.)

P	articulars.		1953–54.(b)	1954–55.(b)	1955–56.	1956–57.
Permanent—Males Femal Temporary(c)—Ma	les	 	52,240 2,406 51,282 1,190	53,951 2,468 53,855 1,323	55,752 2,456 53,200 1,476	58,707 2,457 54,429 1,500
Total		 	107,118	111,597	112,884	117,093

<sup>(</sup>a) Including value of keep.

5. Persons (of all ages) Residing Permanently on Holdings.—Particulars of persons (of all ages) residing permanently on rural holdings have been collected by all States at the annual Agricultural and Pastoral Census continuously since 1954. Details for each State as at 31st March, 1957 and for Australia as a whole for the years 1954–1957 are shown below.

## RURAL HOLDINGS: PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON HOLDINGS AT 31st MARCH, 1957.

Particu	lars.	N.S.W.	Vic.	Q'ld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males Females	••	175,153 148,279					28,317 25,241	937 414		563,894 475,587
Tota	d	323,432	272,962	194,823	106,907	85,426	53,558	1,351	1,022	1,039,481

## RURAL HOLDINGS: PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON HOLDINGS, AUSTRALIA.

				Ĭ	As at 31st March—								
	Pa	irticulars.			1954.	1955.	1956.	1957.					
Males					543,740	549,734	557,274	563,894					
Females	••	• •	••	••	453,503	462,163	469,805	475,587					
Tota	ıl				997,243	1,011,897	1,027,079	1,039,481					

<sup>(</sup>b) Excludes Northern Territory.

<sup>(</sup>c) Includes amounts paid

#### CHAPTER XXIII.

#### PASTORAL PRODUCTION.

Note.—Except where otherwise indicated, values of Australian oversea trade shown throughout this chapter are expressed as f.o.b., Australian currency, port of shipment.

#### § 1. Initiation and Growth of Pastoral Industry.

1. Livestock Numbers.—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given in previous issues of the Year Book. Since 1860, annual enumerations have been made, based, with few exceptions, on actual collections made through the agency of the State Police or by post. Particulars concerning the numbers of each of the principal kinds of livestock in Australia at decennial intervals from that year to 1950, and from 1953 onwards in single years, are given in the following table, and are shown continuously on the graph on p. 931.

LIVESTOCK: AUSTRALIA.

Yea	ır.	Horses.	Cattle.	Sheep.	Pigs.	Yea	ır.	Horses.	Cattle.	Sheep.	Pigs.
1860		432	3,958	20,135	351	1940		1,699	13,080	119,305	1,45
1870 1880	• • •	717 1,069	4,276 7,527	62,184	543 816	1950	• •	1,057	14,640	112,891	1,123
1890 1900	• •	1,522 1.610	10,300 8,640	97,881 70,603	891 950	1953 1954	• •	895 850	15,247 15,601	123,072   126,944	993 1,197
1910	• • •	2,166	11,745	98,066	1,026	1955		803	15,836	130,849	1,297
1920 1930	• •	2,416 1,793	13,500 11,721	81,796 110,568	764 1,072	1956 1957		770 737	16,457 17,257	139,124	1,160

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of droughts which have from time to time left their impress on the pastoral history of Australia. These occurred in 1868, 1877, 1883-4, 1892, 1893, 1895, 1901-2, 1912, 1914, 1918, 1919, 1922-23, 1925-26, 1927-28, 1929-30, 1940-41 and 1944-45 to 1946-47.

The years in which the numbers of livestock attained their maxima are as follows:—Horses 1918 (2,527,000); cattle, 1957 (17,257,000); sheep, 1957 (149,802,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of beef cattle, dairy cattle, sheep and pigs as at 31st March, 1955 was shown in the maps on pp. 909-12 of Official Year Book No. 43.

The numbers of horses, beef cattle and sheep in each State and Territory are shown later in this chapter; similar information for dairy cattle and pigs appears in Chapter XXIV.—Farmyard, Dairy and Bee Products.

- 2. Minor Classes of Livestock.—Statistics of the minor classes of livestock (goats, camels, mules, donkeys, etc.) have not been collected in recent years. The last year in which all States, other than Victoria, collected this information was 1941, when total numbers were as follows:—Goats, 80,366; camels, 2,267; and mules and donkeys, 10,881. Of these, goats were most numerous in Queensland, and camels, mules and donkeys in Western Australia. Further details have been published in earlier issues of the Official Year Book.
- 3. Carrying Capacity of Pastoral Holdings.—The carrying capacity of pastoral holdings has been increased in recent years by the succession of good seasons since 1946-47. Other important contributing factors have been the reduction of rabbit infestation by the introduction of myxomatosis, and increased attention to pasture improvement.

Since myxomatosis was first introduced in 1950 there has been a dramatic increase in the spread of the disease over much of Australia and in many areas the rabbit population is at the lowest level for many years.

Statistics of the area under sown grasses and clovers have been collected on a uniform basis in all States since 1952-53 only, but here also there are indications that the area sown has been considerably increased. In 1956-57, the area under sown grasses and clovers

(excluding native grasses) totalled 32.6 million acres, an increase of 4.2 million acres (15 per cent.) over 1955-56 and 11.5 million acres (55 per cent.) over 1952-53. In recent years, the sowing and top-dressing of pastures has been facilitated by the increasing use of aircraft in these operations, an area of 1.0 million acres being sown and/or top-dressed in the year ended March, 1957.

4. Value of Pastoral Production.—(i) Gross, Local and Net Values, 1955-56. Values of pastoral production for each State are shown for 1955-56 in the following table. Further details of the source of the information and an explanation of the terms used in this compilation will be found in Chapter XXX.—Miscellaneous. Maintenance costs have not been computed in all States and depreciation has not been deducted; consequently the net values are inflated to the extent of these costs.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1955-56.
(£'000.)

			1	Farm	Costs.	
State.	Gross Production Valued at Principal Markets	Marketing Costs.	Gross Production Valued at Farm.	Seed used, and Fodder for Farm Stock.	Value of other Materials used in Process of Production.	Net Value of Production. (a)
New South Wales	185,617	13,146	172,471	5,861	(b) 3,323	163,287
Victoria	123,757	11,716	112,041	2,637	4,584	104,820
Queensland	96,833	6,789	90,044	3,944	1,769	84,331
South Australia	50,441	3,098	47,343	700	2,018	44,625
Western Australia	44,646	2,875	41,771	2,051	3,142	36,578
Tasmania	10,123	602	9,521	1,835	(b) 404	7,282
Northern Territory	3,626	561	3,065			3,065
Aus. Cap. Territory	923	61	862	10	42	810
Australia	515,966	38,848	477,118	17,038	15,282	444,798

<sup>(</sup>a) No deduction has been made for depreciation and maintenance. been made for costs of power, power kerosene, petrol and other oils.

(ii) Net Values, 1934-35 to 1955-56. The net value of pastoral production by States and the net value per head of population for the years 1951-52 to 1955-56 together with the average for the years 1934-35 to 1938-39 are shown below.

NET VALUE OF PASTORAL PRODUCTION.(a)

<b>`</b>	ear.		N.S.W. (b)	Vic.	Q'land.	S. Aust.	W. Aust.	Tas. (b)	Australia
					VALUE.				
					.000.)				
Average,	1934-35	to	,		i				
1938–39	• • •	• •	30,592	16,784	13,384	4,583	4,307	1,429	71,079
1951-52			154,386	99,808	67,080	38,965	34,442	5,812	400,493
1952-53			206,872	108,459	82,442	49,918	38,642	7,412	493,745
1953-54			202,439	108,930	81,989	47,423	43,784	7,151	491,716
1954-55			175,446	112,196	82,180	45,220	36,194	7,647	c 461,464
1955-56			163,287	104.820	84.331	44,625	36,578	7,282	c 444,798

For footnotes see following page.

<sup>(</sup>b) No allowance has

NET	VALUE	<b>OF</b>	PASTORAL.	PRODUCTION-	-continued

Year.	N.S	s.W.	(b)	,	Vic.	:	Q	lan	d.	S.	Aus	t.	w.	Au	st.	T	as.(b	)	Au	stral	ua.
			N	ler	Vai	.UE			EAD		Poi	PUL	ATIO	ON.						:	
Average, 193 35 to 1938-3		8	0	9	1	3	13	11	10,	7	15	6:	 9	9	2	6	2.	7	10	8	
1951–52 .	. 46	12	4	43	4	- 1			!										47	3	
1952-53	. 61				14	5	64	16	o,	65	8	5	63	4	6	24	10	0		16	
953-54	. 59	8	11		19				11		6	9	69	8			2		55		
954-55 .	.   50	14	4	45	1.	10	62	0	1	56	0	0	55	15	6	24	8	8	c50	15	
1955–56 .	.   46	6	7	40	17	4	62	6	11	53	9	6	54	13	6	22	16	3	c47	14	1

<sup>(</sup>a) No deduction has been made for depreciation and maintenance. Excludes payments to wool-growers of profits from the war-time wool disposal plan. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) Includes estimates for Northern Territory and Australian Capital Territory.

5. Indexes of Quantum and Price of Pastoral Production, 1952-53 to 1956-57.—The quantum indexes relate to gross output of farm products valued at constant prices. The quantities of each farm product produced each year have been re-valued at the unit gross value for the period 1936-37 to 1938-39. The price indexes relate to average "prices" of farm products realized in the principal markets of Australia. Average quantities of each product marketed in the period 1946-47 to 1950-51 have been used as fixed weights. For further details of the methods of calculating these indexes and of the weights used see Chapter XXX.—Miscellaneous.

## INDEXES OF QUANTUM(a) AND PRICE OF PASTORAL PRODUCTION: AUSTRALIA.

(Base: Average 3 years ended June, 1939 = 100.)

Particulars.	1952-53.	1953–54.	1954–55.	1955–56.	1956-57.(6)
041	. 131	128 117	132 120	146 123	164
Total per Head	. 126 of 97	123. 95	96	136	142 102
Other menducts	623 389	621 401	540 409	468 424	607 410
Total' Pastoral	531	534	489	451	529

<sup>(</sup>a) Index of value at constant prices, i.e., quantities revalued at average unit values of base years (1936-37 to 1938-39). (b) Subject to revision.

Although it is not easy to obtain strictly comparable particulars for other countries, it appears from data published by the Food and Agricultural Organization of the United Nations in its Food Balance Sheets that in recent years consumption of meat in Australia has been at approximately twice the level of that in Canada and about one and a half times the level of that in the United States of America.

<sup>6.</sup> Consumption of Meats.—The quantity of meat (including cured and canned meat) in terms of carcass weight and edible offal available for consumption in Australia in 1956-57 was 1,001,781 tons. This is equivalent to 235.3 lb. per head compared with 231.6 lb. per head in 1955-56, and an average of 253.0 lb. during the years 1936-37 to 1938-39.

- 7. Marketing of Meat.—(i) General. The Australian Meat Board, consisting of representatives of producers, processers, exporters and the Commonwealth Government, is responsible for the control of all exports of Australian meat and meat products. Further information on the powers, etc., conferred on the Board under the Meat Export Control Act 1935–1953 was given on p. 801 of Official Year Book No. 40.
- (ii) United Kingdom Long-term Purchase Agreements. Details of the long-term meat contracts with the United Kingdom Government from the outbreak of the 1939-45 War up to 30th June, 1952 and of the Fifteen Year Meat Agreement (1952-67) were given on p. 710 of Official Year Book No. 41 and in earlier issues of the Year Book.

The Fifteen Year Meat Agreement (1952-67) between the United Kingdom and Australian Governments has as its objectives the promotion of meat production in Australia enabling increased exports to be made to the United Kingdom and the provision of a satisfactory market in the United Kingdom for that meat. It covers chilled and frozen beef, frozen veal, frozen mutton and lamb, frozen cattle and sheep sundries and edible offal.

- (iii) Cessation of Bulk Purchasing. Following the announcement in September, 1953, that the United Kingdom Ministry of Food would cease bulk purchasing of meat, arrangements were made between the Australian Meat Board and the Ministry for the reversion to private trading in the United Kingdom. The main features of the arrangements are:—
  - (a) Mutton and lamb exported after 1st July, 1954, and beef, veal and pig meats exported after 1st October, 1954, direct to United Kingdom importers are to be sold on the open market under methods similar to those which applied pre-war.
  - (b) The following minimum prices, to operate until 30th September, 1955, were agreed upon:—Beef and veal, 13.18d. stg. f.o.b. per lb.; lamb, 13.61d. stg. f.o.b. per lb.; and mutton, 6.05d. stg. f.o.b. per lb. The minimum prices are to be reviewed for subsequent years.
  - (c) In the event of market prices for the various classifications of meat averaging below the minimum, the Ministry is to make a payment to the Australian Government corresponding to the amount of the deficiency. So as to determine the extent of any deficiency, a procedure designed to measure as accurately as possible the weighted average level of wholsesale prices of Australian meat on the United Kingdom market has been agreed upon.
- (iv) Private Trading. After eight months of open trading, the Board estimated that a deficiency payment would be received in respect of beef for the first year. In order to make arrangements for this anticipated deficiency to be passed on to the producer, the Meat Agreement (Deficiency Payments) Act was passed by the Commonwealth Government in May, 1955. Payments were to be made on the understanding that they were, or would be, reflected in the price paid to producers.

To make provision for recoupment by the Board of any overpayment, the Meat Export (Additional Charge) Act was also passed in May, 1955.

Negotiations were made in Australia during August and September, 1955, to review minimum prices and the working of the Agreement generally. The following minimum prices were fixed for the three years ended 30th September, 1958:—For beef and veal and lamb the same as for the year ended 30th September, 1955, and for mutton the average prices realized to the end of April, 1955, (approximately 5.8d. stg. per lb.). In addition, minimum beef and veal prices were fixed for the three years 1958-61 at 5 per cent. below those for the 1955-58 period. Under the terms of the Agreement, Australia will be entitled to export 10,000 tons of beef, veal, lamb and mutton to destinations other than the United Kingdom and the Colonies. Additional free quotas can be requested and sympathetic consideration can be expected for any such requests should depressed prices or other circumstances justify an approach of this kind.

Under this arrangement, for the year ended 30th September, 1956, an additional 5,000 tons of beef for export to any destination was agreed upon.

Because of a rise in beef prices in the United Kingdom, the deficiency payments made by the Board during the year ended 30th September, 1955, exceeded the sum received from the United Kingdom for the same period. In an endeavour to recoup some of this overpayment, under the terms of the Meat Export (Additional Charge) Act, a levy of one eighth of a penny per lb. was imposed on certain classes of beef exported to the United Kingdom out of stocks placed into store from 1st February to 16th April, 1956.

Since the beginning of the 1955-56 season on 1st October, 1955, beef prices in the United Kingdom have been consistently below the level of the guarantee and consequently Australia has "earned" regular deficiency payments. The rates of payment made by the Australian Meat Board during the 1954-55 and 1955-56 seasons were given on pp. 888-9 of Official Year Book No. 43. For the 1956-57 season the rate was 1½d. per lb. to the end of December. It was increased to 3d. per lb. for January and February, and was continued at this rate for bone-in beef right through 1957; the rate on bone-out beef however, was increased to 4d.per lb. from the beginning of March until the end of December, 1957. The Australian

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Meat Board not only maintained bounty payments at these rates on beef placed into store for export to the United Kingdom during 1957, but commenced 1958 with sufficient funds in hand to continue bounty payments at the same basic rates for that year.

Deficiency payments received from the United Kingdom in 1954-55 were £150,000; in

1955-56 they were £3.25 million and in 1956-57, £5.93 million.

For 1958, a new "chiller" grade of export beef was introduced. Beef of the new grade, whether exported in the chilled or frozen form receives a bounty of 5d. per lb. The bounty on bone-out piece beef has been increased from 4d. to 5d. per lb., and on certain classes of bone-in piece beef from 3d. to 5d. per lb. The basic rate of 3d. per lb. has been maintained for other 1st and 2nd quality quarter beef.

In July and August, 1956, the annual review of the operation of the Agreement took place in London. It was agreed that Australia be entitled to export 15,000 tons of beef, weal, mutton and lamb to destinations other than the United Kingdom and Colonies during each of the meat years 1956-57 and 1957-58.

#### § 2. Horses.

1. Distribution throughout Australia.—About 80 per cent. of the total number of horses in Australia are in the States of New South Wales, Queensland and Victoria. In the following table, figures are shown for each State and Territory for the years 1953 to 1957 in comparison with the average for the years 1935 to 1939:—

HORSES	:	NUMBER.
C	'n	OO )

					( 000.)					
Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 19	935									
to 1939		537	355	444	198	154	31	33	1	1,753
1953		298	154	282	57	50	18	35	1	895
1954		280	141	273	52	49	17	37	1	850
1955		258	132	267	49	47	16	33	1	803
1956		247	119	261	44	46	15	37	1	770
1957		235	108	255	41	45	14	38	1	737

The number of horses in Australia attained its maximum during 1918, when a total of 2,527,149 was recorded. The United States of America recorded its highest number in the same year and Canada in 1921. The number in Australia has declined considerably since 1918 owing to the mechanization of transport and farming. During the period 1918 to 1957, the decrease in numbers has averaged 45,000 per annum.

A graph showing the number of horses in Australia from 1860 onwards appears on p. 931.

The percentage distribution of the number of horses in each State and Territory for 1957 was:—New South Wales, 32; Victoria, 15; Queensland, 34; South Australia, 6; Western Australia, 6; Tasmania, 2; and Northern Territory, 5.

- 2. Oversea Trade in Horses.—(i) Exports. The export of horses from Australia during the early years of this century was fairly considerable, averaging about 15,000 head per annum between 1901 and 1920, exclusive of those used for war purposes during the 1914–18 War. Since then, exports have gradually declined and in 1956–57 amounted to only 682.
- (ii) Imports. The few horses imported into Australia consist mainly of valuable stud animals from the United Kingdom and racehorses from New Zealand. The total number imported in 1956-57 was 374 valued at £376,715.

#### § 3. Cattle.

1. Purposes for which Raised.—Cattle-raising is carried out in all the States, the main object in certain districts being the production of stock suitable for slaughtering purposes, and in others the raising of profitable dairy herds. The great impetus which the development of the export trade in Australian butter gave to the dairying industry led to a considerable increase in numbers and an improvement in quality of the dairy herds in the coastal districts of Victoria, New South Wales and southern Queensland in particular, the portion of Australia in the temperate zone which is best adapted to this industry. On the other hand, beef-producing cattle are more widely distributed, particularly in the eastern States, and are raised in areas unsuitable for dairy cattle, such as the tropical area of northern Queensland, the Northern Territory, and the Kimberley district in the north of Western Australia.

2. Distribution throughout Australia.—Until 1880, New South Wales was the principal cattle-raising State, but in that year Queensland took the leading position, which it has since maintained. There was a very rapid increase in the number of cattle in Australia up to the year 1894, when 12,312,000 head were depastured. From 1895 onwards, however, the effects of droughts and the ravages of tick fever reduced the number to 7,063,000 in 1902. Following the disastrous drought which terminated in the latter year, the herds were gradually built up, and, despite recurring droughts, they continued to increase up to 14,441,000 in 1921. Thereafter the number dropped each year till 1929, largely owing to the decline in the oversea demand for frozen beef. With the expansion of dairying it recovered to 14,049,000 in 1934, but from that year declined again to 1939 when it stood at 12,862,000. The upward movement which commenced in 1940 was continued until 1944, the total number of cattle (14,184,000) in the latter year being at its highest level since 1923. Drought conditions and other factors caused a decline in numbers to 13,427,000 in 1947. This was followed by a general upward movement in numbers to a record 17,257,000 in 1957. A graph showing the number of cattle in Australia from 1860 appears on p. 931.

The numbers of cattle (beef and dairy) in the several States and Territories in each year 1953 to 1957 compared with the average for the years 1935 to 1939 are shown below.

CATTLE	:	NUMBER.
(	'n	00.)

				( 000.,					
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
Average, 1935 to 1939 1953 1954 1955 1956 1957	3,198 3,649 3,554 3,461 3,678 3,911	1,952 2,297 2,370 2,456 2,616 2,765	6,018 6,751 7,086 7,238 7,331 7,462	331 483 491 524 566 621	819 846 830 861 897 957	262 275 295 319 332 354	889 936 966 969 1,028 1,176	9 10 9 8 9	13,478 15,247 15,601 15,836 16,457 17,257

Although the proportion was not as high as it has been in the past, Queensland was carrying 43 per cent. of the cattle in Australia in 1957. The percentage in each State and Territory during that year was:—New South Wales, 23; Victoria, 16; Queensland, 43; South Australia, 3; Western Australia, 6; Tasmania, 2; and Northern Territory, 7.

Maps showing the distribution of beef and dairy cattle in Australia have been published in previous issues of the Official Year Book (see No. 43, pp. 909-10 for 1955; No. 39, pp. 905-6, for 1948; No. 34, pp. 453-4, for 1938-39; and No. 22, p. 660, for 1924-25).

3. Classification of Cattle According to Purpose.—Of the total number of cattle in Australia in 1957, 12,139,000 or 70 per cent. were classified as beef cattle. The numbers classified as beef cattle in the several States and Territories during the years 1943 and 1953 to 1957 were as follows:—

BEEF CATTLE: NUMBER.

			<del></del>			( 000.)	· · · · · · · · · · · · · · · · · · ·	· · · · · ·			
	Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aust.
1943		••	1,676	577	4,893	171	605	102	978	5	9,007
1953 1954 1955	::	::	2,357 2,268 2,196	820 829 856	5,378 5,703 5,861	231 230 255	612 600 633	113 121 129	936 966 969	6	10,453 10,723 10,904
1956			2,341 2,577	954 1,044	5,946 6,087	302 356	673	148 158	1,028 1,176	6 8	11,398

A classification of numbers on this basis is not available prior to 1943.

Particulars relating to dairy cattle numbers will be found in Chapter XXIV.—Farm-yard, Dairy and Bee Products.

- 4. Size Classifications of Cattle Herds.—A special series of tabulations relating to rural holdings in Australia was compiled for 1955-56 and published in full detail in a series of mimeographed bulletins, Size Classification of Rural Holdings, 1955-56. Condensed tables also appear in Primary Industries, Part I, Bulletin No. 51. The tables relating to beef and dairy cattle show classifications according to size of herd, area of holding, area of wheat for grain and area of sown pastures.
- 5. Comparison with other Countries.—The following table shows the number of cattle in Australia and in some of the principal cattle-raising countries of the world for the years 1936-40 and at the latest available date. The figures, which, in general, have been compiled by the United States Department of Agriculture for publication in Foreign Crops and Markets and Foreign Agriculture Circular, relate to areas embraced by post-war boundaries, but do not cover identical areas for the two periods in all cases.

CATTLE: NUMBER IN VARIOUS COUNTRIES. ('000.)

	Country.			Average, 1936–40.(a)	Year and Month.	Number.
India(b)				180,000	1955 (January)	209,000
United States o	f America			66,706	1957 (January)	95,166
U.S.S.R.				59,800	1957 (October)	70,400
Brazil				40,807	1956 (December)	64,000
Argentina				33,762	1956 (July)	45,400
Pakistan(b)				33,000	1955 (January)	30,000
China				25,600	1953 (May)	28,800
Ethiopia				18,000	1954 (July)	20,000
France				15,504	1957 (October)	17,792
Australia				13,285	1957 (March)	17,257
Mexico				11,716	1957 (December)	16,700
Colombia				8,010	1956 (December)	12,100
Turkey(b)				8,611	1956 (December)	12,005
Union of South	Africa			11,636	1954 (August)	11,604
Germany, Fede	ral Republ	ic of		12,114	1957 (December)	11,815

<sup>(</sup>a) In some cases census for a single year, and in others an average for two to four years. (b) Includes buffaloes.

6. Imports and Exports of Cattle.—The products of the cattle-raising industry figure largely in the export trade of Australia, although until recently the export of live cattle has never been large. In 1956-57, exports of cattle mainly to the Philippines for slaughter, amounted to 18,360 valued at £754,000. The number of cattle imported is small, consisting, as in the case of horses, mainly of valuable animals for stud purposes. Details for the years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 are as follows.

CATTLE: IMPORTS AND EXPORTS, AUSTRALIA.

			:	Impo	rts.	Expo	rts.
	Yea	r.	-	No.	Value.	No.	Value.
					£'000		£'000
Average,	1934-35	to 1938-39		295	22	308	6
1952-53				494	201	1,643	81
1953-54				153	102	1,214	95
1954-55				1,679	155	6,786	346
1955-56				304	229	8,025	475
1956-57				145	123	18,360	754

The average value per head of the cattle imported during the last five years was £292, while the average value per head of the cattle exported during the same period was £48-

7. Cattle Slaughtered.—The numbers of cattle slaughtered during each of the years ended June, 1953 to 1957 compared with the average for the years 1934-35 to 1938-39 are shown in the following table:—

### CATTLE (INCLUDING CALVES) SLAUGHTERED.

('000.)

		Slaughterings passed for Human Consumption.										
Year ended June	n.s.w.	Vic.	QId.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	terin inclu ing Boile Dow		
1939 1953 1954 1955 1956	to (a)1,112 (a)1,112 1,406 1,564 1,518 1,591	812 848 1,008 1,024 1,023 1,139	1,046 1,272 1,366 1,430 1,502 1,641	(b)156 194 220 233 227 252	(b)124 154 172 181 191 192	45 70 62 75 88 102	(b) 4 14 15 16 25 25	2 8 8 8 9	3,301 3,966 4,415 4,485 4,612 4,952	3,33 4,00 4,47 4,55 4,67 5,01		

<sup>(</sup>a) Year ended March.

8. Production of Beef and Veal.—Details of the production of beef and veal in each State and Territory are shown in the following table for the years indicated:—

PRODUCTION OF BEEF AND VEAL (BONE-IN WEIGHT): AUSTRALIA. ('000 tons.)

<b>Ye</b> ar endec	I June—	N.S.W.	Vic.	Qld.	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust
Average	1935									
to 1939	٠ (	(a)173	115	181	(b) 25	(b) 27	9	(b) 1		53
1953		217	124	253	31	32	14	` 3	1	67
1954		221	140	258	34	35	11	3	2	70
1955		215	143	272	34	37	14	3	2	72
1956		222	139	292	38	38	15	5	2	75
1957		236	159	317	40	38	18	5	2	81

<sup>(</sup>a) Year ended March.

9. Consumption of Beef and Veal.—For the three years 1936-37 to 1938-39, the average annual production of beef and veal in Australia was 569,000 tons of which 127,000 tons were exported, leaving a balance of 442,000 tons (or the carcass equivalent of 144 lb. per head per annum) available for consumption as fresh and canned meat. Since the 1939-45 War, consumption per head of beef and veal has been at a somewhat lower level. In 1956-57 it amounted to 132.7 lb. per head, consisting of 129.3 lb. of carcass meat and 3.4 lb. of canned meat (carcass equivalent).

In the following table, details of the production and disposal of beet and veal are shown or the years 1952-53 to 1956-57 compared with the average for the three years 1936-37 o 1938-39.

<sup>(</sup>b) Year ended previous December.

<sup>(</sup>b) Year ended previous December.

## PRODUCTION AND DISPOSAL OF BEEF AND VEAL (BONE-IN WEIGHT) : AUSTRALIA.

('000 tons.)

			:				_	Consumpt tralia as Hu	ion in Aus- ıman Food.
	Year.		Chai in St		Production.	Exports.	For Canning.	Total.	Per Head per Annum.
Average, 1938-39 1952-53 1953-54 1954-55 1955-56 1956-57	1936-37	to	+ - + - +	6 7 4 7 3	569 675 704 720 751 815	127 96 155 137 163 177	(a) 106 101 106 100 84	442 467 455 473 495 551	lb. 144.1 119.7 114.6 116.5 119.1 129.3

(a) Included with exports.

10. Exports of Frozen Beef and Veal.—The export of frozen meat from Australia dates from about 1881, and since that year the trade has grown considerably. The quantities and values of frozen beef and veal exported during the five pre-war years ended 1938-39 and in each year 1952-53 to 1956-57 are shown in the following table:—

#### EXPORTS OF FROZEN BEEF AND VEAL: AUSTRALIA.

	Yea		 Exports of Froz Bee		Exports of F	rozen Veal.
	I Ca		Quantity.	Value.	Quantity.	Value.
			 '000 lb.	£'000	'000 lb.	£'000
Average, 1	934-35 t	o 1938-39	 231,355	3,188	10,353	165
1952-53			 189,176	13,443	3,324	339
1953-54			 313,198	21,697	3,779	349
1954-55			 271,772	21,408	4,626	491
1955-56			 306,354	22,025	4,689	495
1956-57			 331,170	22,835	3,391	409

The largest purchaser of Australian beef and veal is the United Kingdom, which during 1938-39 took about 90 per cent. of the total shipments. In 1956-57, shipments to the United Kingdom were valued at £17,007,000 or 73 per cent. of the total value of beef and veal exports whilst exports to other Commonwealth countries amounted to £2,573,000 or 11 per cent. of the total.

In view of the preference overseas for chilled beef, the Australian beef industry was at a serious disadvantage until investigations proved that beef could be successfully transported from Australia to the United Kingdom in a chilled condition. Trial shipments began in 1932-33 and exports in subsequent years increased to a maximum of 58,963,000 lb. in 1938-39. However, the advent of war seriously affected the export trade in chilled beef, which declined to a negligible amount after 1939-40. In 1956-57, chilled beef exports were 13,991,000 lb. valued at £943,000 whilst frozen beef exports amounted to 317,264,000 lb. valued at £21,920,000.

#### § 4. Sheep.

- 1. Initiation of the Pastoral Industry.—The suitability of the Australian climate and general conditions for the production of a high class of wool were recognized at an early date by Captain Macarthur, one of the pioneer sheep-breeders of New South Wales. While it would appear that the introduction of the merino sheep into Australia was not due to Macarthur, a great deal of the credit for having successfully established the pastoral industry in Australia must certainly be his.
- 2. Movement in Sheep Numbers in Australia.—Fluctuations in the number of sheep recorded in Australia for each year from 1860 onwards may be seen from the graph on p. 931. Up to 1945, there were five marked periods of decline, but the losses were made up rapidly. In each of the years 1925 to 1945, the sheep flocks exceeded 100 million, reaching 125.2 million in 1942. During the three years ended 1947, however, a sharp decline to 95.7 million occurred. This was largely attributable to the severe drought conditions experienced during 1944, 1945 and 1946. The passing of the drought and consequent re-stocking have resulted in a steady increase in sheep numbers which at 31st March, 1957, amounted to 149.8 million, the highest ever recorded.

The following table shows the approximate movement in sheep numbers in Australia in 1938-39 and 1952-53 to 1956-57.

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA. ('000.)

Season.		Lambs Marked.	Excess of Exports.	Sheep and Lambs Slaughtered.	Estimated Number of Deaths from Disease, Drought, etc.(a)	Number at 31st March.	Annual Net Increase (+) or Decrease(-)
1938–39		25,469	67	18,900	8,817	( <i>b</i> )111,058	_ 2,315
1952–53		31,778	84	21,034	5,235	123,072	+ 5,425
1953-54		32,231	86	20,922	7,351	126,944	+ 3,872
1954-55		32,804	97	22,454	6,348	130,849	+ 3,905
1955-56		36,914	97	21,180	7,362	139,124	+ 8,275
1956–57	• •	39,902	122	19,142	9,960	149,802	+ 10,678

<sup>(</sup>a) Balance figure. (b) As at 1st January, 1939—Queensland, South Australia, Western Australia, Tasmania, Northern Territory; as at 1st March, 1939—Victoria.

3. Distribution throughout Australia.—With the exception of a short period in the early sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing almost one half of the sheep of Australia.

Maps showing the distribution of sheep in Australia have been published in previous issues of the Official Year Book (see No. 43, p. 911, for 1955; No. 39, p. 907, for 1948; No. 34, p. 432, for 1938-39; and No. 22, p. 659, for 1924-25).

The numbers of sheep in the several States and Territories at 31st March of each year 1953 to 1957 compared with the average for the years 1935 to 1939 are shown in the following table:—

SHEEP: NUMBER. ('000.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Aust. Cap. Terr.	Aus- tralia.
Average, 1935 to 1939 1953 1954 1955 1956 1957	51,774	17,555	21,061	8,515	9,839	2,312	23	240	111,319
	57,461	21,368	17,030	12,036	12,475	2,421	34	247	123,072
	59,639	21,438	18,194	11,838	13,087	2,465	31	252	126,944
	59,200	22,330	20,222	12,817	13,411	2,595	29	245	130,849
	62,988	23,343	22,116	13,585	14,128	2,673	33	258	139,124
	67,670	25,831	23,190	14,984	14,887	2,943	30	267	149,802

Except when affected by drought, the relative number of sheep depastured in the different States in recent years has remained fairly constant.

The percentage distribution in 1957 was:—New South Wales, 45; Victoria, 17; Queensland, 16; South Australia, 10; Western Australia, 10; and Tasmania, 2.

4. Classification of Sheep According to Age, Sex and Breed.—In the following table, numbers of sheep in Australia are classified according to age and sex at 31st March of the years 1953 to 1957.

SHEEP: AGE AND SEX, AUSTRALIA.

		, , , , , , , , , , , , , , , , , , ,							
	31st March—								
Description.	1953.	1954.	1955.	1956.	1957.				
Rams, 1 year and over Breeding ewes (including ewes	1,560	1,610	1,647	1,721	1,830				
intended for mating)	55,351	55,528	58,614	62,480	66,844				
Other ewes, 1 year and over	7,039	8,430	7,847	7,553	8,447				
Wethers, 1 year and over Lambs and hoggets, under 1	34,304	36,069	37,645	39,145	41,573				
year	24,818	25,307	25,096	28,225	31,108				
Total, Sheep and Lambs	123,072	126,944	130,849	139,124	149,802				

Particulars relating to the principal breeds of sheep at 31st March, 1956, the last year for which these details are available are shown in the following table:—

SHEEP: PRINCIPAL BREEDS, 31st MARCH, 1956.

Breed.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.(a)	A.C.T.	Aust.
Merino	49,994	9,934	21,777	11,482	12,987	301	33	236	106,744
Other recognized breeds Merino come-	3,491	5,314	71	910	439	1,345	••	13	11,583
backs(b) Crossbreds(c)	3,792 5,711	2,449 5,646	64 204	281 912	140 562	377 650	•••	4 5	7,107 13,690
Total	62,988	23,343	22,116	13,585	14,128	2,673	33	258	139,124

<sup>(</sup>a) As at 31st December, 1955. (b) Merino comeback is the progeny of a crossbred merino ewe and a merino ram, i.e., finer than half-bred. (c) Half-bred and coarser.

- 5. Numbers of Sheep on Rural Holdings.—A special series of tabulations relating to rural holdings in Australia was compiled for 1955-56 and published in full detail in a series of mimeographed bulletins—Size Classification of Rural Holdings 1955-56. Condensed tables also appear in Primary Industries, Part I. Bulletin No. 51. The tables relating to sheep farming show classifications according to size of flock, area of holding, area of wheat for grain and area of sown pasture.
- 6. Comparison with other Countries.—As regards the size of its flocks and the quantity and quality of wool produced, Australia has long occupied a leading position amongst the sheep raising countries of the world. In 1955-56, Australian flocks numbered 139 million sheep, compared with an estimate of 200 million for the U.S.S.R., China, and Eastern Europe, with about 45 million in Argentina and about 40 million in New Zealand. The total world sheep population was estimated at about 890 million in 1955-56. Further details of sheep numbers in the principal wool producing countries of the world for 1938-39, 1954-55 and 1955-56 are given in the table on p. 935.
- 7. Oversea Imports and Exports of Sheep.—As in the case of cattle, the oversea exports of live sheep from Australia are of comparatively little importance. On 27th November, 1929, the export of stud merino sheep was prohibited, except with the approval of the

Minister for Primary Industry. Exports of sheep are now principally for slaughter overseas. Consignments for this purpose in recent years were made chiefly to Singapore from Western Australia. The following table shows the imports and exports of all sheep for the years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39.

SHEEP:	<b>IMPORTS</b>	AND	EXPORTS,	AUSTRALIA.
--------	----------------	-----	----------	------------

			Impor	rts.	Exports.		
	Yea	ır.		No.	Value.	No.	Value.
					£'000.		£'000.
Average,	934-35	to 1938-3	9	3,795	30	65,188	67
1952-53				267	10	84,397	278
1953-54				247	14	86,526	304
1954-55				232	13	97,146	340
1955-56			[	4,437	89	101,837	332
1956-57				7,445	212	129,480	482

8. Sheep Slaughtered.—The following table shows the numbers of sheep slaughtered in the several States during each of the years ended June, 1953 to 1957 compared with the average for the years ended June, 1935 to 1939:—

SHEEP (INCLUDING LAMBS) SLAUGHTERED. ('000.)

		Slaughterings Passed for Human Consumption.										
Year.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.			
verage, 1934- to 1938-39 952-53 953-54 954-55 955-56	-35   a 6,474   7,065   7,360     7,318     6,840     6,951	7,797 8,405 7,709 8,714 7,860 7,038	1,101 1,076 1,081 1,009 1,186 1,270	b 1,703 2,740 2,637 2,799 2,358 2,329	b 1,178 1,817 1,545 1,673 1,796 1,907	358 577 594 643 645 684	(b) 3 3 3 2 2	25 68 63 74 73 66	18,636 21,751 20,992 22,233 20,760 20,247			

<sup>(</sup>a) Average, years ended March.

9. Production of Mutton and Lamb.—Details of the production of mutton and lamb in each State and Territory are shown below:—

## PRODUCTION OF MUTTON AND LAMB. (Tons.)

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average, 1934–3; to 1938–39	103,706 125,731 124,530 122,499	135,149 153,030 135,622 155,611 146,228 121,253	20,166 20,371 19,692 18,550 23,020 23,866	29,710 51,484 45,471 49,853 44,339 42,563	20,476 32,506 27,266 28,413 32,759 33,303	6,035 10,656 11,073 11,901 11,778 12,607	1 82 72 78 59 49	396 1,230 1,086 1,259 1,333 1,198	315,639 395,090 364,812 388,164 380,131 366,786

10. Consumption of Mutton and Lamb.—For the three years 1936-37 to 1938-39, the annual production of mutton and lamb averaged 319,000 tons of which 88,900 tons were exported leaving a balance of 230,100 tons (or the carcass equivalent of 74.8 lb. per head per annum) available for consumption.

<sup>(</sup>b) Average, years ended December 1934 to 1938.

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Civilian consumption of mutton and lamb (in carcass equivalent weight including that used for canning) during the 1939-45 War rose substantially, but fell again in 1946-47 and up to 1951-52 was lower than in pre-war years. It rose during the years 1952-53 to 1954-55 to a steady level of just over 78 lb. per head, but fell again in 1955-56 to 76.1 lb. and in 1956-57 to 75.1 lb. per head.

In the following table details of the production and disposal of mutton and lamb are shown for the periods stated:—

# PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (BONE-IN WEIGHT) : AUSTRALIA.

('000	tons.)
-------	--------

					For	Consumption in Australia.		
	Year.		Changes in Stock.		Exports.	Canning and Dehydra- tion.	Total.	Per Head per Annum. (lb.)
			M	UTTON.				
Average 1 1952-53 1953-54 1954-55 1955-56 1956-57	936–37 t	o 1938–39	 - 7 - 1 - 1 + 2	201 249 238 240 234 224	17 36 25 15 15	20 16 15 16 13	184 193 204 211 204 199	59.8 49.5 51.4 52.1 49.1 46.8
		•		Lamb.				
Average 1: 1952–53 1953–54 1954–55 1955–56 1956–57	936–37 to	o 1938–39  	 - 5 + 1  + 1	118 146 127 148 145 143	72 39 19 42 36 24		46 112 107 106 109 118	15.0 28.8 26.9 26.0 26.2 27.7

<sup>11.</sup> Exports of Frozen Mutton and Lamb.—The export trade in mutton and lamb preserved by cold process expanded rapidly up to 1913 when 205 million lb. were shipped. It declined in subsequent years and it was not until 1942–43 that it almost reached this level again. In earlier years, shipments consisted mainly of frozen mutton, but in 1923–24 lamb supplanted mutton and the exports of lamb were largely responsible for the increase in total shipments during the ten years to 1942–43. Exports have, however, fallen again since 1942–43 and in 1956–57 amounted to only 76,274,000 lb. consisting of 53,262,000 lb. lamb and 23,012,000 lb. mutton.

The quantities and values of exports of frozen mutton and lamb in each year 1952-53 to 1956-57 compared with the average for the five years ended 1938-39 are shown in the following table:—

EXPORTS O	F FROZEN	MUTTON	AND	LAMB:	AUSTRALIA.
-----------	----------	--------	-----	-------	------------

Year.				Exports o		Exports o Lan		Exports of Frozen Mutton and Lamb.		
				Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	
				'000 lb.	£'000.	'000 lb.	£'000.	'000 lb.	£'000.	
Average,	1934-35 to	1938-39		40,584	656	153,606	4,208	194,190	4,864	
1952-53				80,774	2,790	86,070	5,971	166,844	8,761	
1953-54				55,590	1,964	44,102	3,298	99,692	5,262	
1954-55				33,811	1,626	94,982	10,191	128,793	11,817	
1955-56				34,657	1,885	81,626	7,867	116,283	9,752	
1956-57				23,012	1,326	53,262	4,773	76,274	6,099	

As with beef, the principal customer in this trade is normally the United Kingdom. In 1956-57, exports of mutton and lamb to this country represented 66 per cent. and 83 per cent., respectively of the total quantities exported.

#### § 5. Wool.

1. General.—Australia is the leading wool-growing country in the world. With less than one-sixth of the world's sheep, Australia produces more than one-quarter of the world's wool, (30 per cent. in 1956-57) and about one-half of the total fine-quality merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool and wool on sheep skins and small quantities of semi-manufactured wool are also shipped. The remainder, which is used by Australian manufacturers, has amounted to only five per cent. of the total production (greasy basis) in recent years.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on p. 935.

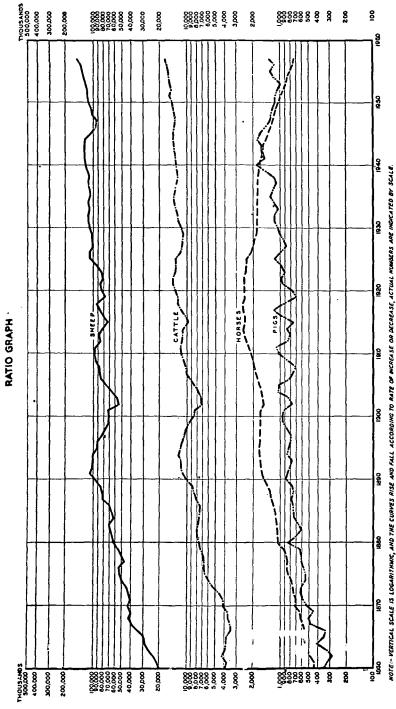
2. Greasy and Scoured Wool.—Whether the weight of the wool clip should be stated as "in the grease" or as "clean" is a matter which seriously affects comparisons between the clips of different seasons and of different countries. The quantity of grease and other extraneous matter in a fleece differs, not only between countries, but between districts in the same country. It fluctuates with the vagaries of the season, and with the breed and the condition of the sheep.

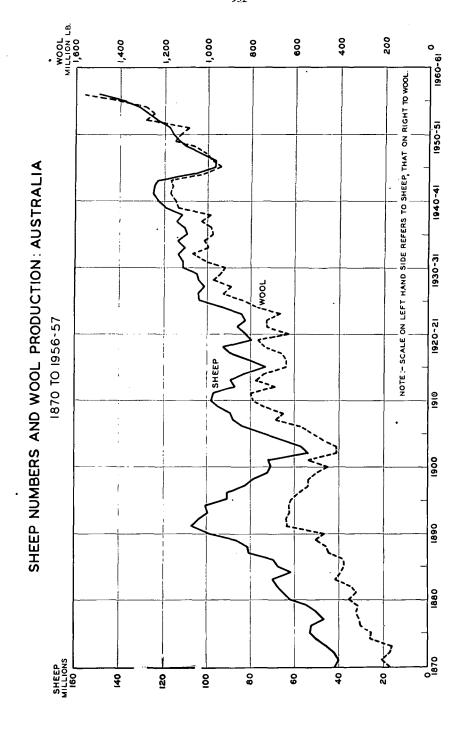
From 1946-47 to 1952-53, the Australian Wool Realization Commission, and from 1953-54, the Wool Statistical Service, has assessed annually the clean yield of the Australian wool clip. A steady rise was recorded from 53.4 per cent. clean yield from greasy in 1946-47 to 57.5 per cent. in 1951-52 and 1952-53. This was followed by a fall to 55.7 per cent. in 1953-54 but in succeeding years there was a further steady rise to 57.7 per cent. in 1956-57. A standard factor of 93 per cent. is taken as the clean yield of Australian scoured wools.

Wool scoured, washed and carbonized in Australia before export, however, has a clean yield somewhat lower than for the whole clip, because the grade of greasy wool treated locally for export as scoured, washed or carbonized includes a large proportion of dirty and low-grade wool. In recent years, it has approximated 53 per cent. The quantity of this wool exported during 1956-57 was approximately 12 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

3. Production.—The bulk of the Australian wool production is shorn from live sheep; in recent years, approximately 3 per cent. has been obtained by fellmongering and about 5 per cent. has been on skins exported. Statistics of wool production are compiled from data received from growers, fellmongers, etc. The following table shows the production for the five years 1952-53 to 1956-57 compared with average production for the five years ended 1938-39. Particulars of the gross value of wool produced are based, for shorn wool, upon the average price realized for greasy wool sold at auction, and for skin wools on prices recorded by fellmongers and skin exporters.

LIVESTOCK: AUSTRALIA, 1860 to 1957





WOOL: TOTAL PRODUCTION (AS IN THE GREASE).

Particulars.	Average, 1934-35 to 1938-39.	1952-53.	1953–54.	1954–55.	1955–56.	1956-57.
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 1Ь.
New South Wales	480,670	556,552	544,934	540,977	593,712	660,343
Victoria	165,586	252,195	223,481	253,364	273,356	297,420
Queensland	164,971	163,149	174,414	176,548	194,014	227,664
South Australia	85,120	158,658	145,509	155,761	173,697	188,808
Western Australia	81,543	128,148	134,442	129,662	156,454	156,402
Tasmania	15,504	19,807	20,116	23,797	23,418	28,663
Northern Territory(a)	35	332	290	311	393	346
Australian Capital Terri-	Ì					
tory	1,827	2,245	2,276	2,232	2,328	2,457
Australia-		1				
Shorn (including Crut-	1	*				
chings)	888,677	1,168,699	1,138,108	1,173,906	1,303,944	1,457,387
Dead and Fellmongered	50,396	45,493	47,000	44,417	44,051	37,716
Exported on Skins	56,183	66,894	60,354	64,329	69,377	67,000
Total—Quantity	995,256	1,281,086	1,245,462	1,282,652	1,417,372	1,562,103
	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
,, Value	51,182	425,807	409,768	367.138	354,064	510,013

- (a) Estimated.
- 4. Care Needed in Comparing Clips.—In comparing successive clips, allowance must be made for the circumstance that, owing to climatic or other conditions, the time of shearing may be so far delayed in some areas that one clip may include almost thirteen months' growth of wool, while the succeeding one may include little more than eleven months' growth.
- 5. Average Weights of Fleeces Shorn.—The average weights of sheep and lamb fleeces shorn in each of the States of Australia and in the Australian Capital Territory are shown in the following table for each season 1952-53 to 1956-57 compared with the average for the five seasons 1934-35 to 1938-39.

AVERAGE WEIGHT OF SHEEP AND LAMB FLEECES SHORN.

		(lb.)				
State.	Average, 1934–35 to 1938–39. (a)	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
	 S	HEEP.				
New South Wales Victoria Queensland South Australia Western Australia Tasmania	 8.87 7.84 7.98 10.06 8.53 7.62	10.18 9.63 9.78 13.14 10.16 8.17	9.53 9.04 9.87 11.72 10.53 8.13	9.32 9.83 9.23 11.86 9.76 9.31	10.01 10.41 9.96 12.68 11.33 8.85	9.92 11.02 9.98 13.14 10.73 10.07
Australia Capital Territory  Australia(b)	 8.32 8.57	9.81 10.26	9.38	9.03	9.75 10.45	10.20
	L	AMB.				
New South Wales Victoria Queensland South Australia Western Australia Tasmania Australian Capital Territory Australia(b)	2.75 2.14 2.89 2.57 2.57 1.37 1.11	3.24 2.83 3.72 3.83 2.82 2.10 1.26 3.19	3.02 2.53 3.66 3.35 2.79 2.04 1.31 2.97	2.90 2.62 3.61 3.29 2.50 2.14 1.16	3.11 2.78 4.18 3.92 2.88 2.36 1.33	3.30 3.11 4.09 4.11 2.78 2.46 1.52 3.37

<sup>(</sup>a) Mean of average weights in each season.

<sup>(</sup>b) Excludes Northern Territory.

6. Wool classified according to Quality.—Under control exercised during the 1939-45 War, records were kept of the classification of each lot of wool appraised according to quality, degree of fault and combing or carding type for each of the years 1940-41 to 1945-46. From the resumption of auctions in 1946-47 to 23rd October, 1953, this analysis was continued by the Australian Wool Realization Commission and from 23rd October, 1953, by the Wool Statistical Service, but the basis of the data has been changed to the catalogues of auction sales, and not upon appraisement as previously. The following table provides a detailed analysis of wool sold at auction according to quality, for the years 1952-53 to 1956-57. "Quality" ("64's, 60's, 58's," etc.) is a measure of the fineness and texture of wool for spinning purposes. Broadly, it means the maximum number of hanks of yarn, each of 560 yards length, which can be spun from I lb. of combed wool. For instance, wool of 64's quality is of a fineness and texture which will produce 64 hanks, each of 560 yards, from 1 lb. of tops (combed wool) of that particular wool.

# CLASSIFICATION OF GREASY WOOL SOLD AT AUCTION(a): AUSTRALIA. (Bales of approximately 300 lb.)

Рте-	1952-	53.	1953–	54.	1954_	55.	1955-	56.	1956–5	57.
dominating Quality.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.	Quantity.	Per cent.
70's and finer	110,903	3.0	98,307	2.7	95,055	2.5	86,925	2.1	100,011	2.1
64/70's	451.393				415.012					
64's	557,885	14.9	612,776			15.6		14.0		14.5
64/60's	418,288		357,936			9.9	390,633	9.4		10.1
60/64's	690,981	18.4	702,871	19.1	752,490			20.0		
60's and					,					
60/58's	580,944	15.5	596,709	16.2	641,970	16.8	746,019	17.9	804,363	16.9
Total 60's										
and finer	2,810,394	75.0	2,810,505	76.3	2,876,653	75.4	3,065,680	73.6	3,587,590	75.5
58's	413,901	11.0	377,931	10.2	416,419	10.9	503,868	12.1	502,566	10.6
56's	324,074		293,926		312,055	8.2	350,219	8.4		7.9
50's	131,823	3.5	123,609		125,878	3.3	146,640	3.5	162,533	
Below 50's	35,821	1.0	41,907		42,523	1.1	47,505	1.1	50,055	
Oddments	35,617	0.9	39,212		44,209	1.1	_ 53,747	1.3	74,226	1.6
Grand Total	3,751,630	100.0	3,687,090	100.0	3,817,737	100.0	4,167,659	100.0	4,753,630	100.0

<sup>(</sup>a) All greasy wool sold at auction except "wool re-offered account buyer".

7. World Sheep Population and Wool Production.—The following table shows particulars of the sheep population and total production of wool, in terms of greasy, in the principal wool-producing countries of the world, together with estimates of world production of merino, crossbred and carpet type wool for the latest available years compared with prewar years. The data have been taken from reports published by the Commonwealth Economic Committee compiled from questionnaires prepared by the Committee and the International Wool Textile Organization and from other official sources.

In 1956-57, Australia produced 31 per cent. of the world total of all types of wool, the share of the British Commonwealth representing approximately 50 per cent. The principal wool producers, other than Australia, are New Zealand with 10 per cent. of the world total, Argentina, 8 per cent., United States of America, 6 per cent., and Union of South Africa, 6 per cent. Production in the U.S.S.R., China, and Eastern European countries together amounted to 16 per cent. World production of wool (all types) in 1956-57 was about 1,240 million lb. (33 per cent.) greater than the average for 1934-38.

Australia's wool clip is predominantly merino; New Zealand and Argentina produce mainly crossbred wool, while the clip of the U.S.S.R. is largely of the carpet type. World production of merino wool in 1956-57 was 26 per cent. above the average for 1934-38, and the production of crossbred types has risen by about 55 per cent. Carpet wool production has risen by about 14 per cent.

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#### ESTIMATED WORLD SHEEP POPULATION AND PRODUCTION OF WOOL.

	Sheep 1	Numbers ('0	00,000).		duction ('000 erms of grea	
Country and Type.	1938–39.	1954–55.	1955-56.	Average, 1934-38.	1955-56.	1956–57. (a)
British Commonwealth— Australia New Zealand South Africa (b) Other Commonwealth Total  Foreign— U.S.S.R., China, Eastern Europe (c) Argentina United States of America Uruguay Other Foreign Total Grand Total	142.0 45.9 51.3 18.0 239.8 497.0	130.8 39.1 37.1 94.0 301.0 188.0 45.0 31.6 24.5 280.4 569.5	139.1 40.0 38.0 93.9 311.0 200.0 45.2 31.1 23.0 279.7	995 300 261 230 7,786 435 376 470 114 607 2,002		1,565 491 320 223 2,599 823 392 300 180 734 2,429
	776.0	8/0.5	890.0	3,788	4,806	5,028
Apparel Type— Merino Crossbred Carpet type			•	1,579 1,265 944	1,874 1,876 1,056	1,995 1,960 1,073

<sup>(</sup>a) Provisional. (b) Basutoland and S.W. Africa Territory excluded from sheep population, but included in wool production. (c) Comprising U.S.S.R., Poland, Czechoslovakia, Hungary, Romania, Bulgaria, Eastern Germany, Albania, China and Dependencies, Outer Mongolia and Tibet.

8. War-time Contracts.—(i) Wool. Details of the contract entered into between the Governments of Australia and the United Kingdom for the purchase of the surplus wool clip of Australia for the duration of the war and one full clip thereafter (1939–40 to 1945–46) will be found in Official Year Book No. 36, p. 1106.

(ii) Sheepskins. Details of the war-time contract arrangements for the period April, 1940, to June, 1946, between the Australian and United Kingdom Governments for the purchase of Australia's exportable surplus of woolled sheepskins will be found in Official Year Book No. 37, p. 875.

9. Australian Wool Realization Commission.—The Australian Wool Realization Commission was the Australian subsidiary of a Joint Organization (commonly referred to as "J.O.") set up by the Governments of the United Kingdom, the Commonwealth of Australia, the Dominion of New Zealand and the Union of South Africa, under the title of "U.K.—Dominion Wool Disposals Limited" to dispose of accumulated war-time stocks of Dominion wool held by the United Kingdom Government at the end of the war. Details of the functions and operations of these organizations appear in earlier issues of the Year Book, particularly No. 38 (pp. 919–923).

By the end of 1951, the Joint Organization had disposed of all stocks of wool held and shortly after it went into voluntary liquidation. Liquidation proceedings were completed

on 15th February, 1954.

Australia's share of the profits arising from the operations of J.O. amounted to approximately £93 million (including interest). The task of distributing the profits to growers was entrusted to the Australian Wool Realization Commission and up to May, 1956, all but £2.5 million of the total value of the profits, plus a small amount representing mainly

unclaimed moneys, had been distributed to growers.

The distribution of the remaining £2.5 million was held up by the protracted litigation known as the "Poulton Case". The moneys concerned represented the profits on wool which was submitted by growers for wartime appraisement through dealers. Mr. Poulton, a dealer, sought to establish the right of the dealers to these profits, but the High Court ruled against him on two occasions. The single High Court judgment was given in November 1953, and the unanimous decision of the Full High Court was given in December, 1953. However, as the possibility existed that Mr. Poulton might seek leave to appeal to the Privy Council against the High Courts's decision, the Government withheld distribution for that reason. By May, 1956, Mr. Poulton had not taken any action to seek leave to appeal to the Privy Council and the Government, after consulting its legal advisers, decided to distribute the profits to the growers. The Commission is now engaged in completing this task.

10. Australian Wool Bureau.—(i) General. The Australian Wool Bureau was constituted under the Wool Use Promotion Act 1953 and replaced the Australian Wool Board which was established in 1936. The Bureau's main function is to promote the use of wool by publicity and other means in Australia and overseas.

The Bureau consists of seven members. Of these, six represent wool-growers (three nominated by the Australian Woolgrowers' Council and three by the Australian Wool and Meat Producers' Federation) and are appointed by the Governor-General for a period of three years, while one (the Commonwealth Wool Adviser) represents the Commonwealth Government and is appointed by the Minister for Primary Industry.

Particulars of the wool promotional activities of the Bureau are given in paragraph 12,

Wool Publicity and Research.

(ii) Wool Statistical Service. The Wool Statistical Service, formerly conducted by the Australian Wool Realization Commission, was taken over by the Australian Wool Bureau on 23rd October, 1953. The statistical Service is responsible for the preparation and publication of statistical material relating to the Australian wool market and the composition of the Australian clip and other special statistical work which may be assigned to it.

It is financed out of the income received by the Australian Wool Bureau from wool stores under its control and from an annual contribution by the Commonwealth Government.

A Statistical Service Committee, consisting of the representatives of the Australian Wool Bureau, the Commonwealth Government, wool buyers, wool growers and wool selling brokers' organizations, acts in an advisory capacity to the Australian Wool Bureau.

(iii) Wool Stores. Some three hundred wool stores, formerly the property of the

- (iii) Wool Stores. Some three hundred wool stores, formerly the property of the Joint Organization and purchased from it by the Commonwealth Government, were transferred to the ownership of the Australian Wool Bureau by virtue of the Wool Stores Act 1953. The Bureau formally assumed control of these stores on 11th January, 1954, and at the same time received a substantial sum of money representing accumulated rentals and receipts from sales which had come to hand whilst the stores were held by the Commonwealth Government. Under the Act, the Bureau may only dispose of these stores with the permission of the Minister for Primary Industry and, in the event of war, may be required to return the stores without compensation to the Commonwealth Government. The stores are being let by the Wool Bureau as a commercial proposition. The rental income is used to meet the expenses of maintaining, managing and insuring the stores, to defray the cost of operating the Wool Statistical Service and to help finance the wool promotion activities of the Bureau.
- (iv) The Contributory Charge.—Associated legislation, namely, the Wool (Contributory Charge) Act 1945 (subsequently replaced by the Wool (Contributory Charge) Act (No. 1) 1950–1951 and the Wool (Contributory Charge) Act (No. 2) 1950–1951) and the Wool (Contributory Charge) Assessment Act 1945–1951, provided for a contributory charge to be imposed on all wool produced in Australia and sold, purchased or processed by a manufacturer or exported on or after a date fixed by proclamation. The passage of amending Wool Tax legislation in June, 1952, made it possible to cease collection of the contributory charge at 30th June, 1952, and the legislation under which it was imposed was repealed. Further particulars of the Wool Contributory Charge and the amounts collected appear in Year Book No. 40, pp. 675 and 819.
- (v) The Wool Levy. Whilst the contributory charge legislation, mentioned above, was in force, the Wool Levy, which was imposed by the Wool Tax Act 1936 and the Wool Tax Assessment Act 1936, was temporarily suspended. When the Wool Levy was first imposed in 1936, the rate of tax was 6d. per bale of wool delivered into the store of a wool dealer or wool selling broker, or exported. The proceeds were paid into the Wool Publicity and Research Fund administered by the Australian Wool Board.

When collection of the contributory charge ceased, (i.e., from July 1st, 1952), the Wool Levy again became operative but at a higher rate. This rate was provided for in the Wool Tax Acts (No. 1 and 2) of 1952, under which a rate can be prescribed between the limits of 2s. and 5s. per bale of shorn wool produced. For the years 1952-53 to 1956-57, the rate imposed was 4s, per bale.

- 11. Marketing of Wool:—(i) Minimum Reserve Price Plan. Details of the minimum reserve price plan which was completed by the Governments of Australia, New Zealand, South Africa and the United Kingdom in May, 1951, and which was subsequently rejected at a referendum of wool-growers in Australia, may be found in Official Year Book No. 39, p. 925.
- (ii) Subsidy on Woollen Goods, 1950-51. Details of the subsidy paid on woollen goods manufactured for consumption in Australia from wool sold during the 1950-51 season will be found in Official Year Book No. 41, p. 727.
- 12. Wool Publicity and Research.—(i) Wool Use Promotion. The Wool Use Promotion Act of 1953 defines the powers and functions of the Australian Wool Bureau as including

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measures for promoting, by publicity or other means, the use of wool in Australia or in other countries.

The Bureau is also authorized to take measures for improving the production of wool in Australia and encouraging research directed to the promotion of the use of wool.

The Bureau is associated with the New Zealand Wool Board and the South African Wool Board in maintaining the International Wool Secretariat, which was established in 1937 with head-quarters in London and with branches in fourteen countries. The function of the Secretariat is to promote the use of wool through a broad programme of publicity, education and research.

The activities of the Australian Wool Bureau are financed from the Wool Use Promotion Fund into which are paid the proceeds of the Wool Levy, and contributions from the rental

income of the wool stores as mentioned in 10 (iii) above.

(ii) Research. Until 1945, the Australian Wool Board was responsible for the supervision of economic and scientific research but in that year the Commonwealth Scientific and Industrial Research Organization was made responsible for scientific, technical and biological research into sheep raising and wool production, as well as wool textile research. Economic wool research is the responsibility of the Bureau of Agricultural Economics, a division of the Commonwealth Department of Primary Industry. The economic research work falls into two main categories, namely, farm production economics dealing with economics of wool growing and sheep-station management generally, and commodity research dealing with the economic aspects of the wool industry in Australia and of wool as a commodity in world trade.

To finance the research programme, the Wool Research Trust Account was established under the Wool Use Promotion Act in 1945. Originally, a sum equal to the amount raised by the Wool Levy was paid annually into this account from Consolidated Revenue. The Wool Use Promotion Act, 1953, fixed the rate of contribution at 2s. for each bale of shorn wool produced.

In addition, finance was available for research from the Wool Industry Fund. This Fund was established in 1946 from various moneys accumulated by the Central Wool Committee in war-time.

Under the Wool Research Act, 1957, these sources of income together with an increased Government contribution (now totalling 4s. a bale) and a contribution of 2s. a bale from woolgrowers (collected under the Wool Tax Acts, 1957) were combined into one fund known as the Wool Research Trust Fund. The use of this Fund is limited to sheep and wool research and expenditure therefrom is based on the recommendations of the Wool Research Committee. This committee comprises representatives of the C.S.I.R.O., the Universities, the Department of Primary Industry and other interested bodies.

Ample opportunity is afforded for co-operation with State Departments of Agriculture and other organizations in research and extension activities.

13. Consumption of Wool.—(i) Consumption of Raw Wool. Statistics of raw wool consumption published in recent years for the purposes of broad international comparisons are based on the quantities of scoured or carbonized wool used on the woollen and worsted systems (mill consumption) plus quantities used in such processes as felting. Consumption estimates compiled on this basis have obvious defects as they disregard oversea trade in semi-processed wool (e.g., tops and yarn) as well as woollen goods. They are, however, comparatively simple to calculate and are useful in providing an approximate indication of trends in wool consumption. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown below for the years 1938–39 and 1952–53 to 1956–57.

ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA.

 	( 00	0 10.)					
	Greasy Basis.			Clean Basis.			
Woollen	Used for Felt Manu- facture (including Hats).	Total.	l Osea on	Used for Felt Manu- facture (including Hats).	Total.		
77 947	2 248	80 105	20 500	1.068	40,667		
. ,			,		44,415		
			,		56,954		
, , ,		•	,		52,517		
 93,529	7,586	101,115	,	3,603	58,450		
 107,633	8,944	116,577	63,118	4,248	67,366		
	. 77,947 . 69,868 . 88,106 . 82,923 . 93,529	Used on Woollen and Worsted Systems Used for Felt Manufacture (including Hats).  77,947 2,248 69,868 5,622 88,106 8,376 82,923 7,552 93,529 7,586	Used on Wanu- Woollen and Worsted Systems	Used on Woollen and Worsted Systems    Used on Woollen and Worsted Systems   Used for Felt Manufacture (including Hats).   Total.   Used on Woollen and Worsted Systems.	Used on Woollen and Worsted Systems		

(ii) Consumption of Locally Processed Wool. As considerable quantities of tops, noils and yarn are exported from Australia, the series on raw wool consumption shown above is over-stated to this extent. The series entitled "Consumption of Locally Processed Wool" provides a more reliable indication of wool consumption in Australia, as allowance has been made for exports of wool in semi-processed form. This series is shown below for the years 1938-39 and 1952-53 to 1956-57. Briefly, the series measures consumption of wool in terms of yarn used in Australian mills and other factories to produce woollen cloth and other woollen goods, yarn used for hand knitting purposes, and scoured wool used for felt manufacture. No allowance has been made for oversea trade in woollen piece goods, clothing, etc., because of the obvious difficulties of accurately estimating the wool content of these products.

ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA.
('000 lb.)

		Greas	Basis.		Clean Basis.					
Year.	Worsted Yarn Used. (a)(b)	Woollen Yarn Used. (b)	Scoured Wool used for Felt Manu- facture (including Hats).	Total.	Worsted Yarn Used. (a)(b)	Woollen Yarn Used. (b)	Scoured Wool used for Felt Manu- facture (including Hats).	Total.		
1938-39	 31,568	21,393	2,248	55,209	16,353	11,130	1,068	28,551		
1952-53	 37,490	23,240	5,622	66,352	22,065	14,402	2,670	39,137		
1953-54	 44,698	28,639	8,376	81,713	26,245	17,650	3,979	47,874		
1954-55	 41,056	26,599	7,552	75,207	23,775	16,299	3,587	43,661		
1955-56	 42,656	27,497	7,586	77,739	24,706	16,069	3,603	44,378		
1956-57	 45,918	31,008	8,944	85,870	26,588	18,240	4,248	49,076		

<sup>(</sup>a) Includes hand knitting yarns used except in 1938-39. containing a mixture of wool and other fibres.

14. Exports of Wool.—(i) Greasy—Quantities. Prior to the 1939-45 War, Australian greasy wool exported overseas was sent principally to the United Kingdom and other European countries. In 1938-39, 42 per cent. of total shipments were sent to the United Kingdom, other important consignees being France, 20 per cent., Belgium, 13 per cent., and Japan, 9 per cent. During the 1939-45 War, exports to the United States of America showed great expansion but have since dwindled to about 3 per cent. Of the total shipments in 1956-57, 25 per cent. went to the United Kingdom, 19 per cent. to Japan, 18 per cent. to France, 10 per cent. to Italy and 9 per cent. to Belgium-Luxemburg. The following table shows the quantities of greasy wool exported, and the principal countries of recorded destination.

# EXPORTS OF GREASY AND SLIPE WOOL. ('000 lb. actual weight.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
United Kingdom Other Commonwealth	288,450	353,195	286,509	299,571	275,573	306,504
Countries	2,188	8,705	9,672	9,973	9.315	12,246
Belgium-Luxemburg	108,120	76,327	87,814	90,078	93,668	105.963
France	100,511	154,441	162,536	159,764	199,797	215,150
Germany, Fed. Rep. of	(a) 36,856	40,446	52,974	64,779	74,945	82,897
Italy	21,730	92,943	114.354	89,457	93,266	123,438
Japan	131,305	147,612	95,121	124,718	189,852	233,036
United States of America	25,739	69,021	62,889	58,962	48,059	37,454
Other Foreign Countries	47,981	38,803	118,154	65,371	82,347	92,509
Total	762,880	981,493	990,023	962,673	1,066,822	1,209,197

<sup>(</sup>b) Includes wool content of yarns

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(ii) Scoured and Washed and Carbonized—Quantities. The exports of "scoured and washed" wool, whether carbonized or not, are shown below according to principal countries of destination.

EXPORTS OF WOOL-SCOURED AND WASHED AND CARBONIZED ('000 lb. actual weight.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
United Kingdom	32,826 2,394	32,629 5,593	28,111 4,093	26,227 4,120	24,303 5,356	24,298 3,220
Other Commonwealth Countries	939	1,181	1,709	1,098	1,285	1.538
Belgium-Luxemburg	8,224 9,301	4,837 7,291	6,098 7,890	5,127 5,994	3,601 5,309	4,017
Germany, Fed. Rep. of	(a) 3,007	4,264	5,594	5,818	8,329	10,583
Italy Japan	361 736	5,913 6,596	6,314 1,699	4,657 836	6,017 2,428	7,671 3,943
United States of America Other Foreign Countries	668 5,756	8,012 7,782	9,141 10,119	16,866 11,476	16,919 11,397	13,294 15,928
Total	64,212	84,098	80,768	82,219	84,944	90,737

(a) Pre-war Germany.

(iii) Tops, Noils and Waste. Particulars of the exports of tops, noils and waste are shown in the following table.

## EXPORTS OF WOOL TOPS, NOILS AND WASTE.

('000 lb. actual weight.)

Particulars.	Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–\$6.	1956–57.
Tops	5,948	8,423	4,970	5,911	11,107	14,949
Noils		2,805	3,722	3,625	4,507	4,578
Waste—Soft wool		2,960	3,705	2,238	7,094	14,697
Hard wool		9,258	3,272	3,928	3,617	4,428

(iv) Total Exports—Greasy and Clean Bases. The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1938-39 and 1952-53 to 1956-57.

## EXPORTS OF WOOL—GREASY AND CLEAN BASES.

		( 000	110.)			
Particulars.	1938–39.	1952–53.	1953-54.	1954–55.	1955–56.	1956-57.
		GREASY	BASIS.		·············	
Raw Wool— Greasy and Slipe	795,728	981,493	990,023	963,583	1,067,654	1,209,840
Scoured and Washed and Carbonized Exported on Skins	137,391 58,187	159,277 66,894	155,620 60,354	154,838 64,329	159,071 69,377	169,918 68,000
Total	991,306	1,207,664	1,205,997	1,182,750	1,296,102	1,447,758
Semi-processed Wool— Tops Yarn	10,124 58	14,993 54	8,946 189	10,403 229	20,215	27,207 247
Total Wool	1,001,488	1,222,711	1,215,132	1,193,382	1,316,440	1,475,212
		CLEAN	Basis.	·		
Raw Woo!	(a) 5,071	696,985 8,791	676.033 5,376	667,347 6,160	741,653 11,621	840,675 15,688
Total Wool	(a)	705,776	681,409	673,507	753,274	856,363

(v) Total Value of Exports. The value of wool (other than wool on sheepskins) exported from Australia during the five years ended 1956-57 averaged 48 per cent. of the total value of exports of merchandise of Australian origin, and during 1956-57 the proportion was 50 per cent. The value during the period under review, together with the principal countries to which wool was exported is shown in the following table.

#### VALUE OF WOOL EXPORTS(a).

(£'000.)

Country to which Exported.	Average, 1934-35 to 1938-39.	1952-53.	1953-54.	1954-55.	1955–56.	1956-57.
United Kingdom Other Commonwealth	19,235	142,278	117,718	107,917	83,096	117,372
Countries	705	6,836	6,901	6.839	8,060	9,920
Belgium-Luxemberg	5,863	23,897	27.522	25,620	21,391	29,608
France	5,618	54,910	58,448	50,473	53,388	73,494
Germany, Fed. Rep. of	(b) 2,603	17,447	21,936	22,926	23,603	32,987
Italy	1,340	38,288	47,323	32,379	29,259	47,905
Japan	7,727	66,686	43,685	46,077	64,761	103,770
United States of America	2,247	30,992	30,239	29,801	21,636	20,705
Other Foreign Countries	3,429	21,573	56,661	31,076	32,335	47,964
Total	48,767	402,907	410,433	353,108	337,529	483,725

- (a) Excludes wool exported on sheepskins.
- (b) Pre-war Germany.
- 15. Local Sales of Wool.—Auction sales are conducted at Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballaarat, Brisbane, Adelaide, Perth, Hobart and Launceston, and are attended by buyers representing manufacturers and merchants in the United Kingdom, France, the United States of America, Japan, U.S.S.R. and many other countries. More than 95 per cent. of the Australian wool clip is now disposed of at auction in Australia.
- 16. Stocks of Wool.—Stocks of raw wool held in Australia at 30th June, 1957, other than wool which had been sold but not shipped, amounted to 83.9 million lb. (as in the grease) of which 58.1 million lb. (39.7 million lb. as greasy and 18.4 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers and 25.8 million lb. (unsold wool assumed to be all greasy) were held by brokers. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

Stocks at 30th June, 1957, were higher than at the same time for any other year since 1950. During the war and post-war years up to 1951, raw wool stocks were exceptionally high because of the large quantities held in Australia by the Australian Wool Realization Commission on account of Joint Organization. They reached a maximum of 1,749.9 million lb. at 30th June, 1945, but declined in each successive year to 30th June, 1952, by which time all Joint Organization stocks had been sold.

17. Price.—Wool is the chief factor in the pastoral wealth of Australia and the nation's prosperity is largely dependent upon its satisfactory sale. During the five years ended 1956-57, the price of greasy wool sold in the selling centres of Australia averaged 74.9d. per lb. compared with the average selling price of 11.5d. per lb. during the ten years ended 1938-39. The average for the nine years ended 1928-29 was 18d. per lb., and for the seven years ended 1913-14, 9d. per lb.

As indicated in para. 8 above, the price of wool during the 1939–45 War was determined by the British Government wool contract. With the return to auction sales since 1945–46, the average price of greasy wool sold rose rapidly from the contract price of 15.45d. per lb. applicable in 1945–46 to the unprecedented level of 144.19d. per lb. in 1950–51. This was followed by a sharp fall in 1951–52 to 72.42d. per lb. or slightly more than half the price in 1950–51. There was, however, a partial recovery to 81.80d. per lb. in 1952–53 and 81.50d. per lb. in 1953–54. There was a further decline in the two following years to 70.88d. per lb. in 1954–55 and 61.46d. per lb. in 1955–56, the lowest recorded since 1948–49. In 1956–57, however, prices rose again to 79.66d. per lb.

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The prices quoted above, except for United Kingdom contract prices, are as compiled by the National Council of Wool Selling Brokers and represent the average price realized for all greasy wool, of whatever type or quality, marketed during the years indicated.

18. Value.—Fluctuation in Australian wool prices has a marked effect on the nation's rural income. In 1945-46, the gross value of wool production was £58,597,000 representing 17.4 per cent. of the gross value of all rural industries while in 1950-51, when prices reached a peak, wool was valued at £651,902,000 or 55.6 per cent. of the total for all rural industries. The value of wool production fell in subsequent years and in 1956-57 was £510,941,000.

Details of the value of wool production for the years 1952-53 to 1956-57 compared with the average for the three pre-war years are shown below.

WOOL (AS IN THE GREASE)—ESTIMATED GROSS VALUE OF TOTAL PRODUCTION.(a) (£'000.)

Season.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
Average, 1936–37 to 1938–39 1952–53 1953–54 1954–55 1955–56 1956–57	26,276	9,322	9,247	4,111	3,389	980	2	98	53,425
	192,124	78,761	59,903	48,579	39,164	6,380	103	793	425,807
	180,781	73,384	61,125	44,434	42,523	6,655	90	776	409,768
	155,335	75,125	52,109	41,602	35,013	7,232	68	654	367,138
	149,128	69,020	53,134	39,911	35,881	6,190	92	708	354,064
	217,124	97,646	81,015	57,289	46,965	9,974	106	822	510,941

<sup>(</sup>a) Includes shorn, dead and fellmongered wool and wool exported on skins. Excludes distributions of profits under the Wool Disposal Plan. (b) Estimated.

WOOL(a): IMPORTS INTO UNITED KINGDOM. ('0000 lb.)

Country of Origin.	1953.	1954.	1955.	1956.	1957.
Australia	364,931	291,704	336,800	310,585	315,392
New Zealand	191,781	186,352	185,440	163,550	166,057
Union of South Africa	57,200	61,826	64,315	61,194	45,568
India and Pakistan	30,794	35,235	30,505	25,912	29,925
Other Commonwealth Coun-	, ,	ŕ	, i		•
tries	8,027	9,396	9,785	9,583	11,428
Argentina	60,953	21,784	31,553	32,740	32,441
France	16,850	15,707	18,092	22,228	16,657
Uruguay	65,992	37,070	18,855	34,373	17,448
Other Foreign Countries	30,733	24,920	25,977	39,156	40,626
Total Quantity	827,261	683,994	721,322	699,321	675,542
Total Value (£'000 sterling)	229,408	184,670	176,995	167,927	188,824

<sup>(</sup>a) Greasy and Scoured.

Australian wool represented 47 per cent. of the total quantity imported into the United Kingdom during 1957. New Zealand supplied 24 per cent. and South Africa 7 per cent., while the total quantity received from British countries constituted 84 per cent. of all United Kingdom imports of wool.

20. Principal Importing Countries and Sources of Supply.—The following table, prepared from information published by the Commonwealth Economic Committee, furnishes, in respect of the principal importing countries, details of their production and imports of wool for 1956 together with the chief sources of supply. The quantities imported refer to the actual weight of wool without distinguishing between greasy and scoured except in the case of the United States of America where estimated clean content of raw wool is quoted.

<sup>19.</sup> United Kingdom Importation of Wool.—The important position which Australia occupies in the supply of wool to the United Kingdom is indicated in the following statement of the quantities of wool imported into that country from the principal wool-producing countries during each year 1953 to 1957.

WOOL: PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1956.
(Million lb.)

	Pro- duction	j					
Importing Country.	of Importing Country.	Australia.	Union of South Africa.	Argen- tina.	New Zealand.	Other Countries.	Total Imports.
United Kingdom .	102	310.6	61.2	32.7	163.6	131.2	699.3
Belgium	. (c)	103.7	14.3	13,9	22.7	34.3	188.9
France	1 55	211.8	53.1	36.1	84.0	32.7	417.7
Germany (Federa	1					1	İ
Republic)	(c)	84.8	46 0	15.7	29.9	60.8	237.2
Italy	2.4	93.5	20.8	4.1	17.2	39.4	177.0
Japan	(c)	204.8	17.9	43.0	5.3	11.5	282.5
United States o	ſ	1	:	İ			
America	305	(d) 41.8	(d) 13.5	(d) 62.5	(d) 39.7	(d) 89.1	(d)246.6

<sup>(</sup>a) As in the grease, 1955-56. (b) Actual weight of greasy and scoured wool. (c) Not available. (d) Imports are in terms of estimated clean content of greasy and scoured wool. Actual weight of total United States of America imports was 340.6 million lb.

As a considerable transit trade exists between continental countries, it must not be assumed that the whole of the imports recorded by these countries are retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom (11 per cent. of total imports re-exported in 1956) and Belgium.

#### § 6. Trade in Hides and Skins.

- 1. Extent of Trade.—In addition to the hides and skins treated locally, considerable quantities are exported: the value of cattle and horse hides, and sheep and other skins, sent overseas during 1956-57 amounted to £24,269,000 compared with a total of £20,882,000 in 1955-56 and £19,704,000 in 1954-55.
- 2. Sheepskins with Wool.—The exports of sheepskins with wool constitute the most important item in the values referred to in the preceding paragraph. Of the total exports of £19,438,000 during 1956-57, France obtained 83 per cent. by value and the United Kingdom 11 per cent. The exports of sheepskins with wool during each of the years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 were as follows:—

## EXPORTS OF SHEEPSKINS WITH WOOL : AUSTRALIA.

Partículars.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956- <b>57.</b>	
Number Value		000°£	12,009 2,780	15,681 16,584	13,647 15,569	14,841 15,569	14,891 15,268	14,239 19,438

3. Sheepskins without Wool.—Up to 1943-44, sheepskins without wool were exported chiefly to the United States of America. During 1943-44, that country accounted for 97 per cent. of the total shipments. In subsequent years, however, there has been a decline in shipments to the United States of America and an increase in the quantities shipped to other countries; of the total value of £479,000 of sheepskins without wool exported in 1956-57 the United States of America received only 33 per cent., France received 39 per

cent. and the United Kingdom 19 per cent. Quantities and values for the five years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 are shown in the table hereunder:—

EXPORTS OF SHEEPSKINS WITHOUT WOOL: AUSTRALIA.

Particulars.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.	
Number		'000	808	3,242	2,482	2,147	1,771	1,353
Value		£'000	70	749	671	372	424	479

4. Hides.—(i) Exports. The export trade in cattle hides and calf skins during 1956-57 was distributed as follows:—Italy, £514,000; Federal Republic of Germany, £421,000; Japan, £342,000; Panama, £335,000; United Kingdom, £301,000; Sweden, £153,000 and other countries, £458,000.

The exports during each of the five years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 are shown in the table below:—

EXPORTS OF CATTLE HIDES AND CALFSKINS: AUSTRALIA.

Particulars.			Average, 1934-35 to 1938-39.	1952–53.		1953–54.	1954–55.	1955–56.	1956-57.
Quantity Value		'000 lb. £'000	(a) 1,677 957	(a)	282 1,161	18,761 1,381	33,817 1,874	45,976 2,722	45,111 2,524

(a) '000 skins.

Horse hides exported during 1956-57 weighed 1,939,984 lb. and were valued at £116,928.

(ii) Imports. The imports of cattle hides and calfskins are fairly large, the chief sources of supply being New Zealand and the Pacific Islands. The quantities and values of cattle hides, including calfskins, imported into Australia during the years 1952-53 to 1956-57 compared with the average for the years 1934-35 to 1938-39 were as follows:—

IMPORTS OF CATTLE HIDES AND CALFSKINS: AUSTRALIA.

Pa	rticulars.		Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
Quantity		cwt.	70,781	11,183	16,960	12,391	10,537	11,064
Value		£'000	279	64	174	108	58	66

5. Furred Skins.—The exports of furred skins were valued as follows:—

## EXPORTS OF FURRED SKINS: AUSTRALIA.

Average, 1934-35					
1938–39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
(a) 1,150	924	849	1,100	1,711	975
125	31	104	42	15	53
191	187	202	281	285	279
69	9	1	7	2	6
1,535	1,151	1,156	1,430	2,013	1,313
	to 1938–39. (a) 1,150 125 191 69	to 1938–39. (a) 1,150 924 125 31 191 187 69 9	to 1938–39.	to 1932–33. 1933–34. 1934–33. (a) 1,150 924 849 1,100 125 31 104 42 191 187 202 281 69 9 1 7	to 1938–39.

These skins were shipped principally to the United States of America, the United Kingdom, and Belgium and Luxemburg, the values shipped to each in 1956-57, with 1955-56 values in parentheses, being:—United States of America, £952,000 (£1,427,000); United Kingdom, £147,000 (£407,000) and Belgium-Luxemburg, £125,000 (£146,000).

- 6. Marketing of Hides and Skins.—(i) Sheepskins with Wool. Details of the agreement between the United Kingdom and Commonwealth Governments for the purchase by acquisition of the "exportable surplus" of woolled sheepskins in Australia during the 1939-45 War were given in Official Year Book No. 37, p. 886. The contract expired on 30th June, 1946, and sheepskins have since been marketed mostly at open auction.
- (ii) Sheep and Lamb Pelts. Details of the marketing control of sheep and lamb pelts were given in Official Year Book No. 38, p 930. Pelts have reverted to open marketing without export restrictions.
- (iii) Hides and Leather. A hide acquisition and marketing scheme operated from November, 1939 to August, 1954. Until 31st December, 1948, the scheme operated under the National Security Regulations. From 1st January, 1949, it continued under a Commonwealth Act and supporting State Acts. In June, 1952, the Tasmanian legislation lapsed and the scheme did not operate in Tasmania after that date. By August, 1954, the wide gap which had existed between fixed local prices and export prices for hides and leather had almost disappeared and, having in view certain legal difficulties which were hampering the operation of the scheme, the Commonwealth Government decided on its immediate termination.

The Australian Hide and Leather Industries Board, which administered the scheme, acquired all cattle hides and yearling and calf skins produced in Australia at set prices and allocated them to tanners at these prices. The prices were 15 per cent. to 20 per cent. above August, 1939 levels until May, 1952 when they were increased by an average of 50 per cent. Surplus hides were disposed of by tender or open auction. The Board retained the amounts realized in excess of appraised values, and supplemented the price to the producers in cases where the realized amount was less than the appraisement values.

Returns from sales of surplus hides and deferred payments levied on leather exported, based on the difference between world and Australian prices for the hides involved, were paid into a fund by the Board. From this fund, premiums were paid to producers as a proportion of appraised values. These premiums compensated hide producers to some extent for the margin between local and oversea prices. Further details of the war-time operations of the scheme will be found in Official Year Book No. 37, p. 887 and Official Year Book No. 38, pp. 930-1.

Pre-war, about 40 to 45 per cent. of Australian production was exported, but with the development of the local tanning industry, the proportion is now approximately 30 per cent.

(iv) Rabbit Skins. A marketing control scheme for rabbit skins was introduced under the National Security (Rabbit Skins) Regulations on 10th June, 1940, and terminated in April, 1949. Details of the scheme will be found in Official Year Book No. 38, p. 931.

#### § 7. Tallow and Lard.

1. Production.—Australia's production of tallow and lard is in excess of local requirements and considerable quantities are normally available for export. Details of the production of edible and inedible tallow and lard in each State are shown in the table below for the years 1954-55 and 1955-56.

<b>TALLOW</b>	AND	LARD:	PRODUCTION.
		(cwt.)	

		1954-55.	†	1955-56.			
State.	Tali	low.		Tal			
	Edible.	Inedible.	Lard.	Edible.	Inedible.	Lard.	
New South Wales	92,553	463,839	4,145	107,424	532,167	3,718	
Victoria	308,026	495,870	7,919	351,679	566,822	7,898	
Queensland	378,218	221,601	19,421	402,399	157,523	17,473	
South Australia	56,106	112,446	6,932	54,434	132,930	4,348	
Western Australia	15,165	66,807	3,353	18,645	95,564	6,667	
Tasmania	1,227	33,153	1,176	1,786	42,484	1,369	
Australia	851,295	1,393,716	42,946	936,367	1,527,490	41,473	

2. Consumption of Tallow in Factories.—Details of consumption are collected from the principal factories using tallow (soap and candle, chemical and woolscouring works).

Total consumption of tallow in factories as shown in the table below for the years 1938-39 and 1952-53 to 1956-57 is deficient, however, to the extent that no allowance is made for the small unrecorded amounts used in other types of establishments.

TALLOW: CONSUMPTION IN FACTORIES, AUSTRALIA. (cwt.)

Y	Year.			Ye	ar.		Quantity Used.
1938–39 1951–52 1952–53			539,095 1,205,307 1,068,181	1953-54 1954-55 1955-56		•••	1,172,710 1,193,368 1,210,694

3. Exports of Tallow and Lard.—Particulars of exports of edible (including lard) and inedible tallow are shown in the following table for the five years 1952-53 to 1956-57 in comparison with the average for the five years ended 1938-39.

TALLOW AND LARD: EXPORTS, AUSTRALIA.

			· ** · · · · · · · · · · · · · · · · ·			
Particulars.	 Average, 1934-35 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.
Edible(a) Inedible	  (b) 606,934	111,020 430,227	158,875 823,816	74,401 365,985	142,498 829,403	128,649 936,951
Total	 (b)	541,247	982,691	440,386	971,901	1,065,600

<sup>(</sup>a) Including lard and sweetened fats.

4. Marketing of Tallow.—Until 30th September, 1952, the bulk of Australia's exportable surplus tallow, other than collar white mutton tallow was sold to the United Kingdom Ministry of Food under a series of annual contracts. The 1951-52 contract was not renewed and on 9th November, 1952, tallow export control was removed following termination of the industry's equalization pool arrangement and price de-control in most States.

<sup>(</sup>b) Not available.

### § 8. Exports of Principal Pastoral Products.

The quantities and values of the principal pastoral products of Australia exported for the years 1954-55 to 1956-57 were as follows:—

EXPORTS OF PASTORAL PRODUCTS: AUSTRALIA.

	Unit of		Quantity.		v	'alue (£'000	).)
Product.	Quan- tity.	1954–55.	1955–56.	1956–57.	1954–55.	1955–56.	1956-57.
Animals (living)—							
Cattle	No.	6,786	8,025	18,360	346	475	754
Horses	,,	607	582	682	251	264	326
Sheep		97,146	101,837	129,480	340	332	482
Bones	'000 cwt.		24	1,145	50	49	132
Glycerine	'000 1ь.	27	1,379	1,011	2	129	57
Hair and Bristles	cwt.	3,410	1,928	2,299	89	98	151
Hoofs	,,	10,447	10,461	10,936	18	24	23
Horns	,,	10,014	9,347	9,104	69	76	81
Meats-	1 "	,	1		!		
Frozen Beef and Veal(a)	'000 lb.	276,398	322,748	334,646	21,899	23,431	23,272
Mutton and Lamb	,,	128,793	116,283	76,274	11,817	9,752	6,095
Rabbits and Hares	Value only		١		1,478	1,855	2,513
Other	,,				4,221	3,833	3,202
Preserved in Tins, etc	'000 lb.	141,115	130,591	112,193	20,568	18,230	13,175
Other (excluding Bacon	1						
and Ham)	Value only			1	1,248	1,005	849
Sausage Casings	,,	·			1,905	2,128	1,700
Hides and Skins—							
Cattle and Calf	'000 1ь.	33,817	45,981	45,111	1,874	2,722	2,524
Horse		2,303	2,204	1,940	138	136	117
Sheep and Lamb	<b>'000</b> .	16,988	16,661	15,593	15,941	15,691	19,917
Rabbit and Hare	'000 lb.	4,586	3,327	2,464	1,100	1,711	975
Tallow (Edible and Inedible) Wool	cwt.	415,543	956,678	1,057,145	1,771	4,027	4,373
Greasy	'000 1ъ.	959,040	1,063,493	1,206,625	310,904	293,839	425,728
Scoured, Tops, Noils, Waste	,,	101,555	114,598	131,961	42,204	43,690	57,997

<sup>(</sup>a) Includes chilled beef.

#### CHAPTER XXIV.

### FARMYARD, DAIRY AND BEE PRODUCTS.

Note.—Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. Port of Shipment, except where otherwise indicated.

### § 1. Introductory.

- 1. General.—The introduction of cattle into Australia and the early history of the dairying industry are referred to in some detail in earlier issues of this publication. It may be noted here that an increased and improved milk supply has resulted from the crossing of imported stud cattle with the original stock and from the further judicious crossing of strains. In Australia, dairy cattle thrive in the open throughout the year, local climatic conditions demanding no protection other than tree plantations for shelter and, in certain districts, rugging in the coldest weather. Indigenous and imported grasses furnish food during the greater part of the year, and winter fodder, when necessary, is given to the cattle in the fields. With the wider application of scientific methods in the treatment of animals and pastures and in the processes of manufacture, coupled with herd testing and effective State supervision, the dairying industry has shown rapid expansion. It has been demonstrated that Australian production and marketing methods do not adversely affect the vitamin content of the butter and that the loss during cold storage even for as long as two years is insignificant.
- 2. Mixed Farming.—Dairying is not, as formerly, wholly confined to agriculturists since many graziers also give it their attention. In non-coastal regions, it is generally carried on in conjunction with agriculture and sheep-raising, sufficient fodder being grown to carry the cattle through the winter months. Local wants are thus met and, in many places remote from the metropolis, well-equipped factories have been established. The extent to which dairy cattle were run in conjunction with beef cattle, sheep, and pigs in 1955-56 is shown in the relevant tables published in a series of mimeographed bulletins Size Classification of Rural Holdings, 1955-56, and also appears in summarized form in Primary Industries, Part 1 Rural Industries, 1956-57, Bulletin No. 51.
- 3. Employment.—The numbers of persons employed in rural industries are ascertained at the annual census of rural production. The particulars collected are in respect of those persons who were permanently engaged in the actual work of the farm and include owners, lessees, tenants or sharefarmers, relatives over 14 years of age not receiving wages, and other permanent employees, including managers and relatives, working for wages or salary. For some earlier years, and uniformly from March, 1950, particulars have also been collected as to numbers of temporary employees at 31st March of each year. Details of the numbers so engaged are given in Chapter XXII.—Agricultural Production, § 29.

Persons who described themselves at the population census as being engaged in dairy farming comprised 96,508 males and 10,018 females, a total of 106,526 persons at the Census of 30th June, 1947, and 100,553 males and 11,004 females, a total of 111,557 persons, at the Census of 30th June, 1954.

4. Growth of the Dairying Industry.—The following table gives some indication of the growth of the dairying industry since 1918-19:—

Number of Dairy 31st March			r of Dairy C 31st March.		1	Production of			
Year.		In Milk.	Dry.	Total.	Milk for all Purposes.	Butter (Factory and Farm).	Cheese (Factory and Farm).	Milking Machines (No. of Stands).(a)	
					Million Gallons.	Tons.	Tons.		
1918-19		1,319,588	582,448	1,902,036	529.6	81,162	10,621	(b)	
1928-29		1,744,728;	600,342	2,345,070	815.4	129,817	13,490	(b)	
1938-39		2,600,707	608,812	3,209,519	1,189.9	203,500	29,304	(b)	
1948-49		2,339,885	818,725	3,158,610	1,208.9	165,830	43,202	144,916	
1952-53		2,223,416	910,686	3,134,102	1,215.2	167,480	46,606	179,853	
1953-54		2,262,783	995,891	3,258,674	1,189.7	159,585	49,057	189,542	
1954-55		2,338,658	943,485	3,282,143	1,325.8	191,078	45,193	196,877	
1955-56		2,393,870	1,009,637	3,403,507	1,405.3	208,911	38,700	204,298	
1956-57		2,354,305	1,097,164	3,451,469	(c)1,362.6	(c) 192,380	(c) 44,819	210,664	

#### DAIRYING INDUSTRY: AUSTRALIA.

5. Official Supervision of Dairying Industry.—Dairy experts of the various State Agricultural Departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce. A high standard of cleanliness, both of personnel and matériel, prevails.

The export trade is regulated by the terms of the Commonwealth Customs Act 1901–1954 and the Commonwealth Commerce (Trade Descriptions) Act 1905–1950, and regulations thereunder. It will be sufficient to state here that the true trade description, etc., must be marked on all produce intended for export, while official inspection ensures the maintenance of purity and quality. Upon request of the exporter, the goods are given a certificate by the inspector.

6. Australian Agricultural Council.—General information on the constitution and functions of the Australian Agricultural Council is given on p. 854 of Chapter XXII—Agricultural Production. On pp. 833-4 of Official Year Book No. 40, details were given of the production aims for the five-year period ending 1957-58 (including specific targets for the principal dairy products) as set by the Council at its 36th Meeting in April, 1952.

# § 2. Value of Farmyard, Dairy and Bee Production and Indexes of Price and Quantum of Production.

1. Gross Value of Farmyard, Dairy and Bee Production, 1936-37 to 1938-39 and 1951-52 to 1955-56.—The following table shows the gross value of recorded farmyard and dairy production at the principal markets in Australia.

<sup>(</sup>a) "Number of Stands" indicates the number of cows that can be milked simultaneously—i.e., the cow capacity of installed milking machines. (b) Not available. (c) Subject to revision.

# GROSS VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.(a) (£'000.)

Particulars.	Average 1936-37 to 1938-39.	1951–52.	1952-53.	1953–54.	1954–55.	1955–56.
Whole Milk(b) used for—						
Butter	22,550	36,009	58,995	57,004	67,801	78,559
Cheese	1,505	6,872	9,377	10,077	9,218	8,585
Condensing, Concentrating,	1					1
etc	1,094	7,948	10,860	9,583	7,537	8,908
Other purposes	7,971	37,261	46,092	49,205	50,377	52,465
Subsidy Paid on Whole Milk	1		1			
for—	L			1	i	
Butter, Cheese, Condensing,				i	:	Ì
Concentrating, etc		17,735	15,265	15,468	16,081	14,499
Total Whole Milk (in-						i
cluding Subsidy)	33,120	105,825	140,589	141,337	151,014	163,016
Pigs Slaughtered	5,526	18,516	21,703	23,773	21,263	25,543
Dairy Cattle Slaughtered	1,591	5,966	6,569	8,437	9,652	9,625
Eggs	9,117	37,534	43,637	43,569	40,650	42,137
Poultry	2,386	10,985	11,231	11,396	10,835	11,666
Honey	154	800	1,113	1,473	1,465	1,801
Beeswax	10	62	84	120	133	132
Total	51,904	179,688	224,926	230,105	235,012	253,920
	i	1	ļ	<u>  </u>	1	<u> </u>

<sup>(</sup>a) Prior to 1954-55 excludes Australian Capital Territory and Northern Territory, details for which are not available.
(b) Excludes Commonwealth subsidy which is shown separately below.

2. Gross and Net Values, 1955-56.—The values of dairy, poultry and bee farming on gross, local and net bases are shown in the following table. Further information on values, including definitions of the terms used, is given in Chapter XXX.—Miscellaneous.

GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION, 1955-56.

(£'000.) Farm Costs. Gross Gross Value of Production. Net Value Marketing Production Other State. Valued at Fodder of Pro-Costs. Valued at Materials Principal Fed to duction. Farm. Used in Markets. Farm (a) Process Stock. of Production. DAIRY PRODUCTION. 6,942 New South Wales 60,213 53.271 3,504 (b) 298 1 49,469 . . 2,500 Victoria 70,094 10,550 54,301 67,594 2,743 34,105 4,813 1,869 Oueensland 35,362 1,257 27,423 Queensland ... South Australia 242 1,102 15,413 795 13,274 15,171 . . Western Australia 372 2,705 8,447 8.075 1,503 3,867 . . Tasmania 8,431 427 373 6,719 8,004 912 (b) Northern Territory 23 1 22 22 Australian Capital Ter-201 22 168 ritory 10 191 198,184 11,751 186,433 Total 23,608 7,582 155,243

<sup>(</sup>a) No deduction has been made for depreciation and maintenance. made for costs of power, power kerosene, petrol and other oils.

<sup>(</sup>b) No allowance has been

# GROSS, LOCAL AND NET VALUE OF FARMYARD, DAIRY AND BEE PRODUCTION, 1955-56—continued.

(£'000.)

			(2 000.)	'			
				:	Farm	Costs.	
State.		Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Farm.	Fodder Fed to Farm Stock.	Value of Other Materials Used in Process of Pro- duction.	Net Value of Pro- duction. (a)
		Pou	LTRY PROD	ouction.			
New South Wales		21,783	2,283	19,500	6,740	(b)	12,760
Victoria		20,930	1,569	19,361	6,743	(b)	12,618
Queensland		2,620	323	2,297	1,124	69	1,104
South Australia		3,937	453	3,484	1,684	(b)	1,800
Western Australia		2,553	320	2,233	1,417	(b)	816
Tasmania		1,736	174	1,562	628	(b)	934
Northern Territory		63	3	60	10		50
Australian Capital	Ter-	1		1			
ritory	• •	181	27	154	51		103
Total		53,803	5,152	48,651	18,397	(c) 69	30,185
			EE PRODUC				
New South Wales	• •	849	78	771	• •	[]	771
Victoria	• •	464	54	410	• •		410
Queensland	• •	116	13	103	• •	\ (b) \ \	103
South Australia	• •	267	21	246	• •	`	246
Western Australia	• •	217	15	202	• •	[] []	202
Tasmania	• •	19	1	18	• • •	ᄓᆝᄼ	18
Northern Territory Australian Capital	Tor		• •		• •	• • •	• •
Australian Capital	Ter-	1		1			1
•	• •	l	102				1 951
Total	• •	1,933	182	1,751	··-	(b)	1,751

### TOTAL FARMYARD, DAIRY AND BEE PRODUCTION.

Total		253,920	17,085	236,835	42,005	7,651	187,179
ritory		383	37	346	73	1	272
Australian Capital	Ter-	1			į		
Northern Territory		86	4	82	10		72
Tasmania		10,186	602	9,584	1,540	373	7,671
Western Australia	1	11,217	707	10,510	4,122	1,503	4,885
South Australia		19,617	716	18,901	2,786	795	15,320
Queensland		38,098	1,593	36,505	5,937	1,938	28,630
Victoria		91,488	4,123	87,365	17,293	2,743	67,329
New South Wales		82,845	9,303	73,542	10,244	(d) 298	63,000

<sup>(</sup>a) No deduction has been made for depreciation and maintenance. (b) Not available. (c) Incomplete, Queensland only. (d) Incomplete, see individual industries above.

<sup>3.</sup> Net Value of Production, 1934-35 to 1938-39 and 1951-52 to 1955-56.—In the following table, the net values of farmyard, dairy and bee production (total and per head of population) are shown by States.

	Year.		N.S.W. (b)	Vic	Q'land.	S. Aust.	W. Aust.	Tas.(b)	Australia (c)
			1	NET VALL	JE. (£'00	00.)			
Average.	1934-35 to 1	1938-39	11.848	12,238 1	7,118	1.938	979 1	943	35.064
1951-52			44,508	51,935	19,412	11.029	5,265	3.955	136,104
1952-53			60,642	57,842	31,402	11,708	5,460	4,970	172,024
1953-54			58,985	60,595	29,758	12,525	5,540	5,761	173,164
1954-55			58,323	58,577	26,237	12,498	4,686	6,406	166,983
1955-56	• • • • • • • • • • • • • • • • • • • •		63,000	67.329	28,630	15,320	4,885	7,671	187,179
		NET V	ALUE PER	HEAD O	F POPUL	ATION. (£	s. d.)		
Average,	1934-35 to	1938-39	4 8 3	6 12 2	7 4 7	3 5 11	2 3 0	4 0 10	5 2 1
1951-52			13 8 10	22 9 9	15 13 3	14 16 8	8 18 6	13 9 7	16 0
1952-53			18 0 3	24 7 6	24 13 8			16 8 7	19 15 1
1953-54			17 6 5	25 0 3	22 17 8		8 15 8	18 12 5	19 11
954-55		- ::	16 17 1	23 10 10	19 15 11	15 9 6		20 9 4	1 24 14
1955-56		::	17 17 6	26 5 0	21 3 4	18 7 2	7 6 0	24 0 8	

<sup>(</sup>a) No deduction has been made for depreciation and maintenance or for costs of materials used in the process of production in the Poultry (for States other than Queensland) and Bee-farming Industries. (b) No deduction has been made for costs of power, power kerosene, petrol and other oils. (c) Prior to 1954-55 excludes Northern Territory and Australian Capital Territory.

4. Indexes of Quantum and Price of Farmyard, Dairy and Bee Production, 1951-52 to 1955-56.—For details of the methods of calculating these indexes and of the weights used see Chapter XXX.—Miscellaneous.

### INDEXES OF QUANTUM(a) AND PRICE OF FARMYARD, DAIRY AND BEE PRODUCTION: AUSTRALIA.

(Base: Average 3 years ended June, 1939 = 100.)

Particulars.	1951–52.	1952~53.	1953–54.	1954–55.	1955–56.
Quantum(a) of Production—			'		i
Milk	92	107	104	116	123
Other Products	108	110	113	117	114
Total Farmyard and Dairy	97	108	107	117	120
Total per Head of Population	78	85	83	88	88
Price—					
Milk	319	373	379	370	380
Other Products	363	423	435	375	423
Total Farmyard and Dairy	332	387	395	371	392

<sup>(</sup>a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of base years (1936-37 to 1938-39).

### § 3. Dairy Cattle and Dairy Products.

1. Dairy Herds.—Lack of uniformity in the schedules used by the various States in the collection of livestock statistics makes it impossible to measure with complete accuracy the growth of dairy herds prior to 1943. Statistics of dairy cows—which form the largest part of herds—are, however, available on a comparable basis for a series of years. These statistics show that in 1918-19 there were 1,902,036 dairy cows (in milk and dry), compared with 2,345,070 in 1928-29 and 3,209,519 in 1938-39. The numbers remained at this level until March, 1944, but declined in succeeding years and did not regain the level of 1944 until 31st March, 1954, when the number recorded was 3,258,674. Since then numbers have increased, rising to 3,451,469 in March, 1957. In New South Wales, Victoria, South Australia, and Tasmania, the proportion of dairy to all cattle is high. In Queensland, the Northern Territory, and Western Australia, there is a great preponderance of other cattle, the main object in these areas being the production of beef. The numbers of dairy cows for 1953 to 1957 shown in the following table refer to those recorded by farmers as being in milk and dry as at 31st March. The figures shown for the years 1935 to 1939 cover the same categories, but the period differs in some States (see footnote (a)). To this extent the figures lack comparability.

NUMBER OF CATTLE	AND DAIRY	cows	(IN MILK	AND DRY)	AT					
31st MARCH.										

State.	Average, 1935-39. (a)	1953.	1954.	1955.	1956.	1957.
N.S.Wales All Cattle	3,054,164	3,648,733	3,554,016	3,460,692	3,678,634	3,910,827
	1,024,761	895,371	921,866	906,774	976,089	971,868
Victoria All Cattle Dairy Cows	1,892,465	2,297,208	2,370,184	2,456,303	2,616,587	2,765,049
	912,621	947,061	987,345	1,025,233	1,071,437	1,112,293
Queensland \{\begin{aligned} All Cattle \\ Dairy Cows \end{aligned}	6,047,726	6,751,395	7,086,207	7,238,062	7,330,021	7,461,717
	924,875	903,621	946,230	931,568	943,323	944,516
South Australia All Cattle	331,488	482,578	490,945	523,817	566,055	621,577
	154,870	155,956	164,230	169,822	165,865	166,549
W. Australia { All Cattle Dairy Cows	796,473	846,261	829,694	860,574	896,897	957,175
	121,127	133,923	134,129	134,696	134,517	134,478
Tasmania { All Cattle Dairy Cows	260,267	275,131	295,178	319,417	331,589	354,170
	93,708	96,040	102,523	111,781	110,028	119,485
Nor. Territory { All Cattle Dairy Cows(b)	893,925	935,602	966,033	968,775	1,027,819	1,175,997
Aust. Cap. Ter. All Cattle Dairy Cows	8,261	9,705	9,394	8,500	9,399	10,596
	1,019	2,130	2,351	2,269	2,248	2,280
Australia { All Cattle Dairy Cows	13,284,769	15,246,613	15,601,651	15,836,140	16,457,001	17,257,108
	3,232,981	3,134,102	3,258,674	3,282,143	3,403,507	3,451,469

<sup>(</sup>a) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania. (b) No information available; assumed to be "nil".

In the next table, the dairy cattle in each State are shown in various categories as at 31st March, 1955, 1956 and 1957. Information in this detail was not collected uniformly in all States prior to 1943.

### NUMBER OF DAIRY CATTLE.

		At	Dairy	Cows.	Dairy Heifers	Dairy Calves	Dairy	Total	
State.		31st March	In Milk.	Dry.	1 year and over.	under 1 year.	Bulls.	Dairy Cattle.	
New South Wales	•••	1955 1956 1957	668,610 693,112 686,949	238,164 282,977 284,919	203,583 194,397 191,476	130,437 143,385 147,398	23,840 23,944 23,468	1,264,634 1,337,815 1,334,210	
Victoria	••	1955 1956 1957	757,080 780,132 773,273	268,153 291,305 339,020	299,627 308,874 315,506	233,804 239,192 248,031	41.057 43,045 44,734	1,599,721 1,662,548 1,720,564	
Queensland	••	1955 1956 1957	655,307 664,443 630,558	276,261 278,880 313,958	226,437 225,627 215,201	191,269 186,900 187,138	27,940 27,889 27,819	1,377,214 1,383,739 1,374,674	
South Australia	••	1955 1956 1957	109,379 102,507 103,976	60,443 63,358 62,573	47,060 47,217 44,831	43,259 42,416 45,307	8,780 8,805 8,797	268,921 264,303 265,484	
Western Australia	••	1955 1956 1957	60,432 59,176 58,851	74,264 75,341 75,627	39,708 38,894 37,924	47,991 44,704 46,271	5,850 5,469 5,388	228,245 223,584 224,061	
Tasmania	••	1955 1956 1957	86,496 93,163 99,315	25,285 16,865 20,170	30,766 30,884 30,333	42,652 37,817 41,573	4,512 4,873 4,503	189,711 183,602 195,894	
Australian Capital ritory	Ter-	1955 1956 1957	1,354 1,337 1,383	915 911 897	304 311 365	600 554 615	49 44 50	3,222 3,157 3,310	
Australia	• •	1955 1956 1957	2,338,658 2,393,870 2,354,305	943,485 1,009,637 1,097,164	847,485 846,204 835,636	690,012 694,968 716,333	112,028 114,069 114,759	4,931,668 5,058,748 5,118,197	

Maps showing the distribution of dairy cattle in Australia at 31st March, 1955, and 1948 appeared on p. 910 of Official Year Book No. 43 and p. 906 of Official Year Book No. 39, respectively.

- 2. Size of Dairy Herds.—A series of special tabulations relating to rural holdings, undertaken for all States for the year 1955-56, covered, inter alia, a classification of holdings by size of dairy cattle herd and by area of holding, area of sown grasses and clovers, size of sheep flock, size of beef cattle herd, size of pig herd and number of milking machine stands. The tabulations have been published in full detail in a series of mimeographed bulletins Size Classification of Rural Holdings, 1955-56, and also appear in summarized form in Primary Industries Part I, Rural Industries, 1956-57, Bulletin No. 51.
- 3. Factory System.—(i) General. Cream separation and butter-making are often carried on together under the co-operative system. The establishment of large central butter factories either on the co-operative system or on an independent basis has resulted in a considerable reduction in the cost of manufacture. The product is also of a more uniform quality and, whereas formerly the average quantity of milk used per pound of hand-made butter was about 3 gallons, factory butter requires less than 2½ gallons. In addition, subsidy payments by the Commonwealth Government are made only on factory produced butter. As a result, the production of farm made butter has declined substantially and in 1956–57 represented only about 1.4 per cent. of all butter made. A similar position exists in the cheese-making industry where a negligible amount is now made on farms.
- (ii) Number of Factories. In 1955-56, the factories in Australia for the manufacture of butter, cheese and condensed milk numbered 375 and were distributed among the States as follows:—New South Wales, 77; Victoria, 130; Queensland, 85; South Australia, 42; Western Australia, 18; and Tasmania, 23. More details regarding numbers of factories, output, etc., are given in Chapter VII.—Manufacturing Industry.
- 4. Butter and Cheese—Stabilization Schemes.—(i) Voluntary Plan. During the period from January, 1926 to April, 1934, a voluntary scheme known as the "Paterson Plan" was in operation which had the effect of stabilizing the price of butter in Australia. Details of this scheme may be found on p. 1028 of Official Year Book No. 38 and in earlier issues.
- (ii) Compulsory Plan. On 1st May, 1934, the "Paterson Plan" was superseded by a compulsory price equalization plan, details of which were shown on p. 1029 of Official Year Book No. 38 and earlier issues. This compulsory plan was invalidated in 1936 by the decision of the Privy Council which declared in the James (Dried Fruits) Case that the Commonwealth had no power under the Constitution to regulate trade between the States.
- (iii) Equalization Scheme. Since the Privy Council decision, the butter price equalization scheme has continued to operate by voluntary action based on the agreements between the manufacturers and the Commonwealth Dairy Produce Equalization Committee Limited. The Committee, which comprises members of the State Dairy Products Boards and other persons representing the industry, enters into agreements with manufacturers to secure to them equal rates from sales of butter and cheese, and for this purpose may fix basic prices at which these products sold in Australia or abroad are to be taken into account. The effect is that local and export trade are distributed in equitable proportions among the manufacturers by means of quotas. The Committee fixes basic prices and equalizes returns to factories through an Equalization Fund. The States originally participating in the scheme were New South Wales, Victoria, Queensland and Tasmania in respect of both butter and cheese, and South Australia in respect of cheese. South Australia and Western Australia entered the scheme in respect of butter on 1st April, 1946, and Western Australia extended its participation to include cheese in January, 1947.

The home consumption prices of butter and cheese were fixed by the Commonwealth Prices Commissioner up to 19th September, 1948, from which date they have been a matter for State Prices Authorities. At present, however, the power to fix prices is being exercised in only two States, Queensland and South Australia, the prices in all other States being determined by the Commonwealth Dairy Produce Equalization Committee.

5. Commonwealth Subsidies.—(i) Butter, Cheese and Processed Milk Products. Under the provisions of the various Dairy Industry Assistance Acts, the first of which was passed in 1942, the Commonwealth Government has provided subsidies on milk supplied for the manufacture of butter, cheese and processed milk products. Subsidies were paid on a seasonal basis prior to 1st April, 1946, but from that date have been on a flat rate basis. Subsidies are distributed by the Commonwealth Dairy Produce Equalization Committee Limited through factories to milk producers by payments on butter, cheese and processed milk products manufactured. Subsidy on milk supplied for the manufacture of processed milk products was discontinued from 1st July, 1948, to 30th June, 1949, and again from 1st July, 1952.

The following table shows in respect of butter and cheese, particulars of the ratesrealized on local, interstate and oversea sales and the average equalization and subsidyrates in operation for the years ended June, 1939 and 1953 to 1957.

# BUTTER AND CHEESE: RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS.

(Rates s. d. per cwt.)

	ear ende			Rates	Reali	zed on	Sales.		Ave	rage	D.			te of
	30th June.		Lo	ocal.	Interstate.		Overseas.		Equalization Rate.		Rate of Subsidy.		Return to Manu- facturers.	
						Bu	ITTER.							
1939			154	5.5	146	5.5	121	7.5	136	3.5			136	3.5
1953 1954	• •	• •	404 404	6.0	381 380	4.0	389 401	0.0 4.6	398 400	0.4 5.1	85 89	0.0	483	0.4 3.4
1955		• •	404	4.2	384	1.1	386	3.8	395	10.3	79	0.0	474	10.3
1956		• • •	438	1.5	419	7.3	353	0.2	400	10.5	65	1.0	465	11.5
1957				2)		a)		a)	<i>b</i> 379	4.0	65	7.8	6444	11.8
						Cı	HEESE.		·					
1939			(	c) 94	8.6		59	3.2	71	7.6			71	7.6
1953			-	244	3.3		203	4.1	232	4.8	32	0.0	264	4.8
1954				244	8.6		209	11.1	232	4.7	32	0.0	264	4.7
1955				246	3.1		191	11.1	220	2.2	29	10.9	250	1.1
1956				264	0.1		259	9.6	262	4.1	31	5.7	293	9.8
1957		• •		(a)	)		(	a)	b209	8.0	26	2.6	b235	10.6

<sup>(</sup>a) Not yet available. (b) Rates are of an interim nature only. (c) A lower rate was determined for cheese sold for processing for local consumption.

(Source: Commonwealth Dairy Produce Equalization Committee Limited.)

Following representations by industry organizations, the Commonwealth Government established the Joint Dairy Industry Advisory Committee in November, 1946, comprising a chairman nominated by the Government, four representatives of Commonwealth Government Departments and four industry representatives from the several States. The Committee's functions, broadly, were to advise and assist in conducting cost and other surveys of dairy farm production and to act as an advisory body to the Government in these matters. From 1st April, 1947, to 30th June, 1952, the rates of overall return to milk producers determined by the Commonwealth Government for the purpose of subsidy payments were based on recommendations made by the Committee following surveys of production costs in the dairy industry.

Under the Five-year Stabilization Plan, which came into operation on 1st July, 1952, the Commonwealth Government, with the approval of the States, determined each season the ex-factory prices of butter and cheese, guaranteed to dairy farmers a return, based upon costs of efficient production, in respect of quantities of butter and cheese sold within the Commonwealth, plus an additional 20 per cent. (if produced), and hence determined the amount of subsidy it would make available to lift the return on that part of output covered by the guarantee to the guaranteed level.

A second Five-year Stabilization Plan, continuing all the important features of the first plan, came into operation on 1st July, 1957.

Early in 1953, the Dairy Industry Investigation Committee, an independent body consisting of three members, was appointed to advise the Commonwealth Government on the guaranteed return to producers during 1953-54. The Committee was re-established in March, 1954, to advise the Government on the guaranteed return for each year of the remaining three year period of the Stabilization Plan. For the current five year plan, the Committee has been re-appointed to determine the cost of efficient production of butter-fat only.

Amounts realized on exports of butter and cheese in excess of the f.o.b. equivalent of the guaranteed return have been credited to the Dairying Industry Stabilization Fund, which was established in July, 1948, for the purpose of stabilizing returns from exports. During 1951–52, the Stabilization Fund met the deficiency in respect of all exports which did not return sufficient to meet the basic return to the factory. From 1st July, 1952, to 30th June, 1957, it was available to the industry to be used, in whatever manner considered desirable by it, to make good any deficiency in respect of all exports other than the 20 percent. provided for under the Commonwealth Government's Five-year Stabilization Plan. The Act was amended in 1957 to enable the Board to use the fund for such other purposes as are approved by the Minister for Primary Industry. After allowing for outstanding debits, the amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1957, totalled approximately £1,445,000.

(ii) Whole Milk. In addition to the subsidies referred to above, the Commonwealth Government subsidized the production of whole milk consumed directly from 1943-44 to 1948-49. Details of the amounts distributed during each year will be found in Official Year Book No. 38, p. 1031.

6. Total Dairy Production.—The dairy production for each State in 1956-57 is shown below:—

		DA	AIRY PR	ODUCTI	ON.			
Particulars.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
		N	1956- 11LK ('000	-57.(a) GALLON	√s).			
Used for— Butter Cheese Condensing and	(b)166,752 9,004	(c)416,284 45,145		35,826 25,684		49,629 752	25	894,146 98,885
concentrating Other purposes	20,181 111,665	52,450 76,835	47,867	26,384	19,731	13,507	{ ·· <sub>932</sub>	81,742 287,810
Total	307,602	590,714	254,492	87,894	57,036	63,888	957	1,362,583
			BUTTER	(Tons).				
In Factories	(e) 33,811	(f) 88,574	(f) 41,077	8,328	7,464	10,433		189,687
On Dairy and other Farms	1,248	732	264	132	108	204	5	2,693
Total	35,059	89,306	41,341	8,460	7,572	10,637	5	192,380
			Снееѕе	(Tons).				
In Factories On Dairy and	4,019	20,204	(g) 7,152	11,943	1,152	334		44,804
other Farms		12		••	3			15
Total	4,019	20,216	7,152	11,943	1,155	334	••	44,819

<sup>(</sup>a) Subject to revision. (b) Includes milk, the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (c) Includes milk, the produce of Victoria, sent as cream to New South Wales. (d) Includes milk, the produce of Queensland, sent as cream to New South Wales. (e) Includes butter made from cream, the produce of Victoria and Queensland. (f) Includes butter made from cream, the produce of New South Wales. (g) Includes cheese made in establishments not classified as factories.

7. Whole Milk.—(i) Production and Utilization. During the five years ended 1938-39, approximately 80 per cent. of Australia's milk supply was used for making butter, 4 per cent. for cheese manufacture, 2 per cent. for condensery products and 14 per cent. for fluid consumption and other purposes. There has since been a considerable decline in the proportion of milk used for butter-making, with corresponding increases in the quantities used for other purposes. In 1956-57, 66 per cent. of the total milk supply was used for butter, 7 per cent. for cheese, 6 per cent. for condensery products and 21 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each year 1952-53 to 1956-57 in comparison with the average for the years 1934-35 to 1938-39:—

PRODUCTION AND UTILIZATION OF WHOLE MILK: AUSTRALIA. ('000 Gallons.)

				Quantity used for—					
Year.		Total Production.	Butter (Factory and Farm).	Cheese (Factory and Farm).	Condensery Products.	Other purposes.			
Average, 1934-	25 to 1	938-39	1,149,697	913,754	48,595	28,116	159.232		
1050 50			1,215,241		100,224		259,840		
	• •	• •		771,522	,	83,655	,		
195354			1,189,652	737,474	105,870	75,995	270,313		
1954-55			1,325,799	886,652	98,569	64,365	276,213		
1955-56			1,405,292	962,397	84,021	74,604	284,270		
1956-57(a)			1,362,583	894,146	98,885	81,742	287,810		

<sup>(</sup>a) Subject to revision.

In the following table, particulars of production of whole milk in the several States are shown for the years 1952-53 to 1956-57, compared with the average for the five years ended 1938-39. Victoria is the principal milk-producing State and in 1956-57 the output from that State, 590.7 million gallons, represented 43 per cent. of total production. Output from New South Wales was 307.6 million gallons, or 23 per cent. of the total, and that of Queensland 254.5 million gallons (19 per cent.). Production in the remaining States accounted for 15 per cent. of the total Australian output.

### TOTAL PRODUCTION OF WHOLE MILK.

('000 Gallons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia.
Average, 1934–35 to 1938–39 1952–53 1953–54 1954–55 1955–56 1956–57(a)	331,963 317,385 282,187 315,719 337,222 307,602	402,447 436,417 474,358 536,835 577,475 590,714	278,226 285,533 249,712 275,605 282,296 254,492	63,538 84,249 85,014 90,699 90,342 87,894	40,394 49,830 49,996 54,194 55,668 57,036	32,797 41,139 47,642 52,022 61,405 63,888	332 688 743 725 884 957	1,149,697 1,215,241 1,189,652 1,325,799 1,405,292 1,362,583

<sup>(</sup>a) Subject to revision.

<sup>(</sup>ii) Production per Cow. The quantity of milk produced by a dairy cow reaches as high as 1,000 gallons a year, varying greatly with breed, locality and season. For the whole of Australia for all dairy cows and for all seasons prior to 1916 production averaged considerably less than 300 gallons per annum. In recent years, not only has there been an

improvement in the quality of the cattle, but the application of scientific methods has been continually extended, and the 300-gallon average has been exceeded in each year since 1924. In 1956-57, the average yield was 398 gallons. The annual average yields per cow shown in the following table are based on the approximate number of dairy cows which were in milk during any part of the year. The average shown is, therefore, less than that for cows which were yielding during the greater part of the year. It should be noted that there are many difficulties attending the collection of particulars of the total quantity of milk obtained during any year. In addition, there is the further difficulty of ascertaining with reasonable accuracy the average number of cows in milk during the same period. The average yield per cow shown hereunder may be accepted as sufficiently reliable to show the general trend:—

# AVERAGE MILK PRODUCTION PER DAIRY COW. (Gailons.)

•	Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust- ralia.
Average, 1938-39 1952-53 1953-54 1954-55 1955-56 1956-57(a)	1934–35	to  	322 370 311 345 358 316	440 469 490 533 551 541	306 324 270 294 301 270	412 547 531 543 538 529	334 377 373 403 414 424	350 436 480 485 554 557	347 308 332 314 391 423	357 398 372 405 420 398

(a) Subject to revision.

8. Butter Production.—There was a steady increase in the annual output of butter for many years prior to the 1939-45 War. The average annual production rose from 126,000 tons for the five years ended 1928-29 to 195,000 tons for the five years ended 1938-39.

Following the record output of 211,987 tons in 1939-40, the general trend of butter production declined until 1946-47, when 143,308 tons were produced. Output increased again to 173,599 tons in 1949-50, but was at a lower level in subsequent years until 1954-55, when a substantial increase was recorded due to a recovery in New South Wales and Queensland and a considerable increase in production in Victoria. Production in 1956-57 amounted to 192,380 tons. The foregoing figures include butter produced on farms which has shown a decline from 8,714 tons in 1938-39 to 2,693 tons in 1956-57.

The following table shows production of butter in factories in each State for the years 1952-53 to 1956-57, compared with the average for the five years ended 1938-39.

### BUTTER PRODUCTION IN FACTORIES.

(Tons.)

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Average, 1934–35 1938–39 1952–53 1953–54 1954–55 1955–56 1956–57(b)	to  	52,949 37,087 29,713 38,688 41,066 33,811	62,489 57,323 63,616 79,418 90,608 88,574	53,255 49,008 41,797 45,915 48,189 41,077	7,570 7,630 7,586 8,510 8,562 8,328	5,459 6,480 6,142 7,145 7,404 7,464	3,811 6,059 7,263 8,334 9,962 10,433	185,533 163,587 156,117 188,010 205,791 189,687

(a) Northern Territory and Australian Capital Territory: nil.

(b) Subject to revision.

The table below shows the monthly production of factory butter in Australia in each of the years 1938-39 and 1952-53 to 1956-57. The annual output of farm butter is also shown.

PRODUCTION OF BUTTER IN FACTORIES AND ON FARMS: AUSTRALIA. (Tons.)

Particular	s.	1938–39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57: (a)
Factories—							
July		9,415	7,862	6,941	6,917	8,479	9,229
August		11,645	10,325	8,906	10,903	13,277	13,758
September		15,531	15,139	12,781	16,288	18,197	17,277
October		20,485	19,329	17,481	21,819	24,311	24,187
November		22,561	19,468	19,640	25,011	26,166	24,412
December		20,710	19,537	18,585	24,715	25,276	24,071
January		15,872	16,905	17,038	19,681	23,919	22,152
February		15,816	15,052	15,410	16,598	20,036	16,324
March		17,729	14,063	15,465	16,658	15,887	14,151
April		16,583	10,440	9,933	12,358	12,329	10,516
May		15,568	8,286	7,646	9,435	9,845	7,718
June	• •	12,871	7,181	6,291	7,627	8,069	5,892
Factory Total (b)		194,786	163,587	156,117	188,010	205,791	189,687
Made on Farms(c	)	8,714	3,893	3,468	3,068	3,120	2,693
Grand Total		203,500	167,480	159,585	191,078	208,911	192,380

<sup>(</sup>a) Subject to revision.

9. Cheese Production.—Until 1916, the annual production of cheese in factories and onfarms had not reached 10,000 tons. From 1916 to 1932-33, it ranged between about 10,000 and 16,000 tons, rising in subsequent years with some reversals of trend to an output of 44,796 tons in 1949-50. Production decreased in 1950-51 and 1951-52 but by 1953-54 had risen to a record output of 49,057 tons. Production declined in the next two years to 38,700 tons, but recovered to 44,819 tons in 1956-57 mainly because of fluctuations in Victorian output. The States contributing chiefly towards the general increase over the years are Victoria and South Australia.

The following table shows production of cheese in factories in each State in the years 1952-53 to 1956-57 in comparison with average output during the years 1934-35 to 1938-39:—

# CHEESE PRODUCTION IN FACTORIES. (Tons.)

Year.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Average, 1934-3	5 to							
1938–39		3,332	6,177	5,071	5,437	390	1,210	21,617
1952-53		3,162	22,377	9,439	10,454	895	265	46,592
1953–54		3,210	25,977	6,746	11,612	1,205	293	49,043
1954-55		2,508	20,290	7,921	13,101	1,083	275	45,178
1955-56		3,379	13,996	7,579	12,633	763	331	38,681
1956-57(b)		4,019	20,204	7,152	11,943	1,152	334	44,804

<sup>(</sup>a) Northern Territory and Australian Capital Territory: nil.

<sup>(</sup>b) Year ended June.

<sup>(</sup>c) Year ended March.

<sup>(</sup>b) Subject to revision.

The monthly production of cheese in factories in Australia, together with the annual output from farms, is shown in the table below for 1938-39 and each of the years 1952-53 to 1956-57.

PRODUCTION OF CHEESE IN FACTORIES AND ON FARMS: AUSTRALIA. (Tons.)

			(2010)				
Mont	h.	1938–39.	1952-53.	1953–54.	1954-55.	1955-56.	1956-57. (a)
.Factories-		1					
July .		1,517	2,218	1,979	2,429	2,170	2,352
August .		1,950	3,607	3,315	3,754	3,162	3,561
September .		2,820	5,246	5,376	5,422	4,376	4,973
October .		4,028	6,837	7,345	6,657	5,360	6,514
November .		3,990	6,923	7,366	6,660	5,254	6,372
December .		3,462	6,297	6,619	5,910	4,579	5,747
January .		2,212	4,869	5,075	4,096	3,697	4,530
February .		1,715	3,287	3,603	2,729	2,521	3,053
March .		1,826	2,616	3,084	2,454	2,321	2,698
April .		1,656	1,739	1,901	1,816	1,860	1,886
May .		1,898	1,474	1,661	1,589	1,666	1,589
June .		1,900	1,479	1,719	1,662	1,715	1,529
Factory Total(b)		28,974	46,592	49.043	45,178	38,681	44,804
Made on Farms	(c)	330	14	14	15	19	15
Grand Total		29,304	46,606	49,057	45,193	38,700	44,819

<sup>(</sup>a) Subject to revision.

10. Condensed, Concentrated and Powdered, etc., Milk Production.—The manufacture of these products has expanded greatly since 1938–39 to meet the needs of the Services during the 1939-45 War and for export purposes since the war. The output of condensed milk (sweetened and unsweetened) in 1956-57 was more than double that in the three years ended 1938-39, while that of powdered milk (full cream and skim) was more than five times as high. Over the same period, the quantity of whole milk used in the manufacture of the products shown below increased from 33.2 million gallons to 81.7 million gallons or by 146 per cent. These products are manufactured mainly in Victoria, which produced 64 per cent. of the total (in terms of whole milk equivalent) in 1956-57. New South Wales accounted for 25 per cent. and the remaining States for 11 per cent.

The following table shows details of the output of condensed, concentrated, powdered, etc., milk during the years 1952-53 to 1956-57, compared with the available details for the years 1936-37 to 1938-39.

PRODUCTION OF CONDENSED, CONCENTRATED AND POWDERED, ETC., MILK: AUSTRALIA.

	į F	full Cream !	Milk Produc	ts.	· ·	Milk By-	products.
Year.	Condensed Milk (Sweetened and Un- sweetened).	trated Whole	Powdered Full Cream Milk.	Infants' and Invalids' Foods (including Malted Milk and Milk Sugar).	Total Whole Milk Equiva- lent of Full Cream Milk Products.	Powdered Skim Milk.	Powdered Butter- milk and Whey.
	Tons.	Tons.	Tons.	Tons.	'000 gals.	Tons.	Tons.
Average, 1936–37 to 1938–39	17,347 55,385 42,386 38,493 44,360 48,575	(b) 1,355 14,493 19,464 10,071 13,856 20,469	9,464 22,393 18,905 15,539 17,211 17,637	(c) 1,131 10,042 11,740 10,920 12,861 13,628	33,226 83,655 75,995 64,365 74,604 81,742	(d) 16,103 19,804 24,618 30,892 30,795	(e) 701 4,073 5,358 5,086 4,990 5,621

<sup>(</sup>a) Mainly for ice-cream manufacture. (b) Incomplete. (c) Malted milk and milk sugar only. (d) Not available separately; included with powdered full cream milk. (e) Excludes powdered whey. (f) Subject to revision.

<sup>(</sup>b) Year ended June.

<sup>(</sup>c) Year ended March.

11. Local Consumption of Butter and Cheese.—A system of butter rationing introduced as a war-time measure and retained until 16th June, 1950, had the effect of considerably reducing civilian consumption. In the last year of rationing, 1949-50, consumption was 25.3 lb. per head per annum compared with an average of 32.9 lb. during the years 1936-37 to 1938-39. Following the cessation of rationing, consumption rose sharply to 31.2 lb. in 1951-52, and until 1955-56 fluctuated between 29 lb. and 31 lb. per head per annum. In 1956-57 however consumption fell to 28.0 lb. per head.

Cheese consumption rose considerably during the period of butter rationing, from 4.4 lb. per head pre-war to 6.3 lb. per head in 1949-50. Owing to a change in the method of computation, revised figures are shown below for the changes in stock and consumption of cheese for the years 1952-53 to 1956-57. The trend in consumption was not materially affected by these revisions. Consumption increased from 5.6 lb. per head in 1952-53 to 6.3 lb. per head in 1954-55, but since then has decreased to 5.3 lb. in 1956-57.

The following table shows details of the production and disposal of butter and cheese for each of the years 1952-53 to 1956-57 compared with the average for the years 1936-37 to 1938-39.

#### PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE: AUSTRALIA.

		1			Consumptio	n in Australia
Year.		Changes in Stocks.	Production.	Exports. (a)	Total.	Per Head per annum.
		'000 tons.	'000 tons.	'000 tons.	'000 tons.	1b
		Вι	JTTER.			
Average, 1936-37 to	1938-39	(b)	191.0	(c) 90.0	101.0	32.9
1952-53		(d) + 2.5	167.5	50.5	114.5	29.4
1953-54		(d) = 3.0	159.6	40.9	121.7	30.6
1954-55		(d) + 4.9	191.1	63.7	122.5	30.2
1955–56 .		(d) + 4.7	208.9	83.8	120.4	29.0
1956–57(e)		(d) -4.7	192.4	77.7	119.4	28.0
		C	HEESE.			
Average, 1936-37 to	1938-39	(b)	24.9	11.5	13.4	4.4
1952–53		+1.3	46.6	23.7	21.6	5.6
1953–54		+2.7	49.0	22.4	23.9	6.0
1954–55		-1.6	45.2	21.4	25.4	6.3
1955-56		-1.8	38.7	16.6	23.9	5.7
1956-57(e) .		+5.8	44.8	16.5	22.5	5.3

<sup>(</sup>a) Figures for butter include ghee expressed as butter as well as butter shipped as ships' stores. Figures for cheese include ships' stores after allowance for a small quantity of cheese imported. (b) Not available. (c) Excludes ghee. (d) Includes allowance for movements in stocks other than those held in main cold stores. (e) Subject to revision.

12. Marketing of Dairy Products.—(i) The Dairy Produce Export Control Act 1924–1954. Introduced at the request of the dairying industry, this Act was passed by the Commonwealth Parliament with the object of organizing the oversea marketing of Australian dairy produce. A Dairy Produce Control Board was appointed and was in existence from 1924 to 1935. In the course of its functions, the Board regulated shipments to ensure regularity of supply in the London market, controlled forward selling, obtained reductions in oversea freights and insurance rates and participated in an advertising campaign in the United Kingdom.

Prior to the appointment of the Dairy Produce Control Board, a voluntary body—the Australian Dairy Council—was established to advise and make recommendations to the Governments on problems connected with the production, manufacture and quality of dairy produce, pasture improvements and diseases of dairy cattle.

Following a recommendation by the Australian Agricultural Council, the functions of these bodies were combined by an amending Act of 1935 under the Australian Dairy Produce Board and provision was made for the allocation of money from the Board's

funds for research and investigation into pastures, diseases of dairy cattle and the quality of butter. The functions of the Board were later extended to enable it to advise the Government in connexion with the transport of dairy produce, the securing of new markets, the expansion of existing markets and other matters.

The Australian Dairy Produce Board was re-constituted in 1947 by an amendment to the Dairy Produce Export Control Act, its membership being reduced from seventeen to twelve. The functions of the Board were extended to enable it to purchase and sell, on behalf of the Commonwealth, dairy produce intended for export, and to control all matters concerning the handling, storage, protection, treatment, transfer and shipment of the produce so purchased or sold. In 1953, the direct farmer representation on the Board was increased from two to three members, thus raising the total membership from twelve to thirteen.

In April, 1954, the Act was further amended to prepare for the implementation of an export marketing plan to follow the expiration of the United Kingdom-Australia Butter and Cheese Contract. The amendment enabled the Board to purchase dairy produce intended for export to the United Kingdom and to sell such produce on behalf of the dairying industry in lieu of its present function of selling on behalf of the Commonwealth Government. In the interests of the stability of the industry, the Act provides that the Board may be the sole Australian exporter of butter and cheese to the United Kingdom.

- (ii) The Dairy Produce Export Charges Act 1924-1937. This Act provides for the imposition of a levy on all butter and cheese exported from Australia to cover the administrative expenses of the Board and for advertising and other purposes. The rate of the levy is fixed by regulation.
- (iii) Butter and Cheese Contracts. Details of the war-time contracts arranged between the United Kingdom and Australian Governments, whereby the former undertook to purchase Australia's surplus butter and cheese, were shown on pp. 985 and 986 of Official Year Book No. 37. The purchase of butter and cheese from 1944-45 to 1954-55 was covered by the Long-Term Purchase Agreement. Details of this Agreement and of the prices paid for various grades of butter and cheese each year under the Agreement were given in pp. 943 and 944 of Official Year Book No. 42 and in earlier issues of the Official Year Book.
- 13. Oversea Trade in Butter, Cheese and Milk.—(i) General. The production of butter and cheese in Australia is considerably in excess of local requirements and consequently a substantial surplus is available for export overseas. In normal circumstances, the extent of this surplus is chiefly dependent upon the seasonal conditions. Exports of butter, which averaged 90,000 tons in the three years prior to the 1939–45 War, were maintained to a certain extent during the war and post-war years by the restriction of supplies for local consumption, but because of lower production they nevertheless fell as low as 41,800 tons in 1944–45. In the last year of rationing, 1949–50, exports were 79,200 tons, but they fell to 11,300 tons by 1951–52. There was a substantial increase in exports in subsequent years and in 1956–57, 72,265 tons were shipped. In addition, small quantities of butter concentrate and ghee have been exported during the post-war period. Exports of cheese, which averaged 11,500 tons pre-war, rose to a maximum of 26,000 tons in 1948–49, but they subsequently fell and in 1956–57 amounted to 17,529 tons.

During 1938-39, 96,900 tons of butter (95 per cent. of all butter exported) were shipped to the United Kingdom. With the decline in total exports, there was also a substantial reduction in the proportion shipped to the United Kingdom up till 1954-55. This increased again to 72,400 tons (88 per cent.) in 1955-56 but there was a slight decline again in 1956-57 to 62,553 tons (82 per cent. of the total butter exports).

In 1938-39, exports of cheese totalled 16,000 tons of which 15,500 tons or 97 per cent. were exported to the United Kingdom. Of the total of 17,529 tons exported in 1956-57, 13,432 tons or 77 per cent. were shipped to the United Kingdom.

Total quantities and values of exports of Australian origin of butter, cheese and condensed, concentrated, etc., milk and cream are shown on p. 969.

(ii) Butter and Cheese Exports graded according to Quality. All butter and cheese exported comes under the provisions of the Exports (Dairy Produce) Regulations and is subject to the supervision, inspection and examination of officers appointed for that purpose. These commodities are graded according to quality which has been fixed by regulation as

follows:—Flavour and aroma, 50 points, texture, 30 points, and condition, 20 points. Butter and cheese graded at 93 to 100 points is of choicest quality, at 90 to 92 points, first quality, at 86 to 89 points, second quality, and at 80 to 85 points, pastry or cooking quality or, in the case of cheese, third quality.

In the following table, particulars are given of the relative proportions of butter and cheese graded for export according to quality. Further details, which include actual quantities by States, are to be found in *Primary Industries*, *Part I.—Rural Industries*, 1955-56, Bulletin No. 50.

BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA.

			Butter.			Cheese.			
Grad	ie.	1954–55.	1955–56.	1956-57.	1954-55.	1955–56.	1956-57.		
Choicest First Quality		 52.0 36.8	55.0 34.3	56.8 32.9	1.1	12.7 74.1	11.7		
Second Quality Third Quality(a)		 8.3	7.9 2.8	7.7	17.3 (b)	13.2 (b)	17.4 (b)		
Total		 100.0	100.0	100.0	100.0	100.0	100.0		

<sup>(</sup>a) Includes rejected.

### § 4. Pigs and Pig Products.

1. Pigs.—The number of pigs in Australia first reached a million in 1905. It fluctuated about this level up to 1940, when it reached 1,455,341, while in 1941 the record number of 1,797,340 was recorded. There was a decline in the following two years but the numbers rose again to 1,746,721 in 1944; thereafter, there was an almost continuous decline until 1953 when the number of pigs was only 992,532. Numbers increased in succeeding years and, despite a set-back in 1956, they rose to 1,325,057 in 1957. Details of the number of pigs in each State and Territory for each of the five years 1953 to 1957, together with the average for the five years 1935 to 1939, are given in the following table:—

### NUMBER OF PIGS.

As at 31st March.	N.S.W.	Vic.	Qld.	S. Aust.	W. Aust.	Tas.	N.T.(a)	A.C.T.	Aust- ralia.
Average, 1935 to 1939(b) 1953 1954 1955 1956 1957	391,874 298,690 371,608 375,019 343,030 386,789	287,140 182,824 232,384 263,666 227,223 258,336	294,777 335,809 384,453 406,879 372,871 394,518	80,548 58,657 60,619 84,502 72,920 92,180	83,999 76,195 100,912 107,039 99,097 139,982	42,772 39,378 46,256 58,382 49,498 52,358	479 799 1,132 911 1,076 755	180 276 104 115	1,182,133 992,532 1,197,640 1,296,502 1,165,830 1,325,057

<sup>(</sup>a) As at 1st January. (b) As at 31st March for New South Wales and Australian Capital Territory; 1st March for Victoria; 1st January for Queensland, South Australia, Western Australia and Tasmania.

Further details relating to pig numbers are given in Chapter XXIII.—Pastoral Production. Maps showing the distribution of pigs in Australia at 31st March, 1955 and 1948 appeared on page 912 of Official Year Book No. 43 and on page 908 of Official Year Book No. 39, respectively.

2. Size of Pig Herds.—A series of special tabulations relating to rural holdings undertaken for all States for the year 1955-56 covered, *inter alia*, a classification of holdings by size of pig herd and by area of holding, area of wheat grown for grain, and size of dairy cattle herd. The tabulations have been published in full detail in a series of mimeographed bulletins Size Classification of Rural Holdings, 1955-56 and also appear in summarized form in Primary Industries, Part I, Rural Industries, 1956-57, Bulletin No. 51.

<sup>(</sup>b) Included with Second Quality.

3. Pigs Slaughtered.—The number of pigs slaughtered during each of the years 1952-53 to 1956-57 and the average for the years 1934-35 to 1938-39 are shown in the following table:—

### PIGS SLAUGHTERED.

		Slaughterings Passed for Human Consumption.							
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.	Slaughter- ings (including Boiled Down).	
Average, 1934- 35 to 1938-								·	
39	555	484	525	154	119	61	1,899	1,912	
1952-53	458	297	400	115	122	66	1,463	1,474	
1953-54	492	298	461	104	115	59	1,534	1,545	
1954-55	615	422	499	136	182	79	1,939	1,951	
1955–56	576	395	459	132	160	88	1,817	1,828	
1956-57(b)	539	383	446	122	158	85	1,738	1,748	

- (a) Including Australian Capital Territory and Northern Territory.
- (b) Subject to revision.
- 4. Pork.—(i) *Production*. In the following table, details of the production of pork in each State are shown for the years 1952-53 to 1956-57 compared with average production during the years 1934-35 to 1938-39.

### PRODUCTION OF PORK (BONE-IN WEIGHT). (Tons.)

Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
Average, 1934-35 to 1938-39 1952-53 1953-54 1954-55 1955-56 1956-57(a)	9,938 9,611 12,949 17,026 14,952 14,941	12,236 6,925 7,332 11,078 10,709 10,748	9,867 6,548 7,216 8,948 8,016 7,022	3,215 2,836 2,253 3,521 3,247 2,603	1,741 2,436 2,032 4,362 3,529 3,273	1,240 1,920 1,399 2,027 2,215 2,163	7 60 69 65 67 59	38 132 146 192 204 204	38,282 30,468 33,396 47,219 42,939 41,013

(a) Subject to revision.

(ii) Consumption. As in the case of other meats, pork was subject to rationing during the 1939-45 War and immediate post-war years and consumption was at a much lower level than pre-war. In 1954-55, consumption reached 10.2 lb., only slightly below the immediate pre-war average. During 1955-56 and 1956-57, consumption declined again, the figure recorded for the latter year being 8.7 lb. per head. In the following table, details of the production and disposal of pork are shown for the years 1952-53 to 1956-57 compared with averages for the three years 1936-37 to 1938-39.

#### PRODUCTION AND DISPOSAL OF PORK (BONE-IN WEIGHT): AUSTRALIA.

			Changes in	Production.	_			Consumption in Australia.	
Year.		Stock.	(a)	Exports. Canning.		Total.	Per Head per annum.		
			'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.	
Average, 193	6-37 to	1938-							
39				45.5	13.7		31.8	10.4	
1952-53			+0.8	30.5	1.5	5.5	22.7	5.8	
1953-54			-1.1	33.4	1.2	2.8	30.5	7.7	
1954-55			-0.5	47.2	2.9	3.4	41.4	10.2	
1955-56			-0.7	42.9	1.1	2.2	40 3	9.7	
1956-57(b)			+0.9	41.0	0.6	2.5	37.0	8.7	

- (a) Includes an estimate of trimmings from baconer carcasses.
- (b) Subject to revision.

5. Bacon and Ham.—(i) Production. As in the case of pork, the increased demand for bacon and ham during the 1939-45 War stimulated production to a level not previously attained. Production reached its peak in 1944-45 when 56,246 tons of bacon and ham were cured. This was followed by a decline in output in each succeeding year to 36,628 tons in 1951-52. Production was maintained at about this level for several years but declined further to 35,233 tons in 1956-57. Details of production are shown by States in the following table for each year 1952-53 to 1956-57 compared with the average production for the five pre-war years ended 1938-39.

### PRODUCTION OF BACON AND HAM (CURED WEIGHT).(a)

(Tons.)

7	ćeаг.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	A.C.T.	Australia
Average, 19 39 1952–53 1953–54 1954–55 1955–56 1956–57(b)	34–35 to 1938-	9,963 13,228 11,875 11,769 11,463	7,614 8,165 7,044 8,074 7,929 7,606	9,269 9,510 10,655 10,807 10,224 9,965	2,950 3,063 3,024 3,378 3,587 3,426	2,013 3,693 3,443 3,316 3,231 3,070	970 886 949 1,027 1,040 922		32,780 38,545 36,990 38,371 37,474 35,233

<sup>(</sup>a) Pressed and canned bacon and ham have been converted to bone-in weight, except in pre-war years. (b) Subject to revision.

(ii) Consumption. Consumption per head declined in the early stages of the 1939-45 War from the pre-war average of 10.2 lb. per annum, but subsequently increased to 12.7 lb. in 1946-47. Since that year, there has been a decline to a relatively steady level of from 7 lb. to 8 lb. per head per annum. In 1956-57, consumption amounted to 7.0 lb. per head. Details of production and disposal of bacon and ham for the years 1952-53 to 1956-57 compared with average production and disposal for the period 1936-37 to 1938-39 are shown in the following table:—

### PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED WEIGHT)(a): AUSTRALIA.

Year.	Changes in		<b>.</b>			ption in tralia.		
Year.		Stock. Product		Exports.	Canning.	Total.	Per Head per annum.	
<del> ,</del>			'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	<u>lb.</u>
Average, 193	6-37 to	1938-						[· !
39			(b)	32.5	1.0	ļ	31.5	10.2
1952-53			-0.7	38.5	2.0	8.9	28.3	7.3
1953-54			+0.4	37.0	1.6	6.5	28.5	7.2
1954-55			-0.2	38.4	1.0	5.4	32.2	7.9
1955-56			+0.4	37.5	0.7	5.1	31.3	7.5
1956-57(c)			+0.3	35.2	0.5	4.8	29.6	7.0

<sup>(</sup>a) Pressed and canned bacon and ham have been converted to bone-in weight, except in pre-war years.

(b) Not available.

(c) Subject to revision.

<sup>6.</sup> United Kingdom Contracts.—Details relating to the several war-time contracts and the more recent Long-term Purchase Agreement between the Governments of the Commonwealth and the United Kingdom for the sale of Australia's surplus production of meats (including pigmeats) are included in Chapter XXIII.—Pastoral Production.

<sup>7.</sup> Oversea Trade in Pigs and Pig Products.—Total quantities and values of exports of Australian origin of pigs and pig products (bacon and ham, lard and frozen pork) for the years 1954-55 to 1956-57 are shown on p. 969.

### § 5. Poultry-farming.

- 1. General.—Poultry-farming has been carried on in Australia for many years and the State Departments of Agriculture have encouraged its development by appointing experts to advise on the care and management of poultry and by conducting egg-laying competitions. Originally the industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry and it is from this source that the bulk of the commercial production is obtained. Practically all farms keep poultry for the purpose of supplying their own domestic requirements and in many cases some supplies from this source are also marketed. In addition, many private homes keep small numbers of fowls in backyard runs and this helps to maintain domestic needs, particularly when eggs are in short supply.
- 2. Numbers of Poultry.—In pre-war years, the numbers of the principal kinds of poultry were a normal feature of the annual census of livestock in all States except Victoria and Tasmania. These data were collected on a restricted scale by all States in 1942–43, the details obtained being confined to farms of one acre or more producing eggs or poultry for sale. The collection has since been discontinued in some States. Because of their incompleteness, details of poultry numbers are not published.
- 3. Recorded Production and Disposal of Eggs.—(i) Shell Eggs. Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Egg Boards of the several States. As Boards were not set up in all States until 1943, comparable statistics of recorded production of eggs for Australia as a whole are not available prior to 1943-44. Details of production in the respective States as recorded by these authorities for the years 1952-53 to 1956-57 are shown in the following table:—

SHELL EGGS: PRODUCTION(a) RECORDED BY EGG BOARDS.
('000 Dozen.)

State.			1952-53.	1953–54.	1954–55.	1955–56.	1956-57.
New South Wales	· .		50,884	51,884	55,057	51,635	52,334
Victoria		]	24,701	25,306	26,377	24,985	24,874
Queensland	• .•		7,860	8,555	8,312	7,848	8,848
South Australia			11,359	12,040	12,359	11,820	11,375
Western Australia			8,783	9,283	8,909	7,687	8,589
Tasmania			1,107	934	889	943	912
Total			104,694	108,002	111,903	104,918	106,932

<sup>(</sup>a) Receivals from consignors and sales by producer agents.

(ii) Egg Pulp. Prior to the 1939-45 War, production of egg pulp was about 7 million lb. per annum. This was used almost entirely for the manufacture of cakes, pastry and biscuits, only negligible quantities being exported. Production was expanded greatly during the war years to meet the requirements of the Armed Services and has since been maintained at a high level for export purposes and to meet increased local requirements.

Particulars of the production of whole egg pulp as recorded by the Egg Boards in the several States are shown in the following table.

LIQUID WHOLE EGG: PRODUCTION RECORDED BY EGG BOARDS. ('000 lb.)

State.		4	1952-53.	1953–54.	1954–55.	1955 <b>-5</b> 6.	1956–57.
New South Wales			16,991	20,942	17,057	14,649	18,755
Victoria			6,467	8,295	6,564	6,879	6,245
Queensland			2,315	3,703	2,419	2,901	3,302
South Australia			6,284	8,178	6,516	5,991	4,501
Western Australia			3,490	3,894	1,924	1,532	2,024
Tasmania			359	239	246	236	133
Total	· <u>·</u>	• •	35,906	45,251	34,726	32,188	34,960

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In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1956-57 amounted to 571,184 lb. and 360,837 lb. respectively, compared with 540,643 lb. and 337,844 lb. respectively in the previous year.

(iii) Egg Powder. The production of dried egg powder was established in Australia in 1942, to treat Australia's surplus eggs so as to maintain exports under war-time conditions to the United Kingdom. Production was continued after the end of the war for export purposes, but since 1946-47 has declined to negligible proportions.

4. Production and Consumption of Eggs.—Statistics of total egg production must necessarily be accepted with some reserve. The production shown in the following table together with details of exports and consumption is based upon the records of Egg Boards of production from areas under their control plus estimates of production from uncontrolled areas and from "back-yard" poultry-keepers.

#### ESTIMATED PRODUCTION AND DISPOSAL OF EGGS IN SHELL(a): AUSTRALIA.

			Chamass	Estimated		For Drying	tralia as Hi		
	Year.		Changes in Stock. Total Production.		Exports.	and Pulping.(b)	Total. Per Hear per Annui '000 tons. lb.  78.7 25.7 80.4 20.6 82.7 20.8 85.9 21.2 87.9 21.1	Per Head per Annum.	
		'000 tons.	'000 tons.	'000 tons.	'000 tons.	'000 tons.	lb.		
Average, 19	936-37 to	1938-							
39	• •		(c)	89.5	7.6	3.2	78.7	25.7	
1952-53			-1.2	108.6	12.6	16.8	80.4	20.6	
1953-54	• •		+0.2	111.8	7.9	21.0	82.7	20.8	
1954-55	• •		-0.2	115.4	12.2	17.5	85.9	21.2	
1955-56			١	113.2	9.9	15.4	87.9	21.1	
1956-57			+0.9	115.8	6.3	16.9	91.7	21.5	

(a) The average weight of an egg in Australia is taken as 1.75 oz. (c) Not available.

(b) Includes wastage.

Details of the consumption of shell eggs, liquid whole egg and total shell egg equivalent (expressed in lb. and in number of eggs) per head of population per annum are shown in the following table:-

### SUPPLIES OF EGGS AND EGG PRODUCTS(a) MOVING INTO CONSUMPTION: AUSTRALIA.

(Per Head per Annum.)

	(1 01 1100	P				
Commodity.	Average, 1936-37 to 1938-39.	1952–53.	1953–54.	1954–55.	1955-56.	1956-57.
Shell Eggs lb.	25.7	20.6	20.8	21.2	21.1	21.5
Liquid Whole Egg and Egg Powder(a) lb.	0.9	1.7	1.5	1.6	1.3	1.5
Total $\begin{cases} \text{lb.} \\ \text{Number}(b) \end{cases}$	26.6 243	22.3 204	22.3 204	22.8 209	22.4 205	23.0 210

(a) In terms of weight of shell eggs. 1.75 oz.

(b) The average weight of an egg in Australia is taken as

5. Marketing of Eggs.—(i) United Kingdom Market. Details of the annual contracts entered into between the United Kingdom and Australian Governments up to 1952-53 and of the results of trading under free market conditions in the three following years appear in earlier issues of the Official Year Book.

During the 1956-57 export season, prices for shell eggs in the United Kingdom were well below those of the previous year and sales were reduced by more than half. Over 8,000 tons of egg pulp were shipped to the United Kingdom under contract with a group of pulp importers at a price of £225 8s. sterling per ton f.o.b., £11 13s. sterling higher than the 1955-56 contract price.

(ii) West German Market. Western Germany again proved valuable as an alternative shell egg market to the United Kingdom. Sales in Western Germany increased to 3.1 million dozen, from 2.2 million dozen in 1955-56, and average realizations were higher than in the United Kingdom. Western Germany also took 1,000 tons of egg pulp.

(iii) Egg Export Control Act 1947. Following the termination of Commonwealth control over the production and marketing of eggs on 31st December, 1947, functions relating to the local marketing of eggs reverted to State Egg Boards, which became responsible for stabilizing prices and marketing of eggs produced in the respective States. In order to assist in marketing Australia's surplus production of eggs under the Long-term Purchase Agreement with the United Kingdom, the Commonwealth established the Australian Egg Board under the Egg Export Control Act 1947. The Board, which commenced to operate on 1st January, 1948, was empowered to buy and sell, on behalf of the Commonwealth Government, eggs and egg products intended for export which comply with the provisions of the Export (Dairy Produce) Regulations. In addition, the Board was authorized to deal with all matters relating to the export of eggs and egg products from Australia, to make such experiments as are likely to lead to the improvement of the quality of Australian eggs and to promote their sale overseas. The Board consisted of ten members, including six representatives of egg producers and one representative of the Commonwealth Government.

Due to the discontinuance of inter-Governmental trading in eggs and egg products, the Egg Export Control Act was amended in April, 1954, to provide for the reconstruction of the Australian Egg Board and the implementation of an egg export marketing scheme. The new Board, established on 17th June, 1954, comprises nine members including a representative of the Commonwealth Government and representatives from each State Egg Marketing Board (except Tasmania). The Board is empowered to act as a trading authority selling eggs and egg pulp as agent for State Egg Boards. However, any State Board desiring to export on its own account may do so, subject to general terms and conditions to be laid down by the Australian Egg Board.

6. Oversea Trade in Poultry Products.—The Australian oversea export of poultry products has been confined in the past chiefly to eggs in shell and egg contents, which are consigned mainly to the United Kingdom. In 1949-50, exports of eggs in shell reached the record level of 23 million dozen. Shipments were at a lower level in subsequent years and, in 1956-57, 10.1 million dozen were exported.

Prior to the 1939-45 War, exports of egg contents were small and in 1939-40 there was an excess of imports. During the war years, exports expanded greatly, mainly to meet Service requirements, and after the close of the war there was a further expansion to 37.9 million lb. of egg contents in 1953-54. There was a decline in subsequent years and in 1956-57 20.5 million lb. were exported.

Since the close of the war, there has also been a considerable increase in the exports of frozen poultry. Exports, which amounted to 1.1 million lb. in 1956-57, were, however, much lower than in preceding years.

Total quantities and values of exports of Australian origin of poultry products (live poultry, frozen poultry, eggs in shell, egg pulp and powder) for the years 1954-55 to 1956-57, are shown on p. 969.

### § 6. Bee-farming.

1. Production of Honey and Bees-wax.—Although practised as a separate industry, bee-farming is also carried on in conjunction with other branches of farming, but its place in Australia's rural economy is not very significant. The returns of honey from productive hives during 1956-57 showed an average of 119 lb. per hive and the average quantity of wax was 1.5 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1956-57 are shown in the following table.

BEEHIVES, HONEY AND BEES-WAX, 1956-57. Bees-wax Produced. Beehives. Honey Produced. State or Territory. Pro-Unpro-Gross Gross Quantity. Total. Quantity. ductive. Value. Value. ductive. '000. '000 lb. £'000. '000. **2000.** '000 lb. £'000. New South Wales 125 934 188 61 57 182 14,946 8,210 590 90 29 Victoria 76 26 102 Oueensland 29 10 39 3,075 168 42 12 33 South Australia 74 13 87 8,169 389 116 19 Western Australia 31 5,650 266 70 6 37 372 23 5 2 Tasmania 4 1 5 Aust. Cap. Territory. 1 1 36 2 Australia 340 113 453 40,458 2,372 511 156

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora of the eucalypts, which varies greatly from year to year. In recent years, there has been a pronounced upward trend in the output of honey, the 1948-49 figure, 53,200,000 lb., being an all-time record. Production in 1956-57 at 40,458,000 lb., although lower than in 1948-49, was still higher than pre-war.

The table hereunder shows the production of honey and bees-wax for the five years ended 1956-57 in comparison with the averages for the years 1934-35 to 1938-39.

# HONEY AND BEES-WAX PRODUCTION.

			( 000 10.)				
Year.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aus- tralia.
			Honey.				
Average, 1934–35 to 1938–39 1952–53 1953–54 1954–55 1955–56 1956–57	3,827 8,046 10,381 16,411 15,207 14,946	3,600 6,235 9,382 8,834 7,010 8,210	689 2,166 2,888 1,732 2,329 3,075	3,388 7,656 6,378 3,671 5,115 8,169	1,125 3,393 6,325 2,721 4,482 5,650	181 309 365 243 302 372	(a) 12,810 (b) 27,810 (b) 35,737 (b) 33,633 (b) 34,464 (b) 40,458
			BEES-WAX	· ·			
Average, 1934–35 to 1938–39	56 94 123 194 184 188	42 72 101 94 78 90	10 30 43 37 34 42	41 103 78 60 70 116	19 40 73 52 57 70	2 3 4 4 4 5	(a) 170 (b) 342 (b) 422 (b) 441 (b) 427 (b) 511

<sup>(</sup>a) Excludes the Australian Capital Territory and the Northern Territory. (b) Excludes the Northern Territory.

2. Oversea Trade in Bee Products.—Prior to the 1939-45 War, the production of honey exceeded Australian requirements and a small quantity was available for export. In 1948-49, the record quantity of 32.1 million lb., was exported. Exports amounted to 27.2 million lb. in 1955-56 and 12.8 million lb. in 1956-57.

The wider use of frame hives has reduced the production of wax, and as a result the quantity of bees-wax imported generally exceeded that exported up to 1945-46. During each year since 1946-47, however, with the exception of 1951-52, production has been high on account of exceptionally good seasons, and exports have exceeded imports by substantial margins. In 1956-57, exports exceeded imports by an amount of 109,000 lb.

Total quantities and values of exports of honey and bees-wax for the years 1954-55 to 1956-57 are shown in § 7 below.

### § 7. Exports of Australian Farmyard, Dairy and Bee Products.

The quantities and values of Australian farmyard, dairy and bee products exported during the years 1954-55 to 1956-57 are shown below.

### EXPORTS OF FARMYARD, DAIRY AND BEE PRODUCTS: AUSTRALIA.

Particulars.	Unit of		Quantity.		Value (fA'000 f.o.b. Port of Shipment).		
	Quantity.	1954-55.	1955–56.	1956–57.	1954–55.	1955–56.	1956–57.
Becs-wax Butter Cheese Eggs in shell Eggs not in shell—	lb. '000 lb. '000 doz.	260,275 140,017 49,544 20,266	178,489 185,112 38,486 16,071	117,193 170,834 39,265 10,142	63 24,589 5,058 3,521	28,968 3,537 2,847	35 25,824 3,861 1,997
In liquid form Dry	'000 lb. "	21,496 972 23,471 208	21,182 61 27,162 137	20,457 8 12,828 126	2,315 160 1,039 20	2,440 15 1,567 15	2,568 10 841 15
Bacon and Ham (including canned) Frozen Poultry Frozen Pork	"	6,414 ( <i>a</i> ) 6,515	4,143 1,486 2,472	2,612 1,059 1,437	1,808 546 781	912 349 364	620 215 271
Condensed, Preserved, etc.— Sweetened Full Cream Unsweetened Dried or Powdered—	"	42,757 1,795	52,353 3,590	63,234 2,932	3,714 131	3,700 222	4,222 189
Full Cream Skim Malted Infants' and Invalids' Foods—	"	14,664 40,793 5,280	15,130 50,804 5,508	15,269 45,417 6,088	2,101 1,573 788	2,151 2,041 815	2,155 2,181 906
Essentially of Milk Other Pigs, live Poultry, live(b)	Number	2,686 5,271 1,009 67,170	3,591 6,374 1,066 37,764	7,382 7,246 918 50,823	436 980 19 10	555 1,067 29 6	1,091 1,334 25 7

<sup>(</sup>a) Not available.

### § 8. Imports of Dairy and Farmyard Products into the United Kingdom.

Note.—Values of imports in this section are expressed in  $\pounds$  sterling at the landed c.i.f. point.

1. Summary, Principal Products.—The following table shows the quantities and values of the principal dairy products imported into the United Kingdom during the years 1939, 1955 and 1956.

DAIRY PRODUCTS: IMPORTS INTO UNITED KINGDOM.

Donadouse	Unit of	193	1939.		55.	1956.	
Product.	Quantity.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			£'000.		£'000.		£'000.
Butter ,.	'000 cwt.	8,737	48,424	6,150	106,134	7,081	115,959
Cheese	,,,	2,845	8,869	2,579	25,939	2,689	35,568
Milk, powdered and		,				1	
preserved		,	2,818		3,622		6,142
Bacon and ham	'000 cwt.	7,953	37,105	6,412	78,348	6,636	91,147
Pork(a)	,,	989	3,036	748	8,965	404	4,341
Eggs in shell	'000 doz.	283,315	12,835	83,956	13,636	38,265	6,160
Eggs not in shell, liquid		1				,	
or frozen	'000 cwt.	800	2,292	340	5,060	276	4,097

<sup>(</sup>a) Excludes pork in airtight containers.

<sup>(</sup>b) Including day-old chicks.

2. Butter.—Until 1950, Australia had regularly supplied between 20 and 30 per cent. of the butter imported into the United Kingdom. After 1950, when butter rationing was abolished in Australia, the quantity shipped was considerably lower, but in 1956 it again amounted to 1,515,000 cwt., or 21.4 per cent. of the total United Kingdom imports. New Zealand supplied 44.0 per cent., of the total quantity imported during 1956 and Denmark 25.0 per cent.

In the following table, particulars of the quantity and value of butter imported into the United Kingdom are shown for the years 1938, 1955 and 1956, according to country of origin.

				1938.		5.	1956.	
Country from which	ountry from which Imported,		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
			'000 cwt.	£'000.	'000 cwt.	£'000.	'000 cwt.	£'000.
New Zealand			2,592	14,524	2,436	41,414	3,116	49,566
Australia			1,798	9,630	1,464	25,009	1,515	23,687
Other Commonweal	th Cou	ntries						
and Republic of Ir	eland		423	2,455	41	762	21	368
Denmark			2,365	12,960	1,696	30,061	1,769	31,545
Netherlands			712	3,466	210	4,024	192	3,719
Other Foreign Coun	tries	••	1,628	7,838	303	4,864	468	7,074
Total			9,518	50,873	6,150	106,134	7,081	115,959

BUTTER: IMPORTS INTO UNITED KINGDOM.

- 3. Cheese.—The value of cheese imported into the United Kingdom in 1956 was £35,568,000. Of this, £24,179,000 was imported from New Zealand, £3,189,000 from Australia, £2,737,000 from Denmark and £1,586,000 from the Netherlands.
- 4. Bacon.—Of a total import in 1956 of bacon (excluding bacon in airtight containers), valued at £84,182,000, the value of that supplied by Denmark was £60,505,000, Poland, £10,917,000 and the Netherlands, £10,683,000.
- 5. Pork.—The value of the United Kingdom imports of pork (excluding pork in airtight containers) was £4,341,000 in 1956. Imports from New Zealand, valued at £1,727,000, Argentina, £1,257,000 and the Republic of Ireland, £549,000, comprised 81 per cent. of these imports into the United Kingdom.
- 6. Eggs.—In 1956, the value of eggs imported into the United Kingdom was £10,257,000, comprising eggs in shell, £6,160,000, and liquid or frozen eggs, £4,097,000. Eggs in shell were supplied principally by Denmark, £2,560,000, and the Union of South Africa, £1,277,000.
- 7. Milk Products.—In 1956, the value of preserved milk imported into the United Kingdom was £5,324,000. Of this total, imports from New Zealand amounted to £2,795,000 and Australia, £1,239,000.
- 8. Other Dairy and Farmyard Products.—The imports into the United Kingdom from Australia of poultry, bees-wax, lard and honey in 1956 were unimportant.

#### CHAPTER XXV.

#### FORESTRY.\*

### § 1. General.

Note.—Values of Australian oversea trade shown throughout this chapter are expressed in £A. f.o.b., port of shipment, except where otherwise indicated.

1. Objects of Forestry.—The main object of forestry is to manage the forests of a country in the way that will provide the maximum benefits, both direct and indirect. Direct benefits include the provision of essential commercial commodities such as structural timber, pulpwood, plywood, veneers, firewood, bark products, tars, oils and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, and aesthetic effects.

Forestry aims to improve existing forests and woodlands by properly controlled exploitation, by protection from destructive agencies such as fire, and by inducing natural regeneration where it is desirable. Forestry also aims to provide a partial tree cover on denuded lands when such cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other crop.

2. General Account of Forests and Timbers.—The area of land in Australia suitable for the production of commercial timber as the primary crop is very small in comparison with the size of the continent. It is concentrated mainly around the wetter coastal belts and the eastern highlands and it includes the bulk of the land suitable for intensive development by agricultural or pastoral undertakings.

The allocation of land for agricultural and pastoral purposes led to the clearing of much of the original forest of Australia, particularly of the more readily accessible parts. In the early period of agricultural and pastoral expansion, only the best timbers found their way into commerce, and species now prized as providing high quality woods were often put to inferior uses. During this period, the forest resources of the country were considered by the majority of the people to be inexhaustible, and relatively little care was taken to prevent the degradation of the remaining forests by fire and uncontrolled grazing. This state of affairs is rapidly changing; it is now recognized that the remaining forest land must be protected and properly managed in the interests of the community.

The trees which make up the forests of Australia are mainly evergreen hardwoods. The characteristic genus is *Eucalyptus*. There are over six hundred different kinds of eucalypts and with few exceptions the natural occurrence of all of them is restricted to Australia. The genus includes species such as the mountain ash (*Eucalyptus regnans*) of Victoria and Tasmania, the world's tallest growing hardwood, and the karri (*E. diversicolor*) of Western Australia, another forest giant. At the other end of the scale there are many eucalypts which do not grow to tall trees, including the species collectively known as the "mallees". The mallees develop a number of small stems from an underground structure called the "mallee root".

A specially contributed article dealing with Forestry in Australia appeared as part of Chapter XIX. in Official Year Book No. 19 (see pp. 701-12 therein). See also "The Commercial Timbers of Australia, Their Properties and Uses" by I. H. Boas, published by the Council for Scientific and Industrial Research in 1947, "Timbers and Forest Products of Queensland" by E. H. S. Swain, published in 1928 and "Australian Standard Nomenclature of Australian Timbers" published by the Standards Association of Australian

Less than 100 eucalypts are used for sawmilling and not more than 30 to 40 are exploited extensively. The main commercial eucalypts were listed in Official Year Book No. 39 and earlier issues.

The eucalypts satisfy the Australian requirement for timbers having great strength and durability. They also provide a large proportion of the building timber and some of the wood required for packaging. In recent years, some eucalypts have been used extensively for papermaking and for the manufacture of hardboard and fibreboard. The species most commonly used for pulping are mountain ash (*E. regnans*), alpine ash (*E. gigantea*), and messmate, stringybark or Tasmanian oak (*E. obliqua*).

A large number of other genera represented in the Australian forest flora also produce commercial hardwoods. Among the outstanding furniture, cabinet and veneer timbers are red cedar (Cedrela toona var. australis), Queensland maple (Flindersia brayleyana), Southern and Northern silky oak (Grevillea robusta and Cardwellia sublimis, respectively), Queensland walnut (Endiandra palmerstoni), blackwood (Acacia melanoxylon), rose mahogany (Dysoxylum fraseranum), etc. Turpentine (Syncarpia laurifolia) ranks with the world's best as a harbour piling timber. Coachwood (Ceratopetalum apetalum) came into prominence for rifle furniture and for aircraft plywood during the 1939-45 War.

The foregoing are but a few examples indicating the range of use of the timbers of the Australian hardwood forests.

The most important indigenous softwood resources of Australia were in the forests of hoop pine (Araucaria cunninghamii) of Queensland and New South Wales. These forests occurred on rich land suitable for intensive agriculture. The greater part of the original hoop pine forest has gone but the wood removed made an important contribution to the Australian timber industry. Some areas of the hoop pine forest have been replanted with this species in Queensland and, to a lesser extent in New South Wales.

There are still considerable areas of the useful white-ant-resisting cypress pine (Callitris spp.) in the inland areas of Queensland and New South Wales. They have been seriously overcut but are gradually being brought under management.

Other native softwoods which have played a useful but minor part in the Australian timber industry include bunya pine (Araucaria bidwillii) and kauri (Agathis spp.) of Queensland, and huon pine (Dacrydium franklinii), celerytop pine (Phyllocladus rhomboidalis) and King William pine (Athrotaxis selaginoides) of Tasmania.

The savannah woodlands of the interior of Australia yield commercial commodities such as sandalwood, tanbarks and essential oils. They also have an important function in providing fuel and rough timbers for the development of agricultural and pastoral holdings.

3. Extent of Forests.—According to data assembled for the Seventh British Commonwealth Forestry Conference held in Australia and New Zealand in 1957, the total area of forest in Australia is estimated at 186,791 square miles, or about 6.3 per cent. of the total land area of the continent. This is an increase of 27,040 square miles over the estimate made for the 1952 Conference, and has resulted from the inclusion of a large area of mallee in South Australia, together with 4,500 square miles of forests, mainly low grade woodlands, in the Northern Territory. The estimated forest area is distributed amongst the States as follows (the proportion of forest land to the total area of each State is shown in parentheses):— New South Wales and the Australian Capital Territory, 37,942 square miles (12 per cent.): Victoria, 26,222 (30 per cent.); Queensland, 28,000 (4 per cent.); South Australia, 36,000 (including 25,000 square miles of mallee suitable for firewood only) (10 per cent.); Western Australia, 41,826 (4 per cent.); Tasmania, 12,301 (47 per cent.) and the Northern Territory, 4,500 (1 per cent.). The areas given are rough estimates only and are considerably in excess of those which are both suitable for reservation and likely to be maintained for timber production. Considerable areas of low grade forest which, in many cases, are suitable for little more than the production of firewood, are included. It is doubtful if the remaining prime native forest area of Australia exceeds 20,000 square miles. The proportion of Australia carrying commercial forests is therefore very low and apart from forests on the coastal fringe of the continent, the tree density is very low.

The table below shows a classification of the estimated total forest area referred to above:—

### CLASSIFICATION OF FOREST AREA(a): AUSTRALIA.

				Proportion						
Class of	Class of Forest.			Class of Forest.		State Forest.	Communal Forest.	Private Forest.	Total.	of Total Forest Area.
				!			Per cent.			
Exploitable—				!			i			
Softwood			10,512	5	2,808	13,325	7.1			
Mixed wood			754	i		754	0.4			
Hardwood			41,691	75	13,129	54,895	29.4			
Total		'-	52,957	80	15,937	68,974	36.9			
Potentially Explo	itable—				ļ					
Softwood			58		100	158	0.1			
Mixed wood		• • •	100	1		100	0.1			
Hardwood			13,002		12,200	25,202	13.5			
Total		,	13,160		12,300	25,460	13.7			
Other Lands Clas	ssed as	Forest	81,023	450	10,884	92,357	49.4			
Grand To	tal	, '	147,140	530	39,121	186,791	100.0			

(a) Based on the 1955 classification of forests.

State forests accounted for 78.8 per cent. of the total forest area, private forests for 20.9 per cent. and communal forests for 0.3 per cent.

The bulk of the softwood area of approximately 13,325 square miles is in Queensland and New South Wales and consists principally of slow-growing cypress pine (Callitris spp.) in low rainfall areas. The total area has been increased in comparison with previous estimates by the inclusion of a large area of crown land carrying scattered cypress pine. The volume of this species per acre is comparatively low.

4. Forest Reservations.—The first attempt to determine the forest areas which should be reserved solely for purposes of timber production was made at an Interstate Forestry Conference held at Hobart in 1920. This Conference decided that an area of 24½ million acres of indigenous forest should be permanently reserved. According to statements furnished by State and Commonwealth authorities, reservations of forest areas in Australia as at 30th June, 1957, totalled 32,901,370 acres, of which 22,391,728 acres were Dedicated State Forests and 10,509,642 acres were Timber and Other Reserves. The area of Dedicated State Forests increased by 262,000 acres during the year 1956–57 and Timber and Other Reserves by 41,853 acres. These changes were mainly a result of government policy to increase the forest estate but to dedicate only those areas which are suitable for permanent forest management. The distribution of these areas is shown by States in § 5, para. 2, p. 981.

In general, the Timber Reserves are temporary and are liable to be alienated after the timber on them has been exploited. Some of these areas contain land of high value for forestry purposes, but the greater part does not justify permanent reservation.

If the permanently reserved areas were all of good quality, accessible, and fully productive forests supplying the class of timber required, they could be regarded as adequate for a much larger population than exists in Australia at the present time. Actually, however, a considerable proportion is in inaccessible mountainous country and many of the forests contain a mixture of species only some of which are at present of commercial value; much of the area consists of inferior forest and a large proportion of the whole has been seriously degraded by recurrent fires. Also, the indigenous forest does not contain adequate supplies of soft-woods producing commercial timbers and Australia's requirements of these have to be met largely by imports from other countries.

It is freely acknowledged by Australian forestry authorities that information on forest resources is very imperfect. It is not possible at present to give a reliable estimate of the forest areas needed to meet all future demands because of the number of unknown variables involved—in particular, the yield capacity per acre, future consumption of different classes

of timber per head, and the future population. It appears, however, that all available potentially good forest country, including adequate areas for plantations of conifers, will need to be reserved, protected and systematically managed, if Australia is to approach the goal of self-sufficiency in timber supplies in the future. One of the most urgent requirements in this connexion is a comprehensive estimate of forest resources.

5. Plantations.—Reference has been made to the inadequacy of indigenous softwood supplies, but, as a result of the planned policy of the forest services of the States and the Commonwealth and, to a less extent, of several private commercial organizations, the area of softwood plantations, mainly of exotic species, is steadily increasing. It was natural that this aspect of forestry received earliest attention in South Australia as it is the State most poorly endowed with natural forest. This State now has a larger area of planted softwoods than any other State in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. The total production is now over 130,000,000 superficial feet per annum and is expected to be increased substantially during the next decade. Production is also increasing in the other States and first thinnings from their plantations are already supplying a significant portion of the requirements of the case-making industry.

The total net area of Commonwealth and State softwood plantations as at 30th June, 1957, was 346,750 acres. In addition, the area of privately owned plantations at 30th June, 1956, was about 98,000 acres. Hardwood plantations (mainly Eucalyptus spp.) comprise a much smaller area and the total acreage is about 30,000 acres, nearly two-thirds of which is mallet (Eucalyptus astringens), which has been established in Western Australia for tan bark production.

A special article giving a detailed account of the history and development of softwood plantations and of the characteristics of individual species has been prepared by the Commonwealth Forestry and Timber Bureau for inclusion in this Year Book, see § 2. Softwood Plantations, page 975.

6. Fire Protection.—Fire control measures in Australia are the responsibility of the individual State Governments, and the provision of adequate fire protection is one of the main problems facing forest authorities at the present day. The forest services are responsible for fire protection measures over an area of some 43 million acres of dedicated and reserved forest areas throughout Australia, including some 10 million acres of Crown Land in Victoria.

The responsibility for the protection of private property outside urban areas rests with volunteer bush fire brigade organizations which are co-ordinated in each State by a committee or board carrying out functions of an advisory or educational nature and fostering the growth and organization of the bush fire brigade movement. Throughout the main agricultural and forest areas of Australia there are over 4,500 registered volunteer bush fire brigades with a membership approaching 200,000. Although both forest and rural fire organizations are entirely separate entities, a high degree of co-operation and liaison is maintained.

In addition to the forest service and rural organizations, various private and semi-Governmental bodies in each State maintain fire protection organizations, which are generally concerned with the protection of private forestry operations and hydro-electric and water catchment areas.

Over the five-year period 1952-57, the annual cost of protecting from fire 43 million acres of forest land for which State Forest Services are directly responsible is estimated at £1,500,000 or about 8½d. per acre. The cost of rural fire control as a whole cannot be estimated with any degree of accuracy, owing to the fact that by far the greatest contribution comes from the personal efforts of volunteer brigade members.

The Australian fire season is very variable, with an average of a particularly bad fire season every seven years or so. Such years as 1926, 1939, 1944 and 1952 account for a large proportion of the average annual burn which, for the period 1945 to 1955, amounted to 2.16 million acres or 1.8 per cent. of the total forested area of Australia. In disastrous fire seasons, such as 1938-39 and 1951-52, the acreage burnt on protected forest areas was as high as 15 per cent., compared with an average burn of 1.2 per cent. when such seasons are excluded.

Since the 1939.45 War, forest services have greatly expanded their fire detection facilities and big advances have been made in the use of power pumping equipment. Radio communication is now being used extensively by both forest services and rural organizations, and considerable progress has been made in the provision of legislative power for the rural bush fire movement, although the volunteer movement itself dates back to the turn of the century.

Recognizing that fire prevention is one of the most important aspects of the problem, intensive campaigns have been conducted to reduce the incidence of man-caused fires. A study of fire causes in recent years reveals that human agencies account for 95 per cent. of all fires, and of this figure at least 80 per cent. are preventable. It is estimated that burning off, much of which is started illegally, accounts for 35 per cent. of all fires; smokers, hunters, fishermen and travellers cause 13 per cent. of all fires; whilst only 5 per cent. of fires in Australia are caused by lightning.

### § 2. Softwood Plantations.

- 1. Introduction.—In recent years, there has been a growing awareness of the importance of softwood plantations in the Australian timber industry. In view of this, the following special article has been prepared by the Commonwealth Forestry and Timber Bureau, outlining the current position and future prospects of softwoods in the industry.
- 2. General.—The term "softwood" has long been used to represent the wood of the Coniferae, of which the most important family is the Pinaceae. This family consists primarily of trees and includes such well known producers of commercial timbers as the genera Pinus (pines), Picea (spruces), Abies (firs) and Pseudotsuga (Douglas fir).

The timber of the *Coniferae* is, in general, relatively light, of satisfactory strength in relation to weight, straight-grained, moderately soft and easy to work, machine and nail. In contrast, hardwoods as a group, and particularly the genus *Eucalyptus*, are heavy, strong, hard, not straight-grained and not readily nailed or worked by hand. Certain other properties, especially microscopic cell structure, result in softwoods seasoning much faster and more evenly than hardwoods. Because of these features, softwoods are more suitable than hardwoods for light building construction such as houses, fittings, most furniture and the very large box and case industry. The conifers also produce the bulk of the world's pulpwood and, in most industrial countries, represent 80–90 per cent. of the timber consumption.

3. Timber Resources, Production and Consumption.—Compared with countries of the temperate regions in the northern hemisphere, the indigenous forest resources of Australia are markedly deficient in softwoods. In "A Statement on Forestry in Australia 1951-55", prepared by the Forestry and Timber Bureau for the Seventh British Commonwealth Forestry Conference, which was held in Australia and New Zealand during the latter half of 1957, it was estimated that the total volumes of softwoods and hardwoods in the forests were:—

	Type of Timber.				Million cubic feet under back, true volume.	Per cent.	
Softwoods						1,336	4.1
Hardwoods	• •		• •	• •		31,473	95.9
Total						32,809	100.0

In contrast to the above, the availability (corresponding roughly to consumption) of sawn timber for the year 1955-56 was as follows:—

					Milli superfici	
Hardwoods					• •	
Australian production	on				1,110.	3
Plus imports					72.	9
Less exports	• •				19.	8
Availability					1,163.	<del>4</del> 67.9
Softwoods-					-	_
Australian production	on				289.	3
Plus imports					260.	8
Less exports	• •				0.	7
Availability	••	• •	••		549.	32.1
Total Availab	ility	••	••	• •	1,712.	8 100.0

1950-51

1955-56

1-1-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	Year	r.	1	Rain forest, e.g. virgin hoop pine, etc.	Cypress pine.	Plantation grown.	Total Softwood.
			;		(Million supe	erficial feet.)	
1938-39			!	108.9	48.7	16.9	174.5
1945-46				79.6	38.0	67.2	184.8

The trend of Australian softwood sawn timber production during recent years is given in the following table:—

Notable in the above table is the steady decline in the production of hoop pine and associated softwood species from the virgin rain forests of Queensland and northern New South Wales, and the striking increase in plantation-grown timber. The latter is mainly *Pinus radiata*, but already includes a small amount of plantation-grown hoop pine.

42.0

37.8

56.3

78.0

103.2

173.5

201.5

289.3

In future, rain forest production will probably stabilise at a still lower figure, whereas plantation-grown timber will steadily increase in quantity. In the case of South Australia alone, the State which has the largest area of softwood plantations, the output of *Pinus radiata* within a decade is expected to exceed 250,000,000 superficial feet in the round.

4. Early Plantation Establishment in Australia.—The first steps for the creation of government plantations in Australia were taken, most appropriately, by the State which had the poorest natural resources—South Australia. This was in 1870, when attention was drawn to the seriousness of the position. Planting commenced in 1876, and has continued without interruption ever since, though it was not until shortly before the 1914-18 War that appreciable areas were established each year. These very early plantings here and elsewhere provided valuable evidence in later years as to the suitability of various sites for *Pinus radiata* and other species. The commencement of plantings in South Australia also led to the formation of the Woods and Forests Department of that State, one of the oldest forest services in the British Commonwealth.

Under the aegis of Lands Departments and other State organizations, small plantations were established in other States, notably Victoria, shortly after that time, although it was not until much later that independent forest services were created.

5. The Planting Programme and the Future of Softwood Plantations.—The States have long been aware of the desirability of establishing coniferous plantations, and in the 20 years following the 1914–18 War substantial areas were established under softwoods. It is largely due to this planting that Australia is now in a position to provide a significant part of its softwood consumption from locally-grown timber.

After the 1939-45 War, planting programmes were reviewed and, in most cases, were substantially increased. At the present time the objectives in total softwood areas by State forest services are: Queensland, New South Wales, Victoria and South Australia each 200,000 acres, Western Australia 100,000 acres, Tasmania 50,000 acres and the Australian Capital Territory 40,000 acres, comprising a total of 990,000 acres.

There are a number of factors to be considered in estimating the need for softwood plantations in the future. Some of these are:—

- (a) The relative demand for softwood and hardwood. Because of the general suitability of softwood for many purposes, it seems likely that the future demand for softwood will trend upwards until it reaches at least 60-75 per cent. of total timber consumption. In this connexion it is interesting to note that in South Australia, the only State which has significant home-grown softwood supplies in relation to population, softwoods at present comprise 83 per cent. of the total sawn timber consumption. For Australia, as a whole, the figure is only 32 per cent.
- (b) Forestry and land utilization. Many species of the genus Pinus can grow satisfactorily on relatively poor sandy soils with a mean annual rainfall which may be less than 30 inches. Under such conditions only the poorer types of eucalypts will grow and the mean annual increment in timber is very low, whereas with the pines it may average 165 cubic feet or 1,980 super. feet of timber in the round per acre. Since land of the above type is usually not good enough for agriculture and only of moderate value for pasture, utilization for softwood plantations may produce the greatest benefit to the nation. The main species of introduced pines now grown in Australia will grow to maturity within 40 years, whereas the better types of eucalypts require double that length of time to mature and, unless on exceptionally favourable sites, do not produce as high a mean annual increment of timber.

(c) Policy in relation to self-sufficiency in timber supplies. Since most of Australia's timber imports consist of softwoods, any policy directed towards increasing self-sufficiency in timber supplies, and reducing the amount of foreign exchange needed, will require expansion of the present rate of softwood plantation establishment. Growth in population will also increase the overall demand for timber. It has been stated recently that the need for plantations, even on a conservative estimate, will amount to 1,700,000 acres 35 years hence and that, allowing for increased population and using 60-70 per cent. of softwoods instead of the present 32 per cent. the requirements in 70 years could amount to 4,000,000 acres.

Heads of forest services agree that the target of one million acres decided upon immediately after the 1939-45 War is now conservative in relation to the potential requirements of Australia and that an increase of an additional one million acres would not be excessive.

6. The Extent of Existing Softwood Plantations.—The position as at 30th June, 1956, was estimated to be as follows:—

		Government.	Private		
State or Territory.	Pinus radiata.	Other species.	Total.	(mainly P.	Total.
	Acres.	Acres.	Acres.	Acres.	Acres.
New South Wales	42,937	17,265	60,202	9,041	69,243
Victoria	33,091	13,395	46,486	45,057	91,543
Queensland	976	68,335	69,311	2,000	71,311
South Australia	94,555	7,022	101,577	39,226	140,803
Western Australia	4,125	17,408	21,533	100	21,633
Tasmania	9,914	397	10,311	2,832	13,143
Australian Capital Territory	16,640	1,942	18,582	100	18,682
Australia	202,238	125,764	328,002	98,356	426,358

This table shows the predominance of *Pinus radiata* in all States except Queensland and Western Australia. This species is not climatically adapted to growing in the former State, where the native hoop pine is the most important plantation species, with slash pine (*Pinus elliottii* var. *elliottii*) in second place. The main species in Western Australia is maritime pine (*P. pinaster*), which is particularly adapted to growing on sandy soils too poor for the satisfactory growth of other species.

Private plantations have now assumed a position of importance in the softwood economy. The bulk of them comprise relatively large areas belonging to tree-planting or sawmilling companies, or to larger organizations in the pulp and paper industry. The first phase of extensive private planting was in South Australia and Victoria during the decade 1925–35, and these plantations now form the basis of expanding timber-using industries. The second phase began after the 1939–45 War, when the pulp and paper industry commenced planting on a fairly large scale in order to provide part of the raw material for its future requirements. An encouraging aspect of recent years has been that several sawmilling companies are planting in order to assure future timber supplies. With the exception of the relatively small areas in Queensland and New South Wales, *P. radiata* has been used almost exclusively.

7. Notes on the More Important Softwood Species used in Plantations.—(i) Native species. (a) Hoop pine—Araucaria cunninghamii. Hoop pine is a high class softwood and is the main species used in plantations in Queensland. It is also planted to a less extent in northern coastal areas of New South Wales. Where it occurs naturally in the rain forests, it attains very large dimensions, reaching 150 feet in height and four feet or more in diameter. To grow hoop pine to this size in plantations would take too long, and it is considered that a height of 100 feet and a diameter of 20 inches will be satisfactory for utilization. On good sites this would require a rotation of 50-60 years.

All tests to date indicate that the rapid, controlled growth possible in plantations does not affect the quality of the wood in the case of hoop pine; in fact, the wood properties of rapidly-grown plantation trees are equal to and sometimes superior to those of average wood from virgin forests. On the evidence available, branch size (with its effect on the knottiness of the timber) appears to be a factor that can be more readily influenced by genetic rather than silvicultural measures. The Forestry Department of Queensland is conducting research on this and other aspects of tree breeding.

The timber of hoop pine is in strong demand for most purposes where durability is not a prime consideration.

- (b) Bunya pine—Araucaria bidwillii. This species, which is closely related to hoop pine, is planted to only a limited extent on account of its slow growth, is more heavily-branched and more difficult to establish than hoop pine.
- (c) South Queensland kauri—Agathis robusta. Kauri has been planted to a more limited extent by the Forestry Department of Queensland because seed supplies are less readily obtained and establishment is more difficult.
- (ii) Exotic species. (a) Radiata pine—Pinus radiata. This pine was first introduced into Australia, as well as into New Zealand and South Africa, about 100 years ago, and has become one of the most important softwood species. It is a native of the Monterey Peninsula in southern California, where it is of negligible importance. When it was introduced to countries overseas it frequently showed a far superior rate of growth and attained much greater dimensions than in its native habitat, with the result that one of its common names is "remarkable pine". Heights at 20 years of age may vary from 60 to over 100 feet, and at maturity attain 130-140 feet. In Australia its planting is mainly restricted to the winter rainfall regions where the summers are dry and warm. Successful plantations have been established in south-eastern South Australia, southern Victoria, in Tasmania and on the southern and central tablelands and the south-western foothills of New South Wales. The mean annual increment of timber per acre varies from about 165-300 cubic feet, or 2,000-3,500 superficial feet in the round, true volume. Expressed in terms of a 40-year rotation, an average acre can be expected to produce a total volume of about 120,000 super. feet of sawn timber and possibly ten cords of pulpwood or small case logs. The timber, like that of most species, needs to be mature, and requires careful milling and Under these conditions it is at least equal to red deal (the timber of Pinus sylvestris) which is one of the main building timbers of northern Europe.
- (b) Slash pine—Pinus elliottii var. elliottii. This species replaces Pinus radiata as the main exotic species in Queensland and in coastal New South Wales north of Newcastle, which are areas of summer rainfall. Slash pine is one of the main timber species of the southern States of U.S.A., and in that country it is used extensively for pulp, sawn timber and veneers. Thinnings from plantations in Queensland have yielded sawn timber of good quality and there is no reason to expect that the quality will be in any way inferior to that of timber in its natural habitat. The rotation will probably be much the same as for P. radiata—about 40 years. Slash pine was first introduced into Queensland in 1925 and after 1930 began to play an important part in the planting programme of the State.
- (c) Loblolly pine—Pinus taeda. This is another species from southern and eastern parts of the U.S.A., where it grows on a wide variety of soils and under a similar range of climatic conditions to slash pine. It is not generally quite as uniformly healthy and vigorous as slash pine, and for this reason has not been planted as extensively, though, if certain apsects of development can be controlled, it is likely to receive increased attention.
- (d) Patula pine—Pinus patula. Patula pine is a fairly common species on the moist mountains of south-eastern Mexico at elevations of 7,000 to 8,000 feet above sea level. It is planted to a moderate extent in selected localities by the Forestry Department of Queensland.
- (e) Maritime pine—Pinus pinaster. This is the most important exotic pine in Western Australia, where it grows on sandy soils which are too poor for satisfactory development of P. radiata. It is also used in similar areas in South Australia. Maritime pine is a native of the Mediterranean region and very large areas of it have been planted for sand dune control in Les Landes region of France.

Maritime pine does not attain a height comparable with *P. radiata*, 80-90 feet being common for well-grown mature trees, but diameters are relatively large. The timber is useful for a wide range of purposes.

(f) Other species. In addition to the pines already mentioned, there are several other conifers which have a place in the Australian softwood plantation programme. Possibly the most important species of the future will be Douglas fir (Pseudotsuga menziesii) in the higher rainfall zones of the mountains of Victoria and southern New South Wales. The timber of this tree (sometimes known under the name of Oregon) has been, and still is, imported on an extensive scale from Canada and the U.S.A. In suitable areas in Australia it shows considerable promise, but the rotation will be considerably longer than that of P. radiata. A pine which is very suitable for hard soils in areas of rainfall as low as 20 inches is Canary Island pine (P. canariensis). This species is a native of the Canary Islands and grows well under conditions too dry and hot for most other exotic conifers. It is of excellent form and has a marked resistance to fire damage once it has attained pole size. The timber is of exceptional strength and density for a conifer.

In addition to the conifers referred to above, there may be afforestation possibilities with artificial hybrids on which forestry research institutions in Australia are now working. Controlled pollination offers wide scope since pollination can be carried out not only between individuals of the same species but also between closely allied species. Work on agricultural plants has shown that cross pollination not uncommonly has produced new varieties possessing more desirable features than those of either parent alone. Work on these lines is a long-term project, but one that is nevertheless of fundamental importance in forest research.

### § 3. Forestry Activities of the Commonwealth.

- 1. Prior to 1925.—When the Commonwealth of Australia was established on 1st January, 1901, forestry was not included among the matters transferred from the States to the control of the Commonwealth, and Federal jurisdiction was therefore restricted to the then relatively unimportant forests of the Australian Territories. After the 1914–18 War, these Territories (including Papua-New Guinea and Norfolk Island) covered a large area, and in the aggregate contained substantial forest resources. In the early twenties of this century, a professional forester was appointed as forestry adviser to the Commonwealth Government, and he submitted preliminary reports on the forest resources of Papua-New Guinea, Norfolk Island and the Australian Capital Territory, with suggestions for future policy.
- 2. Forestry and Timber Bureau.—In 1925, the Commonwealth Forestry Bureau was instituted, and the Commonwealth Forestry Adviser became the Inspector-General of Forests. By an Act of 1930, the Bureau received statutory powers, and its functions included the advising of the various Territorial Administrations on forestry matters, the management of forests placed under its control, the establishment of experimental forest stations, the training of students in forestry, etc.

At the end of the 1939-45 War, the Commonwealth Government decided to continue certain advisory functions which during the War had been carried out by War-time Timber Control, and such functions were incorporated in the Forestry and Timber Bureau Act 1946, under which the title of the Bureau was altered to Forestry and Timber Bureau. The powers and functions of the Bureau were extended to embrace the collection of statistics and information, and advising the Governments of the Commonwealth and the States or other interested bodies on matters relating to the supply, production, oversea trade and distribution of timber in Australia. The Bureau was placed under the administration of a Director-General.

The activities of the Bureau under its statutory functions are summarized below:—

(a) Forestry Education. The Australian Forestry School was opened at Adelaide University in 1926 in continuation of the School of Forestry of that University established in 1911. In 1927, the School was transferred to Canberra. The purpose of the School is to train students as professional officers to manage the forests of Australia. It also accepts students from overseas.

Training at the School covers the third and fourth years of a four-year course. The first two years are spent at an Australian university in a study of prescribed science subjects. Courses at the School lead to Commonwealth Diplomas in Forestry and in Forest Technology and, in the case of the former, can lead further to a degree in forestry of an Australian university. Applicants possessing a university degree granted for approved natural science subjects, or applicants with academic qualifications accepted by the Director-General as equivalent, may also be admitted to this School and proceed to the Diplomas. Graduates or Diploma holders approved by the Director-General may be admitted to the School to take selected subjects or to carry out research work.

The Board of Higher Forestry Education advises regarding pre-requisite university courses leading to the diploma courses and in regard to the maintenance of the standard of the School Diploma course.

In addition to students nominated by State Governments and other Australian and oversea authorities and organizations, private students are accepted at the School, and the Commonwealth Government offers up to ten forestry scholarships each year. These scholarships provide a salary allowance for the four years of the full diploma course.

During 1950, the number of students enrolled reached 80, owing to the intake of ex-servicemen taking university courses under the Commonwealth Reconstruction Training Scheme. The normal capacity of the School is 40.

(b) Silvicultural Research. Research headquarters and a Central Experimental Station have been established at Canberra. Other Forest Experimental Stations have been established at Mount Burr in the south-east of South Australia, in Tasmania, and at Dwellingup in Western Australia, on a co-operative basis with the Forest Services of those States. It is proposed to establish similar co-operative experimental stations in other States and Territories.

With its present limited staff, the research work of the Bureau has been concentrated largely upon studies of forest and climatic conditions, the genetical relationships and silvicultural requirements of various species, forest nutrition and the improvement of forest yields. A considerable expansion in the research activities is planned for the next few years as suitable trained staff becomes available.

(c) Forest Management Research. In the national interest, it is essential that overcutting of forests should be avoided and in consequence it is a matter of primary importance that reliable information be available as to the country's forest resources and potentialities. To this end, a national forest stocktaking is being carried out by the Bureau in co-operation with the Forest Services of the States and, to assist in the work of forest assessment, special consideration is being given to the development of the use of aerial surveys.

Consideration is also being given, in co-operation with the State Forest Services, to the establishment of increased areas of plantations of exotic pines with a view to providing additional supplies of softwood timber to meet requirements.

The general economics of forest management are also being studied.

(d) Timber Supply. The value of reliable statistical data covering availability of timber and timber requirements was so forcibly demonstrated during the 1939-45 War that it was considered essential to maintain at least a skeleton organization against times of future national emergency. Apart from this, it became clear that, for many years to come, shortages of timber on the one hand and heavy post-war reconstruction demands on the other, accentuated by a rapidly increasing population, would necessitate assessment of requirements and availability of supplies being kept constantly under review as a basis for short and long term policies of timber supply and distribution.

Advice is currently provided to government departments and the trade in matters pertaining to timber supply, including—(a) the availability of total quantities and quantities of particular grades and specifications required to meet Australia's needs; (b) the quantity of timber that should be imported; (c) the extent to which exports of timber and related products might be allowed without detriment to local needs; and (d) distribution of timber within Australia.

- (e) Management of Forests. The Bureau manages the forests of the Australian Capital Territory and maintains a forestry officer in the Northern Territory. In addition, it is responsible for advising the administrations of the Northern Territory and the External Territories on the management of the forests under their charge.
- 3. Commercial Forests.—The forest areas under Commonwealth control include the following:—.
  - (a) Australian Capital Territory. The forests of the Australian Capital Territory are administered by a Division of the Forestry and Timber Bureau. Further information is contained in Chapter V.—The Territories of Australia.
  - (b) Northern Territory. The forests of the Northern Territory are administered under ordinance by the Administrator of that Territory. The native forests of the Territory are very limited, consisting largely of open eucalypt forest in the north, with very restricted patches of rain forest along streams, river-fringing forests of paper bark tea-tree, patches of cypress pine, and elsewhere savannah woodland deteriorating to mallee and mulga in the interior. The Bureau maintains a forestry officer in the Territory for investigation and advisory purposes.
  - (c) Norfolk Island. The forests of Norfolk Island are administered by the Administrator of that Territory. The area reserved for forest covers 1,037 acres, of which the main species is Norfolk Island pine.
  - (d) Papua and New Guinea. The forests of the Territory of Papua and New Guinea are managed by a Forestry Department under the control of a Director, and are administered under an ordinance of the Territorial Administration. Forestry in the Territory commenced with the appointment of two officers in 1938. Further information is contained in Chapter V.—The Territories of Australia.

4. Forest Products Research.—Fundamental investigations connected with the properties and uses of timber and forest products generally are carried out by the Forest Products Division of the Commonwealth Scientific and Industrial Research Organization. These investigations cover a very wide field, e.g., pulp, paper, seasoning, structure and chemistry of wood, tans, etc.

Details can be obtained from the annual reports and publications of the Forest Products Division.

### § 4. Forestry Conferences.

The first British Empire Forestry Conference was held in London in 1920. Subsequent conferences were held in Ottawa in 1923, Australia and New Zealand, 1928, South Africa, 1935 and again in the United Kingdom in 1947. In conformity with the development of the British Commonwealth of Nations, the name of these conferences was changed to British Commonwealth Forestry Conference. The sixth was held in Canada in 1952 and the seventh was held in Australia and New Zealand in 1957.

#### § 5. State Forestry Departments.

- 1. Functions.—Except for Queensland, the powers and functions of State forest authorities are laid down under Forestry Acts and Regulations. In each State, there is a department or commission to control and manage the forests of the State. The functions of these administrations are as follows:—(a) The securing of an adequate reservation of forest lands; (b) the introduction of proper measures for scientific control and management of forest lands; (c) the protection of forests; (d) the conversion, marketing and economic utilization of forest produce; and (e) the establishment and maintenance of coniferous forests to remedy the existing deficiency in softwoods. Annual reports are issued by each State forest authority. In Queensland, forestry is a sub-department of the Department of Public Lands. Victoria maintains a forestry school at which recruits are trained for the forestry service of that State.
- 2. Forest Reservations.—As mentioned in § 1, para. 4, p. 973, State forest authorities agreed that, in order to secure Australia's future requirements, an area of 24½ million acres should be permanently reserved. At June, 1957, the area of State Forests reserved in perpetuity totalled 22,391,728 acres or 91.4 per cent. of the area recommended as the goal to be attained.

In addition to the work of permanently reserving areas in each State, foresters are endeavouring to survey all timbered lands with a view to the elimination of those unsuitable for forestry. Considerable areas have been revoked in certain States, while dedications of new areas have resulted in gains to the permanent forest estate. The Forestry Departments also usually control all timber on open Crown lands as well as over 10 million acres of timber reserves, national parks, etc., but, while these areas contain some land of high value for forestry purposes, the greater part does not justify permanent reservation.

In the following table, details of forest areas as recorded by State Forest Authorities, distinguishing between dedicated State forests, timber reserves and other forest reserves, are shown for each State as at 30th June, 1957. In addition details of forest reservations in Northern Territory and Australian Capital Territory are shown.

AREA OF FOREST RESERVATIONS, 30th JUNE, 1957. (Acres.)

State o	 State Forests.	Timber Reserves (Forest Acts)	Other Reserves.	Total.		
New South Wales			 a6,323,337	1,399,610	••	∣ i
Victoria			 4,818,554	712,523	(b) 173,358	5,704,435
Oueensland			 5,008,031	3,071,075	(c)788,152	8,867,258
South Australia			 267,609			267,609
Western Australia			 3,990,295	1,821,389	(b)935,793	6,747,47
Tasmania			 1,977,002	137,028	987,714	3,101,744
Northern Territory			 6,900		352,000	358,900
Australian Capital T	erritory		 		131,000	131,000

<sup>(</sup>a) Includes 1,380,429 acres of national forests. (c) National parks.

Australia

.. 22,391,728 7,141,625 3,368,017 32,901,370

<sup>(</sup>b) Timber reserves under the Land Act.

3. Employment.—In the table below, details are shown of the number of persons employed by State Forestry Departments, and by the Forestry and Timber Bureau in respect of the Australian Capital Territory and the Northern Territory, at 30th June, 1956.

PERSONS EMPLOYED BY FORESTRY DEPARTMENTS, 30th JUNE, 1956.

Occupational Group.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Professional Staff Non-professional Field	163	189	76	45	44	24	1	6	548
Staff Clerical Staff	206 328		81 155	4 82		97 52	1	4	777 884
Extraction of Timber Milling of Timber Labour (forest workers.	1,135	\ \begin{cases} 111 \\ 42 \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	103	34 493	10 24		::	::	5,637
etc.)	J 	784	1,882	251	482			66	J
Total	1,832	1,619	2,297	909	718	393	2	76	7,846

## § 6. Forestry Production.

1. Timber.—Particulars of logs treated and the production of rough sawn timber by sawmills and other woodworking establishments are shown in the following table by States for the year 1955-56.

OUTPUT OF NATIVE TIMBER: ALL MILLS, 1955-56.

			0')	00 super. 1	eet.)			
Particulars	3.	N.S.W.	Victoria.	Q'iand.	S. Aust.	W. Aust.	Tas.	Aust.(a)
	Loc	S TREATE	D, INCLUDI	NG THOSE	Sawn on	Commissio	N.(b)	
Hardwood	)	469,136	536,784	327,368	7,273	507,610	291,166	2.139.337
Softwood		115,089	51,430	111,453	165,326	11,959	7,956	463,213
Total		584,225	588,214	438,821	172,599	519,569	299,122	2,602,550
		Sawn 7	Timber Pro	DUCED FR	ом Logs	Above.(c)		
Hardwood		296,668	322,695	192,920	5,467	216,404	146,782	1.180,936
Softwood		66,041	28,576	68,810	95,516	5,993	3,850	268,786
Total		362,709	351,271	261,730	100,983	222,397	150,632	1,449,722
(a) Exclude:	s the A	ustralian C	apital Territ	ory and the	Northern 7	Territory, de	tails for wi	nich are not

<sup>(</sup>a) Excludes the Australian Capital Territory and the Northern Territory, details for which are not available. (b) Includes logs used for plywood and veneer production. (c) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers.

The following table shows logs used and sawn timber produced in Australia for the years 1938-39 and 1951-52 to 1955-56.

#### OUTPUT OF NATIVE TIMBER: ALL MILLS, AUSTRALIA.(a)

Particulars.	Unit.	1938–39.	1951–52.	1952-53.	1953–54.	1954-55.	1955–56.
Logs used						<del></del> -	
Hardwood	'000 super. feet (hoppus measure)		2,000,032	1,970,126	2,047,906	2,101,306	2,139,337
Softwood	" "	293,680	363,829	369,881	414,827	444,536	463,213
Total	,, ,,	1,308,816	2,363,861	2,340,007	2,462,733	2,545,842	2,602,550
Sawn Timber Pro- duced— Sawn equivalent of Timber Peeled or Sliced for Plywood							
and Veneers	'000 super. feet	21,639	29,159	21,606	28,492	27,676	27,957
Used for other purposes Total Sawn Timber—	**		1,363,607			, ,	1,421,765
Hardwood	,,	526,229	1,166,114	1,115,423	1,157,124	1,184,992	1,180,936
Softwood	,,	190,786		l'			
Total	,,	717,015	1,392,766	1,339,797	1,400,098	1,449,288	1,449,722

<sup>(</sup>a) Excludes the Australian Capital Territory and the Northern Territory, details for which are not available.

The next table shows the sawn output of native timber in sawmills and other woodworking establishments in each State for the years 1938-39 and 1951-52 to 1955-56.

SAWN OUTPUT (a) OF NATIVE TIMBER:	ALL MILLS.
('000 super. feet.)	

State.		1938-39.	1951-52.	1952–53.	1953–54.	1954-55.	1955-56.
New South Wales		179,350	380,633	350,792	370,279	372,920	362,709
Victoria		120,197	348,478	322,209	338,957	362,334	351,271
Oueensland		193,250	291,681	285,074	288,380	264,914	261,730
South Australia		14,537	67,121	68,500	68,190	82,942	100,983
Western Australia		125,453	178,290	203,314	216,021	225,794	222,397
Tasmania		84,228	126,563	109,908	118,271	140,384	150,632
Australia (b)		717,015	1,392,766	1,339,797	1,400,098	1,449,288	1,449,722

(a) Includes the sawn equivalent of timber peeled or sliced for plywood and veneers. (b) Excludes the Australian Capital Territory and the Northern Territory, details for which are not available.

In addition to the sawn timber shown in the preceding table, a large amount of other timber, e.g., sleepers, piles, poles, fencing material, timber used in mining, and fuel, is obtained from forest and other lands. Complete information in regard to the volume of this output is, however, not available. The annual reports of the Forest Departments of the States contain particulars of the output of timber from areas under departmental control but, owing to lack of uniformity in classification and measurement, accurate determination of total production cannot be made. Moreover, there is a moderate quantity of other timber produced from privately owned land, but information regarding output is not available.

- 2. Wood Pulp and Paper.—(i) Wood Pulp. The manufacture of wood pulp from Australian-grown timber was established in Australia in 1939, after years of experimentation with eucalypt hardwoods, production in 1938-39 being 6,165 tons of wood pulp. At the end of 1956, four wood pulp mills were operating in three States and production during 1955-56 was 110,998 tons of chemical pulp and 75,055 tons of mechanical pulp, a total of 186,053 tons.
- (a) Victoria. In Victoria, Australian Paper Manufacturers Ltd. produce wood pulp at Maryvale in Gippsland by a chemical process known as the kraft or sulphate process. The timber used at this mill consists mainly of eucalypt hardwoods at present unsuitable for other purposes and, in addition, a small quantity of plantation pine thinnings and mill waste and special softwood for production of cellulose. During 1956-57, the wood taken from Crown lands for the production of pulpwood and cellulose amounted to 6,799,949 cubic feet, of which 5,925,490 cubic feet were hardwood and 874,459 cubic feet were softwood. Pine plantations are being established in Gippsland by A.P.M. Forests Pty. Ltd. The initial aim is 20,000 acres to provide a perpetual yield of 20,000 tons of long-fibred pulp per annum. Planting commenced in 1951 and it is estimated that 19,700 acres were planted by the end of 1957.
- (b) South Australia. In South Australia a paper board mill operates near Millicent, using raw material in the form of logs from the State Forests in the south-east of South Australia. Up to date, groundwood pulp has been produced, but future expansion allows for the introduction of an additional semi-mechanical process. During 1955-56 and 1956-57, 6,046,309 and 6,577,728 super. feet of pulpwood respectively were used in this establishment. The forests of South Australia are also supplying large quantities of pulpwood in log form to Australian Paper Manufacturers Ltd., Victoria.
- (c) Tasmania. In Tasmania, two large mills are making pulpwood from indigenous hardwoods. At Burnie, on the north-west coast, Associated Pulp and Paper Mills Ltd. use a chemical method, the soda process, to produce wood pulp for fine writing and printing papers from eucalypt hardwoods. This plant is of the most modern design and pulp and paper manufacture are combined with sawmilling and hardboard production. Officuts and rejects from the timber mill are used for pulping and the manufacture of hardboard. Utilization of the freehold and concession forest areas held by the company is being extended to logging areas held by other sawmilling firms, who supply logs unsuitable for milling to the pulp mills. A continuous digester has been installed at the Burnie mill, making it the only one in Australia using a continuous pulping process. The forests are managed on a permanent yield basis with regeneration of the eucalypts in all suitable areas. Pine plantations are being established to provide softwoods for pulping.

Australian Newsprint Mills Ltd. at Boyer, 20 miles from Hobart, is the only producer of newsprint in Australia. Wood pulp is produced by mechanical process from hardwoods drawn from State timber concession areas. Eucalypts provide about 80 per cent. of its requirements for wood pulp, the remainder being imported long fibre softwood pulp. To secure more complete bush utilization, the company has established three sawmills to convert understory species such as myrtle, sassafras, blackwood and celery top pine to sawn timber. The forests are managed on a sustained yield basis. Forest utilization and management are designed to obtain eucalypt regeneration. Experimental work into the problems involved is being carried out by the company and the Tasmanian Forestry Commission.

- (ii) Paper and Paper Board. Paper and paper board are manufactured in all States but the industry is centred mainly in New South Wales, Victoria and Tasmania. At the end of 1956, seventeen paper mills were operating, six in Victoria, five in New South Wales, three in Tasmania and one each in Queensland, South Australia and Western Australia. A new mill, Shoalhaven Paper Mills Pty. Ltd., commenced production in February, 1956, when the first of two mills to be installed began operating. The mill, situated near Nowra in New South Wales, is the first superfine paper mill to operate in Australia, and is expected to produce 8,000 tons of watermarked, rag-content and other fine writing, printing and industrial papers each year. A wide variety of papers and paper boards is produced in Australian mills, the quantity and value of paper produced in 1955–56 being as follows:—newsprint, 79,015 tons valued at £5,649,906; blotting, 732 tons, £112,785; duplicating, 4,122 tons, £642,454; printing and writing, 43,363 tons, £6,557,826, kraft wrapping, 46,450 tons, £5,594,919; other wrapping, 1,227 tons, £181,889; felt and carpet felt, 3,739 tons, £306,635; and other paper, 35,124 tons, £3,312,933. In addition, 140,257 tons of paper boards valued at £10,787,706 were produced in 1955–56.
- 3. Other Forest Products.—(i) Veneers, Plywood, etc. Cutting of timber for the manufacture of veneers, plywood, etc., has been carried out in most States for a number of years. Recently, however, this has been considerably extended, and much greater use has been made of locally-grown timbers, both hardwoods and softwoods. In recent years, special attention has been paid to the selection of logs suitable for peeling.

The following table shows the production of plywood for each of the years 1938-39 and 1951-52 to 1955-56:—

# PLYWOOD PRODUCED. ('000 square feet— $\frac{3}{10}$ in. basis.)

State.	1938-39.	1951–52.	1952-53.	1953-54.	1954-55.	1955–56.
New South Wales Queensland Other States	24,194 66,100 14,511	31,784 110,028 17,341	22,557 81,400 11,771	28,601 114,545 18,435	35,039 130,330 21,235	39,256 133,230 28,213
Australia	104,805	159,153	115,728	161,581	186,604	200,699

Of the total plywood produced in 1955-56, 158,507,000 square feet ( $\frac{3}{16}$  in. basis) was classed as "Commercial", 19,833,000 as "Waterproof", 4,949,000 as "Case" and 17,410,000 as "Sliced Fancy".

During 1955-56, 501.8 million square feet ( $\frac{1}{16}$  in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 147.1 million square feet ( $\frac{1}{16}$  in. basis) were sold or added to stock, the bulk of which would eventually be used in the production of plywood. In addition, 49.7 million square feet of sliced veneers were produced.

(ii) Hardboard. The production of hardboard for building purposes from pulped wood has increased considerably in Australia in recent years. There were three factories producing hardboard in 1956 (two in New South Wales and one in Tasmania) and during the three years ended 30th June, 1956, the following quantities and values were produced:—1953-54, 16,992,000 square yards, £3,284,000; 1954-55, 19,834,000 square yards, £3,810,000 and 1955-56, 22,619,000 square yards, £4,326,387. Preliminary figures for 1956-57 show a recorded total production of 22,456,000 square yards, £4,360,051.

Most of this hardboard enters into normal usage in the condition in which it leaves the producing factories. The remainder is further treated and surfaced mainly to a glossy "tiled" finish, and in 1955-56 this production accounted for 1,011,000 square yards valued at £679,000.

- (iii) Eucalyptus Oil. Oil may be distilled from the foliage of all varieties of Eucalyptus, and several of them furnish a product widely known for its commercial and medicinal uses. Complete information regarding Australian production and consumption of eucalyptus oil is not available, but considerable quantities are manufactured, particularly in New South Wales and Victoria. The value of oversea exports of eucalyptus oil distilled in Australia was £215,283 in 1952-53; £163,763 in 1953-54; £155,291 in 1954-55; and £274,037 in 1955-56. The quantities exported in the years 1952-53 to 1955-56 were 721,330 lb., 504,628 lb., 451,741 lb. and 683,131 lb. respectively.
- (iv) Gums and Resins. Gums and resins are produced in most States of Australia, the main product being grass tree, or yacca gum. This gum, which is used in the preparation of varnishes and lacquers, comes chiefly from South Australia while small quantities are also produced in New South Wales and Western Australia. In 1955-56, the recorded production for Australia of gums and resins was 15,578 cwt. Exports of yacca gum from Australia during the same period amounted to 14,324 cwt. valued at £36,429.
- (v) Tanning Barks. The forests of Australia are capable of yielding a wealth of tanning materials; many species of Eucalyptus and other genera contain varying proportions of tannin, chiefly in the bark, but also in the wood and twigs. Scattered distribution however, has resulted in only the richest tan-bearing species being used in Australia. These are:—Golden wattle (Acacia pycnantha), black or green wattle (Acacia decurrens or mollissima), and mallet (Eucalyptus astringens). Mallet (E. astringens), of Western Australia, is not extensively used in Australian tanneries, but is exported to Europe and other countries. Reference to oversea trade in tanning barks is made in § 7, para. 3, p. 988.

The production of extract from the bark of karri (E. diversicolor), of which very large quantities are available at karri sawmills, has passed the experimental stage, and private enterprise has started production on a commercial scale. The experimental work in kino impregnated marri (E. calophylla) bark is not yet complete. The total factory production of tanning bark in Australia approximated 25,000 tons per annum in the years prior to 1939, but since then production has declined and in 1955-56 was only 9,288 tons. However, this decrease is offset by the increased use of vegetable tanning extracts and synthetic tanning agents.

4. Value of Production.—(i) Gross and Local Values, 1955-56. The values of forestry production on a gross and local basis are shown in the following table for the year 1955-56.

GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION, 1955-56. (£'000.)

			(2 000.)		
State.	State.		Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.
New South Wales			15,774	431	15,343
Victoria			12,668	845	11,823
Queensland			9,499	839	8,660
South Australia			4,736	140	4,596
Western Australia			5,237	360	4,877
Tasmania			5.174	583	4,591
Northern Territory			40	(a)	40
Australian Capital Te			140	11	129
Australia			53,268	3,209	50,059
			<u> </u>		<u>;                                    </u>

(a) Not available.

No information is available on the value of materials used in the process of production for 1955-56 and hence it is not possible to calculate net value of forestry production.

(ii) Local Values, 1934-35 to 1938-39 and 1951-52 to 1955-56. In the following table, the local value of forestry production and the local value per head of population are shown by States for the years 1951-52 to 1955-56 in comparison with the average for the five years ended 1938-39. Local value is gross value less marketing costs and is the value at place of production.

LOCAL VALUE OF FORESTRY PRODUCTION.

Year.	N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
		Locai	Value. (	£'000.)	•		<u> </u>
Average, 1934-35 to 1938-39(b)	2,094	837	2,226	547	1,176	394	7,27
1951–52	12,461 13,692 12,905 13,686 15,343	8,479 8,904 9,475 9,987 11,823	7,040 7,102 7,797 7,895 8,660	3,179 3,790 4,373 4,427 4,596	3,689 3,328 3,615 3,850 4,877	3,057 3,248 3,555 4,037 4,591	37,903 40,064 41,720 44,047 50,059
				·	ı. (£ s. d.		
Average, 1934-35 to 1938-39(b)	0 15 7	0 9 1	2 5 2	0 18 7	2 11 8	1 13 9	1 1 4
951–52	3 15 3 4 1 4 3 15 10 3 19 1 4 7 1	3 13 5 3 15 1 3 18 3 4 0 3 4 12 2	5 13 7 5 11 8 5 19 11 5 19 2 6 8 0	4 5 0 4 18 11 5 11 3 5 9 8 5 10 2	6 5 1 5 8 11 5 14 7 5 18 8 7 5 10	10 8 5 10 14 8 11 9 10 12 17 11 14 7 8	4 9 3 4 12 4 4 14 3 4 16 11 5 7

<sup>(</sup>a) Details for the Australian Capital Territory and the Northern Territory are excluded for years prior to 1954-55.
(b) Net value of production (i.e., local value less value of materials used in the course of production) has been included for certain years for Victoria and Western Australia.

- 5. Employment.—(i) Forestry Operations. The estimated number of persons employed in forestry operations at 30th June, 1954, including working proprietors, but excluding those employed in the sawmilling industry, as recorded at the 1954 Census, was 15,300.
- (ii) Milling Operations. Details of the average number of persons employed, including working proprietors, in the milling operations of sawmills during the year 1955-56 are shown in the next table. Further details regarding the operations of these mills are shown in Chapter VII.—Manufacturing Industry.

SAWMILLS: AVERAGE NUMBER OF PERSONS EMPLOYED, 1955-56.

Sex.		N.S.W.	Victoria.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Males Females		9,371 378	7,674 233	6,519 290	2,068 174	4,492 39	2,679 64	32,803 1,178
Total	••	9,749	7,907	6,809	2,242	4,531	2,743	33,981

<sup>(</sup>a) Excludes Northern Territory and Australian Capital Territory, details for which are not available.

## § 7. Imports and Exports of Timber and Tanning Substances.

1. Imports of Timber, Veneers and Plywood.—The quantities of timber imported into Australia during the year 1955-56 are shown in the following table according to countries of origin:—

IMPORTS OF TIMBER, VENEERS AND PLYWOOD INTO AUSTRALIA: COUNTRIES OF ORIGIN, 1955-56.

Country of Origin.	desar	ncluding oped).	tim	essed ber.(a) per ft.),	Box shooks.	Dressed timber.	Veneers.	Ply- wood.
_	Soft- wood.	Hard- wood.	Soft- wood.	Hard- wood.	('000 super ft.)	('000 super ft.)	('000 sg. ft.)	('000 sg. ft.)
United Kingdom Australian Territories—				140		•••	3,759	
New Guinea		2,503	3,587	288			4,810	20,038
Borneo		30,315	123	17,861	٠.			
Canada			117,878	85			62	
New Zealand			33,976	19	1,439	346	'	
Pacific Is. (British)—Solo-			1		ł	l	ł	
mon Is	2,552	1,323						
Other Commonwealth								
Countries	3	629	460	28,665	981	240	495	95
Brazil			12,059			1	1,709	
Finland			131		1	4,121		
Norway						5,257		
Sweden			1,801		١	10,035	١	
United States of America			65,561	614	1	49		
Other Foreign Countries		556	1,166	1,513	489	34	2,996	3,683
Total	2,555	35,326	236,742	49,185	2,909	20,082	13,831	23,816

<sup>(</sup>a) Excludes railway sleepers.

Most of the logs imported are hardwoods from Borneo, the value of all logs imported being £917,000 during 1955-56. In the same year, the value of undressed timber imported totalled £13,192,000, of which nearly 80 per cent. was softwood. Of the imports of undressed timber, softwoods came principally from Canada, United States of America and New Zealand, while hardwoods came mainly from Malaya and Borneo. The bulk of the imports of dressed timber now comes from Finland, Sweden and Norway. The total value of dressed timber shown in the table above amounted to £1,579,000 during 1955-56. The United Kingdom and New Guinea supplied the greater part of the imports of veneers, which were valued at £151,000 while New Guinea was the largest supplier of plywood, imports of which were valued at £658,000.

2. Exports of Timber, Railway Sleepers, Veneers and Plywood.—The quantities of timber, railway sleepers, veneers and plywood exported during the year 1955-56 are shown below, together with the countries of consignment.

EXPORTS OF TIMBER, RAILWAY SLEEPERS, VENEERS AND PLYWOOD FROM AUSTRALIA: COUNTRIES OF CONSIGNMENT.

Country of Consignment.	desap	ncluding ped). per ft.).	Undr timl ('000 su	ber.	Railway sleepers.	Dressed timber.	Veneers.	Ply- wood.
	Soft- wood.	Hard- wood.	Soft- wood.	Hard- wood.	('000 super ft.)	('000 super ft.)	('000 sq. ft.)	('000 sq. ft.)
United Kingdom				4,228	382	605	6,287	548
Australian Territories — New Guinea		27		250		12		62
Papua	{ ··	1		1,073		139		54
Other		مخفعها	249	50	4.2.500	199	1 .: 40	1 .920
New Zealand		3,929		11,914	11,569		648	250
Pacific Islands (British)—	1	l		224	1	136	i	ı
Fiji Gilbert and Ellice Is	l		222	334 301				
Other	1		222	301		•••		
Other Commonwealth	J		190	132	1	111	<b></b>	
Countries	1	109	7	2,368	601	205	49	23
Foreign Countries	l	112	2	1,486	213	52	2	23
Australian Produce		4.178	179	22,131	12,765	1,431	6.982	959
Re-exports		1,	491	5	1	28	4	1
Total	\	4,178	670	22.136	12,765	1,459	6,986	960

Exports of timber were consigned mainly to New Zealand and the United Kingdom, and consisted largely of the Western Australian hardwoods, jarrah and karri, which have earned an excellent reputation for such purposes as harbour works and wood paving, etc. The total value of exports of undressed timber, excluding railway sleepers, during 1955-56 was £1,363,000 (hardwood £1,303,000, softwood £60,000). Railway sleepers exported were valued at £711,000.

3. Classification of Imports and Exports.—(i) General. The quantities and values of timber, according to items, imported and exported during the year 1955-56 are shown in the following table:—

TIMBER: IMPOR	TS AND	EXPORTS,	, AUSTRALIA,	1955-56.
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		Imp	orts.	Exports.		
Item.		Quantity.	Value.	Quantity.	Value.	
		'000 super.		'000 super.	£A.	
T		ft.	f.o.b.	ft.	f.o.b.	
Logs, not sawn— Softwood		2,555	72,882			
Hardwood		35,326	844,427	4,178	247,816	
Timber, undressed (including rails sleepers)—	way					
Softwood		236,742	10,320,443	670	60,335	
Hardwood		49,185	2,871,586	34,901	2,014,081	
Timber for boxmaking		2,909	186,375	(a)	(a)	
Timber, dressed—						
Flooring, lining and weatherboards		19,727	1,357,316	} 1,459	130,280	
Other		355	35,610	1,439	130,200	
		'000 sq. ft.	[	<sup>3</sup> 000 sq. ft.		
Veneers		13,831	150,674	6,986	150,831	
Plywood		23,816	658,489	960	55,246	
Other Timber (b)	••		2,229	• •	3,236	
Total			16,500,031		2,661,825	

<sup>(</sup>a) Not recorded separately.

The imports of tanning bark consist almost exclusively of wattle bark from the plantations in South Africa. One species of Australian wattle, Acacia mollissima, is chiefly relied upon for the production of wattle bark in the South African plantations, most of the seed being obtained from the best wattle bark areas in eastern Tasmania and western Victoria. Two reasons are given to account for the success of the industry in the Union of South Africa:—(a) The suitability of the treeless, grassy highlands of Natal; and (b) the availability of native labour.

<sup>(</sup>b) Includes dunnage and timber for which quantity data are

<sup>(</sup>ii) Tanning Substances. The imports of tanning substances of natural origin in 1955-56 amounted to 173,035 cwt. valued at £602,555 (bark, 2,083 cwt., £4,192; extracts, 131,474 cwt., £500,189; and other tanning substances including valonia, myrabolans, cutch, etc., 39,478 cwt., £98,174) compared with 199,096 cwt. valued at £648,769 (bark, 2,499 cwt., £5,163; extracts, 154,390 cwt., £592,414; and other tanning substances 42,207 cwt., £51,192) in 1954-55. Exports during the same periods were 139,709 cwt. valued at £480,190 and 96,965 cwt. valued at £350,801 respectively.

#### CHAPTER XXVI.

#### FISHERIES.

### § 1. General.

1. Fish Resources.—The waters surrounding the Australian continent contain a great variety of marine fauna. Despite this, the fish stocks in Australian waters, in common with those of other countries of the Southern Hemisphere (with the exception of South Africa), are small by comparison with the stocks in the Northern Hemisphere. The reasons for this comparative shortage have not been fully explained but it seems clear that the basic factors involved are the absence of large expanses of shallow water and the much lower fertility of the oceans of the Southern Hemisphere.

The existence of greater fish stocks, of course, largely explains why approximately 98 percent. of the world production of fish comes from the Northern Hemisphere. Nevertheless, the Australian catch is low even after making allowance for the smaller resources available. Further explanation must be sought in terms of the socio-economic factors which determine the demand for and supply of fish.

Compared with countries in the Northern Hemisphere the per capita consumption of fish in Australia is small. Consequently, there is not the pressure on resources necessary to induce expansion in the fishing industry and to encourage the investment of large amounts of capital. On the other hand, even this somewhat restricted Australian demand for fish is not met from purely local sources of supply and quantities of fish are imported each year.

This apparent paradox is explained by the fact that the Australian fishing industry has consistently over-exploited some sources of supply and under-exploited others.

Thus, on the one hand, the fisheries in the estuaries of the Australian coasts (the so-called estuarine fisheries) and those offshore for fish that dwell on the bottom of the sea (the demersal fisheries) have frequently been overfished with a consequent diminution of stocks. On the other hand, those species of fish which dwell near the surface of the sea (the pelagic species) have barely been exploited at all.

It is anticipated that the greatest future development of the Australian fishing industry will take place in the pelagic fisheries. However, no great contribution to the supplies of fresh fish can be expected from this source since most of the pelagic species caught are canned or processed.

An increase in the supply of fresh fish available to the Australian consumer will therefore have to come largely from an expansion of the estuarine and demersal fisheries. In view of the over-exploitation of existing estuarine and demersal fisheries, such an expansion will require the development of new fishing areas.

While it is known that promising fishing grounds exist to the south and north of Australia, it appears that the trawling grounds of the Great Australian Bight are the most suitable for development.

2. Fishing Areas.—The principal fishing areas at present are the coastal lakes, streams, estuaries and beaches, from Cairns in Queensland to Ceduna in South Australia, and from Esperance to Geraldton in Western Australia. For the most part, these fishing grounds are associated with the coastal streams. The demersal grounds fall into two classes—(a) the reefs from which cod, snapper, etc. are taken; and (b) the grounds from which flathead, morwong, etc., are taken. The reefs extend intermittently from northern Queensland around the southern part of the continent to Shark Bay in Western Australia. The flathead grounds lie on the continental shelf off south-east Australia, chiefly from Crowdy Head to south of Cape Everard and further off the east Tasmanian coast from Babel Island southwards to Storm Bay. Other demersal grounds exist in the Great Australian shark grounds lie principally in Bass Strait and on the continental shelf off eastern South Australia. Other grounds have been located off southern Western Australia.

The grounds of existing pelagic fisheries include that for the Spanish mackerel off the north-eastern coast from about Coff's Harbour to Cairns and that for barracouta in Bass Strait and off eastern Tasmania. Jack mackerel is found in the waters of eastern Tasmania, the south-east coast of New South Wales, and Western Australia. Tuna is now being taken in commercial quantities on the New South Wales and South Australian coasts.

Of the crustaceans exploited in Australia, crayfish are the most important and are taken on reefs of the continental shelf in the waters of all southern States, the fishery extending (with a major interruption in the Bight) from Port Macquarie in New South Wales to Geraldton in Western Australia. Considerable development has taken place in the crayfish fisheries, particularly in South Australian and Western Australian waters, owing to the opening up of markets in the United States of America for frozen crayfish tails. Crabs of various species are found in practically all coastal waters. Prawns are taken in the temperate waters of Queensland and New South Wales.

In the Mollusc group, edible oysters are found chiefly in the temperate waters of Queensland, New South Wales and Victoria. Some cropping of natural resources takes place in Queensland, but the principal cultivation grounds are found in New South Wales. Until 1956, scallops were taken commercially in Tasmanian waters only, but since then they have been taken also in Queensland.

Pearlshell is fished from Cooktown in Northern Queensland, and from Thursday Island round the north coast of Australia to Exmouth Gulf in Western Australia. Trochus shell is obtained from Mackay in Queensland round the north coast to King Sound in Western Australia.

Whales emigrating from Antarctic waters to their breeding grounds in the warmer waters of low latitudes pass up both the western and eastern coasts of Australia, returning to the Antarctic in the spring. Two whaling stations operate in Western Australia (Babbage Island near Carnarvon and Cheynes Beach near Albany), one in New South Wales (Byron Bay) and one in Queensland (Moreton Island). The company operating at Byron Bay (N.S.W.) also operates a station at Norfolk Island.

3. Fishing Boats and Equipment.—The fishing equipment includes almost every possible type of gear, and appropriate boats are employed. The on-shore equipment includes mesh-nets, trawl-nets, and traps of various types. The demersal reef fishery is worked with traps, hand lines and long lines. The demersal flathead fishery is worked by both otter trawl (with Vigneron-Dahl gear) and Danish seine; in addition, some hand-lining is carried out. The demersal shark fishery is worked by long lines. The pelagic mackerel fishery employs trolling gear with lures of various types, while the pelagic barracouta fishery employs principally barbless jigs. Tuna is taken by trolling and, more recently, by pole fishing with live bait.

The boats for the on-shore fisheries are almost invariably small vessels fitted with low-power petrol engines. The vessels working the reefs are larger (up to 50 feet) and have more power. The otter trawl vessels are steam trawlers, and the Danish seine vessels are 40 to 70 feet in length with diesel engines. The shark boats have diesel power and range from 35 to 50 feet in length.

4. Administration.—The fisheries within the three-mile limit are administered by State Departments while the Commonwealth Fisheries Office, a division of the Department of Primary Industry, develops and administers fisheries in extra-territorial waters and co-ordinates fisheries administration.

The administration of the fisheries was discussed in greater detail in Official Year Book No. 41, p. 844, and in earlier issues.

## § 2. Development and Present Condition of the Fishery.

1. Fisheries Proper.—(i) General. The development of Australian fisheries has almost invariably followed the same sequence at each centre. The earliest fisheries were on-shore followed by demersal reef fishing using long lines. Trawling operations have followed line fishing in suitable areas and more recently the exploitation of pelagic fisheries has commenced.

Until about 1900, the expansion of the industry consisted chiefly of the extension of on-shore and demersal fishing with long lines into areas previously unworked. Barracouta was fished in Tasmanian waters at least by 1880, if not earlier, although the main development of this fishery occurred towards the end of the 1939-45 War and in later years to meet demands for canned fish.

The first major development of the industry came with the institution of trawling operations off the New South Wales coast in 1918 by the New South Wales Government. The State enterprise failed, but the fishery was found very profitable by private enterprise. In 1936, the use of Danish seine vessels began and the fleet of these vessels rapidly expanded, and in 1946 (after the return of vessels requisitioned in war-time) a peak was reached when thirteen steam trawlers and 120 Danish seine vessels were licensed. The total catch of trawled fish in 1946-47 was 16,000,000 lb. Of the species taken by the trawl fishery, tiger flathcad, morwong, and nannygai are the most important and of these, flathcad may be regarded as the prime fish and commands a higher price. Since 1947, the composition of the catch has changed, because of depletion of the flathcad stocks, and the lower-priced fish have become a larger proportion of the catch. In 1956-57, four steam trawlers (all based at Sydney but fishing right down the coast to Bass Strait) and a considerably larger number of Danish seine vessels in New South Wales and Victoria were engaged in the trawl fishery.

In Queensland waters, since 1930, the Spanish mackerel has been taken by line fishermen, operating in off-shore waters out to the Barrier Reef between Gladstone and Cairns.

In 1930 also, fishing for school (snapper) shark commenced in south-eastern waters, particularly off the Victorian and Tasmanian coasts. This fishery rapidly extended its area of operations, and in 1955-56 the catch of edible sharks was 7,000,000 lb. round weight.

Great impetus was given to the fishery during the war years by the demand for livers for fish oil production for medicinal purposes. Demand eased with the return of cod-liver oil and availability of synthetic vitamin "A". The shark fishery is still important, however, as the flesh, which is sold as "flake", brings substantial prices, mainly in Melbourne.

As far as pelagic fisheries are concerned, pilchards occur in the southern waters of Australia from Port Stephens to the south-west of Western Australia and also as far north as Moreton Bay. Commercial catches have been made with lampara nets and to a lesser extent with purse seines. Anchovies are caught in Port Phillip Bay and also in Lakes Entrance and are used for processing. Sprats in Tasmanian waters are caught in payable quantities, though there is usually some difficulty in finding a market for them. Jack mackerel have been caught in commercial quantities off the east coast of Tasmania and off Eden in New South Wales.

The tuna fishery was established on the New South Wales coast during 1949, when fishermen, using improvised trolling gear, caught 1,000 tons of southern bluefin tuna. The catch was canned at Eden and Narooma and some was frozen raw and sold direct to Californian canneries. The American-owned tuna clipper Senibua, whose operations were subsidized by the Commonwealth, demonstrated that Australian tunas could be caught by pole fishing with live bait. In 1955, 40 tuna boats were operating on the south coast of New South Wales, but their catch was limited by the canneries to quantities which could be marketed in canned form in Australia and overseas as the price of raw tuna in California was reduced below the level necessary to make export profitable. In 1955, a new plant on the south coast of New South Wales began producing smoked and cooked tuna, giving further support to the tuna fishery.

Southern bluefin tuna occurs all along the southern coastline of the continent. In addition, albacore, yellowfin, striped (skipjack) and northern bluefin tuna occur, but the taking of these fish has not been developed.

(ii) Production. The statistics of production published in this chapter are in terms of "round" or "gross" weights. Round weights are calculated from recorded weights using conversion factors which allow for the fact that the weights of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Publication on a round weight basis has been made possible in recent years largely as a result of the efforts of the Commonwealth Fisheries Office.

In interpreting Australian fisheries statistics, allowance should be made for the incomplete coverage. Returns are collected in most States from licensed professional fishermen only, and as a result the published totals fall short of total fish production to the extent of the catch by amateur fishermen, the commercial catch by persons not licensed as professional fishermen and unrecorded catch by professional fishermen.

Production by States for the years 1951-52 to 1955-56 is shown in the following table on a round weight basis.

# RECORDED PRODUCTION OF FISH. (EQUIVALENT ROUND WEIGHT.)

UIVALENT ROUND WEIGHT.) ('000 lb.)

State or Territory.		1951–52.	1952–53.	1953-54.	1954–55.	1955-56.
New South Wales		28,331	32,660	32,332	26,441	23,062
Victoria (a)		13,285	13,069	13,820	13,833	10,826
Oueensland		9,594	11,354	10,525	9,368	9,668
South Australia		7,856	8,102	8,317	8,154	7,328
Western Australia		7,344	9,225	10,913	9,393	9,768
Tasmania (a)		5,162	6,882	2,821	3,115	2,545
Northern Territory	٠٠ ١	62	87	100	118	101
Australia	••	71,634	81,379	78,828	70,422	63,298

<sup>(</sup>a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria.

In the following table, total Australian recorded production of fish by species is shown by States in terms of equivalent round weight for the year 1955-56. As an aid to identification, scientific names have been listed in addition to common names.

FISH: RECORDED PRODUCTION BY SPECIES, 1955-56. (EQUIVALENT ROUND WEIGHT.) ('0000 lb.)

Species.	N.S.W.	Vic.(a)	Qld.	S.A.	W.A.	Tas.(a)	N.T.	Aust.
Mullet-								
Mugil cephalus, Aldrichetta								
forsteri, Moolgarda argentea,	1							
Myxus elongatus, Mugil caeru-								
leomaculatus	5,083	816	4,234	550	871	22	• •	11,576
Australian Salmon—	1 225	0.4		626		1 000		
Arripis trutta Shark—	1,225	864	• • •	536	4,771	256	• • •	7,652
Galeorhinus australis. Mustelus	1							
antarcticus, Flakeus megalops,								1
Pristiophorus cirrhatus	1,227	2,724	27	2.119	248	642		6,987
Flathead—	.,	.,		_,				1 3,5 3 7
Neoplatycephalus richardsoni,		1						
Trudis caeruleopunctatus, P.					ļ			
bassensis, Platycephalus fuscus,		i l			1			
P. indicus, P. arenarius, Levi-	2.520	2000	216			00		4000
prora laevigata	2,539	2,055	216	• • •	66	82	••	4,958
Thyrsites atun	83	2,091				1,271		3,445
Snapper—	0.5	2,051	•••	• • •		1,2/1	• • •	3,443
Chrysophrys guttulatus, C. unicolor	1.065	147	104	324	1,477		10	3,127
Morwong, Jackass-Fish, Perch,	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,				-,			-,
Queen Snapper—	1	1				,		į
Nemadactylus macropterus, N.		1				İ		İ
valenciennesi, Other N. spp.,	0.000							
Cheilodactylus spp	2,683	1.7	•••		2	10	•••	2,712
Leatherjacket— Aluteridae	2,251	12	(b)		17			2,280
Aluteridae	2,231	12	(4)		17		•••	2,200
Sillago ciliata, S. maculata, S.				1		ŀ		1
bassensis, Sillaginodes punctatus	195	195	478	1,550	386	١		2,804
Mackerel—		1		, -,		1		
Scomberomorus commerson, S.	1			1				1
queenslandicus	1 .::.		1,487	- : : -	36	1 ::.	·	1,523
Other Species	6,711	1,905	3,122	2,249	1,894	262	91	16,234
Total	23,062	10,826	9,668	7,328	9,768	2,545	101	63,298
Total	23,002.	10,820	9,008	7,328	9,708	2,545	101	03,290

<sup>(</sup>a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Less than 500 lb.

2. Crustaceans and Molluscs.—Crayfish are taken (in pots) in all States other than Queensland. Cray fisheries have developed greatly since the 1939-45 War to take advantage of the market in the United States of America for frozen crayfish tails, the total catch increasing from approximately 3 million lb. in 1945-46 to 20.2 million lb. in 1954-55. Due largely to adverse weather conditions in the eastern States and the presence of an unusually large number of octopuses in crayfishing grounds off South Australia the catch in 1955-56 dropped to 18.5 million lb.

Prawns are taken by otter trawl in the waters of New South Wales, Queensland and Western Australia. Prawns have been found in considerable quantity in the ocean waters of northern New South Wales and southern Queensland. An important development is anticipated with improvement of handling and distribution and opening up of oversea markets.

Initially the Australian oyster fisheries depended solely upon the harvesting of naturally grown stock in littoral and submarine areas. However, the stocks soon deteriorated and attention was turned to methods of cultivation. This is carried on mainly in New South Wales where there has been constant improvement in methods, and the present technique in certain areas is highly efficient. The production for Australia in 1955–56 was 9,561,000 lb. (in-shell). Scallops are taken by dredge in the D'Entrecasteaux Channel in Tasmania and by trawl in Hervey Bay, Queensland.

Details of production of crustaceans and molluscs are shown by States in the table below on a gross (in-shell) weight basis for the year 1955-56.

RECORDED PRODUCTION OF CRUSTACEANS AND MOLLUSCS, 1955-56.
(GROSS (IN-SHELL) WEIGHT.)
('0000 lb.)

				( 000 10.)				
Item.		N.S.W.	Vic.(a)	Q'land.	S. Aust.	W. Aust.	Tas.(a)	Australia.
Crustaceans— Crayfish Crabs Prawns		446 200 3,672	1,026	12 649 2,400	4,000 	10,530 21 75	2,442 	18,456 870 6,148
Total		4,318	1,027	3,061	4,000	10,626	2,442	25,474
Molluscs— Oysters Scallops Other	••	9,197	53	146 200 24	::	(b) 6	214 5,788 	(d) 9,561 5,988 83
Totat		9,197	57	370		(c) 6	6,002	(d) 15,632

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Not available for publication. (c) Incomplete. (d) Excludes oysters in Western Australia.

3. Pearl-shell and Trochus.—The industry, which ceased operations on Japan's entry into the war in December, 1941, did not resume on a commercial basis at Queensland centres until late in 1945, and at Western Australian centres until 1946, while operations off the Northern Territory coast were not resumed until 1948.

Before the war, a large proportion of the key men were Japanese; the others included Malays, Chinese, Koepangers, Filipinos, Papuans and Torres Strait Islanders. On the resumption of operations without the Japanese, the labour available was, with few exceptions, inefficient. The expansion of the industry at Darwin has been retarded by the fact that the key men lack the local knowledge acquired by the Japanese. Western Australian centres also suffered from lack of skilled labour. In 1953, the Commonwealth permitted the employment at Broome, under certain conditions, of 35 Japanese divers, tenders and engine-drivers. Queensland, with a more ready source of labour from the Torres Strait Islands and mainland, was able to expand its fishing more rapidly, and in the 1949 season achieved its second highest pearl-shell production on record.

In 1953, a Japanese fleet, which had been pearling in the Arafura Sea while a Japanese Mission in Canberra was discussing a fisheries agreement with the Australian Government, moved into an area in which it had been asked not to fish. This action was regarded

as having broken off the negotiations, and proclamations were issued in September, 1953, declaring Australia's sovereign rights over the natural resources of the sea bed and sub-soil of the Continental Shelf adjoining Australia, its territories and the Trust Territory of New Guinea. In September, the Pearl Fisheries Act 1952-53, providing for licensing and control of pearling, was brought into operation.

Japan disputed Australia's right to apply this legislation to foreign ships, and Australia agreed to refer the dispute to the International Court of Justice on condition that meantime Japanese pearling in Australian waters would be conducted in conformity with the Australian Government's policy of regulation and conservation, and that Japan would abide by the Court's decision. On these conditions, a Japanese pearling fleet has operated in prescribed waters since 1954.

Australian production of pearl-shell and trochus-shell was 2,913,000 lb. and 2,114,000 lb. respectively in 1955-56. In addition, Japanese pearlers took 1,657,000 lb. of pearl-shell in Australian waters.

Reference to inquiries into the pearl-shell fishing industry by a Royal Commission in 1912, and by the Tariff Board in 1935, is made on p. 1031 of Official Year Book No. 37.

#### § 3. Marketing and Distribution.

- 1. Marketing.—Most of the fish taken in Australian waters is sold in metropolitan markets. In Queensland, fish marketing is under the control of a Fish Board, which has representatives of producers, wholesalers and consumers, and a Government nominee as chairman. A central market is located in Brisbane and there are branch markets or depots at fourteen centres along the coast. The organization ensures that all fish is marketed through these channels, and the board has encouraged to a very marked extent the steadily increasing fish production of the State. The fish marketing methods in this State have proved successful. In New South Wales, the central market in Sydney is conducted by the Chief Secretary's Department, and the port depots in various centres along the coast by fishermen's co-operatives. These co-operatives distribute some of their fish to local centres and to inland country districts, and send the balance to the central market in Sydney. In Victoria, South Australia and Western Australia, fish is sold in central markets by agents. The greater part of the catch of fish in Tasmania is either processed in canneries in that State or exported to the mainland. There is some interstate export of fish from the northern rivers of New South Wales to Queensland, from Tasmania to New South Wales and Victoria, and from South Australia to Victoria.
- 2. Consumption of Fish.—Prior to the 1939–45 War, Australians consumed annually the fresh and canned equivalent of about 131 million lb. of round fish, or 19.0 lb. per person. About 70 million lb. were produced locally and the remainder was imported. Total consumption (including canned and cured) during 1955–56 is estimated at 94.8 million lb. edible weight (10.2 lb. per head) as compared with 94.2 million lb. edible weight (10.4 lb. per head) in the previous year. This is equivalent to approximately 186.5 million lb. fresh round weight (20.0 lb per head) and 185.8 million lb. fresh round weight (20.4 per head) respectively.
- 3. Processing, including Canning.—The equipment for handling fish was in the past rather inadequate, but in most States cold storage facilities have been improved and increased in recent years. In Queensland and New South Wales, particularly, the depots which have been established at fishing ports have been equipped with cold storage space. In several States, there has been a development of establishments equipped for snap freezing of fish, in particular the freezing of crayfish tails, prawns and scallops for export. A number of vessels have been equipped with freezing plants to process crayfish at sea.

In all States, there has been a development of facilities for light processing of fish.

Reference to the production of processed fish and number of factories operating will be found in § 5, para. 4, p. 999. Considerable expansion has taken place in the industry. particularly since 1945-46. In 1938-39, 1,472,592 lb. of fish valued at £29,581 were processed, whereas in 1955-56 10,603,479 lb., valued at £384,945 were processed.

4. By-products.—Processing of offal for fish-meals, etc., has been established in certain States. The processing of livers for vitamin-rich oils was undertaken in several States but as mentioned previously production has fallen to a low level in recent years.

### § 4. Inquiries and Research.

- 1. General.—The Australian fishing industry has been the subject of a number of official inquiries seeking an explanation of the very slow rate of development and the unfortunate conditions prevailing within the industry as well as the paucity of supplies available to the public. Details of the inquiries undertaken, the recommendations arising from them, and subsequent developments will be found in Official Year Book No. 38. p. 1082.
- 2. Commonwealth Scientific and Industrial Research Organization, Division of Fisheries and Oceanography.—Details of the establishment, organization and functions of the Division of Fisheries of the Commonwealth Scientific and Industrial Research Organization will be found in Official Year Book No. 38, p. 1083. The scientific basis on which the work of the Division is carried out has now been widened, and, to provide for this, the name of the Division has been amended to "Division of Fisheries and Oceanography

Research carried out by the Division has assisted greatly in the development and preservation of Australian fisheries. Details may be found in Official Year Book No. 41. p. 848, and in previous issues.

3. Commonwealth Fisheries Office.—The Commonwealth Fisheries Office, a division of the Department of Primary Industry, arose out of a Tariff Board recommendation in 1941, following a public inquiry into the fishing industry, that a Commonwealth developmental authority should be established. Details of the establishment, organization and functions of the office will be found in Official Year Book No. 38, p. 1084.

In accordance with the Tariff Board report, scientific research, as distinct from developmental and administrative functions, was left to the Commonwealth Scientific and Industrial Research Organization, which had established a Division of Fisheries for this purpose in 1937.

The Commonwealth is responsible for extra-territorial waters, whaling, pearling, rehabilitation of ex-servicemen in the fishing industry, fishery training schools, commercial development of fisheries, promotion of uniform conditions governing catches of various species of fish, statistics, information and publications.

- 4. Fisheries Development Trust Account.-In early 1956, the assets of the Australian Whaling Commission, an authority set up by the Commonwealth Government in 1949. were disposed of to private interests. The finance derived from the sale, authorized by the Fishing Industry Act 1956, was paid into a fund, known as the Fisheries Development Trust Account. Provision was made in the Act for the moneys to be used for the purposes of developing the fishing industry through research, direct financial assistance, the development of particular fisheries, training schemes and the dissemination of information and advice through various publications and the press.
- An Advisory Committee on fisheries development, which comprises representatives of the Commonwealth Departments of Primary Industry, Trade, Treasury, and the Commonwealth Scientific and Industrial Research Organization, has been formed to advise the Minister on specific projects for fisheries development.
  - Projects which have so far been approved include:-
- (i) The purchase of a modern diesel trawler to test the commercial potentialities of trawling in the Great Australian Bight. This area is so far unexploited, although, in the past, scientific and commercial fishing operations have revealed a vast fishing area.
- (ii) The chartering of a vessel to survey the prawn resources off the east coast of Australia. This survey met with initial success with the discovery of large prawn resources off Fraser Island (Queensland).
- (iii) A survey of the pilchard resources off the New South Wales coast, with a view to ascertaining whether pilchards can be taken in commercial quantities.
- 5. North Australia Development Committee.—In 1946, the North Australia Development Committee recommended that a hydrological and oceanographical survey should be made of North Australian waters. It also suggested that a biological survey should be made of the pearl oyster with particular reference to the possibility of instituting pearl culture.

Further reference to these and other recommendations may be found in Official Year

Book No. 41, p. 848.

The C.S.I.R.O. Division of Fisheries subsequently set up a biological research station on Thursday Island, mainly for the pearl and pearl-shell investigations. Since 1951, a research vessel has been based on Thursday Island and is used for diving, biological and hydrological work.

6. Whaling.—The Commonwealth Fisheries Office carried out extensive investigational and preparatory work for the establishment of an Australian whaling industry. In 1949, a privately-owned station began operating at Pt. Cloates, Western Australia. The Australian Whaling Commission, referred to in paragraph 4, above, built a station on Babbage Island, near Carnarvon, Western Australia, which began operations towards the end of the 1950 season. There is also a small station in Western Australia at Cheynes Beach near Albany. A large station began operating in 1952 at Moreton Island (Queensland), and in 1954 a small station began operating at Byron Bay (New South Wales). In 1956, the company operating the Byron Bay station established a station at Norfolk Island. In the same year, the station operating at Pt. Cloates (W.A.) closed down. In 1956, the five stations operating processed 1,990 whales, producing whale oil and other products valued at £2,233,000. A table showing statistics of whaling operations appears in § 5, para. 2, following.

The Director of Fisheries represents Australia on the International Whaling Commission which controls whaling throughout the world.

### § 5. The Fishing and Whaling Industry—Statistics.

1. Fisheries.—(i) Quantity and Gross Value of Take. Recorded production for all fisheries is shown in the following tables.

RECORDED FISHERIES PRODUCTION: QUANTITY AND GROSS VALUE OF TAKE, 1955-56.

Particulars.		Unit.	N.S.W.	Vic.(a)	Qld.	S.A.	W.A.	Tas.(a)	Aust.(b)
Fish-								-	·
Equivalent Round		1000 11	22.000	10.000	0.660	= 200	0.700	0.545	62.000
Weight	• •	'000 lb.	23,062	10,826	9,668	7,328	9,768	2,545	63,928
Gross Value	<u></u>	£,000	1,892	756	534	720	581	128	4,626
Crustaceans—							l		
Gross Weight		'000 lb.	4,318	1,027	3,061	4,000	10,626	2,442	25,474
Gross Value		£'000.	582	115	319	400	1,243	214	2,873
Molluscs—									
In-shell Weight		'000 lb.	9,197	57	370		(c) 6	6,002	d 15,632
Gross Value		£'000.	604	2	18		(e)	164	788
Shark Livers									
Gross Weight		'000 lb.		80	1	135	1	٠	215
Gross Value		£'000.		8	1	17	1		25
Pearl-shell(f)-			·						<u> </u>
Weight		'000 въ.	i	l i	1,142		1.460	٠	2.913
Gross Value		£'000.	::	::	284	• • •	413	: ::	771
Trochus-shell(f)-			<del></del>					i	·
Weight		'000 lb.	١	i	2,101		13		2,114
Gross Value	• •	£'000.	::		344	• •	13	,	2,117
31005 Tardo	<u> </u>	1 2000.	• • • •	<u>'</u>	344	•••	. 4	'	370

(a) Catch by Victorian fishermen in Tasmanian waters is included in Victoria. (b) Includes Northern Territory; 101,000 lb. of fish valued at £15,000 and 311,000 lb. of pearl-shell valued at £74,000. (c) Excludes oysters, for which details are not available for publication. (d) Excludes oysters in Western Australia. (e) Less than £500. (f) Western Australia, season ended 31st December, 1955. Northern Territory, season ended 31st January, 1956.

RECORDED FISHERIES PRODUCTION: QUANTITY AND GROSS VALUE OF TAKE, AUSTRALIA.

Particula	Particulars.			1951–52.	1952–53.	1953–54.	1954-55.	1955–56.
Fish-								
Equivalent Roun Gross Value	id Weig	ht	' '000 lb. £'000.	71,634 3,810	81,379 4,514	78,828 4,716	70,422 4,632	63,928 4,626
Crustaceans				: <del>-,</del>				
Gross Weight			'000 lb.	17,260	19,722	22,265	27,668	25,474
Gross Value			£'000.	1,863	2,106	2,510	2,929	2,873
Molluscs								
In-shell Weight	• •	• •	'000 lb.	9,761	11,719	13,570	15,931	15,632
Gross Value		• •	£'000.	436	487	641	829	788
Shark Livers								
Gross Weight			'000 lb.	199	308	254	170	215
Gross Value			£'000.	25	40	34	22	25
Pearl-shell-								
Weight			'000 lb.	1,906	2,048	2,337	2,489	2,913
Gross Value			£'000.	459	487	595	647	771
Trochus-shell-								
Weight		•••	1000 tb.	2,634	2,238	3,057	2,784	2,114
Gross Value	• •		£'000.	234	146	260	350	346

(ii) Boats and Men Engaged, etc. The following tables show particulars of boats and equipment used and persons engaged in the various fisheries. Details relating to oyster leases are also shown.

FISHERIES: BOATS AND EQUIPMENT IN USE AND PERSONS ENGAGED, 1955-56.

Particulars.	Unit.	N.S.W.	Vic.	Qld.	S.A.	W.A. (a)	Tas.	N.T.	Aust.
General Fisheries—(b) Boats Engaged Value of Boats and Equipment Persons Engaged	No. £'000 No.	2,172 1,827 1,874	683 760 885	4,512 1,475 10,029	1,368 525 5,420	1,414		16 5 38	•
Edible Oyster Fisheries— Boats Engaged Value of Boats and Equipment Persons Engaged Leases Granted Length of Foreshore in Leases Area of Offshore Leases	No. £'000 No. " '000 yds Acres	735 94 651 5,145 1,111 5,251	4 (d) 5 5 16	51 21 143 324 (g)		 (e) 	20 (c) 20 	••	810 115 (f) 819 5,474 (f)1,127 5,251
Pearl. Pearl-shell and Trochus-shell Fisheries— Boats Engaged Value of Boats and Equip- ment Persons Engaged	No. £'000 No.			90 425 1,080		36 210 371		10 92 120	
Total, All Fisheries— Boats Engaged Value of Boats and Equipment Persons Engaged	No. £'000 No.	2,907 1,921 2,525	687 760 890	4,653 1,921 11,252	1,368 525 5,420	723 1,624 1,530	805 600 1,242	26 97 158	7,448

<sup>(</sup>a) Year ended 31st December, 1955. (b) Includes Crustacean and Scallop Fisheries. (c) Value of boats engaged in Oyster Fisheries is included in General Fisheries. (d) Less than £500. (e) Not available for publication. (f) Incomplete; see footnotes to individual States. (g) Not available.

# FISHERIES: BOATS AND EQUIPMENT IN USE AND PERSONS ENGAGED, 1951-52 TO 1955-56.

Particulars.		Unit.	1951-52.	1952–53.	1953–54.	1954-55.	1955–56.
General Fisheries—(a) Boats Engaged Value of Boats and Equipment Persons Engaged		No. £'000 No.	8,872 4,613 16,602	9,407 5,028 17,401	9,877 5,936 18,598	10,030 6,240 19,685	10,223 6,606 20,627
Edible Oyster Fisheries— Boats Engaged Value of Boats and Equipment Persons Engaged Leases Granted Length of Foreshore in Leases Area of Offshore Leases	:: :: ::	No. £'000 No. '000' yds. Acres	1,114 98 901 5,495 1,006 5,749	1,079 103 871 5,543 1,039 5,888	978 129 700 5,634 1,020 6,296	1,104 123 922 5,660 1,043 6,547	810 115 819 5,474 1,127 5,251
Pearl, Pearl-shell and Trochus-shell Fishe Boats Engaged	eries—	No. £'000 No.	132 523 1,516	114 441 1,152	124 502 1,386	127 564 1,506	136 727 1,571
Total, All Fisheries— Boats Engaged Value of Boats and Equipment Persons Engaged	••	No. £'000 No.	10,118 5,234 19,019	10,600 5,572 19,424	10,979 6,567 20,684	11,261 6,927 22,113	11,169 7,448 23,017

<sup>(</sup>a) Includes Crustacean and Scallop Fisheries.

2. Whaling.—The information summarized in the table below was supplied by the Commonwealth Fisheries Office. Details relate to seasons extending from about May to October of each year.

#### WHALING STATISTICS, AUSTRALIA.

Particulars.	Unit.	1952.	1953.	1954.	1955.	1956.(a)
Seasonal Quota(b) Whales Taken Whales Processed Average Length of Whales Processed Average Oil Production per Whale Processed Persons Employed—At Sea Persons Employed—Ashore Whale Oil Produced—Quantity Whale Products—Value	No.  ft. Barrel d No.  Barrel d £'000	1,850 1,787 1,780 40.1 51.3 110 390 91,360 1,670	2,000 2,001 2,001 40.0 51.2 110 390 102,354 1,803	(c) 2,039 39.8 49.1 114 420	1,840 1,840 40.8 51.8 124 433 95,258	1,990 1,990 41.1 51.6 124 396 102,366

<sup>(</sup>a) Includes details for the station at Norfolk Island, which commenced operations during this season.
(b) In terms of humpback whales, as determined by the Minister for Primary Industry, acting on the advice of the Director of Fisheries. For quota purposes, I blue whale is taken as equivalent to 2 fin whales, 2½ humpback whales or 6 sei whales.

(c) Includes one blue whale.

(d) 6 barrels = 1 ton.

3. Value of Production.—(i) Gross and Local Values, 1955-56. Although statistics of the value of production of the fishing industry have been on an established basis for some years, attention is drawn to the fact that the actual collection of statistics of the quantity of fish taken presents many difficulties and consequently, any defects which may occur in the collection, must necessarily be reflected in the value of production. Particulars of the value of materials used in the process of production are not available for all States, so the values can only be stated at the point of production, and not on a not basis, as has been done with other industries. Variations in the relative proportions of marketing costs to gross production suggest that complete uniformity in method has not yet been attained.

# GROSS AND LOCAL VALUE OF PRODUCTION: FISHING AND WHALING, 1955-56. (£'000.)

State of	r Territory.	Gross Production Valued at Principal Markets.	Marketing Costs.	Gross Production Valued at Place of Production.		
New South Wales		•••		3,097	413	2,684
Victoria		• • •		871	137	734
Queensland		• •		1,649	178	1,471
South Australia				1,120	125	995
Western Australia				2,457	51	2,406
Tasmania				505		505
Northern Territory	••	••	••	89	••	89
Australia			••	9,788	904	8,884

<sup>(</sup>ii) Local Values, 1934-35 to 1938-39 (Average) and 1951-52 to 1955-56. In the following table, the local value of fisheries production and the local value per head of population are shown by States for the average of years 1934-35 to 1938-39 and for each of the years 1951-52 to 1955-56. Local value is gross value less marketing costs and is the value at the place of production. Because the value of materials used in the course of production is not available for all States it is not possible to show a comparison of net values.

10011		OF FRANKS	ARTE STITE AT TRACE	DECEMBER
LARCAL	VALIJE	OF RISHING	AND WHALING	PRODUCTION.

Year.		N.S.W.	Vic. Q'land.		S. Aust. W. Aust.		Tas.	Total.	
		1		Local Va (£'000.)			<del>-</del>		
Average, 1934–35 1938–39 1951–52 1952–53 1953–54 1954–55 1955–56	to  	588 1,821 2,233 2,642 2,739 2,684	159 706 753 834 849 734	292 835 844 951 1,275 1,471	182 701 851 1,015 1,046 995	229 1,225 1,610 1,867 2,149 2,406	80 441 606 432 556 505	1,530 5,729 6,897 7,741 (a) 8,727 (a) 8,884	
		Loc	AL VALUE	PER HEAD	of Popu	LATION.			
Average, 1934–35 1938–39 1951–52 1952–53 1953–54 1954–55 1955–56	to  	4 5 10 11 13 3 15 6 15 10 15 3	1 9 6 1 6 4 6 10 6 10 5 9	5 11 13 5 13 3 14 7 19 3 21 9	6 3 18 11 22 3 25 10 25 11 23 10	10 0 41 6 52 8 59 2 66 3 71 11	6 11 30 1 40 1 27 11 35 6 31 8	4 6 13 6 15 11 17 6 (a)19 3 (a)19 1	

(a) Includes Northern Territory.

4. Fish Preserving.—The attempt to establish the fish preserving industry at the commencement of this century met with little success although a bounty was paid to encourage production. The industry, however, continued to operate, but there was no marked development until about 1945-46 when the production of canned fish amounted to 1,700,000 lb. After that year, production increased considerably and reached a peak of 10,900,000 lb. in 1948-49, but by 1951-52 it had declined to 7,300,000 lb. It increased again to 7,700,000 lb. in 1952-53, but declined again to 6,600,000 lb. in 1953-54 and was at approximately the same level in 1954-55. Production, however, declined to 6,000,000 in 1955-56.

In addition to the canning of fish, other fish products are produced. In 1955-56, these included 123,000 lb. of smoked fish, 1,097,000 lb. of fish paste and considerable quantities of frozen crayfish tails for export and quick-frozen fish for the local market.

In 1939, New South Wales and Tasmania were the only States canning fish, but the industry has since been extended to Victoria, South Australia and Western Australia. Details of production are given in the following table for the years 1938-39 and 1951-52 to 1955-56.

#### PRODUCTION OF CANNED FISH(a): AUSTRALIA.

Particulars.	1938–39.	1951-52.	1952–53.	1953–54.	1954-55.	1955-56.
Number of factories operating	3	17	13	11	9	11
Quantity produced lb.	603,302	7,294,622	7,705,081	6,604,587	6,645,552	
Value £	13,700	965,100	1,020,307	838,179	834,090	844,359

(a) Including the canning of fish loaf and crustaceans.

The varieties canned in the several States differ according to the species caught, but separate details for each variety are not available. In New South Wales, Australian salmon and tuna are the principal varieties. Barracouta is of major importance in Victoria and Tasmania, and Australian salmon predominates in South Australia and Western Australia. Herrings are also important in the latter State.

5. State Revenue from Fisheries.—The revenue from fisheries during the year 1955-56 was £66,632, compared with £63,971 in 1954-55 and £34,273 in 1938-39. Of the total of £66,632 in 1955-56, New South Wales collected £31,302, Victoria £4,221, Queensland £13,794, South Australia £5,249, Western Australia £6,809, Tasmania £5,217 and Northern Territory £40.

#### § 6. Oversea Trade in Fishery Products.

Note.—Values of Australian oversea trade shown in this section are expressed in £A. f.o.b., port of shipment.

1. Imports of Fish.—The equivalent, in the round, of imported fish consumed in Australia in 1955-56 was 37 per cent. of the total consumption. Particulars of the imports of fish are shown below for the years 1951-52 to 1955-56 in comparison with 1938-39.

FISH (INCLUDING SHELL FISH): IMPORTS INTO AUSTRALIA. (Cwt.)

		<del>Фт.,</del>				
Classification.	1938-39.	1951-52.	1952–53.	1953–54.	1954–55.	1955–56.
Fresh or preserved by cold	0.4.020	150.070	06.005	140.760	165.070	171 024
process	84,028	150,972	86,397	140,769	165,072	171,934
Potted or concentrated	9,435	1,766	583	1,359	1,388	1,408
Preserved in Tins—	i					
Fish—						
Herrings	38,917	88,149	20,030	61,277	60,542	56,497
Salmon	166,695	20,387	24,855	27,339	57,897	86,523
Sardines, Sild and Pilchards	29,372	74,375	3,842	41,695	51,050	50,832
Other	14,306	15,455	916	3,459	5.574	3,844
Crustaceans and Molluscs-	1	′		•	,	-,
Crustaceans	6,829	3,308	2,150	4,141	4,922	9,399
Oysters	1,939	198	115	272	3 496	581
Other	(a)	225	113	137	496	291
Smoked or Dried (not salted)	8,122	56,235	55,929	50,291	60,485	69,130
Other (including salted)	7,987	11,911	6,878	11,296	12,294	18,348

(a) Not recorded separately.

The value of fish and fish products imported during 1955-56 amounted to £6,474,000, compared with £5,612,000 in 1954-55.

Canned fish (total imports of which in 1955-56 were valued at £3,856,000) accounted for most of the imports. Salmon from the U.S.S.R., Canada and Japan, herrings from the United Kingdom and Norway and sardines from Norway and West Germany were the chief varieties imported. A considerable proportion of the fresh fish imported in 1955-56 came from the United Kingdom, the Union of South Africa and New Zealand; the potted fish came chiefly from the United Kingdom; and the bulk of the remainder came from South Africa and the United Kngdom.

- 2. Exports of Fish.—During 1955-56, the exports of fish of Australian origin were as follows:—Fresh or frozen crayfish tails, 39,684 cwt., £1,881,132; other fish (including shell fish) fresh or preserved by cold process, 3,984 cwt., £113,461; oysters in shell, 40 cwt., £1,869; potted or concentrated fish, 15 cwt., £666; fish preserved in tins, 2,486 cwt., £54,730; shell fish in tins, 449 cwt., £14,432; smoked or dried fish (including salted), 23 cwt., £306.
- 3. Exports of Pearl and other Shell.—The exports of pearl, trochus and other shell of Australian origin are shown hereunder for the years 1938-39 and 1951-52 to 1955-56.

PEARL, TROCHUS AND OTHER SHELL: EXPORTS FROM AUSTRALIA.

Artic	le.		1938-39.	1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
Pearl-shell		cwt.	52,532	14,473	24,714	23,020	23,924	27,174
		£	244,266	370,096	694,029	653,797	690,204	836,736
Trochus-shell		cwt.	9,108	42,815	34,751	47,415	36,414	23,959
		£	34,166	515,067	247,483	591,511	578,876	524,954
Other shell		cwt.	4	2,531	5,732	5,853	4,938	1,436
		£	151	35.933	58.713	69.283	68.035	32,478

#### CHAPTER XXVII.

#### MINERAL INDUSTRY.

### § 1. The Mineral Wealth of Australia.

- 1. Place of Mining in Australian Development.—Population was first attracted to Australia in large numbers by the discovery of gold in payable quantities. This discovery was thus a significant factor in Australia's early development. In more recent times, the rapid growth of Australia's secondary industries has been associated with considerable expansion in mining for silver-lead-zinc, copper and iron ores, and coal. The value of mineral production, however, has lagged behind that recorded for Australia's large rural industries and in 1955, represented only about 12 per cent. of the net value of production of all primary industries.
- 2. Extent of Mineral Wealth.—The extent of the mineral wealth of Australia, as of any country, is not determined fully at any point of time. Regional and detailed investigations are being carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics, by the Geological Surveys of the State Governments and by the exploration departments of mining companies, but large areas of the country still await geological survey. Important prospects of copper, iron, lead and zinc, oil, uranium ore, bauxite (aluminium ore) and some other minerals have been recorded recently and are being investigated in detail.
- 3. Standardization of Mineral Statistics.—At the 1945 Conference of Australian Statisticians, consideration was given to the defective nature of Australian mineral production statistics arising from the widely differing methods adopted by individual States in collecting, compiling and publishing the data. Further attention was given to the problem by a conference in 1948 of officers of the Bureau of Mineral Resources, Geology and Geophysics, State Mines Departments and State and Commonwealth Statistical Bureaux. Following work subsequently undertaken by the Bureau of Mineral Resources, the Commonwealth Bureau of Census and Statistics and other authorities concerned, a specific plan for standardization of Australian mineral production statistics was adopted in 1950. In accordance with the plan, numerous improvements have been introduced and with the introduction of annual Australia-wide industrial censuses for mining and quarrying in 1952, Australian mineral statistics are now considered to be adequate for present needs.

The fundamental provision of the plan for standardization of Australian mineral statistics is that quantities and values of individual minerals produced should be reported in terms of the products in the form in which they are dispatched from the locality of each mine. This involves the inclusion in the mining industry of ore-dressing and elementary smelting of metallic minerals (e.g., in the case of gold) and miscellaneous treatment of non-metallic minerals, where these operations are carried out in an associated plant at or near the mine. For example, in the case of a metal mine, the output is recorded as ore when no treatment is undertaken at the mine or as a concentrate where ore-dressing operations are carried out in associated works in the locality of the mine. In addition to the basic quantity data, the plan provides for the reporting of contents of metallic minerals and of contents or average grade of selected non-metallic minerals. Wherever practicable, contents (based on assay) of metallic minerals are shown for each metal which is a "pay-metal" or a "refiners' prize" when present in the particular mineral.

For the purpose of compiling and publishing data relating to employment, value of output, value of production, etc., a detailed statistical classification for the mining industry has been used in Australia since 1950. For the purpose of this classification, the "Mining Industry" includes all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. As mentioned above, ore dressing and miscellaneous treatment of non-metallic minerals (where these are carried out in an associated plant at or near the mine) are included in the mining industry. However, establishments primarily engaged in smelting and/or refining (including the smelting and refining sections of the large plants operated at Mt. Morgan and Mt. Isa in Queensland and at Mt. Lyell in Tasmania) are omitted and classified to the manufacturing industry. The classification divides the industry into four major groups, namely, Metal Mining, Fuel Mining, Non-metal (excluding Fuel) Mining and Construction Material Quarrying.

The adoption of revised methods of compiling and presenting mineral statistics in 1950 caused a break in continuity of the data published for earlier years, and the introduction of industrial censuses of the mining and quarrying industry in all States in 1952 has caused a further break in continuity of data, particularly those relating to values.

In the main, the data consist of official statistics of Mines Departments furnished to this Bureau by the statisticians of the several States and by the Northern Territory Mines Branch. These statistics have been supplemented, as necessary, by data obtained from the Australian Mines and Metals Association (Inc.), the Bureau of Mineral Resources, Geology and Geophysics and several other sources. The particulars shown have been compiled as far as practicable on the standardized basis. This has involved some re-arrangement of official statistics published by Mines Departments for some States.

In the tables, individual minerals are arranged in four groups, Metallic Minerals, Fuel Minerals, Non-metallic (excluding Fuel) Minerals, and Construction Materials, to correspond with the major groups of the statistical classification of the mining industry.

It should be noted that the statistics included in this chapter omit particulars relating to uranium-bearing minerals.

4. Quantity and Value of Minerals Produced in 1956.—(i) Quantities. In the following table, particulars of the quantities of principal minerals produced are shown for each State and the Northern Territory for 1956.

## QUANTITIES OF PRINCIPAL MINERALS PRODUCED, 1956.

Mineral.									
1.111111111	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
	· · · · · · · · · · · · · · · · · · ·	N	1etallic	MINERA	LS.	<u> </u>			
Antimony Ore and Co	1- 1	-							
	. ton	(a) 468	. 1			78		'	547
	. ,,	4,780	4,674	875		!		:	10,329
	.   "	(a) 8				310		•••	318
Chromite	. ,	• • •				6,096			6,096
Copper Ore, Concentra	te					' '			
and Precipitate	. ,,	5,032	٠	146,035	8	212	41,207	19,267	211,76
Gold Ore, Concentrat	e,	107	!		ı	. :			10
etc. Gold—Other Forms(b)		16 523	44,627	(c)	(3)	(3)	<i>i</i>	ià '	(10)
Imenite Concentrate	oz.	16,523 981	44,027	(6)	(c)	(c) 3,293	(c)	(c)	(c) 4,27
ron Ore	. '000 tons	701		• • •	3,587	3,293	• • • • • • • • • • • • • • • • • • • •	•••	3,92
Lead Ore, Concentrate		337,914		136,784	5,551	7,613	13,490	••	495,85
Manganese Ore		1,513		311		56,234	13,130	1,326	59,38
Pyritic Ore and Conce		1,515		J.1.		00,20		1,520	
* A A	.   "	1,088	٠.	10,250	65,097	55,680	52,373		184,48
Rutile Concentrate .		64,914		31,902					96,81
Fantalite-Columbite Co	n-	i '		<u> </u>		!!!			ĺ
centrate .	.   lb.	١				159,655	• • • •		159,65
Tin Concentrate .	. ton	373		883		358	1,311	1	2,920
Tungsten Concentrates-	-!	1 -		_					
Scheelite Concentrate		2		_5	• •		1,488	.:	1,49
Wolfram Concentrate		4		70	• • •		647	156	87
Zinc Ore and Conce	)~	1 420 566	1	21.050	1.4	'	50 220		530,77
trate Zircon Concentrate	. "	439,566		31,958	14		59,239	• • •	72,45
Elicon Concentrate	• • • • • • • • • • • • • • • • • • • •	50,660	<u>'                                    </u>	21,798	<u>'</u>	<u>`</u>			12,43
			FUEL 1	MINERALS	5.				
Coal, Black—	1	1	ľ						Ī
Semi-Anthracite .	. '000 tons			79			_ 2		8
	. ,,	14,793	119	2,472	**		297		17,68
Sub-Bituminous	. ,,	17_		183	482_	830	<u></u>		1,51
Total	. ,,	14,810	119	2,734	482	830	299	٠	19,27
	•   ,,	17,010	117	2,134	702			·	
		14,610	10,560	2,754					
Coal, Brown (includir	g ,,		10,560	JDING F					
Coal, Brown (includin Lignite)	Non	 METALLI	10,560 C (EXCL	JDING F		nerals.	•••		10,56
Coal, Brown (including Lignite)	Non ton	-METALLI	10,560 C (EXCL)	JDING F	UEL) MI	 NERALS.	•••		10,56
Coal, Brown (includin Lignite)	Non	 METALLI	10,560 C (EXCL	JDING F		nerals.	•••		8,66 6,00
Coal, Brown (includin Lignite)	Non ton	 -METALLI 622 1,042	10,560 C (EXCL)	JDING F	UEL) MI	NERALS. 8,047 927	::	::	8,66 6,00
Coal, Brown (includin Lignite)  Asbestos Barite  Clays— Brick Clay and Sha	Non ton to	622 1,042	10,560 C (EXCLI	JDING F	4,040 326	8,047 927 362	•••		8,66 6,00 3,42
Coal, Brown (includin Lignite)  Asbestos Barite Clays— Brick Clay and Sha Other	Non ton "	 -METALLI 622 1,042	10,560 C (EXCL)	JDING F	UEL) MI	NERALS. 8,047 927		::	8,66 6,00 3,42 77
Coal, Brown (includin Lignite)  Asbestos Barite Clays— Brick Clay and Sha Other	Non ton "le '000 tons	622 1,042 1,521 446	10,560 C (EXCLI	JDING F	4,040 326	NERALS.  8,047 927 362 31 7,713	74 6	::	8,66 6,00 3,42 77
Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite	Non ton le '000 tons	622 1,042	10,560 C (EXCLI	JDING F	4,040 326	8,047 927 362 31		::	8,66 6,00 3,42 77
Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Delays— Felspar (including Co	Non ton le '000 tons	-METALLI 622 1,042 1,521 446 7,599	10,560 C (EXCLI	JDING F	4,040 326 85	NERALS.  8,047 927 362 31 7,713 171	74 6		10,56 8,66 6,00 3,42 77 7,72 115,56
Asbestos Barice Clays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Felspar (including Co nish Stone)	Non ton le '000 tons	 -METALLI 622 1,042 1,521 446 7,599 10.244	10,560 C (EXCLI	JDING F	4,040 4,040 326 85 101,496 4,604	NERALS.  8,047 927 362 31 7,713 171 3,781	74 6		10,56 8,66 6,00 3,42 77 7,72 115,56 18,62
Asbestos Barite  Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Sypsum	Non ton ton lee '000 tons	 -METALLI 622 1,042 1,521 446 7,599 10.244	10,560 C (EXCLU  879 193 	JDING F	4,040 326 85 101,496 4,604 263,136	 NERALS. 8,047 927 362 31 7,713 171 3,781 27,121	74 6		10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48
Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Felspar (including Co nish Stone) Cypsum Limestone	Non . ton	 -METALLI 1,042 1,521 446 7,599 10,244 94,203 1,700	10,560 C (EXCLI	JDING F	4,040 326 85 101,496 4,604 263,136 1,076	NERALS.  8,047 927 362 31 7,713 171 3,781 27,121 357	74 6		10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26
Asbestos Sarite Lignite)  Asbestos Sarite Liays Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Limestone Magnesite	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	 -METALLI 622 1,042 1,521 446 7,599 10.244	10,560 C (EXCLU  879 193 	JDING F	4,040 326 85 101,496 4,604 263,136	 NERALS. 8,047 927 362 31 7,713 171 3,781 27,121	74 6 788 	7	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68
Asbestos Barite  Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Cypsum Limestone Magnesite Mica—Muscovite	Non ton ton ner ner ner nor nor nor nor nor nor nor nor nor no	7,599 10,244 94,203 1,700 63,050	10,560 C (EXCLI  879 193  83,024 813	264 9 5,510	4,040 326 85 101,496 4,604 263,136 1,076 831	362 31 7,713 171 3,781 27,121 357 804	74 6	7	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83
Asbestos Barite Lignite)  Asbestos Barite Ligys Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Felspar (including Co nish Stone) Limestone Magnessite Mica—Muscovite Salt Linestone Mica—Muscovite Salt Linestone	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	 -METALLI 1,042 1,521 446 7,599 10,244 94,203 1,700	10,560 C (EXCLU  879 193 	JDING F	4,040 326 85 101,496 4,604 263,136 1,076	NERALS.  8,047 927 362 31 7,713 171 3,781 27,121 357	74 6 788 	7	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83
Asbestos Sarite Lignite)  Asbestos Sarite Liays— Brick Clay and Sha Other Other Oupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- mish Stone) Jypsum Jimestone Magnessite Mica—Muscovite Salt Jilica (Glass, Chemica	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	7,599 10,244 94,203 1,700 63,050	10,560 C (EXCLI  879 193  83,024 813	264 9 5,510	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965	 NERALS. 8,047 927 362 31 7,713 171 27,121 3,781 27,121 3,57 804 (d) 5,717	74 6 788 	7 28,837	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68
Asbestos Sarite Lignite)  Asbestos Sarite Liays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Celspar (including Co nish Stone) Lignite Limestone Magnesite Magnesite Linestone	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	7,599 10,244 94,203 1,700 63,050	10,560 C (EXCLI  879 193  83,024 813	264 9 5,510	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532	8,047 927 362 31 7,713 171 3,781 27,121 3,781 27,121 3,781 (20,12) 804 (d) 5,717 7,343	74 6	7	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88
Asbestos Liays— Brick Clay and Sha Other Coentrate—For Fertiliz Dolomite Colspan (including Conish Stone) Limestone Magnesite Mica—Muscovite alt Lilica (Glass, Chemice etc.)	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	7,599 10,244 94,203 1,700 63,050 131,155	10,560 C (EXCLU 879 193  83,024 813  d 70,800	264 9 5,510  139  (d) 207	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906	NERALS.  8,047 927 362 31 7,713 171 3,781 27,121 27,121 357 804 (d) 5,717 7,343 4,456	74 6 788 	7 28,837	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88
Asbestos Sarite Lignite)  Asbestos Sarite Llays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Jypsum Jimestone Magnesite Mica—Muscovite Jilica (Glass, Chemica etc.)  ale (including Steatit	Non  ton  te '000 tons  ''  ''  ''  ''  ''  ''  ''  ''  ''	METALLI  622 1,042 1,521 446 7,599 10,244 94,203 1,700 63,050 131,155 673 Cons	10,560 C (EXCLU- 879 193 83,024 813 d 70,800	264 9 5,510  139  (d) 207	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906	362 31 7,713 17,121 3,781 27,121 3,57 804 (d)5,717 7,343 4,456	74 6 788 	7 28,837	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03
Asbestos Sarite  Asbestos Sarite  Asbestos Sarite  Asbestos Sarite  Asbestos Sarite  Brick Clay and Sha Other  Cupreous Ore and Co- centrate—For Fertiliz Dolomite  Felspar (including Co- nish Stone)  Gypsum Limestone  Magnesite  Magnesite  Magnesite  Sarite  Sand	Non ton tele '000 tons '' '' '' '' '' '' '' '' '' '' '' '' ''	METALLI  622 1,042 1,521 446 7,599 10,244 94,203 1,700 63,050 131,155 673 Cons	10,560 C (EXCLU 879 193  83,024 813  d 70,800	264 9 5,510  139  (d) 207	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906	NERALS.  8,047 927 362 31 7,713 171 3,781 27,121 27,121 357 804 (d) 5,717 7,343 4,456	74 6 788 	7 28,837	10,56 8,666 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03
Coal, Brown (includin Lignite)  Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Gypsum Limestone Mica—Muscovite Salt Silica (Glass, Chemica etc.) Fale (including Steatit	Non ton ton non te '000 tons ton lb. ton lb. ton i, non ton ton i, non ton i,	7,599 10,244 94,203 1,700 63,050 131,155 673 CONS	10,560 C (EXCLU  879 193 83,024 813 d 70,800  TRUCTION	264 9 5,510  (a) 207  (b) MATER	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906	362 31 7,713 17,121 3,781 27,121 3,57 804 (d)5,717 7,343 4,456	74 6 788 	7 28,837	10,56 8,66 6,00 3,42 77 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03
Coal, Brown (includin Lignite)  Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Pelspar (including Co- nish Stone) Gypsum Limestone Magnesite Mica—Muscovite Salt Silica (Glass, Chemica etc.) Cale (including Steatit  Sand River Gravel and Grav Boulders	Non  ton  te '000 tons  ''  ''  ''  ''  ''  ''  ''  ''  ''	7,599 10,244 94,203 1,700 63,050 131,155 673 CONS	10,560 C (EXCLU- 879 193 83,024 813 d 70,800	264 9 5,510  139  (d) 207	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906	362 31 7,713 17,121 3,781 27,121 3,57 804 (d)5,717 7,343 4,456	74 6 788  179  4,858	7 28,837	10,56 8,66 6,00 3,42 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03
Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Felspar (including Co nish Stone) Gypsum Limestone Mica—Muscovite Salt Silica (Glass, Chemica etc.) Tale (including Steatit  Sand River Gravel and Grav Boulders Dimension Stone	Non  ton  ton  tele '000 tons  ton  ton  ton  ton  ton  ton  ton	7,599 10,244 94,203 1,700 63,050 131,155 673 CONS	10,560 C (EXCLU 879 193 83,024 813 d 70,800 TRUCTION	264   9     5,510	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906 IALS.(f)	NERALS.  8,047 927 362 31 7,713 17,121 3,781 27,121 357 804 (d)5,717 7,343 4,456	74 6 788 	7 28,837	10,56 8,66 6,00 3,42 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03 4,31 2,11 23
Asbestos Barite Clays— Brick Clay and Sha Other Cupreous Ore and Co centrate—For Fertiliz Dolomite Felspar (including Co nish Stone) Gypsum Limestone Mica—Muscovite Salt Silica (Glass, Chemica etc.) Tale (including Steatit  Sand River Gravel and Grav Boulders Dimension Stone	Non ton ton tele '000 tons ton ton ton ton ton lb. ton lb. ton ly min	METALLI  622 1,042 1,521 446 7,599 10,244 94,203 1,700 63,050 131,155 673 CONS' 1,681 1,895 89	10,560 C (EXCLU  879 193 83,024 813 d 70,800  TRUCTION  1,233 221 9	264 9 5,510 139 (d) 207 MATER (c) (c) 4	4,040 326 85 101,496 4,604 263,136 1,076 831 331,965 16,532 7,906 IALS.(f)	NERALS.  8,047 927 362 31 7,713 171 3,781 27,121 3,781 27,157 804 (d)5,717 7,343 4,456	74 6 788  179  4,858	7 28,837	10,56 8,66 6,00 3,42 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03 4,31 2,11 23
Asbestos Barite  Clays— Brick Clay and Sha Other Cupreous Ore and Co- centrate—For Fertiliz Dolomite Felspar (including Co- nish Stone) Jimestone Magnesite Mica—Muscovite Saltica (Glass, Chemica etc.) Cale (including Steatit Sand River Gravel and Grav Boulders Dimension Stone Crushed and Broke	Non ton ton ton ton ton ton ton ton ton t	7,599 10,244 94,203 1,700 63,050 131,155 673 CONS	10,560 C (EXCLU 879 193 83,024 813 d 70,800 TRUCTION	264   9     5,510	UEL) MI  4,040  326 85  101,496  4,604 263,136 1,076 831  331,965 16,532 7,906	NERALS.  8,047 927 362 31 7,713 17,121 3,781 27,121 357 804 (d)5,717 7,343 4,456	74 6 788  179  4,858	7 28,837	10,56 8,66 6,00 3,42 7,72 115,56 18,62 467,48 4,26 64,68 28,83 e 408,68 159,88 13,03

<sup>(</sup>a) Dispatches from the mine (or sales) as distinct from production. (b) Bullion, alluvial, retorted gold, etc. (c) Not available. (d) Estimated. (e) Partly estimated. (f) Incomplete. (g) Less than half the unit of quantity shown.

<sup>(</sup>ii) Contents of Metallic Minerals. The following table shows the contents of metallic minerals produced in 1956. Further particulars, including data for earlier years, are shown in the several sections dealing with individual minerals later in this chapter.

CONTENTS OF METALLIC MINERALS PRODUCED,
---

Content of Metallic Minerals Produced.	Unit.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Alumina Antimony	ton	1,578 879	2,600	440	.:	23			4,618 903
Beryllium Oxide (BeO) Bismuth Cadmium	unit lb. ton	90 862	::	620	::	3,678	  60	4,500	3,768 5,120 922
Chromic Oxide (Cr <sub>2</sub> O <sub>2</sub> ) Cobalt Copper	" "	 59 4,289		34,898	 1	2,624	8,807	5.000	2,624 59 53,041
Gold	fine oz. '000 tons ton	28,821	38,846	56,022	2,332 17	813,537 211 5,828	17,131	75,421	1,029,821 2,543 299,485
Manganese Manganese Dioxide (MnO <sub>2</sub> ) Molybdenum Dioxide	"	5,551 371	••	140		25,280 179		914	30,971 1,464
sulphide(MoS <sub>2</sub> ) Monazite Osmiridium	lb. ton oz.	87		190 6	::	:: ::	 <sub>25</sub>	••	190 93 25
Platinum Silver	'000 fine oz.	9,289 187,087	2	3,725 48.928	31,248	i92 25,295	1,373 46,455	4	18 14,586 339,013
Tantalite-Columbite (Ta <sub>2</sub> O <sub>5</sub> + Nb <sub>2</sub> O <sub>5</sub> )	1b.				31,240	85,690	938	,	85,690
Tin Titanium Oxide (TiO <sub>2</sub> ) Tunestic Oxide	ton "	269 62,951		630 30,772		1,779	938		2,078 95,502
(WO <sub>2</sub> ) Zinc Zircon	"	229,126 50,135		16,231 21,634	7		1,428 32,718	101	1,582 278,082 71,769

<sup>(</sup>a) Sulphur content of lead and zinc concentrates and pyrite. In addition it was estimated that the content of spent oxide roasted in Australia was 5,877 tons.

VALUE OF MINERALS PRODUCED, 1956. (£'000.)

Mineral.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
		Мета	ьнс Мі	NERALS.				
Copper Ore, Concentrate and Precipitate Gold Ore, Concentrate,	289	••	13,182	(a)	(6)	(b)	1,360	18,182
Gold—Other Forms Iron Ore	245 	653	 297	(b) 1	13,275 (b)	3	1,032	15,506 4,449
Lead-Silver and Lead- Silver-Zinc Ores Lead Concentrate Manganese Ore	240 27,024 18		5,558	2	93 442 285	67 1,127		402 34,151 337
Pyritic Ore and Concentrate  Rutile Concentrate	4,704		30 1,726	(b)	(b)	(b)		1,023 6,430
Tin Concentrate Tungsten Concentrates Zinc Concentrate	230 6 6,565		465 68 597		204	699 3,128 1,052	130	1,599 3,332 8,214
Zircon Concentrate Other Metallic Minerals	407 77	27	197		298	8		604 415
Minerals	39,814	680	22,130	4,584	15,354	9,533	2,552	94,647

<sup>(</sup>iii) Values. Particulars of the estimated values of minerals (mine and quarry products) produced in 1956 are shown in the following table. The values represent the estimated selling value at the mine or quarry of minerals produced during the year.

### VALUE OF MINERALS PRODUCED, 1956-continued.

(£'000.)

Year.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	Aust.
		Fu	EL MINER	ALS.				
Coal, Black Coal, Brown Total, Fuel Minerals	40,637	668 4,644 5,312	6,988 6,988	794  794	2,724	628  628	••	52,439 4,644 57,083
1	Non-meta	LLIC (E	XCLUDING	FUEL)	Mineral	LS.		
Total, Non-metallic (ex- cluding Fuel) Minerals	2,429	1,161	595	2,442	1,268	209	42	8,146
	Co	ONSTRUC	TION MA	TERIALS	.(c)			
Total, Construction Ma- terials	5,910	4,738	491	4,090	884	185		d_16,44
			TOTAL.					
Total, All Minerals and Construction Materials	88,790	11,891	30,204	11,910	20,230	10,555	2,594	d176,32
(a) Less than £500. Australian Capital Territo			e for publi	cation.	(c) In	complete.	(d	Include

5. Mine Production of Principal Metals and Production of Coal and Sulphur, 1952 to 1956.—Particulars of the mine production of principal metals (i.e., metallic contents of minerals produced) and production of coal and sulphur in the years 1952 to 1956 are shown in the following table. Graphs showing details of the mine production of principal metals and coal from 1930 to 1957 may be found on pp. 1029-30.

# MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL AND SULPHUR.

Particulars.	:	Unit.	1952.	1953.	1954.	1955.	1956.
Metallic Content of Mi	nerals						
Produced(a)—		4	18,578	26 606	40.067	45 406	53,041
Copper	•• {	ton		36,585	40,857	45,496	
Gold	• • •	fine oz.	980,435	1,075,181	1,117,742	1,049,039	1,029,821
Lead		ton	228,196	269,344	284,862		299,485
Iron(b)	[	,,	1,883,087	2,131,865	2.274.330	2,304,165	2,542,826
Cilver		fine oz.	11,278,374	12,539,152	13,827,038	14,555,412	14,586,197
Tin		ton	1,611	1,553	2.075	2,017	2,078
		ton	36.881			2,017	95,502
Titanium (TiO, Conten		**		37,067	43,241	57,494	
Tungsten (WO <sub>2</sub> Conter	1t)	,	1,282	1,406	1,372		1,582
Zinc		,,	196,450	239,324	252,659	256,564	278,082
Production of—			' '			•	,
Cool Plants			19,404,047	18.410.845	19,763,039	19.274.751	19,273,834
Decem		"	8,103,764	8,257,299	9,331,255	10,112,206	10,559,801
G-f-b()	• • •	,,					
Sulphur(c)	• •	,,	217,242	225,197	254,403	269,071	344,890

<sup>(</sup>a) Mine production of metals. (b) Estimated. (c) Total sulphur content of lead and zinc concentrates and pyrite produced and of spent oxide roasted.

<sup>6.</sup> Value of Output and Value of Production for Mining and Quarrying.—(i) Individual Industries, 1956. The following two tables show particulars of the value of output and value of production of individual mining and quarrying industries and for all mining and quarrying for the year 1956. The data were obtained from industrial censuses of the mining and quarrying industry which were made on a substantially uniform basis in all States and Territories.

# MINING AND QUARRYING: VALUE OF OUTPUT(a), 1956. (£'000.)

				· ·,					
Industry.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal Mining-									
Gold Mining	250	653	297	(b)	13,275	1	1,032		15,507
Silver-Lead-Zinc Mining	34,104		(c)	(b)	(c)	3,051	أحدث	••• [	54,429
Copper-Gold Mining	22	• • •	(c)	(b)	(c)	(c)	1,360		6,667
Tin Mining	230	• • •	465		204	1,006	1		1,906
Mineral Sands Mining	5,130		1,925		(b)		(b)		7,055
Other Metal Mining	80	27	_ (c)_	4,584	1,327	(c)	159		9,079
Total, Metal Mining	39,816	680	22,130	4,584	15,354	9,527	2,552		94,643
Fuel Mining—									
Black Coal Mining	40,637	668	6,988	794	2,724	628			52,439
Brown Coal Mining	1 1	4,644	l	!					4,644
Total, Fuel Mining	40,637	5,312	6,988	794	2,724	628			57,083
Non-metal (excluding Fuel) Mining—									
Clays(d)	840	452	129	278	223	48		(e)	1,970
Gypsum	171	84		311	21			`	587
Limestone	901	620	(c)	859	(c)	163			3,127
Salt(d)			(c)	(c)	ì `				664
Other Non-metal (ex-	1 i							}	
cluding Fuel) Mining	499	5	17	(c)	(c)	4	42		1,806
Total, Non-metal									
(excluding Fuel)						_			
Mining	2,411	1,161	595	2,462	1,268	215	42	(e)	8,154
Total, All Mining	82,864	7,153	29,713	7,840	19,346	10,370	2,594	(e)	159,880
Construction Material									
Quarrying(d)	5,926	4,738	491	4,070	884	185		146	16,440
Total, All Mining and Quarrying	88,790	11,891	30,204	11,910	20,230	10,555	2,594	146	176,320

<sup>(</sup>a) Selling value at point of sale of mine or quarry products, less transport costs from mine or quarry to point of sale, i.e., value of output at mine or quarry. (b) Not available for publication; included with "Other Metal Mining". (c) Not available for publication. (d) Incomplete. (e) Not available for publication; included with "Construction Material Quarrying".

# MINING AND QUARRYING: VALUE OF PRODUCTION(a), 1956. (£'000.)

Industry.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal Mining—					\range				
Gold Mining	134	474	251	(b)	8,898		809	۱ ا	10,566
Silver-Lead-Zinc Mining	27,105		(c)	(b)	(c)	2,773			44,522
Copper-Gold Mining	8	!	(c)	(b)	(c)	(c)	1,095	! !	4,230
Tin Mining	196		312	1	104	865	1	1 1	1,478
Mineral Sands Mining	4,307		1,467	أمنفنا	(b)		(b)	۱ ۰۰ ۱	5,774
Other Metal Mining	66	27	(c)	4,012	1,105	(c)_	137		7,629
Total, Metal Mining	31,816	501	17,790	4,011	10,525	7,514	2,042		74,199
Fuel Mining-									
Black Coal Mining	32,456	518	5,703	649	2,175	468			41,969
Brown Coal Mining	1 . 1	4,124	[	{	-,				4,124
Total, Fuel Mining	32,456	4,642	5,703	649	2,175	468			46,093
Non-metal (excluding Fuel)									
Mining—	717	414	105	247	222	42			
Clays(d)	127			247 206	223	43	• •	(e)	1,749
Gypsum	595		(c)	703		·i20	• • •		414
Limestone		1	(c)	(c)	(c)		• • •	• • •	2,058
Salt(d) Other Non-metal (ex-		•••	(,	(0)	•••	٠٠.	• • •		514
cluding Fuel) Mining	412	5	17	(c)	(c)	3	4:	, l	1 470
		; <u>-</u>			<del>(c)</del> _	<b>-</b>		<u>:-</u>	1,478
Total, Non-metal (excluding Fuel)	1	1				i		1	{
	1,851	807	345	1,986	1,016	166	4	2 (-)	
Mining									6,213
Total, All Mining	66,123	5,950	23,838	6,646	13,716	8,148	2,084	(e)	126,505
Construction Material		!		l					
Quarrying(d)	5,926	_ 3,507	310	2,841	634	151		105	13,474
Total, All Mining	_								\
and Quarrying	72,049	9,457	24,148	9,487	14,350	8,299	2.08	4 105	1139,979

<sup>(</sup>a) Value of output at mine, less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) Not available for publication; included with "Other Metal Mining". (c) Not available for publication. (d) Incomplete. (e) Not available for publication; included with "Construction Material Quarrying".

(ii) States, 1952 to 1956. The following table shows the value of output and the value of production ascertained from the Australia-wide mineral industry censuses for the years 1952 to 1956. Australian Capital Territory figures for 1952 are not available.

# MINING AND QUARRYING: VALUE OF OUTPUT AND VALUE OF PRODUCTION. (£'000.)

					(= 0001)					
Year		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
				VALUE	of Out	гр <b>ит.</b> (а)				
1952 1953 1954 1955 1956	::	77,097 72,346 78,202 84,244 88,790	8,535 9,329 10,080 10,917 11,891	17,429 17,284 21,603 26,892 30,204	6,047 6,203 8,580 10,512 11,910	17,704 20,011 20,736 19,746 20,230	8,750 8,037 8,955 10,744 10,555	1,282 1,221 1,145 1,691 2,594	(b) 111 103 125 146	136,844 134,542 149,404 164,871 176,320
				Value o	F PRODU	oction.(	:)			
1952 1953 1954 1955	::	63,166 58,042 63,965 69,262 72,049	6,632 7,277 8,146 8,867 9,457	13,860 12,906 15,935 21,732 24,148	5,153 5,051 7,101 8,452 9,487	12,410 13,998 14,776 14,143 14,350	7,325 6,392 7,057 8,612 8,299	1,125 1,117 1,028 1,377 2,084	(b) 92 80 63 105	109,671 104,875 118,088 132,508 139,979

<sup>(</sup>a) Selling value of mine and quarry products at the mine or quarry. (b) Not available. (c) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted.

7. Industrial Census of the Mining and Quarrying Industry, 1956.—Since 1952, industrial censuses of the mining and quarrying industry have been taken annually in all States and Territories on a substantially uniform basis, thus providing important Australian statistics on mining and quarrying operations which were not previously available. A summary of the statistics collected in 1956 is shown in the following table.

#### MINING AND QUARRYING: SUMMARY OF OPERATIONS, AUSTRALIA, 1956.

Particulars.	Unit.	Metal Mining.	Fuel Mining.	Non- metal (exclud- ing Fuel) Mining. (a)	Total, All Mining.	Con- struction Material Quarry- ing.(b)	Total All Mining and Quarry- ing.
Mines and Quarries Persons Employed(c) Salaries and Wages Paid(d)(e) Value of Output(f) Total Fuel, Materials, etc.,	No. £'000	896 23,271 29,829 94,643	265 25,475 28,082 57,083	833 2,970 2,390 8,154	1,994 51,716 60,301 159,880	745 4,329 2,738 16,440	2,739 56,045 63,039 176,320
Used	,,	20,444 74,199	10,990 46,093	1,941 6,213	33,375 126,505	2,966 13,474	36,341 139,979
placements to Fixed Assets(d)	,,	9,609	9,421	1,725	20,755	656	21,411

<sup>(</sup>a) Incomplete for some industries outside the normal administrative control of State Mines Departments (e.g., clays and salt). (b) Incomplete in some States. (c) Average number employed (including working proprietors) during whole year. (d) Excludes mines and quarries employing less than four persons. (e) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (f) Value at mine or quarry. (g) Value of output less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted.

In the next table, statistics of numbers of mines and quarries, persons employed, value of output and value of production are shown for each State, the Northern Territory and the Australian Capital Territory for the year 1956.

#### MINING AND QUARRYING: SUMMARY OF OPERATIONS, 1956.

State or Territory.	Mines and Quarries.	Persons Em- ployed. (a)	Salaries and Wages Paid. (b)(c)	Value of Output.	Total Fuel, Materials, etc., Used.	Value of Production.	Value of Addi- tions and Replace- ments to Fixed Assets.
New South Wales	839	28,316	33,330	88,790	16,741	72,049	8,401
Victoria	229	4,601	4,673	11.891	2,434	9,457	3,737
Oueensland	595	9,339	10,697	30,204	6,056	24,148	3,671
South Australia	577	2,213	1,938	11,910	2,423	9,487	1,540
Western Australia	287	8,030	8,289	20,230	5,880	14,350	2,238
Tasmania	80	2,866	3,337	10,555	2,256	8,299	682
Northern Territory	128	638	730	2,594	510	2,084	960
Aust. Cap. Territory	4	42	45	146	-41	105	182
Australia	2,739	56,045	-63,039	176,320	36,341	139,979	21,411

(a) Average number employed (including working proprietors) during whole year. (b) Excludes mines and quarries employing less than four persons. (c) Excludes drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (d) Value at mine or quarry. (e) Value of output less cost of power, fuel and light and other materials and stores used; depreciation and maintenance costs have not been deducted.

### § 2. Gold.

- 1. Discovery in Various States.—A detailed account of the discovery of gold in the various States appears under this section in Official Year Books Nos. 1 to 4.
- 2. Mine Production.—The following table shows the recorded mine production of gold (i.e., gold content of minerals produced) in the several States and in Australia as a whole during each of the ten decennial periods from 1851 to 1950, and in single years from 1951 to 1956. Owing to defective information in the earlier years it is likely that the recorded production falls considerably short of the actual totals.

GOLD: MINE PRODUCTION.(a) ('000 fine oz.)

						<u> </u>				
Pe	riod.		N.S.W.	Vic.	Q`land.	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
1851-60 1861-70 1871-80 1881-90 1891-1900			2,714 3,220 2,019 1,014 2,432	21,973 15,327 9,564 6,689 7,040	3 489 2,527 3,259 5,648	136 58 52	  42 5,252	186 3 165 357 550	19 168 214	24,876 19,039 14,430 11,587 21,188
1901-10 1911-20 1921-30 1931-40 1941-50	:: :: ::		2,253 1,145 204 569 572	7,095 3,067 593 1,052 800	5,512 2,263 434 1,021 750	73 55 10 53 13	17,784 10,671 4,557 8,474 6,683	604 202 43 130 157	111 23 2 84 148	33,432 17,426 5,843 11,383 9,123
1951 1952 1953 1954 1955	··· ··· ···		49 39 26 32 30	66 68 64 53 38	79 85 92 98 64	(b) (b) (b) (b)	648 727 823 862 835	15 16 17 19 17	39 45 53 54 65	896 980 1,075 1,118 1,049
1956	••		29	39	56	(b)	813	17	75	1,029
Total,	1851-1	956	16,347	73,528	22,380	450	58,171	2,498	1,100	174,474

<sup>(</sup>a) Gold content of minerals produced.

<sup>(</sup>b) Less than 500 fine oz.

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The amount of gold won in Australia in any one year attained its maximum in 1903, when Western Australia also reached its highest point. For the other States, the years in which the greatest yields were obtained were as follows:—New South Wales, 1852; Victoria, 1856; Queensland, 1900; South Australia, 1904; and Tasmania, 1899. In recent years, output has expanded to record levels in the Northern Territory which is now the second largest producer in Australia.

Owing to the exhaustion of the more easily worked deposits and increased costs due to deep mining, the production of gold in Australia declined from 3,837,979 fine oz. in 1903 to 427,160 fine oz. in 1929, the lowest output since its discovery.

Increased activity in prospecting due to prevailing economic conditions resulted in some improvement in 1930, but the marked development between that year and 1939 was caused by the heavy depreciation of Australian currency in terms of gold. Following the outbreak of the 1939-45 War, there was a sharp fall in gold production to 656,867 fine oz. in 1944 and 657,213 fine oz. in 1945, but with the release of man-power after the war there has been a slight upward trend in mine production of gold, which, in 1953, exceeded 1,000,000 fine oz. for the first time since 1942. The devaluation of Australian currency in September, 1949 gave an impetus to gold production, but this was offset in the following years by increasing costs which brought about the closing of several large producers in New South Wates, Victoria and Western Australia.

To assist the industry in meeting the increase in costs, the Commonwealth Government decided in November, 1951, to permit Australian newly-won gold to be sold at a premium The Gold Producers' Association was incorporated in December, on oversea markets. 1951, to implement this decision. Under existing legislation, all gold produced in Australia must be sold to the Commonwealth Bank but the newly-formed Association was permitted to purchase from the Bank each month a maximum quantity of gold for resale on premium markets, equal to the amount of new gold delivered to the Bank by members in the previous month, less the quantity required for industrial purposes in Australia. The net proceeds from premium sales have been distributed to members in proportion to their production of gold. The actual volume of sales has been largely dependent on prices offering and, during 1952 and 1953, premium sales of gold brought an additional return to the industry amounting to about £1,800,000. Towards the end of 1953, however, the price of gold on oversea premium markets fell sharply and subsequent sales have been made at prices very little above the official price. This had an adverse effect on the financial position of the goldmining industry and as a result the Commonwealth Government passed the Gold-Mining Industry Assistance Act in 1954 to prevent any serious decline in gold-mining activity. The operation of this Act has since been extended from two years to five years. In October, 1957, a further amendment to the Act increased the maximum subsidy payable, and also increased the maximum expenditure allowed for mine development in determining costs of production. The production of gold in Australia increased from 1951 to 1954 but fell back in 1955 and 1956 under the pressure of rising costs.

- 3. Sources of Production.—(i) New South Wales. Gold production in 1956 was 28,821 fine oz. The only gold producer of any significance was Wellington Alluvials Ltd., who operate a dredge on the Macquarie River, but other small quantities were won in conjunction with silver, lead and zinc at Broken Hill and at Captain's Flat, and by small prospecting parties throughout the State.
- (ii) Victoria. In 1956, the gold yield in Victoria was 38,846 fine oz. This was slightly higher than in 1955 and halted the decline in production of previous years. Only five producers—four quartz mines and one dredge—produced more than 1,000 fine oz. during the year, the largest of these being the Wattle Gully mine at Chewton in central Victoria.
- (iii) Queensland. The output of 56,022 fine oz. during 1956 was lower than the previous year owing to the lower output from Mt. Morgan, the main producer. The only other major producer is Golden Plateau N.L. at Cracow.

- (iv) South Australia. Only 43 fine oz. of gold were won in 1956 by prospectors in central and northern parts of the State.
- (v) Western Australia. Production of gold during 1956 was 813,537 fine oz. This was lower than production in 1955. More than half the year's total production of gold in Western Australia came from the Coolgardie goldfields, most of the remaining production coming from the Murchison, Dundas, Yilgarn and Mt. Margaret goldfields. The Lake View and Star Mine at Fimiston maintained its position as the largest gold producer in Australia, winning 167,002 fine ozs. during 1956, and eight other mines each produced over 20,000 fine oz. in the same period.
- (vi) Tasmania. Production of gold in Tasmania during 1956 was 17,131 fine oz. Almost all of this production was won as a by-product of lead-zinc mining at Rosebery and of copper mining at Mt. Lyell in western Tasmania but a small amount was also won in tin dredging operations in the north-eastern area of the State.
- (vii) Northern Territory. Gold production in Northern Territory which has been steadily increasing in recent years, reached a record level of 75,421 fine oz. in 1956. Production is centred around Tennant Creek and mines in this area produced 68,308 fine oz., the main producer being the "Nobles Nob" mine.
- 4. Refinery Production.—The quantities and values of the refinery production of new gold of Australian origin are shown in the following table for each of the years 1947 to 1956. The value of the refined new gold is based on the price fixed by the Commonwealth Bank, but allowance is made, from 1952 onwards, for premiums on sales of gold overseas and for industrial purposes in Australia.

GOLD: REFINERY PRODUCTION OF NEWLY WON GOLD OF AUSTRALIAN ORIGIN.

Year.		Quantity.	Value.		Year.		Quantity.	Value.	
			'000. fine oz.	£'000.				'000. fine oz.	£'000.
1947			969	10,430	1952			979	16,037
1948	• • •	• • •	884	9,517	1953		• • •	1,053	16,780
1949	••		879	10,670	1954			1,063	16,589
1950		• •	844	13,077	1955			1,055	16,503
1951			850	13,172	1956			1,044	16,346

The unit value of refinery production of newly won gold of Australian origin rose to £12 2s. 10d. in 1949 as a result of the increase in the price to £15 9s. 10d. per fine oz. fixed by the Commonwealth Bank on 19th September, 1949, consequent upon alteration in the rate of exchange. In 1950 and 1951, the unit values were the Bank's price of £15 9s. 10d. per fine oz., and since 1952 allowance has been made for premiums on gold sold for industrial purposes in Australia and on premium markets overseas, the average value per fine oz. being £16 7s. 7½d. in 1952; £15 18s. 9½d. in 1953; £15 12s. 0d. in 1954; £15 12s. 11½d. in 1955 and £15 13s. 1d. in 1956. From 1st May, 1954, the official price of gold in Australia was raised to £15 12s. 6d. per fine oz. The previous gold price was based on the price for which gold could be sold abroad in official markets less costs of movement. The new price reflects the "parity" value of Australian currency established by the International Monetary Agreement Act 1947. Further information regarding the price of gold realized, including particulars of prices for newly won gold sold on oversea premium markets, is given in Chapter XX.—Private Finance (see page 723.)

5. Changes in Stocks of Gold held in Australia.—The following table shows particulars of production, imports and exports of gold and changes in stocks of gold held in Australia for each of the years 1952-53 to 1956-57.

# CHANGES IN STOCKS OF GOLD HELD IN AUSTRALIA. (Fine oz.)

Particulars.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57.
Mine Production of Gold(a) Imports of Gold(b)(c)	1,037,885 228,407	1,111,420 189,628	1,080,249 175,166	1,032,436 175,649	1,062,128 144,192
Total	1,266,292	1,301,048	1,255,415	1,208,085	1,206,320
Exports of Gold(b)	1,250,162	863,464	864,391	531,664	908.283
Gold Content of Ores and Concentrates Exported	12,441	12,526	11,133	13,427	21,817
Net Industrial Absorption of Gold	37,816	51,543	45,253	34,678	39.815
Total	1,300,419	927,533	920,777	579,769	969,915
Changes in Stocks of Gold held in Australia( $d$ )	-34,127	+373,515	+334,638	+628,316	+236,405

<sup>(</sup>a) Gold content of minerals produced in Australia. (b) Includes gold contained in matte. (c) Excludes gold imported in some minor minerals. (d) Includes gold content of mineral products awaiting refining; excludes gold specie.

6. Production in Principal Countries.—The quantities of gold produced in the principal producing countries and the estimated world total production in each of the years 1952 to 1956 are shown in the table hereunder.

GOLD: PRODUCTION IN PRINCIPAL COUNTRIES AND WORLD TOTAL.
('000 fine oz.)

	- 1	( 000 1	nie Uz.)		<del></del>	
Country		1952	1953.	1954.	1955	1956.
Union of South Africa	-	11,819	11,941	13,237	14,601	15,891
Canada		4,472	4,056	4,366	4,556	4,379
United States of America		1,893	1,958	1,832	1,884	1,850
Australia		980	1,075	1,118	1,049	1,030
Gold Coast		691	731	787	687	638
Rhodesia		499	504	538	527	537
Colombia		422	437	377	381	440
Philippines		469	481	416	419	400
Belgian Congo		369	371	365	369	374
Mexico	į	459	483	387	383	350
Estimated World Total(a)	!	24,300	24,200	25,700	26,900	28,000

<sup>(</sup>a) Excludes U.S.S.R.

<sup>7.</sup> Employment in Gold Mining.—Particulars of the numbers of persons employed in gold mining are shown in § 13 (page 1040).

<sup>8.</sup> Assistance to Gold-mining Industry.—In 1939, a tax was imposed on gold produced in Australia or any Australian Territory but this tax was suspended in 1947. Further relief was given to the gold-mining industry in 1952 and 1953 by permitting sales of gold on oversea premium markets, but with the disappearance of high premium prices overseas in late 1953, many producers were faced with the prospect of closing down. To meet this situation, the Gold-Mining Industry Assistance Act was assented to on 18th November, 1954. The purpose of this Act was to assist the gold-mining industry by the payment of subsidy subject to certain conditions on the production and sales of gold during the two financial years 1954-55 and 1955-56. In 1956, the operation of the Act was extended for a further three years to 1958-59. A further amendment enacted on 22nd October, 1957, raised the maximum

subsidy payable and increased expenditure allowances for mine development. Under this amendment, which operates from 1st July, 1957, the subsidy payable to small producers whose annual output does not exceed 500 fine ozs. was raised from £1 10s. 0d. per fine oz. to £2 per fine oz., irrespective of cost of production. For large producers, the formula for determining the amount of subsidy payable remained unchanged, that is: Three-quarters of the excess of average cost of production per fine oz. over £13 10s. 0d.

However, the maximum rate of subsidy payable was increased from £2 per fine oz. to £2 15s. 0d. per fine oz. Where a producer receives an amount in excess of the official price of £15 12s. 6d, per fine oz. as a result of sales on oversea premium markets or otherwise, the subsidy payable shall be reduced by the amount of the excess. The subsidy will also be limited to the extent that the annual net profit of a producer will not, with the addition of the subsidy, exceed 10 per cent. of the capital investment in the company. A further condition of the Act is that the recovery rate of the mine shall be maintained at the level of the year previous to the Act.

Payments under the Act commenced in March, 1955, and the amounts paid to gold producers in the various States and Territories of Australia during 1955, 1956 and 1957 are shown in the following table.

# NET SUBSIDY PAYMENTS TO GOLD PRODUCERS.

				(=-,					
Year.	New South Wales.	Vict.	Q'land.	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Papua and New Guinea.	Total.
1955 1956 1957	225 17 34	29,657 31,478 56,044	966 2,848 620		199,051 496,819 512,708	::	441 1,020 8,345	6,606 63,979 10,761	236,946 596,161 588,512

### § 3. Silver, Lead and Zinc.

1. Mine Production.—The following table shows for 1956 the mine production (metallic content of ores and concentrates produced) of silver, lead and zinc in Australia, and the respective minerals in which these metals were contained.

SILVER, LEAD AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED, 1956.

which co	ntained.		Silver (fine oz.).	Lead (tons).	Zinc (tons).
oncentr	ate		1,016,671	2,355	••
etc.			205,388		
			474,629	3,990	
			12,241,159	286,020	
			648,350	7,120	278,082
			14,586,197	299,485	278,082
	oncentre etc. 	· · · · · · · · · · · · · · · · · · ·	oncentrate	oncentrate	oncentrate

The following table shows the mine production of silver, lead and zinc in Australia, for the years 1952 to 1956.

SILVER, LEAD AND ZINC: CONTENT OF ORES AND CONCENTRATES] PRODUCED, AUSTRALIA.

	Metal.	Unit.	1952.	1953.	1954.	1955.	1956.
Silver		'000 fine oz.		12,539	13,827	14,555	14,586
Lead		. ton	228,196	269,344	284,862	295,944	299,485
Zinc	·· ·	. ,,	196,450	239,324	252,659	256,564	278,082

The following table shows the quantities of silver, lead and zinc contained in minerals won in the several States of Australia in the year 1956:—

SILVER, LEAD AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES.

S	tate.			Silver (fine oz.).	Lead (tons).	Zinc (tons).
New South Wales				9,289,583	238,319	229,126
Victoria				2,255	[]	
Oueensland			٠.	3,724,596	43,104	16,231
South Australia				653	17	7
Western Australia				192,589	5,828	
Tasmania				1,372,881	12,217	32,718
Northern Territory	• •	•	• •	3,640	••	••
Australia				14,586,197	299,485	278,082

Particulars of the values ascribed to the various minerals containing silver, lead and zinc for the year 1956 are shown in the detailed table relating to mineral production on page 1004.

2. Sources of Production.—(i) New South Wales. By far the most silver-lead-zinc ore in Australia is won from the massive silver-lead-zinc sulphide deposit at Broken Hill. The companies concerned in operating this gigantic lode are North Broken Hill Ltd., which mines the northern limb of the ore-bearing structure, and Broken Hill South Ltd. and Zinc Corporation Ltd. (with which is associated New Broken Hill Consolidated), which are conducting operations on the southern limb.

The present-day sulphide ores are concentrated by gravity and flotation methods at Broken Hill. The lead (galena) concentrates are railed to Port Pirie and smelted to produce lead bullion which is later refined by a continuous lead refining process for the elimination of arsenic and antimony and the recovery of silver and gold. Lead concentrates produced at Broken Hill are now in excess of Port Pirie smelter capacity and part of the Broken Hill production is exported. About half of the zinc concentrate produced at Broken Hill is exported from Australia. Most of the remainder is treated at Risdon in Tasmania.

At Captain's Flat, Lake George Mines Ltd. is operating a lode of similar constitution. Concentration of the ore is carried out at the mine itself, after which process individual concentrates of zinc and lead (containing silver) are dispatched to Port Kembla, New South Wales, for further treatment. Concentrates of copper, pyrite and gold are also produced at this mine.

Silver-lead-zinc ore has been mined in small quantities in various other parts of the State, the more important localities being Howell, Yerranderie and Kangiara.

(ii) Victoria. Small quantities of lead sulphide ore occur on most of Victoria's gold-fields and in minor amounts in the Omeo, Bethanga and Cassilis districts. There has been no production of lead ore in recent years, the total recorded production being about 800 tons valued at £5.892.

The whole of the Victorian mine production of silver, 2,255 fine oz. in 1956, was won as a by-product of the gold mining industry.

(iii) Queensland. Silver produced in Queensland is obtained mainly as a by-product of ores of other metals such as lead-zinc and copper ores at Mt. Isa and copper-gold ore at Mt. Morgan.

Nearly all the output of lead in Queensland is produced at Mt. Isa in the far northwest of the State, where mining is carried out on extensive silver-lead-zinc ore and copper ore bodies. Lead concentrate produced at Mt. Isa is smelted to lead bullion at the mine. All Mt. Isa lead bullion is exported overseas, where certain impurities, such as antimony, arsenic and copper, as well as silver, are removed to yield a pure lead suitable for commercial use.

Zinc concentrates produced by Mt. Isa are also exported overseas. Copper ore is mined and smelted on a large scale at Mt. Isa and details of those operations are given in § 4.

- (iv) South Australia. Output of lead from local ores has been very small in recent years. In 1956, 51 tons of lead-silver ore, containing 17 tons of lead and 653 fine oz. of silver and 14 tons of zinc concentrate with a zinc content of seven tons, were produced. This was the first recorded production of zinc in South Australia since 1903.
- (v) Western Australia. Production of lead concentrate in Western Australia was considerably higher in 1956 than in the previous year. During 1956, 1,282 tons of leadsilver ore and 6,331 tons of lead concentrate were produced, mainly from the Northampton area and from Braeside, east of Port Hedland.
- Silver in Western Australia is obtained as a by-product of the gold-mining industry. which produced 182,820 fine oz. of silver out of the State's total production of 192,589 fine ozs. in 1956. There was no production of zinc in Western Australia during 1956.
- (vi) Tasmania. There are two large centres of silver-lead-zinc mining in Tasmania, the more important being that operated by the Electrolytic Zinc Company of Australasia Ltd. at Read-Rosebery. This company also operates the electrolytic zinc reduction works at Risdon near Hobart. Although the product of this field is primarily zinc, lead and copper-lead concentrates are also produced.

The lead concentrates and copper-lead concentrates produced at Rosebery are exported overseas, while the zinc concentrates, containing some lead, are treated at Risdon. The Risdon plant also treats considerable quantities of zinc concentrates from the Broken Hill mines.

Of secondary importance to Rosebery is the Mount Farrell field, situated 6 miles north-east of Rosebery. These ore-bodies are mainly silver-lead lodes which yield a lead concentrate with high silver content. The zinc content is insufficient to warrant recovery.

Most of the State's silver is contained in concentrates produced at Rosebery, the remainder being contained in copper concentrate produced at Mt. Lyell and in lead concentrate produced at several small mines in the west coast district.

- (vii) Northern Territory. There was no production of lead-silver ore in the Northern Territory in 1956.
- 3. Production and Sales of Refined Silver, Lead and Zinc.—In the following table, details are given of the production and sales of refined primary silver, lead and zinc as recorded from data received from the Australian Mines and Metals Association and the Bureau of Mineral Resources. The figures shown for refined silver production include small quantities recovered from imported materials.

## REFINED SILVER, LEAD AND ZINC: PRODUCTION AND SALES, AUSTRALIA.

Particulars.		1952.	1953.	1954.	1955.	1956.
	SILVE	R ('000 fin	e oz.).		· ·	
Production (a)	1	6,773	6,595	8,474	7,818	8,232
Sold to Australian consumers (b) Exported or sold for export (b)	::	1,045 5,876	1,447 4,755	1,977 6,989	1,928 5,793	1,893 6,214
	1	LEAD (tons	).			
Refined Lead— Production (a)		156,639	172,468	200,409	187,134	194,500
Sold to Australian consumers (b)		31,566	31,663	42,088	45,851	38,616
Exported or sold for export (b)  Lead Bullion—		119,648	141,007	153,847	148,189	151,62
Produced for export (a)		37,709	34,050	38,146	37,392	47,658
	:	ZINC (tons	).			
Production (a)	[	87,438	90.178	104,523	101,090 [	104,993
Sold to Australian consumers (b) Exported or sold for export (b)	:: ]	50,174 38,132	58,524 32,881	61,478 36,130	71,355 34,049	69,760 32,718

<sup>(</sup>a) Source: Bureau of Mineral Resources.

4. Production in Principal Countries and World Total:—The following table shows, for the years 1954 to 1956, particulars of silver, lead and zinc production (mine basis) in principal producing countries, together with the estimated world total, according to data published by the Mineral Resources Division of the Overseas Geological Surveys.

<sup>(</sup>b) Source: Australian Mines and Meta's Association.

SILVER, LEAD AND ZINC: MINE PRODUCTION IN PRINCIPAL COUNTRIES AND WORLD TOTAL, 1954 TO 1956.

Country.	1954.	1955.	1956.			
	Sı	LVER (fine oz.).	<u> </u>	·		
Mexico		39,896,467 1 47,957,655		43,077,046		
United States of America		36,941,384	37,197,742	37,127,149		
Canada		31,117,949	27,984,204	28,794,57		
Peru		20,405,883	22,947,625	22,328,755		
Australia		13,827,038	14,555,412	14,586,197		
Bolivia		5,043,680	5,851,242	7,543,304		
Japan		6,162,815	5,948,627	6,166,963		
Belgian Congo		4,533,000	4,083,000	3,794,000		
Estimated World Total		189,000,000	197,000,000	195,000,000		
	L	EAD (long tons).				
United States of America		290,553	301,808	311,008		
U.S.S.R		(a) 275,000	(a) 290,000	(a) 305,000		
Australia		284,862	295,944	299,485		
Mexico		213,203	207,486	196,457		
Canada		195,085	181,037	166,674		
Peru		108,328	116,875	127,035		
Estimated World Total		2,028,000	2,110,000	2,140,000		
	Z	INC (long tons).				
United States of America		422,742	459,528	484,232		
Canada		336,153	386,926	378,232		
Australia		252,659	256,564	278,082		
U.S.S.R		(a) 240,000	(a) 255,000	(a) 270,000		
Mexico		220,215	265,144	244,956		
Peru		156,058	163,459	152,623		
Poland		139,900	153,700	150,900		
Estimated World Total		2,560,000	2,770,000	2,880,000		

<sup>(</sup>a) Estimated.

5. Prices of Silver, Lead and Zinc.—The following table shows average prices in Australia and on the London Metal Exchange during the years 1952 to 1956. Lead and zinc prices were controlled in Australia and the United Kingdom after the outbreak of war in 1939, but were decontrolled in Australia on 21st April, 1953. Free trading in lead in the United Kingdom, after thirteen years of Government control, was resumed on 1st October, 1952, while the fixing by regulation of the price of zinc was abandoned from 1st January, 1953. Silver prices have not been controlled in Australia or the United Kingdom.

PRICES OF SILVER, LEAD AND ZINC.

Metal.		1952.	1953.	1954.	1955.	1956.
Australian Prices, in Australian currency—						
Silver, per fine oz. (a)	!	s. d. 7 9 £	s. d. 7 8 £	s. d. 7 7 8 £	s. d. 8 1 £	s. d. 8 3 £
	(b) (b)	75 75	(c) 104 (c) 92	114 101	127 114	140 122
in sterling—	,				i	
Silver, per fine oz	1	s. d. 6 2 f	s. d. 6 2 £	s. d. 1 6 2 £	s. d.   6 4   £	s. d. 6 7 £
Lead, per ton Zinc, per ton	(d) (b)	135 150	91 75	96 78	106 91	116 98

<sup>(</sup>a) Silver prices shown represent export parity calculated from London Metal Exchange prices. (b) Prices fixed by regulation. (c) Price regulation was abandoned from 21st April, 1953; average market prices have been used thereafter. (d) Price regulation was abandoned from 1st October, 1952; average market prices have been used thereafter.

6. Employment in Silver, Lead and Zinc Mining.—Particulars of the number of persons employed in mining for these metals are shown in §-13, page 1040.

### § 4. Copper.

1. Mine Production.—Copper is widely distributed throughout Australia. However, the principal producing States in 1956 were Queensland, Tasmania, Northern Territory and New South Wales, in that order of magnitude. The opening of a new smelting plant at Mt. Isa in Queensland early in 1953 doubled the output of copper in Australia over the previous year, and production in 1956 was 53,041 tons. The table hereunder shows the quantity of mine production of copper (copper content of ores and concentrates produced) in Australia for the years 1952 to 1956. It should be noted that the minerals shown below contain, in addition to copper, certain other metals.

COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED, AUSTRALIA

	10113.7				
Mineral in which Contained.	1952.	1953.	1954.	1955.	1956.
Copper Ore, Concentrate and Precipitate Gold Ore, Concentrate, etc	16,125 · 1 2,163 289	33,007 1 3,037 540	37,041 (a) 3,241 575	41,674  3,224 598	48,860 (a) 3,462 719
Total	18,578	36,585	40,857	45,496	53,041

(a) Less than half a ton.

Particulars of the copper content of ores and concentrates produced in each producing State and the Northern Territory, as recorded by this Bureau from data obtained from the several State Mines Departments and other sources for the years 1952 to 1956, are shown in the table below.

COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED, STATES.

		(T)	ons.)		·····	
State.		1952.	1953.	1954.	1955.	1956.
New South Wales Queensland South Australia Western Australia Tasmania Northern Territory		3,562 6,966 2 7 7,722 319	3,626 23,955 1 15 8,902 86	3,182 27,207 (a)  9,880 588	3,492 30,738  3 8,394 2,869	4,289 34,898 1 46 8,807 5,000
Australia		18,578	36,585	40,857	45,496	53,041

(a) Less than half a ton.

2. Sources of Production.—(i) New South Wales. The copper content of all ores and concentrates produced in New South Wales amounted to 4,289 tons in 1956. The only producer of copper concentrate in the State was the Lake George mine at Captain's Flat, but the major production of copper was as a by-product of lead and zinc mining at Broken Hill.

- (ii) Queensland. In 1956, mine production of copper amounted to 34,898 tons. The main centre of production is the Cloncurry field in the north-western part of the State. Since the opening of the new copper smelter at Mt. Isa in February, 1953, copper production in Queensland has increased rapidly and the Mt. Isa mine now produces about half of the present total Australian output. Lead bullion and zinc concentrate are also produced at Mt. Isa. The only other major copper producer is Mt. Morgan, just south of Rockhampton, where copper is produced in conjunction with gold.
- (iii) South Australia. Deposits of copper were found in the past over a large portion of South Australia, but the principal fields have been exhausted and output in recent years has been negligible.
- (iv) Western Australia. During 1956, 212 tons of copper concentrate containing 46 tons of copper were produced. The bulk of copper ore mined in Western Australia in recent years has been for use in fertilizers as a trace-element and details of its production are given in § 12, Non-metallic Minerals (see page 1039).
- (v) Tasmania. The quantity of copper produced in Tasmania during 1956 was 8,807 tons, the Mount Lyell Mining and Railway Co. Ltd. providing the greater part thereof. The remainder consisted mainly of copper in copper-lead concentrates exported from Read-Rosebery.
- (vi) Northern Territory. The greatest part of the output of 5,000 tons of copper in the Northern Territory during 1956, came from the Peko mine at Tennant Creek. Although originally worked as a gold mine, high-grade copper ore was discovered there, and since the new milling plant came into operation in June, 1954, the mine has become the major producer of copper in the Northern Territory. Copper concentrate is also produced at Rum Jungle by Territory Enterprises Pty. Ltd. but details are not available for publication and are not included in the Northern Territory total.
- 3. Smelter and Refinery Production of Copper.—The production of blister copper in Australia has more than doubled since the copper smelter at Mt. Isa commenced operations in 1953. Blister copper is also produced at Mt. Lyell in Tasmania, Mt. Morgan in Queensland and at Port Kembla in New South Wales. Copper concentrate smelted at Port Kembla is mainly from Lake George Mines Pty. Ltd. at Captain's Flat, N.S.W. and Peko Mines N.L. at Tennant-Creek, N.T. The production of primary blister copper in Australia during 1956 was 49,030 tons compared with 37,439 tons in 1955 and 20,008 tons before the opening of the Mt. Isa smelter in 1952.

At present Mt. Isa has no facilities for refining copper, and depending on local requirements and the refining capacity available at Port Kembla, the excess blister copper is exported to the United States of America for refining. Mt. Isa Mines are at present constructing an electrolytic refinery near Townsville, Queensland with an initial annual capacity of 30,000 tons. Blister copper produced at Mt. Morgan is shipped to Port Kembla for refining and the recovery of gold, which in 1956 averaged just over 7 fine ozs. per ton of blister copper.

At Mt. Lyell, refined copper is produced by electrolytic process, and, apart from some sold in Tasmania, the cathode copper produced is shipped to Port Kembla for casting into refinery shapes.

The refining plant operated by the Electrolytic Refining and Smelting Co. at Port Kembla, is a custom smelter and refinery which treats copper ore, concentrates, and metal in all stages. It has an annual capacity of 32,000 tons of electrolytic copper. Fire-refining, which is a cheaper process, is done on a smaller scale when materials are amenable to that treatment. There is also a refinery for the recovery of precious metals from tank house slimes. In the following table, details are given of the production and sales of refined copper, as recorded from data received from the Australian Mines and Metals Association and the Bureau of Mineral Resources.

REFINED COPPER(a): PRODUCTION AND SALES, AUSTRALIA.

(Tons.)									
Particulars.		1952.	1953.	1954.	1955.	1956.			
Sold to Australian consumers (c)		19,623 17,884	16,682 15,415 2,607	29,287 29,361	28,148 27,366	29,307 29,038 650			

<sup>(</sup>a) Refined from domestic primary copper. (c) Source: Australian Mines and Metals Association.

<sup>(</sup>b) Source: Bureau of Mineral Resources.

4. Production in Principal Countries and World Total.—The following table shows the mine production of copper during 1954, 1955 and 1956 from the principal producing countries as published by the Minerals Resources Division of the Overseas Geological Surveys and their estimate of total world production in those years.

COPPER: MINE PRODUCTION IN PRINCIPAL COUNTRIES AND WORLD TOTAL, 1954 TO 1956. (Long Tons.)

C	Country.				1954.	1955.		1956.
United States of A	merica		<del></del>		745,957	891,580	i	982,417
Chile				1	368,093	438,859		494,851
U.S.S.R				(a)	355,000	(a) 400,000	(a)	425,000
Rhodesia				}	392,000	354,016	1	399,095
Canada					270,296	291,066		315,440
Belgian Congo				Ì	220,257	231,394	}	246,016
Mexico				1	53,940	53,812		82,528
Japan					65,228	71,845	l	77,230
Australia				ļ	40,857	45,496	1	53,041
Union of South A	frica			1	41,641	43,963		45,762
Peru				1	37,818	42,718		45,618
Estimated V	Vorld To	tal		2	2,820,000	3,110,000	-	3,450,000

(a) Estimated.

5. Prices.—From the outbreak of war in 1939 to August, 1953 in the United Kingdom and October, 1954 in Australia, the price of copper was fixed by regulation. Private trading has now been resumed in both countries. Details of the average price for the years shown are given in terms of Australian currency and sterling in the following table:—

AVERAGE PRICE PER TON OF ELECTROLYTIC COPPER IN AUSTRALIA AND THE UNITED KINGDOM.

		( <del>z</del> .)			
Country.	1952.	1953.	1954.	1955.	1956.
Australia — in Australian currency(a) · · · ·	309	330	(b) 310	437	435
United Kingdom-in sterling	259	(c) 253	249	352	304

<sup>(</sup>a) Ex works Port Kembla. (b) Average market prices from 26th October, 1954. (c) Average market prices from 5th August, 1953.

6. Employment in Copper Mining.—Particulars of the numbers of persons engaged in the mining of copper and copper-gold ores are shown in § 13, page 1040.

#### § 5. Tin.

1. Mine Production.—The following table shows the tin content of concentrates produced in each State and the Northern Territory for the years 1952 to 1956 as recorded by this Bureau.

TIN: CONTENT OF TIN CONCENTRATES PRODUCED: STATES, (Tons.)

State.		1952.	1953.	1954.	1955.	1956.
New South Wales		396	342	272	270	269
Victoria		39	31	26	2	
Queensland		330	292	730	770	630
Western Australia		65	76	80	119	240
Tasmania		772	788	947	853	938
Northern Territory	]	9	24	20	3	1
Australia	-	1,611	1,553	2,075	2,017	2,078

- 2. Sources of Production.—(i) New South Wales. Production of tin concentrates in 1956 was 373 tons, with a tin content of 269 tons, compared with 378 tons (tin content 270 tons) in 1955. A large proportion of the output in this State is obtained by dredging and sluicing, principally in the New England district.
- (ii) Victoria. With the closing down of the Eldorado gold dredge in July, 1954, the production of tin in Victoria virtually ceased. Production during 1955 amounted to 3 tons of concentrates, with a tin content of 2 tons. In 1956, there was no production in the State.
- (iii) Queensland. The chief districts in Queensland producing tin concentrates during 1956 were Herberton, 793 tons; Cooktown, 29 tons; Kangaroo Hills, 17 tons; Chillagoe, 22 tons; and Stanthorpe, nine tons. The total production in 1956 amounted to 883 tons, compared with 1,092 tons in 1955. The tin content in 1956 and 1955 was 630 tons and 770 tons respectively. It is interesting to compare these production figures with those recorded in this State in the early years of this century when the output ranged between 2,000 and 5,000 tons per annum.
- (iv) Western Australia. The quantity of tin concentrates reported in this State in 1956 amounted to 358 tons with a tin content of 240 tons, compared with 180 tons in 1955 (tin content, 119 tons). Production was mainly in the Pilbara and Greenbushes fields.
- (v) Tasmania. For 1956, the output amounted to 1,311 tons of tin concentrates, an increase of 79 tons on the output of the previous year. The tin content for 1956 was 938 tons and for 1955, 853 tons.
- (vi) Northern Territory. The production for 1956 amounted to one ton of concentrate compared with five tons of concentrate produced during 1955. The tin content for 1956 and 1955 was one ton and three tons respectively.
- 3. Production of Refined Tin.—There are two firms engaged in the smelting of tin in Australia, both located in Sydney, New South Wales. Production recorded by the Bureau of Mineral Resources amounted to 1,850 tons in 1956, compared with 2,004 tons in 1955.
- 4. Production in Principal Countries and World Total.—The production of tin reached its maximum in 1941 when 241,400 tons were recorded. The chief producing countries of the world are—Federation of Malaya, Bolivia, Indonesia, Belgian Congo, Thailand and Nigeria and in recent years these countries have produced approximately 90 per cent. of the total production. Australia's share of the world's tin production is about 1 per cent.

The production of tin ore, in terms of metal, as published by the International Tin Study Group and other authorities, for the principal producing countries in 1955 and 1956, was as follows.

TIN: PRODUCTION IN PRINCIPAL COUNTRIES.

(Long Tons.)

C		Produc	ction.	G	Production.	
Country.		1955.	1956.	Country.	1955.	1956.
Malaya		61,244	62,296	Australia	2,017	2,078
Indonesia		33,366	29,579	Union of South Africa	1,283	1,442
Bolivia		27,921	26,421	Portugal	1,445	1,276
Belgian Congo		15,303	14,764	United Kingdom	1,037	1,066
Thailand		11,022	12,481	_		ŕ
Nigeria		8,159	9,067	Estimated World		
China	[	8,400	8,400	Total(a)	177,400	174,600

(a) Excludes U.S.S.R.

5. Prices.—At the outbreak of war in September, 1939, the price of tin in Australia and in London was fixed by regulation. London control of tin prices ceased on 14th November, 1949, while the Australian price was decontrolled on the 21st April, 1953. Details of the movement in average prices for the years 1952 to 1956 are given in terms of Australian currency and sterling in the following table.

AVERAGE PRICE PER TON OF TIN IN AUSTRALIA	AND THE UNITED KINGDOM.
(£.)	

Country.	1952.	1953.	1954.	1955.	1956.
Australia—in Australian currency (a) United Kingdom—in sterling (b)	1,151	919	911	947	1,014
	965	731	<b>720</b>	741	788

<sup>(</sup>a) Prices fixed by regulation ex smelters for sales of 10 cwt. or more or in ingots of 70 lb. or more to 21st April, 1953; average market prices thereafter.

(b) Average spot market prices for standard tin.

6. Employment in Tin Mining.—The number of persons employed in tin mining is shown in § 13 (page 1040).

## § 6. Iron.

- 1. General.—Although iron ore is widely distributed throughout Australia, the only known ore bodies of large extent and high grade which are easily accessible are those situated at Iron Knob, South Australia and at Yampi Sound, Western Australia. Estimates of the high grade reserves at these centres place the quantities available at approximately 200 million tons and 100 million tons respectively. Bearing in mind the expansion of the iron industry in Australia, and the limitations of these reserves, the Commonwealth Government prohibited the export of iron ore from 1st July, 1938.
- 2. Mine Production.—(i) Australia. Production of iron ore for smelting purposes and estimated iron ore content are shown below for the years 1952 to 1956:—

IRON ORE: PRODUCTION, AUSTRALIA. (Tons.)

(Tolol)									
Particulars.	1952.	1953.	1954.	1955.	1956.				
Production of Iron Ore Estimated Iron Content	2,907,754 1,883,087	3,298,718 2,131,865	3,518,804 2,274,330	3,572,609 2,304,165	3,923,985 2,542,826				

(ii) New South Wales. Since 1945, no iron ore has been mined in this State for conversion into pig-iron. For many years, South Australia has been the chief source of supply for New South Wales blast furnaces.

Small quantities of iron oxide produced in New South Wales are used by the various gas-works for purifying gas, and also in the manufacture of paper, and for pigments. These supplies are drawn chiefly from the deposits in the Port Macquarie Division. During 1956, 3,527 tons of oxide were won.

- (iii) Victoria. Deposits of iron ore exist in the Nowa Nowa area of East Gippsland, but much larger quantities of ore than are at present known will have to be proved if the area is to become an economic source of iron. In 1955, 2,300 tons of limonite (iron oxide) were produced at Buchan for gas purification purposes.
- (iv) Queensland. Deposits of iron ore in the Constance Range area of north-west Queensland may prove to be the largest deposits in Australia. First indications were that the ore was too low in grade to warrant exploitation. Later investigations have been more promising and an extensive programme of drilling and detailed field mapping is now being carried out to evaluate the deposits. The output of 4,093 tons of iron oxide for 1956 came from the Townsville district.
- (v) South Australia. The main production of iron ore in Australia is from the deposits worked by The Broken Hill Proprietary Co. Ltd. at Iron Knob in the Middleback Ranges near Whyalla. Production in 1956 reached a record level of 3,587,095 tons (estimated iron content, 2,331,611 tons). The deposits of iron ore at Iron Baron and Iron Prince are

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now being developed. Production from Iron Baron commenced early in 1958 and it is planned to reach a rate of one million tons of ore annually. The presence of thirty million tons of high grade iron ore has been proved near the leases held by B.H.P. Co. Ltd. and it is proposed to offer the company new leases in this area covering 250 square miles.

- (vi) Western Australia. The production of iron ore in Western Australia during 1956 was 336,890 tons with an estimated iron content of 211,215 tons. The major part of this production came from Yampi Sound, and was shipped to New South Wales for smelting. The Yampi Sound iron ore is of high grade but much of it is powdery and friable and a sintering plant was opened at Port Kembla, N.S.W. in 1957 to beneficiate the ore. The remaining production all came from Koolyanobbing.
- (vii) Tasmania. There has been no production of ironstone in Tasmania since 1943 when seven tons were produced. In 1956, 5,685 tons of iron oxide were produced for fluxing and other purposes.
- (viii) Northern Territory. Extensive deposits of low grade iron-bearing material have been discovered in the Roper River area. With modern ore beneficiation methods, these deposits may have some economic significance.
- 3. Imports.—Imports of iron ore from New Caledonia began in 1956. This ore has a lower iron content than ore from the Middleback Range and Yampi Sound. It contains impurities such as chromium and nickel and at present it is blended with Australian ores for smelting. During 1956, 14,052 tons of iron ore were imported into Australia, compared with 32 tons in 1955.
- 4. Sources of Production.—(i) Australia. The production of pig-iron and steel in Australia, of which New South Wales is the main producing State, is shown in the following table for each of the years ended 31st May, 1948 to 1957.

PIG-IRON AND STEEL: PRODUCTION, AUSTRALIA.
(Tons.)

 May.	Pig-iron. (a)	Steel Ingots.	Year Ended 31st May.		Pig-iron. (a)	Steel Ingots.	
 	1,235,574	1,344,692	1953			1,691,693	1,801,028
 	1,044,957	1,178,010	1954			1,826,711	2,116,813
 	1,097,635	1,217,971	1955			1,868,841	2,208,708
 	1,313.332	1,443,831	1956			1,910,521	2,320,289
 	1,430,027	1,521,386	1957			2,097,349	2,853,501
		1,044,957 1,097,635 1,313,332	1,044,957 1,178,010 1,097,635 1,217,971 1,313,332 1,443,831	1,044,957 1,178,010 1954 1,097,635 1,217,971 1955 1,313,332 1,443,831 1956	1,044,957   1,178,010   1954   1,097,635   1,217,971   1955   1,313,332   1,443,831   1956 1,430,027   1,521,396   1957	1,044,957   1,178,010   1954   1,097,635   1,217,971   1955   1,313,332   1,443,831   1956   1,430,027   1,521,386   1957	1,044,957   1,178,010   1954 1,826,711   1,097,635   1,217,971   1955 1,868,841   1,313,332   1,443,831   1956 1,910,521

(a) Includes pig-iron for castings; excludes ferro-alloys.

In 1957, eight blast furnaces were operating in Australia; three at Newcastle and three at Port Kembla, in New South Wales, one at Whyalla, South Australia, and one at Wundowie, Western Australia.

(ii) New South Wales. The principal producers in Australia, both in New South Wales, are the Broken Hill Proprietary Co. Ltd. at Newcastle and Port Kembla and Australian Iron and Steel Ltd. at Port Kembla. The expansion of the steelworks at Port Kembla was carried a step further in October, 1956, when two new open hearth steel furnaces, each of 275 tons capacity, were brought into operation. In January, 1957, the iron ore sintering plant was installed to handle the fine friable iron ore from Yampi Sound in Western Australia. The hot-dip tinplate mill at Port Kembla began production in August, 1957. Plant capacity is 70,000 tons a year, about 60 per cent of present Australian requirements, but it is proposed to increase capacity to 150,000 tons annually and to use electrolytic methods for plating. In June, 1957, work commenced on the building of a £9,000,000 coke manufacturing plant. The project includes a battery of ninety-six coke ovens and associated by-products chemical plant. At Newcastle, the new skelp mill commenced operations in February, 1958. This

mill will produce high quality steel strip for processing into tubes and it will have a capacity of 400,000 tons annually. During 1956, the construction of an additional blast furnace at Port Kembla was commenced. When completed in 1959, its productive capacity of 600,000 tons of pig iron annually will at least equal the output of the world's largest blast furnace. In 1956, the B.H.P. Central Research Organization commenced activities at Newcastle. It has been designed to investigate problems in coal and ore beneficiation, fuel technology, iron and steel making, fabrication and heat treatment of steel, and the chemistry and physics of materials used in modern industry.

- (iii) South Australia. At Whyalla in South Australia, in addition to the blast furnace production, The Broken Hill Proprietary Co. Ltd. produces a small quantity of steel ingots from an electric furnace. In March, 1958, it was announced that the B.H.P. Co. Ltd. would build a steel plant at Whyalla at an estimated cost of £30,000,000. The project will include added blast furnace capacity, steelmaking plant, rolling mills and associated works.
- (iv) Western Australia. In Western Australia, the State-owned Wundowie Wood Distillation, Charcoal Iron and Steel Industry produces pig iron using charcoal for smelting instead of the non-coking local coal. This high grade iron is used for the manufacture of spheroidal graphite cast iron. The output of pig iron during the year 1955–56 amounted to 12,028 tons and during 1956–57 to 14,020 tons. At Kwinana in Western Australia, the steel rolling mill commenced operations in 1956. Billets are shipped from New South Wales steel works to Kwinana, and after cutting to fifteen foot lengths, they are heated in an oil-fired furnace and then broken down into merchant steel sections in the semi-continuous rolling mill. The capacity of this mill is over 50,000 tons of steel products annually.
- 5. Production in Principal Countries.—Particulars of the production in the principal countries and the estimated world total production during the years 1955 and 1956 according to figures published by the Mineral Resources Division of the Overseas Geological Surveys, are shown in the next table.

IRON AND STEEL: PRODUCTION IN PRINCIPAL COUNTRIES.
('000 Tons.) (a)

	Coun	·	1	Pig-iron and F	erro-alloys.	Steel Ingots and Castings.		
	Coun	uy.		1955.	1956.	1955.	1956.	
United State	es of A	America		70,771	69,264	104,497	102,872	
U.S.S.R.				32,800	35,200	44,600	47,800	
Germany					i			
Federal R	epubl	ic		16,222	17,299	20,999	22,823	
Eastern				1,492	1,549	2,468	2,697	
United King	gdom			12,470	13,170	19,791	20,659	
France				10,787	11,299	12,393	13,186	
Japan				5,357	6,168	9,259	10,931	
Belgium				5,302	5,670	5,807	6,286	
Italy				1,706	1,964	5,309	5,814	
Poland				3,063	3,451	4,357	4,935	
Czechoslova	ıkia			2,950	3,230	4,403	4,805	
Canada				3,018	3,402	4,044	4,737	
China				3,700	4,700	2,740	4,280	
Luxemburg				3.036	3,261	3,174	3,401	
Saar				2,833	2,983	3,115	3,321	
Australia				1,798	2,074	2,201	2,584	
Sweden				1,227	1,386	2,093	2,366	
India	••	••	• •	1,895	1,958	1,704	1,738	
Estin	nated 1	World To	tal	189,300	197,500	264,700	278,000	

### § 7. Other Metallic Minerals.

1. Tungsten.—Tungsten ores occur in all States. Particulars of scheelite concentrates from King Island, in Bass Strait, the major producer, are included in Tasmanian production. Other important deposits of tungsten ores occur in Queensland, New South Wales, the Tasmanian mainland and the Northern Territory, but production from Victoria, South Australia and Western Australia has been comparatively unimportant. In recent years, the largest producer has been Tasmania. Production of tungsten concentrates and contents during 1956 in each producing State and Territory is shown below:—

TUNGSTEN CONCENTRATES: PRODUCTION, 1956.

(Tons.) N.S.W. Particulars. Q'land. Tas. N. Terr. Australia. Scheelite Concentrate 1,488 1,495 WO<sub>2</sub> Content 2 3 985 990 Wolfram Concentrate 4 70 647 156 877 2 WO<sub>3</sub> Content 46 443 101 592

The following table shows production for Australia for the years 1952 to 1956:—

## TUNGSTEN CONCENTRATES: PRODUCTION, AUSTRALIA.

Particulars.		1952.	1953.	1954.	1955.	1956.
Scheelite Concentrate		989	1,185	1,331	1,449	1,495
WO <sub>2</sub> Content		602	729	861	960	990
Wolfram Concentrate		1,035	1,008	722	788	877
WO <sub>2</sub> Content		672	672	511	522	592

- 2. Mineral Sands.—(i) General. In recent years, the growing world demand for titanium metal has brought about a rapid expansion of mineral sands mining in Australia. The recovery of mineral sands from Australian beaches commenced in 1933 when 550 tons of ilmenite were produced in Tasmania. This ilmenite proved unsuitable for pigment manufacture and operations ceased the same year. In 1934, operations to recover mineral beach sands commenced at Byron Bay in New South Wales. At first, the concentrates produced were mainly mixed zircon-rutile-ilmenite, but in 1941 electro-magnetic separators were installed to separate the ilmenite, and in 1943 electro-static separators were introduced to produce rutile concentrates. The Commonwealth Government banned the export of mixed concentrates in 1944, and all producers now turn out separate concentrates of rutile, zircon, ilmenite and monazite. Australia is the largest producer of rutile and zircon in the world.
- (ii) Titanium. The main raw material for titanium metal is rutile, which is an oxide of titanium and the principal mineral recovered from eastern coast beach sands. Ilmenite, an oxide of iron and titanium, is used largely in pigment manufacture, but owing to the presence of chromium as an impurity, eastern coast deposits are unsuitable for this purpose. However large scale operations to produce chromium-free ilmenite started in 1956 in the Bunbury-Capel district of Western Australia. Details of production of rutile and ilmenite and the titanium content thereof during the years 1952 to 1956 are shown in the following table:—

PRODUCTION OF TITANIUM (IN TERMS OF TiO<sub>2</sub>) IN AUSTRALIA. (Tons.)

				Rutile Co	ncentrate.	Ilmenite C		
Year.		Quantity.	TiO: Content.	Quantity.	TiO <sub>2</sub> Content.	Total TiOs Content.		
1952				38,014	36,861	48	20	36,881
1953				38,039	37,067			37,067
1954				44,659	43,011	469	230	43,241
1955				59,613	57,232	535	262	57,494
1956				96,816	93,242	4,274	2,260	95,502

(iii) Zircon. Zircon was the main product when beach sand mining commenced in Australia, but consumption of zirconium has not increased as rapidly as world demand for titanium. Although production of zircon concentrate has increased in recent years in association with rutile, many producers are not now extracting saleable zircon concentrate. The production of zircon concentrate during the years 1952 to 1956 is shown in the following table:—

#### ZIRCON PRODUCTION, AUSTRALIA.

#### (Tons.)

State.	1952.	1953.	1954.	1955.	1956.
New South Wales	 17,156	15,528	27,489	32,827	50,660
Queensland	10,540	11,679	13,964	15,846	21,798
Total	 27,696	27,207	41,453	48,673	72,458
Zircon Content	27,571	26,858	40,920	48,209	71,769

3. Cadmium and Cobalt.—The sources of cadmium in Australia are lead and zinc concentrates. The cadmium content of these concentrates produced was 844 tons during 1955 and 922 tons in 1956. Most of the concentrates are treated at Risdon, Tasmania, and at Port Pirie, South Australia, for the extraction of cadmium. The remainder is exported.

Cobalt is present in zinc concentrate produced at Broken Hill, New South Wales, and at Rosebery, Tasmania. The cobalt is recovered in the form of cobalt oxide at the zinc refining plant at Risdon, Tasmania, and is sold as such to industry. The cobalt metal content of zinc concentrate produced was estimated at 61 tons in 1955 and at 59 tons in 1956.

Production of refined cadmium and cobalt oxide for the years 1952 to 1956 is shown in the following table:—

# CADMIUM (REFINED) AND COBALT OXIDE: PRODUCTION.(a) (Tons.)

	<b>Y</b>	ear.	Extract	Cobalt Oxide.  Extracted from Ores Mined		
			New South Wales.	Tasmania.	Total.	in New South Wales.(b)
1952		•••	 245	41	286	16
1953			 257	40	297	17
1954			 239	49	288	18
1955			 261	40	301	18
1956			 232	44	276	19

(a) Source: Bureau of Mineral Resources. (b) Excludes less than a ton of cobalt oxide produced from Tasmanian ores in each of the years shown.

The figures shown in the table above refer to production in Australia only and do not include the metallic contents of cadmium and cobalt oxide contained in the ores and concentrates exported overseas.

4. Manganese.—There has been considerable expansion of manganese ore production in recent years, due mainly to increased output in Western Australia at Ragged Hills, 250 miles south-east of Port Hedland, and at Horseshoe, north of Meekatharra. In 1955, the mining of manganese commenced near Muchetty in the Northern Territory and 1,462 tons of ore with a manganese dioxide content of 975 tons were produced during 1955, and 1326 tons with a manganese dioxide content of 914 tons during 1956.

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The following table shows the production of metallurgical grade and battery and other grades of manganese ore for the years 1952 to 1956:—

## MANGANESE ORE PRODUCTION: AUSTRALIA.

#### (Tons.)

			ical Grade.		Battery and Other Grades.				
г.	N.S.W.	Q'land.	W. Aust.	Australia.	N.S.W.	W. Aust.	N. Terr.	Australia.	
	. 981		5,045	6,026	1.043			1,043	
	1,015	43	30,457	31,515	1,428			1,428	
	749	138	26,448	27,335	867			867	
	1,071	78	44,194	45,343	551	l	1,462	2,013	
	986	311	56,032	57,329	527	202	1,326	2,055	
		N.S.W.  981 1,015 749 1,071	N.S.W. Q'land.  981 1,015 43 749 138 1,071 78	N.S.W. Q'land. W. Aust.  981 . 5,045 . 1,015 43 30,457 . 749 138 26,448 . 1,071 78 44,194	N.S.W. Q'land. W. Aust. Australia.  1. 981 . 5,045 6,026 1,015 43 30,457 31,515 1,071 78 44,194 45,343 1,071 78 44,194 45,343	N.S.W. Q'land. W. Aust. Australia. N.S.W.  981 5,045 6,026 1,043  1,015 43 30,457 31,515 1,428  749 138 26,448 27,335 867  1,071 78 44,194 45,343 551	N.S.W. Q'land. W. Aust. Australia. N.S.W. W. Aust.  981 . 5,045 6,026 1,043	N.S.W. Q'land. W. Aust. Australia. N.S.W. W. Aust. N. Terr.  1015 43 30,457 31,515 1,428 1,015 43 26,448 27,335 867 1,071 78 44,194 45,343 551 1,462	

- 5. Other.—The production, in 1956 (1955 shown in parentheses) of other metallic minerals worthy of note, is as follows:—
  - Antimony. The antimony content of antimony-bearing minerals produced was 903 tons (922 tons). Of this amount, 616 tons (615 tons) were in lead concentrate and 287 tons (307 tons) in 547 tons (650 tons) of antimony ore and concentrate.
  - Bauxite. 10,329 tons (7,563 tons) of bauxite ore were produced, mainly in New South Wales and Victoria. During recent years, extensive deposits of bauxite have been discovered on the west coast of Cape York Peninsula, Queensland, and on the Gove Peninsula and Wessel Islands of the Northern Territory. Extensive surveys in these and nearby areas are being carried out and reserves already proved have placed Australia among the large potential bauxite producers of the world. The Commonwealth Aluminium Corporation Pty. Ltd. has authority to prospect an area of about 2,500 square miles, and it plans to produce annually 1,500,000 tons of bauxite yielding 500,000 tons of alumina which will be exported.
  - Beryllium. Production of beryl ore was 318 tons (206 tons) which came mainly from Western Australia where the Pilbara gold field was the main producing area. The beryllium oxide content of the beryl ore was 3,768 units (2,428 units).
  - Chromium. Production of chromite was recorded as 6,096 tons in 1956, with a chromic oxide content of 2,624 tons. This all came from Coobina in Western Australia. There was no production recorded in 1955.
  - Tantalite-Columbite. The production of tantalite-columbite concentrate was 159,655 lb. (27,139 lb.) and the whole of this output came from Western Australia. The tantalum pentoxide and columbium pentoxide content of the concentrates was 85,690 lb. (15,454 lb.).
  - Other. Other metallic minerals produced in Australia in small quantities during 1956 were bismuth, molybdenite concentrate, native osmiridium, and platinum concentrate.

## § 8. Coal.

1. Mine Production.—An account of the discovery of coal in each State appears in earlier issues of the Official Year Book (see No. 3, pp. 515-16). The quantity and value of the production in each State in Australia for each of the years 1952 to 1956 are shown in the following table. Of the total production of black coal in 1956, 81,143 tons were classified as semi-anthracite, 17,681,258 tons as bituminous and 1,511,433 tons as subbituminous.

#### COAL PRODUCTION.

•		Black Coal.									
Year	r.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.	Victoria		
				QUANTIT	y ('000 to	ons).					
1952		15,022	144	2,742	418	830	248	19,404	8,104		
1953		14,174	152	2,517	448	886	234	18,411	8,257		
954	• •	15,083	141	2,761	495	1,019	264	19,763	9,331		
955	• •	14,737	133	2,747	455	904	299	19,275	10,112		
1956	•••	14,810	119	2,734	482	830	299	19,274	10,560		
				Value	(a) (£'000	)).					
1952		43,283	724	5,956	430	2,457	475	53,325	3,259		
953		41,630	946	5,861	461	3,073	453	52,424	3,62		
954		42,762	886	6,474	650	3,589	523	54,884	3,94		
955		41,715	815	6,729	778	3,089	611	53,737	4,38		
956		40,637	668	6,988	794	2,905	629	52,621	4,63		

(a) At the mine.

The mining of black coal on a large scale by opencut methods first began in Australia at Blair Athol in Queensland, where in 1937, the first year of production, 18,494 tons were produced. Opencut mining of black coal was introduced in New South Wales in 1940, in Western Australia in 1943, in South Australia in 1944, and in Tasmania in 1950. The output from opencuts rose slowly up to 1943 when 119,406 tons were produced, increasing rapidly from 1944 and reaching an output of over four million tons in 1952. Since then however, the output from opencut mining has declined and in 1956 it was 2,149,952 tons only. This decline has been mainly due to the closing down of large opencuts in New South Wales, as overproduction of coal began to occur late in 1952 and it is the policy of the Joint Coal Board that opencut mining should provide the quantity of coal by which underground mine production fails to meet total requirements.

The production of black coal from underground and opencut mines in each State for the years 1952 to 1956 is shown in the following table.

BLACK COAL PRODUCTION: UNDERGROUND AND OPENCUT. ('000 Tons.)

Year,	Method of Mining.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	Aust.
1952	Underground	12,492 2,530	144	2,006 736	418	419 411	240	15,301 4,103
	Total	15,022	144	2,742	418	830	248	19,404
1953	Underground	12,452 1,722	152	1,941 576	448	493 393	234 (a)	15,272 3,139
	Total	14,174	152	2,517	448	886	234	18,411
1954	Underground	13,703 1,380	141	2,067 694	495	608 411	254 10	16,773 2,990
	Total	15,083	141	2,761	495	1,019	264	19,763
1955	Underground Opencut	13,835 902	133	2,108 639	455	600 304	284 15	16,960 2,315
	Total	14,737	133	2,747	455	904	299	19,275
1956	Underground Opencut	14,000	119	2,103 631	482	621 209	281	17,124 2,150
	Total	14,810	119	2,734	482	830	299	19,274

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2. Sources of Production.—(i) New South Wales. The coal deposits of New South Wales are the most important and extensively worked in Australia. The principal fields are known as the Northern, Southern and Western, and are situated in the vicinity of Newcastle. Bulli and Lithgow respectively.

The coal from the various districts differs in quality or, geologically speaking, rank—that from the Northern district being especially suitable for gas-making, household purposes and steam, while the product of the Southern and Western districts is essentially a steaming coal. The Permian Coal Measures in the Northern division are being worked extensively in the Hunter River Valley area, particularly in the vicinity of Maitland, Cessnock and, more recently, Muswellbrook. This district is the most important, from the aspect of coal mining, in Australia.

The following table shows particulars of New South Wales coal production classified according to rank and type of mining during the five years 1952 to 1956:—

	 	(Tons.)			
Particulars.	 1952.	1953.	1954.	1955.	1956.
Semi-anthracite	 420			1,658	
Bituminous	 15,008,489	14,164,603	15,065,979	14,718,426	14,792,853
Sub-bituminous	 13,191	9,228	17,281	16,313	17,312
Total :.	 15,022,100	14,173,831	15,083,260	14,736,397	14,810,165
Underground mines	 12,491,904	12,451,741	13,703,289	13,834,824	13,999,615

COAL: PRODUCTION, NEW SOUTH WALES.

(ii) Victoria. (a) Black Coal. Production of black coal in Victoria is restricted to the Gippsland district. The State Coal Mine at Wonthaggi is the main producer, the remaining production coming from small privately-owned mines. In 1956, production of bituminous coal was 118,827 tons compared with 132,888 tons in 1955.

1,722,090

1,379,971

901.573

810,550

2,530,196

Open-cut mines

(b) Brown Coal. The mining of brown coal in Australia is carried on only in Victoria, where extensive deposits exist; estimates place the available reserves at 40,000 million tons. Large-scale developmental projects are in progress and these, when completed, will greatly reduce the dependence on fuel from other States. In the past ten years, the output of brown coal in Victoria has doubled, and in 1955 it exceeded ten million tons for the first time. Of the 10,559,801 tons of brown coal produced in 1956, 9,661,180 tons, or 91 per cent., were won at the State opencuts at Yallourn.

The briquetting plant of the State Electricity Commission at Yallourn started operations in November, 1924, and the output, which in 1926 was 95,477 tons, had increased to 180,905 tons in 1930 and to 635,716 tons in 1955. Approximately two and a half tons of brown coal are required to make one ton of briquettes. In December, 1956, the Lurgi high pressure brown coal gasification plant at Morwell was opened. This plant is operated by the Gas and Fuel Corporation of Victoria and produces town gas which is sent to Melbourne through 103 miles of pipeline.

The table following shows the production and distribution of brown coal and the production of briquettes in Victoria for the years 1951-52 to 1955-56.

BROWN COAL: PRODUCTION AND UTILIZATION, VICTORIA. ('000 Tons.)

			Cons	umption as	Fuel.	Consump- tion as Raw	Balance (available		
Year.		Production.	Electricity Generation.	Briquette Factory.	Other Factories.	Material in Briquette Manufac- ture.		Briquettes Manufac- tured.	
1951-52	•••	8,096	4,784	776	876	1,553	107	568	
1952-53		8,075	4,933	729	837	1,457	119	545	
1953-54		8,731	5,307	780	920	1,560	164	587	
1954-55		9,668	5,899	842	1,088	1,684	155	631	
1955-56		10,383	6,517	843	1,191	1,686	146	634	

(iii) Queensland. The production of coal classified according to rank and type of mining during the years 1952 to 1956 was as follows:—

COAL: PRODUCTION IN QUEENSLAND.

(Tons.) Particulars. 1952. 1953. 1954. 1955. 1956. 83,373 80,979 72,459 80,442 79,316 Semi-anthracite . . 2,215,078 2,472,692 Bituminous ... 2,312,167 2,377,883 2,459,727 . . Sub-bituminous 346.696 220,755 310,468 206,996 182,651 . . Total .. 2,742,236 2,516,812 2,760,810 2,747,165 2,734,659 ٠. Underground mines 2,006,321 1.941.631 2,066,788 2.108.065 2,103,641 . . 694,022 Open-cut mines 735,915 575,181 639,100 631,018

The principal coal-producing districts in Queensland are Ipswich, Clermont, Mount Morgan and Bowen; output from these areas in 1956 amounted to 2,294,076 tons or 84 per cent. of the total.

The opencut method of mining for black coal has advanced considerably in Queensland in recent years. In 1946, 106,444 tons (or 7 per cent. of total production) were won from opencuts while in 1954, 694,022 tons (25 per cent.) were mined in this manner. In 1956, the output from opencuts declined to 631,018 tons, or 23 per cent. of the total.

(iv) South Australia. Coal mined in South Australia is won by opencut methods at Leigh Creek, some 380 miles by rail north of Adelaide. This important deposit yields a low grade sub-bituminous coal of Triassic age, and has known reserves of about 380 million tons. However, this State relies to a great degree on bituminous coal from New South Wales to supplement the demand created by industrial expansion. In 1944, the first year of major production of the Leigh Creek mine, 34,620 tons were won. Production has risen considerably in more recent years, and amounted to 481,463 tons in 1956.

(v) Western Australia. The only coal deposits which have been developed on a commercial scale are at Collie in the south-west of the State. Collie coal is sub-bituminous in rank. Production in 1956 was 830,007 tons, compared with 903,793 tons in 1955. Although a large proportion of the coal produced in Western Australia comes from opencut mines, the amount available from these mines is limited, as present surveys estimate that only 8,000,000 tons can be extracted by opencut methods. In 1956, 208,540 tons, or about one quarter of the total production, were won by opencut mining.

(vi) Tasmania. Two periods of coal formation are represented in Tasmania. The older (Permo-Carboniferous) seams contain fairly high ranking semi-anthracitic coal, with a high sulphur content, but production from these mines, 1,827 tons in 1956, represents less than one per cent. of Tasmanian black coal output. The more recent Mesozoic coal of bituminous rank is mined in the north-east of the island, the Cornwall and Mt. Nicholas mines being the most prolific producers. In 1956, output amounted to 298,713 tons of which 18,381 tons came from opencut mining.

(vii) Australia's Coal Reserves. The latest available estimate of the actual and probable coal reserves of Australia is that prepared by the Coal and Lignites Panel of the Power Survey Sectional Committee of the Standards Association of Australia, and is shown in the following table.

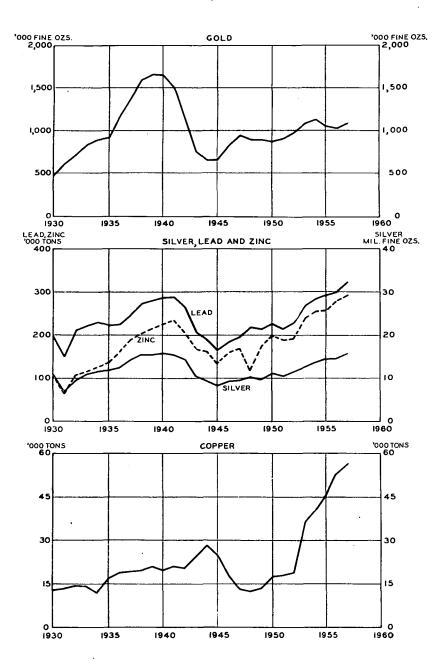
COAL RESERVES OF AUSTRALIA.

			(141)	BHOH I	)IIS.)		
	St	ate.			Anthracitic and Bituminous Coal.	Sub- bituminous Coal.	Lignites and Brown Coal.
New South Wales					11,000	500	
Victoria					12		40,000
Queensland					4,000	3	50
South Australia						380	225
Western Australia						1,000	2
Tasmania					240		2
•							1

## MINE PRODUCTION OF PRINCIPAL METALS

(METALLIC CONTENT OF MINERALS)

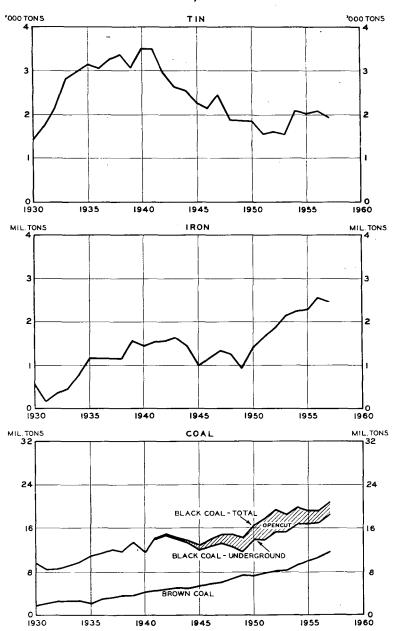
AUSTRALIA, 1930 TO 1957



# MINE PRODUCTION OF PRINCIPAL METALS AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

AUSTRALIA, 1930 TO 1957



COAL. 1031

3. Production in Principal Countries.—The following table shows the production of the principal countries in 1955 and 1956 as published by the Mineral Resources Division of the Overseas Geological Surveys.

COAL: PRODUCTION IN PRINCIPAL COUNTRIES. ('000 Tons.)(a)

<b>G</b>		Black	Coal.	Brown Coal	and Lignite.
Country.		1955.	1956.	1955.	1956.
Jnited States of Americ	a	435,422	469,318	2,827	2,627
J.S.S.R		272,300	298,900	112,800	123,500
Jnited Kingdom .		221,551	222,006		
Germany—					
Federal Republic .		130,452	134,051	88,910	93,729
Eastern		3,000	3,000	198,200	202,600
China		91,000	103,200		
Poland		92,984	93,646	5,949 '	6,085
France		54,461	54,257	2,021	2,220
apan		41,750	45,819	1,346	1,496
ndia		38,213	39,430		
Union of South Africa.		31,639	33,071		
Belgium		29,503	29,088		
Czechoslavakia .		21,785	23,041	40,107	45,568
Australia		19,275	19,274	10,112	10,560
Saar		17,056	16,818		
Spain		12,228	12,649	1,807	1,901
Vetherlands		11,707	11,469	251	265
Canada		11,183	11,227	2,048	2,091
Hungary		2,649	2,334	19,314	17,932
Yugoslavia		1,119	1,213	13,848	15,618
Estimated World	Total	1,584,000	1,665,000	518,000	545,000

<sup>(</sup>a) Long tons.

COAL: OVERSEA EXPORTS AND BUNKER, AUSTRALIA.

Year.				Oversea Ex	rports.(a)	Bunker Coal for Oversea Vessels.		
	1 ca		3	Quantity.	Value.	Quantity.	Value.	
	-			Tons.	£	Tons.	£	
1952~53				255,832	1,178,466	42,623	215,776	
1953-54				385,812	1,528,788	31,718	129,977	
1954~55				291,226	1,147,441	25,363	111,625	
1955-56				193,813	780,284	38,749	165,224	
1956-57				545,101	2,196,044	9,065	44,116	

<sup>(</sup>a) Excludes bunker coal.

<sup>4.</sup> Exports.—(i) General. The quantities and values of the oversea exports of Australian coal and of bunker coal for oversea vessels for the five years 1952-53 to 1956-57 are shown in the following table. These shipments were made mainly from New South Wales.

<sup>(</sup>ii) New South Wales. New South Wales is the principal Australian coal-producing State and, in addition to meeting requirements within the State, supplies considerable quantities of coal to other States and for export overseas as well as bunker coal for vessels calling at New South Wales ports. Of the total New South Wales coal production in 1956-57 (15,175,232 tons), 12,442,107 tons (82 per cent.) were available for consumption in the State, 2,003,588 tons (13 per cent.) were exported interstate and 729,537 tons (5 per cent.) were exported overseas or supplied as bunker coal for interstate and oversea vessels.

<sup>5.</sup> Consumption in Australia.—Details of the production of black coal and its disposal in Australia are given in the following table for the years 1951-52 to 1955-56.

BLACK COAL: PRODUCTION AND DISPOSAL. ('000 Tons.)

	( 000	101-01)			
Particulars.	1951–52.	1952–53.	1953–54.	1954–55.	1955-56.
Production(a)	19,170	18,545	19,424	19,352	19,033
Imports	285	146	2	5	4
Total	19,455	18,691	19,426	19,357	19,037
Disposals—					
Consumption as Fuel—					
Electricity Generation	5,042	5,071	5,590	5,916	5,922
Factories	3,090	3,097	3,367	3,329	3,101
Railway Locomotives(b)	3,291	3,110	3,208	3,112	2,963
Bunker Coal—	-,		,	.,	, ,
Oversea Vessels	54	43	32	25	39
Interstate Vessels	227	229	228	218	198
Total	11,704	11,550	12,425	12,600	12,223
Consumption as raw					
Gas works	2.097	2,081	2,047	2.063	2,031
Coke works	2,835	3,071	3,252	3,314	3,258
Total	4,932	5,152	5,299	5,377	5,289
Exports (Oversea) Balance—Unrecorded con-	139	256	386	291	194
sumption, other purposes(c)	2,680	1,733	1,316	1,089	1,331
Grand Total	19,455	18,691	19,426	19,357	19,037

<sup>(</sup>a) Includes miners' and colliery coal. change in stocks.

(c) Includes net

After the 1939-45 War, it was found necessary to augment local supplies of black coal in Australia by increasing imports. The quantity imported reached a post-war peak of 597,866 tons in 1950-51, but since then has declined, as in recent years production has expanded considerably. Since 1952-53, exports have exceeded imports by a wide margin; in 1956-57, exports of black coal were 545,101 tons and imports were 6,191 tons.

6. Value at the Mine in New South Wales.—Particulars of the average values at the mine (or at screens where these are at a distance from the mine) of saleable coal for each district and for New South Wales as a whole are shown in the following table for the years 1952 to 1956. Saleable coal is taken to exclude miners' coal, coal consumed at the mines and other producer-consumed coal. Stocks of coal held at grass by the Commonwealth Government are also excluded. No deduction has been made in respect of excise duty operative from 1st November, 1949.

AVERAGE SELLING VALUE AT THE MINE PER TON OF SALEABLE COAL:
NEW SOUTH WALES.

Year.				Northern District.	Southern District.	Western District.	Average for State.
1952				62 3	60 3	56 7	61 2
1953				62 1	61 0	56 9	61 1
1954				59 11	59 0	57 1	59 3
1955				59 3	58 10	55 3	58 7
1956			!	58 <b>2</b>	58 0	54 4	57 8

<sup>7.</sup> Values in New South Wales, Great Britain and the United States of America.—The following table shows, for the years 1952 to 1956, average values of coal produced in New South Wales, Great Britain and the United States of America. The figures give an indication of changes in average value or price within each country but they do not necessarily show the relative levels as between the countries concerned.

<sup>(</sup>b) Government railways only.

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# PRODUCTION VALUES OF COAL PER TON: NEW SOUTH WALES, GREAT BRITAIN AND UNITED STATES OF AMERICA.

Country.	1952.	1953.	1954.	1955.	1956.	
New South Wales—Bitumi-	s. d.	s. d.	s. d.	s. d.	s. d.	
nous(a)	61 2 57 3	61 1 61 1½	59 3 63 6	58 7 68 0 <del>1</del>	57 8 77 0	
United States of America— Bituminous and lignite(c)	<b>\$</b> 4.90	<b>\$</b> 4.92	<b>8</b> 4.51	<b>\$</b> 4.49	8 4.93	

- (a) Average selling value at the mine per ton of 2,240 lb.; the figures relate to saleable coal and include excise duty. (b) Average value in tsterling at the mine per ton of 2,240 lb. (c) Average value in United States currency at the mine per ton of 2,000 lb.
- 8. Employment in Coal-mines.—The number of persons employed, both above and below ground, in coal-mines in each State for each of the years 1952 to 1956 is shown in the following table.

COAL-MINES: PERSONS EMPLOYED.

Year.			New South	Victoria.		Queens-	South	Western	Tas-	Australia.
	rear.		Wales.	Black.	Brown.	land.	Australia. Australia.		mania.	Austrana.
			20,151	848	1,694	3,715	220	1,326	349	28,303
1954		::	19,961 19,979	900 786	1,598 1,598	3,673 3,638	250 270	1,478 1,583	344 358	28,204 28,212
1955 1956		::	19,260 17,918	687 610	1,502 1,561	3,618 3,568	280 260	1,432 1,190	367 349	27,146 25,456

The year of maximum employment was 1926 when 31,774 persons were engaged in the coal-mines of Australia. Shortly after that year, the industrial depression and a prolonged stoppage of work on one of the principal fields of New South Wales during 1929 and 1930 seriously affected the figures of employment. After 1933, there was a gradual increase up to a level of about 23,000 which was maintained during the war years. There was a further increase after the war to 28,303 in 1952, but since then the number in employment has fallen again. In 1956, it was 25,456. In New South Wales in 1956, 9,243,545 tons of coal, or 66 per cent. of the total output of underground coal, were cut by machinery, compared with 3.594,000 tons or 32 per cent. in 1939. Similar details for other States are not available.

9. Production of Black Coal per Man-shift.—(i) Underground Mines. The following table shows particulars of estimated black coal output per man-shift worked, (a) at the coal face, and (b) by all employees, in respect of underground mines for each State concerned and for Australia for the years 1952 to 1956. These estimates have been calculated by the Joint Coal Board from data collected fortnightly in respect of coal production and the number of man-shifts actually worked. In South Australia, black coal is won only by open-cut mining.

PRODUCTION OF BLACK COAL PER MAN-SHIFT: UNDERGROUND MINES.

					Olis.)			
	Year.		N.S.W.	Vic.	Q'land.	W. Aust.	Tas.	Australia.
		Pre	ODUCTION I	PER MAN-SH	ift Worke	D AT COAL 1	FACE.	-
1952		1	10.06	2.24	6.36	6.82	6.03	8.88
1953			9.72	2.09	6.37	4.86	6.15	8.49
1954			10.16	2.03	6.54	4.82	5.95	8.81
1955			10.76	2.13	6.61	4.74	6.54	9.24
1956			11.43	2.05	6.79	5.14	7.04	9.77
		Prop	UCTION PE	R MAN-SHIF	r Worked	BY ALL EMP	LOYEES.	
1952			3.00	0.83	2.55	1.64	3.01	2.81
1953			3.08	0.81	2.53	1.67	3.00	2.84
1954			3.25	0.82	2.61	1.91	3.07	3.00
1955			3.39	0.86	2.66	2.06	3.08	3.14
1956			3.55	0.83	2.65	2.35	3.41	3.28

(ii) Opencut Mines. In the next table, the Joint Coal Board's estimates of production of black coal per man-shift worked by all employees in opencut mines are shown for the years 1952 to 1956. There are no opencuts producing black coal in Victoria.

# PRODUCTION OF BLACK COAL PER MAN-SHIFT: OPENCUT MINES. (Tons.)

	Year.	:	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
1952			7.92	11.78	(a) 3.22	6.13	4.63	7.07
1953			8.51	10.97	(a) 3.57	5.37	9.25	6.92
1954		!	8.97	12.27	(a) 4.52	4.71	7.91	7.31
1955		i	9.18	11.42	6.02	5.77	7.78	8.11
1956			10.36	13.06	6.72	6.37	8.56	9.19

(a) Figures prior to July, 1954, include man-shifts on other than mine work.

10. Joint Coal Board.—After the 1939-45 War, the Governments of the Commonwealth and New South Wales agreed to create jointly a coal authority with powers similar to, and in some respects wider, than those possessed under Commonwealth war-time legislation. Following this agreement, the Joint Coal Board was created and has functioned as from 1st March, 1947. Briefly, it is the responsibility of the Board to ensure that the coal of the State is conserved, developed, worked, distributed and used to the best advantage in the public interest, and to promote the welfare of the workers in the industry. Further details of the powers and functions of the Board are contained in earlier issues of the Official Year Book.

### § 9. Coke and Other By-products from Coal.

1. Coke.—The production of metallurgical coke in Australia was limited to about 250,000 tons per annum prior to the 1914-18 War. This was below local requirements and necessitated an annual import of about 27,000 tons. By 1920, production had risen to more than 500,000 tons, by 1938-39 to 1,164,873 tons, and in 1955-56 it reached the record level of 2,058,426 tons. Imports exceeded exports prior to 1952-53 but in 1952-53 and later years there has been a net export surplus. In 1955-56, exports amounted to 66,590 tons and 3,444 tons were imported, while in 1956-57 exports further increased to 129,397 tons (126,527 tons to New Caledonia) and imports amounted to 8,206 tons.

In addition to metallurgical coke referred to above (which is produced by specialized coke works), considerable quantities of coke are produced in gas works as a by-product of the manufacture of gas. Production in gas works in 1955-56 was 1,031,135 tons.

In order to avoid duplication with coal values, the figures for coke have not been included in the general tables of mineral production in the early part of this chapter.

In the following table, particulars of the production of coke in coke works and gas works in Australia are shown for the years 1951-52 to 1955-56. The figures exclude output of coke breeze, which in 1955-56 amounted to 340,834 tons.

#### **COKE PRODUCTION: AUSTRALIA.**

(Tons.)

Indi	ıstry.	 1951–52.	1952–53.	1953–54.	1954–55.	1955–56.
Coke Works	· · ·	 1,636,982	1.858,428	2,010,404		2,058,426
Gas Works		 1,203,602	1,071,106	943,344	1,099,859	1,031,135
Total		 2,840,584	2,929,534	2,953,748	3,146,649	3,089,561

2. Other By-products from Coal.—In addition to coke, other products are obtained from the treatment of coal by coke and gas works. Some of the main items produced, principally in coke and gas works, during 1955-56 (1954-55 in parentheses) were crude tar, 54,352,000 gallons (46,609,000 gallons); refined tar 25,914,000 gallons (17,120,000 gallons); and ammonium sulphate 75,321 tons (78,434 tons).

#### § 10. Mineral Oils.

1. Australia.—Natural oil has been proved to exist in Queensland and Victoria and also in Western Australia, where, in 1953, potential oil production was found at Rough Range. Following this discovery, structural control drilling and field exploration have increased enormously.

The Commonwealth Government has set aside the sum of £500,000 annually for four years to encourage drilling for stratigraphic information. This will be used to subsidize drilling by oil companies in areas not previously investigated at depth.

Individual subsidies will be limited to not more than half the cost of each hole.

Oil companies responded well to this offer and, at the end of February 1958, applications were receiving attention.

Drilling programmes are being carried out in all States of the Commonwealth except Tasmania and in the Northern Territory. A brief outline of these activities during 1957 and up to February, 1958, is given below.

2. New South Wales.—The Australian Oil & Gas Corporation Ltd. drilled Dural No. 1 to 5,203 feet. Low pressure methane gas was recorded at several horizons and salt water was encountered at 5,200 feet. Kurrajong Heights No. 1 was abandoned at 4,755 feet.

Dural No. 2 is drilling ahead and a number of shallow stratigraphical and geological holes are being drilled in the Camden, Morisset, and Yass districts.

3. Victoria.—Woodside (Lakes Entrance) Oil Co. Ltd. drilled Woodside No. 2 to 8,862 feet before abandoning. The casing was perforated over the intervals 1,310 to 1,345 feet and 5,583 to 5,618 feet, and a drill stem test held but no flow oil was recovered.

Oilco No. 1 reached basement at 1,366 feet and Hedley No. 1 was drilling ahead at 3,650 feet.

Frome Lakes Pty. Ltd.'s No. 3 in Gippsland was abandoned in brown coal at 1,876 feet.

4. Queensland.—Associated Australian Oilfield's N.L. drilled a well at Arcadia to 3,280 feet.

Frome Broken Hill Pty. Ltd. in association with other companies reached basement at 2,822 feet in a hole at Wyaaba.

South Pacific Pty. Ltd. drilled to 5,186 feet at Tambo before abandoning the well as a dry hole. Zinc Corporation Ltd. drilled a hole at Weipa on the Cape York Peninsula to a depth of 3,243 feet. Australian Oil and Gas Corporation Ltd. drilled a shallow stratigraphic test at Talbalba.

- 5. South Australia.—Following extensive seismic surveys by the Commonwealth Bureau of Mineral Resources, Santos Ltd. drilled a series of shallow stratigraphical holes in the Wilkatana, Oodnadatta and Cordillo Downs areas. Minor showings of oil were reported.
- 6. Western Australia.—West Australian Petroleum Pty. Ltd. drilled a number of structure holes in the Exmouth Gulf and Canning Basin areas. Dirk Hartog Island No. 1 and Rough Range No. 10 were completed as dry holes at 4,998 and 3,740 feet, and Learmonth No. 1 was drilling ahead at 5,228 feet. Yanrey No. 1 on the East Coast of Exmouth Gulf encountered basement at 1,395 feet, and a shallow stratigraphical hole at Wallal in the Kimberleys was drilled to 1,010 feet.

Seismic surveys followed gravity and magnetometer work in the Samphire Marsh area of the Kimberleys and the Meda area of the North Fitzroy Basin. Associated Freney Oilfields N.L. drilled their Sisters Well in the Kimberleys to 9,825 feet in grey, medium to coarse, micaceous sandstone before abandoning as a dry hole.

7. Papua.—Australasian Petroleum Co. Pty. Ltd. and Island Exploration Co. Pty. Ltd., the joint exploration companies operating in Western Papua, continued extensive geological and geophysical surveys and also drilled a series of deep tests. Komewa was completed in basement at 6,393 feet. Kuru No. 2 was abandoned at 7,305 feet due to formation difficulties. Morehead was abandoned at 8,087 feet after a velocity survey showed the close proximity of basement.

Sireru No. 1 was completed at 1,510 feet.

Barikewa No. 1 was drilling ahead at 8,025 feet and locations were being prepared to drill Kuru No. 3 and Puri No. 1

Papuan Apinaipi Petroleum Co. Ltd. were preparing to spud in on the Kaufana Anticline.

#### § 11. Sulphur.

Sulphur, although produced in Australia as a content of certain metallic minerals, is itself non-metallic in character. Sulphides such as zinc concentrate and pyrite, which contain sulphur, are produced in appreciable quantities. There is no production of elemental sulphur (brimstone) in Australia. A large proportion of the zinc concentrate produced is exported and therefore lost to Australia for utilization of the sulphur content. The sulphur recovered in Australia is in the form of acid, most of which is used in the manufacture of fertilizers, mainly superphosphate. As this recovery does not at present satisfy local requirements, it is necessary to import elemental sulphur to meet the balance.

Production of pyrite concentrate at Nairne in South Australia commenced early in 1955. The output from this mine is supplied to the new sulphuric acid plant which was opened at Port Adelaide in August, 1955. This new plant has an annual capacity of 100,000 tons of sulphuric acid and requires 70,000 tons of pyrite concentrate from Nairne annually. The production of pyritic ore and pyrite concentrate in Australia during 1956 is shown in the following table:—

## PYRITE PRODUCTION: STATES, 1956.

#### (Tons.)

Item.	N.S.W.	Q'land.	S. Aust.	W. Aust.	Tas.	Australia.
Pyritic Ore Pyrite Concentrate	1,088	10,250	65,097	12,629 43,051	52,373	12,629 171,859

The following table shows for the years 1952 to 1956 the sulphur content of sulphurbearing minerals produced, quantities of sulphur recoverable therefrom, production of monohydrate acid (100 per cent. sulphuric acid), and sulphur content of monohydrate acid produced. Particulars regarding spent oxide roasted have been included to complete the statistics relating to recovery of sulphur and monohydrate acid production.

# SULPHUR PRODUCTION: AUSTRALIA. (Tons.)

Item.		1952.	1953.	1954.	1955.	1956.
Sulphur contained in—						
Zinc concentrate		119,515	141,954	152,074	155,836	168,714
Lead concentrate						83,512
Pyrite		93,516	77,811	97,649	107,724	86,787
Spent Oxide Roasted (a)		4,211	5,432	4,680	5,511	5,877
Total Sulphur Content		217,242	225,197	254,403	269,071	344,890
Recoverable Sulphur (		189,436	195,471	221,265	232,552	268,443
Monohydrate Acid Produced		628,302	671,471	778,008	895,765	841,225
Quantity of Sulphur in Mono Acid produced from—	hydrate					
Sulphur (Elemental) (b)		112,225	123,469	154,337	187,015	146,816
Zinc concentrate		33,115	31,270	33,564	30,412	29,061
Lead concentrate		ĺ				16,090
Pyrite		57,891	60,811	62,533	71,179	76,780
Spent Oxide		3,231	3,973	3,973	4,295	4,643
Other Materials	• •	· ·	••	••	••	1,694
Total		206,462	219,523	254,407	292,901	275,084

(a) Estimated.

(b) All imported.

#### § 12. Non-metallic Minerals.

1. Asbestos.—The production of asbestos in Australia at present is only sufficient to meet about one-sixth of domestic requirements. Production in recent years has been of two types, chrysotile and crocidolite, the former being the most important type economically. The deposits of chrysotile, however, are relatively small and widely scattered. The principal deposits of asbestos are of crocidolite, and they occur in the Hammersley Ranges in Western Australia, about 200 miles south-east of Roebourne. Large scale operations were commenced there in 1943 at Wittenoom Gorge by Australian Blue Asbestos Ltd. and reserves in seams over which the company holds leases are estimated at two million tons. However, high costs of production due to heavy freight charges and the difficulty of retaining labour in an isolated community have prevented greater development of the project.

The production of chrysotile and crocidolite in Australia during the five years 1952 to 1956 is shown in the following table:—

<b>PRODUCTION</b>	OF	<b>ASBESTOS:</b>	STATES.
	(I	ons.)	

				Chrysotile.	Crocidolite.		
	Year.		New South Wales.	Western Australia.	Australia.	Western Australia.	Australia.
1952			466	652	1,118	2,940	2,940
1953			569	606	1,175	3,795	3,795
1954			616	303	919	3,794	3,794
1955			590	275	865	4,487	4,487
1956			622	761	1,383	7,286	7,286

2. Clays.—Statistics of clay production in Australia are not entirely satisfactory, mainly because of differences between States in the classification of the various types of clays. In the following table, the recorded production of the main types of clays produced in each State of Australia is shown for the year 1956.

## PRODUCTION OF CLAYS: STATES, 1956.

Type.	New South Wales.	Victoria.	Queensland	South Australia.	Western Australia.	Tasmania.	Total.
Bentonite Brick Clay and Shale Cement Clay and	63 1,521,267	878,799	264,260	325,788	1,404 (a)361,923	(a) 74,292	1,467 3,426,329
Shale Damourite	115,564			19,220 472	18,314	::	153,098 472
Fireclay	82,219	27,020	8,508	18,711	9,437		145,895
Fuller's Earth	195 23,007	5,867	341	3,517	2,090	6,267	235 41,089
Stoneware Clay	80,609		217	42,441	2,000		123,267
Tile Clay Other Clays	136,757 ( 7,749 ]	(a) 53,422 106,478	::		.:	::	190,179 114,227

(a) Estimated.

3. Gypsum.—There are very extensive deposits of gypsum in Australia, but only the more accessible and easily worked deposits have been exploited. These deposits lie in four main regions, (a) in New South Wales stretching from around Griffith to near Broken Hill, (b) in the north-west corner of Victoria, the south-west corner of New South Wales and adjoining parts of South Australia, (c) in South Australia on both sides of Gulf St. Vincent and extending to Lake MacDonnell in the west, and (d) between Perth and Kalgoorlie in Western Australia. The South Australian deposits are the most important and more than half of the total Australian production of gypsum in 1956 came from that State, where the main centres of production are Stenhouse Bay on Yorke Peninsula and Lake MacDonnell.

The building industry is the main user of the gypsum produced in Australia. The greater part is used in the manufacture of plaster and most of the remainder in cement manufacture. A small amount is also used as fertilizer. A considerable quantity is exported, mainly to New Zealand for use in the plaster industry, and to New Caledonia for use in nickel smelting operations.

The production of gypsum in Australia is set out in the following table for the five years 1952 to 1956.

PRODUCTION OF GYPSUM: STATES.

(Tons.)

	Year.	New South Wales.	Victoria.	South Australia.	Western Australia.	Australia.
1952		 89,226	47,295	164,825	50,332	351,678
1953		 71,819	36,286	181,640	40,247	329,992
1954		 128,790	75,012	194,772	41,142	439,716
1955		 136,356	89,190	204,522	39,946	470,014
1956		 94,203	83,024	263,136	27,121	467,484

4. Limestone.—Limestone is quarried in all States, but statistics of production are incomplete as Queensland figures do not include limestone quarried for cement manufacture. Limestone is used mainly for the manufacture of cement, other uses being in the steel industry as a metallurgical flux, in the chemical industry, and in agriculture.

The recorded statistics of limestone production in each State of Australia during 1955 and 1956 are shown in the following table. Details of limestone produced for use as building or road material are not included.

PRODUCTION OF LIMESTONE(a): STATES, 1955 AND 1956. ('000 Tons.)

Year.	New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Tasmania.	Total.
1955	1,690	714	121	987	(b) 280	206	3,998
1956	1,700	814	139	1,076	356	179	4,264

<sup>(</sup>a) Includes shell and coral.

5. Magnesite.—The major sources of magnesite at present are deposits at Fifield and Thuddungra in central New South Wales. Most of the output of magnesite in Australia is used for refractory purposes, particularly in the steel industry, and small amounts are used in chemical, paper, glass, rubber, and ceramic industries. Particulars of the production of magnesite in each State for the years 1952 to 1956, are set out in the table below.

PRODUCTION OF MAGNESITE: STATES.

(Tons.)

	Year.	 New South Wales.	Victoria.	Queensland.	South Australia.	Western Australia.	Australia.
1952		 40,333	164	13	572	1.,055	42,137
1953		 45,769	572		36	20	46,397
1954		 42,825		l	235	92	43,152
1955		 .57,262		1	412		57,674
1956		 63,050			831	8.04	64,685

<sup>(</sup>b) Estimated.

6. Mica.—Almost all Australian production of muscovite mica comes from the Northern Territory, though small quantities of inferior grades have been obtained from most of the States. The centre of mica production in the Northern Territory is the Harts Range area about 130 miles north-east of Alice Springs, where mining has been carried on intermittently since 1892, and the Plenty River field, 50 miles north-east of Harts Range.

The Commonwealth Mica Pool—details of which are given in § 15, Government Aid to Mining, on page 1045—purchases all mica which is in accordance with certain specifications. The following table shows the quantity of muscovite mica produced in Australia during the five years 1952 to 1956.

#### MUSCOVITE MICA PRODUCTION.

(lb)

	 			- · · · i	
Particulars.	1952.	1953.	1954.	1955.	1956.
	 <del></del>		<u> </u>		
New South Wales—			1		
Scrap	 	:	15,680	20,160	
Northern Territory —		, ;			
Trimmed	 )	√ 70,684     1,542	. 84,619	56,649	28,837
Crude and Film	 <b>&gt;</b> 71,929	₹ 1,542		j	
Scrap	 J	. !	65,184	'	

7. Salt.—Salt is obtained in Australia from evaporation of saline lakes and clay pans. Production satisfies local requirements and provides a considerable surplus for export. Recorded production in South Australia (the chief producing State) is shown in the following table for the years 1952 to 1956. Estimates of total Australian production are also shown.

#### SALT PRODUCTION.

('000 Tons.)

Particulars.	1952.	1953.	1954.	1955.	1956.
South Australia	203	239	304	291	332
Estimated Australian Total	277	310	380	370	410

- 8. Other Non-metallic Minerals.—(i) General. Many other non-metallic minerals are produced in Australia in considerable quantities, and are listed separately in the following paragraphs.
- (ii) Barite. The principal producing centre of barite is at Oraparinna in the north Flinders Range in South Australia where the deposits are of first-grade quality. The production of barite in Australia during 1956 was 6,009 tons, of which 4,040 tons came from South Australia, 1,042 tons from New South Wales, and 927 tons from Western Australia.
- (iii) Cupreous Ore and Concentrate. Cupreous ore is mined in Western Australia for mixing with superphosphate fertilizer. The quantity produced in 1956 was 7,713 tons with: an average grade of 8.60 per cent.
- (iv) Diatomite. Production of diatomite is carried on mainly in the eastern States of Australia. In 1956, 5,789 tons were produced, and of this total, New South Wales produced 5,002 tons.
- (v) Dolomite. Up to 1950, New South Wales was the main producer of dolomite, but in that year the Broken Hill Pty. Co. Ltd. opened up a large deposit of dolomite at Ardrossan in South Australia which now produces about 90 per cent. of the total output. In 1956, New South Wales produced 7,599 tons; Queensland, 5,510 tons: South Australia, 101,496 tons; Western Australia, 171 tons; and Tasmania, 788 tons, making an Australian total of 115,564 tons.

- (vi) Felspar. The main demand for felspar comes from the glass and ceramic industries. About half the Australian production of felspar comes from New South Wales which produced 10,244 tons of the Australian total of 18,629 tons in 1956. Of the remainder, 4,604 tons came from South Australia and 3,781 tons from Western Australia.
- (vii) Gemstones. (a) Diamonds. Gem quality diamonds are not produced in Australia, but, in 1956, 383 carats of industrial diamonds valued at £3,834 were recovered during gold dredging operations on the Macquarie River in New South Wales.
- (b) Opals. Most of the opals won in recent years came from the Coober Pedy and Andamooka fields in South Australia which produced opals worth £120,529 in 1956. Other production in 1956 was from the Quilpie district in Queensland, valued at £1,337, and £2,750 from Lightning Ridge in New South Wales.
- (c) Sapphires. The Anakie field in Central Queensland is the only Australian producer of sapphires. Output in 1956 was valued at £691.
- (viii) Silica. The production of silica is not recorded in Victoria and Queensland. The output of silica, which includes glass sand, quartz, quartzite, sand, sandstone, and silicious abrasives, was 131,155 tons in New South Wales; 16,532 tons in South Australia; 7,343 tons in Western Australia; and 4,858 tons in Tasmania, giving a total of 159,888 tons for those States during 1956.
- (ix) Sillimanite. In 1956, 2,181 tons of sillimanite were produced in Australia. New South Wales contributed 1,585 tons and the remaining 596 tons came from South Australia.
- (x) Talc. The Australian output of talc (including steatite), was 13,035 tons in 1956. New South Wales produced 673 tons, South Australia 7,906 tons and Western Australia 4,456 tons.
- (xi) Other. Other non-metallic minerals produced in Australia in small quantities during 1956 were fluorite, garnet, graphite, glauconite, mineral pigments, pebbles for grinding, phosphate rock, pyrophyllite, serpentine, slate and vermiculite.

## § 13. Persons Engaged, Wages Paid and Accidents in Mining.

1. Total Employment in Mining.—The number of persons engaged in the mining industry in Australia fluctuates according to economic conditions generally, the price of industrial metals, the state of the labour market, and according to the permanence of new finds and the development of the established mines. The following table shows the numbers engaged in the various mining industries in each State and Australia as a whole in 1956.

#### EMPLOYMENT IN MINING, 1956. (a)

Industry.	N.S.W.	Vic.	Q'land.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal Mining—									
Gold Mining	107	379	133	(b)	5,612	1	257	l í	6,488
Silver-Lead-Zinc Mining	6,784		(c)	(b)	(c)	764,	(c)	۱ ۱	10,623
Copper-Gold Mining	47		(c)	(b)	(c)	(c)	195	l I	2,210
Tin Mining	113		320		62	435	8	1 1	938
Mineral Sands Mining	986		598	• • • • •	(c)		(c)		1,592
Other Metal Mining	45	14		414	322	_(c)			1,420
Total, Metal Mining	8,082	393	5,326	414	6,162	2,301	593		23,271
Fuel Mining— Black Coal Mining—									
Underground	17,598	610	3,393		ا م ، ، م ا	240		1 1	
Open-cut	320		175	260	<b>}</b> 1,190	349	• •		23,895
Total	17,918	610		260	1,190	349	•••		23,895
Brown Coal Mining		1,566					••		1,566
Oil Mining	(d)	(d)					14	<u>  </u>	14
Total, Fuel Mining	17,918	-2,176	3,568	260	1,190	349	14		25,475
Non-metal (excluding Fuel)									
Mining	1,071	350	205	735	436	142	31	(e)	2,970
Total, All Mining	27,071	2,919	9,099	1,409	7,788	2,792	638	(e)	51,716
Construction Material									
Quarrying	1,245	1,682	240	804	242	74		42	4,329
Total, All Mining									
and Quarrying	28,316	4,601	9,339	2,213	8,030	2,866	638	42	56,045

(a) Average employment during whole year. (b) Not available for publication; included with "Other Metal Mining". (c) Not available for publication. (d) Not available for publication; included with "Non-Metal Mining". (e) Not available for publication; included with "Construction Material Quarrying".

The following table shows particulars of mining employment in Australia for the years 1952 to 1956. The figures show for 1952 the average number of persons employed during the period worked by individual mines or quarries, and for 1953 and later years the average number of persons employed during the whole year.

EMPLOYMENT IN MINING: AUSTRALIA.

Industry.			1952.	1953.	1954.	1955.	1956.	
Metal Mining—								
Gold Mining			6,583	7,050	7,192	6,753	6,488	
Silver-Lead-Zinc Mining			9,497	9,686	9,397	10,076	10,623	
Copper-Gold Mining			2,112	2,025	1,957	2,062	2,210	
Tin Mining			999	1,063	969	937	938	
Mineral Sands Mining			619	597	598	891	1,592	
Other Metal Mining			1,601	1,601	1,253	1,273	1,420	
Total, Metal Mining			21,411	22,022	21,366	21,992	23,271	
Fuel Mining-								
Black Coal Mining			26,612	26,606	26,614	25,660	23,895	
Brown Coal Mining			1,691	1,598	1,598	1,502	1,566	
Oil Mining			112	(a)	56	68	14	
Total, Fuel Mining			28,415	28,204	28,268	27,230	25,475	
Non-metal (excluding Fuel) ?	Mining		3,070	(b)2,946	2,858	2,875	2,970	
Total, All Mining			52,896	53,172	52,492	52,097	51,716	
Construction Material Quarr	ying		4,162	3,803	4,121	4,197	4,329	
Total, All Mining and	Quarry	ing	57,058	56,975	56,613	56,294	56,045	

<sup>(</sup>a) Not available separately; included with "Non-metal (excluding Fuel) Mining". (b) Includes "Oil Mining".

2. Salaries and Wages Paid in Mining.—Statistics of total salaries and wages paid in the mining and quarrying industry are now available from the annual industrial censuses of the industry taken from 1952 onwards. Salaries and wages paid in the mining and quarrying industries in Australia during each year 1952 to 1956 are shown in the following table. Information regarding rates of wages paid in the mining industry is shown in Chapter VI.—Labour, Wages and Prices (p. 161) and also in the Labour Report.

SALARIES AND WAGES PAID IN MINING: AUSTRALIA. (£'000.)

		(*	000.)				
Industry.			1952.	1953.	1954.	1955.	1956.
Metal Mining-							
Gold Mining			5,952	6,291	6,450	6,344	6,551
Silver-Lead-Zinc Mining			12,690	12,359	12,761	15,154	17,299
Copper-Gold Mining			1,655	1,608	1,786	1,867	2,098
Tin Mining			562	715	704	734	733
Mineral Sands Mining		[	481	362	412	819	1,644
Other Metal Mining			1,027	1,380	1,195	1,328	1,504
Total, Metal Mining			22,367	22,715	23,308	26,246	<sup>-</sup> 29,829
Fuel Mining-		- 1					
Black Coal Mining		i	23,565	24,171	25,988	26,065	26,422
Brown Coal Mining			1,450	1,483	1,557	1,761	1,649
Oil Mining			44	(a)	(a)	(a)	(a)
Total, Fuel Mining			25,059	25,654	27,545	27,826	28,071
Non-metal (excluding Fuel) M	<b>Iining</b>		1,617	1,684	1,693	2,270	2,401
Total, All Mining			49,043	50,053	52,546	56,342	60,301
Construction Material Quarry	ving (b)	1	2,020	2,007	2,045	2,439	2,738
Total, All Mining and	Quarryin	ıg	51,063	52,060	54,591	58,781	63,039
						//> T	

<sup>(</sup>a) Not available for publication; included with "Non-metal Mining".

<sup>(</sup>b) Incomplete.

<sup>3.</sup> Accidents in Mining.—Particulars of numbers of persons killed and injured in accidents in mines and associated treatment plants are recorded by State Mines Departments. Numbers injured are not reported on a uniform basis in all States as varying criteria are used in determining what constitutes injury for the purpose of these

records. In 1955, 62 persons were recorded as having been killed and 1,788 as having been injured in mining and quarrying accidents. Of the total of 62 persons killed, 25 were in black coal mines, 11 in gold mines and 8 in silver-lead-zinc mines. Reported injuries were highest in black coal mines (552), gold mines (504), and silver-lead-zinc mines (398).

### § 14. Oversea Trade in Minerals and Metals.

Particulars of the quantity and value of imports and exports of the principal minerals and metals for Australia are shown in the following table for the years 1954-55, 1955-56 and 1956-57. In addition to the unfabricated metals shown, considerable quantities of partly fabricated metals (bars, rods, wire, etc.) enter into Australia's oversea trade.

IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND METALS: AUSTRALIA.

	Unit of	1954	-55.	1955	-56.	1956-57.	
Item.	Quantity.	Quantity.	Value. (£A.f.o.b.)	Quantity.	Value. (£A.f.o.b.)	Quantity.	Value. (£A.f.o.b.)
		Ім	PORTS.				
Minerals-	:	:					
Antimony ore and con-	i	37.004	140 001	10.020	£2 £20	10.503	45.540
centrate Asbestos	cwt.	27,094 853,811		10,639	52,570 2,394,810	10,593 466,014	45,548 1,708,751
Chromium ore and con-	**			070,130	2,354,010	100,014	1,700,731
centrate	,,	99,242	59,296	146,246	94,776	120,788	63,983
Coal	ton	4,994	26,185	4,117 3,444	29,973 53,191	6,191	29,239 125,229
Coke Diatomite	cwt.	78,873	71,114 123,182	87,879	139,095	8,206 95,895	146,466
Industrial diamonds	carat	265,144	531,968 93,450	258.321	543.657	192,295 437,289	420,539
Mica	lb.	1,021,777	93,450	764,347 4,117,595	56,049	437,289	46,019
Sulphur	cwt.	3,851,674	2,720,089	4,117,595	2,740,044	2,761,667	1,707,168
Metals— Aluminium (pigs, ingots,	1			ļ			
etc.)	٠,,	255,250	2,748,466	240,651	2,924,968	207,917	2,764,067
Copper—	, ,	1	'	1	1	1	, ,
Blister	,,	10,000	150,597	• • •	••	ł j	
Pigs, ingots, powder,		562,505	9,549,183	94,791	2,087,810	66,019	1,171,474
Gold bullion (ingots, bar,	,,	302,505	7,545,105	34,751	2,007,010	00,015	1,171,474
etc.)	fine oz.	175,166	2,720,834	175,649	2,745,143	143,852	2,270,632
Iron and Steel—	1			1			
Bar and rod	cwt.	1,198,833	3,935,534	2,040,376	6,734,571	625,364	3,106,731
Ingots, blooms, slabs,	1	10,319	56,140	14,761	76,597	8,362	54,206
Nickel (pigs, ingots, etc.)	"	10,299	320,280	14,732	528,299	16,178	556,601
Tin	,,,	11,582	515,711	10,358		16,599	803,498
	<u></u>	Ex	PORTS.	1			
N. Company		1	1	1	i		
Minerals— Asbestos	cwt.	66.01	380,38	138,958	693,521	234,203	1,043,486
Coal	ton	291,22	6 1,147,44	193,813		545,101	2,196,044
Coke	,,	66,01 291,22 21,88	5 180,32	1 66,590	537,841	129,397	1,072,699
Copper—	1 .		. 252:06	62.000	1 214 767	202.025	1 255 525
Ore and concentrate Copper-lead dross, etc.	cwt.	110,92 163,34		63,809 4, 152,130		382,975 188,327	1,356,636 1,317,037
Lead and silver-lead ore	, ,,	105,54	302,37	132,130	1,17 <del>4,001</del>	100.327	1,317,037
and concentrate	,,	1,217,11					
Rutile concentrates	,,,	1,116,96	6 2,375,16	5¦ 1,394,970	4,627,553	2.273,540	8,499,133
Tungsten (scheelite and wolfram concentrates)		41,77	6 3,188,41	6 47,537	3,708,473	41,343	2,758,476
Zinc ore and concen-	,,,	74,77	5,100,41	1 47,557	3,700,473	41,545	2,730,470
trate	,,	4,076,58					
Zircon concentrates	,,	931,10	4 518,15	0, 1,094,007	596,022	1,839,239	1,130.402
Metals—		102,46	3 1,513,84	4 291,170	5,845,048	311,924	5,109,509
Copper, blister Gold bullion (ingot, bar,	"	102,40	3 1,313,07	2,91,,1./(	3,043,040	.311,527	3,105,309
dust, sheet, etc.)	fine oz.	864,39	1 13,716,62	2 531,664	8,323,118	908,283	14,225,889
Iron and Steel—							
Bar and rod	cwt.	266,18	2 567,72	7, 143,476	362,369	549,698	1,437,201
Ingots, blooms, slabs,		156,13	1 228,14	9 19,742	22,587	34,734	82,186
Pig iron	* ***	1,205,56			324,051		
Lead—	1 77		1 '		1		
Pig	1,	2,805,12	6 17,182,33	9; 2,922,883			22,915,913
Bullion Silver bullion (ingot,	'**	610,36	9 6,133,23	0; 396,23	4,039,133	1,070;023	8,337.514
bar, dust, sheet, etc.)	fine oz.	6,147,15	5 2,356.90	8 6,485,356	2,620,905	16,570,469	5,594,400
Zinc, ingots	cwt.	654,18			4,107,141		
	1	1	1	E .	1	F	4

Considerable quantities of metallic ores, concentrates, slags and residues are exported from Australia for refining overseas. The following table shows the quantities of such items exported during 1956-57 and their principal metallic content as estimated by assay.

# PRINCIPAL METALLIC CONTENT OF ORES AND CONCENTRATES EXPORTED FROM AUSTRALIA DURING 1956-57.

	Quantity	Estimated Metallic Content.								
Ore, Concentrate, etc.	Ex- ported.	Copper.	Gold.	Lead.	Silver.	Tin.	Tungsten (WO <sub>1</sub> Content).	Zinc.		
	cwt.	cwt.	fine oz.	C.VL.	fine oz.	cwt.	cwt.	cwt.		
Copper Ore, Concentrate, Slag and Residues Gold Ores and Con-	571,302	146,559	9,317	70,867	389,396	179		206		
centrates	274		110		4 505 045			• • •		
Lead Bullion Lead Ore. Concentrate.	1,070,623		• •	1,063,110	4,797,845	••		• • •		
Slag and Residues	1;637,724	16,269	12,390	1,097,281	1,901,575	177		113,653		
Scheelite Ore and Concen-			-	1				1		
trate	25,332	• • •		•• ,	]	• •	16,691			
Tin Ore and Concentrate	1,225	,		• • •		761				
Wolfram Ore and Concen-		,			.					
trate	16,011	٠٠ ,	• •	•••	: •• [	68	10,937	• •		
Zinc Ore, Concentrate, Slag and Residues	5,902,684	75		40,473	79;919	5		3,091,486		

## § 15. Government Aid to Mining, and Mineral Control.

- 1. Aid to Mining.—(i) Commonwealth. (a) Assistance to marginal and sub-marginal gold mines. Under the terms of the Gold-Mining Industry Assistance Act 1954, large producers received a subsidy of up to three-quarters of that portion of the cost of production in excess of £13 10s. per fine oz., the maximum rate of subsidy being limited to £2 per fine oz. Persons producing less than 500 fine oz. per year received a flat rate subsidy of £1 10s. per fine oz. regardless of the cost of production. The Act remained in force for two years from 1st July, 1954, and was extended for a further three years to 30th June, 1959. In 1957, the flat rate to small producers was increased to £2 per fine oz. and the maximum rate to large producers was increased to £2 10s. per fine oz.
- (b) Rewards for Discovery of Uranium Ore. To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government has approved the granting of monetary rewards up to a maximum of £25,000 for any one deposit.
- (c) Bureau of Mineral Resources, Geology and Geophysics. The Bureau of Mineral Resources, Geology and Geophysics has sections dealing with geology, geophysics, mining engineering, petroleum technology and mineral economics. The geological section provides geologists to conduct all surveys required in Commonwealth Territories, makes detailed and regional surveys in conjunction with or by arrangement with the State Mines Departments, surveys of possible oil-fields in Australia and New Guinea, surveys of mines for which financial assistance is sought, and investigations of deposits of radio-active minerals. The geophysical section conducts investigations throughout Australia and New Guinea connected with the search for metalliferous, radio-active and other mineral deposits; investigations connected with exploration for coal, oil and water; regional magnetic and gravity surveys; engineering and military geophysics: and the operation of geophysical (magnetic and seismic) observatories. The Bureau works in close co-operation with the Mines Departments of the States. It has assumed full responsibility for geological and geophysical surveys in Commonwealth Territories, but suitable arrangements have been made to ensure that the local Administrations have the necessary technical advice directly available to them
- (d) Diamond Drills. The drilling plant operated by the Bureau of Mineral Resources consists of two heavy, two medium and five light prospecting drills. These drills are used mainly in connexion with the Bureau's comprehensive programme of prospecting by aericl, geological, geophysical and geochemical methods.

(e) Search for Oil. No variation has been made in the policy described in Official Year Book No. 37, p. 850, regarding the search for petroleum throughout Australia and its Territories. In addition to its activities set out in that Year Book, the Bureau of Mineral Resources, Geology and Geophysics in Melbourne tests bore cores for porosity and permeability on behalf of companies engaged in drilling for oil. The Bureau also maintains two portable rotary plants for scout boring for geological information.

The Commonwealth Government has encouraged the search for oil in Australia, Papua and New Guinea; details of the efforts made are outlined in earlier issues of the Official Year Book and in § 10, Mineral Oils (p. 1035).

- (f) Survey of North Australia. Reference to this survey which was completed at the end of 1940 appears in Official Year Book No. 35, p. 744.
- (g) Ore-dressing and Mineragraphic Investigations. These investigations are conducted by the Commonwealth Scientific and Industrial Research Organization as required by the industry. Ore-dressing investigations are carried out at the Ore-Dressing Laboratory, situated in the Department of Mining, University of Melbourne, and at the Ore-Dressing Laboratory, Kalgoorlie, situated at the School of Mines. The Mineragraphic Investigations Section is located in the Geology Department, University of Melbourne.

These two groups of laboratories perform complementary services—the Mineragraphic Investigations Section assesses microscopically the state of dispersion and the mineral association of ore bodies while the Ore-Dressing Laboratories investigate the composition of ores and provide advice on suitable methods for their full-scale treatment. Much of this research is carried out on a co-operative research basis with the mining industry.

- (h) Petroleum Legislation. The petroleum ordinances of Papua and New Guinea have been amended and combined in a single ordinance entitled Petroleum (Prospecting and Mining) Ordinance 1951. Further minor amendments were passed in 1954 and 1957. A new Petroleum Ordinance for the Northern Territory was brought into force on 27th May, 1954. New legislation covering petroleum was brought down in New South Wales under the Petroleum Act, 1955, and several amendments to the Petroleum Act, 1951, were passed in Western Australia.
- (ii) States. (a) General. In addition to free assays and determinations of rocks and minerals carried out for prospectors by the Mines Departments of the States and Territories, technical officers of these departments provide advice to the mining and allied industries where required, carry out field examinations of mining prospects, advise on exploration and development, select sites for water supply, and in general give a free technical service to the mining industry.
- (b) New South Wales. State aid to assist metalliferous mining may consist of grants to assist the prospecting and/or mining for gold and minerals and for the purchase, removal and installation of mining plant or equipment.
- (c) Victoria. Loans may be granted to assist prospecting and development or the purchase of machinery. The Mines Department has stamp batteries in different parts of the State to crush ore for prospectors at nominal rates. Small mining companies may avail themselves of these facilities. Drilling with diamond, rotary and percussion drills is carried out by the Mines Department for mining companies and for general mineral exploration. A survey of the States' underground water reserves is in progress, in conjunction with the opening up of town water supplies from underground sources for which new deep drilling equipment has been obtained.
- (d) Queensland. The Mines Department maintains a treatment works for tin ores, etc., at Irvinebank, an assay office at Cloncurry and diamond-drilling plants in several parts of the State. The Venus State Mill at Charters Towers is available for the treatment of gold-bearing ores. In addition, many departmental compressor plants, pumping plants and other mining equipment are provided and made available on hire on the principal mining fields.
- (e) South Australia. The Department of Mines provides the following services and facilities to the mineral industry:—(i) Hire of boring plants and mining equipment; boring and testing of mineral deposits; financial subsidies in approved cases for prospecting and mining development; development of sub-surface water supplies for farming, pastoral, irrigation and mining purposes; purchase of basic metal ores from prospectors. (ii) Geological examination of mineral deposits, water supply, dam, foundation and drainage

problems; guidance on mining legislation; publication and issue of geological bulletins and maps. (iii) Chemical and metallurgical analytical and assay investigation; testing and treatment of ores and minerals; petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

(f) Western Australia. Assistance is given to prospectors to the extent of £4 10s. 0d. per week south of the 28th parallel of latitude, and of £5 10s. 0d. per week north of that parallel; also provision is made of some tools required for prospecting.

There are twenty-one State batteries operating throughout the gold-fields for the treatment of ore from prospectors and small mine-owners, at a nominal charge. A cartage subsidy is also granted to such operators sending ore to State batteries for treatment.

Provision is made for loans to mine-owners who require assistance to develop mines. The Government has a drilling scheme, financing mine-owners on a £1 for £1 basis.

(g) Tasmania. The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or dewatering of shafts, for construction of dams and water races, for testing and proving a deposit of any mining product, for developmental work and for diamond and other types of drilling.

Other assistance is rendered to the industry by geological and engineering advice and through ore-dressing research into metallurgical recoveries and the selection and design of treatment plant.

- (h) Northern Territory. In order to encourage the development of the mining industry, the Northern Territory Administration provided Government batteries at Tennant Creek, Hatches Creek, and Maranboy for the treatment of miners' ores. The Hatches Creek battery is the only one in operation at the present time. The Tennant Creek battery is being reconstructed and is expected to reopen shortly, but the re-opening of the Maranboy battery will depend on a revival of tin mining at that centre. The crushing charges are subsidized by Government grants. In addition, the Administration provides cartage subsidies and financial advances to encourage miners to carry out developmental work. Roads and water supply services are provided and maintained for mines under active development throughout the Territory.
- 2. Control of Minerals.—(i) Mica Production. The Commonwealth Mica Pool purchases mica won in the Harts Range, Northern Territory, thus ensuring the miners a ready market for their output at fixed prices and also permitting an orderly distribution of mica to the trade. The Pool is controlled by a Committee of Management consisting of representatives of the Commonwealth Government, producers and consumers.
- (ii) Control of Exports of Metals and Minerals. Certain metals and minerals produced in Australia are subject to export control for one or more of the following reasons:—
  - (a) the necessity of conserving resources (e.g., iron ore and manganese);
  - (b) inadequacy of local production to fulfil domestic demand (e.g., mica, manganese ore, copper, iron and steel);
  - (c) the strategic importance of the minerals (e.g., beryllium ores, concentrates and metal; monazite; tantalite and tantalum products; uranium ore, concentrates, residues and metal; mica).

Mixed concentrates of beach sand minerals are prohibited exports, but rutile, zircon and ilmenite may be exported. Some non-ferrous scrap is also subject to control.

(iii) Radio-active Minerals. Since the discovery of the possibility of using atomic energy, considerable attention has been paid to the occurrence of uranium in Australia. To encourage the search for and discovery of deposits of uranium ore, the Commonwealth Government grants monetary rewards for such discoveries.

Up to the end of 1949, important deposits had been found only in the north-eastern part of South Australia where the Mt. Painter and Radium Hill fields had been investigated, largely by the South Australian Government, but in that year the presence of uranium was discovered in the Rum Jungle district of the Northern Territory, and investigations carried out by the Commonwealth Bureau of Mineral Resources, Geology and Geophysics in the years 1949-1952 proved that these deposits are of substantial importance.

Towards the end of 1952, the Commonwealth Government placed the Rum Jungle deposits under the control of Territory Enterprises Pty. Ltd., a subsidiary of Consolidated Zinc Corporation Limited, to carry on the investigations on its behalf and to mine and treat the ore. The treatment plant at Rum Jungle was officially opened by the Prime Minister on 17th September, 1954. Investigation of an area adjacent to Rum Jungle was carried out by the Bureau, using an airborne scintillograph. This survey indicated the presence of many radio-active anomalies, and demonstrated the effectiveness of this method of search. During 1952, arrangements were completed between the Governments of the United States of America, South Australia and the Australian Commonwealth, for the purchase of ores by the United States.

In South Australia, the South Australian Government extensively explored the Radium Hill deposit by underground development and diamond drilling. A primary treatment plant was erected at the mine and went into operation in November, 1954; the concentrate is transported to a plant at Port Pirie, completed in mid-1955, where it is further reduced.

The construction of a plant for the extraction of uranium oxide at Mary Kathleen in north-west Queensland commenced in 1956. By the end of 1957, a township had been built, a dam constructed, and considerable progress made in the erection of the mill and treatment plant. Developmental work also continued and ore has been stockpiled.

The Bureau of Mineral Resources is carrying out further airborne scintillograph surveys and extensive geological, geophysical and geochemical surveys and diamond drilling operations, with a view to discovering further deposits and to assessing the value of known deposits.

During 1953, Commonwealth Legislation was enacted to set up an Atomic Energy Commission which is responsible, in an overall sense, for the production and utilization of uranium in Australia. This Act, the Atomic Energy Act of 1953, supersedes the Atomic Energy (Control of Materials) Act of 1946, but retains a provision of that Act which provides for control of substances which could be used for production or use of atomic energy. It gives the Commonwealth power to acquire such substances in their natural state and in waste materials from mining operations, to carry on mining and other operations necessary for the recovery of such substances, and to pay compensation for such acquisition. It also gives the Commonwealth power to obtain possession of such substances held by any person.

Further reference to the Atomic Energy Commission appears in Chapter XXX.—Miscellaneous.

#### CHAPTER XXVIII.

#### DEFENCE.

### § 1. Department of Defence.

- 1. Introduction.—At the outbreak of the 1939-45 War, the Department of Defence comprised the three Fighting Services and a Central Secretariat. In November, 1939, separate Departments, each with its own Minister, were created for the control and administration of the Navy, Army and Air Force. The Defence Department as then reconstituted retained responsibility for over-all defence policy and for the conduct during the war of the business of the War Cabinet, set up in September, 1939, and the Advisory War Council, set up in October, 1940. These bodies ceased to function after the war.
- 2. Functions and Organization.—(i) Functions. Subject to the authority of Cabinet, the Minister and Department of Defence are responsible for:—
  - (1) The formulation and general application of a unified defence policy relating to the Defence Forces and their requirements, including:—(a) co-operation in British Commonwealth and regional defence and the defence aspect of the Charter of the United Nations; (b) the supply aspect of defence policy, including the review of production programmes and capacity; (c) the scientific aspect of defence policy; and (d) the financial requirements of defence policy, and the allocation of funds made available.
  - (2) The defence aspect of armistice and peace terms, contro! commissions, and forces of occupation.
  - (3) Matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect.
  - (4) The defence aspect of questions relating to the organization and machinery for:—(a) co-operation in British Commonwealth defence; (b) co-operation in regional security, including obligations under the United Nations Charter; (c) higher direction in war; and (d) higher direction of the Services.
  - (5) The Commonwealth War Book, which is a summary of national plans for an emergency as developed in Departmental War Books.
  - (6) The administration of inter-Service organizations, such as the joint intelligence machinery.
  - (7) The defence aspect of:—the strength and organization of the forces, higher appointments in the Services, honours and awards.
  - (8) Advice on the military aspect of civil defence.
- (ii) Organization, higher defence machinery, the control of the joint Service machinery and the Secretariat of the Council of Defence. The joint Service and inter-Departmental advisory machinery of the Department consists of various committees headed by the Defence Committee, the Chiefs of Staff Committee and the Joint War Production Committee.

The Defence Committee is a statutory body consisting of the Secretary, Department of Defence, who is Chairman, the Chiefs of Staff of the three Services, the Secretary, Prime Minister's Department, the Secretary, Department of External Affairs, and the Secretary to the Treasury. Its function is to advise the Minister for Defence on:

- (a) The defence policy as a whole and also to co-ordinate military, strategic, economic, financial and external affairs aspects in framing defence programmes.
- (b) Matters of policy or principle and important questions having a joint Service or inter-Departmental defence aspect.
- (c) Such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The main responsibility of the Chiefs of Staff Committee in peace is the preparation of strategic appreciations and military plans. The function of the Joint War Production Committee is, briefly, to examine the relation between strategic plans and their requirements to ensure that the war potential for them exists. The major committees subordinate to the Defence Committee and/or the Chiefs of Staff Committee comprise the Principal Administrative Officers Committee (Maintenance and Matériel), the Principal Administrative Officers Committee (Personnel), the Defence Research and Development Policy Committee, the Joint Planning Committee, the Joint Intelligence Committee and the Joint Administrative Planning Committee.

- (iii) Board of Business Administration. In view of the heavy defence expenditure, the Government, in July, 1953, established the Board of Business Administration in the Department of Defence. The Board deals with joint Service matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired. The Board comprises businessmen who serve in a part-time honorary capacity and consists of an independent chairman and deputy chairman and the business advisers of the three Service Departments.
- 3. Basis of Current Defence Policy.—The main strategic factors affecting current defence policy may be summarized as follows:—
- (i) Likelihood of War. Because of the nuclear deterrent, it is believed that global (or full scale) war is unlikely to occur as the result of deliberate planning, but could occur as the result of miscalculation. Limited war (or armed conflict short of global war) is always possible and could break out with little or no warning. Hostile powers will probably continue to seize every opportunity to attain their aims by cold war techniques, such as infiltration, subversion and armed insurrection.
- (ii) Area of Primary Strategic Interest. South East Asia is of great strategic importance to Australia, whose primary effort will be directed to that area in cold, limited or global war.
- (iii) Reliance on Collective Defence. The defence of South East Asia and Australia is to be sought through the concept of collective security. For this reason Australia is participating in regional arrangements such as SEATO and ANZUS, and arrangements for Commonwealth co-operation. Such arrangements are entirely in accord with the United Nations Charter.
- 4. The Defence Programme.—(i) Programme. The level of national defences must be adequate to enable Australia to meet her regional and home defence responsibilities. The proportion of the national resources that can be allotted to defence is, however, affected by the concurrent demands of the programmes of national development, industrial expansion and migration, which add to our basic defence capacity. Current defence planning and preparations provide for the maintenance of an efficient Service organization including fighting forces, together with command, training and maintenance elements, capable of rapid expansion in time of war. The emphasis is no longer so much on numbers as on mobility, equipment and fire power. Equipment used by Australian forces will be standard or compatible as far as possible with that used by United States forces, with whom they are likely to be associated in war. The defence programme provides for the acceleration of the naval construction programme, designed to produce ships of the appropriate types, the building up of a regular army brigade group, highly trained, mobile, and equipped with the most modern weapons available. Mobility will be greatly increased by the procurement of 12 modern transport aircraft for the R.A.A.F. The first ground to air guided weapons unit will also be introduced into the R.A.A.F., and additional mobile control and reporting units will be established. The army brigade group will be additional to the infantry battalion in Malaya referred to below, and the Citizen Military Forces will be maintained at an adequate strength.

In the field of research and development, Australia is making its principal contribution through the Long Range Weapons Establishment which is a joint United Kingdom-Australian effort for the testing of guided weapons. The executive authority for this project is the Department of Supply which is also responsible for design and inspection services and for the provision of the material requirements of the forces other than munitions. Australian support for atomic weapons tests carried out by the United Kingdom at Maralinga in South Australia will be maintained.

The Department of Defence Production is responsible for the manufacture and supply of munitions and aircraft. The new filling factory at St. Mary's has been handed over for operation and, at the Small Arms Factory at Lithgow, component production for the FN rifle for the Services has commenced.

The estimated cost of the defence programme for 1957-58 was £190 million.

(ii) Financial. Details of defence expenditure for 1956-57 and the allocation of the Defence Vote for 1957-58 are set out in the two tables which follow:—

# ALLOCATION OF DEFENCE VOTE OF £190,000,000 FOR 1957-58. (£'000.)

Servic	æ or Depa	rtment.	Maintenance.	Capital Material Requirements, Machinery, Plant and Equipment.	Capital Buildings, Works and Acquisition of Sites.	Total Expenditure.
Defence			 885	37	38	960
Navy			 31,730	10,598	1,463	43,791
Army			 45,746	7,289	4,354	57,389
Air			 41,562	12,492	3,967	58,021
Defence Pro	duction		 3,834	2,077	6,461	12,372
Supply			 12,077	949	2,292	15,318
Other Servic	es		 615	1,009	525	2,149
Total	••		 136,449	34,451	19,100	190,000

## DEFENCE EXPENDITURE, 1956-57. (£'000.)

Service or Department.				Mainten- ance.	Capital Material Requirements, Machinery, Plant and Equipment.	Capital Buildings, Works and Acquisition of Sites.	Total Expenditure.
Defence				808	26	23	857
Navy			٠	29,388	7,795	1,512	38,695
Army				49,895	6,681	3,456	60,032
Air				40,430	9,416	3,007	52,853
Defence Pro	duction			3,418	2,104	14,990	20,512
Supply				11,773	810	2,333	14,916
Other Servi	ces	• •	• -	518	42	72	632
Tota	l . <i>.</i>	••		136,230	26,874	25,393	188,497

(iii) Personnel Strengths. The personnel strengths of the Services at 31st December, 1957 were:—

Category.	Navy.	Army.	Air Force.	Total.	
Permanent Forces	(a) 11,016	20,771	14,407	46,194	
Citizen Forces— Volunteers	4.716	(b) 14,367 (c) 45,209	915 (c)	22,924 49,925	
Total Citizen Forces	12.358	59,576	915	72,849	
Total Permanent and Citizer Forces	22.274	80,347	15,322	119,043	

<sup>(</sup>a) Excludes 37 midshipmen not on pay. (b) Excludes 1,553 on Army Supplementary Reserve. (c) Excludes 73,572 Army and 16,164 Air Force National Service personnel who have completed training and are on the reserve.

<sup>5.</sup> Australian Forces Serving Overseas. (i) Malaya. Australia has participated with the United Kingdom and New Zealand in the Commonwealth Strategic Reserve in Malaya since it was first established in 1955. Malaya became a sovereign and independent member of the Commonwealth in 1957 and by arrangements agreed upon at that time, the Strategic Reserve has continued to be stationed in that country. In addition to its role as a strategic reserve, this force, at the request of the Malayan Government, continues to assist in the campaign against the communist terrorists.

The Australian contribution to the Strategic Reserve comprises the following forces— Navy—Two destroyers or frigates. An aircraft carrier also pays an annual visit, and additional ships would be provided in an emergency.

Army—An infantry battalion with supporting arms, and reinforcements in Australia. Air Force—An airfield construction squadron, which is engaged in the reconstruction of the airfield and ancillary facilities at Butterworth. A Canberra bomber squadron was deployed to Malaya in July, 1958, on completion of the airfield. This was followed by a fighter wing of two squadrons, of which the first squadron will arrive in Malaya before the end of 1958. The Lincoln bomber squadron which has been engaged in operations against the terrorists in Malaya since 1950 was withdrawn from Malaya on the arrival of the Canberra squadron.

- (ii) Korea. The final elements of the Australian Forces in Korea were withdrawn in 1957. United Kingdom, Australian and New Zealand representation on the United Nations Command, Korea, is maintained by a Commonwealth Liaison Mission. Australian ships will, however, continue to serve in Korean waters during their regular tours of duty with the Far East Fleet.
- 6. National Service Training.—Under the National Service training scheme, every male person, other than those mentioned below, ordinarily resident in Australia, who, on or after 1st November, 1950, attains the age of 18 years, is required to register for National Service when called upon to do so by notice published in the Commonwealth Gazette. The first registration of male British subjects took place in May, 1951, and since then successive groups of eighteen-year-olds have been required to register, usually at six-month intervals. In May, 1954, the obligation to register was extended to New Australians.

Exemption from the liability to register is confined to certain diplomatic personnel and officials in the service of international bodies, members of the permanent forces, and aboriginal natives of Australia. Exemption from the liability to undergo training may be granted to theological students, ministers of religion, members of religious orders, conscientious objectors, and registrants suffering from certain prescribed physical or mental disabilities.

Registrants not exempted from service are liable to be called up for training provided they attain the standard of medical fitness required. Deferment may be granted for limited periods to students or apprentices so as to avoid undue interruption to their studies or trade training and to registrants who can establish before a court that their call-up would cause exceptional hardship to themselves, their parents or dependants. Early in 1955, provision was made to defer the call-up of registrants living outside approved C.M.F. training centres and to rural workers permanently engaged full-time on a rural holding in the production of food or raw materials.

In 1957, a new selection procedure was introduced. This is in the form of a ballot conducted shortly after each new age group is called upon to register. Registrants included by ballot are regarded as available for call up subject to the existing rules and procedures for exemption and deferment. Those excluded by ballot are granted deferment.

Up to and including the intakes in January, 1957, training was carried out in all three Services. Since that date, all training has been carried out in the Army and the total number called up each year reduced from 34,000 to 12,000. Up to the time when training in the Navy and Air Force was abandoned, the total numbers called up for training in those services were Navy 6,967 and Air Force 22,267. Up to the latest Army intake in January, 1958, the total number called up for service in the Army was 176,465.

The total Army training liability is 140 days consisting of an initial continuous training period of 77 days and 21 days part-time and camp training in each of the following three years. Trainees remain on the Reserve of the Citizen Military Forces for five years from the date of call-up. The normal times for call-up are in January, April and August of each year.

Provision is made to safeguard the rights of registrants called up for training, notably with regard to reinstatement in civilian employment. There is no statutory obligation on employers to make up any difference between the civil and service pay of employees who are undergoing training, but some employers, e.g., the Commonwealth Government and the Government of New South Wales, do so voluntarily.

#### § 2. Naval Defence.

- 1. General.—(i) State Systems. Information regarding naval defence systems prior to 1901 will be found in Official Year Book No. 2, p. 1084.
- (ii) Royal Australian Navy up to the end of 1939-45 War. An outline of the development of Australian Naval policy was given in Official Year Book No. 3, p. 1060 and No. 12, p. 1012. Some account of the building of the Australian Navy, the proposed and modified cost

thereof, the compact with the Imperial Government, etc., appears in Official Year Book No. 15, pp. 921-23. An account of the growth and activities of the Royal Australian Navy during the 1939-45 War is given in Official Year Book No. 36, pp. 1023-27.

- 2. Naval Board.—The Australian Navy is administered by a Board consisting of the Minister for the Navy with four Naval Members, and the Secretary, Department of the Navy; the seat of administration is at Melbourne.
  - 3. Strength of the Fleet .- Ships in Commission:

H.M.A. Fleet.

- 1 Aircraft carrier.
- 1 Daring Class, 2 Battle Class, 1 Tribal Class destroyers.
- 3 Fast Anti-submarine frigates.
- 1 Cadet Training frigate.

Survey Ships.

- 1 Frigate.
- 1 Converted motor stores lighter.

Training Ships.

2 Ocean minesweepers.

Auxiliary Vessels.

- 2 Boom working vessels.
- 1 Ocean tug.
- 1 Armament Stores carrier.
- 5 Search and rescue craft.
- 4. Personnel.—The strength of the Royal Australian Navy has been pegged at 14,400, comprising 1,584 officers and 12,816 ratings.
- 5. Womens' Royal Australian Naval Service.—The strength of the W.R.A.N.S. remains pegged at 14 officers and 260 ratings. In June, 1957, new quarters for W.R.A.N.S. personnel serving in the Melbourne Area were opened at Greenwich House, Toorak. Ratings are serving at the following Establishments: H.M.A.S. Cerberus, where all initial training is also carried out, H.M.A.S. Harman, where telegraphists now complete their training, H.M.A.S. Lonsdale and H.M.A.S. Melville (Coonawarra W/T Station) and, since April 1957, in H.M.A.S. Watson as W.R.A.N.S. (Radar Plot). In addition to the new categories of W.R.A.N.S. (Radar Plot) and Motor Transport Driver (introduced in December, 1957), ratings are employed as Telegraphists; Writers (General Duties), (Pay), and (Shorthand Typist); Stores Assistants (Stores) and (Victualling); Sick Berth Attendants; Cooks; Stewards and Regulating.
- 6. Strength of Royal Australian Navy.—The serving strength of the Royal Australian Naval Forces, both permanent and reserves, at 31st December, 1957, was 1,307 officers and 9,445 ratings including 72 native ratings of the Papua and New Guinea Division of the Royal Australian Navy. In addition, 12 officers and 217 ratings of the Women's Royal Australian Naval Service were serving, and 72 cadet midshipmen were undergoing training, at the Naval College. Reserve strength comprised 1,497 officers and 10,583 ratings.
- 7. Reserve and National Service Training.—Reserve training was resumed as from 1st January, 1950, for members of the Royal Australian Naval Reserve. Training consists of 45 two-hour drill attendances at night or on Saturdays in naval training establishments in each of the capital cities, plus 13 days continuous training each year in H.M.A. ships or training establishments, including special schools. In addition, payment is made for further voluntary home training up to a maximum of 12 days. Selected members may undergo special courses up to a limit of six months during the whole of their service in the Reserve, whilst up to 12 months training or service may be performed in H.M.A. ships or establishments with similar qualifications. Engagements are for three years. Rates of pay have been aligned (with minor modifications) with those applicable to the Permanent Naval Forces. The training for members of the Royal Australian Naval Reserve (Sea-going) is normally 28 days every two years whilst members of the Royal Australian Naval Volunteer Reserve are under no training obligations.

Naval National Service personnel commenced training on 30th July, 1951. On completion of their 154 days initial training in naval establishments and H.M.A. ships, personnel have been attached to the Naval Reserve Training Establishments in their State until completion of their five-year liability for mobilization in war or emergency. After the intake of trainees in January, 1957, National Service Training by the Navy was discontinued.

Revised post-war conditions of service in the Royal Australian Fleet Reserve were introduced as from 13th December, 1950. This Reserve is comprised of two classes:—
(a) former ratings who receive full benefits under the Defence Forces Benefits Act and are required to serve five years in the Royal Australian Fleet Reserve as a consideration for receipt of these benefits and (b) former ratings who have previously served in the Permanent Naval Forces of the Royal Australian Navy, Royal Navy, or a Dominion Navy subject to a minimum period of three years' service and an absence of not more than five years. No retainer is payable to members under (a) and no obligatory training is carried out but 14 days paid voluntary training can be undertaken. Members under (b) receive an annual retainer of £24 subject to completing annual training; if enrolled within 12 months of discharge from Permanent Naval Forces—14 days; if enrolled after a lapse of 12 months since discharge from Permanent Naval Forces—14 days; additional paid voluntary training up to 14 days may be carried out. Subject to minor modifications ratings receive pay applicable to Royal Australian Navy personnel whilst under training.

- 8. Fleet Air Arm.—The Fleet Air Arm of the Royal Australian Navy consists of four front line squadrons, one operational carrier, H.M.A.S. *Melbourne*, and one Naval Air Station, H.M.A.S. *Albatross* at Nowra, New South Wales. The aircraft carrier H.M.A.S. *Melbourne*, fitted with an angled deck and steam catapult, carries three squadrons of aircraft including Gannet turbo-prop for anti-submarine operations and jet Sea Venom all weather fighters and ground attack aircraft.
- 9. Ship Construction and Repair.—Provision is made for the maintenance in Australia of a nucleus ship construction and repair industry capable of rapid expansion in war. The present approved programme provides for the construction of three Daring Class Ships (one was completed in February, 1957), and four anti-submarine frigates (at present under construction).
- 10. The Relation of New Weapons.—Careful consideration has been given to the implications of new weapons, and the decisions in regard to the Navy are based on the broad conclusions of great naval powers that these weapons should be introduced by the normal process of evolution, first into existing ships, and later perhaps into an entirely new form of fighting ship. The same authority supports the view that there will be no rapid development which will render vessels such as carriers, cruisers and destroyers obsolete in the near future.
- 11. Naval College.—The Royal Australian Naval College, transferred from Jervis Bay, A.C.T., to Flinders Naval Depot in 1930, has been re-established at Jervis Bay. It was commissioned as H.M.A.S. Creswell on 20th January, 1958. In January, 1958 there were 78 R.A.N. Cadets (25 having been appointed away and 31 newly entered) and 14 R.N.Z.N. Cadets undergoing training at the College.
- 12. Training Establishments.—Flinders Naval Depot, Victoria, remains the principal training establishment for ratings in the permanent forces, while several advanced training schools are established at Port Jackson, New South Wales. Air training is carried out at Nowra, New South Wales.
- 13. The Australia Naval Station.—Defined limits of the Australia Station are as follows:—

Eastern-

From 3° 30' North, 169° East, south to 1° South, thence east to 170° East, thence south along this meridian to 30° South, thence to 45° South, 160° East, thence south, along this meridian.

Northern-

From 3° 30' North, 169° East, west to 125° East, thence south to the Coast of Celebes, thence west along the Coast of Celebes to 120° East, thence south to 11° 30' South, thence west to 11° 30' South, 95° East.

Western-

From 11° 30′ South, 95° East, south along this meridian to 30° South, thence west along this parallel to 80° East, thence south along this meridian.

14. Foreign Service.—During the year ended June 1958, H.M.A. ships Melbourne, Anzac, Tobruk, Voyager and Warramunga served on the Far East Station as units of the Commonwealth Strategic Reserve. H.M.A.S. Melbourne paid a visit to Pearl Harbour for advanced A/s exercises in June, 1958, and H.M.A. Ships Quiberon, Queenborough and Quickmatch have made visits beyond the limits of the Australia Station.

15. Papua and New Guinea Division of the Royal Australian Navy.—A Papua and New Guinea Division of the Royal Australian Navy, consisting of native ratings, was inaugurated in July, 1951, as a separate part of the Permanent Naval Forces for employment in Papua and New Guinea and waters adjacent thereto.

16. Ships of the Royal Australian Navy.—The following ships were in commission or in reserve in June, 1957:—

SHIPS OF THE ROYAL AUSTRALIAN NAVY, JUNE, 1957.

	Vessel. Description. Displacement.								Displace- ment.
n Commission		•							Tons.
Melbourne	••	• •	• •		Aircraft	Carrier,	Opera	tional	15,680
Voyager	• •		• •		Daring (	Class Shi	p		2,801
Anzac					Destroye	er			2,436
Tobruk					,,				2,436
Warramunga		• •	• •		,,	• •	••		2,012
Queenboroug	h				Frigate				2,020
Quiberon					,,				2,020
Ouickmatch					,,				2,020
Swan (Traini	ng Ship)	)			,,				1,060
Warrego (Sui			••		,,				1,060
Cootamundra	,				Ocean N	Aineswee	ner		768
Fremantle	• • •								768
1 / Emantic	• •	• •	• •	• •	**	**	• •	• •	100
Lachlan (Sur Royal New				o the	Frigate		••		1,47
n Reserve— Sydney					Aircraft	Carrier			15 740
Syuney .	••	••	••	••	Ancian	Califel	• •	• •	15,740
Hobart	••	••	• •	• •	Cruiser	• •	• •	••	7,10
Arunta					Destroy	er			2,01
Barcoo (Surv	eying Sl	hip)			Frigate				1,47
Barcoo (Surv Barwon	eying Sl	hip)			1				1,47 1,48
		• •	• •		,,			••	1,48
Barwon		•••			,,	••		••	1,48 1,48
Barwon` Burdckin				• •	,,		••		1,48 1,48 1,53
Barwon Burdckin Condamine		•••	•••		,, ,, ,,	•••			1,48 1,48 1,53 1,53
Barwon Burdckin Condamine Culgoa		•••		• •	,, ,,			•••	1,48 1,48 1,53 1,53 1,48
Barwon Burdckin Condamine Culgoa Diamantina Gascoyne		•••	••		,, ,, ,, ,,				1,48 1,48 1,53 1,53 1,48 1,48
Barwon Burdckin Condamine Culgoa Diamantina Gascoyne Hawkesbury					,, ,, ,, ,,				1,48 1,48 1,53 1,53 1,48 1,48
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie					>> >> >> >> >> >> >> >> >>				1,48 1,48 1,53 1,53 1,48 1,48 1,48
Barwon Burdckin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison					); ); ); ); ); ); ); ); ); ); ); ); ); )				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,55
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Quadrant					;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;;				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison					); ); ); ); ); ); ); ); ); ); ); ); ); )				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven					)) )) )) )) )) )) )) )) )) )) )) )) ))				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02 1,53
Barwon Burdckin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury					)) )) )) )) )) )) )) )) )) )) )) )) ))				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02 1,53
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg					"" "" "" "" "" "" "" "" "" "" "" "" ""	      	   		1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 2,02 1,53 76
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg Castlemaine					"" "" "" "" "" "" "" "" "" "" "" "" ""	··· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ·· ··			1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02 1,53
Barwon Burdekin Condanine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg Castlemaine Colac					"" "" "" "" "" "" "" "" "" "" "" "" ""				1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02 1,53 76 76 76 86
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg Castlemaine Colac Cowra					Ocean M		    		1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,48 1,55 1,53 2,02 1,53 76 76 79 86 76 76
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg Castlemaine Colac Cowra Gympie					Ocean N		    		1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,55 1,53 2,02 1,53
Barwon Burdekin Condamine Culgoa Diamantina Gascoyne Hawkesbury Macquarie Murchison Quadrant Shoalhaven Ararat Bunbury Bundaberg Castlemaine Colac Cowra					ocean M		    		1,48 1,48 1,53 1,53 1,48 1,48 1,48 1,48 1,55 1,53 2,02 1,53 76 76 79 86 76 76

SHIPS OF THE ROYAL AUSTRALIAN NA	VY, JUNE,	1957—continued.
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		essel.		l 	Displace- ment.				
In Reserve—a	ontinued	1.							Tons.
Rockhampte	on				Ocean I	Mineswe	eper		768
Strahan					٠,,	,,	·		768
Wagga					,,	,,		:	768
Under Docky	ard Con	trol						1	
Vampire					Daring	Class Sl	nip (Buil	ding)	2,789
Vendetta			• •		,,	,,	,,	Ű,	2,789
Miscellaneous reserve—fif		in com	mission a	nd in				1	

### § 3. Military Defence.

1. State Systems.—A detailed historical account of the Australian defence forces prior to Federation will be found in Official Year Book No. 2, pp. 1075–1080. See also Official Year Book No. 12, p. 999.

The strength of the military forces of the States on 31st December, 1900 (the eve of Federation) was:—New South Wales, 9,338; Victoria, 6,335; Queensland, 4,028; South Australia, 2,932; Western Australia, 2,696; Tasmania, 2,024; total for Australia, 27,353. This total is exclusive of cadets, reservists and rifle club members.

2. Commonwealth Systems.—(i) General. Under the terms of the Constitution Act 1900, the Commonwealth took over control of defence matters in March, 1901. The growth of the Commonwealth Military Forces may be considered to have taken place in sixteen phases. For particulars of the phases which cover the period from the welding together of the military forces of the States into one homogeneous army in 1902 up to the decision to increase the training strength of the militia to 70,000 in the year before the 1939–45 War (phases 1–7), see Official Year Book No. 36 and earlier issues.

Phases 8-10, covering the period immediately prior to, and just following, the outbreak of the 1939-45 War, relate to the initial steps necessary to put the Australian Military Forces on a war-time basis, and to its organization into commands.

The eleventh phase, in January, 1942, was the division of Northern, Eastern and Southern Commands into separate commands and base headquarters to handle operational and administrative matters respectively, and the twelfth phase was the revision of the machinery for command administration of lines of communication areas. The thirteenth phase was the appointment of Lieutenant-General Sir Iven Mackay as G.O.C.-in-C. Home Forces commanding the forces in Northern, Eastern and Southern Commands. The fourteenth phase covered the period following the outbreak of war with Japan and the entry of United States of America Forces into the South-West Pacific Area, and related to the appointment of General Sir Thomas Blamey as Commander-in-Chief, Australian Military Forces, the cessation of the Military Board, and the replacement of the system of commands and bases by the field army and lines of communication areas. In March, 1943, First and Second Armies took over from Queensland, New South Wales and Victoria Lines of Communication Areas the command of all coast and static anti-aircraft artillery defences and training establishments. On 16th June, 1944, Western Command was re-established and took over the combined responsibilities of Third Australian Corps and Western Australia Line of Communication Area.

The fifteenth phase was the re-introduction in March, 1946, of the Military Board and the organization of commands and military districts, and the sixteenth phase was the commencement of the National Service Training Scheme in August, 1951 (see § 1, para. 6 above and sub-para. (iv) (c) following).

For greater detail on phases 8-14, see Official Year Book No. 38 and earlier issues.

- (ii) Population of Military Age, 30th June, 1957. The following particulars show the estimated numbers of males of military age in the population of Australia as at 30th June, 1957. The total number of cadet age, 14 and under 18, was 282,676; of citizen soldier age, 18 and under 26, 516,830; and 26 and under 35, 686,156; making a total of 1,485,662 aged 18 and under 35, which is considered the best period for military service. In addition to the above-mentioned, there were 1,480,169 males, 35 and under 60, in Australia at 30th June, 1957.
- (iii) Allotment of Units. Under the Command Organization (see above), units are raised on a territorial basis, each State supplying its proportion of the personnel required for the fighting services. Commands and all formations and units under them conform generally to State boundaries as follows:—Northern Command, Queensland; Eastern Command, New South Wales; Southern Command, Victoria; Central Command, South Australia; Western Command, Western Australia; Tasmania Command and Northern Territory Command. New Guinea is the responsibility of Northern Command.
- (iv) Military Training Systems. (a) General. Particulars of the military training systems in operation prior to the 1939-45 War, first on a compulsory basis and later voluntary, will be found in Official Year Book No. 38 and earlier issues.

The current plan (1957-58) for the Australian Regular Army is based on an average strength of 25,600 full time duty personnel (including 4,800 civilians) and a Citizen Military Force of 70,300 including National Servicemen.

(b) The Australian Cadet Corps. The Australian Cadet Corps is a voluntary organization comprised of School Cadet units. It serves as a training ground to provide, to some extent, the future officers and non-commissioned officers of the Australian Military Forces, and, as such, occupies an important position in the scheme of national defence. School Cadet units are raised at educational establishments in all States of the Commonwealth. The minimum age for enrolment is the year in which the applicant reaches the age of 14 years, and cadets, who in the large majority of schools receive a free issue of A.M.F. pattern uniform, may remain in the Cadet Corps until they cease to be pupils of the educational establishments concerned. A few units retain their own pattern school uniform and are not issued with A.M.F. pattern uniforms. Provision is made for the appointment of officers, warrant and non-commissioned officers on an authorized establishment scale from within school units.

The establishment of the whole Corps is 35,000 all ranks, and at 31st December, 1957, comprised 274 School Cadet units with a posted strength of 30,321 all ranks.

- (c) National Service Training Scheme. Under the National Service Training Scheme (see § 1, para. 6 above) the Army was initially required to train 29,250 trainees a year, effected by three intakes each of 9,750 trainees in January, April and August. The first intake commenced training in August, 1951. As from the second intake of 1957, the annual intake has been reduced to 12,000.
- (v) Women's Services. In November, 1950, approval was given for the enlistment of women into the Australian Regular Army, on a limited scale. Enlistment commenced immediately into the Australian Women's Army Corps. During June, 1951, the Australian Women's Army Corps was re-designated the Women's Royal Australian Army Corps (W.R.A.A.C.). Members are employed in establishments in direct substitution for male soldiers. The Women's Services in the Australian Regular Army now comprise two Corps only:—(a) Royal Australian Army Nursing Corps; (b) Women's Royal Australian Army Corps.

Women's Services have been incorporated in the Citizen Military Forces and it is proposed to raise sixteen companies of the Women's Royal Australian Army Corps and twelve companies of the Royal Australian Army Nursing Corps, a total of 3,900 all ranks, within the C.M.F.

At December, 1957, six companies of the Women's Royal Australian Army Corps and eight companies of the Royal Australian Army Nursing Corps, a total of approximately 1,900 all ranks, had been raised within the C.M.F.

(vi) Malaya. On 1st April, 1955, the Commonwealth Government announced its decision to dispatch troops to Malaya as an Australian component of the British Commonwealth Far East Strategic Reserve. 2nd Battalion, The Royal Australian Regiment and 105th Field Battery, Royal Australian Artillery and other minor units embarked from Australia on 6th October, 1955 and disembarked at Penang on 20th October, 1955. These units returned to Australia in 1957, disembarking at Sydney on 31st October. They were replaced by 3rd Battallon, The Royal Australian Regiment, 100 (a) Field Battery, Royal Australian Artillery and other minor units.

(vii) The Staff College. Until 1938, the training of staff officers was carried out in the various Military Districts throughout Australia, except in cases where officers were selected from time to time to attend courses abroad. In 1938, an Australian Command and Staff School, located in the original Officers' Mess at Victoria Barracks, Sydney, was established. Between 1939 and 1945, the training of staff officers was carried out under varying conditions by different schools in accordance with the changing needs of the war.

Early in 1946, the Staff School (Australia) was established at Seymour in Victoria and re-designated the Staff College in conformity with other Empire training establishments for training officers for command and staff appointments. The College was later moved to Queenscliffe, Victoria, where it is at present situated. The courses are of ten months' duration and are held from January to November each year. The normal intake is 30 students and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for war, and in so doing to fit them for Command or Grade II. staff appointments. Each course includes, among the students, Army representatives of the United Kingdom, and other Dominions and countries. Included in the 1957 course are students from the United Kingdom, Canada, New Zealand, India, Pakistan, the United States of America, the Phillipines and Burma. Vacancies on each course are reserved also for officers who may be nominated by the Royal Australian Navy, the Royal Australian Air Force and the Commonwealth Public Service.

In order to ensure common standards in tactical doctrine and staff and command training throughout the Empire, liaison is maintained with other Staff Colleges; and to this end, there is also a reciprocal exchange of instructors. To this extent, it may be said that the Staff College is imperial in character.

(viii) The Royal Military College. The Royal Military College was established in 1911 at Duntroon in the Australian Capital Territory for the purpose of providing trained officers for the Army. The conditions of entry are laid down in the Royal Military College Regulations and provide for admission by "normal", "service", and "special" entries. The length of the normal course is four years; "service" entry cadets attend for three years; and "special" entries for one year.

While at the College, cadets receive pay and allowance of 15s. 10d. per day in their first year, rising to 25s. 6d. per day in their fourth. Uniform maintenance allowance of 1s. 9d. per day is additional, and a further 6d. per day is paid to cadets on attaining the age of 18 years. The course of instruction is organized into military and civil departments and the instructional staff comprises officers of the Army and civilian professors. On graduation, cadets are appointed lieutenants in the Australian Regular Army. The College also trains New Zealand cadets for commissions in the New Zealand Permanent Forces under an agreement made with the Government of that Dominion.

- (ix) The Officer Cadet School. The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the supply of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, National Servicemen, and civilians between the ages of 18 and 23 years, are eligible to apply for entrance. The course is of eleven months' duration and on graduation cadets are appointed second-lieutenants in the Australian Regular Army. They then normally proceed to further training at the Army School of the Arm or Service to which they have been allotted before being posted to regimental duties.
- (x) The Women's Royal Australian Army Corps School. The W.R.A.A.C. School was established in 1952 at Mildura, Victoria. It has two wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., the other being for the training of non-commissioned officers at all levels and for other special courses. The officer cadets are selected from eligible applicants, who may be serving members between 21 and 32 years of age, or civilians between 21 and 30 years of age. The course is of six months' duration and, on graduation, cadets are appointed lieutenants in the Women's Royal Australian Army Corps.
- (xi) The Army Apprentices' School. The Army Apprentices' School was opened in 1948 at Balcombe, Victoria, with the aim of training youths as skilled tradesmen for the Australian Regular Army, and to form a background for an Army career with prospects of promotion. The course is open to boys between the ages of 15 and 17 years and provides training in a number of highly skilled trades. A three-year course of intensive theoretical and practical work at the Apprentices' School is followed by one year in an appropriate Army workshop or technical unit. At the end of their third year, boys are

given their Army trade test and also take the Victorian Apprenticeship Commission final grade public examinations, which ensures that they will be accepted as qualified tradesmen in civil life when they eventually leave the Army. In addition to trade training, the Apprentices' School provides general educational facilities up to the school leaving standard.

(xii) Army Schools. Schools have been established for the major Arms and Services for the purpose of training officers and other ranks in the up-to-date techniques of their own Arm or Service, to qualify them for promotion requirements, and to produce trained instructors. In addition, a School of Tactics and Administration which has been established at Seymour, Victoria, provides qualifying and instructional courses in current tactical and administrative doctrine for members of all Arms and Services. Courses at Army Schools are conducted for members of both the Australian Regular Army and the Citizen Military Forces.

The following Schools have been established:—School of Tactics and Administration; Jungle Training Centre; Armoured School; School of Artillery; School of Military Engineering; School of Survey; School of Signals; School of Military Intelligence; School of Infantry; Royal Australian Army Medical Corps School of Army Health; Royal Australian Army Service Corps School; Royal Australian Army Ordnance Corps School; Royal Australian Electrical and Mechanical Engineers Training Centre; Transportation Training Centre; School of Music; Women's Royal Australian Army Corps School; Land/Air Warfare (Joint Services) School.

(xiii) Rifle Clubs. The Australian Rifle Club movement, which had its origin in 1888, is provided for in the Defence Act and comprises an Australian Council of State Rifle Associations (which functions in an advisory capacity to the Minister and in the promotion of oversea and interstate rifle competitions), State Rifle Associations, District Rifle Club Unions and Rifle Ctubs. When placed in recess, the efficient strength of the rifle club movement was 1,018 clubs and 36,478 members. Approximately 20 per cent. of this number served overseas and a further 60 per cent. performed home service duties during the 1939-45 War. Rifle shooting activities were resumed in 1946 and the strength of the movement as at 31st December, 1957, was 1,011 clubs and 46,207 members.

(xiv) The Australian Battles Nomenclature Committee. Reference to the formation of the Australian Battles Nomenclature Committee on 25th July, 1957, together with a broad outline of its functions and activities was given in Official Year Book No. 43, p. 1024. The Australian Battles Nomenclature Committee advised the United Kingdom Battles Nomenclature Committee regarding all operations of the Second World War and the Korean Campaign 1950-53 in which Australian Military Forces participated. The final report of the United Kingdom Battles Nomenclature Committee was published in November, 1957.

3. Strength of Australian Military Forces.—The effective strength of the Australian Military Forces at 31st December, 1957, was as follows:—Australian Regular Army, 17,498; Regular Army Special Reserve, 3,273; Citizen Military Force (including National Service Trainees), 89,207; Australian Cadet Corps, 30,321.

### § 4. Air Defence.

- 1. General.—A statement regarding the preliminary steps taken in connexion with the development of air defence will be found in Official Year Book No. 18, p. 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939-45 War appears in Official Year Book No. 36, p. 1027.
- 2. Operations in Korea and Malaya.—Reference to R.A.A.F. participation in operations in Korea is contained in Official Year Book No. 40, pp. 1112-13.

Australian assistance in the form of one transport squadron provided to the Malayan authorities is detailed in Official Year Book No. 40, p. 1113.

One bomber squadron was also provided for operations in Malaya. The Lincolns of No. 1 Squadron arrived in July, 1950, and were soon in action. Up till 1st February, 1958, No. 1 Squadron had dropped 32,800,350 lb. of bombs during operations against communist bandits. This bombing, which calls for extreme accuracy, was mainly on jungle hideouts frequented by the insurgents and was carried out in close co-operation with the ground forces.

3. Administration and Organization.—The Department of Air is responsible for policy for the organization and control of the Royal Australian Air Force. The Air Board is responsible, subject to approved policy, for the control and administration of the Royal Australian Air Force, and is constituted as follows:—Chief of the Air Staff, Air Member for Technical Services, Air Member for Personnel, Air Member for Supply and Equipment, Citizen Air Force Member and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is located at Melbourne. An Oversea Headquarters is located at London and an Air Attaché at Washington.

The units of the Royal Australian Air Force are organized in three functional Commands throughout Australia and its Territories.

The Commands are:-

Home Command.—Home Command is responsible for the command of operational units and the conduct of their operations within Australia and its Territories.

Training Command.—Training Command is responsible for the command of training units, recruitment and individual training in the R.A.A.F.

Maintenance Command.—Maintenance Command is responsible for the command of supply and servicing units, and supply and servicing, including technical services, of the R.A.A.F. in Australia.

The organization of the Royal Australian Air Force includes the following types of formations and units:—

- (a) Sub-formations, comprising a headquarters unit to control the activities of a number of units at one location. Each formation has a base squadron which provides common services to all units at the location.
- (b) Flying Squadrons. These bomber, fighter, transport and maritime reconnaissance squadrons undertake the operational and operational training flying commitments of the R.A.A.F.
- (c) Aircraft Depots. These units specialize in major overhauls, etc., of aircraft and equipment and relieve flying unit ground staff of these commitments.
- (d) Stores Depots. Stores and equipment ordered by the R.A.A.F. are delivered to these centrally located depots for distribution to units.
- (e) Flying Training, Ground Training, Navigation, Radio and Air Armament Training Units, which specialize in the aircrew and ground staff training required by the R.A.A.F.
- (f) Airfield Construction Squadrons. These units specialize in the construction of R.A.A.F. aerodromes and associated buildings and works services.
- (g) Royal Australian Air Force College. This unit is the training college for officer cadet entrants to the R.A.A.F.
- (h) Telecommunications Units. These units are responsible for the communications services of the R.A.A.F.
- (i) R.A.A.F. Staff College. This college trains specially selected R.A.A.F. officers for higher staff and command posts.
- 4. Aircraft.—Some of the aircraft which are at present being used in the Royal Australian Air Force are: bomber squadrons—Lincoln and Canberra; fighter squadrons—Mustang, Vampire, Meteor and Avon Sabre; transport squadrons—Metropolitan and Dakota; maritime reconnaissance squadrons—Lincoln and Neptune; air observation post—Auster; training—Wirraway, Dakota, Lincoln, Winjeel, Vampire, Meteor and Avon Sabre.
- 5. Establishment.—The Royal Australian Air Force establishment, as proposed, comprises—(a) a Home Defence Organization, (b) a Field Operational Force, (c) an Operational Reserve and (d) a Training Organization, consisting in all of approximately 16,800 personnel.
- 6. Strength of Royal Australian Air Force.—At 1st February, 1958, the strength of the Royal Australian Air Force was as follows:—Permanent Air Force, 14,453; Active Citizen Air Force, 425; Active Reserve, 381 and General Reserve, 35,921, including National Service Trainees transferred to the Reserve on completion of their 154 days training. After the intake of trainees in January, 1957, National Service Training by the Air Force was discontinued (see p. 1050).
- 7. Women's Royal Australian Air Force.—At 1st February, 1958, the Women's Royal Australian Air Force had an establishment of 849, with an enlisted strength of 760. There are 27 musterings, excluding members of the W.R.A.A.F. in training. The entry age is 18 to 34 years inclusive. Parental consent must also accompany applications for those between the ages of 18 and 21 years. A good education is necessary and applicants must be of British nationality, single, or a widow without dependants, and must be physically fit. Engagement period is four years with the option of re-enlistment for further periods of four years.
- All W.R.A.A.F. trainees undergo a month's initial training course at Point Cook, Victoria. On graduating, they are posted for duty to R.A.A.F. units anywhere in Australia. Wherever possible, the Air Force endeavours to post members of the W.R.A.A.F. to R.A.A.F. units within their home State. This rule applies for those who wish to serve in their home State, but members of the W.R.A.A.F. who wish to travel may indicate their preference and be posted to whichever State they desire.

### § 5. War Gratuities.

Reference is made in earlier issues of the Official Year Book to the payments made under the provisions of the War Gratuity Acts 1920 (see No. 15, p. 930) and the War Gratuity Act 1945-1947 (see No. 41, p. 999).

### § 6. Department of Defence Production.

- 1. General.—On 11th May, 1951, a Department of Defence Production and a Department of Supply were established by a decision of the Commonwealth Government. These Departments took over the functions previously undertaken by a joint Supply Department. The Department of Defence Production is responsible broadly for the production in government-operated factories and in industry under contract to the Government of munitions (including aircraft) required by the Services. It is also responsible for all those matters incidental to production, including planning production capacity to meet expected future Service requirements. References to previous operations of the various sections and establishments of the Department are given in Official Year Book No. 38, pp. 1200-9.
- 2. Functions of the Department and Act Administered.—The functions of the Department of Defence Production, as defined in the Administrative Arrangements approved by the Governor-General, are:—
  - (i) Manufacture, acquisition, provision and supply of munitions for the defence forces, that is to say, armaments, aircraft, arms, ammunition, weapons, machine tools, war chemicals, radar and such other items as may be mutually agreed with the Department of Supply as falling within the definition of munitions, including the materials and plant necessary for the production of those things and all matters incidental thereto, including:—

The receipt from the Service Departments and other authorities or Departments of orders and forecasts of requirements of munitions; appropriate liaison with the Higher Defence Machinery, Service Departments and the Department of Supply to deal with Service munitions programmes; operation and management of factories, workshops and undertakings concerned in the production of munitions; arrangements and all action necessary to secure the manufacture, processing and delivery of munitions; investigations and development of Australian sources of munitions production, including the establishment of annexes or special capacity in industry for that purpose; acquisition by the Commonwealth and the establishment of factories and workshops for the purpose of producing munitions; provision and maintenance of stocks of materials and goods for the purpose of producing munitions.

(ii) Employment and training of technicians, workmen and others for the purpose of producing munitions.

(iii) Formation of Industry Advisory Committees to advise the Minister for Defence Production regarding:—

The allocation to industry of production programmes of munitions; the establishing of additional munitions production facilities, including annexes and undertakings; the obtaining of appropriate details of Australian industrial capacity required by the Department of Defence Production in allocating munitions production to industry; any other matters associated with munitions production as specified by the Minister.

- (iv) Provision and control of stores, magazines and similar undertakings required in connexion with production of munitions and for other purposes as
- (v) Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions.
- (vi) Development of inventions originating in government factories in the interests of defence production.

The Act administered by the Department is the Supply and Development Act 1939-1948.

- 3. Production.—(i) Munitions. The Department is responsible for the production in Australia of the munitions (other than specialized Navy requirements) for the Armed Services. The production is undertaken in government-operated factories and industry. Broadly this production is allocated as follows:—
  - (a) Some processes are entirely undertaken by the government factories in peace and war because of special requirements.
  - (b) Some classes of equipment and components are produced entirely by industry in peace and war.

(c) Production techniques of advanced equipment and components of which industry may undertake mass production in war, are developed in the government factories in peace.

(d) Limited requirements of standard equipment and components produced in peace by the government factories are in war produced on a mass pro-

duction basis in industry.

The following factories are currently in operation:—Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St. Mary's, New South Wales; Ordnance—Maribyrnong, Bendigo, Echuca, Port Melbourne, all in Victoria; Small Arms—Lithgow, New South Wales; and certain annexes established in industry. Other government-owned factories and annexes are held on a care and maintenance basis against an emergency.

A new Munitions Filling Factory was completed in December, 1957, at St. Mary's, New South Wales. The factory, which cost approximately £26 million, will remedy a critical deficiency in the capacity to fill the empty components—depth charges, torpedoes, shells,

grenades, guided weapons—with explosives and propellants.

These factories are complementary to each other in the manufacture of a range of basic munitions. The Ammunition Factory makes the brass and non-ferrous components of gun ammunition, including melting and rolling, and these components are then passed to the Filling Factories for filling with explosives. In the case of small arms ammunition, however, the factory makes the complete round, receiving the propellant from the Explosives Factories. The Ordnance Factories principally make guns, but in addition make the steel shell bodies which are passed to the Filling Factories to be filled with explosives and assembled with the brass and other components received from the Ammunition Factory. The Explosives Factories make the propellant and high explosives for the brass components made at the Ammunition Factory and the steel components made at the Ordnance Factory. The Explosives Factories also assemble the gun ammunition. The Small Arms Factory is equipped to make the rifles and other small arms for which the Ammunition Factory makes the ammunition.

Production of munitions is also a joint effort between the Government factories and private contractors in industry. In peace, industry produces many components for ammunition and other stores plus complete units such as electronic equipment and motor vehicles for the Services. In war, industry would provide the major capacity not only for mass production of these and many other new items, but also for the mass production of equipment and components using engineering techniques developed in peacetime in the Government factories.

(ii) Aircraft. (a) General. Matters relating to the production in Australia of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force and the Royal Australian Navy are administered by the Department of Defence Production. Aircraft repair and overhaul activities carried out for those Services in civilian establishments, as distinct from Service workshops, are also the function of the Department, together with the responsibility of supplying aircraft and engine spare parts and airborne equipment generally.

(b) Aircraft, Engine and Other Production. The approved production programmes for the major aircraft manufacturing organizations in Australia comprised Canberra jetengined bombers and Jindivik radio-controlled jet-propelled target aircraft at the Government Aircraft Factory, Melbourne; Avon Sabre jet-engined fighters, Winjeel basic trainers and Rolls-Royce Avon turbo-jet engines at Commonwealth Aircraft Corporation Pty. Ltd., Melbourne, and Vampire jet-trainers at De Havilland Aircraft Pty. Ltd., Sydney.

Associated concurrent production activities included the manufacture of parts of aero engines and of undercarriages at the Aircraft Engine Factory, Sydney, production of heavy forgings in light alloy materials at the Heavy Forge Annexe, Sydney, and the manufac-

ture of aircraft pressed metal parts at Chrysler Australia Ltd., Adelaide.

(c) Repair and Overhaul. During the year, the broad policy was continued by the R.A.A.F. of returning to the factories in which they were produced all Australian-made aircraft and aero engines requiring major overhaul and the incorporation of modifications. Repair and overhaul of R.A.A.F. aircraft of certain other types and of carrier-based aircraft operated by the R.A.N. were undertaken by civilian personnel in the aircraft factories or in the works of contractors specially equipped to handle this type of work.

Lincoln and Canberra bomber aircraft were repaired and modified at the Government Aircraft Factory, together with Jindivik target aircraft. Avon Sabre fighter aircraft were repaired and modified and Rolls-Royce Nene and Avon turbo-jet engines were overhauled by Commonwealth Aircraft Corporation Pty. Ltd., Melbourne. Rolls-Royce Merlin and Pratt and Whitney Twin Row Wasp engines from the R.A.A.F., Rolls-Royce Griffon, Bristol Centaurus and Armstrong-Siddeley Double Mamba turbo-propellor engines from the R.A.N., and Rover Meteor engines from the Department of the Army for Centurion tanks were overhauled at the Aircraft Engine Factory, Sydney. Wright turbo-compound engines from R.A.A.F. Neptune aircraft were overhauled by Oantas Empire Airways Ltd., Sydney.

Carrier-based Sea Venom aircraft, Vampire fighters and trainers, together with Goblin turbo-jet engines from Vampire trainers and Gipsy Major piston engines were repaired and overhauled at De Havilland Aircraft Pty. Ltd. Dakota transport and other miscellaneous aircraft were reconditioned and serviced at the Government workshops at Parafield, South Australia.

The repair and overhaul of carrier-based Fairey "Firefly", Hawker "Sea Fury" and Fairey "Gannet" aircraft were handled by the Fairey Aviation Company of Australasia Ltd., Sydney.

Sycamore helicopter aircraft built by the Bristol Aeroplane Company, Bristol freighter aircraft, Alvis and Leonides and Bristol Hercules engines from those aircraft were repaired and overhauled by Bristol Aviation Services, also in Sydney.

Repair and overhaul work on propellors was undertaken at the Propellor Annexe, Sydney, managed for the Commonwealth by De Havilland Aircraft Pty. Ltd., Sydney.

The reconditioning and servicing of aircraft instruments, ancillary equipment and airframe components were carried out by a large number of sundry contractors.

- (d) Avalon Test Field. During the year, the aircraft flight test field at Avalon, near Geelong (Victoria), was further developed for the final assembly, fitting out and testing in flight of the Canberra bomber, Avon Sabre fighter and Winjeel trainer aircraft, built at the aircraft factories near Melbourne.
- 4. Defence Production Planning.—The Defence Production Planning Branch is the executive instrument of a Committee of the same name which operates both as an advisory body and as a reviewing Committee of defence production matters for submission to the Higher Defence Machinery. Its membership includes representatives of the three Services and the Departments of Defence, Defence Production, Supply and Trade, thereby ensuring a close liaison between the Departments most concerned with defence, both directly and indirectly, in the formation of defence production planning policy.

A series of Industry Advisory Committees has been established by the Minister for Defence Production to advise him and the Department in the development of industrial mobilization plans to meet the requirements for munitions production in war. The Committees are:—Ammunition; Electrical; Explosives and Chemicals; Machine Tools and Gauges and Munitions Factory Equipment; Materials; Military Vehicles; Radar and Telecommunications; and Weapons and their Equipment.

Members of the Committees are industrialists of wide experience and the highest ability in their chosen fields.

5. Finance and Accounts.—The expenditure on munitions, munitions factories, aircraft production, etc., during 1955-56 and 1956-57 is shown in the following table:—

DEFENCE PRODUCTION: TOTAL EXPENDITURE.

(±'000.)											
Particulars.				Expenditure.							
Particulars.				1955-5	6. 1956	57.					
Parliamentary Appropriations Trust Fund Accounts—		• •	••	(a) 12,33	4 (b) 20,	512					
Government Factories and Estab	olishme	nts		16,78	1 13.9	984					
Manufacture of Munitions			•	13,54	- '	262					
Munitions Materials				2		5					
Defence Production Materials				34	9	194					
Aircraft Production				18,41	7 15,	709					
Strategic Stores and Equipment	• •	• • •	• •	23	9	9					
Total Trust Fund Accounts				49,34	9 42,	163					
Total Expenditure				61,68	3 62,0	575					

<sup>(</sup>a) Includes Audit; excludes contribution under Superannuation Act. (b) Excludes Audit and contribution under Superannuation Act.

### § 7. Department of Supply.

- 1. General.—Reference to the creation of the Department of Supply is contained in Official Year Book No. 39, p. 1257.
- 2. Functions of the Department.—The functions of the Department include (a) the manufacture, acquisition, provision and supply of services and goods other than "munitions" (that is to say foodstuffs, textiles, clothing, fibres, canvas goods, woodwork, hardware, boots, leatherware and other like supplies) required by the Services and other authorities; (b) research and scientific development in relation to war matériel, including the operation of the Joint United Kingdom-Australia Long Range Weapons Project, and Australian research and development through the Weapons Research Establishment, the Aeronautical Research Laboratories, Defence Standards Laboratories and associated establishments; (c) design and associated technical development and inspection of war matériel; (d) planning for and procurement of strategic materials; (e) planning and establishment of manufacturing facilities for the production of goods other than munitions; (f) formation of industry advisory committees in respect of production and procurement matters; (g) arranging contracts for supply of goods and performance of services; (h) operation and management of Government Clothing Factories; (i) acquisition, maintenance and disposal of stocks; (i) sale or disposal of surplus or unserviceable Commonwealth property (except buildings or land); (k) provision of Commonwealth transport facilities; (l) security service for Supply and Defence Production Departments; (m) arrangements for ascertaining costs and control and limitation of profits on production contracts; (n) co-ordinating estimates, allocation and commitment of resources for Defence Supply needs (including munitions) and liaison with the National Security Resources Board; (o) provision and control of stores required for or in connexion with matters administered by the Department of Supply; and general storage for other Departments as required.
- 3. Act Administered.—The Minister for Supply administers the Supply and Development Act 1939-1948.
- 4. Research and Development Branch.—(i) General. The Research and Development Branch, which is under the control of the Chief Scientist, is responsible for research and scientific development in relation to war matériel including the operation of the joint United Kingdom-Australia Long Range Weapons Organization. The Chief Scientist is also the Chairman of the Board of Management for Research and Development, which is responsible for the efficient and economical conduct of research and development undertakings. The headquarters of the Branch is situated at 339 Swanston Street, Melbourne, and the following establishments are included in the Branch:—Weapons Research Establishment, Salisbury, South Australia; Defence Standards Laboratories, Maribyrnong, Victoria; Aeronautical Research Laboratories, Fishermen's Bend, Victoria.
- (ii) Weapons Research Establishment, Salisbury, South Australia. This Establishment has two main sections, namely, the Trials and Instrumentation Wing and the Weapons Research and Development Wing.

The Trials and Instrumentation Wing is concerned with the Joint United Kingdom-Australia Long Range Weapons Project and is responsible for the testing of guided missiles developed in the United Kingdom. The Weapons Research and Development Wing is engaged chiefly on Australian-initiated research but also provides a supporting research service for the Joint Project.

The headquarters of Weapons Research Establishment consisting of the main laboratory, workshop and administrative services, is located at Salisbury.

Accommodation has been provided in the area for a number of United Kingdom firms which are developing guided weapons under contract to the British Ministry of Supply.

A modern airfield (Edinburgh Field) has been established adjacent to the Headquarters at Salisbury to meet the flying requirements of the establishment, the flying effort being provided by the R.A.A.F.

Testing ranges have been provided at Woomera, which is approximately 280 miles north-west of Salisbury and 9 miles north of Pimba, which is on the trans-continental railway line. A number of these testing ranges are now in operation. A modern township of 500 houses and extensive barracks accommodation has been built, complete with community store, hospital, school and all amenities usually found in an Australian country town.

(iii) Defence Standards Laboratories. The Defence Standards Laboratories at Maribyrnong continue to give comprehensive service to industry, the armed services and to other Commonwealth and State Departments.

The broad function of these laboratories is the application of scientific knowledge and research to the problems arising in design, development, manufacture, inspection, storage, and use of war *matériel*. Research is also carried out in connexion with the development of new and improved materials, methods and equipment of known or potential interest.

- (iv) Aeronautical Research Laboratories. The Aeronautical Research Laboratories at Fishermen's Bend have continued investigations in aerodynamics, structures, aircraft materials and general aeronautical engineering according to their approved programme with particular attention to defence problems. These laboratories also collaborate with the United Kingdom on aeronautical matters of mutual interest.
- 5. Design and Inspection Branch.—(i) General. The prime functions of the Branch are to design and test equipment to meet the Army's special requirements, and to inspect stores equipment for adherence to standards before acceptance on behalf of the Army.
- (ii) Design. Comparatively little of the Army's equipment is identical with commercial patterns. In many cases, these can be used as the basis, minor modifications being made to suit Service needs. In other cases, there is no commercial equivalent and a completely new equipment must be developed. Hence there is need for a design authority:—(a) to investigate, evaluate and recommend commercial types of equipment for adoption by the Army; (b) to devise modifications to bring commercial products, or oversea Service equipment, into line with Australian Army requirements; and (c) to design and develop completely new patterns of equipment for the Army.

The Design Establishment at Maribyrnong is equipped for these tasks. Its three design sections handle respectively armaments, vehicles, and general engineering and telecommunications. It has common facilities for dealing with defects, standards, rationalization and standardization, production drawings, specifications, publications, testing of components and complete electrical and mechanical units, and the construction of mockups and models. The establishment makes the maximum use of extra-mural facilities (universities, other government departments, and industrial firms) and itself undertakes equipment development only when this is clearly the best way of doing it.

A small amount of work is done for Services other than the Army, for non-service departments and for industry.

(iii) Inspection. The Inspection Service is primarily intended for the inspection of supplies for the Army, but undertakes inspection on behalf of certain other departments, and all proof of armament stores for the three Armed Services.

The Inspection Service is divided into four groups—Engineering, Ammunition and Small Arms, General Stores and Clothing, and Proof and Experimental. The headquarters of the service is predominantly technical. The size of elements in the States varies with the volume of production to be inspected.

The Proof and Experimental Group conducts a number of proof ranges, the chief of which are at Port Wakefield, South Australia, and Compton Vale, Victoria.

The General Stores and Clothing Group, in addition to its inspection function, is responsible for the design of general stores and clothing.

In addition, there is an Equipment Inspection Section which holds and issues a complete range of drawings and specifications for Army equipment, including United Kingdom and Australian Joint Service specifications. This Section provides the data on which production is based.

- 6. Contract Board.—(i) General. Under the Supply and Development Act 1939–1948, the Contract Board is the authority responsible for purchasing supplies and arranging services for the Military, Naval and Air Forces of the Commonwealth, as well as for the Departments of Supply and Defence Production. Under this Act and Regulations, it is charged also with the responsibility of arranging for the sale or disposal on behalf of Commonwealth departments of all surplus or unserviceable war matèriel, goods and services approved for disposal. In addition to its statutory responsibilities, the Board makes purchases and arranges disposals on behalf of numerous Commonwealth Government departments and authorities who have no public contracting organization of their own, e.g., Immigration, National Development and External Affairs (Colombo Plan supplies).
- (ii) The Board and its Administrative Organization. The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Defence Production, Navy, Army and Air. The Board's administrative organization is the Directorate of Contracts. In each State other than Victoria, there is a District Contract Board with an administrative organization similar to the Directorate of Contracts. The table following shows, in respect of the Contract Board Organization, the purchases and realizations from disposals for the years 1955-56 and 1956-57.

## CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS FROM DISPOSALS.

(£.)

State.			Purci	hases.	Realizations from Disposals.		
2-2-3-		1955–56.	1956-57.	1955–56.	1956–57.		
Contract Board, Victoria District Contract Board—	••	••	31,299,167	31,853,447	1,965,434	1,242,289	
New South Wales			5,950,805	5,848,752	1,113,615	1,024,453	
Queensland		• • • • • • • • • • • • • • • • • • • •	1,771,071	1,206,103	424,641	480,722	
South Australia			1,136,241	992,868	321,958	330,824	
Western Australia		• •	592,163	449,608	114,195	134,092	
Tasmania	• •	• •	113,172	167,205	32,641	23,526	
Total			40,862,619	40,517,983	3,972,484	3,235,906	

7. Stores and Transport Branch.—This Branch, administered by a Board of Management and working under the direction of a General Manager, functions as the central authority for meeting the storage and transport requirements of Commonwealth departments and authorities. It is the authority for the arrangement of furniture removals, at departmental expense, in all States but not in the Australian Capital Territory and the Northern Territory. It has agents in Canberra and Darwin.

At 30th June, 1957, it had under its control land, buildings, plant and machinery valued at £5,774,691 and 2,285,362 square feet of storage space, of which 1,938,800 square feet was Government-owned and the balance held under tenancy.

8. Finance Branch.—The expenditure for Department of Supply activities during the years 1955-56 and 1956-57 are shown in the following table.

SUPPLY: TOTAL EXPENDITURE. (£'000.)

Particula	1955–56.		1956-57.						
Parliamentary Appropriations Trust Fund Accounts—			••		(a)	15,363	(b)	14,916	
Dorest Tin Dradge						34	1	35	
Mica						72		28	
Government Factory (Clothing)						2,198		1,836	
Stores and Transport	• •	••	• •			4,633		4,513	
Total Trust Fund Accounts		••				6,937		6,412	
Total Expenditure						22,300		21,328	

<sup>(</sup>a) Includes amount appropriated for audit charges.

<sup>(</sup>b) Excludes audit charges.

#### CHAPTER XXIX.

#### REPATRIATION.

### § 1. General.

The Repatriation Commission, established under the Repatriation Act 1920–1957, is a body corporate consisting of three full-time members. It operates from departmental headquarters in Melbourne, but has a branch office in each State under the control of a Deputy Commissioner.

Its principal functions are-

- (i) the payment of war and service pensions to ex-service men and women and their dependants;
- (ii) the provision of medical treatment to ex-service men and women for injuries and illnesses caused or aggravated by their war service;
- (iii) the provision of medical treatment in certain circumstances to ex-service men and women, and to their dependants, who are suffering from injuries and illnesses not caused or aggravated by war service.

Other functions of the Repatriation Commission are outlined in a later section of this chapter (See § 5, General Benefits, page 1073).

Four statutes passed during the year 1956-57 affected the Repatriation Commission. They are the Repatriation (Far East Strategic Reserve) Act 1956, which provided benefits for members of the defence forces who served with the British Commonwealth Far East Strategic Reserve in Malaya; the Native Members of the Forces Benefits Act 1957, which provided war pensions and other benefits for the natives of Papua, New Guinea and the islands in Torres Strait and the Pacific Ocean who served with the special native units raised during the 1939-45 War; the Repatriation Act 1956, which made certain amendments to the provisions governing repatriation benefits; and the Repatriation Act (No. 2) 1956, which made certain amendments necessitated by the passing of the Repatriation (Far East Strategic Reserve) Act.

### § 2. War Pensions.

- 1. General.—The first provision for the payment of war pensions to members of the forces and their dependants was made by the Commonwealth Parliament in the War Pensions Act 1914, which came into operation on 21st December, 1914. This Act was repealed in 1920 by the Australian Soldiers' Repatriation Act (amended from 31st December, 1950, to the Repatriation Act). Owing to limitations of space, only some of the main features relating to war pensions under the Repatriation Act 1920-1957 are set out in the following paragraphs:—
- (i) Eligibility for Pension. There has been a considerable widening of the provision in this respect, to the benefit, mainly, of members of the Citizen Military Forces who have not served outside Australia. These provisions are summarized as follows:—
  - (a) A member of the forces who served (1) outside Australia, (2) in the Territories of Australia, such as Papua and New Guinea, or (3) within Australia in

circumstances which can be regarded as combat against the enemy, is covered for war pension purposes in respect of incapacity or death which may result from any occurrence that happened during the period from the date of his enlistment to the date of the termination of his service in respect of that enlistment.

- (b) In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.
- (c) There is a third ground applicable to all in (a) and (b) who have had at least six months' camp service. This provides that, where a condition existed at enlistment, a pension may accrue if it is considered that the condition was aggravated by service.
- (ii) Pensions for Incapacity. From 20th October, 1955, the 100 per cent. pension rate for a member's incapacity was increased from £4 10s. to £4 15s. a week (higher rates were payable in respect of certain commissioned ranks). The rates for wives and children of incapacitated members are £1 15s. 6d. and 13s. 9d. a week, respectively. From 17th October, 1957, the member's 100 per cent. incapacity rate was increased from £4 15s. to £5 2s. 6d. a week.
- (iii) Supplementation of Pensions. From 17th October, 1957, where a member is, because of his war disability, temporarily (for at least three months) precluded from earning other than a negligible percentage of a living wage an additional pension may be granted to bring the total pension to the member up to £11 a week.
- (iv) Women's Nursing and Auxiliary Services. Members of Women's Services are eligible for pensions and other benefits as prescribed in the Act on the same basis as male members of the Forces.
- (v) Pulmonary Tuberculosis. If at any time after discharge, a member of the Forces who served in a theatre of war became or becomes incapacitated, or died or dies, from pulmonary tuberculosis, war pension is payable as if the incapacity or death resulted from an occurrence on service. (See also § 3. Service Pensions.) Medical treatment may also be provided on application.
- (vi) Special Rates. Those who have been totally blinded as the result of war service and those who are permanently and totally incapacitated receive, as from 20th October, 1955, special pensions of £9 15s. a week. The rate for Tuberculars, Class "B" (fit for light employment) was increased from £6 10s. to £7 a week. The rates were further increased to £11 and to £7 17s. 6d. a week respectively from 17th October, 1957. In addition to the special pension, an attendant's allowance of £1 15s. a week is granted to the war-blinded and to certain others who are deemed to be in need of an attendant. A war-blinded member who is also affected with total loss of speech or total deafness was entitled from 2nd October, 1952, to an attendant's allowance of £3 10s. a week in lieu of that referred to above. Attendant's allowance rates were further increased from 20th October, 1955, to £2 15s. and to £4 10s. a week, respectively. The wife and any children under 16 years of age receive the same rates as shown in sub-para. (ii).
- (vii) Specified Disabilities. Where the disability is amputation of a limb or limbs or total loss of vision in one eye, amounts ranging from 8s. 6d. to £5 17s. 6d. a week in addition to the statutory rate of pension are payable as from 17th October, 1957. In addition, allowances of either £2 15s. or £4 10s. a week are payable in certain double amputation cases.
- (viii) Time Limit for Wives and Children Removed. Prior to the 1950 amending. Act, wives who were married and children who were born after 1st July, 1938, were ineligible to receive a war pension. This time limit was removed as from 2nd November, 1950.

- (ix) Rates of Pension for Death. (a) Widows. As already indicated, rates of pension, which were previously based on the daily rate of pay of the member, are now based on the rank of the member. From 17th October, 1957, the rates were increased by 7s. 6d. a week, the minimum rate being increased from £4 10s. to £4 17s. 6d. a week. In addition to the pension, the widow, if she has dependent children, receives an allowance if she is permanently unemployable, or if she is over 50 years of age; this allowance is £2 a week. The allowance may also be paid to a widow under 50 years of age, in certain cases, so long as the child (or one of the children if more than one child) over the age of sixteen, is undergoing education or training but has not qualified for (or is not receiving) the adult wage in the occupation for which the child is training.
- (b) Children. From 2nd October; 1952, the rate of pension for the eldest child (under 16 years of age) was increased to £1 6s. 6d. a week and that for each younger child to 18s. 6d. Additional pension of 6s. a week may be paid in certain circumstances. Where both parents are dead each child is pensioned at the rate of £2 8s. a week.
- (x) Widowed Mother on Death of Member. A pension ranging from £2 5s. to £4 3s. a week, according to the rank of the member; may be granted to a widowed mother of a deceased unmarried son, provided widowhood occurred either prior to or within three years after the death of the member. The pension may be supplemented by payment to a prescribed person of an additional amount (not exceeding £4 7s. 6d. a week as from the 17th October, 1957) according to the extent of other income of the pensioner. The value of property owned does not affect the pension.
- 2. Appeals Tribunals.—The principal Act was amended, as from 1st June, 1929, to create tribunals to hear appeals in respect of war pensions. The War Pensions Entitlement Appeal Tribunal is empowered to hear and decide any appeal by or on behalf of ex-members of the Forces or their dependants against a decision of the Repatration Commission that the incapacity or death of an ex-member did not arise out of war service. Assessment Appeal Tribunals were created to hear and decide any appeal against a current assessment or a "Nil" assessment of war pension made by the Repatriation Commission in respect of the incapacity of an ex-member of the Forces which had been accepted as arising out of war service. Provision was made by subsequent legislation to enable the Tribunals to hear appeals by certain members for service pensions.
- 3. Summary of War Pensions, 1956-57.—At 30th June, 1957, the number of war pensions for the 1914-18 War was 133,240, for the 1939-45 War 476,675, and for the Korea and Malaya Operations 3,375, making a total of 613,290 with a liability of £44,872,736 per annum. The amount paid in war pensions during the year 1956-57 was £45,203,787. The outstanding features for 1956-57 for each war are listed in the following table:—

WAR PENSIONS: SUMMARY, AUSTRALIA, 1956-57.

Particulars.	1914–18 War.	1939-45 War.	Korea and Malaya Operations.	Total.
New claims granted	2,276	28,634	782	31,692
Restorations	479	1,443	9	1,931
Claims rejected (gross)	2,442	19,682	616	22,740
Pensions reviewed	8,263	27,302	253	35,818
Pensions cancelled or discontinued	838	10,540	55	11,433
Deaths of pensioners	4,314	2,223	8	6,545
Number of pensions in force at 30th June,		· '	1	-
1957	122 240	476,675	3,375	613,290
Annual pension liability at 30th June, 1957 £		25,609,726	188,864	44,872,736
Amount paid in pensions during the year		, , , , , , , ,	, , , , , ,	' '
1956–57 £		(a)	(a)	45,203,787
		1		1

4. Classes of War Pensions, Australia, 1956-57.—(a) New Claims Granted. The following is an analysis of the total number of new claims granted during 1956-57:—

### WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1956-57.

C	lass.			1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.	
Members	•••	•••		777	5,593	230	6,600	
Wives of Members				1,090	5,865	190	7,145	
Children			\	304	16,524	352	17,180	
Other dependants	••			105	652	10	767	
Total				2,276	28,634	782	31,692	

(b) Pensions in Force. The following table shows the number of pensions in force at 30th June, 1957, for each war and for each class of pensioner:—

### WAR PENSIONS IN FORCE, AUSTRALIA, 30th JUNE, 1957.

					Number of Pensioners at 30th June, 1957.						
	(	Class.			1914-18 War.	1939-45 War.	Korea and Malaya Operations.	Total.			
Children of d	eceased	l membe	rs		542	7,728	82	8,352			
Orphans	••				25	127	1 1	152			
War widows					19,517	10,941	54	30,512			
Members		• •		1	57,380	143,055	1,279	201,714			
Children	••	• •			3,791	189,963	1,105	194,859			
Wives		• •			49,939	117,747	773	168,459			
Parents					1,750	6.894	76	8,720			
Brothers and		• •			75	108	5	188			
Others			• • •		221	112	1	334			
Total	••	••			133,240	476,675	3,375	613,290			

(c) Special Rate Pensions. At 30th June, 1957, special rate pensions of £9 15s. a week were being paid to the following classes of members of the Forces:—

### WAR PENSIONS: MEMBERS ON SPECIAL RATES, AUSTRALIA, 30th JUNE, 1957.

Class,			1914–18 War.	1939–45 War.	Korea and Malaya Operations.	Total.
Blinded members			214	212	3	429
Tubercular members			733	929	16	1,678
Totally and permanently	incapa	citated	ļ			
members			10,853	4,008	9	14,870
Tuberculars, Class "B" (a)			153	322	4 1	479

(a) Rate £7 a week.

5. Number of War Pensioners and Annual Liability, States, etc., 30th June, 1957.—The following table shows the number of pensions in force and annual liability for each war at 30th June, 1957, according to place of payment. (The amount paid is shown on p. 1070.)

WAR PENSIONS: NUMBER OF PENSIONERS AND ANNUAL LIABILITY, 30th JUNE, 1957.

		(E, 1957.			
	Number of	War Pensions	in Force at 30tl	h June, 1957.	
Where Paid.	Incapacitated Members of the Forces.	Dependants of Incapaci- tated Members.	Dependants of Deceased Members.	Total.	Annual Pension Liability. (£.)
	1914	-18 War.			
New South Wales(a)	18,451	17,364	7,343	43,158	6,244,199
Victoria	19,265	17,645	7,322	44,232	6,256,694
Queensland	6,928	6,413	1,960	15,301	2,325,665
	4 2 4 0	4,275	1,728	10,351	1,570,600
	1 4.040	4,653		10,866	1,328,684
			1,567		
Tasmania	2,534	2,563	850	5,947	923,847
Australia	56,172	52,913	20,770	129,855	18,649,689
Overseas	1,208	1,270	907	3,385	424,457
Total	57,380	54,183	21,677	133,240	19,074,144
	1939-	-45 War.			
New South Wales(a)	50,138	101,231	9,530	160,899	8,784,001
	20,000	83,234	6,759	128,615	6,875,676
Victoria					
Queensland	19,340	44,273	3,231	66,844	3,733,222
South Australia(b)	15,467	36,203	2,468	54,138	2,769,376
Western Australia	13,294	28,289	2,217	43,800	2,223,731
Tasmania	5,677	14,281	714	20,672	1,082,192
Australia	142,538	307,511	24,919	474,968	25,468,198
Overseas	517	822	368	1,707	141,528
Total	143,055	308,333	25,287	476,675	25,609,720
	Korea and M	ALAYA OPER	ATIONS.		·
New South Wales(a)	491	692	84	1,267	70,720
Victoria	317	440	50	807	41,470
Queensland	202	314	27	543	32,058
South Australia(b)		156	7	250	14,378
TO . A . 10	1 113	190	18	321	17,446
'aamania	48	75	9	132	7,046
Australia	1,258	1,867	195	3,320	183,118
Overseas	21	14	20	55	5,746
Total	1,279	1,881	215	3,375	188,864

<sup>(</sup>a) Includes the Australian Capital Territory.

<sup>(</sup>b) Includes the Northern Territory.

6. Summary of War Pensions.—(i) Number. The following table shows, for each war, the number of pensions granted, claims rejected, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1953 to 1957 and the total for all war pensions for the same series of years:—

WAR PENSIONS: SUMMARY, AUSTRALIA.

					Number of	War Pensio	ns in Force a	t 30th June.	Annual
	ear ende Ith June		Pensions Granted.	Claims Rejected.	Incapaci- tated Members of the Forces.	Depend- ants of Incapaci- tated Members.	Dependants of Deceased Members.	Total.	Pension Liability at 30th June. (£.)
				1	914–18 W	AR.			
1953 1954 1955 1956 1957		•••	3,090 3,063 2,758 2,337 2,276	1,136 1,559 2,031 1,488 2,442	62,703 61,634 60,398 58,984 57,380	60,000 58,390 57,045 55,720 54,183	20,793 20,980 21,198 21,409 21,677	143,496 141,004 138,641 136,113 133,240	15,674,373 16,574,412 17,673,142 18,939,411 19,074,146
		1	_	1	939–45 W	AR.			
1953 1954 1955 1956 1957		 :::	33,944 33,370 33,748 30,098 28,634	8,034 13,733 18,380 13,756 19,682	125,366 129,926 :134,979 139,249 143,055	248,483 265,552 282,367 296,214 308,333	25,885 25,773 25,516 25,391 25,287	399,734 421,251 442,862 460,854 -476,675	18,502,675 20,211,273 22,424,840 24,548,421 25,609,726
			I	COREA ANI	MALAYA	OPERATIO	ons.		
1953 1954 1955 1956 1957		::	.399 .698 .642 .676 .782	241 450 507 305 616	326 643 878 1,057 1,279	274 572 949 1,382 1,881	144 196 207 208 215	744 1;411 2,034 2,647 3,375	.53,519 -92,652 -125,738 -157,155 -188,864
					Total.				
1953 1954 1955 1956 1957		::	37,433 37,131 37,148 33,111 31,692	9,411 15,742 20,918 15,549 22,740	188,395 192,203 196,255 199,290 201,714	308,757 324,514 340,361 353,316 364,397	46,822 46,949 46,921 47,008 47,179	543,974 563,666 583,537 599,614 613,290	34,230,567 36,878,337 40,223,720 43,644,987 44,872,730

(ii) Amount Paid and Place of Payment. The following table shows for the years 1952-53 to 1956-57 the amounts paid in pensions and the place where they were paid:—

WAR PENSIONS: AMOUNT PAID.

	(£.)											
Place of	f Paym	ent.		1952–53.	·1953–54.	1954–55.	1955–56.	1956–57.				
New South Wales(a) Victoria Queensland Sucuth Australia(b) Western Australia Tasmania Overseas				11,769,571 9,918,742 4,109,763 3,349,467 2,921,367 1,714,609 572,276	12,578,067 10,600,721 4,591,219 3,583,510 3,086,783 1,820,440 536,304	14,100,305 11,975,025 5,385,216 4,101,624 3,438,517 1,933,349 514,575	14,501,426 12,718,047 5,763,319 4,135,874 3,450,830 2,017,289 578,892	15,297,734 13,372,248 6,106,669 '4;309,036 3,584,495 2,026,868 506,737				
Total	••	•• = -		34,355,795	36,797,044	41,448,611	43,165,677	45,203,787				

<sup>(</sup>a) Includes the Australian Capital Territory

<sup>(</sup>b) Includes the Northern Territory.

### § 3. Service Pensions.

- 1: General:—The Repatriation Act 1920-1957, administered by the Repatriation Department, provides for a service pension to be paid subject to a means test of income and property to:—
  - (i) A male member of the Forces who is sixty years of age and who served in a theatre of war, or to a female member of the Forces who is 55 years of age and who served abroad. No pension is payable to the wife or children under 16 years of age of a member granted a service pension on account of age.
  - (ii) A member of the Forces who is permanently unemployable and who served in a theatre of war (or, in the case of a female member, who served abroad). Service pensions are also payable to a pensioner's wife and up to four children under 16 years of age.
  - (iii) A member of the Forces suffering incapacity from pulmonary tuberculosis whether or not the person served in a theatre of war. Service pensions are also payable to a pensioner's wife and up to four children under 16 years of, age.

Only those persons who qualify under (iii) are entitled to receive both service and invalid pensions at the same time.

2. Rate of Pension.—The maximum rate of service pension is the same as that for age and invalid pensions paid by the Department of Social Services, namely, £4 7s. 6d. a week. Since the 18th October, 1956, a member service pensioner with two or more children under 16 years of age in his care, custody and control, is eligible for a further 10s. a week for each child except the first, if he receives a service pension on the ground of being permanently unemployable, or suffering from pulmonary tuberculosis.

The maximum rate for a member's wife is £1 15s. a week; the rate for the first child under sixteen years of age is 11s. 6d. a week and for each other child (not exceeding three) 2s. 6d. a week.

A member who is single may have income up to £3 10s. a week from sources other than his pension and still receive the maximum service pension. If income from other sources exceeds £3 10s. a week the pension is reduced by the amount of the excess. No service pension is payable if income from other sources reaches or exceeds £7 17s. 6d. a week. For this purpose, the term "income" includes a war pension, and income derived from any source other than from property, but does not include a gift or allowance from a claimant's parents or children, maternity allowance, child: endowment or other payments in respect of children, a benefit from any friendly society, a payment in respect of illness, infirmity or old age from any trade union, the value of State food relief or like assistance granted under any-law of a State or Territory, Commonwealth hospital and medical benefits (including an amount received from a registered benefit organization up to the total amount of fees), pharmaceutical benefits or a tuberculosis allowance, or interest on Commonwealth war gratuities.

The rate of pension is further reduced by 4½d, a week for every complete £10 by which the value of property owned by a member exceeds £200. No pension is payable if the value of the property exceeds £1,750. For this purpose, the term "property" includes all real and personal property such as houses or land or interests therein, money in a bank or invested, or lent to any person, bonds, shares, interests in estates of deceased persons, and livestock, but excludes the value of the home of the pensioner and of his furniture and personal effects, the surrender value (up to £750) of any life assurance policies, the capital value of any life interest, annuity or contingent interest, the value of any reversionary interest, property to which the claimant or spouse is entitled from the estate of a deceased person but which has not been received, and the amount of any Commonwealth war gratuity.

For the purposes of the administration of the means test, the income and property of a married person are deemed to be half the total income and property of the husband and wife (unless they are legally separated or in certain other special circumstances). This

provision means that the pension of a married person, whether or not his spouse is a pensioner, will not be reduced because of the income he receives from sources other than his pension unless that income exceeds £7 17s. 6d. a week, nor will his pension be reduced on account of the value of his property unless that value exceeds £400.

On 1st November, 1941, eligibility for service pensions was extended to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War. Members who served in Korea and Malaya are also eligible.

3. Operations, 1956-57.—The following table gives a summary relating to service pensions during 1956-57:—

Claims granted du	ring year					
Members of t	he Force	es				5,222
Wives						2,250
Children	••	• •	• •	••		1,188
Total	••	••		••		8,660
Claims rejected du	ring year					
Members of t	he Force	s				1,239
Wives						597
Children		• •	• •	• •	• •	414
Total		••				2,250
Service pensions c	ancelled	or discon	tinued du	ring year		3,171
Deaths of pension	ers durin	ig year				1,883
Pensions in force	at 30th J	une, 1957				39,077
Annual pension lia	ability or	1 30th Jun	ie, 1957			£5,242,492

4. Number of Service Pensioners and Amount Paid.—(i) Summary, Australia. The following table shows the number of service pensions in force and the amount paid in pensions for the five years 1952-53 to 1956-57.

### SERVICE PENSIONS: SUMMARY, AUSTRALIA.

	Numi	per of Servi	ce Pensions	at 30th Ju	ne payable	to—			
Year.	Aged	Member Forces w	rs of the	Depend Member the Mem		1	Amount Paid in Pensions during		
	Members of Forces.	Per- manently Unem- ployable.	Suffering from Pul- monary Tuber- culosis.	Per- manently Unem- ployable.	Suffering from Pul- monary Tuber- culosis.	Total.	year ended 30th June.		
							£		
1952–53	8,703	4,971	291	4,780	432	19,177	2,225,044		
1953–54	9,648	5,294	321	5,092	451	20,806	2,694,522		
1954–55	10,566	5,555	379	5,286	530	22,316	3,011,861		
1955–56	11,881	9,733	1,266	10,001	1,894	34,775	4,140,488		
1956–57	13,547	10,794	1,449	11,074	2,213	39,077	4,907,362		

(ii) Amount Paid and State where Paid. The following table shows for the years 1952-53 to 1956-57 the amount paid in pensions and the State where paid:—

SERVICE	PENSIONS:	<b>AMOUNT</b>	PAID.
	(4)		

			(2.)	<del></del>		
State where Paid.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57.	
New South Wales(a) Victoria Queensland South Australia(b) Western Australia		764,803 503,946 396,090 215,626 278,115	977,815 601,579 467,038 259,438 302,617	1,050,593 684,636 528,571 287,624 361,294	1,472,949 958,825 679,181 401,159 482,021	1,727,099 1,089,529 845,828 477,229 547,473
Tasmania	••	66,464	86,035	99,143	146,353	220,204
Australia	••	2,225,044	2,694,522	3,011,861	4,140,488	4,907,362

<sup>(</sup>a) Includes the Australian Capital Territory.

## § 4. Medical Treatment of Ex-Servicemen Suffering from War Service Disabilities.

At 30th June, 1957, there were 4,435 in-patients in Repatriation medical institutions and State mental hospitals, including a number whose care was undertaken by the Repatriation Commission on behalf of other countries or Commonwealth departments. There were 385,752 out-patient attendances for treatment during the year, excluding approximately 841,735 treatments by local medical officers resident in metropolitan and country areas and in New Guinea. The expenditure for the year ended 30th June, 1957, was £10,288,344.

### § 5. General Benefits and Miscellaneous.

1. Other Departmental Activities.—(i) General. During the 1939-45 War, the ordinary activities of the Department in the way of general benefits for the welfare of members and dependants were carried on without interruption. They were mainly education and training of children under the Soldiers' Children Education Scheme, medical benefits for widows and children of deceased members and for widowed mothers of deceased unmarried members, funeral expenses for certain classes of members and dependants, and allowances to certain classes of dependants.

By legislation passed in June, 1940, these benefits were extended to members engaged in the 1939-45 War and in November, 1950, to those engaged in the Korea and Malaya Operations, and new benefits designed for the re-establishment of members after discharge from the Forces were made available. The re-establishment benefits administered by the Repatriation Commission are:-payment of re-employment allowance while awaiting employment; provision of tools of trade and equipment where such are necessary to the member's employment; transportation expenses to meet the cost of fares and removal of household belongings, where a member takes up training, employment, or a business, or settles on the land; supplementing of wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable members and widows to establish themselves in business, practices or other occupations, including (until the Division of War Service Land Settlement began operations early in 1946) agricultural occupations; payment of re-establishment allowance during the early stages of establishment in business; gifts up to £75 for furniture to members who are blind or totally and permanently incapacitated, also to widows with children under 16 years of age; and free passages to Australia for wives, widows and children of members who married abroad (and passages outward from Australia in certain cases of members and dependants).

<sup>(</sup>b) Includes the Northern Territory.

In 1949, the Commission took over the functions of the Re-establishment Division of the former Department of Post-war Reconstruction, and it is now responsible for the coordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. Re-establishment of the more seriously disabled, where ordinary training is not sufficient, continues to be a function of the Commission, and special means have to be found to overcome each problem.

(ii) General Repatriation Benefits. The following table gives a summary of expenditure during 1956-57 on the more important general repatriation benefits for all wars.

### GENERAL REPATRIATION BENEFITS, 1956-57.

				Expenditure, 1956-57.				
				-			Æ	£
Medical Treatment o								1
Operation of Insti-							6,222,017	
Dispensing of Pres	scriptio	ons					1,143,644	Ì
-Fees to Consultan							864,090	
Maintenance of P	atients	in othe	r than F	Repatriati	on Instit	utions	658,526	1
Sustenance Allowa							601,715	1
Other Treatment (	Surgic	al Aids.	'Dental 7	<b>Freatmen</b>	t, etc.)		362,105	
,								9,852,097
Medical Treatment o	f Depe	ndants						436,247
Employment and Voc			19—					,
Re-employment A				10.70			.3.1	
Tools of Trade (gi							3,952	1
Tools of Trade (lo				• •			1,544	
Members in Train				• •			.246,304	
Fares and Remova					• • • • • • • • • • • • • • • • • • • •		1,834	1
Tures una Itemo	LI LAP	0,,,,,,,	••	• •	• •	• • •	1,00	253,665
Business Loans .								91.200
Furniture Grants—	•	••	••	• •	• •	• • •		1,200
\$3.77.4							31	1
Mandaga		• •	• •	• •	• •	• •	149	ŧ
Members .		• •	• •		• •	• •	149	- 180
Soldiers' Children Ed	lucatio	n Schow						427,546
			ie	• •	• •	• •		2,447,443
"		• •	• •	• •	• •	• •	• • •	234,797
Jiner Benejiis .	•	• •		• •	• • •	• •	i	234,79
Total .								13,743,175

<sup>(</sup>a) Expenditure by the Department of Labour and National Service and the Universities Commission.

The following table gives a summary of expenditure during the five years 1952-53 to 1956-57 on the more important general repatriation benefits for all wars.

EXPENDITURE ON GENERAL REPATRIATION BENEFITS, SUMMARY 1952-53 TO 1956-57.
(£.)

Year ended 30th June.	Medicál Treatment.	Employ- ment and Vocational Training.	Business Loans and Furniture.	Living Allowances.	Soldiers' Children Education Scheme.	Other Benefits.	Totál.
1953	8,444,886	967,473	.270,755	1,863,490	287,283	.225,261	12,059,148
1954	8,906,189	505,944	227,679	2,128,052	340,496	223,781	12,332,141
1955	8,969,116	.313,242	.178,060	2,334,047	368,876	229;591	42,392,932
1956	9,559,880	.221,711	.145,453	2,357,660	348,282	206,615	42,839,601
1957	10,288,344	253,665	.91,380	2,447,443	-427,546	.234,797	43,743,175

2. Expenditure by the Repatriation Commission, 1956-57.—The total expenditure by the Repatriation Commission for the year ended 30th June, 1957, was £67,758,567, distributed as follows:—

Repatriation Bene						£	£
War and Ser	vice Pensior	าร				50,161,841	
Operation of	of Medical	Institu	itions,	Medical	Treat-		
ment, etc.				• •		13,069,325	
Soldiers' Chi	ildren Educa	tion Sc	heme			427,546	
					_		63,658,712
Other Benefits-S	Seamen's W	ar Pens	ions, et	c			127,372
Administration							3,101,060
Capital Works an	d Services						871,423
Total							67,758,567

- 3. Settlement of Returned Service Personnel on the Land.—Reference to the settlement on the land of returned service personnel will be found in Chapter IV.—Land Tenure and Settlement.
- 4. The Services Canteens Trust Fund.—(i) Introduction. The Services Canteens Trust Fund was established under the Services Trust Funds Act 1947. This Act transferred to the Fund the profits and assets of the Army, Navy and Air Force canteens, the mess and regimental funds of disbanded wartime units, money derived from the sale of amenities supplied to the defence forces between the 3rd September, 1939, and the 30th June, 1947, and funds held by the A.M.F. Special Benefits Committee, the trustees of the R.A.N. Relief Fund and the trustees of the R.A.A.F. Welfare Fund.
- (ii) Establishment and Administration of the Fund. The total amount transferred to the Fund to the 31st December. 1956, was £5,505,775. The Act prescribed that of this, £2,500,000, and such further amounts as the trustees of the Fund may from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-servicemen and women, and that the balance of the fund should be used to provide relief for ex-servicemen and women and their dependants in necessitous circumstances.

The Fund is administered by ten honorary trustees, appointed by the Commonwealth Government. The trustees have power to determine the persons or groups of persons to benefit from the Fund and the extent of benefits to be granted within the provisions of the Act, and to appoint regional committees to assist with the administration.

Regional committees have been established in all Australian States, the Australian Capital Territory, the Northern Territory, New Zealand and London. All Australian diplomatic and consular posts also act as local representatives of the trustees. They have delegated to them by the trustees specific powers to deal with applications for assistance from the Fund.

Members of regional committees are all persons who served in the 1939-45 War or are widows of men who served during the war, and, with the exception of regional chairmen and deputy chairmen, have been selected by the trustees from nominees of the major ex-service organizations. They also serve in an honorary capacity.

(iii) Assistance from the Fund. Persons eligible for assistance from the Fund are those who between 30th September, 1939, and 30th June, 1947, served in the Australian Naval, Military or Air Forces, including members of the Canteens Staff of any ship of the Royal Australian Navy, persons duly accredited to any part of the Defence Force who served in an official capacity on full-time paid duty, and their dependants.

The trustees are charged under the Services Trust Funds Act with:-

- (a) providing educational assistance including professional and trade training-
  - (i) for the children of deceased or incapacitated eligible servicemen or of eligible servicemen who are in needy circumstances; and
  - (ii) for the children of other eligible servicemen, which children are in the opinion of the trustees particularly deserving of assistance by reason of exceptional circumstances;

- (b) providing benefits for-
  - (i) eligible servicemen in necessitous or deserving circumstances;
  - (ii) the dependants of deceased or totally or partially incapacitated eligible servicemen or of eligible servicemen in necessitous or deserving circumstances:
  - (iii) the dependants of eligible servicemen other than those mentioned in paragraph (ii) above, which dependants are, in the opinion of the trustees, in necessitous circumstances or particularly deserving of assistance:
  - (iv) the provision of relief or benefit for eligible servicemen and their dependants in such other cases as the trustees think fit.

The trustees have introduced schemes for providing—

- (a) welfare relief for ex-service men and women who are eligible for benefits and their dependants;
- (b) benefits for children of eligible ex-service men and women who are suffering from serious and incapacitating afflictions; and
- (c) education benefits for the children of eligible ex-service men and women.

Because over 1,000,000 men and women and all their dependants are eligible for benefits, the assistance that can be provided in individual cases is limited and the trustees have prescribed a policy for welfare relief which makes assistance available only to those who are in genuine distress from which they cannot extricate themselves by their own efforts. In determining the nature or amount of relief to be granted, care is taken wherever possible to use the fund constructively with the object of assisting the applicant to achieve independence, and of discouraging any tendency towards increasing dependence on social welfare organizations. For example, the regular supplementing of pension or low income for an indefinite period is contrary to the policy of the trustees, as it is quite impossible for the fund to assume a general responsibility of that nature. Instead every effort is made to assist the applicant to adjust his mode of living or to increase his income himself so that he may live within it. Either the applicant, or his dependants, should be deserving of assistance. Though the fund is not used in such a way as to encourage improvidence, even the complete worthlessness of the eligible person will not debar deserving dependants.

From its inauguration in 1947, the Fund is to be available for 40 years for welfare relief, and for 30 years for educational benefits.

Applications are carefully investigated to determine the bona fides of the applicant and the case presented, and to help regional committees in deciding the kind of assistance, if any, to be given. Where possible, investigations are made by trained social workers either on the staff of the Fund or of recognized agencies.

I	Recipier	nts.		Year 1957.	Total to 31st December, 1957.
				£	£
Ex-service men and women			 \	52,289	594,734
Widows and orphans	• •	• •	 	28,120	267,267
Total			 [	80,409	862,001

A total of 22,329 ex-service men and women and 8,079 widows and orphans were granted welfare assistance from the Fund to 31st December, 1957.

Of all persons eligible for assistance from the Fund, widows and orphans are likely to be in greatest need, especially in the period immediately following the death of an exserviceman. Consequently a special effort is made to locate these widows and orphans and their degree of need is interpreted more liberally than is that of ex-servicemen.

Also particularly deserving of assistance are dependent children suffering from afflictions which permanently disable or seriously retard their progress or prevent the enjoyment of normal health and strength, and present a prospect of complete or partial dependence on others for all or part of their lives. The trustees introduced a plan to ensure that any eligible child suffering from a serious affliction may be assisted as necessary and may have access to whatever treatment or facilities are available to help the child to become as normal, self-reliant, self-supporting, socially acceptable, mobile, and happy as possible, despite his or her handicap. The extent to which assistance will be granted in a particular case depends largely on the nature of the child's affliction, the facilities available, the family circumstances, and the funds that can be made available.

Up to 31st December, 1957, 1,490 afflicted children had been assisted under the Afflicted Children's Scheme involving an expenditure of £69,564.

Educational assistance is restricted to children who are 15 years of age and over, except in the case of orphans, when assistance commences at the age of 12 years, or in the case of orphans eligible for education allowances from the Repatriation Department, where education assistance is granted from the age of 13. The object of the trustees is to assist eligible children to obtain the highest education within their capacity.

Educational assistance from the Fund is in the form of awards ranging from £5 to £200 a year depending on the cost of the course undertaken and the family circumstances. These awards are granted for practically every type of course of education, whether secondary, tertiary or commercial. They are designed to cover, or contribute towards, the cost of essential books, fees in cases where government school courses are not available, fares between the child's home and school, essential equipment and material, a uniform allowance in certain years and a maintenance allowance for the child while at school.

The educational scheme also provides for post-graduate courses. Two post-graduate scholarships are awarded each year. One scholarship valued at £800 per annum for three years is provided for study overseas and one scholarship valued at £600 per annum for three years is available for post-graduate study in Australia.

Two post-graduate nursing awards are tenable in Australia each year. They cover fees, fares, books and a maintenance allowance at the rate of £6 per week for the duration of the course. In addition, post-graduate nursing awards are granted for post-graduate nursing training overseas in courses which are not available in Australia.

The number of children assisted under the educational scheme to 31st December, 1957, was 22,881, and the expenditure on educational awards, post-graduate scholarships and post-graduate nursing awards to 31st December, 1957, was £994,444.

### § 6. Seamen's War Pensions and Allowances.

The Seamen's War Pensions and Allowances Act 1940 provides for the grant of-

- (a) pensions to Australian mariners and their dependants if the mariner, during the course of his employment, sustained injury through enemy action;
- (b) pensions to dependants of Australian mariners who, while in employment, were killed by enemy action;
- (c) detention allowances to Australian mariners and their dependants (if any) during any period of detention of mariners after capture by the enemy; and
- (d) compensation to Australian mariners in respect of personal effects lost or damaged through enemy action.

Regulations passed in 1942 provided that the wages of an Australian mariner, less the amount of any detention allowance, should continue if, while employed in sea-going service under articles of agreement entered into in Australia, or in the case of a pilot while employed on pilot duty, he fell into the hands of the enemy as a result of that employment and that the wages so continuing should be applied for the benefit of the mariner and his dependants. The wages would be paid by the Government of the Commonwealth of Australia for the first 18 months of the mariner's detention if he was employed in a ship owned by, or under requisition to, that Government, the United Kingdom Government or the Government of any country in the British Commonwealth, and thereafter irrespective of his employment.

Subsequent amendments to the Act and regulations raised pensions to rates corresponding to those payable under the Repatriation Act, and made mariners eligible for general benefits on the same scale as those available under that Act.

The following table gives a summary of the main statistics relating to seamen's war pensions and allowances.

SEAMEN'S WAR PENSIONS AND ALLOWANCES: SUMMARY, AUSTRALIA.

12 mo			ths ended 3	0th June.	Pensions payable at 30th June—				
Ye	ar.	Pensions Granted.	Claims Rejected.	Expenditure.	To Incapa- citated Mariners.	To Dependants of Incapa- citated Mariners.	To Dependants of Deceased Mariners.	Total.	
<del></del>		No.	No.	£	No.	No.	No.	No.	
1953		20	44	24,953	3.6	26	141	203	
1954		3	34	24,436	39	27	136	202	
1955		20	40	27,805	52	34	130	216	
1956		24	15	30,416	52	48	127	227	
1957		2.7	38	32,629	54	65	115	234	

#### CHAPTER XXX.

#### MISCELLANEOUS.

This chapter comprises miscellaneous statistics and other descriptive information not directly related to the subjects of the preceding chapters, arranged in sections as follows:—

Valuation of Australian Production;
 Indexes of Production;
 Consumption of Foodstuffs and Beverages;
 Patents, Trade Marks and Designs;
 Copyright;
 Australian Shipbuilding Board;
 Commonwealth Scientific and Industrial Research Organization;
 Mount Stromlo Observatory;
 Standards Association of Australia;
 Film Censorship Board;
 Australian National Film Board and the Film Division;
 National Safety Council of Australia;
 Australian Road Safety Council;
 Australian Atomic Energy Commission;
 The United Nations;
 Australian Representation Abroad: Oversea Representation in Australia;
 Retail Trade.

### § 1. Valuation of Australian Production.

1. General.—The value of production for Australia is computed in accordance with the decisions reached at the Conferences of Australian Statisticians and principally at the Conference held in 1935. The figures published below have been compiled by the State Statisticians from the latest data available, and relate to 1955-56. The adoption of substantially uniform methods of valuing production and of estimating elements of costs of production and marketing renders the results comparable as between States.

Attention is directed to the fact that the values shown in the tables herein refer only to the production of primary industries and factories and exclude the building and construction industry, those industrial establishments not classified as factories, and certain agricultural and farmyard produce obtained from areas of less than one acre.

The following is a brief explanation of the terms used:-

- (a) Gross Value of Production is the value placed on recorded production at the wholesale price realized at the principal markets. In cases where primary products are consumed at the place of production or where they become raw material for a secondary industry, these points of consumption are presumed to be the principal markets.
- (b) Local Value (i.e., the gross production valued at the place of production) is ascertained by deducting marketing costs from the gross value. Marketing costs include freight, cost of containers, commission, and other charges incidental thereto.
- (c) Net Value of Production represents local value less value of materials used in the process of production. Materials used in the process of production include seed, power, power kerosene, petrol and other oils, fodder consumed by farm stock, manures, dips, sprays and other costs. No deductions have been made for depreciation or certain maintenance costs as particulars are not available for all States. The Net Value of Production is the only satisfactory measure to use when comparing or combining the value of primary industries with those of other industries.

Power costs (power, power kerosene, petrol and other oils) have not been deducted in New South Wales since 1940-41 when they amounted to £1,892,000 and in Tasmania since 1941-42, when they amounted to £86,510. Consequently net values of production for later years in these two States are overstated. Costs of materials used in the process of production are not available for all States in respect of Bee-farming, Trapping, Forestry and Fisheries, and local values have been used for these industries with consequent overstatement in net values.

2. Value of Production, Australia, 1955-56.—The following table shows particulars of the gross, local and net values of production in Australia by industries during the year 1955-56:—

GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES: AUSTRALIA, 1955-56.

(£'000.)

In	idustry.			Gross Production Valued at Principal Markets.	Local Value— Gross Production Valued at Place of Production.	Net Value of Production (with out deduction of depreciation or maintenance).
Agriculture			::	384,937 518,083	324,632 479,100	279,455 446,780
Dairying			::	198,184	186,433	155,243
Poultry				53,803	48,651	30,185
Bee-farming			•••	1,933		(a) 1,751
Total, Rural				1,156,940	1,040,567	913,414
Trapping				6,693	6,047	(a) 6,047
Forestry	• •			53,268		(a) 50,059
Fishing and Whaling		• •	• •	9,788		(a) 8,884
Mines and Quarries	••	••	• •	(a) 164,871	164,871	132,508
Total, Non-rural	••	••		234,620	229,861	197,498
Total, All Primary				1,391,560	1,270,428	1,110,912
Factories	• •	••	••	(b) 1,500,714	(b) 1,500,714	1,500,714
Total, All Industries			••	2,892,274	2,771,142	2,611,626

(a) Local value.

(b) Net value.

3. Net Value of Production, States, 1955-56.—The following tables show the total net value of production, and the net value per head of population, for each industry and State during the year 1955-56:—

# $\operatorname{NET}(a)$ VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES, 1955-56.

(£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia.
Agriculture	63,647	66,465	55,361	41,271	37,350	15,170	42	149	279,455
Pastoral	163,287	104,820	86,313	44,625	36,578	7,282	3,065	810	446,780
Dairying	49,469	54,301	27,423	13,274	3,867	6,719	22	168	155,243
Poultry	12,760	12,618	1,104	1,800	816	934	50	103	30,185
Bee-farming( $b$ )	771	410	103	246	202	18	••	1	1,751
Total, Rural	289,934	238,614	170,304	101,216	78,813	30,123	3,179	1,231	913,414
Trapping(b)	1,822	3,197	152	485	156	215	20	· · ·	6.047
Forestry $(b)$	15,343	11,823	8,660	4,596	4,877	4,591	40	129	50,059
Fishing and Whalingb	2,684	734	1,471	995	2,406	505	89		8,884
Mining and Quarry-	_,		.,						1
ing	69,262	8,867	21,732	8,452	14,143	8,612	1,377	63	132,508
Total, Non-rural	89,111	24,621	32,015	14,528	21,582	13,923	1,526	192	197,498
Total, All Primary	379,045	263,235	202,319	115,744	100,395	44.046	4,705	1,423	1,110,912
Factories	644,086	491,948	128,080	120,936	69,733	45,931	•••		1,500,714
Total, All Indus- tries	1,023,131	755,183	330,399	236,680	170,128	89,977	4,705	1,423	2,611,626

(a) See letterpress on p. 1079.

(b) Local value.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES PER HEAD OF POPULATION, 1955-56.

(£ s. d.)

Industry.	N	.S.V	V.	Vi	cto	ria.	Q	'lan	d.	s.	Αu	st.	w	. <b>A</b> ı	ıst.		Tas		Au	stra (b)	lia.
Agriculture Pastoral Dairying Poultry Bee-farming(c)	18 46 14 3	1 6 0 12	2 7 9 5	25 40 21 4	18 17 3 18	3 4 5 6	40 63 20 0	18 16 5 16	7 3 6 4	49 53 15 2	9 18 3	2 6 1 2	55 54 5 1	16 13 15 4	6 6 7 5	47 22 21 2	10 16 1 18	6 3 0 6	29 47 16 3 0	19 19 13 4	11 2 4 10
Total, Rural	82	5	4	93	ō		72	<u>-</u> 12	٠.	121	5	10	117	16	0	94	<del>-</del> 7	-5	98	$\frac{3}{1}$	ó
Trapping(c) Forestry(c) Fishing and Whalingc Mines and Quarries	19	10 7 15 13	4 1 3 0	1 4 0 3	4 12 5 9	11 2 9 2	0 6 1 16	2 8 1 1	3 0 9 4	0 5 1 10	11 10 3 2	8 2 10 7	0 7 3 21	4 5 11 2	8 10 11 9	0 14 1 26	13 7 11 19	6 8 8 7	0 5 0 14	13 7 19 4	0 5 1 6
Total, Non-rural Total, All Primary Factories	25 107 182	5 11 15	8 0	9 102 191		-0 8 1	23 149 94	13 11 13	6 10	17 138 144	8 14 18	$\frac{3}{1}$	32 150 104	5 1 4	$\frac{2}{2}$	137 143	12 19 17	5 10 11	21 119 161	<i>4 5</i> 1	0
Total, All Industries	290	6	0	294	8	9	244	5	4	283	12	7	254	5	9	281	17	9	280	6	11

<sup>(</sup>a) See letterpress on p. 1079.
Territory. (c) Local value.

4. Net Value of Production, Australia, 1951-52 to 1955-56.—The following table shows the net value of production for Australia during the years 1951-52 to 1955-56.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES: AUSTRALIA.

(£'000.)

Industry.	1951-52.	1952-53.	1953–54.	1954–55.	1955–56.
Destauri	246,685 400,493	276,398 493,745	268,460 491,716	243,919 461,464	279,455 446,780
Poultry	103,776 31,554 774	135,745 35,213 1,066	136,956 34,782 1,426	135,798 29,787 1,398	155,243 30,185 1,751
Total Donal	783,282	942,167	933,340	872,366	913,414
Forestry(b) Fishing and Whaling(b)	6,713 37,905 5,729	5,595 41,864 6,897	5,074 41,720 7,741	4,961 44,047 8.727	6,047 50,059 8,884
-	97,199	109,671	104,875	118,060	132,508
	147.546	164,027	159,410	175,795	197,498
Enstanias	930,828 1,024,867	1,106,194 1,082,862	1,092,750 1,227,045	1,048,161 1,365,509	1,110,912 1,500,714
Total, All Industries	1,955,695	2,189,056	2,319,795	2,413,670	2,611,626

<sup>(</sup>a) See letterpress on p. 1079.

In the chapters dealing with the respective industries (except trapping and mines and quarries) tables will be found showing the total value of production and the value per head of population for the industry by States for a series of years up to 1955-56.

### § 2. Indexes of Production.

In the first two tables in this section, indexes of price and quantum (i.e. value at constant prices) of production are given for the following industrial groups, namely:—Agriculture, Pastoral, Farmyard and Dairying, and All Farming combined (including separate indexes for Wool and Products other than Wool). In the third table, indexes of quantum (i.e. value at constant prices) of production, exports and consumption of farm products for food use are shown. Indexes previously published in respect of Gold and Other Minerals, and All Mining combined, are under review and pending completion of investigations the publication of these results has been discontinued.

<sup>(</sup>b) Includes the Northern Territory and the Australian Capital

<sup>(</sup>b) Local value.

1. Farm Production Price Indexes.—The Farm Production Price Indexes shown in the following table relate to average "prices" of agricultural, pastoral, farmyard and dairying products realized at the principal markets of Australia. The "price" data used are average unit values for the total quantities of the relevant commodities produced or marketed in each year and the index numbers therefore measure both the effects of changes in prices (as such) and of variations in the quality, type, usage, etc. of products marketed. The index numbers for any year relate to the average values of products produced or marketed in that year, irrespective of the periods in which payment is received by producers.

The indexes have been calculated by the fixed-base weighted aggregative method. "Prices" for each commodity in any year are obtained by dividing gross value of production by the quantity produced in that year. In the original published series of Production Price Index Numbers, the average quantities of the relevant commodities produced in the period 1923-24 to 1927-28 were used as fixed weights. This series, re-computed to the base, average 1936-37 to 1938-39 = 100, was published in earlier issues of the Official Year-Book (see No. 43, page 1050). For 1936-37 and later years, the original series was replaced in December, 1952, by a revised series in which average quantities of each product marketed during the period 1946-47 to 1950-51 were used as fixed weights. In the revised series, the regimen was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were also incorporated in the revised indexes, the principal of which was the omission from the weights used for the All Farming Index of quantities of crops marketed for livestock feeding in Australia.

# FARM PRODUCTION: INDEXES OF PRICES AT PRINCIPAL MARKETS, AUSTRALIA.

(Base.: Average 1936-37 to 1938-39 = 100.)

	Yea	ar.		Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other than Wool.
1936-37				114	.115	93	109	126	104
1937-38	• •	• •	• • •	98	.113	102	99	95 4	100
1938-39	• •		****	88	87	105	92	79	96
1939-40	•••	•••	• • •	100	105	105	104	102	105
1940-41	• •	• •	• •						
1940-41	• •	• •	•-•	1.06	107	1.05	107	102	108
1941-42				111	108	107	110	102	113
1942-43				.131	-123	130	128	118	1132
1943-44	••	• • •	• •	149	128	147	139	118	146
1944-45	••			151	128	152	142	118	150
1945-46		• •		17.4	133	159	:157	118	1169
1946-47				194	182	157	185	187	185
1947-48	• •	••	• •				247		
1947-48	••	• •	• •	267		183	260	301	230
1946-49	• •	• •	• • •	234	313	197		366	225
	• •	• •	• •	272	.396	~228	316	483	261
1950-51	• •	••	• • •	291	818	258	505	1,098	308
1951∹52		•••		355	<b>′501</b>	332	.410	·552 .:	363
19.52-53				.364	531 '	387	440	623	379
1953-54				324	534	395	-429	621	365
1954-55				316	489	371	401	540	355
1955-56(a		• • • • • • • • • • • • • • • • • • • •	::	330	451	392	397	468 !	373
1956–57 <u>(</u> £	)		•••	332	529	-404	-432	607	.375

<sup>(</sup>a) Revised.

<sup>(</sup>b) Subject to revision.

2. Indexes of Quantum (i.e. Value at Constant Prices) of Farm Production.—The indexes shown in the following table relate to gross output of farm products valued at constant prices. They have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the base years.

In the original published series, the period 1923-24 to 1927-28 was adopted as the base for revaluing each farm product. This series, re-computed to the base, average 1936-37 to 1938-39 = 100, was published in earlier issues of the Official Year Book (see No. 43, page 1051). For 1936-37 and later years, the original series was replaced in December, 1952 by a revised series in which average unit values for the period 1936-37 to 1938-39 were used. The regimen used for the revised series was extended and modified to include farm products (as defined by Australian Statisticians) in all cases. Certain other refinements were incorporated in the revised indexes, the principal of which was the omission, in calculating the All Farming Index, of quantities of crops fed to livestock in Australia.

INDEXES OF QUANTUM(a) OF FARM PRODUCTION, AUSTRALIA.

(Base: Average 1936-37 to 1938-39 = 100.)

	Ye	zar.		Agri- culture.	Pastoral.	Farm- yard and Dairying.	All Farming.	Wool (Shorn and Dead).	Products other .than Wool.
1936-37	·	· · · ·		97	98	97	97	99	96
1937-38	• •	• •		107	103	101	104	103	105
1938-39	• •			96	.99	102	.99	98	99
1939-40	• •			120	107	108	107	115	105
1940-41	• •		• • •	74	109	107	97	115	91
1044 40				101	ين ا		104		
1941-42	٠.	• •	• • •	104	112	104	104	118	99
1942-43	• •	• •	•••	97	114	103	102	116	98
1943-44	• •	• •	• •	86	115	.100	.100	.119	94
1944-45	• •	• •		68	101	99	88	101	84
1945-46	• •	• •	• •	100	86	103	92	92	92
1946-47				<sub>684</sub>	92	103	9.1	95	90
1947-48	::			122	98	107	109	101	111
1948-49	::		::	108	105	iii	.109	108	109
1949-50			::	117	1112	iii	115	115	115
1950-51	• • •	• • • • • • • • • • • • • • • • • • • •		108	109	106	109	116	107
1,50 51	•	••	• •	100	1	100	105	110	10.
1951-52				.103	-105	97	103	.112	100
1952-53		• •		121	126	108	121	131	118
1953-54				129	123	107	122	128	120
195455	• •	• •		.120	127	117	123	132	120
1955-56(b)				134	136	120	131	146	127
				]	]	1	1	1	]
1956-57(c)	٠			121	142	116	128	164	118

(a) Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (see text preceding table). (b) Revised. (c) Subject to revision.

3. Farm Products for Food Use: Indexes of Quantum (i.e. Value at Constant Prices) of Production, Exports and Consumption. The indexes shown in the following table have been calculated by revaluing quantities of each farm product included in the indexes at the average unit gross value of each product for the years 1936-37 to 1938-39. The items included comprise products in the form in which they are sold from farms in all cases except livestock sold for slaughter for meat, which are included in terms of dressed carcass weight of meat. Quantity data relating to exports include exports of processed food in terms of farm product equivalent. The indexes of production relate basically to gross output of farm products for food use, including crops exported for stock-feeding overseas. Particulars are not available prior to 1946-47 except for the base years.

### FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM(a) OF PRODUCTION, EXPORTS AND CONSUMPTION.

(Base: Average 1936-37 to 1938-39 = 100.)

			ection.	Exp	orts.	Consumption in Australia.			
Year.		Total.	Per Head of Total Population.	Total.	Per Head of Total Population.	Total.	Per Head of Total Population.		
1946-47		90	82	73	66	107	98		
1947-48		113	102	113	102	110	99		
1948-49		110	97	112	99	111	98		
1949-50		116	99	116	99	114	98		
1950–51		109	90	104	86	120	99		
1951-52		100	81	70	57	119	96		
1952-53		118	93	113	89	119	94		
1953-54		122	94	102	79	124	96		
1954-55		121	91	117	89	127	96		
1955-56(b)		128	95	131	96	130	96		
1956-57(b)		119	86	120	86	131	95		

(a) Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (1936-37 to 1938-39). (b) Subject to revision.

### § 3. Consumption of Foodstuffs and Beverages.

1. Quantities Consumed.—Issues of the Official Year Book up to No. 36 included a statistical survey of the movement in the consumption in Australia, in total and per head of population, of a selected number of commodities over a period of years up to 1940-41 (see Official Year Book No. 36, pp. 1098-1100). In issue No. 37, these long-term comparisons were replaced by more detailed information covering consumption of the principal foodstuffs and beverages in annual periods since 1944 in comparison with average annual consumption during the three years ended 1938-39. In this issue, the annual periods extend from 1952-53 to 1956-57.

The estimates of total consumption and consumption per head of population in Australia in the two tables which follow have been compiled by deducting net exports from production and allowing for recorded movements in stocks of the respective commodities. While the estimates may generally be accepted as reasonably accurate, there are some deficiencies to which attention should be directed. These relate chiefly to the quantities of poultry, game and fish (fresh and shell) and the quantities of visible oils and other fats entering consumption. In addition, little information is available on the quantities of vegetables, fruit, eggs, etc., which householders produce for their own requirements and the extent of wastage occurring in the marketing of foodstuffs. In all these cases, careful estimates have been compiled from the best available data, and the quantities shown as entering consumption in Australia have been adjusted to allow for these circumstances. The absence of particulars for stocks of certain commodities has resulted in some inaccuracies in the estimates of annual consumption. Consumption of foodstuffs is measured in general at "producer" level. As a result, no allowance is made for wastage before the foodstuffs are consumed. In recent years, wastage of foodstuffs has possibly been less than hitherto because of more efficient distribution and storage methods. Furthermore, it is likely that the quantities of foodstuffs shown in the following pages as available for consumption have been supplemented by an increase in the aforesaid production by householders for their own requirements. Neither of these factors has been taken into account, and it is possible that, as a result, some understatement has occurred in the following consumption estimates. Except in a few special cases, no adjustment has been made for changes in stocks held by wholesalers and retailers. Where no allowance is made, it is considered unlikely that these stocks would make any appreciable difference to consumption estimates. Allowance has

not been made for the purchase of foodstuffs for dispatch overseas as gifts in bulk and by parcel post. These deficiencies, however, do not seriously impair the accuracy of the estimates compiled.

The estimates of consumption per head of population shown in the second of the following tables have been checked, wherever possible, with data from other sources (principally from the Food Consumption Survey conducted in 1944 by the Nutrition Committee of the National Health and Medical Research Council) which confirm the reliability of the methods used.

More detailed information on the consumption of foodstuffs and beverages is contained in the Statistical Bulletin: Food Production and the Consumption of Foodstuffs and Nutrients in Australia, issued by this Bureau.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA.

001150		211111011			LIII.		
Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956-57. (a)
Milk and Milk Products— Fluid Whole Milk Fresh Cream Condensed Milk (Sweetened	Mil. gals.	161 19.7	243 7.8	253 8.0	258 8.1	266 8.3	269 8.5
and Unsweetened) Concentrated Whole Milk Powdered Milk—	"	9.9 3.4	13.1 14.5	15.7 19.5	16.8 10.1	18.2 13.9	17.7 20.5
Full Cream Skim	"	8.1	{ 9.7 2.4	10.4 3.9	9.6 5.7	9.7 8.7	9. <b>5</b> 10.0
(including Malted Milk) Cheese	,, ,,	3.0 13.4	7.7 21.7	9.5 23.9	7.9 25.4	10.6 23.9	8.7 22.5
Total (in terms of Milk Solids)		120.5	177.3	188.4	190.3	199.0	202.1
Beef (bone-in-weight) Mutton (bone-in-weight) Lamb (bone-in-weight) Pork (bone-in weight)	,, ,, ,,	442.0 183.4 46.1 31.8	466.7 193.0 112.4 22.7	455.2 204.4 106.8 30.5	472.6 211.5 105.6 41.4	495.4 204.2 109.1 40.3	550.4 199.2 117.8 37.0
Offal Canned Meat (canned weight) Bacon and Ham (cured weight)	** ** **	25.7 (b) 31.4	40.4 7.8 28.3	41.9 7.9 28.5	43.5 12.4 32.2	42.3 14.3 31.3	35.4 13.9 29.6
Total (in terms of carcass weight) Poultry, Game and Fish—		776.1	_888.3	887.8	939.9	_963.2	1,001.8
Poultry and Rabbits (carcass weight)	٠,,,	29.8	59.1	60.2	61.4	63.0	64.4
Fresh Cured (including Smoked and Salted)	"	19.7 (d)	20.2	22.5 3.2	21.2	20.2	21.8
Crustaceans and Molluscs Canned—Australian origin Imported	" " "	2.1 } 12.4	2.6 2.7 2.5	3.3 3.1 6.8	4.6 2.5 8.8	3.9 2.5 10.3	3.8 3.5 7.1
Total(c) Eggs and Egg Products—		51.5	65.4	73.7	76.5	77.7	75.6
Shell Eggs	"	78.7 2.9	80.4 6.4 0.2	82.8 5.4 0.2	85.9 6.5 0.1	87.9 4 9 0.2	91.7 6.1 0.2
Total (Shell Egg equivallent)	Mil, Doz.	81.6 139.3	87.0 148.5	88.4 150.9	92.5 157.9	93.0 158.7	98.0 167.3
Fats and Oils— Butter Margarine—	'000 tons	101.0	114.5	121.6	122.5	120.4	119.4
Table Other Lard	" "	2.8 12.2 5.2	6.2 21.8 3.9	8.5 22.3 3.9	9.1 22.0 5.1	12.3 19.2 4.8	15.4 19.9 4.6
Vegetable Oils and Other Fats  Total (Fat Content)		115.5	15.6	15.9	16.2	16.6	17.0
Total (Fat Content)	See no	713.3 (		140.3	140.0	147.3	130.2

See next page for notes.

## ESTIMATED QUANTITY OF EOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1952–53.	1953–54.	1954-55.	1955–56.	1956–57. (a)
Sugar and Syrups— Refined Sugar— As Sugar In manufactured products Honey, Glucose and Syrups	'000 tons	216.5 110.1 21.9	250.9 174.2 21.7	258.4 187.9 25.1	256.3. 205.9 22.3	261.5° 219.4 21.0	260.2 220.1 30.0
Total (Sugar Content)	,,	343.9	442.4	466.4	480.0	497.6	501.2.
Potatoes— White Sweet	"	318.5 7.4	376.1 5.5	485.4 5.6	417.1	368.9 5.8	467.5 5.9
Total	**	325.9.	381.6.	491.0	422.8	374.7	473.4
Pulse and Nuts— Dried Pulse Peanuts (weight without shell) Edible Tree Nuts (weight with-	"	4.5: 2.8:	8.9 5.3	14.9 7.5	11.5	12.5	13.4
out shell)	"	2.6 6.3	5.6 9.6	6.8 11.3	7.7 9.8	6.6 10.7	6.8/ 9.8
Total	335	16.2	29.4	40.5	39.8-	35.7	32.,9
Tomatoes  and Fruit—   Tomatoes(f)	)) )) )) ))	(g) 48.0 97.8 288.2 35.1 24.8 31.9	84.1 113.7 253.5 33.7 28.0 47.9	73.0 150.7 316.3 36.1 29.3 48.3	100.3 143.6 306.7 37.5 32.0 56.3	104.1 167.9 371.1 40.4 22.5 57.5	132.5 160.7 295.4 41.0 20.4 58.5
Total (Fresh Fruit equiva- lent)	,,	580.3	630.6	730.5	762.4	826.8	762.0
Vegetables— Leafy, Green and Yellow Vegetables. Other Fresh Vegetables. Canned Vegetables.	"	(h) (h) (h)	173.0 249.5 13.1	166.5 245.9 18.2	162.3 237.4 20.1	168.4 235.3 21.2	191.5 270.2 22.7
Total	,,	(h)	435.6	430.6	419.8	424.9	484.4
Grain Products— Flour— White Sharps Wheatmeal for baking Breakfast Foods Rice (Milled) Tapioca, Sago, etc. Pearl Barley Barley Meal and Polished Wheat (Rice substitute) Edible Starch (Cornflour)	1) 1) 1) 1) 1) 1) 1) 1)	\begin{cases} 574.0 \\ (1)32.5 \\ 12.2 \\ 3.7 \\ 3.0 \\ 4.3	\[ \begin{pmatrix} 720.4 \\ 1.5 \\ 31.4 \\ 51.3 \\ 15.2 \\ 1.9 \\ 2.2 \\ 0.8 \\ 3.0 \end{pmatrix} \]	0.8	721.8 1.6 29.4 52.9 14.2 1.4 2.2 0.8 3.4	727.9 1.9 28.1 57.9 15.4 1.6 1.9 0.6 3.5	762.1 1.5 27.8 55.2 15.8 1.2 1.8 0.6 3.1
Total	***	629'.7'	827.7	829.5	827.7	838.8	869.1
Beverages— Tea	Mil. gals.	21.1 2.0 80.1 4.2	25.3 2.6 190.7 11.9	27.0 4.3 205.2 12.4	24.3 4.5 220.5 10.1	24.5 5.5 225.1 11.0	26.2 6.7 218.1 13.1

<sup>(</sup>a) Subject to revision. (b) Included with fresh meat at its carcass weight. (c) Edible weight: (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (l) Excludes invalid and health foods, semolina and wheat germ.

# ESTIMATED QUANTITY OF FOODSTUFES AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1952–53.	1953–54.	1954–55.	1955–56.	1956–57 (a)
Milk and Milk Products— Fluid Whole Milk	Gallon	23.4	27.8	28.4	28.4	28.5	28.2
Fresh Cream	lb.	6.4	2.0	2.0	2.0	2.0	2.0
Unsweetened)	,,	3.2	3.4 3.7	3.9	4.1	4.4	4.1
Concentrated Whole Milk Powdered Milk—	"	1.1	i l	4.9	2.5	3.3	4.8
Full Cream Skim		2.6	$\left\{\begin{array}{c} 2.5\\ 0.6 \end{array}\right.$	2.6 1.0	2.4 1.4	2.3 2.1	2.2 2.4
Infants' and Invalids' Foods (including Malted Milk)		1.0	2.0	2.4	1.9	2.6	2.0
Cheese	",	4.4	5.6	6.0	6.3	5.7	5.3
Total (in terms of Milk Solids)	,,	39.2	45.2	47.5	46.9	47.7	47.4
Meat—							400.0
Beef (bone-in-weight) Mutton (bone-in-weight)	,,	144.1 59.8	119.7 49.5	114.6 51.4	116.5 52.1	119.1 49.1	129.3 46.8
Lamb (bone-in-weight) Pork (bone-in-weight)	,,	15.0 10.4	28.8 5.8	26.9 7.7	26.0 10.2	26.2 9.7	27.7 8.7
Offal Canned Meat (canned weight)	,,	8.4 (b)	10.3	10.6 2.0	10.7 3.0	10.2 3.4	8.3
Bacon and Ham (cured weight)	,,	10.2	7.3	7.2	7.9	7.5	7.0
Total (in terms of carcass weight)	,,	253.0	227.7	223.5	231.6	231.6	235.3
Poultry, Game and Fish-						i	
Poultry and Rabbits (carcass weight)	"	9.7	15.1	15.1	15.1	15.1	15.1
Fish(c)— Fresh	,,	6.4	5.2	5.7	5.2	4.9	5.1
Cured (including Smoked and Salted)		(d)	0.9	0.8	1.0	1.1	0.5
Crustaceans and Molluscs Canned—	",	0.7	0.7	0.8	1.2	1.0	0.9
Australian origin Imported	,,	} 4.1	{ 0.7 0.6	0.8 1.7	0.6 2.2	0.6 2.5	0.8 1.7
Total(c)	<u> </u>	16.8	16.8	18.6	19.0	18.8	17.7
	,,	10.8	10.8	10.0		70.8	
Eggs and Egg Products— Shell Eggs	,,	25.7	20.6	20.8	21.2	21.1	21.5
Liquid Whole Egg(e) Egg Powder(e)	••	0.9	1.6 0.1	1.4 0.1	1.6 0.0	1.2 0.1	1.4
		ļ					
Total (Shell Egg equiva- lent)	{ no.	26.6 243	22.3 204	22.3 204	22.8 209	22.4 205	23.0 210
Fats and Oils— Butter	lb.	32.9	29.4	30.6	30.2	29.0	28.0
Margarine— Table	,,	0.9	1.6	2.1	2.3	3.0	3.6
Other Lard	,,	4.0 1.7 4.7	5.6 1.0	5.6 1.0	5.4 1.3	4.6 1.2	4.7 1.1
Vegetable Oils and other Fats	"	4.7	4.ŏ	4.0	4.0	4.0	4.0
Total (Fat Content)	,,	37.6	35.4	36.8	36.8	35.6	35.3
Sugar and Syrups— Refined Sugar—		70 €	64.3	65.0	63.3	62.9	61 1
As Sugar In manufactured products	"	70.6 35.9	64.3 44.7	47.3	50.7	52.8	61.1 51.7
Honey, Glucose and Syrups		7.1	5.6	6.3	5.5	5.1	7.0
Total (Sugar Content)		112.0	113.5	117.3	118.4	119.7	118.4

See next page for notes.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA—continued.

Commodity.	Unit of Quantity.	Average 1936-37 to 1938-39.	1952–53.	1953–54.	! 1954~55.	1955–56.	1956–57 (a)
Potatoes— White	1b.	103.8	96.4 1.4	122.2 1.4	102.8	88.7 1.4	109.8 1.4
Total	,,	106.2	97.8	123.6	104.2	90.1	111.2
Pulse and Nuts— Dried Pulse		1.5	2.3	3.7	2.8	3.1	3.1
Peanuts (weight without shell) Edible Tree Nuts (weight with-	**	0.9	1.3	1.9	2.7	1.4	0.7
out shell) Cocoa (Raw Beans)	"	0.8	1.4 2.5	1.7 2.8	1.9 2.4	1.6 2.6	1.6 2.3
Total	,,	5.3	7.5	10.1	9.8	8.7	7.7
Tomatoes and Fruit— Tomatoes(f)	,,	(g) 15.7	21.6	18.4	24.7	25.0	31.1
Citrus Fruit(f)	,,,	31.9	29.2	37.9	35.4	40.4	37,8
Other Fresh Fruit	,,	94.0	65.0	79.6	75.6 9.2	89.2	69.4
Jams Dried Fruit	"	11.4 8.1	8.6 7.1	9.1 7.3	7.9	9.7 5.4	9.6 4.8
Canned Fruit		10.7	12.3	12.2	13.9	13.8	13.7
Total (Fresh Fruit equiva- lent)	,,	189.2	161.7	183.8	187.9	198.8	179.0
Vegetables— Leafy, Green and Yellow Vege-							
tables	,,	(h)	44.3	42.0	40.0	40.5	45.1
Other Fresh Vegetables Canned Vegetables	"	(h) (h)	63.9 3.4	61.9 4.6	58.6 4.9	54.7 5.0	63.5 5.3
Total	**	(h)	111.6	108.5	103.5	100.2	113.9
Grain Products— Flour—							
White	.,	17	[184.8	181.5	177.9	175.0	179.0
Sharps Wheatmeal for baking	"	187.1	8.0	0.5 7.9	0.4 7.2	0.5 6.8	0.4 6.5
Breakfast Foods	**	(10.6	13.2	13.0	13.0	13.9	13.0
Rice (milled)	,,	4.0	3.9	3.7	3.5	3.7	3.7
Tapioca, Sago, etc Pearl Barley	,,	1.2	0.5	0.4	0.3	0.4	0.3 0.4
Barley Meal and Polished	**	1.0	0.0	0.3	!	0.5	0.4
Wheat (Rice substitute) Edible Starch (Cornflour)	::	`i.4	0.2 0.8	0.2	0.2 0.9	0.1 0.8	0.1 0.7
Total	,,	205.3	212.4	208.7	203.9	201.7	204.1
Beverages-							
Tea Coffee	.,	6.9 0.6	6.5 0.7	6.8	6.0	5.9 1.3	6.2 1.6
Beer	Gallon	11.7	21.8	23.1	24.3	24.2	22.9 1.3

<sup>(</sup>a) Subject to revision. (b) Included with fresh meat at its careass weight. (c) Edible weight. (d) Included with fresh. (e) In terms of weight of shell eggs. (f) Includes fresh equivalent of manufactured products. (g) Probably understated owing to lack of complete data. (h) Not available. (i) Excludes invalid and health foods, semolina and wheat germ.

<sup>2.</sup> Level of Nutrient Intake.—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1952-53 in comparison with the annual average for the three years 1936-37 to 1938-39. The table has been compiled by the Nutrition Section of the Commonwealth Department of Health and is based on the estimates of the quantity of foodstuffs available for consumption per head of population shown in the preceding table.

# ESTIMATED SUPPLIES OF NUTRIENTS AVAILABLE FOR CONSUMPTION: AUSTRALIA.

(Per Head per Day.)

Nutrient.		Unit.	Average 1936-37 to 1938-39.	1952-53.	1953-54.	1954–55. (a)	1955–56. (a)	1956–57. (a)
Calories		No.	3,117	3,261	3,338	3,296	3,276	3,291
Animal	'	gm.	58.7	56.5	57.3	56.8	56.8	59.1
Vegetable		,,	30.9	33.0	33.8	33.1	31.3	32.5
Total		"	89.6	89.5	91.1	89.9	88.1	91.6
Fat		,,	133.5	129.5	132.5	133.1	131.4	130.3
Carbohydrate		,,	377.4	421.1	426.8	416.1	413.9	418.6
Calcium		mgm.	642	758	800	758	782	806
Iron		,,	15.4	14.0	14.2	13.9	13.2	13.9
Vitamin A		I.U.	8,457	7,200	7,254	7,084	7,047	7,652
Ascorbic Acid		mgm.	86	80	90	83	83	89
Thiamin		,,	1.4	1.3	1.3	1.3	1.2	1.2
Riboflavin		"	1.7	1.7	1.8	1.7	1.7	1.7
Niacin		**	18.7	18.1	18.6	18.5	17.6	18.3

(a) Subject to revision.

Note.—The Conversion factors used are based on factors contained in the "Table of Composition of Australian Foods" (Anita Osmond and Winifred Wilson, Canberra, 1954).

# § 4. Patents, Trade Marks and Designs.

1. Patents.—(i) General. Patents for inventions are granted under the Patents Act 1952–1955, which applies to the Commonwealth of Australia and the Territories of Norfolk Island, Papua and New Guinea. The Act is administered by a Commissioner of Patents. The principal fees payable up to and including the grant of a patent amount to £17 10s. Renewal fees are payable as follows:—£5 before the expiration of the fourth year, and an amount progressively increasing by £1 before the expiration of each succeeding year up to the final fee of £16, payable before the expiration of the fifteenth year. An extension of time for six months for payment of a renewal fee may be obtained. Patents granted under the repealed Acts (Patents Act 1903–1950) are subject to the renewal fees under those Acts.

(ii) Summary. The number of separate inventions in respect of which applications were filed and the number of letters patent sealed during the years 1953 to 1957 are shown in the following table.

# PATENTS: AUSTRALIA.

Particulars.	1953.	1954.	1955.	1956.	1957.
Applications Applications accompanied by	8,917	9,073	8,869	9,396	9,899
provisional specifications Letters patent sealed	3,973 5,181	3,590 5,464	3,220 5.931	3,465 6,056	3,683 6,407

- 2. Trade Marks and Designs:—(i): Trade Marks. Under the Trade Marks Act 1905-1948, the Commissioner of Patents is also Registrar of Trade Marks. This Act has been amended from time to time, the last amendment having been made in 1948. Special provisions for the registration of a "Commonwealth Trade Mark" are contained in the Act of 1905, and are applicable to all goods included in or specified by a resolution passed by both Houses of Parliament that the conditions as to remuneration of labour in connexion with the manufacture of such goods are fair and reasonable. The Act of 1948 provides for the registration of users of trade marks, and also for the assignment of trade marks with or without the goodwill of the business concerned.
- (ii) Designs. Under the Designs Act 1906-1950, the Commissioner of Patents is also Registrar of Designs.
- (iii) Summary. The following table shows the applications for trade marks and designs received and registered during the years 1953 to 1957.

Pàrticulars.			1953.	1954.	1955.	1956.	1957.
Trade Marks—							
Received		i	4,305	4,730	4,630	4,402	4,589
Registered			1,469	1,400	1,848	5,360	3,569
Designs				-		· ·	
Received			1,504	1,373	1,330	1,130	1,394
Registered		\	802	900	819	458	91

TRADE MARKS AND DESIGNS: AUSTRALIA.

3. Revenue.—The following table shows the revenue of the Commonwealth Patent Office, Trade Marks and Designs Office, and revenue obtained from Copyright for the year 1953. From 1st July, 1954, a system of payment of fees by "fee stamps" was introduced and fees have since been collected under one head of revenue. Consequently separate figures are not available for the years 1954 to 1957.

PATENTS, TRADE MARKS	AND	DESIGNS	AND	COPYRIGHT,	<b>REVENUE:</b>
•	ΑŪ	USTRALIA.			

(£.)									
Particulars.	1953.	1954.	1955.	1956.	1957.				
Patents Trade Marks and Designs Copyright		130,292 45,113 1,156	202,290	234,125	293,918	302,279			
Total		176,561	202,290	234,125	293,918	302,279			

# § 5. Copyright.

1. Legislation.—Copyright is regulated by the Commonwealth Copyright Act 1912–1950 wherein, subject to modifications relating to procedure and remedies, the British Copyright Act of 1911 has been adopted and scheduled to the Australian law.

Reciprocal protection of unpublished works was extended in 1918 to citizens of Australia and of the United States of America, under which copyright may be secured in the latter country by registration at the Library of Congress, Washington. The Commonwealth Government promulgated a further Order in Council which came into operation on 1st February, 1923, and extended the provisions of the Copyright Act to the foreign countries of the Copyright Union, subject to the observance of the conditions contained therein.

 Applications and Registrations.—The following table shows under the various headings the number of applications for copyright received and registered for the years 1953 to 1957.

# COPYRIGHT: AUSTRALIA.

Particulars.			1953.	1954.	1955.	1956.	1957.
Applications received—							
Literary			1,134	1,044	1,005	1,059	1,064
Artistic			21	25	17	22	38
International				1		!	
Applications regi	stered—		Į.			1	
Literary		••	1,411	943	869	521	870
Artistic			15	20	12	17	26
International							

<sup>3.</sup> Revenue.—Revenue obtained from copyright during the year 1953 is shown in § 4, para. 3, above.

# § 6. Australian Shipbuilding Board.

- 1. Constitution.—Originally established in 1941 under National Security Regulations, the Board has been reconstituted a number of times since its inception and in 1948 was constituted on a permanent basis under the Supply and Development Act. At present it operates under the control of the Minister for Shipping and Transport. In order to link the activities of the Board more closely with the Department of Shipping and Transport, the constitution of the Board was altered in April, 1952, to provide for representation by senior departmental officers. The present membership of the Board consists of a Chairman who is the General Manager, a Deputy Chairman, a Finance Member and two other members, one of whom represents the Naval Board.
- 2. Functions.—The existing functions of the Board which have been summarized in earlier issues of the Official Year Book, are set out in detail in regulation 22 (4) of the Supply and Development Regulations.

In the exercise of its functions, the Board is responsible for—(i) the design of vessels; (ii) the calling of tenders and placement of orders; (iii) co-ordination of the Board's supplies to shipbuilders, e.g., machinery and certain equipment; (iv) supervision of construction; (v) acceptance of vessels after sea trials; and (vi) administration associated with ship repairs, marine engines, spare parts, etc.

The Board is also responsible for determining, within the limits prescribed by the Commonwealth Government, the amount of subsidy to be paid on merchant ships constructed in Australia. In 1956, the Government accepted a recommendation made by the Tariff Board that the maximum subsidy on ships built in Australia for the coastal trade should be increased from 25 per cent. to 33\{\frac{1}{2}} per cent. of the cost of construction. The method and level of assistance to the industry will be re-examined by the Tariff Board during 1958.

In order to take advantage of this, private shipowners are required to place their orders for vessels through the Board, which has thus become the ordering authority for all vessels built in Australian yards on which a subsidy is paid. The increased subsidy was payable on all orders placed with the Board after 12th April, 1956.

The Board has also undertaken the preparation of plans and drawings for the various yards, as the level of ship construction in Australia does not warrant each yard employing specialists in naval architecture. In this way, the Board has assisted in raising the efficiency of the industry as a whole and also in the development of individual yards. (For a more detailed reference to the constitution and functions of the Board see Official Year Book No. 37, p. 1170).

In order to assist the shipbuilding industry to become more self-sufficient, the Board has also encouraged the construction of marine engines in Australia including steam engines and several well known types of diesel engines manufactured under licence. The marine diesel engines under construction at 1st March, 1958, were:—"Doxford", two engines of 3,300 B.H.P., two of 4,400 B.H.P., and one of 2,600 B.H.P.; "Polar Atlas", two engines of 1,120 B.H.P.

3. Construction Programme.—From its inception to 1st March, 1958, the Board had arranged for the construction of 57 vessels of over 300 gross tons and totalling 323,561 tons deadweight. During the war, the Board was also responsible for the construction of numerous small craft and a 1,000 ton floating dock.

Current orders at 1st March, 1958, placed by the Board were for the construction of 11 vessels totalling 119,200 deadweight tons. The vessels consisted of two bulk ore carriers each of 19,000 d.w.t. on behalf of the Broken Hill Pty. Co. Ltd., and one 5,200 d.w.t. bulk sugar carrier on behalf of the Adelaide Steamship Co. Ltd., together with two bulk carriers of 14,000 d.w.t. each, four bulk carriers of 10,000 d.w.t. each, one bulk wheat/general cargo vessel of 2,000 d.w.t. and a 4,500 tons gross passenger/vehicular ferry all for the Australian National Line. The passenger/vehicular ferry has been designed for the carriage of passengers and their cars and loaded trailers on the Bass Strait run from Melbourne to northern Tasmania and when completed, late in 1959, will be the first of its kind to be operated in the Australian Coastal trade.

The Board is at present preparing working drawings for a second roll-on roll-off vessel which will be constructed in an Australian yard for the Australian National Line. This vessel, which will also be operated in the Bass Strait trade will be solely for the carriage of cargo.

The Commonwealth Government on 27th February, 1958, approved the payment of a subsidy on the construction of a 32,000 d.w.t. tanker to be built through the Board for Ampol Petroleum Pty. Ltd., by Broken Hill Pty. Co. Ltd. The official orders have not yet been placed for this vessel or the second roll-on roll-off vessel.

# § 7. Commonwealth Scientific and Industrial Research Organization.

- 1. General.—By the Science and Industry Research Act 1949, the previously existing Commonwealth Council for Scientific and Industrial Research was re-organized under the title of the Commonwealth Scientific and Industrial Research Organization. An account of the organization and work of the former Council, and of the earlier Commonwealth Institute of Science and Industry from which the Council was formed, was given in earlier issues of the Official Year Book. (See No. 14, p. 1061 and No. 37, p. 1183.)
  - 2. Science and Industry Research Act 1949.—This Act provides for-
    - (a) an Executive of the Organization consisting of five members to be appointed by the Governor-General, at least three of whom shall be persons possessing scientific qualifications; and
    - (b) an Advisory Council of the Organization, consisting of the members of the Executive, the Chairman of each State Committee constituted under the Act, and such other members as the Advisory Council, with the consent of the Minister, co-opts by reason of their scientific knowledge.

The powers and functions of the Organization are as follows:—(a) To initiate and carry out scientific researches in connexion with primary or secondary industries in Australia; (b) to train research workers and to establish industrial research studentships and fellowships; (c) to make grants in aid of pure scientific research; (d) to establish and make grants to industrial research associations in any industry; (e) to test and standardize scientific apparatus and instruments; (f) to collect and disseminate scientific and technical information; (g) to publish scientific and technical reports and periodicals; and (h) to act as a means of liaison between Australia and other countries in matters of scientific research.

- 3. Science and Industry Endowment Act 1926-1949.—Under this Act, the Government established a fund of £100,000, the income from which is used to provide assistance (a) to persons engaged in scientific research; and (b) in the training of students in scientific research. Provision is made for gifts or bequests to the fund which is controlled by a trust consisting of the Executive of the Organization. In accordance with the Act, arrangements have been made to send a number of qualified graduates abroad for training in special fields of work.
- 4. Work of the Organization.—The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Undesirable centralization has been avoided mainly in two ways. In the first place, the policy has been followed of establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found. Secondly, the Act provides for the establishment of a State Committee in each of the six States. These Committees are widely representative of scientific and industrial interests, and advise the Executive or the Advisory Council on general matters and on particular questions of investigation and research.

For about twelve years after its establishment, the work of the previous Council was devoted mainly to the solution of problems affecting the agricultural and pastoral industries. Unlike manufacturing concerns, which can often employ their own scientific staffs, the farmers and the pastoralists are dependent on outside help for the solution of their problems which require research. It was a recognition of the greater need of the primary producer which directed the Council's early policy. In 1937, however, the Commonwealth Government decided to extend the activities of the C.S.I.R. so as to provide assistance to secondary industries, and several laboratories have been established for work in that field; it was thus in the fortunate position of being able to render to these industries assistance of vital importance almost immediately after the outbreak of war. In fact, the remarkable technological advances and developments in secondary industrial production during the war would have been to a large extent impossible had it not been for the assistance rendered by scientific research, and this may well serve as a forceful illustration of what may be accomplished in times of peace.

For the purpose of carrying out its research work, there are established within the Organization a number of Divisions and Sections. The Divisions, of which there are now eighteen, comprise the major establishments for which special laboratory buildings have been erected and equipped; the Sections generally include establishments which have not reached a stage of development, so far as the scope and magnitude of their operations are concerned, to justify their designations as Divisions. As the Organization's investigations extend on a Commonwealth-wide basis and as many of the investigations which are being conducted—particularly those concerned with problems affecting the agricultural and pastoral industries—necessitate experimental work in the field, a number of field stations are established in various parts of Australia.

The Divisions which have been established are as follows:-

- (1) Plant Industry, with main laboratories at Canberra and Brisbane and field stations.
- (2) Entomology, with main laboratories at Canberra and field stations.
- (3) Animal Health and Production with main laboratories in Melbourne, Sydney and Brisbane and field stations.
- (4) Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- (5) Soils, with main laboratories at Adelaide and extensive operations in the field.
- (6) Forest Products, with main laboratories in Melbourne and field experiments.
- (7) Food Preservation and Transport, with main laboratories at Homebush (New South Wales) and a subsidiary laboratory in Brisbane.
- (8) Fisheries and Oceanography, with main laboratories at Cronulla (New South Wales), subsidiary laboratories in Dunwich, (Queensland), Perth and Thursday Island, and experimental work in coastal waters of Australia.
- (9), (10), (11) Metrology, Physics and Electrotechnology, comprising the National Standards Laboratory at Sydney.
- (12) Radiophysics, with main laboratory at Sydney.
- (13) Industrial Chemistry, with main laboratories in Melbourne.
- (14) Tribophysics, with laboratories in Melbourne.
- (15) Building Research, with laboratories in Melbourne.
- (16) Mathematical Statistics, with main laboratory in Adelaide.
- (17) Meteorological Physics, with main laboratory in Melbourne and field station.
- (18) Land Research and Regional Survey, with headquarters in Canberra, and field stations at Ayr (Queensland), Katherine (Northern Territory) and Ivanhoe (Kimberley, Western Australia).

# The following are the Sections:-

- (1) Commonwealth Research Station, Murray Irrigation Area, Merbein (Victoria).
- (2) Irrigation Research Station, Griffith (New South Wales).
- (3) Radio Research Laboratories, Camden and Sydney (New South Wales).
- (4) Dairy Research, Melbourne.
- (5) Mineragraphic Investigations, Melbourne.
- (6) Ore-dressing Investigations, Melbourne and Kalgoorlie.
- (7) Fodder Conservation, Melbourne.
- (8) Physical Metallurgy, Melbourne.
- (9) Wool Textile Research Laboratories, Geelong, Melbourne and Sydney.
- (10) Coal Research, Sydney.
- (11) Mathematical Instruments, Sydney.
- (12) Wildlife Survey, with main laboratory in Canberra, subsidiary laboratory at Albury, and field experiments.
- (13) Animal Genetics, Sydney.
- (14) Engineering.

In addition to its investigational work, the Organization deals with inquiries covering a wide range of scientific and technical subjects and maintains Scientific Research Liaison Offices in London and Washington.

An Agricultural Research Liaison Section established at the Organization's Head Office assists in making results in agricultural research speedily available to State Departments of Agriculture for use in their extension work.

Recently an Industrial Research Liaison Section has also been established at Head Office to foster liaison in the secondary and manufacturing fields.

The Organization's Head Office, with administrative and executive staff, is in Melbourne, and associated with it are the Organization's Central Library, Agricultural Research Liaison Section and Industrial Research Liaison Section. The funds for the Organization are provided from two main sources, namely, from Commonwealth revenue by Parliamentary appropriation, and from industry directly or indirectly by way of contributions and special grants. The fact that contributions and grants account for over one-eighth of the total annual expenditure indicates that the C.S.I.R.O. has succeeded in a very large measure in gaining the confidence of the public.

The activities of the C.S.I.R.O. are now so comprehensive in their scope and so widely distributed that it is not an easy matter to present an adequate picture of them in a concise form. For details of the investigations in progress, reference should be made to the Annual Report of the Organization.

# § 8. Mount Stromlo Observatory.

- 1. General.—In January, 1957, the former Commonwealth Observatory was transferred from the control of the Department of the Interior to the Australian National University as part of the Research School of Physical Sciences of that University, and is now officially known as the Mount Stromlo Observatory.
- 2. Foundation of Observatory.—The Observatory was founded primarily to prosecute astrophysical research, including the study of the relations between solar and terrestrial phenomena. A short history of the foundation of the Observatory appears in Official Year Book No. 19, p. 979.
- 3. Site of Observatory.—The Observatory is situated on Mount Stromlo, which forms part of a ridge of hills about seven miles west of Canberra. The highest point in the ridge is 2,560 feet above sea level, that is about 700 feet above the general level of the surrounding country.
- 4. Equipment.—The major items of equipment at Mount Stromlo comprise a 74-inch reflector, a 50-inch reflector, which is the re-built Melbourne 48-inch telescope, a 30-inch reflector donated by the late J. H. Reynolds, Esq., a 20-inch reflector once the property of the late J. H. Catts, M.P., as well as a 9-inch refractor, a solar tower telescope of 45 feet focal length and other smaller telescopes. A photographic refractor of 26-inch aperture belonging to the Universities of Yale and Columbia is installed in a dome provided by the Commonwealth Government, and a 20-inch/26-inch Schmidt telescope from the University of Uppsala has been installed in a similar fashion.
- 5. Functions of Observatory.—Investigations in the fields of stellar spectroscopy, stellar photometry and variable stars are being carried out. The Observatory is responsible for the accuracy of the Australian Time Service. Considerable attention is being given to the development of this work, and a highly accurate quartz clock system has been installed. A photographic zenith tube has been acquired for time determination.
- 6. International Co-operation.—The Observatory works in close liaison with oversea observatories and major equipment has been or is being installed at Mount Stromlo in co-operation with the University Observatories of Yale and Columbia (U.S.A.) and Uppsala (Sweden).

# § 9. Standards Association of Australia.

The Standards Association of Australia is the national standardizing organization of Australia, and issues Australian standard specifications for materials and codes of practice.

The Association was established in July, 1929 by the amalgamation of the Australian Commonwealth Engineering Standards Association and the Australian Commonwealth

Association of Simplified Practice. It is an independent body in close touch with modern industrial requirements and has the full recognition and support of the Commonwealth and State Governments and industry. It was incorporated by Royal Charter in 1950.

The sole executive authority of the Association is vested in the Council, on which industry is fully represented, together with official representatives of the Commonwealth and State Governments and their technical departments, and of scientific, professional and commercial organizations. Voluntary assistance is rendered in the drafting of specifications and codes by several thousand individuals who are experts in their particular fields, and are organized into some hundreds of committees. These committees are grouped under broad industry headings including civil engineering and building construction, mechanical engineering, electrical engineering, chemical industry, timber industry, transportation, aircraft materials, ferrous and non-ferrous metallurgy, textiles, mining, ceramics, medical and dental materials, household and domestic economy, miscellaneous and general.

These committees are comprised of nominated representatives of manufacturing, distributing and purchasing organizations, and of scientific and other expert authorities in the particular field of the project being dealt with. The operations of these committees are co-ordinated and supervised by committees broadly representative of the whole industry within which the respective projects are included.

The specifications of the Association provide a suitable standard of performance, quality and dimension and an equitable basis for tendering. They help to eliminate redundant qualities and sizes. They enable purchasers to obtain their requirements with greater assurance of satisfaction, with more rapid delivery and without the necessity of drafting individual specifications.

The underlying principles covering the preparation of the specifications and codes are that they shall be in accordance with the needs of industry; that the common interests of producer and consumer be maintained; that periodical revision should keep the work abreast with progress; and that standardization be arrived at by general consent without coercion.

Organizations, companies, firms and individuals interested in the work of the Association are eligible for subscription membership. Members are entitled to free copies of the publications of the Association and to the use of the library and its Special Information Service. Bibliographical research is undertaken for committees, members of the Association, and industry in general. Many hundreds of inquiries are answered each year.

The Association has international affiliations and the standards of all British and foreign countries are filed in the library and are accessible to members. It is a member, representing Australia, of the International Organization for Standardization (ISO). The Association also administers the Australian National Committees of the International Electrotechnical Commission and the International Commission on Large Dams.

The Association is also the representative of the British Standards Institution, and all British standards may be purchased from headquarters and branch offices in the various States.

The headquarters of the Association are at Science House, Gloucester Street, Sydney, and branches of the Association are situated at Temple Court, 422 Collins Street, Melbourne; School of Arts Building, 166 Ann Street, Brisbane; Alliance Building, Grenfell Street, Adelaide; Gledden Building, Hay Street, Perth; c/o Engineering Department, Hobart Technical College, Hobart; Department of Works, Canberra; and Howard Smith Chambers, Watt Street, Newcastle.

# § 10. Film Censorship Board.

1. Legislation.—The Commonwealth Government's powers over censorship extend only to imported films and advertising and stem from the Customs Act. Under that Act, the Customs (Cinematograph Films) Regulations provide for the appointment of a Film Censorship Board whose function is to ensure that films coming within certain defined categories are not admitted into Australia. Under those regulations, the Film Censorship Board may pass films in their original form, reject them, or pass them after eliminations have been made. The Commonwealth Regulations give the Board no power to classify films.

However, legislation passed by the State Governments of Victoria, Queensland, Western Australia and Tasmania names the Commonwealth Film Censorship Board as the censorship authority and vests in it the power to classify films as suitable for general exhibition or otherwise. The classification is advisory only and is designed to enable picture goers and particularly parents to obtain a general idea of any particular film.

The State Acts give the Commonwealth Board the authority to censor films made in Australia for commercial exhibition and advertising matter made in Australia.

The Censorship organization comprises a Censorship Board of five persons and an Appeal Censor, the headquarters being in Sydney. There is also a right of appeal to the Minister.

2. Import of Films.—Imported standard size (35-millimetre) films, including films for television, dealt with by the Censorship for the year 1957 were as follows:—1,191 films of 3,768,038 feet passed without eliminations, 164 films of 1,229,407 feet passed after eliminations and six films of 35,288 feet rejected, making a total of 1,361 films of 5,032,733 feet. The countries of origin were as follows:—United States of America, 685 films of 2,759,882 feet; United Kingdom, 440 films of 1,378,509 feet; and other countries, 236 films of 894,342 feet. Of the 440 films from the United Kingdom, 139 were for television screening only.

During 1957, 485 feature films for theatrical exhibition (4,001,798 feet) were imported, 289 (2,382,316 feet) from the United States of America, 108 (870,322 feet) from the United Kingdom and 88 (749,160 feet) from other countries. Three hundred and twenty nine (2,760,488 feet) were passed without eliminations, 150 (1,206,022 feet) were passed with eliminations and six films of 35,288 feet were rejected. During 1956, 431 feature films were dealt with, 273 being passed without eliminations and 156 passed with eliminations, while two films were rejected.

During 1957, 7,896,814 feet of imported 16-millimetre films were censored (commercial films, 3,254,971 feet and films for television, 4,641,843 feet.) Of these, six commercial films were rejected and 34 passed after eliminations, and 20 films for television were rejected and 448 passed after eliminations.

During 1957, 45,328 feet of 8-millimetre and 9.5-millimetre films were censored compared with 2,067,219 feet in 1956. Of these commercial films, six were rejected and one subjected to eliminations.

3. Export of Films.—The number of films exported for the year 1957 was 3,105 of 1,999,187 feet, of which 1,760 films of 1,186,981 feet were sent to British countries, including Trust Territories, 709 films of 507,342 feet were sent to the United States of America and 646 of 304,864 feet to other countries. This footage includes in many cases several prints of the one film.

#### § 11. Australian National Film Board and the Film Division.

1. The Australian National Film Board.—The Australian National Film Board was inaugurated in April, 1945, on the recommendations of a Commonwealth Government inter-departmental committee which considered the suggestions of a conference of interested individuals and Commonwealth and State officials, including Directors of Education, called in November, 1944, by the Ministers for Information and Post-war Reconstruction. It was attached, for administrative purposes, to the Department of Information.

With the abolition of the Department of Information in March, 1950, administration of the Board was transferred to the News and Information Bureau, Department of the Interior.

In November, 1950, the Board was reconstituted as an advisory body to the Minister for the Interior on matters concerned with the production, acquisition and distribution of films required by Commonwealth departments for the following purposes:—

- (a) for use within Australia on important matters of national interest and welfare, such as school and adult education, rehabilitation, social development, international understanding, trade and tourist expansion, and immigration;
- (b) for dissemination abroad to expand trade and commerce with other countries, to encourage tourist traffic with Australia, to improve Australia's relations with other countries and, where necessary, to explain Australia's national policies and encourage immigration.

The constitution provides for a membership of ten, with the Secretary of the Department of the Interior, Chairman, the Director of the News and Information Bureau, Deputy Chairman, and the remainder representative of Commonwealth departments, State Government instrumentalities and organizations interested in the production, distribution or utilization of films for national publicity.

2. The Film Division of the News and Information Bureau.—Production and distribution of all films required by Commonwealth Departments is undertaken by the staff of the Film Division, News and Information Bureau, Department of the Interior, or by commercial enterprises under the supervision of officers of the Film Division. Theatrical distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organized by the News and Information Bureau's home office or its oversea representatives. Non-theatrical distribution in Australia is organized through the National Library, Canberra, in co-operation with State film distribution agencies.

The first Australian Government organization for the production of motion pictures for national publicity purposes was the Cinema and Photographic Branch of the Department of Commerce, set up in Melbourne in 1920. Early in the 1939-45 War, the newly-established Department of Information was made responsible for the operation of the Cinema Branch and for an Official War Photography Unit.

Since 1946, the Film Division has produced 293 films for general exhibition, as well as training and special purpose films. Prints are dispatched to 44 oversea centres, where distribution is arranged by News and Information Bureau officers or other Australian representatives. In Britain, there is regular distribution through more than a thousand theatres, and a large non-theatrical and educational series of circuits. By arrangement with the British Broadcasting Corporation, items of topical interest photographed by the Film Division are flown to London for television. In the United States of America, there is wide non-theatrical distribution and considerable use of the films by television networks. An exchange arrangement with the National Film Board of Canada secures extensive distribution in Canada. French versions, prepared in Paris under the supervision of the Australian Embassy, circulate through France and French-speaking countries. Selected films have also been recorded in Dutch, German, Italian, Japanese, Hindustani, Tamil and other Indian dialects.

In addition to films made on the initiative of the News and Information Bureau, the Film Division has produced, or is producing, films under the sponsorship of, or with the co-operation of, Commonwealth Departments and many other bodies such as the Commonwealth Bank of Australia, the Road Safety Council, Overseas Telecommunications Commission, Snowy Mountains Hydro-electric Authority, Australian Wine Board, the Australian National University and the Australian Broadcasting Commission.

The co-operation of the Australian motion picture industry with the Commonwealth, spontaneously offered at the outset of the 1939-45 War, continues. Special films for urgent national appeals are planned, produced and distributed, with the assistance of the National Films Council of the motion picture industry and its Film Production Advisory Committee.

# § 12. National Safety Council of Australia.

The National Safety Council of Australia was founded in Melbourne in 1927 for the purpose of developing, mainly by means of education, safety on the road, at work and in the home, and its activities have developed in other directions wherever the need for reducing the toll of accidents has been shown. To this end, it conducts continuous propaganda through the press and in other ways. It also forms Junior Safety Councils in the schools for developing a safety conscience among children. The children themselves are officers of these Councils and patrol the roads in the neighbourhood of the schools and conduct the scholars across in safety. Posters are available to schools in connexion with Health and Safety lessons. Specially taken films are available for child and adult road safety instruction.

A "Safe Driving" campaign for individual motor drivers is conducted as well as a "Freedom from Accidents" competition among employee drivers, those completing a year free from any accident for which they were responsible being given a certificate to that effect. An industrial service of four posters a month, together with slips for pay envelopes, constitutes a regular service for the dissemination of safety advice, and is supplied to over 150,000 workers in factories each year. Committees deal with specific problems regarding

traffic, films, safety in industry, air safety and home dangers. The Air Safety Committee has a plan for marking town and property names on buildings to assist aircraft in distress and to facilitate dropping supplies from the air in times of emergency, such as floods. This is being implemented throughout Australia, particularly in flood areas.

The Council is supported by Government grants, public subscriptions and payments for service, and is a non-profit organization. Its work is carried on by a small staff controlled by committees and governed by an executive. Six committees, whose work is of an entirely honorary nature, are in operation, namely, Executive, Traffic, Industrial Safety, Home, Air Safety and Publicity.

# § 13. Australian Road Safety Council.

1. Origin and Organization.—The Australian Road Safety Council was formed in June, 1947, through the instrumentality of the Australian Transport Advisory Council.

The prime movers for the establishment of the Council were the Australian Automobile Association, which submitted a comprehensive plan; the New South Wales Minister for Transport, who advocated expansion, on a nation-wide basis, of road safety activities on lines similar to those of the Road Safety Council of New South Wales; and the National Safety Council of South Australia, which conveyed recommendations from a Special Safety Convention held in Adelaide in 1946.

At that time, in addition to the above-mentioned organizations in New South Wales and South Australia, there was a road safety organization in Victoria. Steps were immediately taken to form Councils in Queensland, Western Australia and Tasmania, and subsequently in the Australian Capital Territory.

The Australian Road Safety Council is the composite body of Road Safety Councils of the following States and Territories of Australia:—

Governmental.—New South Wales, Road Safety Council of New South Wales; Queensland, Road Safety Council of Queensland; Tasmania, Road Safety Council of Tasmania; the Australian Capital Territory, Road Safety

Council of the Australian Capital Territory.

Non-Governmental.—Victoria, Victorian Road Safety Division, National Safety Council of Australia; South Australia, Road Safety Division, National Safety Council of South Australia; Western Australia, Road Safety Division, National Safety Council of Western Australia.

The Council is representative, geographically and technically, of the whole Commonwealth and comprises nominees of practically all classes of road users, together with representatives of road transport, the Department of Army (representing all Services) and police administrations from each State. National organizations represented on the Council are:—Australian Automobile Association, Australian Road Transport Federation, Auto Cycle Council of Australia, Council of Fire and Accident Underwriters, The Federal Chamber of Automotive Industries, Federation of Motor Cycle Importers and Distributors of Australia, and Transport Workers' Union of Australia.

The Council meets annually and an Executive Committee operates between conferences. The principal effort of the Council is directed through educational, advertising and public relations media.

An annual grant is made available by the Commonwealth Government under the Commonwealth Aid Roads Act for the promotion of road safety. Hitherto £100,000 annually, it has been increased to £150,000 for the five years commencing 1st July, 1955. Of this, £90,000 is allocated to State Road Safety Councils for local activities in the following proportions:—New South Wales, £22,500; Victoria, £18,000; Queensland, £16,650; Western Australia, £14,850; South Australia, £11,250; and Tasmania, £6,750. The remaining £60,000 is applied to the National Campaign, spread equitably over the entire Commonwealth.

2. Mode of Operation.—The role of the Australian Road Safety Council is primarily in the field of education and public relations. Its task is to inculcate the habit of safe use of the roads by all who travel on them and to promote the cause of road safety as a humanitarian and community ideal of the highest importance. To this end, it constantly strives to increase public awareness of the road accident problem, which for the year ended 30th June, 1957, resulted in 109,672 accidents involving casualties or damage in excess of £10 to property, the deaths of 2,113 persons and injuries to 50,450 persons. (For further information on the subject of Traffic Accidents see pp. 416-9.)

The campaign for road accident prevention resolves broadly into two main elements relating to (i) Road Users and (ii) Roads and Vehicles. The attack falls into three main divisions—(i) Education, (ii) Enforcement, and (iii) Engineering. The link between the components is, broadly:—

In addition to the foregoing activities, the Council convenes special national conferences, as required by the Australian Transport Advisory Council, to consider specific road safety problems. Typical of these have been the special committee appointed in 1951 to discuss level crossing accidents, which recommended, among other measures, the appointment in each State of a committee to investigate level crossings and report on safety provisions, the elimination of some railway level crossings and the closure of others where practicable and desirable; a special meeting held in June, 1953, to discuss methods of reducing the high incidence of motor cycle accidents, at which various measures to offset the greater vulnerability of both the machine and its rider were recommended; and special meetings held in May, 1954, and April, 1955, to consider the problems of "Youth and Road Safety" and "Pedestrian Behaviour" respectively. Road safety and traffic authorities from oversea countries took part in special "International Sessions" of the 1956 Congress of the Council. The Australian Road Safety Council has pioneered the advocacy of voluntary blood tests for intoxication in cases of suspected driving under the influence of drugs or alcohol. An Educational-Enforcement campaign to link more closely the work of the road safety movement and the police is planned for 1958–59.

The Council works in close collaboration with two other bodies also established by the Australian Transport Advisory Council, namely, the Australian Motor Vehicle Standards Committee and the Australian Road Traffic Code Committee. All three bodies are administered by the Commonwealth Department of Shipping and Transport, which is the executive department for the Australian Transport Advisory Council.

The Australian Motor Vehicle Standards Committee develops and promulgates essential basic motor vehicle standards such as maximum lengths, weights, heights, carrying capacity of vehicles, and minimum lighting, braking and other mechanical efficiencies. In addition to ensuring a greater safety factor, these standards have helped to eliminate many conflicting State requirements which had an adverse effect on design and production costs.

The Australian Road Traffic Code Committee is charged with the responsibility of progressively preparing a "blue print" uniform national traffic code for incorporation in State legislation. Speed limits, right-hand turns, rules governing approaches to intersections, qualifications of drivers, and pedestrian behaviour are a few of the numerous aspects which come within its purview, and a high degree of uniformity has been achieved.

# § 14. Australian Atomic Energy Commission.

In November, 1952, a Commission of three members was appointed to control the Commonwealth's activities in relation to uranium and atomic energy, and in April, 1953, upon the enactment of the Atomic Energy Act 1953, the Commission was established as a statutory authority, with powers and functions as defined in the Act. The Commission is a corporate and autonomous body, controlling its own service. It functions under the direction of the Minister for National Development.

The functions of the Commission fall under two main headings. Firstly, it is responsible for undertaking and encouraging the search for and mining of uranium, and is empowered to co-operate with the appropriate authorities of the States in connexion with these and related matters. Secondly, it is authorized to develop the practical uses of atomic energy by constructing and operating plant for this purpose, carrying out research and generally fostering the advancement of atomic energy technology. These powers and functions are set out in detail in Part II. of the 1953 Act. In general, and subject to the Commonwealth's defence powers and particular provisions of the Act, they are exercisable only in or in relation to the Territories of the Commonwealth.

The search for and mining of uranium in the Territories of the Commonwealth are freely open to private enterprise, subject to the Atomic Energy Act 1953 and the Ordinances of the Territories. For the assistance of private prospectors, and with the object of ascertaining the uranium resources of the Territories, aerial and geological surveys are carried out to identify areas favourable to uranium occurrences. These surveys are undertaken for the Commission by the Bureau of Mineral Resources of the Department of National Development, and the results are published from time to time in map form for general information. As incentives to private enterprise to engage in the search for uranium, rewards have been paid for discoveries. Taxation concessions are allowed in respect of income derived from uranium mining. In addition, the Atomic Energy Commission, the Bureau of Mineral Resources and other Commonwealth agencies make available to prospectors and mining companies a wide range of technical and advisory services.

The development of the uranium resources of the States is governed by the legislation and policies of the States. Commonwealth aerial survey facilities are made available to the States for the radiometric examination of areas within the States, and the State Mines Departments undertake work, for the Commonwealth, on the testing of uranium ores and research on ore treatment problems.

Uranium oxide is being produced in Australia from large ore deposits at Rum Jungle, in the Northern Territory, and Radium Hill, in South Australia. The Rum Jungle deposits are being developed under arrangements between the Commonwealth and the Combined Development Agency, a joint procurement organization of the United States and United Kingdom Governments. The actual mining and treatment operations are being conducted for the Commonwealth by an Australian mining company. A treatment plant was brought into operation on the field in September, 1954, the substantial production from which is being sold to the Agency for defence purposes. The Radium Hill deposits are being developed by the South Australian Government, which has established an ore concentration plant on the field and a plant for the treatment of the concentrates at Port Pirie. Like the Rum Jungle project, the operations at Radium Hill and Port Pirie are carried out under arrangements with the Combined Development Agency, and the output from the operations is sold to the Agency.

Uranium ores have also been found elsewhere in the Commonwealth, most notably at the Mary Kathleen lease in the Mt. Isa-Cloncurry district in Queensland. The Mary Kathleen lease, containing a large body of ore, is being developed by commercial interests, which are erecting a treatment plant in the area at a cost of several million pounds. Production from the plant will be sold to the United Kingdom Atomic Energy Authority, under arrangements approved by the Commonwealth Government. Another company, operating in the South Alligator River area of the Northern Territory, sold some ore of exceptionally high grade to the Combined Development Agency.

The Commission has undertaken a research programme into the civil uses of atomic energy, with special reference to Australian needs. By arrangement with the United Kingdom Atomic Energy Authority, it has had a team of scientists working in the Authority's Research Establishment at Harwell in England. At the end of 1955, the Commission began the construction of its Research Establishment at Lucas Heights near Sydney. This consists of a high flux nuclear reactor of the most advanced type, with associated services and various laboratories. During 1958, the reactor came into operation and the scientific staff, with one or two exceptions, continued their research programme in Australia. So that the specialized facilities at Lucas Heights may be available to the universities for research and training, the Australian Institute of Nuclear Science and Engineering has been established. Within Australia, in addition to its programme at Lucas Heights, the Commission is supporting atomic energy research on a considerable scale in the various universities, and it has established a wide range of post-graduate studentships and undergraduate scholarships in the universities to train scientists for future work in atomic energy fields.

The broad objects of the Commission's research programme are to develop the production of electric power from nuclear fuels, and to investigate and promote the application of atomic energy and radioactive isotopes in industry, agriculture, medicine and biological research and other fields. In these endeavours, the Atomic Energy Commission is working in close co-operation with the United Kingdom Atomic Energy Authority, under arrangements which give Australia access to the results of the very large United Kingdom programme of research on peaceful atomic energy uses. The results of research in Australia will in like manner be made available to the United Kingdom. Work in Australia, though constituting a self-contained programme, is co-ordinated with the United Kingdom programme, to avoid overlapping of research objectives and duplication of investigations.

In the light of the vast amount of research now going forward overseas, and the programmes of many nations for the establishment of full-scale power-producing reactors, it seems clear that nuclear power is rapidly approaching the stage of being economically

practicable. A number of Government authorities, and several commercial organizations are undertaking serious study of the possible application of nuclear energy to their problems. The planned Australian research effort will enable Australia to make a full contribution to the advancement of atomic energy technology, both in power production and in other fields, and will, at the same time, place the country in a position to take advantage of the practical uses of atomic energy as they are developed.

# § 15. The United Nations.

1. General.—The Moscow Declaration of 1943 concerning a new international organization for the maintenance of international peace and security marked the end of the League of Nations. The dissolution of the League, and the transfer of certain of its functions to the new body, the United Nations, took place over subsequent years. Information concerning the League of Nations was given in issue No. 35 and earlier issues of the Official Year Book.

The Charter of the United Nations was drawn up by the delegates of fifty nations at the United Nations Conference on International Organization at San Francisco from 25th April to 26th June, 1945. Australia's ratification was deposited on 1st November, 1945. Following the admission of 16 new members during the Tenth Session and seven more subsequently, there are now\* 82 member States:—Afghanistan, Albania, Argentina, Australia, Austria, Belgium, Bolivia, Brazil, Bulgaria, Burma, Byelorussia, Cambodia, Canada, Ceylon, Chile, China, Colombia, Costa Rica, Cuba, Czechoslovakia, Denmark, the Dominican Republic, Ecuador, Egypt, El Salvador, Ethiopia, Finland, France, Ghana, Greece, Guatemala, Haiti, Honduras, Hungary, Iceland, India, Indonesia, Iran, Iraq, the Republic of Ireland, Israel, Italy, Japan, Jordan, Laos, Lebanon, Liberia, Libya, Luxemburg, Malaya, Mexico, Morocco, Nepal, the Netherlands, New Zealand, Nicaragua, Norway, Pakistan, Panama, Paraguay, Peru, the Philippines, Poland, Portugal, Romania, Saudi Arabia, Spain, Sudan, Sweden, Syria, Thailand, Tunisia, Turkey, the Ukraine, the Union of South Africa, the Union of Soviet Socialist Republics, the United Kingdom, the United States of America, Uruguay, Venezuela, Yemen and Yugoslavia. The United Arab Republic has sought to replace both Egypt and Syria.

The full record of the Conference is contained in the Report by the Australian Delegates on the United Nations Conference on International Organization held at San Francisco,

from 25th April to 26th June, 1945.

At San Francisco, an Executive Committee and a Preparatory Commission were established, and when these bodies had completed their work of preparation for the first meeting of the United Nations, the General Assembly met in London on 10th January, 1946.

The principal organs of the United Nations are the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council, the International Court of Justice, and the Secretariat.

- 2. General Assembly.—This is the forum of the United Nations. In it, each member State is represented and has one vote. It meets in regular annual sessions and has provision for special sessions. With the exception of disputes which are before the Security Council and matters essentially within the domestic jurisdiction of any State, it has power to discuss any matter within the scope of the Charter and to make recommendations upon it. The assembly elects the non-permanent members of the other major organs and considers annual reports from them. Upon the recommendation of the Security Council, it may expel a member which has persistently violated the principles of the Charter.
- 3. The Security Council.—This has the primary responsibility for the maintenance of international peace and security. It is composed of five permanent members, namely China, France, the United Kingdom, the Union of Soviet Socialist Republics and the United States of America, and six non-permanent members with two-year periods of office, of whom three retire at the end of each year. At the initial election three countries, including Australia, were elected for a term of two years and three others for a term of one year only. The following are the non-permanent members of the Security Council at present\*: Canada, Japan and Panama (whose terms commenced on 1st January, 1958), and Colombia, Iraq and Sweden (whose terms commenced on 1st January, 1957). On procedural matters, decisions are taken by an affirmative vote of any seven members. But on all other matters, decisions can be made only on the affirmative vote of seven members, including the concurring votes of all the permanent members. However, the powers which are parties to a dispute for peaceful settlement do not vote.

The Security Council is assisted by a Military Staff Committee consisting of the Chiefs of Staff of the permanent members of the Council or their representatives.

4. The Economic and Social Council.—This body consists of eighteen members, each elected for a period of three years. Its main functions are to make, or initiate, studies and reports, and to make recommendations to the General Assembly or to members of the United Nations, upon international, economic, social, cultural, educational, health and related matters. It may make recommendations for the purpose of promoting respect for, and observance of, human rights and fundamental freedoms for all.

The present\* members of the Economic and Social Council are: Brazil, Canada, Greece, Indonesia, the United States of America and Yugoslavia (retiring 1958); Finland, Mexico, Pakistan, Poland, the United Kingdom, and the Union of Soviet Socialist Republics (retiring 1959); and Chile, China, Costa Rica, France, the Netherlands and Cuba (retiring 1960).

5. The Trusteeship Council.—The Charter declares the political, social, cultural and economic advancement of the Trusteeship Territories to be a sacred trust. A Trusteeship Council has been set up composed of those members of the United Nations who are administering trust territories and an equal number of members who are not administering trust territories (including any permanent members of the Security Council who are not administering trust territories). Territories which may be placed under trusteeship in accord with individual trusteeship agreements are those previously held under mandate, those detached from enemy states as a result of the 1939-45 War and those dependent territories placed under the system by the States responsible for their administration. Australia is automatically a member of the Trusteeship Council, as the power administering the Trust Territories of New Guinea and Nauru. The present\* members of the Trusteeship Council are: Australia, Belgium, France, Italy, New Zealand, the United Kingdom, the United States of America (administering States), and Burma, China, Guatemala, Haiti, India, Syria† and the Union of Soviet Socialist Republics. China and the Union of Soviet Socialist Republics are members of the Trusteeship Council by virtue of their permanent membership of the Security Council.

The Council has among its duties the consideration of annual reports submitted by the trustee states, the carrying out of periodic inspections by agreement with them, and the formulation of questionnaires on the welfare and advancement of the dependent peoples.

6. The International Court of Justice.—This consists of fifteen judges, no two of whom may be nationals of the same State. Its jurisdiction comprises all cases which the parties refer to it, and all matters especially provided for in the Charter or in treaties and conventions in force. Provision exists in the Statute of the Court whereby States, parties to the Statute, may accept the jurisdiction of the Court as compulsory, either conditionally or unconditionally in certain international disputes.

The present\* members of the Court are: Judges Hackworth (United States of America), Sir Zafrullah Khan (Pakistan), Klaestad (Norway), Kozhevnikov (U.S.S.R.), and Armand-Ugon (Uruguay)—all-retiring in 1961; Judges Lauterpacht (United Kingdom), Basdevant (France), Guerrero (El Salvador), Cordova (Mexico), and Quintana (Argentina)—all retiring in 1964; and Judges Badawi (Egypt), Wellington Koo (China), Winiarski (Poland), Sir Percy Spender (Australia) and Spiropoulos (Greece)—all retiring in 1967.

- 7. The Secretariat.—The Secretary-General is the head of the Secretariat of the organization. He is appointed by the General Assembly upon the recommendation of the Security Council, and he appoints his staff in accordance with the rules approved by the General Assembly. Mr. Trygve Lie (Norway) was appointed first Secretary-General, and at the Sixth Session of the General Assembly in 1950 was re-appointed for a further three years as from 1st February, 1951. In November, 1952, Mr. Lie announced his intention of retiring and in April, 1953, Mr. Dag Hammarskjöld (Sweden) was appointed in his place. Mr. Hammarskjöld was re-appointed for a further five years in September, 1957.
- 8. Specialized Agencies.—In addition to these organs of the United Nations there are specialized agencies which co-operate closely with the United Nations in many fields on economic and social questions.

Those now<sup>‡</sup> in operation are: The International Labour Organization; Food and Agriculture Organization; United Nations Educational, Scientific and Cultural Organization; International Civil Aviation Organization; International Bank for Reconstruction and Development; International Monetary Fund; Universal Postal Union; World Health Organization; International Telecommunication Union; World Meteorological Organization

To enable co-ordination of the work of the specialized agencies, arrangements have been made for them to submit reports on their activities and budgets to the United Nations where they are discussed by the Economic and Social Council and the General Assembly,

# § 16. Australian Representation Abroad: Oversea Representation in Australia.

1. General.—The following statements show particulars of the various Australian diplomatic and other representatives overseas and of oversea representatives in Australia Full details of Commonwealth and foreign representation in at 31st July, 1958. Australia—diplomatic and consular—and of permanent Australian missions overseas may be obtained from publications issued by the Department of External Affairs, Canberra. A statement is issued each quarter by the Department of Trade, showing the latest particulars of the Australian Trade Commissioner Service overseas.

# 2 Australian Representation Overseas.—

# AUSTRALIAN DIPLOMATIC AND OTHER REPRESENTATIVES OVERSEAS.

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Her Majesty's Australian Ambassador Extraordinary and Plenipotentiary to-
    Burma (Rangoon)—A. H. Loomes.
    France (Paris)-A. T. Stirling, C.B.E.
    Germany, Federal Republic of (Bonn)-P. Shaw.
    Indonesia (Djakarta)—L. R. McIntyre, O.B.E.
Ireland (Dublin)—(Vacant); N. St. C. Deschamps (Chargé d'Affaires ad interim).
    Italy (Rome)-D. P. McGuire, C.B.E.
    Japan (Tokyo)-Sir Alan Watt, C.B.E.
    The Netherlands (The Hague)—H. A. McClure-Smith, C.V.O.
    The Philippines (Manila)-K. C. O. Shann.
    Thailand (Bangkok)-J. K. Waller, O.B.E.
    United States of America (Washington, D.C.)—The Hon. Howard Beale, Q.C.
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Her Majesty's Australian Envoy Extraordinary and Minister Plenipotentiary to-Brazil (Rio de Janeiro)—D. Mackinnon, C.B.E.

Cambodia (Phnom Penh)-F. H. Stuart.

Israel (Tel Aviv)—B. C. Ballard. Laos (Vientiane)—F. J. Blakeney.

Viet Nam (Saigon)-F. J. Blakeney.

#### High Commissioners for Australia in-

Canada (Ottawa)—(Vacant); F. T. Homer (Acting High Commissioner).

Ceylon (Colombo)—A. J. Eastman. Ghana (Accra)—S. Jamieson.

India (New Delhi)-W. R. Crocker, C.B.E.

Malaya, Federation of (Kuala Lumpur)-T. K. Critchley.

New Zealand (Wellington)-Vice-Admiral Sir John Collins, K.B.E., C.B.

Pakistan (Karachi)-Major-General Sir Walter Cawthorn, C.B., C.I.E., C.B.E. Union of South Africa (Pretoria)-(Vacant): H. Gilchrist (Acting High Commis-

sioner). United Kingdom of Great Britain and Northern Ireland (London)-The Rt. Hon. Sir Eric Harrison, K.C.V.O.

# Australian Military Mission-

Germany, Federal Republic of (Berlin)-Head, P. Shaw.

United Nations (New York)—Ambassador, Dr. E. R. Walker, C.B.E. United Nations (Geneva)—Permanent Representative, G. A. Jockel.

# Australian Commissioner in-

Singapore, Brunei, Sarawak and North Borneo (Singapore)-D. McNicol.

# Consuls-General-

Greece (Athens)-J. J. B. Cliffe.

Switzerland (Geneva)—G. A. Jockel.

United States of America (New York)—The Hon. Sir Josiah Francis.

United States of America (San Francisco)-M. H. Marshall.

#### Consuls-

Denmark (Copenhagen)-G. A. Cole.

New Caledonia (Noumea)-R. B. Hodgson.

Portugese Timor (Dili)-F. J. A. Whittaker.

United States of America (New York)-J. E. Ryan.

# Trade Commissioner Service of the Commonwealth of Australia-

Canada—G. W. Temby (Acting) (Montreal); C. A. Allen, M.V.O. (Vancouver).

Ceylon—M. F. Roberts (Colombo).

France—A. R. Taysom, Commercial Counsellor and Trade Commissioner (Paris). Germany, Federal Republic of-R. R. Ellen, Commercial Counsellor and Trade

Commissioner (Bonn).

Hong Kong-K. T. Ridley (Victoria).

India-F. R. Gullick (New Delhi); J. L. Chapman (Calcutta); D. R. McPhee, O.B.E., E.D., (Bombay).

Indonesia-T. W. Collis, Commercial Counsellor and Trade Commissioner (Djakarta).

Italy-H. K. H. Cook, Commercial Counsellor and Trade Commissioner (Rome). Japan-N. F. Stuart, Commercial Counsellor and Trade Commissioner (Tokyo).

Malaya, Federation of-W. Cairns, Commercial Counsellor and Trade Commissioner (Kuala Lumpur).

New Zealand-H. C. Menzies (Wellington); B. G. Dawson (Auckland); H. Sullivan (Christchurch).

Pakistan-R. B. Hines, Commercial Counsellor and Trade Commissioner (Karachi). Philippines, The-E. E. Jarvis, Commercial Counsellor and Trade Commissioner (Manila).

Rhodesia and Nyasaland, Federation of-H. M. LeMarchand (Salisbury).

Singapore-R. W. Holberton (Acting) Commercial Counsellor and Trade Commissioner (Singapore).

Thailand-L. C. Holmes, Commercial Councellor and Trade Commissioner (Bangkok).

Union of South Africa-S. D. Shubart, Commercial Counsellor and Trade Commissioner (Johannesburg).

United Kingdom of Great Britain and Northern Ireland-G. R. B. Patterson, Senior Trade Commissioner; E. B. Gilbert (London).

United States of America—A. C. B. Maiden, Commercial Counsellor and Trade Commissioner; J. B. Todd, Commercial Counsellor (Washington); A. J. Day (New York); K. F. McKernan (San Francisco).

West Indies, Federation of-B. T. Connolly (Port of Spain).

3. Oversea Representation in Australia.—Consular representatives are not included in the following statement. Particulars of these are contained in a publication Consular Representatives and Trade Commissioners in Australia, issued by the Department of External Affairs, Canberra. There are more than 180 such representatives in Australia, and 53 countries are represented.

# DIPLOMATIC REPRESENTATIVES IN AUSTRALIA.

# Ambassador Extraordinary and Plenipotentiary of-

Burma—(Vacant); U Myat Tun (Chargé d'Affaires ad interim) (Canberra U 1451). China-(Vacant); Dr. Chen Tai Chu (Chargé d'Affaires ad interim) (Canberra U 2368).

France—His Excellency Monsieur R. Sivan (Canberra X 2925).

Germany, Federal Republic of-His Excellency Dr. Hans Mühlenfeld (Ambassador designate) (Canberra U 1553).

Indonesia-His Excellency Dr. A. Y. Helmi (Canberra U 1221).

Ireland—(Vacant); Mr. William B. Butler (Chargé d'Affaires ad interim) (Canberra J 3251).

Italy-His Excellency Signor Silvio Daneo (Canberra J 3263).

Japan-His Excellency Mr. Tadakatsu Suzuki (Canberra U 1251).

The Netherlands—His Excellency Mr. A. H. J. Lovink (Canberra U 1256), The Philippines—His Excellency Dr. J. F. Imperial (Sydney FL 4168).

Thailand—His Excellency Nai Konthi Suphamongkhon (Canberra, U 8101).

United States of America—His Excellency Mr. William J. Sebald (Canberra U 1351).

# Envoy Extraordinary and Minister Plenipotentiary of-

Austria—Dr. J. Manz (Chargé d'Affaires) (Canberra U 8167).

Belgium—His Excellency Monsieur Willy Stevens (Sydney FB 1325). Brazil-His Excellency Senhor L. A. Borges da Fonseca (Canberra X 2680). Denmark-Mr. F. Henning Hergel, O.B.E. (Chargé d'Affaires) (Sydney BW 3547). Finland-Mr. P. I. Simelius (Chargé d'Affaires) (Sydney FM 3116). Greece-His Excellency Monsieur G. K. A. Christodulo (Canberra X 1553). Israel—His Excellency Mr. M. Yuval (Minister designate) (Sydney BW 2082). Sweden—His Excellency Monsieur Carl Bergensträhle (Canberra U 1421). Uruguay-Mr. Washington Rios (Chargé d'Affaires) (Canberra J 2647).

Canada-His Excellency Mr. T. W. L. MacDermot (Canberra U 1304). Ceylon-His Excellency Mr. B. F. Perera, C.M.G., O.B.E. (Canberra X 1021). India-His Excellency Shri Parakat Achutha Menon (Canberra J 3209). Malaya, Federation of-His Excellency Mr. Gunn Lay Teik, O.B.E. (Canberra X 1277).

New Zealand-His Excellency the Hon. F. Jones (Canberra U 1030).

Pakistan-His Excellency Lieutenant-General Mohammed Yousuf (Sydney BL 3394).

Union of South Africa-His Excellency Mr. A. M. Hamilton (Canberra U 2370). United Kingdom of Great Britain and Northern Ireland—His Excellency the Right Honourable the Lord Carrington, K.C.M.G., M.C. (Canberra U 2211).

#### Commissioner for—

Malta-Captain George F. L. Stivala, O.B.E. (Melbourne MU 1291).

# TRADE COMMISSIONERS OF OVERSEA GOVERNMENTS IN AUSTRALIA.

Canada—Canadian Government Trade Commissioners—Mr. J. C. Britton (Sydney BW 5696-7) and Mr. T. G. Major (Melbourne MU 4716).

Cuba—Cuban Trade Commissioner—Mr. Armando Machado (Sydney)
India—Indian Trade Commissioner—Mr. H. A. Sujan (Sydney BW 9518).

New Zealand-Senior New Zealand Government Trade Commissioner-Mr. R. V. Jackson (Sydney BL 3941).

New Zealand Government Trade Commissioners-Mr. R. J. Inglis (Melbourne MU 8111); Messrs. E. J. Sutch and T. A. Foley (Sydney BL 3941).

United Kingdom of Great Britain and Northern Ireland-United Kingdom Senior Trade Commissioner-Mr. H. J. Gray, C.M.G. (Canberra U 2211).

United Kingdom Trade Commissioners—Messrs. N. L. Hibbs and W. C. Hodgkins (Canberra U 2211); Messrs. A. R. Bruce, O.B.E., A. Hartland, O.B.E., and L. F. Hope (Sydney BW 8086); Messrs. G. J. Husted and H. F. Stevens (Melbourne MU 5556); Mr. R. Fell (Brisbane B2307); Mr. J. D. Leithead (Perth BA 2042).

# § 17. Retail Trade.

1. General.—The statistics in this section relate to the number of retail establishments throughout Australia and the turnover of these establishments.

Information of this nature was first collected in respect of the year ended 30th June, 1948, by a full census of all retail establishments. As this was the first census of its type in Australia, its scope and the data sought were the minima consistent with the objective of securing a record of the number of such establishments, their type, their geographical distribution, their aggregate sales of goods and a simple commodity dissection together with a record of the value of certain services provided. This census was followed by a second census of all retail establishments trading during the year ended 30th June, 1949.

A third census was taken for the year ended 30th June, 1953, in which retailers were asked to furnish more detailed information concerning the dissection of their turnover into commodity groups and questions were asked about stocks of goods on hand, the number of persons engaged in the business and credit sales.

A further census was taken in respect of the year ended 30th June, 1957, and tabulation of the results is proceeding.

1 4.

In general terms, the censuses covered those establishments which normally sell goods by retail in shops, rooms, kiosks and yards. Certain types of establishments which sell services by retail (including repairs and materials therein) were also included, e.g., boot repairers, hairdressers, motor garages and service stations and cafés. The censuses included the retail sales of those factories or wholesalers who conducted a regular retail business, but excluded those who only occasionally sold goods by retail. Both new and second-hand goods were included in sales recorded by relevant retail establishments.

During the period between censuses, variations in the value of retail sales have been measured by means of quarterly sample surveys. Annual totals derived from these surveys and some of the results of the 1952-53 census are contained in this section.

2. Value of Retail Sales in Each Commodity Group, 1948-49 and 1952-53 to 1956-57, Australia.—The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1948-49 and 1952-53 to 1956-57 on a comparable basis throughout. The figures for the years 1948-49 and 1952-53 were obtained from censuses taken in respect of those years, whereas figures for the other years shown are estimates based on sample surveys.

VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA. (£ million.)

Commodity Grou	Year ended 30th June—							
Commonly Grou	μ.	1949.(a)	1953.(a)	1954.(b)	1955.(c)	1956.(c)·	1957.(b)	
Groceries Butchers' Meat Other Food(d)	::	143.4 65.3 116.6	261.5 127.8 206.8	275.1 133.9 223.7	306.0 146.4 246.6	335.9 158.6 268.7	352.1 170.6 280.3	
Total Foodstuffs		325.3	— <u>596.1</u>	632.7	699.0	763.2	803.0	
Beer, Wine and Spirits Clothing, Drapery, Piec	e-goods	95.3	173.0	186.7	202.7	219.9	235.1	
and Footwear		237.8	355.1	387.6	422.0	437.3	442.2	
Hardware( $\epsilon$ ) Electrical Goods( $f$ )	• •	55.7 33.8	113.8 75.8	124.7 91.2	142.7 100.5	153.4 106.2	153.9 113.7	
Furniture	• •	46.4	72.8	81.0	86.9	92.3	92.5	
Other Goods(g)	• • •	167.9	315.5	336.9	365.8	394.2	414.2	
Total (excluding Vehicles, etc.)	Motor	962.2	1,702.1	1,840.8	2,019.6	2,166.5	2,254.6	
Motor Vehicles, Parts, etc.(h)	Petrol,	166.1	417.3	(c) 491.7	583.7	633.3	640.6	

(a) Census figures
(b) Survey figures.
(c) Survey figures revised since previous issue.
(d) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread.
(e) Excludes basic building materials (e.g., timber, roofing tiles, bricks, etc.)
(f) Includes radio, television and accessories, musical instruments, domestic refrigerators, etc.
(g) Includes tobacco, cigarettes, etc., newspapers, books and stationery, chemists' goods, grain and produce, jewellery, office equipment, etc.
(h) Excludes farm machinery and implements, earth-moving equipment, etc.

In the foregoing table, figures for the year ended 30th June, 1949, relate to establishments with total retail sales of £50 or more; for the years ended 30th June, 1953 to 1957, they relate to establishments with total retail sales of £500 or more. The total amount of retail sales of establishments so excluded in 1952-53 was not significant (less than 0.1 per cent. of total), and their omission does not affect the validity of the comparisons shown.

3. Retail Census, Australia, 1952-53.—Tables showing statistics of the Retail Census of 1952-53 appear in Official Year Book No. 43, pages 1074-8. Details are given for:—
(a) Number of establishments in each State which sold goods in each commodity group;
(b) Value of retail sales of goods in each commodity group, by States; (c) Number of retail establishments and value of retail sales in each State classified according to main type of business; and (d) Takings for certain services (repair work, meals, etc., and hairdressing).

# CHAPTER XXXI.

# STATISTICAL ORGANIZATION AND SOURCES OF INFORMATION.

# § 1. Statistical Organization in Australia.

- 1. Early Development of Australian Statistics.—(i) Crown Colony "Blue Books". Statistical organization in Australia was founded in the "Blue Books" which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although primarily intended for administrative purposes, these documents have been important sources of statistical data, even though some important matters are not covered, and others only partially so. These "Blue Books" form the basis from which later statistical publications were developed. This led to an element of uniformity in statistical compilation within the British Empire.
- (ii) Statistical Registers. Following the advent of Responsible Government, which was granted during the period 1851–1860 to all Australian States except Western Australia—and to that State in 1890—the "Blue Book" was succeeded in all States by "Statistical Registers". These were in many respects the old "Blue Books" in a new form, and were largely confined to summaries of the "by-product" statistics of Government administrative departments.

The first example of extensive Governmental organization for purely statistical purposes was the taking of periodic population censuses, which were initiated in all States under the Crown Colony régime. The growing need for quantitative data concerning the progress of the several young communities of Australia eventually led to the appointment of official Statisticians commissioned to prepare and publish such data.

- (iii) Statistical Conferences. To enable the interchange of ideas between States and to obtain uniform State statistics which could be aggregated to Australian totals, conferences were held in the several States from as early as 1861. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906. These were held in 1861, 1875, 1890, 1900, 1902 and 1903. The holding of these conferences has been continued since the formation of the Commonwealth Bureau, and a representative from New Zealand attended up to 1928.
- 2. Creation of the Commonwealth Bureau of Census and Statistics.—Under the provisions of section 51 of the Commonwealth Constitution, power is conferred on the Commonwealth Parliament "to make laws for the peace, order and good government of the Commonwealth with respect to—" (inter alia) "(XI.) Census and statistics". In compliance with this provision, the Census and Statistics Act 1905 was passed, and in 1906 the Commonwealth Bureau of Census and Statistics was created. A conference of Statisticians in 1906 defined the relations between the Commonwealth and State Bureaux, and in each case the State Statistician became the representative in his own State of the Commonwealth Statistician for the purpose of administering the Commonwealth Act. In addition, each State has its own "Statistics Act", and although these are not identical in all States, they embody common principles. The Commonwealth Bureau did not attempt to duplicate the existing statistical organization, but endeavoured to use the services of the State statistical offices whenever possible, and to undertake the initial collection of statistics only in fields not already occupied by the States, or in which efficiency demanded complete centralization.
- 3. Integration of Statistical Services.—The creation and development of the Commonwealth Bureau of Census and Statistics, the frequent conferences of Commonwealth and State Statisticians, and the close and increasing liaison between officers dealing with the same subjects in the State and Commonwealth fields, did much to promote uniformity in the official statistical collections and methods employed throughout Australia. The complete realization of this aim could not, however, be achieved, even with the utmost co-operation of those concerned, while seven distinct statistical systems operated.

This became apparent after the 1914-18 War, when the economic problems that then arose drew attention to deficiencies in the Australian statistical data. With a view to overcoming these weaknesses the Prime Minister of the day proposed to the Premiers' Conference that State statistical offices be transferred to the Commonwealth. Tasmania alone agreed to this, and the transfer was effected in 1924. Since then, an amalgamated office has functioned satisfactorily in that State as a Commonwealth office which also serves State statistical needs.

The boom of the 1920's, the depression of the 1930's, the 1939-45 War, and the post-war boom, each with its special economic problems, imposed a severe strain on the Commonwealth and State statistical systems. Moreover, the development during and since the 1939-45 War of a very considerable volume of new statistics added greatly to the complexities of the several administrations in their efforts to secure, and maintain, uniformity in statistical collections. The establishment of Commonwealth statistical offices in some State capitals ameliorated the situation to some extent—indeed, without their establishment the new and expanded statistical collections could not have been carried out at all. However, this did not solve the problem, and constituted only one of a number of improvisations devised to obtain uniform data essential for national purposes, and to satisfy urgent demands for new types of statistics. Furthermore, the excessive amount of time and effort entailed in such improvisations made it impossible to devote the necessary time to the major question of supplying growing statistical needs promptly.

The emergence of the problem of providing uniform statistical services throughout Australia, adequate to meet present-day demands, was foreseen during the 1939-45 War, and in 1949 discussions were initiated with the Premiers by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States by agreement. These negotiations were continued by correspondence, and subsequently all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth.

The Statistics (Arrangements with States) Bill was introduced into the Commonwealth Parliament on 17th April, 1956, its purpose being to seek parliamentary approval of the making of arrangements with individual States for, and the setting up of, integrated statistical services. The legislation is permissive in nature, designed to enable the Commonwealth to enter into an agreement with any State to effect an amalgamation of Commonwealth and State statistical offices and services. The objective of such an agreement is that, in each State accepting it, there will be an integrated statistical service operated by Commonwealth statistical officers under the immediate direction of a statistician in the State who would hold office under both the Commonwealth and State governments. Both Commonwealth and State will be adequately served with statistics, and no State will be required to surrender its existing powers in the field of statistics. The rights of officers transferred under any agreement entered into are provided for. After passing through the usual stages of Parliament, the bill became law on 12th May, 1956.

4. Scope of the Commonwealth Bureau of Census and Statistics.—The scope of the Commonwealth Bureau of Census and Statistics has constantly been widened, more particularly during the 1939-45 War, when the Bureau responded to the urgent demands of administration for immediate and accurate statistical information in various fields. Since the war, requirements in the administrative, industrial, financial and scientific spheres have led to the development of many new statistical collections. All the activities of the Bureau are covered by the Census and Statistics Act, which confers authority to collect information and contains stringent provisions to ensure that the information obtained is treated in strictest secrecy.

For administrative purposes, the Commonwealth Bureau is divided into a number of Divisions. These are:—Census, Compiling, Development, Methodology and Sampling, Publications, Social Accounting, Mechanical Tabulation and Administrative.

- (a) Census Division. This Division of the Bureau is responsible for the taking of periodic population censuses and the tabulation, summarization and preparation for publication of the results obtained.
- (b) Compiling Division. The Compiling Division is divided into the following Branches which compile statistics dealing with specific fields of activity:—
  - Trade and Transport Branch—Responsible for the original compilation, tabulation and analysis of statistics relating to imports and exports, and for the compilation of statistics relating to road and rail transport, aviation, shipping, posts, telegraphs and telephones and broadcasting and television.
  - Employment and Labour Branch—Compiles all employment estimates, wage and labour statistics.
  - Primary Production Branch—Deals with statistics relating to agricultural and pastoral activities, mining, forestry and fishing. Original data are supplied largely by State Statisticians.
  - Secondary Production Branch—Compiles all factory statistics both annual and monthly. Collates on a Commonwealth basis original annual data supplied by State Statisticians.

- Finance and Taxation Branch—Compiles statistics of private finance (banking, insurance, exchange rates, etc.), public finance (Commonwealth, State and Local and Semi-Governmental authorities), and statistics relating to all aspects of Commonwealth taxation.
- Demography Branch—Concerned with statistics of births, deaths, marriages and migration, and the making of periodic estimates of population.
- (c) Development Division. This Division was created in order to develop new statistical collections to meet post-war demands for more adequate and up-to-date statistics, and also to examine current collections in the light of such requirements. It is divided into three Branches, namely:—
  - Development Branch—Develops new statistical collections and examines current collections in the light of present-day requirements. Included in the latter are Social Statistics.
  - Prices Branch—Deals with the collection of retail and wholesale prices and the compilation of retail and wholesale price index numbers. A staff of trained field officers is maintained in the several States to facilitate the collection of accurate information.
  - Business Statistics Branch—Conducts censuses and surveys and analyses statistics relating to internal trade (retail), business and hire purchase activities, and company investments and profits.
- (d) Methodology and Sampling Division. Undertakes the development and application of sampling procedures to statistical collections and, in addition to furnishing technical advice to other Branches, undertakes projects relating to operations research in other Departments.
- (e) Publications Division. This Division is responsible for the scrutiny, editing and graphical illustration of all Bureau publications, and, in collaboration with other Divisions, for the initiation, development and co-ordination of statistical publications. It also maintains a regular flow of statistical series to certain international organizations, and revises statistical material in certain oversea and local publications.
- (f) Social Accounting Division. This Division undertakes research into the theoretical and practical problems of social accounting. It is divided into three branches as follows:—
  - Balance of Payments Branch—collects and analyses statistics of Australia's balance of international payments.
  - National Income and Expenditure Branch—prepare's estimates of national income and expenditure.
  - Quantum Indexes Branch-undertakes research into quantum of production.
- (g) Mechanical Tabulation Division. This Division is equipped with modern tabulating equipment including one electronic unit and is responsible for all machine tabulating work required by other Divisions of the Bureau with the exception of the Census Division.
- (h) Administrative Division. The Administrative Division is responsible for all aspects of staff recruitment and direction, supplies, payment of accounts, etc. The Reproduction Section of the Division is equipped with multilith and duplicating machines for processing statistical statements for more immediate requirements. In addition, a special section of this Division is responsible for the examination of statistical methods and systems and the co-ordination of all statistics in Commonwealth Departments (see para. 5 below). The specialized library of official and unofficial publications on statistics and economics is controlled by the Administrative Division.
- 5. Relation of the Bureau to other Commonwealth Departments.—In October, 1950, the Commonwealth Public Service Board issued a circular relative to the compilation of statistics in other Commonwealth Departments, in which it stated that the Commonwealth Statistician should be the co-ordinating authority on all statistics in Commonwealth Departments, and that, as a general principle, where any new statistical field is to be established involving the regular collection of statistics, the Commonwealth Statistician should be consulted to ensure that they are necessary and that they are based on sound statistical methods; furthermore, that the Commonwealth Statistician should make a regular inspection, at least once every twelve months, of all statistical work done by Departments to ensure that their needs are met by the most economical means and without duplication of effort.

This project of co-ordination is being implemented as time and circumstances permit.

# § 2. Statistical Publications of Australia.

- 1. General.—The official statistical publications of Australia may be divided bibliographically into two main divisions, namely:—(i) Commonwealth publications dealing both individually and collectively with the several States of Australia; and (ii) State publications dealing with individual States only.
- 2. Commonwealth Publications.—Commonwealth publications may be grouped under two heads, namely:--(i) Publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

(i) Publications issued by the Commonwealth Statistician. The following is a list of the principal statistical publications issued from the Commonwealth Bureau of Census and Statistics since its inauguration to July, 1958:-

Australian Balance of Payments.—Statements Nos. 1 to 3, 1928-29 to 1951-52.

Australian Life Tables, 1901-1910. Australian Joint Life Tables, 1901-1910.

Australian Life Tables, 1920-1922.

Australian Life Tables, 1932-1934. Australian Joint Life Tables, 1932-1934.

Australian Life Tables, 1946-1948.

Australian Mineral Industry Statistics (formerly Minerals and Metals Bulletin) .-Part 2 of Quarterly Bulletin issued jointly with the Bureau of Mineral Resources.

Australian Primary Industries.—Report prepared for the Empire Producers Conference, Sydney, March, 1938.

Census (1911) Results.-Bulletins. Vols. I. (Statistician's Report), II., and III., with Appendix Mathematical Theory of Population.

Census (1921) Results.-Bulletins, Nos. 1 to 26. Parts I. to XVI., forming Vol. I., and Parts XVII. to XXIX., forming, with the Statistician's Report, Vol. II. Note.—Part XXVII., Life Tables.

Census (1933) Results.—Bulletins, Nos. 1 to 25. Parts I. to XIV., forming Vol. I., Parts XV. to XXVIII., forming Vol. II., and Parts XXIX. to XXXVII., forming, with the Statistician's Report and Australian Life Tables, 1932-1934,

Census (1947) Results.-Bulletins, Nos. 1 to 25. Parts I. to XVI., forming Vol. I., Parts XVII. to XIX., forming Vol. II., and Parts XX. to XXVIII., forming, with the Statistician's Report and Australian Life Tables, 1946-1948, Vol. III.

Census (1954) Results.—See Price List at end of this volume.

Census of Motor Vehicles, 1947-48 (see Survey of Motor Vehicles, 1947-48).

Census of Motor Vehicles, 31st December, 1955.—Bulletins, Nos. 1 to 8. \*Census of Retail Establishments (1947-48) Results.—Bulletins, Nos. 1 to 7.

\*Census of Retail Establishments (1948-49) Results.—Bulletins, Nos. 1 to 7. \*Census of Retail Establishments (1952-53) Results.—Bulletins, Nos. 1 to 14.

\* Dairying Industry (formerly Summary of Dairying Industry).—Statistical Bulletin. monthly; first issue, September, 1937.

Demography.-Bulletin, annually, 1911 to 1956.

\*Factories, Principal Statistics, Summary.—Annually, 1948-49 to 1955-56.

Finance.—Bulletin, 1907 to 1916-17 annually; 1917-18 and 1918-19 (one vol.); 1919-20 and 1920-21 (one vol); 1922-23 to 1955-56 annually. From 1955-56 issued in two parts; Part I., Public and Private Finance; Part II., Commonwealth Taxation.

\*Food Production and the Consumption of Foodstuffs and Nutrients in Australia, Statistical Bulletin. Half-yearly, 1946-47 to 1947-48; annually, 1948-49 to

\*Fruit Growing Industry Summary.—Annually, 1944-45 to 1956-57.

Labour and Industrial Statistics.-Memoranda and Reports, various, to 1913, Labour Report.-Annually, 1913 to 1957.

\*Livestock Numbers (formerly Summary of Livestock Statistics).—Statistical Bulletin, annually, 1943 to 1957.

Local Government in Australia.-July, 1919.

\*Manufacturing Industries.—Bulletins on Individual Industries, annually, 1936-37 to 1939-40, 1940-41 (issue incomplete), and 1944-45 to 1955-56.

\*Monthly Review of Business Statistics.—First issue, October, 1937.

\*Occupation Survey (1945) Results.—Detailed tables.

Official Year Book of the Commonwealth of Australia. - Annually, 1907 to present issue (No. 44). Issues Nos. 40 to 43 also published in parts.

Obtainable from the Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- Oversea Trade.—Bulletin, annually, 1906 to 1956-57.
- \*Oversea Trade.—Preliminary Bulletin. Annually, 1952-53 to 1956-57.
- \*Oversea Trade Statistics: Imports Cleared for Home Consumption classified according to Individual Items of the Customs Tariff, 1950-51 to 1956-57.
- Pocket Compendium of Australian Statistics (formerly Statistical Digest).—1913, 1914, 1916, and 1918 to 1958 annually.
- Population and Vital Statistics.—Bulletins and Reports, various, 1906-1910. Primary Industries.—Bulletin, annually, 1950-51 to 1955-56, in two parts—Part I. Rural Industries: Part II. Non-Rural Industries and Value of Production.
- Production.—Bulletin, annually, 1906 to 1949-50. From 1936-37 to 1949-50 issued in two parts—Part I. Secondary Industries; Part II. Primary Industries (including Total Recorded Production); thereafter separate Bulletins (see Primary Industries and Secondary Industries).
- Professional Papers.—Various. A full list appears in Official Year Book No. 13. p. 3.
- Ouarterly Summary of Australian Statistics.—First issue, No. 70, December, 1917, replacing Monthly Summary of Australian Statistics (Bulletins Nos. 1 to 69).
- \*Registrations of New Motor Vehicles.—Statistical Bulletin, monthly and annually. \* Report of Proceedings of the Conference of British Commonwealth Statisticians.
- 1951.
- \*Rural Land Use and Crop Statistics (formerly Summary of Crop Statistics).— Statistical Bulletin, annually, 1943-44 to 1956-57.
- Secondary Industries.—Bulletin, annually, 1950-51 to 1955-56. \*Size Classification of Rural Holdings, 1955-56, Bulletins Nos. 1 to 7.
- Social Insurance.—Report to the Hon. the Minister for Trade and Customs, 1910. Social Statistics.—Bulletin, 1907 to 1915 annually, and 1918.
- Superannuation for the Commonwealth Public Service.—Report to the Hon. the Minister for Home Affairs, 1910.
- \*Survey of Motor Vehicles (1947-48) Results.—Bulletins Nos. 1 to 7.
- \*Survey of Private Pensions and Retiring Allowance Schemes, 1955-56 (reprinted in Finance, Part I., Bulletin No. 47).
- \*Survey of Private Superannuation Schemes 1951-52 (reprinted in Finance Bulletin No. 44).
- Transport and Communication.—Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1955-56 annually.
- \*Vegetables Grown on Farms for Human Consumption.—Statistical Bulletin, annually, 1942-43 to 1956-57.
- Wealth .- The Private Wealth of Australia and its Growth as ascertained by various methods, together with a Report on the War Census in 1915.
- \*Wheat Industry (formerly Summary of the Wheat Situation).-Statistical Bulletin, periodically; first issue, July, 1936.
- \*Wool Supplies and Utilization.—Bulletin, annually, 1952-53 to 1956-57.

The foregoing list includes all the printed publications issued from the Bureau, and certain more important mimeographed publications issued for the most part annually. Other mimeographed statements, obtainable on application to the Commonwealth Statistician and dealing with a wide variety of subjects, are issued as follows:-

Annually-Bee Farming; Bulletin of Oversea Investments; Commonwealth, State and Territory Taxation Collections; Factory Products (Principal); Fire, Marine and General Insurance; Fishing and Whaling; Milking Machines on Rural Holdings; Mining and Quarrying; Oversea Trade between Australia and Eastern Countries; Rural Statistics of the Australian Capital Territory; Tractors on Rural Holdings; University Statistics; Value of Production; Wheat Forecast and Estimate; Wine and Brandy Statistics; Wool Production.

Half-yearly-Australian Balance of Payments; Capital and Maintenance Expenditure; Labour Turnover; Meat Production and Utilization: Trade of Australia with the United Kingdom.

Quarterly-Building; Interim Retail Price Index; New Capital Raisings; Retail Sales of Goods; "C" Series Retail Price Index; Road Traffic Accidents; Tractor Statistics; Trade of Australia with Monetary Areas.

Monthly-Banking; Demographic Review; Employment; Exports of Wool from Australia; Export Prices Index; Gold Mining Industry; Life Assurance; Oversea Trade; Production Statistics; Retail Hire Purchase Operations of Finance Businesses; Savings Bank Statistics; Wholesale Price (Basic Materials and Foodstuffs) Index.

Obtainable from the Commonwealth Statistician—for methods of obtaining other publications still in print see back page of this volume.

- (ii) Commonwealth Parliamentary and Departmental Reports and Papers. Lists of the principal official reports and other documents containing statistical information issued from the inauguration of the Commonwealth appear in the Official Year Books up to No. 13, but it is not now practicable to undertake the preparation of such lists.
- 3. State Publications.—The chief statistical publications of each State are set out hereunder. As with the Commonwealth Parliamentary and Departmental Reports and Papers, it is not practicable to enumerate the various Departmental Reports, statements of accounts, etc., issued by officials, boards, local and semi-governmental authorities, etc., in each State.
  - (a) New South Wales—Statistical Register (annually); Official Year Book of New South Wales (annually); Pocket Year Book (annually); Statistical Bulletin (monthly to December, 1919, quarterly to June, 1943, then discontinued to September, 1948); Monthly Summary of Business Statistics.
  - (b) Victoria—Statistical Register (annually to 1916, then discontinued); Victorian Year-Book (annually); Statistical Abstract (quarterly to 1917, then discontinued to December, 1946).
  - (c) Queensland—Statistical Register (annually); Official Year Book, 1901; A.B.C. of Queensland Statistics (annually to 1936, then discontinued); Queensland Year Book (annually 1937 to 1941, then discontinued to 1945); Queensland Pocket Year Book (annually).
  - (d) South Australia—Statistical Register (annually); Official Year Book, 1912 and 1913; Statesman's Pocket Year Book of South Australia (annually); Quarterly Summary of Statistics.
  - (e) Western Australia—Statistical Register (annually); Statistical Abstracts (quarterly, previously issued monthly to July, 1917); Pocket Year Book of Western Australia (annually).
  - (f) Tasmania—Statistical Register (annually); Pocket Year Book of Tasmania (annually); Monthly Review of Business Statistics.

# § 3. The Third Conference of British Commonwealth Statisticians, Canberra, 1951.

Conferences of the Government Statisticians of the British Commonwealth were held first in London in 1920 and then in Ottawa in 1935. The Third Conference was held in Canberra from 12th to 23rd November, 1951. Delegates were present from Australia, Canada, Ceylon, India, New Zealand and the United Kingdom (including a representative of the Colonial Office). Ireland, the Commonwealth Economic Committee and the United Nations were represented by observers, and the Australian State Government Statisticians were also present. A summary of the activities of the conference may be found in Official Year Book No. 39, p. 1320.

# § 4. Select List of Works about, or published in, Australia.

(Compiled by the Librarian of the Commonwealth National Library.)

This list aims to meet the growing need, in Australia as publishing develops, and overseas as interest in Australia widens, for an authoritative current reference and reading list of books dealing with Australia or of Australian authorship, wherever published.

Australians will find these books in the National Library and in their State Libraries as well as in leading bookshops. Oversea readers may have access to them in the collections which the National Library maintains at 44 Australian posts abroad. They will be found also, increasingly, in leading libraries and bookshops in many countries. In the United States, for example, Australian books are included in the Farmington Plan in which 62 libraries and research institutions co-operate to ensure that at least one copy of all material published in any part of the world and likely to be required for a serious purpose will be available promptly somewhere in the country. Under a similar arrangement, Australian books are supplied to the National Library of Canada.

The list is classified broadly by subject and under each heading there is first a list of the principal standard books still in print, then a list of selected books and official publications (excluding annual reports) published in the last few years. To ensure that, so far as is

possible, an evenness of standard is maintained in the compilation of the list, the advice of a representative range of experts in the various subject fields has been sought. Where known the retail price in the country of publication is given, but this is subject to fluctuation.

The Library also issues a series of select lists which include:—Australian Public Affairs Information Service (monthly and, since 1955, cumulated annually); a subject index of material in new books, pamphlets, current periodicals and government publications from Englishspeaking countries, with an important bearing on investigations into Australian political. economic, cultural and social affairs; and the following full bibliographies.

Australian Government Publications, a monthly list covering both the Commonwealth and the States;

Books published in Australia, a monthly list of books supplied to the National Library under copyright.

The two last-mentioned publications are cumulated annually as the Annual Catalogue of Australian Publications which includes also a list of books published overseas of Australian interest or by authors resident in Australia. a select list of the more important Australian periodical and serial publications and a directory of publishers.

#### General and Descriptive.

#### STANDARD WORKS IN PRINT.

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AUSTRALIAN INSTITUTE OF POLITICAL SCIENCE. Northern Australia: task for a nation. Syd., Angus & Robertson, 1954. 25s.

CAIGER, G., ed. The Australian way of life. Lond., Heinemann, 1953. 12s. 6d.

COOK, J. The journals of Captain James Cook on his voyages of discovery: ed. from the original manuscripts by J. C. Beaglehole with the assistance of J. A. Williamson, J. W. Davidson and R. A. Skelton: v. 1: Voyage of the Endeavour, 1768-1711. Lond., Hakluyt Society, 1955. 80s. and 50s. Volume one of the first definitive edition of Cook's journals.

FINLAYSON, H. H. The red centre: man and beast in the heart of Australia (2nd ed.). Syd., Angus & Robertson, 1952. 21s.

HILL, ERNESTINE. The great Australian loneliness. Melb., Robertson & Mullens, 1952. 27s. 6d.

OFFICIAL YEAR BOOK OF THE COMMONWEALTH OF AUSTRALIA: No. 1 to date. Canb., Govt. Pr., 1908 to 1946-47 (No. 37), 5s. per issue; after No. 38, 10s. Latest issue: No. 44, 1958.

RATCLIFFE, F. N. Flying fox and drifting sand: the adventures of a biologist in Australia: introd. by Julian Huxley. Syd., Angus & Robertson, 1951. 15s. First published in 1938.

TAYLOR, T. G. Australia: a study of warm environments and their effect on British settlement (6th ed.). Lond., Methuen, 1951. 30s.

WALKABOUT: Australian geographical magazine: v. 1 to date. Melb., Australian Geographical Society, 1934 to date. Monthly, 24s. per annum.
WHITE, H. L., ed. Canberra: a nation's capital: foreword by Sir Robert Garran. Syd., Angus & Robertson, 1954. 35s.

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BANK OF New South Wales. Australia for the visitor. Syd., 1956.

BEATTY, B. Beyond Australia's cities. Melb., Cassell, 1956. 21s.

BEVAN, I., ed. The sunburnt country: profile of Australia: introd. by Gilbert Murray. Lond., Collins, 1953. 21s. An illustrated account by well-known Australian writers of various aspects of their

PS-35. An illustrated account by weir-known resonant model of the country.

BRAY, J. E. Northern Territory in brief: sketches by A. J. Mahood: photographs by Walkabout. Alice Springs (N.T.), Publication Syndicate, 1956. 3s. 6d.

CLARKE, C. The coast of coral. Lond., Muller, 1956. 2ls. Adventure on the Great Barrier Reef. FARWELL, G. Australian setting. Lond., Evans, 1952. 12s. 6d.

GORE, S. Overlanding with Annabel. Syd., Angus and Robertson, 1956. 18s. An account of a investigation of the Depth of Depth of the Parking of the Country by one for Depth to Depth of the Parking of the Par

Gore, S. Overlanding with Annabel. Syd., Angus and Robertson, 1956. 18s. An account of a journey by car from Perth to Darwin.

Groom, A. Wealth in the wilderness. Syd., Angus and Robertson, 1955. 21s. A journey by car from Brisbane via Alice Springs across to Wyndham.

HILL, ERNESTINE. The Territory. Syd., Angus and Robertson, 1955. 25s. An historical account of the Northern Territory and its pioneers.

HOPE, W. E. S. Diggers' Paradise. Lond., Hale, 1956. 18s.

HURLEY, J. F. Australia: a camera study. Syd., Angus and Robertson, 1955. 45s.

— Tasmania: a glance at its history, beauty, resources and development over a period of 150 years: a camera study. Syd., Sands, 1953. 19s. 6d.

— Victoria: a camera study: by Frank Hurley. Syd., Sands, 1956. 30s.

— Western Australia: a camera study. Syd., Angus and Robertson, 1953. 42s.

HURLEY, P. J. In search of Australia (4th ed.). Syd., Dymock's, 1954. 21s.

LEFPER, G. W., ed. Introducing Victoria. Melb., Melbourne Univ. Press (for A.N.Z.A.A.S.), 1955. 30s.

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LOCK, A.C.C. Tropical tapestry. Melb., Georgian House, 1956. 25s. Travel in Queensland from the Tropic of Capricorn to Cape York, and from the coast to the Northern Territory border.

MORRHEAD, A. C. Rum Jungle. Lond., H. Hamilton, 1954. 12s. 6d. Deals not only with the recently discovered uranium field, but with many aspects of life in northern and central Australia. New South Wales—Tourist Activities and Immigration, Department of. Nor'west horizons: New South Wales, Australia. (Syd., North and North-west Local Government Association, 1956).

NIEMELA, J. N. Australia: the great south land. Syd., Angus and Robertson, 1956. 15s.

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#### RECENT PUBLICATIONS OF INTEREST-continued.

The man from Oodnadatta: (3rd ed.) Syd., Angus and Robertson, 1957. 20s. An

account of Central Australia and the work of the Australian Inland Mission.

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SIMPSON, C. Australian image. Syd., Legend Press, 1956. 32s. 6d. Illustrated with reproductions

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SPATE, O. H. K. Australia, New Zealand and the Pacific. Oxford, Oxford Univ. Press, 1956.

TAYLOR, D. Ten stars south of Asia. Lond., Hale, 1957. 16s.

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WHITE, MYRTLE R. No roads go by: illus. by Elizabeth Durack (2nd ed.). Syd., Angus and Robertson, 1954. 16s. An account of the daily life on a cattle station in South Australia forty years ago. First published in 1932.

WINSTON, D. Sydney's great experiment: the progress of the Cumberland county plan. Syd., Angus and Robertson, 1957. 37s. 6d.

ZIEGLER, O. L. ed. This is Australia: ed. and produced by Oswald L. Ziegler, with the collaboration of the State governments of New South Wales, Victoria, South Australia, Western Australia, and the Commonwealth government departments. Syd., Oswald Ziegler Publications, 1957. 50s.

#### Territories Outside Australia.

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AUSTRALIAN NATIONAL ANTARCTIC RESEARCH EXPEDITION, 1947-1949. Reports. Melb., Antarctic Division. Department of External Affairs, 1951 to date.

GORDON, D. C. The Australian frontier in New Guinea 1870-1885. N.Y., Columbia Univ. Press, 1951. \$4.25.

HANDBOOK OF PAPUA AND NEW GUINEA, 1954: comp. and ed. by R. W. Robson. Syd., Pacific Publications, 1954. 15s.

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Lesson, Ida. A bibliography of bibliographies of the South Pacific. Melb., Oxford Univ. Press, 1954. 15s. Published under the auspices of the South Pacific Commission.

Papua and New Guinea, Territory of. Official research publications: no. 1 to date. Port Moresby, Govt. Pr., 1951 to date.

Papua and New Guinea, Territory of—Laws, statutes &c. Laws of the Territory of Papua-New Guinea, 1945–1949 (annotated) . . . together with supplements to the Laws of the Territory of Papua, 1888–1945 (annotated) and the laws of the Territory of New Guinea 1921–1945 (annotated). Syd., Govt. Pr., 1952.

Scholes, W. A. Seventh continent: saga of Australian exploration in Antarctica 1895–1950. Lond., Allen & Unwin, 1953. 21s.

STANNER, W. E. H. The South Seas in transition: a study of post-war rehabilitation and reconstruction in three British Pacific dependencies. Syd., A'asian Pub. Co., 1953. 50s.

WILLIAMS, F. E. Orokaiva magic. Oxford, Oxford Univ. Press, 1928. 22s. 6d.

—Orokaiva Society. Oxford, Oxford Univ. Press, 1936. 30s.

See also the annual reports of the Administrators of the various Territories, and reports to the General Assembly of the United Nations on trusteeship territories, the anthropological reports of the Governments of Papua and New Guinea, and material appearing in Oceania.

#### RECENT PUBLICATIONS OF INTEREST.

BELSHAW, C. S. The great village: the economic and social welfare of Hanuabada, an urban community in Papua. Lond., Routledge & K. Paul, 1957. 30s.

BIERRE, J. The last cannibals. Lond., M. Joseph, 1956. 21s. An account of primitive civilizations in Central Australia and in New Guinea.

BROWN, P. L. Twelve came back. Lond., Hale, 1957. 18s. An account of the Australian National Antarctic Research Expedition at Heard Island, 1952–1953.

EVANS, E. R. G., 15s Baron Mountevans. The Antarctic challenged. Lond., Staples, 1955. 16s.

FISCHER, Dora. Unter Sudsee-insulanern: das Leben des Forschers Mikloucho-Maclay: 2nd rev. ed. Leipzig, Koehler & Amlang, 1956. 84.25. An account of the work of Miklouho Maclay, explorer of New Guinea.

GAISSEAU, P. D. Visa to the prehistoric world. Lond., Muller, 1957. An account of the remote highland areas of New Guinea.

GARDI, R. Tambaran: Begegnung mit untergehenden Kulturen auf Neuguinea. Zurich, Fussli, 1956. DM 18.00. An account of disappearing cultures in primitive Papua.

HASLUCK, Hon. P. M. C. Australian policy in Papua and New Guinea. Syd., University of Sydney, 1956. (George Judah Cohen memorial lecture, 1956).

—Australia's task in Papua and New Guinea. Melb. Australian Institute of International Affairs, 1956. (Roy Milne memorial lecture, 1956).

KEARNS, W. H. The silent continent: by W. H. Kearns and Beverley Britton. Lond., Gollancz, 1955. 18s. A history of Antarctic discovery.

LAFFIN, J. Return to glory. Syd., Angus and Robertson, 1956. 16s. A descriptive account, by a World War II. veteran, of a return visit to the battlefields of New Guinea, New Ireland and the Solomons.

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LAW, P. G. ANARE: Australia's Antarctic outposts: by Phillip Law and John Bechervaise. Melb., Oxford Univ. Press, 1957. 60s.

MEAD, MARGARET. New lives for old: cultural transformation—Manus, 1928–1953. N.Y., Morrow, 1956. 86.75.

MIGOT, A. The lonely south. Lond., Hart-Davis, 1956. 21s. An account of a year spent with a French scientific mission to Kerguelen Islands and the Antarctic.

RUHEN, O. Land of Dahori: tales of New Guinea. Phil., Lippincott, 1957. \$3.75.

— Adam in plumes. Syd., Angus and Robertson, 1954. 25s.

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— — Islands of men: a six-part book about life in Melanesia. Syd., Angus and Robertson, 1955.

### History.

#### STANDARD WORKS IN PRINT.

CLARK, C. M. H., ed. Select documents in Australian history 1788–1900: selected and ed. by C. M. H. Clark with the assistance of L. S. Pryor. 2v. Syd., Angus & Robertson, 1950–1955. 112s. CRAWFORD, R. M. Australia. Lond., Hutchinson's Univ. Library, 1952. 8s. 6d. FITZPATRICK, B. C. British Empire in Australia: an economic history 1834–1939 (2nd ed.). Melb., Melbourne Univ. Press, 1949. 17s. 6d. GREENWOOD, G., ed. Australia: a social and political history. Syd., Angus & Robertson, 1955.

HISTORICAL RECORDS OF AUSTRALIA: (ed. by J. F. Watson). Syd., Commonwealth National Library, 1914 to 1925. 65s. per v. 34 v. have so far appeared. Publication has been suspended since

HISTORICAL STUDIES: AUSTRALIA AND NEW ZEALAND. Melb., Melbourne Univ. Press, 1940 to date.

Bi-annual. 21s. per annum.

O'Brien, E. M. The foundation of Australia (1786–1800): a study in English criminal practice and penal colonization in the eighteenth century: foreword by John M. Ward (2nd ed.). Syd., Angus

SCOTT, Sir ERNEST. A short history of Australia (8th ed.). Melb., Oxford Univ. Press, 1950. 14s. 6d. SHANN, E. O. G. An economic history of Australia. Melb., Georgian House, 1948. 18s. First published in 1930.

SHAW, A. G. L. w, A. G. L. Economic development of Australia (3rd ed.). Melb., Longmans, 1955. 15s. 6d.

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BRODSKY, I. Sydney looks back. Syd., Angus and Robertson, 1957. 42s.

CURREY, C. H. The Irish at Eureka. Syd., Angus & Robertson, 1954. 21s.

FITZPATRICK, B. C. The Australian Commonwealth: a picture of the community. Melb., Cheshire, 1956. 30s.

FRIEND, D. A collection of Hillendiana. Syd., Ure Smith, 1956. 35s.

GRANT, J. The Melbourne scene: arranged and introduced by James Grant & Geoffrey Serle. Melb., Melbourne Univ. Press, 1957. 42s.

HARRIS, A. Settlers and convicts; or, Recollections of sixteen years' labour in the Australian backwoods: by an emigrant mechanic: foreword by C. M. H. Clark (2nd ed.). Mclb., Melbourne Univ. Press, 1954. 18s. 6d.

JEANES, W. H., comp. Glenelg: birthplace of South Australia: a centenary publication to mark the attainment of 100 years of civic administration and development, 1855–1955. Glenelg, S.A., Glenelg Town Council, 1955. 30s.

Kyogle, N.S.W.—Shire Council. Kyogle, New South Wales: 1839–1956. Syd., Oswald Ziegler Publications, 1956. 35s.

NADEL, G. H. Australia's colonial culture: ideas, men and institutions in mid-nineteenth century eastern Australia: foreword by C. Hartley Grattan. Melb., Cheshire, 1957. 30s.

NEWNHAM, W. H. Melbourne: the biography of a city. Melb., Cheshire, 1957. 30s.

PALMER, E. VANCE. The legend of the nineties. Melb., Melbourne Univ. Press, 1954. 25s.

PEARL, IRMA. Our yesterdays: Australian life since 1853 in photographs: arranged by Irma Pearl: commentary by Cyril Pearl. Syd., Angus & Robertson, 1954. 30s.

PIKE, D. H. Paradise of dissent: South Australia 1829–1857. Melb., Longmans, Green, 1957. 70s.

PORT ADELAIDE—City Council. Centenary history of the Municipal Corporation of the city of Port Adelaide, 1856–1956. Adel., 1956. 25s.

SOUTH AUSTRALIAN COUNTRY WOMEN'S ASSOCIATION—Kingscote Branch. Kangaroo island past and present: being a short history of the oldest settlement in South Australia. Kingscote, S.A., 1957. 10s.

1957. 10s. SOUTHALL, 1. A tale of Box Hill: day of the forest. Box Hill, Vic. Box Hill City Council, 1957.

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TENNANT, KYLIE. Australia: her story. Lond., Macmillan, 1953. 15s. WILLIAMS, W. L. History trails in Melbourne. Syd., Angus & Robertson, 1957. 15s.

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AUSTRALIA—Army, Department of—Public Relations Directorate. The Australian army at war: an official record of service in two hemispheres, 1939–1945. Melb., 1947.

AUSTRALIA IN THE WAR OF 1939–45: (ed. by Gavin Long): Ser. 1, v. 1 to date. Canb., Australian War Memorial, 1952 to date. Various prices. Contents: Series 1 (Army), 3 v. have so far appeared; Series 2 (Navy), 1 v. has so far appeared; Series 3 (Air), 2 v. have so far appeared; Series 4 (Civil), 3 v. have so far appeared; Series 5 (Medical), 3 v. have so far appeared; Series 4 (Civil), 3 v. have so far appeared; Series 5 (Medical), 3 v. have so far appeared; Series world war. Canb., Australian War Memorial, 1946. 25s.

FEAKES, H. J. White ensign—southern cross: a story of the King's ships of Australia's navy: (foreword by Admiral Lord Mountevans of Chelsea). Syd., Ure Smith, 1951. 42s.

LEE, J. E. Duntroon: the Royal Military College of Australia 1911–1946. Canb., Australian War Memorial, 1952. 30s.

MACANDIE, G. L. The genesis of the Royal Australian Navy: a compilation. Syd., Govt. Pr., 1949. 25s.

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MCGUIRE, FRANCES M. The Royal Australian Navy: its origin, development and organization. Melb., Oxford Univ. Press, 1948. 16s.

NORTON, C. F. Fighting ships of Australia and New Zealand: foreword by Vice-Admiral Sir John Collins. Syd., Angus & Robertson, 1953. 15s.

OFFICIAL HISTORY OF AUSTRALIA' IN THE WAR OF 1914-1918: (ed. by C. E. W. Bean): 12 v. Canb., Australian War Memorial, 1921-42. 21s. per v. v. 8, 10, 11, 18s.

OFFICIAL FISTORY OF THE AUSTRALIAN ARMY MEDICAL SERVICES IN THE WAR OF 1914-1918: (ed. by Col. A. G. Butler): 3 v. Canb., Australian War Memorial, 1930-43. 21s. per v.

SWAN, W. N. Spearheads of invasion: an account of the seven major invasions carried out by the Allies in the south-west Pacific area during the recent world war as seen from a Royal Australian Naval Landing Ship Infantry: foreword by Vice-Admiral Sir John Collins. Syd., Angus & Robertson, 1953. 25s.

#### Military and Naval History-continued.

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AUSTRALIAN WAR MEMORIAL, Canberra. With the Australians in Korea: ed... by Norman Bartlett. Canb., 1954. 25s.

BARTLETT, N., ed. Australia at arms. Canb., Australian War Memorial, 1955. 25s.

BEAN, C. E. W. Two men I knew: William Bridges and Brudenell White. 'Syd., Angus and Robertson, 1957. 25s.

BENSON, J. Prisoner's base and home again: the story of a missionary P.O.W. Lond., Hale, 1957. 15s. Experiences of a missionary in the hands of the Japanese in Papua during World War II.

CHARLWOOD, D. E. C. No moon to-night. Lond., Angus & Robertson, 1956. 16s. A vivid account of the work of the Bomber Command.

MANT, G. Grim glory (2nd ed.). Syd., Currawong Pub. Co., 1955. 12s. 6d. An account of the 2/19th and 2/29th Battalions of the A.I.F. in action in Malaya in World War II.

MILNER, S. Victory in Papua. Wash., Office of the Chief of Military History, Department of the Army, 1957.

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MOOREHEAD, A. C. Gallipoli. Lond., Hamilton, 1956. 21s.

RICHARDSON, H. One man war: the Jock McLaren story. Syd., Angus & Robertson, 1956. 16s. McLaren, a member of the Australian Eighth Division in the second World War, after escaping from Singapore, participated in guerilla warfare in the Phillippines and later in Borneo.

Selby, D. Hell and high fever. Syd., Currawong, 1956. 15s. A personal narrative of the campaign in New Guinea during World War II.

SOUTHALL, I. They shall not pass unseen. Syd., Angus & Robertson, 1956. 21s. The story of 461 Squadron, R.A.A.F. and its battle against U-boats in the Bay of Biscay.

TAYLOR, G. Piece of cake. Lond., Davies, 1956. 15s. Experiences of a member of the R.A.A.F. who was shot down in Germany in 1943.

#### Religious History.

#### RECENT PUBLICATIONS OF INTEREST.

ALEXANDER, F., ed. Four bishops and their see, Perth, Western Australia 1857-1957. Nedlands (W.A.,)
Univ. of Western Australia Press, 1957. 22s. 6d.

ELKIN, A. P. The diocese of Newcastle: a history of the diocese of Newcastle, N.S.W., Australia. Syd., A'sian Medical Pub. Co., 1955. 60s.

GOLDMAN, L. M. The Jews in Victoria in the nineteenth century. Melb., Author 1954. 63s.

GSELL, F. X. "The bishop with 150 wives": fifty years as a missionary: epilogue by André Dupeyrat. Lond. Angus & Robertson, 1955. 16s.

JOHNSON, J. A. A. A seed that grew: a hundred years of Catholic life on the North Shore 1856-1956. Syd., Printed by Cresta Printing Co., 1956. 6s.

JOSE, G. H. The Church of England in South Australia 1836-1905. Adel., Church Office, 1937-1955. 15s. 3 V.

SISTERS OF THE GOOD SAMARITAN. The subsching users. Sixtyn 6 and 1857-1957.

SISTERS OF THE GOOD SAMARITAN. The wheeling years: Sisters of the Good Samaritan, 1857-1927. Syd., Printed by Waite and Bull, 1957. 35s.

WALKER, A. Heritage without end: illus. by Frank Whitmore (2nd ed.). Melb., General Conference Literature and Publications Committee of the Methodist Church of Australasia, 1953. 3s. 6d. An historical account of the Methodist Church in Australia.

Webb, L. C. The conciliar element in the Anglican tradition. Canb. St. Mark's Library, 1957. (St. Mark's Library publications, no. 2).

#### Biography.

#### STANDARD WORKS IN PRINT.

PALMER, E. VANCE. National portraits (3rd ed.). Melb., Melbourne Univ. Press, 1954. 15s. SERLE, P. Dictionary of Australian biography. 2 v. Syd., Angus & Robertson, 1949. 105s. WHO'S WHO IN AUSTRALIA. Melb., Herald Press, 1906 to date. 75s. per issue. Latest issue: 15th, 1955

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BASSETT, MARNIE. The governor's lady: Mrs. Philip Gidley King: an Australian historical narrative (2nd ed.). Lond., Oxford Univ. Press, 1956. 20s. Philip Gidley King was Governor of New South Wales from 1800 to 1806.

— The Hentys: an Australian colonial tapestry. Melb., Oxford Univ. Press, 1954. 63s. The record of a pioneer family of Victoria.

BEDFORD, RUTH M. Think of Stephen a family chronicle. Syd., Angus & Robertson, 1954. 25s. Biography of Sir Alfred Stephen and his family, written by one of his grand-daughters.

BRADDON, R. R. Nancy Wake. Melb., Cassell, 1956. 21s. Biography of an Australian-born leader in the French Resistance movement of World War II.

BROOKES, MABEL. Crowded galleries: by Dame Mabel Brookes in collaboration with Sir Norman Brookes. Melb., Heinemann, 1956. 30s. The life story of husband and wife, well known in international sport, and in Melbourne public and social life.

CATTS, DOROTHY. King O'Malley: man and statesman. Syd., Publicity Press, 1957.

CUMPSTON, I. H. L. Thomas Mitchell: surveyor general and explorer. Melb., Oxford Univ. Press, 1954. 30s.

ELLIS, M. H. John Macarthur. Syd., Angus & Robertson, 1955. 50s. Biography of the founder of Australia's wool industry.

GODDARD, R. H. The life and times of James Milson. Melb., Georgian House, 1955. 50s. Biography of one of Sydney's early settlers.

GROSS, A. Charles Joseph La Trobe: superintendent of the Port Phillip district 1839–1851, Lieutenant-governor of Victoria 1851–1854. Melb., Melbourne Univ. Press, 1956. 18s. 6d.

### Biography-continued.

# RECENT PUBLICATIONS OF INTEREST-continued.

HANCOCK, Sir W. KEITH. Country and calling. Lond., Faber, 1954. 18s. Autobiography.
HASLUCK, ALEXANDRA. Portrait with background: a life of Georgina Molloy. Syd., Oxford Univ.
Press, 1955. 42s.

HAWKE, JESSICA. Follow my dust. Lond., Heinemann, 1957. 21s. A biography of Arthur Upfield

HETHERINGTON, J. A. Blamey: the biography of Field Marshal Sir Thomas Blamey. Melb., Cheshire, 1954. 195. 6d.

IDRIESS, J. L. Flynn of the Inland (new ed.) Sud. Annual St.

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 IDRIESS, I. L. Flynn of the Inland (new ed.). Syd., Angus & Robertson, 1956. 25s. Biography of the founder of the Australian Inland Mission and the Flying Doctor Service.
 MACMILLAN, D. S. A squatter went to sea: the story of Sir William Macleay's New Guinea expedition (1865) and his life in Sydney. Syd., Currawong Pub. Co. 1957.
 MACQUARIE, L. Lachlan Macquarie: governor of New South Wales: journals of his tours in New South Wales and Van Diemen's Land 1810-1822. Syd., Public Library of New South Wales, 1956. 90s.
 MARSHALL, A. I can jump puddles. Melb., Cheshire, 1955. 18s. 9d. This autobiography of one of Australia's prominent creative writers deals mainly with his experiences as a cripnled child.

MARSIALL, A. 1 Can jump puddies. Melb., Cheshire, 1955. 188. 9d. 1 his autobiography of one of Australia's prominent creative writers deals mainly with his experiences as a crippled child.

REID, W. S. H. John Grant's journey. Lond., Heinemann, 1957. 21s. Biography of a convict transported to New South Wales in 1803, compiled from original letters and diaries.

WADHAM, Sir SAMUEL M. Sir Samuel Wadham: selected addresses with a biographical study by Geoffrey Blainey. Melb., S. M. Wadham Testimonial Fund Committee, 1957.

WHYTE, W. F. William Morris Hughes: his life and times. Syd., Angus and Robertson, 1957.

50s. W. M. Hughes, possibly the most widely-known politician in the history of the Commonwealth, sat in the Federal Parliament from 1901 to the time of his death in 1952. He was Prime Minister device World War I during World War I.

#### Education.

#### STANDARD WORKS IN PRINT.

AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH. A brief guide to Australian universities (3rd ed.).

Melb., 1955. 4s.

Review of education in Australia 1948-1954; ed. by R. M. McDonnell, W. C. Radford and P. M. Staurenghi. Melb., 1956. 40s.

AUSTRALIAN LIBRARY JOURNAL. Syd., Library Association of Australia, 1951 to date. Quarterly.

AUSTRALIAN NATIONAL CO-OPERATING BODY FOR EDUCATION. Compulsory education in Australia: a study. Paris, UNESCO, 1951.

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AUSTRALIAN VICE-CHANCELLORS' COMMITTEE. A symposium on the place of the Australian university in the community and post-graduate studies in the Australian universities. Canb., 1955. gratis. BOSTOCK, J. E. The pre-school child and society: a study of Australian conditions and their repercussions on national welfare: by J. Bostock and E. Hill. Brisb., University of Queensland, 1946.

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COLE, P. R., ed. The rural school in Australia. Melb., Melbourne Univ. Press, 1937. 10s.

LYNRAVN, N. S. Libraries in Australia. Melb., Cheshire, 1948. 3s. 6d.

RADFORD, W. C., comp. The non-government schools of Australia: a descriptive and statistical account. Melb., Melbourne Univ. Press, for Australian Council for Educational Research, 1953.

NER, S. A. Correspondence education in Australia and New Zealand. Melb., Melbourne Univ. Press, 1949. 10s.

# RECENT PUBLICATIONS OF INTEREST.

ANCHEN, J. O. Frank Tate and his work for education. Melb., Australian Council for Educational Research, 1956. 30s.

AUSTRALIA—Committee on Australian Universities. Report. Canb., Govt. Pr., 1957.
AUSTRALIAN COUNCIL FOR EDUCATIONAL RESEARCH. The early years: a summary of an enquiry into age of admission, classification and promotion practices in Australian primary schools. Melb., 1957. 1s.

Opportunities available for Australians

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AUSTRALIAN NATIONAL ADVISORY COMMITTEE FOR UNESCO. Opportunities available for Australians to study overseas . . . Canb., Govt. Pr., 1956.

BERDIE, R. F. Manpower and the schools. Melb., Australian Council for Educational Research, 1956. 20s.

BLANEY, G. A centenary history of the University of Melbourne. Melb., Melbourne Univ. Press, 1957. 37s. 6d.

BUTTS, R. F. Assumptions underlying Australian education. Melb., Australian Council for Educational Research, 1955. 12s.

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Australian Journal of Chemistry, Melb., C.S.I.R.O., 1951 to date. Quarterly. 40s. per annum.

Australian Journal of Experimental Biology and Medical Science. Adel., Medical Sciences Club, University of Adelaide, 1924 to date. Bi-monthly. 60s per annum.

Australian Journal of Physics. Melb., C.S.I.R.O., 1951 to date. Quarterly. 40s. per annum.

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AUSTRALIAN VETERINARY JOURNAL Syd., Australian Veterinary Association. Monthly. 1925 to date.

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MUSGRAVE, A., comp. Bibliography of Australian entomology: 1775-1930. Syd., Royal Zoological Society of New South Wales, 1932. 10s.

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REHN, A. G. The grasshoppers and locusts (acripoidea) of Australia: v. 1-3. Canb., C.S.I.R.O., 1957.

ROBERTS, F. H. S. Insects affecting live-stock with special reference to important species occurring in Australia. Syd., Angus & Robertson, 1952. 45s.

WHITTELL, H. M. The literature of Australian birds: a history and a bibliography of Australian ornithology. Perth, Paterson Brokensha, 1954. 70s.

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1955. 17s. 6d.

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BRITTON, E. B. A revision of the Australian chafers: coleoptera, scarebaeidae, melonthinae: v. 1. Lond. British Museum (Natural History), 1957.

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BURNET, Sir Frank M. Enzyme, antigen and virus: a study of macro-molecular pattern in action. Camb., Cambridge Univ. Press, 1956. 18s.

BUTLER, S. T. Nuclear stripping reactions: by S. T. Butler in association with O. H. Hittmair. Syd.,

Horwitz Publications, 1957.

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GANDEVIA, B. An annotated bibliography of the history of medicine in Australia. Syd., A'sian Medical Pub. Co., 1957 (British Medical Association in Australia—Federal Council. Monographs, No. 1).

MUELLERIA. Melb., National Herbarium, 1955 to date.
RYAN, L. D. Sheep-shearing experting. Syd., Angus and Robertson, 1957. 45s.

SOCIETY OF GOURMETS, Sydney. Oh for a man who cooks: by Carlos Zalapa (and others) . . . of the Society of Gourmets: drawings by George Molnar, Syd., Shepherd Press, 1957.

Triterion, E.W. Facing the atomic future: foreword by Professor M. L. Oliphant. Melb., Cheshire 1956. 32s. 6d.

TORY, B. E. Offset lithography. Syd., Horwitz Publications, 1957.

UNDERWOOD, E. J. Trace elements in human and animal nutrition. N.Y., Academic Press, 1956. 75s-VICTORIA. National Museum. Collections of a century: the history of the first hundred years of the National Museum of Victoria: by R. T. M. Pescott. Melb., 1954. 30s.

YEOMANS, P. A. The keyline plan. Syd., Author, 1954. 37s. 6d.

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#### STANDARD WORKS IN PRINT.

AUSTRALIAN MUSEUM MAGAZINE. Syd., 1921 to date. Quarterly. 9s. per annum. BARRETT, C. L. Butterflies of Australia and New Guinea: by C. L. Barrett and A. N. Burns. Melb., eward, 1952. 55s.

-Wild life of Australia and New Guinea. Lond., Heinemann, 1954. 18s. 6d.

CAYLEY, N. W. What bird is that? a guide to the birds of Australia. Syd., Angus & Robertson, 1951. 30s.

DAKIN, W. J. Australian seashores: a guide for the beach-lover, the naturalist, the shore fisherman, and the student: by William J. Dakin, assisted by Isobel Bennett and Elizabeth Pope. Syd., Angus & Robertson, 1952. 45s.

HARRIS, THISTLE Y. Wild flowers of Australia (4th ed.). Syd., Angus & Robertson, 1956. 42s. First published in 1938.

Leach, J. A. Australian nature studies: a book of reference for those interested in nature study (3rd ed.: rev. by E. Byrne). Melb., Macmillan, 1952. 30s.

NICHOLLS, W. H. Orchids of Australia: drawn in natural colour by W. H. Nicholls with descriptive text: (introd. by C. T. White). Melb., Georgian House, 1951. 3 pts. 150s. each.

PATTON, R. T. Know your own trees: a short introduction to the study of our common eucalypts (2nd ed.). Melb., Melbourne Univ. Press, 1954. 5s. 6d.
ROUGHLEY, T. C. Wonders of the Great Barrier Reef: (2nd ed.) Syd., Angus and Robertson, 1951. 30s.

TROUGHTON, E. Le G. Furred-animals of Australia (3rd ed.). Syd., Angus & Robertson, 1951. 30s.

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Some common Australian birds: by Allan and Shirley Bell. Melb., Oxford Univ. Press, Bell, A. Some 1956. 35s.

HARRIS, THISTLE Y., ed. Naturecraft in Australia: an introductory handbook to the fauna and flora and to the Australian environment for the use of the bushwalker, student, teacher, field naturalist and conservationist. Syd., Angus & Robertson, 1956. 25s.

IREDALE, T. Birds of New Guinea. Melb., Georgian House, 1956. 2 v. 504s.
KINGHORN, J. R. The snakes of Australia: new ed. Syd., Angus & Robertson, 1956. 25s.
MCKEOWN, K. C. Australian spiders: their lives and habits (2nd ed.). Syd., Angus & Robertson, 1952. 21s.

MONKMAN, N. Escape to adventure. Syd., Angus & Robertson, 1956. 25s. The experiences of an underwater photographer in the Australian tropics.

MORRISON, P. C. Melbourne's garden: a descriptive and pictorial record of the Botanic Gardens, Melbourne (2nd ed.). Melb, Melbourne Univ. Press, 1957. 30s.

SERVENTY, V. Australia's great barrier reef: a handbook on the corals, shells, crabs, larger animals and birds with some remarks on the reef's place in history. Melb., Georgian House, 1955. 13s. 6d. WALLING, EDNA. The Australian roadside. Melb., Oxford Univ. Press, 1952. 30s. A pictorial account

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#### Aboriginals.

#### STANDARD WORKS IN PRINT.

- NDT, R. M. Arnhem land: its history and its people: by Ronald M. Berndt and Catherine H. Berndt. Melb., Cheshire, 1953. 30s.
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   STREHLOW, T. G. H. Aranda traditions. Melb., Melbourne Univ. Press, 1947.
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   THOMSON, D. F. Economic structure and the ceremonial exchange cycle in Arnhem Land. Melb., Macmillan, 1949.
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- AUSTRALIA—Territories, Department of. Our aborigines: prepared under the authority of the Minister for Territories, with the co-operation of the Ministers responsible for aboriginal welfare in the Australian States. Canb., Govt. Pr., 1957.

  CHASELING, W. S. Yulengor: nomads of Arnhem Land. Lond., Epworth Press, 1957. 21s.

  DEAN, BETH. Dust for the dancers: by Fish Dean and Victor Carell. Syd., Ure Brith, 1955. 25s.

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  ENDACOTT, S. J. Australian aboriginal words and place names and their meanings (9th ed.). Melb., Georgian House, 1955. 6s.

  GARTRELL, MAJORLE. Dear primitive: a nurse among the aborigines. Syd., Angus and Robertson, 1957. 16s.

  HARNEY, W. E. Life among the aborigines. Lond. Hale, 1957. 18s. The author, a well known identity

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  KYELE-LITTLE, S. Whispering wind. Lond., Hutchinson, 1957. 22s. 6d. Experiences of a patrol officer among the aborigines of the Northern Territory.

  MCCARTHY, F. D. Australia's aborigines: their life and culture. Melb., Colorgravure, 1957. 170s.

  MCCONNELL, URSULA H. Myths of the Munkan. Melb., Melbourne Univ. Press, 1957. 35s.

  ROBINSON, R. Legend and dreaming: legends of the dream-time of the Australian aborigines . . . Syd., Edwards & Shaw, 1952. 17s. 6d.

  Rose, R. Living magic: the realities underlying the psychical factors and beliefs of the Australian aborigines. Chicago, Rand, McNally, 1956. \$3.75.

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- BADHAM, H. E. A gallery of Australian art: chosen and introd. by Herbert Badham. Syd., Currawong, 1954. 73s. 6d.

  BARNETT, P. N. Australian book-plates and book-plates of interest to Australia. Syd., Beacon Press, 1950. 252s.
- BOYD, R. Australia's home: its origins, builders and occupiers. Melb., Melbourne Univ. Press, 1952. 25s.

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  CASEY, MAIE, comp. Early Melbourne architecture: 1840–1888; comp. and ed. by Maie Casey and others. Melb., Oxford Univ. Press, 1953. 40s.

  CATO, J. The story of the camera in Australia. Melb., Georgian House, 1955. 126s.

  GODDARD, R. H. Australian landscapes in miniature. Syd., Legend Press, 1952. 12s. 6d.

  HALL, H. B. Ballet in Australia from Pavlova to Rambert. Melb., Georgian House, 1948. 105s.

  HERMAN, M. E. The early Australian architects and their work: illus. and decorated by the author. Syd., Angus & Robertson, 1954. 84s.

  HOFF, URSULA. Masterpieces of the National Gallery of Victoria. Melb., Cheshire, 1949. 70s.

  McGuire, D. P. The Australian theatre . . . by D. P. McGuire, B. Arnott and F. M. McGuire. Melb., Oxford Univ. Press, 1948. 12s. 6d.

  MEMORIAL VOLUME TO HOWARD HINTON, patron of art. Syd., Angus & Robertson, 1951. 42s.

  ORCHARD, W. A. Music in Australia: more than 150 years of development. Melb., Georgian House, 1952. 30s.

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- ANDERSON, H. Australian song index, 1828-1956. Ferntree Gully, Vic., Rams Skull Press, 1957. 18s. BENNETT, W. R. The art of Rubery Bennett: introd. by William Dargie. Syd., Angus & Robertson, 1954. 84s. Feint, A. Flower paintings. Syd., Ure Smith, 1948. 75s. Herman, M. E. The architecture of Victorian Sydney: by Morton Herman assisted by Boyd Atkinson. Syd., Angus & Robertson, 1956. 84s.

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Watercolours and drawings: text by Sir Lionel Lindsay and James S. MacDonald. Syd., HEYSEN, H. Legend Press, 1952. 105s.

Loss, J. A brief history of the Australian theatre. Syd., Sydney University Dramatic Society,

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KARDOSS, J. A brief history of the Australian theatre. Syd., Sydney University Dramatic Society, 1955. 7s. 6d.

LOXTON, J. S. The art of John S. Loxton . . . foreword by John Rowell. Melb., Osboldstone & Co., 1956. 84s.

MACKENZIE, ISABEL. The why and how of child art. Syd., Angus & Robertson, 1955. 15s.

MACQUEEN, K. Adventure in watercolour. Syd., Legend Press, 1948. 63s.

MISSINGHAM, H. Hal Missingham sketch book. Syd., Dymock's, 1954. 126s.

OLYMPIC GAMES, 16th, Melbourne Nov.-Dec., 1956—Organising Committee. The arts festival of the Olympic Games, Melbourne. Melb., Olympic Civic Committee of the Melbourne City Council, 1956.

ORBAN D. A layman's guide to creative art. Syd. Edwards & Shaw, 1957. 25s.

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Preston, Margaret. Margaret Preston's monotypes. Syd., Ure Smith, 1949. 75s.

Rentoul, Marjorie. Painting for children. Melb., Georgian House, 1955. 17s. 6d.

Seidler, H. Houses, interiors and projects. Syd., Associated General Publications, 1954. 84s.

Sherman, A. The flower paintings of Albert Sherman: introd. by Howard Ashton. Syd., Angus & Robertson, 1956. 84s.

Strehlow, T. G. Rex Battarbee: artist and founder of the aboriginal art movement in Central Australia. Syd., Legend Press, 1956. 27s. 6d.

Turnbull, C. The art of Ian Bow: introd. by Ernest Burbridge. Melb., Cheshire, 1954. 25s.

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#### STANDARD WORKS IN PRINT.

COOMBE, D. C. History of the Davis Cup: being the story of the International Lawn Tennis Champion-ship, 1900-48. Syd., A'sian Pub. Co., 1949. 17s. 6d. EDWARDS, S. H. Shooting and shooting bushcraft. Syd., Angus & Robertson, 1951. 7s. 6d. MILLER'S SPORTING ANNUAL AND ATHLETIC RECORD. Melb., Herald & Weekly Times, 1918 to date.

Annual. 5s. per issue.

Missingham, H. Good fishing: a handy guide for Australia with illustrations of the most commonly caught fish. Syd., Dymock's, 1953. 10s. 6d.

MOYES, A. G. Australian batsmen from Charles Bannerman to Neil Harvey. Syd., Angus & Robertson

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WINSER, K., comp. Wild game of Australia. Melb., Motor Manual Publications, 1953. 27s.

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ALSTON, R. Test commentary. Lond., Paul, 1956. 15s.
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DONALD, K. Olympic saga: the track and field story Melbourne, 1956: by Keith Donald and Don Selth. Syd., Futurian Press, 1957. 25s.

GILLIGAN, A. E. R. Australian challenge. Syd., Ure Smith in association with Abelard-Schuman, 1956. HOPMAN, H. Aces and places. Lond., Cassell, 1956. 12s. 6d.

JOHNSON, I. W. Cricket at the crossroads. Lond., Cassell, 1957. 16s.

OLYMPIC GAMES, Melbourne. 1956. Melb., Colorgravure Publications, 1956.

MACLAREN, T. M. The Australian golfer's handbook, 1957. Syd., Langside Pub. Co., 1957. 20s.

ROSS, A. Cape Summer and the Australians in England. Lond., Hamilton, 1957. 18s.

SEDGMAN, F. A. Winning tennis: the Australian way to a better game. Syd., A'sian Pub. Co., 1954.

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## STANDARD WORKS IN PRINT.

ANNUAL CATALOGUE OF AUSTRALIAN PUBLICATIONS. Canb., Commonwealth National Library, 1936 to date. 6s. 6d. per issue.

Australian Poetry. Syd., Angus & Robertson, 1941 to date. Annual. Various prices.

COAST TO COAST: Australian stories. Syd., Angus & Robertson, 1943 to date. Annual. Various prices.

Excludes the works of individual authors, reference to which will be found in Miller, Australian literature and Serle, An Australasian anthology.

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GREEN, H. M. ed. Modern Australian poetry (2nd ed.). Melb., Melbourne Univ. Press, 1952. 17s. 6d. JINDYWORDAK ANTHOLOGY. Melb., Georgian House for Jindyworobak Club, 1944 to date. Annual. Various prices.

MACKANESS, G., comp. An anthology of Australian verse (2nd ed.). Syd., Angus & Robertson, 1952.

21s. MEANJIN: contemporary verse and prose. Melb., Melbourne Univ. Press, 1940 to date. Quarterly.

10s. per issue. MILLER, E. MORRIS. Australian literature: a bibliography to 1938; by E. Morris Miller; extended to 1950: ed. with historical outline and descriptive commentaries by F. T. Macartney. Syd., Angus

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MITCHELL, A. G. The pronunciation of English in Australia. Syd., Angus & Robertson, 1951. 8s. 6d. First published in 1946.

MURDOCH, W. L. F. A book of Australian and New Zealand verse (4th ed.). chosen by Walter Murdoch and Alan Mulgan. Melb., Oxford Univ. Press, 1950. 14s.

QUEENSLAND PUBLIC LIBRARY—Oxley Memorial Library. Bibliography of Queensland verse with biographical notes: by J. H. Hornibrook. Brisb., 1953. 15s.

RODERICK, C. An introduction to Australian fiction. Syd., Angus & Robertson, 1950. 12s. 6d.

SERILE, P., comp. An Australaisan anthology: comp. by P. Serle, F. L. T. Wilmot and R. H. Croll (new ed.). Syd., Collins, 1946. 8s. 6d.

SOUTHERLY. Syd., Australian English Association, 1939 to date. Quarterly. 5s. per issue.

STEWART, D. A., ed. Australian bush ballads: ed. by Douglas Stewart and Nancy Keesing. Syd., Angus and Robertson, 1955. 30s.

#### RECENT PUBLICATIONS OF INTEREST.

Australian Broadcasting Commission—Standing Committee on Spoken English. A guide to the pronunciation of Australian place names. Syd., Angus and Robertson, 1957. 30s.

Buckley, V. Essays in poetry, mainly Australian. Melb., Melbourne Univ. Press, 1957.

Franklin, Stella M. M. L. Laughter, not for a cage: notes on Australian writing, with biographical emphasis on the struggles, function, and achievements of the novel in three half-centuries. Syd., Angus & Robertson, 1956. 25s.

Hungerford, Meld., Cheshire, 1956. 18s. 6d. A collection of Australian. Writers by T. A. G. Hungerford. Meld., Cheshire, 1956. 18s. 6d. A collection of short stories, poetry, critical and historical essays and general articles.

Lavater, L. The sonnet in Australiania: a survey and selection: ed. with foreword by Frederick T. Macartney (2nd ed.). Syd., Angus & Robertson, 1956. 25s.

Macartney, F. T. Australian literary essays. Syd., Angus & Robertson, 1957. 21s.

Morison, R. H., comp. A book of South Australian verse. Adel., Mary Martin, 1957.

Rees, G. L.. Towards an Australian drama. Syd., Angus & Robertson, 1953. 18s.

Roderick, C., ed. Australian round up: stories from 1790 to 1950: illus. by Broadhurst. Syd., Angus & Robertson, 1953. 21s.

SCHONELL, F. J. A study of the oral vocabulary of adults: (an investigation into the spoken vocabulary of the Australian worker): by F. J. Schonell and others. Brisb., Univ. of Queensland Press and Univ. of London Press, 1956. 20s.

STEWART, D. A. Old bush songs and rhymes of colonial times: enlarged and revised from the collection.

STEWART, D. A. Old bush songs and rhymes of colonial times: enlarged and revised from the collection of A. B. Paterson: by Douglas Stewart and Nancy Keesing. Syd., Angus & Robertson, 1957. 25s. WRIGHT, JUDITH A., comp. New land, new language: an anthology of Australian verse. Melb., Oxford Univ. Press, 1957. 12s. 6d.

#### Riction.

#### INCLUDES BOTH RECENT PUBLICATIONS AND REPRINTS OF WELL-KNOWN AUSTRALIAN WRITERS.

ALDOUS, A. The new Australians. Lond., Bodley Head, 1957. 12s. 6d.
BOYD, M. A'B. Outbreak of love. NY., Reynal, 1957.
BROWNE, T. A. Robbery under arms: a story of life in the bush and in the goldfields of Australia.
Lond., Collins, 1954. 8s. First published in 1888.
CLOSE, R. S. Eliza Callaghan. Lond., Allen, 1957. 15s.
DARK, ELEANOR. The timeless land. Syd., Collins, 1956. 16s. First published in 1941. The author continued this story of early Sydney in her Storm of time and No barrier.
FRANKLIN, STELLA M. M. L. All that swagger (2nd ed.) Syd., Angus & Robertson, 1956. 25s.
FURPHY, J. Such is life: being certain extracts from the diary of Tom Collins. Syd., Angus & Robertson, 1956. 25s. First published in 1903.
GUNN, JEANNIE. We of the Never-never. Melb., Robertson & Mullens, 1954. First published in 1908.
HAYLES, K. The long reach. Lond., Hale, 1956. 13s. 3d.
JAY, CHARLOTTE. The brink of silence. N.Y., Harper, 1956.
LAMBERT, E. Watermen. Lond., Muller, 1956. 13s.
LAMBERT, E. Watermen. Lond., Muller, 1956. 13s.
AUWRAY, M. Twilight at dawn. Lond., Joseph, 1957. 13s. 3d.

<sup>\*</sup> Excludes the works of individual authors, reference to which will be found in Miller, Australian literature and Serle, An Australasian anthology.

#### Fiction-continued.

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PALMER, E. VANCE. The passage. Melb., Cheshire, 1957. 16s. 6d. First published in 1930.

PARK, RUTH. One-a-pecker, two-a-pecker. Syd., Angus & Robertson, 1957. 17s. 6d.

PORTEOUS, R. S. Brigalow. Syd., Angus & Robertson, 1957. 17s.

PRICHARD, KATHARINE S. Working bullocks. Syd., Angus & Robertson, 1956. 16s. First published

in 1926.
RICHARDSON, H. H. The fortunes of Richard Mahony. Melb., He published in 1917.
STOW, R. The bystander. Lond., Cassell, 1954. 15s.
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UPFIELD, A. W. Man of two tribes. Lond., Heinemann, 1956. 12
WEST, M. L. Kundu: a novel. Syd., Angus & Robertson, 1957. 16s.
WHITE, P. V. M. Voss: a novel. N.Y., Viking Press, 1957. \$5.00. Melb., Heinemann, 1951. 17s. 6d. First

#### Poetry.

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Anderson, Ethel L. The song of Hagar to the patriarch Abraham. Syd., Edwards & Shaw, 1957. 15s. Brennan, C. J. The burden of Tyre: fifteen poems. Syd., Harry F. Chaplin, 1953. 63s. Campbell, D. The miracle of Mullion Hill. Syd., Angus & Robertson, 1956. 15s. Collinson, L. The moods of love. Melb., Overland, 1957. 18s. 9d. Dobson, Rosemary de B. Child with a cockatoo and other poems. Syd., Angus & Robertson, 1955.

Liss.

Farbridge, W. S. Poems. Syd., Angus & Robertson, 1953. 15s.

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Farbridgerald, R. D. This night's orbit. Melb., Melbourne Univ. Press, 1953. 21s.

Frazer, G. Poems of life and time. Syd., Elizabethan Press, 1957. 21s.

GILMORE, DAME, MARY Fourteen men: verses. Syd., Angus & Robertson, 1954. 15s.

Hope, A. D. The wandering islands. Syd., Edwards & Shaw, 1955. 15s.

Kendall, H. C. Selected poems of Henry Kendall: with biographical and critical introd. by T. Inglis Moore. Syd., Angus & Robertson, 1957. 17s. 6d.

Lawson, H. H. Songs from Lawson: (ed. by John Meredith: illus. by Clem Millward). Syd., Alan Scott, 1956. 4s.

McCare, H. R. Forests of Pan. Brisb., Meanjin, 1944. 4s. 6d.

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BARNARD, MARGARET. Wish and the magic nut . . . illus. by Sheila Hawkins. Syd., Sands, 1956. 5s. 6d.

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The story of the poet Adam Lindsay Gordon.

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# DIARY OF PRINCIPAL ECONOMIC EVENTS, 1954 to 1957.

The principal economic events for the years 1931 to 1938 were shown on pp. 968 to 977 of Official Year Book No. 33, those for the years 1939 to 1944 on pp. 1129 to 1141 of Official Year Book No. 36, those for the years 1945 to 1948 on pp. 1235 to 1245 of Official Year Book No. 37, while those for the years 1949 to 1953 were covered by Official Year Books Nos. 38 to 40. For reasons of space some of the items originally shown for the years 1954 and 1955 have been omitted from this issue. Previous issues should be consulted for additional information for these years.

#### 1954.

Net migration increased in 1954, but was still well below the level of the preceding four years. Total employment (excluding rural and household domestic employment and the defence forces) rose to 2,701,000 in December, 1954. Numbers on unemployment benefit fell to 2,975 in November, 1954. Production of pig-iron and steel was practically the same as in 1953, but there were rises in the production of coal, gas and electricity, and many basic materials. Production of domestic electrical appliances and of many textile and clothing lines also increased. More new houses were commenced in 1954 than in 1953, but the number completed was slightly below the 1953 figure. Meat production increased slightly in 1954. The wheat acreage for 1954-55 was about the same as in 1952-53, but both the total crop and the average yield were below the levels of the previous two seasons. The 1954-55 wool clip was practically the same as the record 1952-53 clip. In April, there was a further relaxation of import restrictions on trade with countries other than dollar area and Japan, and imports were substantially higher than in 1953. A fall in wool and wheat prices and a lower volume of wheat exports contributed to a decline in exports. In the second half of 1954, there was a debit balance of £108 million in the balance of payments on current account. Quotas were re-imposed on some imports in October. Average earnings per employee rose by 4 per cent. Retail and wholesale prices, however, showed practically no change. Bank interest rates were not altered during the year. The three Commonwealth loans were issued at 4½ per cent. for long dated bonds and most local and semi-governmental loans at 4½ per cent.

7th January.—Reciprocal agreement with the United Kingdom on Social Services became operative.

8th-15th January.—Conference of British Finance Ministers held in Sydney.

19th January.—It was announced that Australia would sign the declaration extending until 30th June, 1955, the schedule of tariff concessions under the General Agreement on Tariffs and Trade.

25th February.—Interim decision by Full Arbitration Court on claim by Metal Trades employees for increased margins left rates of pay unchanged (see 5th November, 1954).

4th March.—Loan of \$54 million from the International Bank, to be used to import capital goods and equipment.

1st April.—United Kingdom Free and Assisted Passages Migration Agreement with Australia renewed for another year.

9th April.—Contract for £25 million let for the construction of the Eucumbene-Tumut tunnel and other works in the Snowy Mountains Scheme.

16th April.—Revision of the 15 year marketing agreement for Australian meat sold in the United Kingdom, occasioned by the change over from bulk purchasing to private trading.

27th April.—£3.9 million contract let for building the Upper Tumut power station of the Snowy Mountains Scheme.

4th June.—Queensland Industrial Court increased margins to workers.

28th June.—Australia signed International Tin Agreement as a consuming country.

30th June.—Loan Council approved borrowing programme of £290 million for 1954-55 comprising Government loans, £200 million, Semi-Governmental loans, £75 million, and Local Government loans, £15 million. Tax reimbursement Grants to States to be £150 million for 1954-55. Australian population census taken.

1st July.—Forecast that by 31st July stocks of wheat carried over by the four major producing countries will total 1,601 million bushels compared with 1,061 million in 1953.

13th July.—Heavy rain and gales caused damage to 200 miles of coastal area from Queensland to Northern New South Wales with floods in river districts of S.E. Queensland and Northern New South Wales.

4th August.—£1,800,000 hydro-electric project approved for Warragamba Dam (New South Wales).

13th August.—Wool sold in Australia in 1953-54 season realized £390.7 million.

18th August.—Commonwealth Budget for 1954-55 introduced into the House of Representatives. (For details see Official Year Book No. 42, p. 1156.)

31st August.—New South Wales Government granted £125,000 to New South Wales University of Technology for research in nuclear engineering (previously £50,000 was granted to the University of Sydney for research into nuclear physics).

20th September.—Mechanical extraction of pillar coal commenced in some New South Wales mines.

30th September.—New import restrictions announced on imported materials and equipment (goods on which quota restrictions were abandoned in April, 1954), on the basis of 100 per cent. of imports in the base year, 1950-51.

5th October.—National Joint Production Council formed representing management and workers.

29th October.—Tariff changes increased tariffs on certain imports and increased protection to eight Australian industries. Government bounties on rayon yarn in Australia and scutched flax fibre produced from flax grown in Australia were announced.

3rd November.-Bounty paid on sulphuric acid as from 1st July, 1954.

5th November.—Commonwealth Arbitration Court granted higher margins for skilled workers in a judgment intended to be a guide to other wage fixing authorities.

19th November.—Privy Council ruled New South Wales State Transport (Co-ordination) Act invalid insofar as it applied to interstate transport.

14th December.—£13 million lag in cash section of Commonwealth Government £125 million cash and conversion loan.

15th December.—Increased margins for coal industry employees, applying in New South Wales, Queensland, Victoria and Tasmania, announced by Coal Industry Tribunal.

31st December.—Governor of Commonwealth Bank announced an increase of 5s. per. £100 in rates of interest on bank fixed deposits and savings bank deposits.

#### 1955.

When the Treasurer presented the budget in August he said that there were "unmistakable signs of active inflation". A boom had been getting under way in consumer spending and private investment, and labour shortages had become general. No concessions in taxation were made in the budget. During the year, several measures were introduced to check inflation. In July, the Commonwealth Bank directed the trading banks to restrict new loans which would increase the scale of hire purchase. Towards the end of the year, the Prime Minister held a series of conferences with representatives of financial and industrial institutions to enlist their co-operation in checking inflation. Hire purchase and finance companies agreed to restrict the increase in their loans to 10 per cent, above the level at September, 1955. The value of exports was slightly higher than in 1954 but the value of imports was much greater than in 1954 and the balance of payments deficit was therefore greater in 1955. Import restrictions were made more severe in April and again in September. Margins for skill were adjusted upwards in many occupations. Nominal wages rose throughout the year, and by December, 1955, were  $3\frac{1}{2}$  per cent. higher than in December, 1954. Over the same period, average earnings rose by 7 per cent. and retail prices by  $4\frac{1}{2}$  per cent. Employment rose steadily during the year, and the number of persons receiving unemployment benefit fell to the lowest level since 1951. Investment by private businesses in 1955 was well above the level of 1954. There were 78,000 new houses completed in 1955, a

higher number than in any post-war year except 1952. Secondary production was generally maintained at the high level of the previous year, and output of primary products increased. The wheat acreage in 1955-56 was slightly less than in any other post-war year, but the average yield was the highest on record. The total crop was therefore nearly as high as in 1953-54. The production of wool in 1955-56 was a record at 1,410 million pounds. Net immigration during 1955 was 95,000 compared with 68,000 in 1954 and 43,000 in 1953.

1st January.—Price control in Victoria ended after 14 years. Increased Bank Deposit interest rates.

12th January.—Harbour at Cockburn Sound, Western Australia, opened to provide shipping facilities for Kwinana.

1st February.—Kwinana £40 million oil refinery began operations.

4th February.—Arrangements completed for issue of £6 million public loan in Switzerland to Commonwealth Government.

7th February.—Australia's first aluminium plant, at Bell Bay, Tasmania, began production.

22nd February.—Guthega power station in operation, first power generated from Snowy Mountains Hydro-electric scheme being fed into New South Wales electricity system.

24th February.—Disastrous floods cover large areas of central west New South Wales and Hunter Valley.

18th March.—Government plan announced for sale to tenants of houses built under Commonwealth and State Housing Agreement. Maximum advance to be £2,750 repayable over 45 years at 4½ per cent. interest, minimum deposit 5 per cent. of first £2,000 of sale price, repayments of principal included in rent previously paid to be credited as part of deposit.

19th March.—Details announced of new 15 year, 54½ million dollar loan from International Bank of Reconstruction to Australia.

21st March.—New import restrictions imposed, cutting Australia's rate of imports by about 20 per cent.

23rd March.—First commercial shipment of Australian uranium oxide, worth about £200,000, dispatched to United States.

15th April.—All price control ended in New South Wales.

20th April.—Broken Hill Pty. Company announced plans for spending £67 million on plant in next five years at Newcastle and Port Kembla.

12th May.—Increase of interest rates for home purchase and building finance from 5 per cent. to 5½ per cent. announced by most of major life assurance companies in Australia.

16th May.—Commonwealth Government to build ammunition filling and assembly factory at St. Marys, near Sydney. (Opened 17th December, 1957.)

5th June.—Australia's 1955-56 immigration programme to be increased to basic intake of 125,000 migrants (including 70,000 under assisted-passages scheme).

10th June.—Full High Court in reserved judgment declared invalid recent New South Wales legislation imposing a road tax on interstate road hauliers.

19th June.—Commonwealth abandons control of tea.

21st-23rd June.—At annual Loan Council meeting, the Council, by majority vote, approved borrowing programme of £193,500,000 for public works in 1955-56. Prime Minister announced that Commonwealth Government would grant States £157 million taxation reimbursements for 1955-56.

19th July.—Decision by Federal Cabinet to cut subsidy on local consumption of butter and cheese, followed by increase in butter and cheese prices. General Motors-Holden's announced £21.6 million expansion programme for plants throughout Australia.

26th-28th July.—Price control re-imposed in New South Wales and South Australia.

22nd August.—First International Wool Textile Research Conference to be held in Australia opened in Sydney.

23rd August.—Contract system of shipping Australian wool exports to Europe and United Kingdom broke down as British and European shipowners refused to renew contracts at less than 10 per cent. increase in freight rates.

24th August.—Commonwealth Budget for 1955-56 introduced into the House of Representatives. (For details see Official Year Book, No. 43, page 1105.)

26th August.—Overall prices of Australian iron and steel raised by 5 per cent.

30th August.—New £30 million hot-strip steel mill of Australian Iron and Steel Ltd. at Port Kembla (N.S.W.) opened by the Prime Minister.

12th-21st September.—Prime Minister called series of conferences with representatives of trading banks, hire purchase companies, and trade-union leaders to discuss financial aspects of Australian economic problems and suggested remedies. Fresh tightening of bank credit.

1st October.—Increase of  $7\frac{1}{2}$  per cent. in shipping freights for Australian exports to most oversea countries became effective.

6th October.—15 million dollars (£A6.8 million) loan successfully negotiated in Canada by Australian Government.

4th November.—Automatic quarterly basic wage adjustments reintroduced in New South Wales.

18th November.—Queensland and New South Wales coal producers combined to form Australian Coal Association with main object of trying to find new and improved ways of producing, preparing and marketing coal.

22nd November.—For the first time in history, brown coal coke was successfully used at a Richmond (Vic.) foundry to smelt iron commercially.

26th November.—Reduction of about 10 per cent. in Queensland shearing rates under the State Shearing industry award ordered in Industrial Court judgment of 25th November.

17th December.—Commonwealth £30 million cash loan undersubscribed by £2 million.

### 1956.

In order to arrest inflationary tendencies and the decline in international reserves additional measures were found necessary early in 1956. Despite import restrictions, oversea balances had fallen by £55 million in the six months ended December, 1955. New taxation measures passed to provide a brake on consumption and investment spending. Taxation increased on motor vehicles and petrol, higher customs and excise duties on beer, spirits, tobacco, cigars and cigarettes, increased company taxation and increased sales tax on less essential goods. Banks agreed to raise interest rates on fixed deposits by 1 per cent. and overdraft rate from 5 per cent. to an average of 5½ per cent. In June, new import cuts estimated at £40 million a year were imposed on motor vehicles and chassis. Oversea reserves had fallen by a further £18 million in the six months ended June, 1956. Imports fell from £863 million in 1955 to £765 million in 1956 and exports rose from £778 million to £840 million. Exports of wool were £23 million higher at £377 million and exports of wheat and flour £19 million higher at £84 million. Oversea reserves at December, 1956 stood at £425 million, £70 million higher than in June, 1956.

Production of wool in 1955-56 was 1,410 million pounds. Wheat production in 1955-56 was 195 million bushels. Preliminary estimates of the total value of production of primary industries suggested an increase of 8 or 9 per cent. in 1956-57.

Secondary production generally was at the same high level as in 1955.

Although total civil employment (excluding rural and household domestic employees) was somewhat higher in the year, the number of persons receiving unemployment benefits was over 13,000 at the end of 1956, compared with 3,245 at the end of 1955. Nominal wages were nearly 5 per cent. higher, the main increase occurring in June, when an increase of 10s. per week in the Commonwealth basic wage was granted by the Full Arbitration Court.

Although there was little change in gross private investment on fixed capital equipment during 1956, significant changes occurred in some of the components of investment. Private dwelling construction was about £10 million lower, the value of motor cars purchased was about £15 million lower, investment in commercial vehicles and other capital equipment was at much the same level and other new building and construction was about £20 million higher than in 1955.

5th January.—Rent control lifted in Tasmania.

18th January.—Federal Executive Council empowered all trading banks to operate Savings Banks on conditions broadly the same as those governing State Savings Banks. (Bank of New South Wales Savings Bank Limited and Australia and New Zealand Savings Bank Limited opened 19th January, C.B.C. Savings Bank Limited opened 16th July, 1956.)

23rd January.—General Australian waterside strike over pay rates and working conditions for waterside workers. Queensland floods destroyed tobacco crops in South-West, floodwaters created widespread havoc, heavy losses of sheep.

31st January.—Commonwealth Treasury commenced publication of Quarterly Economic Review. Eight Australian University economists urged interest and tax increases "to avoid crisis".

1st February.—Loan Council meeting in Canberra decided not to alter the £190 million programme for State public works in this financial year. It agreed also to increase the interest rate on public loans by semi-governmental authorities from  $4\frac{3}{4}$  to  $4\frac{7}{8}$  per cent. but decided against making any change in the Commonwealth bond rate.

14th February,—Australian Council of Trades Unions began presentation of a case to Arbitration Court for review of the basic wage.

15th February.—Waterside workers resumed work in all Australian ports after 23 days strike (see 23rd January).

17th February.—Conciliation Commissioner reduced award wages for shearers in all States except Queensland by 5 per cent. from 5th March (see also 26th November, 1955).

20th February.—Commonwealth Government set up Advisory Panel of experts to advise Economic Committee of Commonwealth Ministry on economic problems.

24th February.—Federal Council of Australian Workers' Union called on shearers and other pastoral workers not to work under new rates fixed by Conciliation Commissioner (see 17th February).

1st March.—British Atomic Energy Commission contracted to buy more than £40 million worth of uranium oxide from Mary Kathleen leases near Mt. Isa.

2nd March.—Majority decision of Full High Court ruled that Arbitration Court had no power to impose penalties on those disobeying its orders.

5th March.—Improvements to working of the arbitration system discussed at roundtable conference by Ministry of Labour Advisory Council which included leading tradeunionists, employer's organizations and Government experts.

14th March.—Australia's first electric main railway line, 98 mile section from Melbourne to Traralgon, Gippsland, opened.

The Prime Minister, in a statement to the House of Representatives, announced a number of new economic measures proposed by the Government to achieve economic stability. These included increases in sales tax on motor vehicles, jewellery and other goods of a less essential character, increases in customs and excise duties on petrol, beer, spirits, tobacco, cigarettes and cigars and increased income tax on companies. In addition, bank overdraft rates would be permitted to rise from 5 per cent. to an average of 5½ per cent. with a maximum of 6 per cent, and bank fixed deposit rates would be increased by 1 per cent.

21st March.—Australian Loan Council approved Commonwealth proposal that interest rate on new semi-governmental loans be raised. Three new loans issued at rates of 5½ per cent. and 5½ per cent.

27th March.—Announced that banks would be free to fix their own rates for individual loans within the limits announced by the Prime Minister on 14th March (see above).

30th March.—Agreement completed between Australia and Netherlands under which 75,000 Dutch settlers would come to Australia in next five years.

4th April.—Rural and Industries Bank of Western Australia opened savings bank department.

7th April.—Commonwealth Bank increased rates of interest payable on savings bank accounts by one-quarter per cent. Other savings banks followed suit.

19th April.—Bill introduced in Commonwealth Parliament to set up Export Payments Insurance Corporation. (Act assented to 19th June.)

21st April.—Extensive deposits of iron ore discovered near Nowa Nowa, 215 miles east of Melbourne.

27th April.—New agreement finalized by United Nations Wheat Conference; to come into force on 1st August, for a period of three years.

24th May.—Prime Minister in first of series of economic surveys said that the Australian economy faced long-term problems.

25th May.—Full Arbitration Court announced 10s. increase in Commonwealth basic wage and restated decision not to make automatic quarterly adjustments.

29th May.—Bill introduced in Commonwealth Parliament to replace Stevedoring Industry Board by Australian Stevedoring Industry Authority. (Act assented to 30th June.)

Announced that, as part of Commonwealth Government's world-wide trade promotion drive, Australian trade missions would visit New Zealand, India, Ceylon, Japan, Pakistan, the Middle East and, possibly, the Philippines to try to boost Australian exports.

19th June.—Announcement made of successful conclusion of negotiations for an Australian loan of \$25 million to be raised in New York.

21st June.—Executive of Australian Council of Trades Unions, at special congress in Melbourne, empowered to take nation-wide strike action against Stevedoring Industry Act (see 29th May).

24th June.—Biggest floods for 70 years on Darling and Murrumbidgee Rivers cover vast areas of country in south-west New South Wales and also affect northern Victoria.

26th-28th June.—At the meeting of the Loan Council, the Commonwealth rejected proposals by the States for a substantially increased loan programme to finance State works during 1956-57. With the Commonwealth dissenting, the Loan Council approved a governmental borrowing programme of £210,000,000 for 1956-57. This included £35,532,000 for the Commonwealth-State Housing Agreement. However, the Commonwealth indicated that it was prepared to vote for a programme of £190,000,000 and would review the position after the first six months of the financial year to determine whether further assistance could be provided towards financing the Loan Council programme. In addition the Council approved a borrowing programme of £80,250,000 for semi-governmental and local authorities.

28th June.—At the Premiers Conference, the Acting Prime Minister and Treasurer, Sir Arthur Fadden, announced that the Commonwealth Government would make a supplementary grant to the States of £19,400,000. This would bring the total of the tax reimbursement grant and the supplementary grant to £173,000,000 or £16,000,000 more than similar grants in 1955-56.

Acting Prime Minister announced new £40 million a year import cuts to reduce imports of fully assembled motor vehicles by 50 per cent. and unassembled chassis by 30 per cent. Dollar licences for import of motor vehicles from North America reduced by 30 per cent.

30th June.—Commonwealth budget results for 1955-56 showed surplus of £61.6 million.

10th July.—By decision of Privy Council, New South Wales Government held liable for repayment of £1 million to interstate road hauliers in respect of licence fees and mileage charges paid since July, 1952.

12th July.—Every road between Melbourne and Sydney blocked by floods, mud, or snow.

13th July.—Tasmanian wages board decided to suspend quarterly adjustments of State basic wage after 16s. adjustment made for June quarter.

1st August.—New International Wheat Agreement commenced to operate. Australian quota 30 million bushels out of total of 303 million bushels (see Chapter XXII., p. 867).

14th August.—New Conciliation and Arbitration Act became effective. (See Chapter VI. page 158.)

16th August.—Special Premiers' Conference. Commonwealth asked States to freeze basic wage but failed to reach agreement.

22nd August.—Large deposit of bauxite discovered on west coast of Cape York Peninsula.

29th August.—The 1956-57 Budget was introduced into the New South Wales Legislative Assembly. During 1955-56, the transactions of the Consolidated Revenue Fund, Railways, Tram and Omnibus Service and Sydney Harbour Services resulted in an overall deficit of £6,800,000. After providing for debt charges, there were deficits of £7,600,000 on the Railways and £4,100,000 on Transport Services. The 1956-57 Budget provided for total expenditure of £223,078,000. Estimated revenue was £223,115,000. This would leave a small overall surplus of £37,000. After providing for debt charges, it was estimated that there would be deficits of £3,900,000 on the Railways and £1,800,000 on Tram and Omnibus services. New taxation proposals were the introduction of a land tax, a tax on poker machines and increased stamp duty on hire purchase agreements.

30th August.—Commonwealth Budget for 1956-57 introduced into the House of Representatives providing for an estimated expenditure of £1,121,400,000, revenue of

£1,230,200,000 and an estimated surplus of £108,800,000 to be paid to the Loan Consolidation and Investment Reserve. The more important items of expenditure were—Defence Services, £190,000,000; War and Repatriation Services, £123,100,000; National Welfare Fund, £226,600,000; Payments to the States, £243,800,000 and Capital Works and Services, £109,700,000.

Revenue expected from the main sources was Income Taxes £611,700,000; Excise Duties £212,200,000; Sales Tax, £130,000,000 and Customs Duties, £50,000,000.

The budget proposals provided for increases in some widows and invalid pensions, some minor concessions in income taxes, the imposition of customs and excise duties on cathode ray tubes used in television sets, and increases in broadcast listeners' fees and some postal, telegraph and telephone charges.

11th September.—The 1956-57 Budget was introduced into the Victorian Legislative Assembly. During 1955-56, there was a deficit of £3,200,000. Revenue during the year totalled £123,200,000 and expenditure was £126,400,000. The Budget provided for expenditure of £135,788,000 in 1956-57. Estimated revenue was £133,343,000. This would result in a deficit of £2,445,000. This included an estimated Railways deficit of £5,600,000, an increase of £1,400,000 over the deficit in the previous year. Additional revenue was to be obtained by increasing entertainments tax, motor registration fees and stamp duty on cheques and receipts and by imposing a stamp duty on hire purchase agreements.

16th September.—Public première of television in Sydney, first regular television transmissions began.

18th September.—The 1956-57 Budget was introduced into the South Australian Legislative Assembly. In 1955-56, the transactions of the Consolidated Revenue Fund resulted in a deficit of £1,400,000. Revenue was £59,400,000 and expenditure was £60,800,000. The 1956-57 Budget proposals provided for expenditure of £65,982,000 and estimated revenue of £65,129,000. This would result in a deficit of £853,000. The additional revenue would be obtained from increased collections from land tax due to the reassessment of the values of all land, an increase in the rate of stamp duty on cheques, increases of the liquor licence fees and some other statutory fees and increased railway freights.

20th September.—The 1956-57 Budget was introduced into the Queensland Parliament. In 1955-56, Consolidated Revenue Fund receipts were £75,700,000 and expenditure, £77,400,000. This resulted in a deficit of £1,700,000. The 1956-57 Budget provided for an expenditure of £84,760,000 from the Consolidated Revenue Fund. Estimated revenue was £84,775,000. This would leave a small surplus of £15,000. Most of the increased revenue will be provided by increased railway charges which operated from 1st August 1956.

28th September.- All price controls suspended in New South Wales.

4th October.—Minister for Trade stated that United Kingdom asked Government for its reactions to suggestion that United Kingdom should join in partial free trade area in Western Europe.

10th October. Victorian Legislative Assembly passed legislation to abolish cost of living adjustments for State employees.

11th October. Prime Minister announced signing of new five-year Sugar Agreement between Commonwealth and Queensland governments.

12th October.—Queensland State Industrial Court granted an interim shearing award for payment of £7 11s. per 100 sheep shorn. This was accepted by shearers and 10 months old industrial dispute ended.

19th October.—Rise in "C" series index resulted in 11s. increase in New South Wales basic wage.

26th October.—Eight metal trades unions, backed by A.C.T.U., apply to newly formed Commonwealth Industrial Commission for basic wage increases and restoration of quarterly cost-of-living adjustments.

Details released of plan for development of 1½ million acres of land near Esperance, Western Australia, by the American Chase Syndicate.

31st October.—The Tasmanian Budget for 1956-57 was tabled in the House of Assembly. During 1955-57, revenue was £18,000,000 and expenditure £17,900,000. This resulted in a surplus of £100,000. The 1956-57 Budget provided for expenditure of £20,283,000. It was estimated that receipts will be £19,233,000. This would result in a deficit of £1,050,000. Provision was made in the budget proposals for an increase in stamp duty on cheques and a stamp duty on hire purchase agreements.

8th November.—The West Australian Budget for 1956-57 was introduced. In 1955-56, there was a deficit of £1,800,000. Revenue during the year was £49,600,000 and expenditure £51,400,000. The Budget proposals provided for an expenditure of £54,900,000. Estimated revenue was £53,500,000. This would result in a deficit of £1,400,000. Increased land tax and probate duties were announced.

12th November.—Australia and United Kingdom agreed on comprehensive trade pact to replace 24-year-old Ottawa Agreement.

22nd November.—Commonwealth Treasurer announced that Minister for External Affairs had signed loan agreements on behalf of Commonwealth for a total of \$27 million (£A12.1 million).

29th November.—First gas from brown-coal gasification plant at Morwell (Victoria) reached Melbourne through 103 mile high-pressure pipeline.

4th December.—World Bank announced \$50 million loan to Australia for development of agriculture, transport, industry and mining.

#### 1957.

Throughout 1957, exports of merchandise continued at the high level established in the later months of 1956, and for 1956-57 reached a total of £973 million (£203 million more than in 1955-56). Although exports during the second half of 1957, £453 million, were above those for the same period in 1956, there was, during the last three months, a tendency for the level to fall off in comparison with 1956. Imports during the early months of the year continued at the low level established following the restrictions imposed in 1956; but, in the later months of the year, rose considerably following an easing of restrictions in the second quarter. Imports of merchandise during the year 1956-57 totalled £717 million, £102 million less than the total for 1955-56. For the second half of the year imports were £393 million compared with £358 million in each of the previous two six monthly periods. Australia's international reserves rose by £142 million to £567 million during the first six months of the year and by a further £23 million to £590 million during the remainder of the year.

year and by a further £23 million to £590 million during the remainder of the year.

Internal trade was at a higher level than in 1956. The value of retail sales of goods, other than motor vehicles, petrol, etc., increased by approximately 5 per cent over the 1956 level. Sales of motor vehicles, parts, petrol, etc. which received a set back in 1956 as a result of the increased taxes imposed in March, 1956 recovered and sales of these commodities were approximately 7½ per cent above the 1956 level. Sales under hire purchase agreements were also higher than in 1956 and, as a result, balances outstanding increased by £32.2 million compared with an increase of £19.1 million in 1956.

Drought conditions in the Eastern States during 1957 considerably reduced the production of many primary products and preliminary estimates indicate that the total gross value of primary production in 1957-58 will be about 10 per cent. below the 1956-57 level. The wheat crop in 1956-57 134.5 million bushels, was the lowest since 1946-47 but, as a result of the drought conditions in the Eastern States in 1957, it is estimated that the total wheat crop in 1957-58 would be lower still at 96 million bushels. Wool production in 1956-57 was 1,564 million lbs. and with prices about 25 per cent. above those for the previous year was the main factor contributing to the high value of exports. Production of wool in 1957-58 is estimated to be about 1,426 million lbs. with prices about 15 to 20 per cent. below the 1956-57 level.

During the year secondary industries continued to expand. Employment in factories rose during the year and there were increases in output of most commodities for which information is available. There was, however, a fall in the production of some building materials during the early part of the year, but in the second half of the year, this position improved.

Employment in the building and construction, mining and quarrying and transport industries fell during the year by 13,000, 3,700 and 2,600 respectively. These falls, however, were offset to some extent by increases in employment in factories and in the commercial and professional fields. Overall there was a small increase of 9,000 in the number of civil employees (excluding rural and household domestic employees). This increase, however, was less than the increase in the number of persons available for employment and the numbers receiving unemployment benefit increased from 13,000 at the end of 1956 to 26,000 at the end of 1957.

Average nominal wage rates for adult males rose approximately 2 per cent. The main increase occurred in the second quarter following an increase of 10s. per week in the Commonwealth basic wage. Average earnings for employees (male units) rose by about 3 per cent. over the year.

1st February.—Shipping freights to the United Kingdom and European countries rose by 14 per cent.

7th February.—Consolidated Zinc Corporation Ltd. announced £8 million construction programme for a zinc smelter and the production of sulphuric acid and superphosphate at Cockle Creek (New South Wales).

1st March.—Commonwealth Savings Bank increased its maximum housing loan from £1,750 to £2,500.

20th March.—Privy Council decided that the Victorian Act providing for long service leave—Labour and Industry (Long Service Leave), 13th December, 1955,—applied to workers employed under a Commonwealth award. Legal opinion was that it would also apply to such workers in New South Wales, Queensland and Tasmania.

2nd April.—Details of easing of import restrictions released. The ceiling for imports in 1957-58 was raised to £775 million but the modified restrictions will operate from 1st April, the start of the quota year.

16th April.—First regular generation began of electricity from new hydro-power station at Hume Dam on River Murray.

29th April.—Commonwealth Conciliation and Arbitration Commission announced 10s. increase in Commonwealth Basic Wage to operate from 15th May.

New South Wales government declared eight districts of the State drought areas.

9th May.—Commonwealth Treasurer tabled Annual Economic Survey in House of Representatives. It indicated a period of continuing prosperity and progress for Australia but no easing of the present restrictions on bank lending.

23rd May.—Duties reduced on over 800 items imported from foreign countries.

24th May.—Australian Loan Council approved a government borrowing programme of £200 million for financial year 1957-58. This included £166,840,000 for State Works and £33,160,000 for housing under the agreement between the Commonwealth and States. In addition borrowing programmes of £89,000,000 were approved for semi-governmental and local authorities.

30th May.—Commonwealth Government passed legislation imposing a levy on wheat-growers to finance more wheat research.

4th June.—Consolidated Zinc Corporation announced a major undertaking in the development of Weipa Bauxite on Cape York peninsula.

22nd June.—Acting Prime Minister officially closed Adaminaby Dam outlet gates and water started filling the Adaminaby Reservoir.

26th June.—Commonwealth Government decided to grant United States additional air traffic rights from Australia to Antarctica, South Africa, and South-east Asia for reciprocal rights across the United States for Australian Airlines flying to Europe.

2nd July.—High Court ruled that interstate vehicles could not be compelled to register in New South Wales.

6th July.—Agreement on Commerce between Japan and Australia signed in Tokyo by Japanese Prime Minister and Minister for Foreign Affairs and Australian Minister for Trade, on "most favoured nation" basis.

5th August.—First plant in Australia to produce tinplate, built for flat products division of B.H.P. Co. Ltd. at Port Kembla, was officially opened.

15th August.—British migrants enabled to claim pensions as soon as they arrive in Australia. Previously they had waiting period of 5 years for invalid pensions and 20 years for age pensions.

23rd August.—Full High Court upheld validity of Uniform Taxation Legislation but declared invalid the section giving priority to the Commonwealth.

24th August.—Ansett Transport Industries Ltd. purchased A.N.A. as a going concern for £3.3 million.

25th August.—Of growers who exercised their rights to vote, four out of five voted in favour of the Commonwealth Government's stabilization offer for currants and sultanas.

31st August.—The full High Court upheld the validity of a Victorian tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads.

3rd September.—Commonwealth Budget for 1957-58 introduced into House of Representatives. In 1956-57, receipts of the Consolidated Revenue Fund (excluding self balancing items and balances transferred from Trust Accounts) were £1,234,400,000 or £105,700,000 more than in 1955-56. The main items of revenue were (1955-56 receipts shown in parentheses) Income Taxes £620,300,000 (£574,000,000); Excise Duties £217,400,000 (£168,300,000); Customs Duties £68,600,000 (£87,500,000) and Sales Tax £125,800,000 (£110,000,000), Expenditure from the Consolidated Revenue Fund (excluding self balancing items and the amount transferred to the Loan Consolidation and Investment Reserve) amounted to £1,122,800,000. The main items were (1955-56 expenditure shown in parentheses)—Payments to or for the States, £244,100,000 (£220,500,000); Social and Health Services, £223,900,000 (£214,900,000); Defence Services, £188,500,000 (£190,700,000); War and Repatriation Services, £125,700,000 (£124,500,000) and Capital Works and Services, £107,800,000 (£101,900,000). In addition £194,800,000 (£61,600,000 in 1955-56) was provided for the Loan Consolidation and Investment Reserve. Of this amount £111,600,000 was provided from current revenue and £83,200,000 from trust account balances not required.

The amount of loan money required was £192,000,000 for the approved Loan Council programme for State works and housing and £8,000,000 for War Service Land Settlement, a total of £200,000,000. This was obtained from the following sources—Public loans in Australia £97,700,000; State domestic raisings £1,100,000; New York Loan, £1,300,000; Commonwealth sources, £99,000,000 and amount brought forward, £900,000. External Treasury Bills outstanding were reduced by £15,000,000 during the year.

The Budget for 1957-58 provided for an estimated expenditure from the Consolidated Revenue Fund of £1,321,700,000 (excluding self balancing items). This was £87,300,000 more than in 1956-57. The more important items of expenditure proposed were (1956-57 actual expenditure shown in parentheses)—Payments to or for the States £266,700,000 (£244,100,000); Social and Health Services, £243,600,000 (£223,900,000), Defence Services, £190,000,000 (£188,500,000); War and Repatriation services £129,100,000 (£125,700,000); Capital works and services, £122,400,000 (£107,800,000) and Loan Consolidation and Investment Reserve, £119,400,000 (£111,600,000).

Revenue from the main taxes was estimated to be (1956-57 revenue shown in parentheses) —Income taxes, £675,100,000 (£620,300,000); Excise Duties, £231,100,000 (£217,400,000); Sales Tax, £129,500,000 (£125,800,000) and Customs Duties, £74,200,000 (£68,600,000).

The budget proposals provided for increases in the rates of social service pensions and allowances, war and service pensions and hospital benefits, additional expenditure on homes for the aged, an increase in the subsidy to gold producers and increases in payments to the States and expenditure on Capital works and services.

Proposals relating to taxation included—Income Taxes—deduction for dependants increased by £13 for all classes, allowances for depreciation calculated on diminishing value increased by 50 per cent. and rate of tax on companies reduced by 6d. in £1.-Sales tax—rates for household furniture and equipment reduced from 10 per cent to 8½ per cent and for handbags, baskets travelling bags, etc. reduced from 25 per cent to 12½ per cent. Customs and Excise Duties—duties of 1s. per gallon on automotive diesel oil and 6½d. per gallon on aviation kerosene were imposed.—Payroll Tax—exemption raised from £6,240 to £10,400 per annum. In addition it was proposed to increase the Air Navigation charges by 10 per cent.

4th September.—1957-58 Budget introduced into the South Australian House of Assembly. In 1956-57 receipts of the Consolidated Revenue Fund were £65,761,000 (£6,359,000 more than in 1955-56). Expenditure was £65,810,000 (£4,977,000 more than in 1955-56). There was thus a deficit of £49,000 for the year. The Budget for 1957-58 provided for expenditure of £71,615,000 (an increase of £5,805,000). Estimated revenue was £71,095,000 (£5,334,000 more than the previous year). This would leave a deficit of £520,000.

5th September.—1957-58 Budget presented to the Tasmanian House of Assembly. In 1956-57 total revenue was £18,959,000 (£948,000 more than in 1955-56). Expenditure amounted to £19,772,000 (£1,876,000 more than in 1955-56) and there was a deficit of £813,000. The Budget for 1957-58 provided for a total expenditure of £21,887,000 (an increase of £2,115,000). Estimated revenue was £20,797,000 (an increase of £1,838,000). This would result in a deficit of £1,090,000. Budget proposals provided for increases in totalizator taxes, registration fees for bookmakers and clerks and in motor drivers licences and motor vehicle fees. Amendments to the Land Tax Act which would extend exemption to a wider range of charitable, educational religious and non-profit organisations, raise the exemption limit for pensioners and reduce the tax payable by certain sporting clubs would be

introduced. The Government also proposed to introduce legislation to permit a licence to be granted to a suitable organisation to conduct football pools and to limit the rates of interest charged by hire purchase companies.

11th September.—1957-58 Budget introduced into the New South Wales Legislative Assembly. During 1956-57, the transactions of the Consolidated Revenue Fund, Railways, Metropolitan and Newcastle transport and Sydney Harbour services resulted in an overall surplus of £129,000. After providing for debt charges, there were deficits of £5,800,000 on the Railways and £1,200,000 on the Metropolitan and Newcastle transport services. The 1957-58 Budget provided for a total expenditure of £232,300,000 (an increase of £8,600,000 over 1956-57).—Estimated revenue was £232,400,000 (£8,600,000 more than 1956-57).

This would leave a small overall surplus of £100,000. After providing for debt charges it was estimated that there would be deficits of £4,800,000 on the railways and £1,600,000 on the Metropolitan and Newcastle transport services.

1957-58 Budget introduced into the Victorian Legislative Assembly. In 1956-57, Revenue was £133,300,000 expenditure £137,600,000 and the overall deficit £4,300,000. The deficit included a deficit on Railways of £5,200,000 and State Coal Mines of £300,000. The Budget for 1957-58 provides for an expenditure of £145 million (£7,400,000 more than in 1956-57). Revenue for the year was expected to be £141,500,000. This will result in a deficit of £3,500,000. It was expected that the deficit on Railways would be £5 million and on State Coal Mines, £300,000.

12th September.—1957-58 Budget presented to the West Australian Legislative Assembly. In 1956-57, total revenue was £54,300,000 (£4,700,000 more than in 1955-56). Expenditure amounted to £56,200,000 (£4,800,000 more than in 1955-56), and there was a deficit of £1,900,000. The 1957-58 Budget provided for an expenditure of £58,600,000 (an increase of £2,300,000). Receipts were estimated at £55,900,000 (£1,600,000 more than in 1956-57). There would thus be a deficit of £2,700,000.

14th September.—New South Wales Government gazetted maximum interest rates and minimum deposits applicable under hire purchase and credit sales agreements prescribed in the Hire Purchase (Amendment) Act.

26th September.—1957-58 Budget introduced into the Queensland Legislative Assembly. In 1956-57, receipts of the Consolidated Revenue Fund amounted to £85,158,000 which was £9,489,000 more than in 1955-56. Total expenditure was £85,143,000 or £7,751,000 more than in 1955-56. There was thus a surplus of £15,000. The 1957-58 Budget provided for an expenditure of £89,958,000 (£4,815,000 more than in 1956-57). This includes a provision of £655,000 to meet accumulated losses on several State business undertakings. Receipts were estimated at £88,455,000 (or £3,297,000 more than in 1956-57). There would thus be a deficit of £1,503,000.

30th September.—Conference of British Commonwealth Finance ministers opened at Mount Tremblant, Canada.

1st October.—Australia entered into double-tax agreement with Canada similar to those existing between Australia and the United Kingdom, and Australia and the United States of America.

17th October.—Applications invited for the grant of licences for commercial television stations in the Brisbane, Adelaide, Perth and Hobart areas.

24th October.—Treasurer introduced new banking legislation in House of Representatives. Bills later defeated in Senate (November, 27th).

4th November.—First shipment of drought-relief wheat left Western Australia for New South Wales and Queensland.

19th November.—Full High Court ruled that all employees on Federal awards were entitled to long service leave. (See also 20th March).

20th November.—Wheat Industry Research Council and Wheat Industry Research Committees appointed.

10th December.—Commonwealth Bank advises trading banks to increase advances.

12th December.—Bill introduced in Victoria to allow cheque facilities to depositors with State Savings Bank of Victoria.

13th December.—Minister for Trade announced that Commonwealth Government had decided to import 1½ million bushels of wheat from Canada into New South Wales.

## CHRONOLOGICAL TABLE.

# CHRONOLOGICAL TABLE OF CHIEF EVENTS SINCE THE ESTABLISHMENT OF SETTLEMENT IN AUSTRALIA.

Notes.—For each earlier year this Table rarely contains more than two or three items; for recent years, however, in order to provide a wide cover of events, etc., it includes a much greater number. Both the nature of the Table and considerations of space render necessary a continual reduction in these items, and for more information the reader should therefore consult earlier issues.

The Government was centralized in Sydney, New South Wales, up to 1825, when Tasmania (Van Diemen's Land) was made a separate colony. In the Table the names now borne by the States serve to

indicate the localities.

- 1788 N.S.W.—Arrival of "First Fleet", under Captain Arthur Phillip, at Botany Bay.

  Land in vicinity being found unsuitable for settlement, the expedition moved to Sydney Cove, and formal possession of the colony was taken on 26th January.

  Formal proclamation of colony and establishment of regular government on 7th February. Branch Settlement established at Norfolk Island. French navigator La Perouse visited Botany Bay. First cultivation of wheat and barley. First grape vines planted.
- 1789 N.S.W.—First wheat harvested at Parramatta, near Sydney. Discovery of Hawkesbury River.
- 1790 N.S.W.—Scarcity of provisions, "Second Fleet" reached Port Jackson. Landing of the New South Wales Corps.
- 1791 N.S.W.—Arrival of "Third Fleet". Territorial seal brought by Governor King.
- 1792 N.S.W.—Visit of Philadelphia, first foreign trading vessel.
- 1793 N.S.W.—First free immigrants arrived in *Bellona*. First Australian church opened at Sydney. Tas.—D'Entrecasteaux discovered the Derwent River.
- 1794 N.S.W.—Establishment of settlement at Hawkesbury River.
- 1795 N.S.W.—Erection of the first printing press at Sydney. Descendants of strayed cattle discovered at Cowpastures, Nepean River.
- 1796 N.S.W.—First Australian theatre opened at Sydney. Coal discovered by fishermen at Newcastle.
- 1797 N.S.W.—Introduction of merino sheep from Cape of Good Hope.
- 1798 Tas.—Insularity of Tasmania proved by voyage of Bass and Flinders.
- 1800 N.S.W.—Hunter River coal-mines worked. First Customs House in Australia established at Sydney. Flinders' charts published.
- 1801 N.S.W.-First colonial manufacture of blankets and linen.
- 1802 Vic.—Discovery of Port Phillip by Lieut. Murray. Q'land.—Discovery of Port Curtis and Port Bowen by Flinders. S.A.—Discovery of Spencer and St. Vincent Gulfs by Flinders.
- 1803 N.S.W.—First Australian wool taken to England by Capt. Macarthur. Issue of The Sydney Gazette, first Australian newspaper. Vic.—Attempted settlement at Port Phillip by Collins. Discovery of Yarra by Grimes. Tas.—First settlement formed at Risdon by Lieut. Bowen.
- 1804 Vic.—Abandonment of settlement at Port Phillip. Tas.—Foundation of settlement at Hobart by Collins.
- 1805 N.S.W.—First extensive sheep farm established at Camden by Capt. Macarthur.
- 1806 N.S.W.—"The great flood" on the Hawkesbury. Shortage of provisions. Tas.—Settlement at Launceston.
- 1807 N.S.W.—First shipment of merchantable wool (245 lb.) to England.
- 1808 N.S.W.—Deposition of Governor Bligh.
- 1809 N.S.W.—Free school established.
- 1810 N.S.W.—Post Office officially established at Sydney.
- 1813 N.S.W.—Passage across Blue Mountains discovered by Wentworth, Lawson and Blaxland. Macquarie River discovered by Evans.

- 1814 N.S.W.—Flinders suggested the name "Australia", instead of "New Holland".

  Creation of Civil Courts.
- 1815 N.S.W.—First steam engine in Australia erected at Sydney. Lachlan River discovered by Evans. Tas.—Arrival of first immigrant ship with free settlers. First export of wheat to Sydney.
- 1816 N.S.W.—Sydney Hospital opened.
- 1817 N.S.W.—Oxley's first exploration inland. Discovery of Lakes George and Bathurst and the Goulburn Plains by Meehan and Hume. First bank in Australia—Bank of New South Wales—opened at Sydney.
- 1818 N.S.W.—Liverpool Plains, and the Peel, Hastings and Manning Rivers discovered by Oxley, and Port Essington (N.T.) by Captain King.
- 1819 N.S.W.—First Savings Bank in Australia opened at Sydney.
- 1820 Tas.—First importation of pure merino sheep from Camden Park (N.S.W.) flocks.
- 1821 Tas.—Establishment of penal settlement at Macquarie Harbour.
- 1822 N.S.W.—Formation of Agricultural Society of New South Wales.
- 1823 N.S.W.—New South Wales Judicature Act passed. Discovery of gold at Fish
  River by Assistant-Surveyor McBrien. Qld.—Brisbane River discovered by
  Oxley.
- 1824 N.S.W.—Constituted a Crown Colony. Executive Council formed. Establishment of Supreme Court at Sydney, and introduction of trial by jury. First Australian Enactment (Currency Bill) passed by the Legislative Council. Proclamation of freedom of the press. First manufacture of sugar. Vic.—Hume and Hovell, journeying overland from Sydney, arrived at Corio Bay. Qld.—Penal settlement founded at Moreton Bay (Brisbane). Fort Dundas Settlement formed at Melville Island, N.T.
- 1825 Tas.—Van Diemen's Land (Tasmania) proclaimed a separate colony. Qld.—Major Lockyer explored Brisbane River to its source and discovered coal.
- 1826 N.S.W.—Settlement in Illawarra District. Vic.—Settlement at Corinella, Western Port, formed by Captain Wright.
- 1827 Qld.—Darling Downs and the Condamine River discovered by Allan Cunningham. W.A.—Military settlement founded at King George's Sound by Major Lockyer. First official claim of British Sovereignty over all Australia.
- 1828 N.S.W.—Second constitution. First Census. Sturt's expedition down Darling River. Gas first used at Sydney. Richmond and Clarence Rivers discovered by Captain Rous. Vic.—Abandonment of settlement at Western Port. Qld.—Cunningham discovered a route from Brisbane to the Darling Downs, and explored Brisbane River.
- 1829 N.S.W.—Sturt's expedition down Murrumbidgee River. W.A.—Foundation of settlement at Swan River. Foundation of Perth.
- 1830 N.S.W.—Sturt, voyaging down Murrumbidgee and Murray Rivers, arrived at Lake Alexandrina. Tas.—Black line organized to force aborigines into Tasman's Peninsula, but failed. Small remnant subsequently (1830 to 1835) persuaded to settle on Flinders Island.
- 1831 N.S.W.—Crown lands first disposed of at auction. Mitchell's explorations north of Liverpool Plains. SS. Surprise, first steamship built in Australia, launched at Sydney. First coal shipped from Australian Agricultural Company's workings at Newcastle, N.S.W. First assisted immigration to N.S.W. S.A.—Wakefield's first colonization committee. W.A.—Appointment of Executive and Legislative Councils.
- 1832 N.S.W.-State Savings Bank established.
- 1833 N.S.W.—First School of Arts established at Sydney.
- 1834 N.S.W.—First settlement at Twofold Bay. Vic.—Settlement formed at Portland Bay by Henty Brothers. S.A.—Formation of the South Australian Association. W.A.—Severe reprisals against Murray River natives at Pinjarrah for continued attacks on settlers.
- 1835 Vic.—John Batman arrived at Port Phillip; foundation of Melbourne.

- 1836 N.S.W.—Mitchell's overland journey from Sydney to Cape Northumberland (S.A.).

  Vic.—Proclamation of Port Phillip district as open for settlement. S.A.—

  Settlement founded at Adelaide under Governor Hindmarsh.
- 1837 N.S.W.—Appointment in London of Select Committee on Transportation. Vic.— First overlanders from Sydney arrived at Port Phillip.
- 1838 N.S.W.—Discontinuance of assignment of convicts. Qld.—Settlement of German missionaries at Brisbane—first free colonists. S.A.—"Overlanding" of cattle from Sydney to Adelaide along the Murray route by Hawden and Bonney. Settlement at Port Essington, Northern Territory, formed by Captain Bremer.
- 1839 N.S.W.—Gold found at Vale of Clwydd by Count Strzelecki. S.A.—Lake Torrens discovered by Eyre. Port Darwin discovered by Captain Stokes. W.A.—Murchison River discovered by Captain Grey.
- 1840 N.S.W.—Abolition of transportation to New South Wales. Land regulations—proceeds of sales to be applied to payments for public works and expenditure on immigration. Vic.—Determination of northern boundary. Qld.—Penal settlement broken up and Moreton Bay district thrown open. S.A.—Eyre began his overland journey from Adelaide to King George's Sound.
- 1841 N.S.W.—Gold found near Hartley. W.A.—Completion of Eyre's overland journey from Adelaide to King George's Sound. New Zealand proclaimed a separate colony.
- 1842 N.S.W.—Incorporation of Sydney. Vic.—Incorporation of Melbourne. S.A.—Discovery of copper at Kapunda.
- 1843 N.S.W.—First Representative Constitution (under Act of 1842). Qld.—Moreton Bay granted legislative representation as a distinct electoral division.
- 1844 Qld.—Leichhardt's expedition to Port Essington (N.T.). S.A.—Sturt's last expedition inland.
- 1845 N.S.W.—Mitchell's explorations on the Barcoo. Qld.—Explorations by Mitchell and Kennedy. S.A.—Discovery of the Burra copper deposits. Sturt discovered Cooper's Creek.
- 1846 N.S.W.—Initiation of meat-preserving. Qld.—Foundation of settlement at Port Curtis. S.A.—Proclamation of North Australia.
- 1847 N.S.W.—Iron-smelting commenced near Berrima. Overland mail established between Sydney and Adelaide. Qld.—Explorations by Leichhardt, Burnett and Kennedy.
- 1848 N.S.W.—National and Denominational School Boards established. Qld.— Leichhardt's last journey. Kennedy speared by the blacks at York Peninsula. Chinese brought in as shepherds.
- 1849 N.S.W.—Indignation of colonists at arrival of convict ship Hashemy. Exodus of population to gold-fields of California. Vic.—Randolph prevented from landing convicts. Qld.—Assignment of Hashemy convicts to squatters on Darling Downs. W.A.—Commencement of transportation to Western Australia.
- 1850 N.S.W.—Final abolition of transportion. Sydney University founded. Vic.—Gold discovered at Clunes. Representative government granted. S.A.—Representative government granted. W.A.—Pearl oysters found by Lieut. Helpman at Saturday Island Shoal. Tas.—Representative government granted.
- 1851 N.S.W.—Payable gold discovered by Hargreaves at Lewis Ponds and Summerhill Creek. Vic.—Port Phillip created an independent colony under the name of Victoria. Discovery of gold in various localities. W.A.—Proclamation of Legislative Council Act.
- 1852 N.S.W.—Arrival of *Chusan*, first P. and O. mail steamer from England. S.A.—
  First steamer ascended the Murray River to the junction with the Darling.
  Tas.—Meeting of first elective Council protested against transportation.
  Payable gold discovered at The Nook, near Fingal, and at Nine Mile Springs.
- 1853 Tas.—Abolition of transportation. Vic.—Melbourne University founded.
- 1854 Vic.—Opening of first Australian railway—Flinders Street to Port Melbourne. Riots on Ballarat gold-fields. Storming of the Eureka Stockade, 3rd Dec. Telegraph first used.

- 1855 N.S.W.—Opening of railway—Sydney to Parramatta. Mint opened.
- 1856 N.S.W.—Pitcairn Islanders placed on Norfolk Island. W.A.—A. C. Gregory's expedition in search of Leichhardt. Responsible Governments in N.S.W., Vic., S.A. and Tas. (Act of 1855).
- 1857 N.S.W.—Select Committee on Federation. Vic.—Manhood suffrage and vote by ballot. S.A.—Passage of Torrens' Real Property Act.
- 1858 N.S.W.—Establishment of manhood suffrage and vote by ballot. Telegraphic communication between Sydney, Melbourne and Adelaide. Qld.—Canoona gold rush.
  Population of Australia reached 1,000,000.
- 1859 Qld.—Proclamation of Queensland as separate colony. Tas.—First submarine cable, via Circular Head and King Island to Cape Otway.
- 1860 Vic.—Burke and Wills left Melbourne and crossed to Gulf of Carpentaria. S.A.—
  Copper discoveries at Wallaroo and Moonta. McDouall Stuart reached centre of continent and named "Central Mount Stuart".
- 1861 N.S.W.—Anti-Chinese riots at Lambing Flat and Burrangong gold-fields. Opening of first tramway in Sydney. Regulation of Chinese immigration. Vic.—Burke and Wills perished at Cooper's Creek, near Innamincka, S.A.
- 1862 N.S.W.—Abolition of State aid to religion. Real Property (Torrens) Act passed. S.A.—Stuart crossed the Continent from south to north. W.A.—First export of pearl-shell.
- 1863 Vic.—Intercolonial Conference at Melbourne. S.A.—Northern Territory taken over. W.A.—Initiation of settlement in the north-west district. Henry Maxwell Lefroy discovered and traversed area now comprised in the Coolgardie-Kalgoorlie gold-field.
- 1864 Qld.—First sugar made from Queensland cane.
- 1865 N.S.W.—Destruction by fire of St. Mary's Cathedral, Sydney.
- 1866 N.S.W.—Passage of Public Schools Act of (Sir) Henry Parkes. S.A.—Introduction of camels for exploration, etc.
- 1867 Vic.—Imposition of protective tariff. Old.—Discovery of gold at Gympie.
- 1868 W.A.—Arrival of Hougomont, last convict ship.
- 1869 Vic.—Record gold nugget "Welcome Stranger" 2,284 oz. found near Dunolly.
  W.A.—First telegraph line opened from Perth to Fremantle.
- 1870 N.S.W.—Intercolonial Exhibition opened at Sydney. Imperial troops withdrawn. Vic.—Intercolonial Congress at Melbourne. S.A.—Commencement of transcontinental telegraph.
- 1871 N.S.W.—Permanent military force raised. W.A.—Forrest's explorations. Tas.—
  Discovery of tin at Mount Bischoff.
- 1872 Vic.—Mint opened. S.A.—Cable from Java to Port Darwin. Completion of transcontinental telegraph line.
- 1873 N.S.W.—Intercolonial Conference at Sydney. First volunteer encampment.

  Inauguration of mail service with San Francisco.
- 1874 N.S.W.—Triennial Parliaments Act passed. Intercolonial Conference. S.A.—
  University of Adelaide founded. W.A.—John and Alexander Forrest arrived at Overland Telegraph from Murchison.
- 1875 Qld.—Transfer of Port Albany Settlement to Thursday Island.
- 1876 N.S.W.—Completion of cable—Sydney to Wellington. W.A.—Giles crossed colony from east to west. Tas.—Death of Truganini, last representative of Tasmanian aboriginals.
- 1877 W.A.—Opening of telegraphic communication with South Australia. Population of Australia reached 2,000,000.
- 1878 Qld.—Restriction of Chinese immigration.
  Introduction of telephone into Australia.
- 1879 N.S.W.—First artesian bore at Kallara Station, near Bourke. First steam tramway. W.A.—A. Forrest's explorations in the Kimberley district, and discovery of the Fitzroy pastoral country.

- 1880 N.S.W.—Public Instruction Act passed. Vic.—First Australian Telephone Exchange opened in Melbourne.
  - Federal Conference at Melbourne and Sydney.
- 1881 N.S.W.—Further restrictions on Chinese immigration.

  First Australia-wide censuses on same date taken.
- 1882 W.A.-Nugget of gold found between Roebourne and Cossack.
- 1883 N.S.W.—Discovery of silver at Broken Hill. Completion of railway between New South Wales and Victoria. Qld.—Annexation of New Guinea—repudiated by Imperial authorities.
  Federal Conference held at Sydney. Federal Council created.
- 1884 Federation Bill passed in Victoria and rejected in New South Wales. British protectorate declared over New Guinea.
- 1885 N.S.W.—Military contingent sent to the Sudan. Opening of the Broken Hill Proprietary Silver Mines. W.A.—Gold found by prospectors on the Margaret and Ord Rivers in the Kimberley district. Tas.—Silver-lead discovered at Mount Zeehan.
- 1886 Tas.—Discovery of gold and copper at Mount Lyell.

  First session of Federal Council held at Hobart on 26th January.
- 1887 W.A.—Gold discovered at Southern Cross.

  First "Colonial" Conference in London. Australasian Naval Defence
  Force Act passed.
- 1888 N.S.W.—Restrictive legislation against Chinese, imposing poll-tax of £100. Qld.—Railway communication opened between Sydney and Brisbane.

  Conference of Australian Ministers at Sydney to consider question of Chinese immigration. First meeting of the Australasian Association for the Advancement of Science held in Sydney.
- 1889 Qld.—Railway communication established between Brisbane and Adelaide. W.A.—
  Framing of new Constitution. Tas.—University of Tasmania founded.
  Population of Australia reached 3,000,000.
- 1890 W.A.—Responsible Government granted.

  Meeting at Melbourne of Australasian Federation Conference.
- 1891 N.S.W.—Arrival of Australian Auxiliary Squadron. Cessation of assisted immigration. W.A.—Discovery of gold on the Murchison.

  First Federal Convention in Sydney, draft bill framed and adopted.
- 1892 W.A.—Discovery of gold at Coolgardie.
- 1893 Financial crisis, chiefly affecting the eastern States.
- 1894 S.A.—Women's suffrage granted—first State to do so.
- 1895 N.S.W.—Free-trade tariff. Land and income taxes introduced.

  Conference of Premiers on Federation at Hobart.
- 1896 N.S.W.—People's Federal Convention at Bathurst. Vic.—Wages Board system established by Act of Parliament.
- 1897-8 Sessions of Federal Convention at Adelaide, Sydney and Melbourne.
- 1898 Draft Federal Constitution Bill submitted to electors in Victoria, New South Wales, South Australia and Tasmania. Requisite statutory number of votes not obtained in New South Wales.
- 1899 First contingent of Australian troops sent to South Africa. Conference of Premiers in Melbourne to consider amendments to Federal Constitution Bill. Referendum—Bill accepted by New South Wales, Victoria, Queensland, South Australia and Tasmania. First Labour Government (Queensland).
- 1900 N.S.W.—Old-age pensions instituted. Contingents of naval troops sent to China. Commonwealth Constitution Act received Royal Assent, 9th July. Proclamation of Commonwealth signed 17th September. Mr. (afterwards Sir) Edmund Barton formed first Federal Ministry.
- 1901 Proclamation of the Commonwealth at Sydney. First Commonwealth Parliament opened at Melbourne by the Duke of Cornwall and York. Interstate free-trade established.
- 1902 Completion of Pacific Cable (all-British). First Commonwealth Tariff.
- 1903 Coolgardie and Kalgoorlie Water Supply Scheme completed. Inauguration of the Federal High Court.

- 1904 Commonwealth Conciliation and Arbitration Act.
- 1905 Population of Australia reached 4,000,000. Re-introduction of assisted immigration in New South Wales.
- 1906 Wireless telegraphy installed between Queenscliffe, Vic., and Devonport, Tas. Papua taken over by Commonwealth.
- 1907 First telephone trunk line service between Capital Cities, i.e., Sydney and Melbourne. Imperial Conference in London. Declaration of first basic wage in "Harvester Judgment".
- 1908 Canberra chosen as site of Australian Capital.
- 1909 Imperial Defence Conference in London. Visit of Lord Kitchener to report and advise on Australian military defence. Queensland University founded. Establishment of Commonwealth Age Pension Scheme.
- 1910 Penny Postage. Arrival of Yarra and Parramatta, first vessels built for the Royal Australian Navy. Australian Notes Act passed and first Commonwealth notes issued. Admiral Sir R. Henderson visited Australia to advise on naval defence.
- 1911 First Commonwealth Census. Transfer of Australian Capital Territory and Northern Territory to Commonwealth. Introduction of compulsory military training. University of Western Australia founded.
- 1912 Opening of Commonwealth Bank. First payments of Maternity Bonus. First sod turned at Port Augusta of Trans-Australian Railway.
- 1913 Australian Capital named Canberra and foundation stone laid. Appointment of Interstate Commission.
- 1914 Visit of General Sir Ian Hamilton to report on military defence scheme. Double dissolution of Commonwealth Parliament. Transfer of Norfolk Island to Commonwealth.

  European War declared 4th August. German possessions in South-West Pacific seized by Australian Naval and Military Expeditionary Force. German cruiser Emden destroyed by H.M.A.S. Sydney at Cocos Islands, 9th November. Australian and New Zealand Army Corps (A.N.Z.A.C.) formed under Sir William Birdwood.
- 1915 Opening of Broken Hill Proprietary's Ironworks at Newcastle, N.S.W.

  Australian and New Zealand troops landed at Gallipoli, 25th April.

  Evacuation, 18th-20th December. Australian warships with Grand Fleet.
- 1916 Purchase of steamships by the Commonwealth.
  - Australian and New Zealand mounted troops organized in mounted divisions and camel corps, operating thereafter in Egypt, Palestine and Syria. Other troops transferred to France. First proposal for compulsory military service overseas defeated by referendum.
- 1917 National Ministry formed under Rt. Hon. W. M. Hughes. Transcontinental (Kalgoorlie-Port Augusta) Railway completed.

  Australian Flying Corps operating with R.F.C. in Palestine and France. Second proposal for compulsory military service overseas defeated by referendum.
- 1918 Population of Australia reached 5,000,000. Australia House (Strand, London) opened by the King.

  Armistice with Germany, 11th November. Repatriation Commission created
- 1919 Peace Conference. Return of Australian troops. Flight England to Australia by Capt. (Sir) Ross Smith and Lieut. (Sir) Keith Smith. Peace Treaty signed at Versailles, 28th June.
- 1920 Visit to Australia of H.R.H. the Prince of Wales. Imperial Statistical Conference in London.
- 1921 Mandate given to Australia over Territory of New Guinea. First direct wireless press message, England to Australia. Second Commonwealth Census.
- 1922 First lock on River Murray opened at Blanchetown, South Australia. Queensland Legislative Council abolished.
- 1923 First sod turned on the site of Commonwealth Parliament House at Canberra.
- 1924 Directorate of Commonwealth Bank appointed. Australian Loan Council formed.

- 1925 Population of Australia reached 6,000,000. Solar Observatory established at Canberra.
- 1926 Council for Scientific and Industrial Research established. Imperial Conference, Dominion Status defined.
- 1927 Transfer of Seat of Commonwealth Government from Melbourne to Canberra. Beam wireless established. Financial agreement between Commonwealth and States.
- 1928 State Debts referendum carried.
- 1929 Commonwealth Bank empowered to mobilize gold reserve. Abolition of peacetime compulsory military training in favour of voluntary system.
- 1930 Effects of world-wide severe economic depression felt throughout Australia.

  Brisbane-Grafton (N.S.W.) railway, first step towards uniform gauge railway communication between capitals of mainland States, opened. First Australian—Rt. Hon. Sir Isaac Alfred Isaacs, G.C.M.G., Chief Justice of the High Court—appointed Governor-General of Australia.
- 1931 Depression continued. Initiation of Premiers' Conference plan to meet the financial situation. Commonwealth Bank Act amended to provide for temporary lower reserve against notes. England departed from gold standard. Commonwealth Bank assumed control of exchange rate and lowered it to 125 (previously 130).
- 1932 Sydney Harbour Bridge opened. Australian Broadcasting Commission established. Legislation passed enabling note reserve to be held in sterling securities. Imperial Economic Conference at Ottawa.
- 1933 World Economic Conference in London. Secession Referendum carried (Western Australia). Antarctica and Ashmore and Cartier Islands taken over by the Commonwealth. Third Commonwealth Census.
- 1934 Inauguration of England-Australia Air Mail Service.
- 1935 Empire Statistical Conference at Ottawa.
- 1936 Joint Commonwealth and State Marketing Schemes invalidated by decision of the Privy Council in the James case. Tasmania linked with mainland by submarine telephone cable.
- 1937 Imperial Conference in London. Report of the Royal Commission on Monetary and Banking Systems in Australia.
- 1938 New Defence Programme involving expenditure of £63,000,000 over three years New Trade Treaty with Japan.
- 1939 Population of Australia reached 7,000,000. War declared on Germany, 3rd September. Royal Australian Navy placed at disposal of Great Britain. Advance party of Australians embarked for Middle East, 15th December.
- 1940 Exchange of Ministers between Australia and United States of America marked Australia's entry into field of direct diplomatic representation with countries other than the United Kingdom.

First Australian convoy (6th Australian Division) sailed for Middle East. Cruiser Sydney crippled Italian cruiser Bartolomeo Colleoni.

1941 Establishment of Commonwealth Child Endowment Scheme. United States Congress passed Lend-Lease Bill.

Arrival of units of Eighth Australian Division in Malaya. Sydney lost after fight with Kormoran. R.A.A.F. in defence of Britain, in Middle East and at Singapore. Australian forces engaged in Middle East, Greece, Crete and Syria. Japanese attack on Pearl Harbour. Australia declared war on Japan, 9th December.

1942 Federal uniform taxation adopted. Commonwealth widows' pensions introduced.

Rationing of commodities.

Japanese landed at Rabaul. Fall of Singapore. Darwin bombed. United States armed forces landed in Australia. Headquarters of South-West Pacific Command set up by General Douglas MacArthur in Melbourne. Coral Sea Battle. Japanese midget submarines in Sydney Harbour. Owen Stanley Ranges offensive. Ninth Australian Division at El Alamein (North Africa). Kokoda recaptured.

1943 Price Stabilization Scheme. Mortgage Bank Department of Commonwealth Bank opened. National Works Council formed.

Australian forces combined with American forces to recapture many places in New Guinea. Commencement of long series of amphibious operations. R.A.A.F. from 1943 till end of war operated on all fronts.

1944 Pay-as-you-earn taxation operated from 1st July. Referendum refused Commonwealth Government increased powers in post-war period.

Australian advances in northern New Guinea. Allied invasion of France. Australians landed on New Britain; took over from Americans in Bougainville, Solomon Islands, and at Aitape, New Guinea.

1945 Captain Cook Dock opened. Re-establishment and Employment Act. Banking Act to regulate banking and to protect the currency and public credit. Australia ratified United Nations Charter.

Cessation of hostilities in Europe, 8th May. Cessation of hostilities against Japan, 15th August. General demobilization commenced.

- 1946 Cessation of man-power controls. Commonwealth Government accepted responsibility for supply and maintenance of BCOF in Japan. Inauguration of Commonwealth Employment Service. Joint Organization (Wool Disposal) commenced operations. Act to establish National University at Canberra. Coal Industry Act providing, inter alia, for a joint Commonwealth-State authority. Commonwealth and State agreement on housing. Trans-Australia Airlines (Government) began operations. Constitution Alteration Referendum granted powers in respect of social services to Commonwealth. Double taxation relief agreement between Australia and Britain. Approval for establishment of guided missile range in Central Australia.
- 1947 End of demobilization. Census of Australia—first since 1933. Legislation to nationalize trading banks enacted (see 1948). Australian National Antartic Research Expedition to establish scientific research station at Heard Island. First "displaced persons" reached Australia.
- 1948 Forty-hour week effective throughout Australia. Membership of Commonwealth Parliament increased. Constitution Alteration (Rents and Prices) proposal defeated. High Court declared invalid vital sections of Banking Act 1947. International Trade Organization Act (General Agreement on Tariffs and Trade and Havana Charter for International Trade Organization).
- 1949 Nationality and Citizenship Act operative. Broadcasting Control Board came into operation. New Guinea placed under international trusteeship and administrative union of Papua and New Guinea established. Certain Australian aboriginals for first time granted franchise at Commonwealth elections. Establishment of New South Wales University of Technology. Australian Whaling Commission established. Devaluation of sterling against American dollar, and commensurate devaluation of Australian pound to two dollars twenty-four cents. Commencement of Snowy Mountains Hydro-electric Power Scheme. Australia's population reached 8,000,000.
- 1950 Severe flooding in New South Wales. Arrival of Field-Marshal Sir William Slim, Chief of Imperial General Staff, for defence talks. Following attacks by forces of North Korea on forces of Republic of Korea, United Nations called on members to furnish assistance to Republic of Korea. Australian naval and air forces in vicinity of Korea placed at disposal of United Nations. Inauguration of modified free medicine scheme. Adult franchise for Victorian Legislative Council replaced existing franchise dependent on property qualifications. National Service Bill to establish a system of national training for defence forces of Australia introduced in House of Representatives. Commonwealth Government to contribute £31,250,000 to Colombo Plan for Co-operative Economic Development in South and South-East Asia and £3,500,000 for technical assistance programme. Conference of Commonwealth Prime Ministers in London.
- 1951 Opening of Jubilee celebrations to mark the fiftieth year of Australian federation.

  British Government's confirmation of transfer of Heard Island and the Macdonald Islands (Southern Indian Ocean) to Australia. Double dissolution of Commonwealth Parliament. Official cessation of hostilities with Germany.

  Conferences at all levels of business, finance, and working classes called by

- 1951— Prime Minister to discuss methods of dealing with adverse economic trends. Security Treaty signed in Washington by the United States of America, Australia and New Zealand for action in the event of an armed attack in the Pacific. Japanese Peace Treaty signed at San Francisco. Third Conference of Government Statisticians of the British Commonwealth held in Canberra. Opening of new Legislative Council of Papua and New Guinea, which included, for the first time in the history of Australian Legislature, representatives of the native peoples.
- 1952 Nuclear experiments commenced at National University, Canberra. Refusal by Commonwealth Conciliation Commissioner of application for marginal wage increase affected more than 250,000 metal trades workers throughout Australia. Widespread bushfires in south-eastern Australia. Important high-grade uranium deposits discovered at Rum Jungle, Northern Territory. 1st Battalion, The Royal Australian Regiment, sailed from Sydney for service in Korea. Commonwealth Bank prohibited the establishment of further import credits without specific import licences. Severe restrictions imposed on imports from all sources and on amounts available for Australians travelling overseas. Agreement between the Commonwealth and South Australian Governments and the Combined Development Agency of the British and American Governments, on the development of uranium deposits at Radium Hill, South Australia. Central and southwest New South Wales experienced one of the worst floods in history. Representatives of New Zealand, the United States of America and Australia met at Honolulu to consider the Pacific defence pact (A.N.Z.U.S.). Qantas Empire Airways began first direct service between Sydney and Johannesburg, South Africa. Britain's first atomic weapon detonated on the Monte Bello Islands, near the north-west coast of Australia. British Commonwealth Economic Conference in London.
- 1953 Premier's Conference in Canberra failed to reach agreement on return of income tax powers to States. 2nd Battalion sailed from Sydney for service in Korea. Bill introduced into Northern Territory Legislative Council to give citizenship rights to Northern Territory aboriginals, except those committed to State care. Atomic Energy Act 1953 established Atomic Energy Commission, National Health Bill 1953 consolidated legislation relating to health services. Australia and United States of America signed conventions to end double taxation between the two countries. Coronation of Her Majesty Queen Elizabeth the Second. Britain and Australia signed agreement for reciprocity in social services benefits. Conference of Commonwealth Prime Ministers held in London. Commonwealth Medical Benefits Scheme commenced. Korean armistice signed by United Nations and Communist Forces. Pearl Fisheries Act provided for stricter control of pearl fisheries. Commonwealth Court of Conciliation and Arbitration granted employers' applications for abandonment of the system of automatic adjustment of the basic wage in accordance with retail price index numbers. Oil discovered in Western Australia.
- 1954 Her Majesty the Queen, with His Royal Highness the Duke of Edinburgh, made first tour of Australia by reigning sovereign. Australian Antarctic Research Expedition established a station at Mawson to conduct meteorological and other research. An Australian Services mission visited Singapore for a conference between Service representatives of the United Kingdom, the U.S.A., Australia, and New Zealand. Inaugural meeting of Nuclear Research Foundation. Mr. and Mrs. Vladimir Petrov of the Soviet Embassy granted political asylum. Soviet Government recalled its Embassy in Australia and Australian Embassy left Moscow. Royal Commission into espionage in Australia set up. Political conference on Korea and Indo-China opened in Geneva. Australia took part in Five Power military talks, at Washington, on South-East Asia. Premier of South Australia announced two new uranium finds in north-east of State. Australian population census taken. Carnegie Corporation granted £250,000 to help finance the building of a giant radio telescope. Australia at the Manila Conference signed a treaty pledging collective defence against agression in South-East Asia and the South-West Pacific. 3rd Battalion withdrawn from Korea. At Rum Jungle, Prime Minister officially opened first uranium treatment plant established in Australia. National Joint Production Council formed representing both management and workers. Atomic Energy Commission authorized to construct an advanced type of nuclear reactor and research laboratories as part of a programme of co-operation in atomic research with the United Kingdom. Privy Council ruled New South Wales State Transport (Co-ordination) Act invalid insofar as it applied to interstate transport.

1955 Commonwealth Government agreed to let about 135 Japanese pearl divers enter Australia to operate with pearling fleets from Broome to Darwin. Conference of British Commonwealth Prime Ministers held in London. Australia's first aluminium plant began production. Minister for External Affairs attended first council meeting of signatories to Manila Treaty. Prime Minister visited Washington as guest of President Eisenhower to talk on defence policy and Australia's role in South-East Asia. First power generated from Snowy Mountains fed into New South Wales electricity system. Disastrous floods covered large areas of central west New South Wales and Hunter Valley. Australian population reached 9,000,000. All price control ended in New South Wales. Announced that Australia would make Salk polio vaccine at Melbourne. Australia's 1955-56 immigration programme increased to a basic intake of 125,000 migrants. Privileges committee of Commonwealth Parliament found Messrs. Brown and Fitzpatrick guilty of serious breach of privilege. Both committed to prison for three months. Commonwealth Full High Court declared that recent legislation imposing a road tax on interstate hauliers was invalid. South Australian State Government's uranium treatment plant at Port Pirie began operations. First International Wool Textile Research Conference to be held in Australia opened in Sydney. First F.A.O. Conference to be held in Australia opened in Brisbane. First S.E.A.C.D.T. defence talks to be held in Australia began in Melbourne. Australian task force left for Malaya. New £30 million hotstrip steel mill of Australian Iron and Steel Ltd. at Port Kembla (N.S.W.) opened. Minister for Health announced that Commonwealth Government had decided to apply means test to Pensioner Medical Service. New South Wales Government reintroduced quarterly automatic basic wage adjustments. Cocos (Keeling) Islands became Territory under authority of Commonwealth. Government of Victoria issued High Court writ for declaration that present system of uniform taxation is illegal.

1956 Dr. Roberto Regala appointed first Philippines Ambassador to Australia. Rent control lifted in Tasmania. S.E.A.T.O. military advisers conference opened in Melbourne. Disastrous floods in Queensland, New South Wales, Victoria and north-eastern Tasmania. Secretary-General of United Nations paid short visit to Australia. High Court ruled that Arbitration Court had no power to impose penalties on those disobeying its orders. Australia's first electric main railway line, 98 mile section from Melbourne to Traralgon, Gippsland, opened. Prime Minister in Supplementary Budget announced immediate increases in company and sales taxation and excise and customs duties. Australia and Netherlands completed agreement under which 75,000 Dutch settlers would come to Australia in next five years. Northern Territory Legislative Council approved agreement between Commonwealth Government and Australian-American backed company giving company an option on 750,000 acres of sub-coastal plains for rice growing. Lengthy industrial dispute in Queensland shearing industry. Australia and United Kingdom agreed on new multi-million pound programme for Woomera rocket range. Sweeping changes made in Commonwealth system of conciliation and arbitration by new Conciliation and Arbitration Act (see p. 158). States of New South Wales, Victoria, South Australia and Tasmania marked centenary of responsible government by special ceremonies. Australia's first ambassador to Burma appointed. Bilateral agreement signed between Australia and U.S.A. for peaceful uses of atomic energy. As result of decision by Privy Council, New South Wales liable for repayment of £1 million to interstate road hauliers in respect of licence fees and mileage charges paid under protest since July, 1952 (see 1954). First Commissioner for Federation of Malaya in Australia appointed. Dispute over control of Suez Canal resulted in London conference of Canal users. Australian Prime Minister appointed as chairman of committee to place views of conference before the Egyptian President. Diplomatic relations between Australia and Egypt subsequently broken off. Federal Government decided to reduce immigration from southern European countries. Regular television transmissions commenced in Australia (Sept. 16). First atomic tests at Maralinga (South Australia). £24 million Eildon Dam, largest water storage scheme in southern hemisphere, officially opened by Premier of Victoria. Australian Government agreed to provide sanctuary for up to 10,000 refugees from Hungarian political oppression. Australia and United Kingdom agreed on comprehensive trade pact to replace 24-year-old Ottawa Agreement. Olympic games held in Melbourne, opened by H.R.H. the Duke of Edinburgh. Antarctic expedition sailed with intention of establishing new station at Vestfold Hills as well as extending existing bases.

1957 Commonwealth Government representatives and chiefs of private trading banks met in Canberra to discuss changes in the banking system. Later, government introduced banking legislation to give effect to proposals, but bills were defeated Third S.E.A.T.O. Council meeting held in Canberra, preceded by conference of military advisers. Privy Council decided that Victorian Act providing for long service leave applied to workers under Commonwealth awards. High Court later extended provision to cover workers employed under Commonwealth awards in all States. National service intake cut by two-thirds to about 12,000 recruits a year, and training confined to Army. South-Pacific Commission Conference held in Canberra. Commonwealth Conciliation and Arbitration Commission granted 10s. increase in Commonwealth Basic Wage to operate from 15th May. Consolidated Zinc Corporation and Queensland Government signed agreement for development of £45 million bauxite project at Weipa in Cape York peninsula. Acting Prime Minister officially closed Adaminaby Dam outlet gates and water started filling the Adaminaby reservoir. Conference of British Commonwealth Prime Ministers opened in London. Commonwealth Government decided to grant United States additional air traffic rights from Australia to Antartica, South Africa, and South-east Asia for reciprocal rights across the United States for Australian airlines flying to Europe. International Geophysical Year commenced (July 1); over 250 Australian scientists participated. High Court ruled that interstate vehicles could not be compelled to register in New South Wales. Agreements made with State Governments of Western Australia, South Australia, New South Wales, and Queensland for integration of statistical services. Agreement for most-favoured-nation treatment of commerce between Japan and Australia signed in Tokyo. Queensland elections result in return of first non-labour government for 25 years. First plant in Australia to produce tin-plate officially opened. Full High Court upheld validity of uniform taxation legislation but declared invalid section giving priority to the Commonwealth. Commonwealth established National Capital Development Commission to co-ordinate the expansion of Canberra as the centre of Commonwealth administration. Full High Court upheld validity of a Victorian tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. Australia set up remote automatic weather station at Taylor Glacier, 60 miles west of Mawson base. Mr. Gunn Lay Teik first High Commissioner for Malaya in Australia. Russia launched first satellite projectile. Applications invited for grant of licences for commercial television stations in Brisbane, Adelaide, Perth and Hobart areas. Agreement made for standardization of gauge of Melbourne-Albury railway line. Committee (Murray Committee) appointed by Commonwealth Government to inquire into the future of Australian Universities presented report and as a result a new university is projected in Melbourne. Japanese Prime Minister, Mr. Kishi, visited Australia. Committee, under chairmanship of Lieut.-General Sir Leslie Morshead, to review organization of Defence Departments recommended amalgamation of Supply and Defence Production Departments. International Training Centre in Fisheries Co-operatives and Training Administration opened in Sydney under sponsorship of Food and Agriculture Organization of the United Nations. Prime Minister opened £26 million munitions plant at St. Mary's.

## STATISTICAL SUMMARY, AUSTRALIA.

Note.—(1) In most cases where figures are available back to 1861, these were shown in Official Year Book No. 39, pp. xxviii-xxix.

(2) Most of the statistics in this Summary relate to the periods shown in the table headings. In those comparatively few cases where the statistics relate to other periods, this is indicated in footnotes.

Item.			Ye	ar ended	30th Ju	ne—		
nem.	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1957.
Demography(a)—	1.505					1		
Population(b) { '000 Males '000 Females '000 Persons	1,737 1,504 3,241	2,005 1,820 3,825	2,382 2,192 4,574	2,799 2,712 5,511	3,333 3,220 6,553	3,599 3,545 7,144	4,311 4,217 8,528	4,831 4,702 9,533
Net Oversea Migration '000 '000	26.9	3.0	74.4	17.5	-10.1	5.2 75	111.4	94.0
Marriages { Rate(c)	7.5	7.3	8.8	8.6	6.0	10.6	9.2	72
Divorces(d) and Judicial Separa-	190	399	522	1,502	1,955	3,330	7,327	6,481
Births $\begin{cases} 000 \\ Rate(c) \end{cases}$	110 34.5	103	122 27.2	136 25.0	119	135	193	212
Deaths 5 '000	47 14.8	46 12.2	48 10.7	9.9	57	71	9.7	86 9.1
Infant Deaths Rate(c) 7000 Rate(e)	12.7	10.7	8.4 68.5	9.0	8.7 5.0 42.1	10.0 5.3 39.7	4.9 25.2	4.6
WAGES (ADULT MALES)(a)—								
Nominal Weekly Wage Index Numbers	S	848	1,000	1,826	1,752	1,997	4,495	6,049
Real Wage Index Numbers(g)	(V)	(J)	1,000	1,087	1,210	1,194	1,439	(h)1,465 (i) 1,431
PRODUCTION— Agricultural(j)—							1	
Wheat { Area mill. acs. Yield mill. bus. Av. Yield bus.	3.3 26 7.7	5.1 39 7.5	7.4 72 9.6	9.7 129 13.3	14.7 191 12.9	12.0 167 13.9	10.4 160 15.4	7.9 134 17.1
Oats { Area '000 acs. Yield mill. bus. Av. Yield bus.	246 5.7 23.3	461 9.8 21.2	9.6 15.5	733 12.1 16.6	1,085 15.2 14.0	1,460 22.3 15.3	2,365 34.5 14.6	2,556 35.4 13.8
Barley Area '000 acs. Yield mill. bus. Av. Yield bus.	1.2 17.3	75 1.5 20.4	116 2.1 17.7	299 6.1 20.4	342 6.3 18.4	784 18.0 23.0	1,118 21.9 19.6	2,093 49.3 23.5
Maize { Area '000 acs. Yield mill. bus. Av. Yield bus.	284 9.3 32.6	295 7.0 23.9	340 8.9 26.3	305 7.8 25.7	269 7.1 26.2	301 7.4 24.7	170 4.0 23.7	182 5.5 30.3
Hay { Area '000 acs. Yield '000 tons Av. Yield tons	942 1,067 1.13	1,688 2,025 1.20	2,518 2,868 1.14	2,995 3,902 1.30	2,635 3,167 1.20	2,758 3,575 1.30	1,549 2,345 1.51	1,861 3,043 1.63
Potatoes Area '000 acs. Yield '000 tons Av. Yield tons	380 3.37	323 2.94	130 301 2.31	149 388 2.60	145 397 2.74	333 3.35	118 509 4.31	101 519 5.14
Sugar-cane Area (k)'000acs. Yield '000 tons Av. Yield tons	738 16.2	1,368 15.7	101 1,682 16.7	128 2,437 19.0	242 4,213 17.4	255 5,154 20.3	282 5,327 18.9	370 9,272 25.1
Vineyards Area '000 acs. Wine mill. gals.	3.4	5.3	5.0	92 8.5	113 14.2	130 16.0	136 35.3	132 30.8
Total Area of Crops mill. acs. Pastoral, Dairying, etc.— Horses mill.	1.6	8.4	12.1	15.4 2.4	21.2 1.8	20.5	19.8	19.4 0.7
Livestock(I) Cattle " Sheep "	11.1 106 0.9	8.5 72 0.9	11.8 97 1.1	14.4 86 1.0	12.3 111 1.2	13.6 125 1.5	14.9 118 1.0	17.3 150 1.3
Wool(m) mill. lb. Butter '000 tons Cheese	(a) 634 (a) 19 (a) 4.5	(a) 539 (a) 46 (a) 5.3	(a) 798 (a) 95	723 (a) 119 (a) 14.6	1,007 175 14.0	1,167 168	1,080 135 40.6	1,530 192 44.8
Meat(n)—	(4.3	(4) 3.3	(ω) /.1	` '		30.1		
Beef and Veal ,, Mutton and Lamb ,, Pork ,,	}ဟ	<b>(f)</b>	<b>(f)</b>	$\begin{cases} 339 \\ 218 \\ 11 \end{cases}$	350 307	534 372	582 282 35.0	804 357 41.0
Bacon and Ham ,,	(a) 7.5 (f)	(a)15.2 (f)	(a)23.8 (f)	26.2 608	22.7 31.8 727	58.1 42.5 1,027	35.0 36.6 949	35.2 1,250

<sup>(</sup>a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decrees made absolute, including decrees for nullity of marriage. (e) Number per 1,000 live births. (f) Not available. (g) Index of nominal weekly wage rates for adult males divided by the "C" Series Retail Price index number. (h) Excludes price movement of potatoes and onions. (i) Includes price movement of potatoes and onions. (j) Season ending in year shown. (k) Cane cut for crushing. (l) As at 31st December of previous year for years to 1942, as at 31st March thereafter. (m) In terms of greasy. (n) Bone-in weight in terms of fresh meat; cured weight, bacon and ham.

## STATISTICAL SUMMARY, AUSTRALIA-continued.

Note.—See headnotes on page 1151.

			Ye	ar ended	30th Ju	ne—		
Item.	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1957.
PRODUCTION—continued.  Mineral(a)(b)—  Copper(c)'000 tons  Gold(c)'000 fine oz.  Lead(c)'000 tons  Zinc(c)  Black Coal  Brown Coal  "	(d) 1,243 3.5 (e) 4.4	(d) 3,300 11.8 (e) 6.9	(d) 2,484 22.2 190.3 10.6 (e)	(d) 758 57.7 20.7 12.8 0.1	13.5 595 162.6 97.5 8.4 2.2	20.9 1,497 275.5 170.0 14.2 4.6	17.9 896 212.0 189.2 17.6 7.8	53.0 1,030 299.5 278.1 19.3 10.6
Forestry Sawn output of native timber mill. sup. ft.	(d)	(a) 452	(a) 605	590	237	914	1,393	1,431
Factories— Number of factories '000 Persons employed . " Salaries and wages paid £m. Value of production(g)—	} ഗ	ഗ	\begin{cases} 14.5 \\ 312 \\ 28 \end{cases}	18.0 379 68	21.7 337 56	27.0 725 180	45.8 978 612	53.2 1,063 891
Chemicals, etc , , , , , , , , , , , , , , , , ,	} (d) 23.3 } (d)	(d) { 29.1 (d)	1.1 12.0 7.5 11.8 4.2 47.5 {32.5 31.4	3.2 23.6 19.2 27.2 9.0 112.5 67.3 78.1	7.9 22.8 6.9 11.1 28.7 9.6 111.0 106.6 121.5	24.8 119.9 21.0 23.6 53.2 17.1 316.5 156.3 169.2	63.7 413.1 56.6 81.1 141.1 68.2 1,024.0 360.2 412.5	105.5 214.4 107.9
Net value of production(h)—  Agriculture fm.  Pastoral	17.0 31.3 6.0 1.9 0.1 56.3 (a) } 4.4 12.1 16.5 72.8 23.3 96.1	23.8 27.2 7.6 2.0 0.1 60.7 (d) 2.8 22.0 24.8 85.5 29.1 114.6	38.8 52.7 16.1 4.0 0.1 111.7 (d) { 4.8 1.1 23.3 29.2 140.9 47.5 188.4	81.9 75.1 35.3 9.0 0.1 201.4 20.0 30.5 231.9 112.5 344.4	49.7 43.0 22.6 5.7 0.1 121.1 1.5 3.9 1.4 13.5 20.3 141.4 111.0 252.4	64.0 85.4 34.3 6.5 0.4 190.6 5.0 10.2 1.8 33.4 241.0 316.5 557.5	6.7 37.9 5.7 97.2 147.5	254.5 598.4 141.2 28.4 2.3 1,024.8 6.0 10.6 140.0 203.7 1,032.5 1,622.4 2,854.9
BUILDING(j)—  Permits, New Dwellings (	} (d)	(d)	(d)	(d)	$ \begin{cases} 2.1 \\ 1.5 \\ 4.6 \end{cases} $	9.7 9.6 13.5	32.8 80.4 116.4	37.4 126.1 209.3
Oversea Trade— Imports . £m. f.o.b. Exports , ,,	(a) 34 36	(a) 38 50	(a) 61 79	94 128	52 108	174 169	1,053 675	719 993
Principal Exports(I)—         Wool          \$\begin{align*}         & \text{fill. lb.}(m) \\         & \text{fm. f.o.b.} \\         & \text{foot ons} \\         & \text{foot ons} \\         & \text{fm. f.o.b.} \\         & fm. f.o.b	641 20 258 1.9 33 0.3 4 0.2	529 15 543 2.8 97 0.6 35 1.4	734 26 1,477 9.6 176 1.4 102 4.6	946 48 2,677 28.6 360 5.5 127 8.0	903 32 3,413 19.2 611 3.8 202 10.3	938 58 598 4.6 414 4.2 130 8.1	1,036 323 1,685 55.3 789 33.0 25 4.6	1,408 484 2,440 60.1 750 21.7 171 25.8

<sup>(</sup>a) Year ended previous December. (b) Breaks in the continuity of the series occurred in 1931 and 1951. (c) Mine production, i.e., metal content of minerals produced. (d) Not available. (e) Less than .05. (f) Owing to variation in classification, effective comparison is impossible. (g) For definition see page 233. (h) Gross value from 1891 to 1921-22. Prior to 1922 figures are for years ended previous December. For definitions of gross and net value see page 1079. (i) Incomplete. (J) Six capital cities and suburbs. (k) Includes additions and alterations. (I) Australian produce except gold, which includes re-exports. (m) In terms of greasy.

# STATISTICAL SUMMARY, AUSTRALIA—continued. Note.—See headnotes on page 1151.

Metals, etc.	Note.—See headnotes on page 1151.											
1892.   1902.   1912.   1922.   1932.   1942.   1952.   1957.	14			Ye	ar ended	30th Jui	10					
Principal Exports(b)—continued. Hides and Skins fm. f.o.b. Meats fm. f.o.b. Meats fm. f.o.b. Meats fm. f.o.b. Meats fm. f.o.b. Meats fm. fo.b. Solver from the following from the follow	item.	1892.	1902.	1912.	1922.	1932.	1942.	1952.	1957.			
Hides and Skins		(a)	(a)	(a)		1						
Fruit(c)	Hides and Skins £m. f.o.b.			3.2	3.1	2.3		17.1	24.2			
Sugar		1	0.2	4.3	5.5	6.4	14.1	35.5				
Ores and Condentates	Sugar ,,	!	(d)	(d)	(4)	2.5	2.6	6.9	28.8			
Ores and Condentates	Gold ,,		14.3	12.0	3.5	11.9	9.2	7.0				
Vegetable foodstuffs, etc.   Apparel, etc.   Name of the property of the pro	Ores and Concentrates ,,	1		3.7	0.8	0.2			21.1			
Apparel, etc	Principal Imports—	1	(a)	(a)	40	26	٤ ،	25.0	25.0			
Oil, etc		11	1 10.9			15.4	32.7	203.6	91.3			
Rubber, etc.	Oil, etc ,,	\ \( \omega \)	1.2	1.6	4.7	5.5	16.2	87.5	95.4			
Paper, etc	D 1.1							392.9				
Shipping		J		2.6			4.3	68.8				
Shipping	TRANSPORT AND COMMUNICATION-		1			; !	!					
Clearances   Clearances   Clearances   Clearances   Oversea Cargo   Discharged   mill. tons(g)   Shipped   mill. tons(g)   Shipped   mill. tons(g)   Clearances   Mill. tons(g)   Mill. tons   Clearances   Mill. tons(g)   Mill. tons   Clearances   Mill. tons(g)   Mill.	Shinning		(a)	(a)	ĺ	!		1				
Clearances	Entrances and No.	3,778			3,111				5,290			
Discharged mill. tons(g)   Shipped   (f)	Clearances ) min. tons	4.7	6.5	10.0	9.1	11.4	10.8	18.2	23.7			
Shipped		1]	1	10	2.4	3.0	5.5	14.4	15.3			
Clearances   mill. tons   mil	Shinned (a)	11		l 👸	5.8			5.7				
Clearances   mill. tons   mil	Interstate Vessels, No	\ (1)	(J)						9,578			
Government Railways— Route-miles '000   10.4   12.8   16.8   23.5   27.0   27.2   26.8   26.5	Entrances und (mill tons			13.1	12.8	11.1	12.9	15.8	18.9			
Government Railways—  Route-miles   '000   10.4   12.8   16.8   23.5   27.0   27.2   26.8   26.5   26.5   26.5   26.5   26.5   27.0   27.2   26.8   26.5		11		11.0		4.0	10.0	0.0	12.2			
Route-miles '000   10.4   12.8   16.8   23.5   27.0   27.2   26.8   26.5		(h)	(h)	(h)	3.3	i	10.0	9.0				
Goods and livestock carried mill. tons   9.4 mill. tons   7 mill. tons   9.4 mill. tons   9.4 mill. tons   9.4 mill. tons   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill.   29.7 mill.   29.8 mill	Route-miles '000	10.4	12.8	16.8			27.2					
Mill. tons   9.4   15.5   25.5   31.5   26.1   38.9   44.3   47.5		84	113	228	333	303	4/3	301				
Passenger-journeys—	mill. tons	9.4	15.5	25.5					47.5			
Passenger-journeys—     Trams	Train-miles run mill.	29.7	38.2	55.2	56.1	63.8	88.5	93.4	95.1			
Trams . mill. Omnibuses(i)	Passenger-journeys	i	1		ĺ							
Motor vehicles on the register—  Cars   '000   Commercial vehicles   ,	Trams mill.	} <i>\</i>	(1)						535			
Cars '000	Motor vehicles on the register—	)		(0)	0,	1	l	}	293			
Civil Aviation (Internal)— Plane-miles flown . mill. Passengers carried . '000	Cars '000	}	l	(n	102				1,569			
Plane-miles flown mill. Passengers carried '000 Passenger-miles . mill. Passenger-miles . mill. Passenger-miles . mill. Passenger-miles . mill. Freight car- { '000 short tons ried mill. ton-miles mill. ton-miles postal— Postal matter dealt with(j) mill. articles 242 324 595 702 (k) 871 (k)1,100 (k)1,485 (k)1,784  Telegrams and cablegrams mill. 10.0 9.9 13.3 16.8 13.9 26.1 29.8 23.9  Instruments . '000 7 29 103 259 485 739 1,301 1,814  Lines		1		, ,		ر ۶۶	231	381	703			
Passenger-miles   mill.	Plane-miles flown mill.				!	2.5						
Freight car- { '000 short tons ried	Doscoppes miles mill				ı			1,829				
Postal matter dealt with(j)   (a)   (a)   (a)   (b)   (b)   (b)   (b)   (c)   (c)   (d)   (d)   (d)   (d)   (d)   (d)   (d)   (d)   (d)   (e)	Freight car- ∫ '000 short tons			*		0.1	1.2	57.5	75.1			
Postal matter dealt with(f) mill. articles mill. articles Telegrams and cablegrams mill. Telephones— Instruments '000 7 29 103 259 485 739 1,301 1,814 Lines (f) 25 85 196 364 531 927 1,279 Calls—Trunk mill. (f) (f) (f) 14.0 28.9 45.3 69.4 106.0 Local (f) (f) (f) 221 369 664 968 1,234 Broadcast Listeners' Licences '000 (f) (f) (f) 36 369 1,320 1,961 2,107  PUBLIC FINANCE— Commonwealth— Consolidated Revenue Fund— Revenue (h) (h) (h) Expendiure (f) (f) (f) (f) (f) (f) (f) (f) (f) (f)	ried [ mill. ton-miles	(3	1	1		(f)	0.9	26.7	36.3			
Telegrams and cablegrams mill.   10.0   9.9   13.3   16.8   13.9   26.1   29.8   23.9   13.5   16.8   13.9   26.1   29.8   23.9   23.	Postal matter dealt with(i)	(a)	(a)	(a)		i	1	i				
Telephones—	mill. articles						(k)1,100	(k)1,485	(k)1,784			
Instruments	Telephones—	10.0	9.9	13.3	16.8	13.9	26.1	29.8	23.9			
Lines	Instruments '000	7						1,301	1,814			
Local   Column   Co	Lines ,,	ြတ္လ						927	1,279			
Broadcast Listeners' Licences '000       (1) 36   369   1,320   1,961   2,107	Local	1 66	1 63	<i>6</i> 5	221	369		968	1,234			
Commonwealth	Broadcast Listeners' Licences '000		1	1	(I) 36	369	1,320	1,961	2,107			
Consolidated Revenue Fund— (h) (h) (h) Revenue			!		i	1			İ			
Expenditure, 4 15 64 72 210 1,017 1,312  Net loan fund expenditure 1 5 4 213 55 49		!	Ch	(4)			1	•				
Expenditure, 4 15 64 72 210 1,017 1,312  Net loan fund expenditure 1 5 4 213 55 49			11	21	64		210	1,017	1,312			
Taxation collections ,, 9 16 50 54 180 934 1,099	Expenditure ,,	i		15	64	72	210	1,017	1,312			
,, ,, ,, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Tamatian collections	T.						934				
	,,,	<u> </u>		1			1.50	1	1,000			

<sup>(</sup>a) Year ended previous December. (b) Australian produce except gold, which includes reexports. (c) Excludes fruit juices. (d) Less than .05. (e) Includes concentrates.
(f) Not available. (g) Tons weight plus tons measurement. (h) Year ended 30th June.
(f) Government and municipal only. (f) Letters, postcards lettercards and newspapers.
(k) Includes packets. (l) Year 1923-24.

# STATISTICAL SUMMARY, AUSTRALIA—continued. NOTE,—See headnotes on page 1151.

		1			e anded	20th T			<del></del>
Item.		<u> </u>	1	r ea	n ended	30th Jur	10-	<u>,</u>	
		1892.	1902.	1912.	1922.	1932.	1942.	1952.	1957.
PUBLIC FINANCE—continued									
Consolidated Revenue	Funds £m.	(a)	28	41	85	100	152	389	57 <b>7</b>
Expenditure	Z.III.	(a)	29	41	87	121	149	392	584
Net loan expenditure(b)	**	(a)	9	16	34	6 33	8 57	198	158 115
Taxation collections Public Debt(c)—	**	(a)	3	5	18	33	37	63	113
Commonwealth	£m.	: : .	1	6	354	319	638	1,869	1,885
State Total	**	(d) 155 (d) 155	213	279	519 873	789 1,108	911 1,549	1,396 3,265	2,107 3,992
Overseas	"	(a)	(a)	194	412	522	516	406	424
In Australia	**	(a)	(a)	91	461	586	1,033	2,859	3,568
Private Finance—							400		•••
Commonwealth Note Issu- All cheque-paying banks—	e(e) tm.	(a)	(a)	8	54	· 51	103	303	381
Advances $(f)$	,,	(d) 125	94	109	183	261	324	817	939
Deposits $(\bar{f})$	,,	(d) 98	91	143	289	319	483 2,828	1,353	1,626
Bank clearings(d) Savings bank deposits(g	) "	(a) (d) 15	338 31	662 59	1,702 154	1,581 198	2,020	12,160 892	14,505 1,227
Life Assurance(d)(h)—	, ,,								
Ordinary— Policies	'000	1	(414	484	730	871	1,340	2,553	3 310
Sum assured	£m.	11	108	109	181	285	463	1,212	3,319 2,223
Industrial—	*000	[1	226	467	973	1.550	2 700	2 042	2 500
Policies Sum assured	£m.	) (a)	236	10	30	1,550 67	2,780 127	3,843 254	3,702 315
Total—		[				-			
Policies Sum assured	'000 £m.		650	951 119	1,703 211	2,421 352	4,120 590	6,396 1,466	7,021 2,538
SOCIAL STATISTICS—	νш.	,	(113	117	211	332	370	1,400	2,336
Commonwealth Social Se	rvices-			i l	ļ.				
Age and Invalid f	'000(c)			90	144	256	336	420	554
Pensions Child Endowment,	£m. '000(c)			2.2	5.4	11.1	19.3 488	59.8 1,205	109.2 1,378
Claims in force	£m.		::	::		::	11.3	46.6	57.0
Total Commonwealth									
and Social Services	(i) £m.			2.2	6.1 225	11.5	30.9	137.6	223.9
War Pensions	'000(c) £m.	::	::	::	7.0	274 7.4	220 7.5	525 31.8	613 45.2
Service Pensions	'000(c)						14	17	39⋅
State Social Services(i)-	£m.	i			• • •	• • •	0.6	1.8	4.9
Education(d)—		;							
Government Schools-	- '000		7.0	امها	0.4	10.1	0.5	2.0	7.7
Schools Staff	,,,	6.2 12.6	7.0 14.5	8.0 17.0	9.4 26.1	10.1 33.8	9.5 32.1	7.6 36.7	46.8
Students	.,	561	638	639	819	937	887	1,013	1,374
Non-government Schools	000'	2.0	25	1.9	1.7	1.8	1.9	1.9	2.1
Staff	,,	6.0	2.5 8.3	7.8	8.8	10.0	11.4	13.3	15.2
Students	"	125	149	161	199	221	257	326	433
Universities(k)— Number		4	4	5	6	6	8	9	10
Staff(l)		(a)	(a)	249	482	703	1,416	3,082	3,702
Students Public Hospitals—	'000	1.6 (d)	1.8 (d)	3.4 (d)	8.0 (d)	9.8 (d)	13.9	31.7	34.5
Number		(a)	285	355	404	513	566	675	(m)
Staff—Medical	'000	(a)	(a)	1.1	1.5 6.8	3.2 9.3	3.9 15.4	6.9	(m)
Nursing In-patients, cases trea	ted "	(a) n o 54	(o) 91	5.1 134	215	371	595	24.6 896	(m) (m)
Police and Prisons(d)—	- ,,							1 22 3	,
Police	'000	5.3	5.8	6.4	6.9	8.6	9.7	12.3	13.5
Prisons Prisoners	, 000	(a)	(a) 4.3	104 3.1	91 2.9	85 4.2	70 3.2	69 4.4	73 6.1
	000	(a)	4.3	3.1	د. ع	7.2	3.2		
"C" Series Retail Price In	ndex (p)	١		1,000	1,680	1,448	1,673	3,124 €	(q)4,130 (r)4,226
						-,		1 ' L	(r)4,220

<sup>(</sup>a) Not available. (b) Loan Expenditure in works, services, etc. (c) At 30th June:
(d) Year ended previous December. (e) At end of June. (f) Figures for 1892 are averages of weekly balance for the December quarter; the remainder are for the June quarter. (g) 1891 at 31st December, thereafter at 30th June. (h) Existing business in Australia. (i) Excludes war and service pensions. (j) Includes Northern Territory and Australian Capital Territory. (k) Excludes Australian National University. (l) Teaching and research staff. Includes part-time. (m) Not yet available. (n) Year 1891–92 for Victoria. (o) South Australian cludes Adelaide Hospital only. (p) Base: 1911=1,000. (q) Excludes price movement of potatoes and onions. (r) Includes price movement of potatoes and onions.

## APPENDIX.

(Some recent information which has come to hand since the various chapters were sent to press is given hereunder in summarized form. For further or more detailed information, and for the latest available statistics, reference should be made to other publications issued by this Bureau (see pp. 1110-2), notably the Monthly Review of Business Statistics and the Quarterly Summary of Australian Statistics.)

## CHAPTER II.—PHYSIOGRAPHY.

## § 2. Climate and Meteorology of Australia.

Rainfall: Australian Capital Cities, p. 48.—Rainfall recorded in Australian capital cities during 1957 was as follows:—Canberra, 14.41 ins.; Perth, 35.07 ins.; Adelaide, 16.71 ins.; Brisbane, 20.58 ins.; Sydney, 27.13 ins.; Melbourne, 20.86 ins.; Hobart, 28.65 ins.

## CHAPTER III.—GENERAL GOVERNMENT.

## § 2. Parliaments and Elections.

State Parliaments, pp. 69-72.—The fortieth Victorian Parliament was dissolved on 18th April, 1958. The forty-first Parliament was opened on 8th July, 1958. There were no changes in the Ministry.

## § 3. Administration and Legislation.

Governors and State Ministers, pp. 76-78.—(i) South Australia. The Hon. Sir Malcolm McIntosh, K.B.E. resigned as Minister of Works and Minister of Marine on 14th May, 1958. The Hon. G. G. Pearson took over these portfolios, and the Hon. D. N. Brookman succeeded Mr. Pearson as Minister of Agriculture and Minister of Forests.

(ii) Tasmania. The Hon. R. J. D. Turnbull resigned as Treasurer and Minister for Health on 11th June, 1958, and the Hon. R. F. Fagan resigned as Attorney-General on 18th July, 1958. The vacancies were filled by the taking over of the Treasury portfolio by the Premier, the Hon. R. Cosgrove, and the appointment of the Hon. W. A. Neilson as Attorney-General. The Hon. A. C. Atkins was appointed to the portfolio of Minister for Tourist and Immigration and Forests vacated by Mr. Neilson. On 25th August, 1958, the Premier, Mr. Cosgrove resigned and the Deputy Premier the Hon. E. Reece succeeded him.

Leaders of the Opposition, Commonwealth and State Parliaments, p. 78.—Queensland: Mr. J. Donald was elected on the death of Mr. L. A. Wood, but on 18th August, 1958, resigned in favour of the Hon. J. E. Duggan.

## § 5. Cost of Parliamentary Government, p. 82.

The cost of Parliamentary Government, Commonwealth and individual States, for the year 1956-57 was as follows:—

Commonwealth, £2,445,194 (5s. 2d. per head); New South Wales, £769,125 (4s. 3d.); Victoria, £599,355 (4s. 6d.); Queensland, £417,613 (6s. 1d.); South Australia, £324,848 (7s. 7d.); Western Australia, £425,524 (12s. 5d.); Tasmania, £238,824 (14s. 8d.); and total, £5,230,483 (11s. 0d.).

The amounts expended under the major headings for all Governments during 1956-57 were:—Governor-General or Governor, £418,592; Ministry, £309,954, Parliament, £3,754,431; Electoral, £716,547.

## CHAPTER VI.-LABOUR, WAGES AND PRICES.

## A. RETAIL PRICES AND PRICE INDEXES.

## § 4. Tabular Statements of Retail Price Index Numbers.

The Interim Retail Price Index, pp. 150-1.—The following table shows the interim retail price index numbers for the March and June quarters, 1958, for each capital city and for the six capital cities combined, showing separate series for each of the four main groups of items:—

# INTERIM RETAIL PRICE INDEX NUMBERS. (Base of each Index: Year 1952-53=100.)

·		Dase of e	uth thack	. 1eu/ 19	J2-JJ 10	··· <i>·</i>		
Period.		Sydney.	Mei- bourne.	Brisbane.	Adelaide.	Perth.	Hobart.	Six Capitals (a)
Gr	OUP I.	-Food (	Excludin	NG POTAT	OES AND	ONIONS).	(b)	
March Qtr., 1958 June ,, ,,		115.4 114.6	114.8 115.1	115.0 115.8	110.9 114.2	114.2 115.6	114.8 114.8	114.6 114.9
C	GROUP	I.—Food	(Includ	ING POTA	TOES AND	Onions)		
March Qtr., 1958 June ,, ,,	::	114.7 113.7	114.9 114.9	115.4 115.6	110.8 113.4	114.4 115.7	115.1 114.2	114.4 114.4
		GROUP :	II.—Сьот	HING AND	DRAPERY	<i>t</i> .	•	
March Qtr., 1958 June ,, ,,		108.8 109.7	110.5 111.6	109.4 110.2	107.2 108.1	108.5 109.6	110.6 111.6	109.3 110.2
	Grou	p III.—R	ENT (c) (	4 AND 5	ROOMED I	Houses).		
March Qtr., 1958 June ,, ,,	:.]	119.5 120.8	127.3 128.8	115.9 136.7	133.9 140.6	176.0 180.5	161.2   164.7	128.2 132.2
		GRO	UP IV.—C	OTHER ITE	:мs. (d).			
March Qtr., 1958 June ,, ,,		124.8 124.8	117.7 118.0	120.1 121.0	111.4 111.6	115.8 115.9	121.1 122.3	120.2 120.4
A	ALL G	ROUPS (E	XCLUDING	Ротатов	s and On	ions). (b	).	
March Qtr., 1958 June ,, ,,		116.7 116.8	115.5 116.1	114.8	112.1 114.2	119.4 120.7	119.7 120.6	115.9 116.7
	ALL	GROUPS (	(Includin	G POTATO	DES AND C	nions).		
March Qtr., 1958 June ,, ,,		116.4 116.4	115.5 116.0	114.9 117.3	112.1 114.0	119.4	119.7 120.3	115.8 116.5

<sup>(</sup>a) Weighted average. (b) See para. 5 on page 149. (c) The rent index numbers measure the proportionate rise and fall in the average weekly rentals paid for houses of four and five rooms taking corresponding houses throughout. See note (c) on page 151. (d) A group of items under the following headings—Electricity, Gas, and Firewood; Household Sundries; Services; Cinema Admission, Radio Licence, and Newspapers; Fares; and Tobacco and Cigarettes.

## § 5. The "C" Series Retail Price Index.

"C" Series Retail Price Index, Six Capital Cities, p. 153.—The following table shows "C" Series retail price index numbers for the March and June quarters, 1958, for the six capital cities combined:—

# "C" SERIES RETAIL PRICE INDEX NUMBERS: SIX CAPITAL CITIES COMBINED.

(Base of each Group: Weighted Average of Six Capital Cities, 1923-27 = 1,000.)

Period.	Food and (		Rent (4 and 5 Roomed Houses). (b)	Clothing.	Miscel- laneous.	Total "C' Series Index.(a)		
March Qtr., 1958 June "	 A 3,012 3,018	B 2,988 2,982	1,412 1,455	3,393 3,424	2,399 2,400	A 2,601 2,620	B 2,592 2,607	

<sup>(</sup>a) Indexes in column A exclude, and those in column B include, the price movement of potatoes and onions. (b) See note (c) on p. 151.

#### B. WHOLESALE PRICES AND PRICE INDEXES.

## § 2. Wholesale Price (Basic Materials and Foodstuffs) Index.

Index Numbers, p. 156.—Index numbers for each group of commodities and for all groups combined for the index of wholesale prices of basic materials and foodstuffs are. shown below for the months January to June, 1958.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS (Base of each Group: Average, 3 years ended June, 1939 = 100.)

			Bas	sic Mater	rials.					ls and fs.	
Month.	Metals and Coal.	Oils, Fats and Waxes.	Tex- tiles.	Chemi- cals.	Rubber and Hides.	Build- ing Ma- terials.	Total.	Food- stuffs and To- bacco. (b)	Goods principally Imported.	Goods princi- pally Home- pro- duced. (b)	Total All Groups. (b)
Jan. Feb. Mar. Apr. May June	400 397 398 395 393 394	236 236 236 236 236 236 236	424 434 404 389 384 387	347 347 347 346 346 346	278 273 278 277 263 254	458 458 458 458 458 420 420	355 355 353 351 343 343	318 320 323 321 330 332	302 301 301 301 290 290	349 350 351 349 355 357	335 336 337 335 336 337

<sup>(</sup>a) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in price of all imports.

(b) The indexes for "Foodstuffs and Tobacco", "Goods Principally Home-produced" and "Total All Groups" have been reconstructed as from the base period by excluding potatoes and onions.

## D. WAGES.

## § 2. Rates of Wage and Hours of Labour.

Weekly Rates of Wage, pp. 162-1.—The following table shows for each State and Australia the weighted average nominal weekly rates of wage payable, and the index numbers based thereon, for adult males and for adult females, at 31st March and 30th June, 1958.

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## WEEKLY WAGE RATES OF ADULT MALES AND FEMALES.

(WEIGHTED AVERAGE NOMINAL WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES.)

Date.		N.S.	W.	Vi	c.	Q'la	ınd.	S. A	Aust.	W. 2	Aust.	Tas,		Aust.	
		Α	DUL'	т Ма	LES-	-Rai	ES C	F W	AGE.						
31st March, 1958 30th June, 1958		s. 332 337	d. 6 6	s. 318 320	<i>d</i> . 2 9	s. 306 310	<i>d</i> . 6 8	s. 309 314		s. 323 324	<i>d</i> . 7 8	s. 326 330	<i>d</i> . 11 6	s. 322 326	-
(Base: V	Veight			т Ма e Wa						<i>l</i> .), 19	911 =	= 1,0	00.)		
31st March, 1958 30th June, 1958			88 86		208 258		980 961		032 143	,	314 335	•	378 148		284 360
		ΑD	ULT	Fem.	ALES	Ra	TES	of W	AGE	•					
31st March, 1958 30th June, 1958		s. 219 223	<i>d</i> . 8 8	s. 222 224	d. 2 7	s. 209 212	<i>d</i> . 0 3	s. 217 221	<i>d</i> . 11 8	s. 209 211	<i>d</i> . 6 2	s. 215 218	d. 4 3	s. 218 221	
(Base: Wei	ghted			FEM.							1914	1 = 3	,000	).)	
31st March, 1958 30th June, 1958	••		)86 !33		76 265		592 312		021 160		710   773		926 033		052 168

<sup>(</sup>a) Weighted average for Australia.

## § 4. Basic Wages in Australia.

Basic Wage Inquiry, 1958.—The inquiry was originated by summons on behalf of several organizations of employees for the undermentioned variations of the current Metal Trades Award of this Commission; namely, by increasing the amounts of basic wage prescribed therein for respective cities, towns and localities to the figure each would have reached had the quarterly adjustment system based on the "C" Series retail price index numbers been retained, plus an addition of 10s. to each basic wage, and by making provision for future adjustment of each of the new amounts at quarterly intervals by the application thereto of the same index numbers.

The inquiry opened on 18th February, 1958, before Kirby C.J., Wright and Gallagher JJ., and the judgment was delivered on 12th May, 1958.

The following is an extract from the transcript of proceedings before the Commonwealth Conciliation and Arbitration Commission on 12th May, 1958.

"The Commission publishes its judgment and reasons for judgment.

In view of its particular importance and the public interest therein, it is appropriate to read now from the judgment this extract in relation to the decision to increase the basic wage.

'The Commission is unanimously of the opinion that the position of the economy regarded as a whole is such as to justify an increase in the basic wage, but a difference of opinion exists as to what the amount of the increase should be.

A majority of the members, namely, the President and Mr. Justice Gallagher, take the view that the serious losses through drought conditions and falls in wool and other exports (which it is at least possible may be due to a world slump of indefinite duration), the necessity of not making labour so costly that there will be an impairment of industry with a consequent increase of unemployment, the necessity of providing for rural industries a respite from significant rises in costs and of so enabling further investment improvement and development, the need for maintaining economic stability, for protecting international reserves from untimely depletion and for not increasing unduly the demand for greater imports, are all factors which combine to make it unsafe and therefore undesirable in the interests of all to grant an increase higher than 5s. at the present time to a basic wage which was increased by the Court in 1956 and the Commission in 1957 to levels which they consider were the highest the economy could then sustain.

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Mr. Justice Wright is of the opinion that the conclusions drawn from the material in the appendix [of the judgment] justify a basic wage level substantially higher than that proposed by the majority. That view is influenced to some extent, but by no means entirely, by the fact that unlike the majority he is convinced that the rates of basic wage resulting from the 1956 and 1957 increases might have been higher without unduly straining the capacity of the economy to sustain them.'

The Act provides that the majority opinion prevails.

The decisions of the Commission are:-

- 1. The claim for restoration of automatic quarterly adjustments is refused.
- 2. The claim of the South Australian Government for special treatment is refused.
- 3. The basic wages of adult male employees covered by federal awards will be increased by a uniform amount of 5s. per week.

4. The new rates will come into effect from the beginning of the first pay-period commencing on or after 21st May instant subject to special cases.

In the Metal Trades Award and in awards generally, the basic wage for adult females is prescribed at 75 per cent. of the basic wage for adult males. The result of the increase of the basic wage for adult males by 5s. per week will be to increase the basic wage for adult females in these awards to 75 per cent. of the new basic wage for adult males.

In those awards which do not contain such a provision, but which prescribe basic wages for adult females of a stated amount equal to 75 per cent. of that for adult males, the rate will be re-calculated to give effect to this decision.

In the Metal Trades and in many other awards, the rates for juniors and apprentices of both sexes are prescribed at a percentage of the basic wage for adults, in which cases the existing provisions of the awards will cover proportionate increases for such juniors and apprentices. In awards which do not contain such provisions, applications may be made to the Commission and will be dealt with by the appropriate member of the Commission."

The new basic wage rates of the Commonwealth Conciliation and Arbitration Commission for adult males payable in the capital city of each State from the beginning of the first pay-period commencing on or after 21st May, 1958, are as follows:—Sydney, £13 8s., Melbourne, £13, Brisbane, £12 3s., Adelaide, £12 16s., Perth, £13 1s., Hobart, £13 7s., Six Capital Cities (weighted average), £13 1s.

State Basic Wage Rates, p. 186.—The table below shows the "basic" weekly wage rates of State industrial tribunals, operative in May and August, 1958.

STATE BASIC WAGE—WEEKLY RATES.

		May,	1958.			August, 1958.						
State.	Date of Operation.	Mal	es.	Fema	les.	Date of Operation.	Male	es.	Fema	iles.		
,		5.	d.	s.	d.		<i>s</i> .	d.	s.	d.		
New South Wales—				ļ								
Metropolitan and Country,	35 1050	274	^	205	,	34mm 1050	274	^	205	_		
excluding Broken Hill Broken Hill	May, 1958	274 272	0	205 204	6 0	May, 1958 Aug., 1958	271	0	205 203	6		
	Feb., 1958 Aug., 1956	263	ŏ	197	ŏ	Aug., 1956	263	ŏ	197	ŏ		
Victoria(b)	Aug., 1930	203	U	17,	v	Aug., 1990	203	•	157	v		
Southern Division (Eastern	1											
District), including Brisbane	28.4.58	248	0	167	6	24.7.58	254	0	172	0		
Southern Division (Western			•	1	•			•		•		
District)	28.4.58	255	4	171	2	24.7.58	261	4	175	8		
Mackay Division	28.4.58	253	6	170	3	24.7.58	259	6	174	9		
Northern Division (Eastern	i l			1								
District)	28.4.58	258	0	172	6	24.7.58	264	0	177	0		
Northern Division (Western	1 . 1					l		i				
District)	28.4.58	265	4	176	2	24.7.58	271	4	180	8		
South Australia(c)	26.5.58	256	C	192	0	26.5.58	256	0	192	0		
Western Australia—		0.00	_		,	40.50	272	•	470	_		
Metropolitan Area	7.2.58	268	6	174	6	4.8.58 4.8.58	272 273	3	177	ò		
South-West Land Division Goldfields and other areas	28.4.58	271 268	2	176 174	2	4.8.58	269	9	177 175	8		
Passasia(b)	28.4.58	272	0	204	ő	Aug., 1956	272	0	204	ő		
rasmania( <i>b</i> )	Aug., 1956	212	U	204	v	Aug., 1930	412	U	204	U		

<sup>(</sup>a) Where dates are not quoted wage rates operate from the beginning of the first pay-period commencing in the month shown.

(b) No basic wage declared. Rates shown are those adopted by most Wages Boards. (c) The "living wage" declared for the metropolitan area is also adopted for country areas, except at Whyalia where a loading of 5s. a week is generally payable.

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### E. EMPLOYMENT AND UNEMPLOYMENT.

## § 1. Employment.

Wage and Salary Earners in Civilian Employment, pp. 190-2.—The following are particulars of wage and salary earners in civilian employment, excluding rural wage earners, female private domestics, defence forces and national service trainees in camp, for the month of June, 1958.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT, JUNE, 1958.

(Excluding Rural Wage Earners, Female Private Domestics, Defence Forces and National Service Trainers in Camp.)

				(	'000.)				
Pa	rticulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.(a)
Males Females Persons		•••	812.4 315.2 1,127.6	592.6 243.7 836.3	282.3 96.1 378.4	186.2 63.6 249.8	138.6 45.8 184.4	66.7 23.6 90.3	2,093.9 792.6 2,886.5
Pa	rticulars.		Govern- mental. (b)	Private Em- ployers.	Mining and Quarry- ing.	Manufac- turing, etc.		Retail Trade.	Other Commerce and Finance.
Males Females Persons	••	••	621.8 136.6 758.4	1,472.1 656.0 2,128.1	51.6 1.1 52.7	853.6 252.2 1,105.8	311.8 39.9 351.7	132.5 125.4 257.9	216.3 92.3 308.6

(a) Includes Australian Capital Territory and Northern Territory. (b) Includes all employees of Government authorities (Commonwealth, State, Local and Semi-Governmental) on services such as railways, tramways, banks, post offices, air transport, education, broadcasting, police, public works, factories and munitions establishments, migrant hostels, etc., as well as administrative employees, within Australia. (c) Subject to revision. See note (b), p. 192.

Government Employees, p. 193.—The number of Government employees in Australia in June, 1958, was as follows:—Commonwealth Government—males, 169,764; females, 45,654; persons, 215,418; State Government and Semi-Government authorities—males, 384,424; females, 84,326; persons, 468,750; Local Government authorities—males, 67,603; females, 6,688; persons, 74,291; Total—males, 621,791; females, 136,668; persons, 758,459.

## G. LABOUR ORGANIZATIONS.

## § 1. Labour Organizations in Australia.

Trade Unions, pp. 202-3.—The following tables show the number and membership of trade unions at 31st December, 1957, in each State and Territory and in each industrial group.

TRADE UNIONS: NUMBER AND MEMBERSHIP, 1957.

Particulars.		N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Separate Unions Members Percentage Increase Membership(b)	:: in :	235 737,358 0.2	443,040	310,821	•	156 114,095 3.3				(a) 373 1,810,154 -0.1

(a) Without interstate duplication.
 (b) On preceding year.
 Nоте.—Minus sign (-) denotes decrease.

# TRADE UNIONS: INDUSTRIAL GROUPS, AUSTRALIA, 1957.

Industrial Group.	Unions.	Mem- bers.	Industrial Group.	Unions.	Mem- bers.
1. Wood, Furniture, etc	6	45,460	XII. Pastoral, Agricultural,		
II. Engineering, Metal	T.		etc	3	62,028
Works, etc	15	270,798	XIII. Domestic, Hotels, etc	12	39,196
III. Food, Drink, Tobacco,			XIV. Miscellaneous—		
etc	35	107,999	(i) Banking, Insurance	i	1
IV. Clothing, Textiles, etc	7	101,967	and Clerical	18	112,722
V. Books, Printing, etc	6	43,312	(ii) Public Service	66	216,200
VI. Other Manufacturing	38	86,115	(iii) Retail and Whole-	00	210,200
THE W. 11 11	30	135,541	golo	12	73,238
	12	42.221	(iv) Municipal, Sewerage	12	13,230
VIII. Mining, Quarrying, etc.	12	42,221			07.740
IX. Railway and Tramway			and Labouring	10	87,740
Services	25	141,566	(v) Other Miscellaneous	53	145,904
X. Air and other Land	1				
Transport	11	59,985			1
XI. Shipping, etc.	14	38,162	Total	373	1,810,154

(a) Without interstate duplication.

# CHAPTER VII.—MANUFACTURING INDUSTRY.

Summary, p. 211.—The following table gives a summary of operations in manufacturing industries during 1956-57.

FACTORIES: 1956-57, SUMMARY.

							,		
Particulars.		N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	Aust.	
2. P	actories ersons employed(a) alaries and wages paid(b)	No. £'000	21,838 435,998 377,976	355,204	103,426		48,748	1,595 27,670 23,636	1,063,02
4. V 5.	alue of power, fuel, light, etc., used materials used	£'000 £'000	71,445 946,573	40,381 707,729	13,130 244,974	14,130 184,209	9,225 104,969	4,799 56,909	153,174 2,245,36
6. 7. 8.	,, production(c) ,, output ,, land and build-		1	1,275,756	39,6504	325,105	187,636	110,390	1,622,31: 4,020,78
9.	ings ,, plant and ma- chinery	£'000	303,981 363,310	1	,	-	, ,	56,473 44,836	1

(a) Average over whole year; includes working proprietors.
(b) Excludes amounts drawn by working proprietors.
(c) Value of production equals figures in line 7 less totals of figures in lines 4 and 5.

Value of Production in Classes of Industry, p. 234.—The following table shows, for the year 1956-57 the value of production in Australia for the various classes of industry.

FACTORIES: VALUE OF PRODUCTION, AUSTRALIA, 1956-57.

	•	£'000.)				
Clas	Value of Production, 1956–57.					
I. Treatment of Non-metall	37,495					
II. Bricks, Pottery, Glass, etc.						32,266
III. Chemicals, Dyes, Explosi	ves, Pair	its, Oils,	Grease			137,516
IV. Industrial Metals, Machin	nes, Con	veyances				641,551
V. Precious Metals, Jeweller	y, Plate					7,346
VI. Textiles and Textile Good	ls (not I	ress)				91,469
VII. Skins and Leather (not C	lothing o	or Footwe	ear)			16,523
VIII. Clothing (except Knitted)			,			105,518
IX. Food, Drink and Tobacco	o					214,430
X. Sawmills, Joinery, Boxes,	etc., Wo	ood Turni	ing and C	Carving		79,629
XI. Furniture of Wood, Bedd	ing, etc.					26,330
XII. Paper, Stationery, Printin			tc			107,940
XIII. Rubber						28,530
XIV. Musical Instruments						3,657
XV. Miscellaneous Products						31,884
XVI. Heat, Light and Power						60,231
Total						1,622,315

# CHAPTER X.—TRADE.

Note.-Values are expressed in £A. f.o.b., port of shipment.

# § 6. Total Oversea Trade.

Summary of Movements, p. 340.—The following are preliminary figures of the total oversea trade of Australia during the year 1957-58:—Merchandise—Exports, £813,192,000; Imports, £789,649,000; Commodity balance, +£23,543,000; Bullion and Specie—Exports, £7,644,000, Imports, £2,679,000, Balance, +£4,965,000; Total balance, +£28,508,000.

# § 7. Direction of Oversea Trade.

According to Countries, p. 345.—The following table shows particulars of the values of total imports and total exports of Australia, *including bullion and specie*, according to countries of origin or consignment, for the year 1957.-58.

TOTAL OVERSEA TRADE, AUSTRALIA: COUNTRIES OF ORIGIN OR CONSIGNMENT, 1957-58.(a)

Country.	Imports.	Exports.	Country.	Imports.	Exports.
United Kingdom	325,174	220,577	BelgiumLuxemburg	6,532	28,254
Australian Territories—	1	1 1	China (Mainland)	3,126	9,769
New Guinea	5,402	9,620	Czechoslovakia	2,616	6,756
Papua	5,298	5,323	France	10.338	69,853
Borneo (British)	13,037	1,231	Germany, Federal Republic	41,655	33,006
Canada	23,009	14,143	Indonesia	27,863	4,064
Ceylon	8,760	5,942	Iran	18,580	18.574
Fiji	4,945	1,459	Italy	10,893	46,351
Hong Kong	3,343	12,572	Japan	23,801	102,997
India	23,417	11,682	Mexico	3,609	3,606
Malaya, Federation of	10,865	12,296	Netherlands	11.079	5,346
N 7 1	12,751	56,075	Mammar	4,575	4,476
Dalilata	800	4,915	Delend	311	14.264
	886	12,968	C	11.724	4,022
Singapore	6.294		Contractord	10,200	1,972
South Africa, Union of		5,164	** ** * G C A*		
Other Commonwealth Countries	9,248	23,983		104,666	45,464
			Other Foreign Countries	14,565	19,857
Total, Commonwealth Countries	453,229	397,950			
	l	ļ	Total, Foreign Countries	339,099	422,886
Arabian States	29,602	2,622			
Austria	3,364	1,633	Total, All Countries	792,328	820,836

(a) Preliminary.

According to Monetary Areas, p. 346.—The following table shows the trade of Australia during 1957-58 according to monetary areas.

OVERSEA TRADE OF AUSTRALIA ACCORDING TO MONETARY AREAS(a), 1957-58.(b)

Monetary Area.	£'000.	Monetary Area.	£'000.
Sterling.		OTHER NON-STERLING.	
Imports—	225 174	Imports—	
From—United Kingdom Other Sterling Area Coun-	325,174	From-Countries of the O.E.E.C.,	
tries	127,625	including dependencies. Other Countries	115,195 93,086
Total	452,799		
Exports—		Total	208,281
To—United Kingdom	220,577	Exports—	
Other Sterling Area Countries	166,640	To-Countries of the O.E.E.C., in-	
Total	387,217	cluding dependencies Other Countries	201,242 161,990
Excess of Exports (+) or Imports (-)	-65,582	Other Countries	101,990
		Total	363,232
Dollar.	!		
Imports— From—United States of America	104,666	Faces of Faces de (1) as Imports (1)	
Canada	23,009	Excess of Exports (+) or Imports (-)	+154,951
Other Dollar Area Countries	3,573		
Total	131,248		
Exports—		ALL MONETARY AREAS.	
To-United States of America	45,469	Total Imports	792,328
Canada Other Dollar Area Countries	14,143 10,775		,
Total	70,387	Total Exports	820,836
Excess of Exports (+) or Imports (-)	-60.861	Excess of Exports (+) or Imports (-)	+28,508

(a) For a list of the countries in each monetary area, see page 346. (b) Preliminary.

# § 11. Classified Summary of Australian Oversea Trade.

Imports and Exports in Statistical Classes, p. 352.—The following table shows the values of total imports and total exports in statistical classes for the year 1957-58:—

TOTAL OVERSEA TRADE, AUSTRALIA: CLASSES, 1957-58.(a) (£'000.)

Class.	Imports.	Exports.	Class.	Imports.	Exports
I. Animal foodstuffs, etc	8.395	93,126	XIII. Rubber and leather,	[	
<ol> <li>Vegetable foodstuffs;</li> </ol>	0,000	20,120	etc	17,393	4,382
non-alcoholic bever-	[	1	XIV. Wood and wicker, etc.	16,739	4,538
ages, etc	26,550	133,031	XV. Earthenware, etc	13,358	1,104
III. Alcoholic liquors, etc	2,125	1,890	XVI. Paper and stationery	45,110	2,991
IV. Tobacco, etc	15,210	653	XVII. Jewellery, etc	8,459	758
V. Live animals	722	1,844	XVIII. Optical, surgical and	1	i
VI. Animal substances, etc	4,212	400,857	scientific instruments	12,163	1,630
VII. Vegetable substances, etc.	19,686	1,075	XIX. Chemicals, medicinal	1 .	
VIII. Apparel, textiles, etc	108,526	2,727	products, fertilizers,	1	ļ
IX. Oils, fats and waxes	101,695	23,866	etc	37,497	6,489
X. Pigments, paints and			XX. Miscellaneous	, 54,065	21,018
varnishes	7,647	903	XXI. Gold and silver; bronze		
XI. Rocks, minerals, etc	7,336	28,598	specie	2,679	7,644
XII. Metals, metal manufac-	İ	l			l
tures and machinery	282,761	81,712	Total	792,328	820,836

(a) Preliminary.

Exports of Principal Articles of Australian Produce, p. 354.—The following table shows the quantities and values of the principal articles of Australian produce exported during 1957-58:—

# EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1957-58.(a)

	Article.				Unit of Quantity.	Quantity.	Value.(£'000.)
Arms, ammunition	, military	, na	val and	air force			
stores							1,219
Barley					ton	425,388	9,474
Butter					,,	50,795	15,642
Cheese					,,	9,230	1,855
Chemicals, drugs, 1	fertilizers						6,222
Flour (wheaten), p	lain whit	е			ton (b)	669,386	14,350
Fruit—						,	,
Dried					ton	60,299	9.142
Fresh, including	frozen				'000 bus.	8,002	13,060
Preserved in airt		iner	rs		ton	73,989	12,398
Gold					'000 fine oz.	420	6,352
Hides and skins				•			25,268
Lead, pig					ton	164,329	15,822
	nachinery	,	excent	dynamo		,	,
electrical)					1		10,796
Meats preserved by	cold nec	Cess		• • •	1		20,
Beef and veal	ooid pro		,		ton	125,160	21,452
Lamb	••		• •		1	28,723	
Mutton		• •	• •	• • • • • • • • • • • • • • • • • • • •	,,	18,692	
Pork		• •	• • •		, ,, l	960	.,
Meats, tinned	• •	• •	• • •	• •	,,	58,705	,
Milk and cream	• •	• •	• •	٠.	'000' lb.	118,839	
Ores and concentra	ter	• •	• •	• •	ton	664,041	21,400
Sugar (from cane)		• •	• •	• •	i i	707,891	34,995
	• •	• •	• • •	• •	,,,		28,233
Wheat	• •	• •	• •	• •	'000' lb.	1,052,449	373.643
Wool (c)	• •	• •	• •	• •	,	1,280,341	
All other articles	• •	• •	• •	••	[ •• !	• •	149,904
Total Expor	ts (Austr	alian	Produce	e)			804,296

<sup>(</sup>a) Preliminary.

### § 15. Australian Index of Export Prices.

Monthly Index (Fixed Weights), p. 361.—The following are the export price index numbers for the months January to June, 1958.

### EXPORT PRICE INDEXES: AUSTRALIA.

SIMPLE AGGREGATIVE INDEX: FIXED WEIGHTS.

INDIVIDUAL COMMODITIES, GROUPS OF COMMODITIES AND ALL GROUPS (COMBINED).

(Base of each Index: Average of three years ended June, 1939 = 100.)

		ļ .									All G	roups.
Month.	Wool.	Wheat.	But- ter.	Metals (a)	Meats.	Sugar.	Dried Fruits. (c)	Tal- low.	Hides.	Gold. (e)	Ex- clud- ing Gold.	In- clud- ing Gold.
		<u> </u>			<u> </u>	i						
January February March April May June	453 468 422 400 392 400	363 369 373 366 368 f 368	207 194 188 163 162 166	375	f 337 f 315 f 312 f 324 f 329 f 334	504 496 496 479 485 477	345 349 346 f 346 f 334 f 341	376 379 380 368 373 375	237 239 239 235 241 239	178 178 178 178 178 178	f 389 f 395 f 372 f 357 f 354 f 358	f 374 f 380 f 359 f 344 f 341 f 346

<sup>(</sup>a) Silver, copper, tin, zinc, lead. (b) Beef, lamb, mutton, pork. Guaranteed minimum prices are used when operative. (c) Sultanas, raisins, currants. (d) Cattle hides, calfskins. (e) Where Australian gold has been sold on the oversea premium markets such price has been used in the index. (f) Subject to revision.

### § 20. The Australian Balance of Payments.

The tables in this section show revised balance of payments estimates for the years 1954-55, 1955-56 and 1956-57 and preliminary estimates for 1957-58. In some cases the form of presentation is slightly different from that in Chapter X.—Trade. Further details of balance of payments estimates will be found in *The Australian Balance of Payments*, 1928-29 to 1951-52 and in the mimeographed publication *The Australian Balance of Payments*, 1953-54 to 1957-58.

Current Account, p. 368.—Revised estimates of the balance of payments on current account for the years 1954-55 to 1956-57 and preliminary estimates for 1957-58 are shown in the following table.

# BALANCE OF PAYMENTS ON CURRENT ACCOUNT: AUSTRALIA.

# (£A. million.)

Particulars.	1954–55.	1955-56.	1956–57.	1957-58.(a)
CREDITS.  1. Exports f.o.b	761.4 16.2	772.3 15.6	978.1 16.0	813.7 17.2
Expenditure of oversea ships Other 4. Travel	56.0 5.8 	59.1 6.6 — 65.7 6.1	68.0 8.0 76.0 9.0	66.8 8.5 75.3 7.5
5. Income from investment— Undistributed income Other	3.5 16.0 ————————————————————————————————————	2.9 18.5 — 21.4 9.5	3.3 22.5 — 25.8 15.7	4.0 30.5 34.5 11.8
7. Miscellaneous 8. Donations, etc.— Immigrants' funds, etc	9.2	9.5	7.5	7.5 17.4
Other	5.2 —— 18.3 899.3	5.2 ————————————————————————————————————	6.3 —— 22.4 —— 1,150.5	5.5 —— 22.9 —— 990.4
DEBITS.  9. Imports f.o.b  10. Transportation—	846.9	819.5	717.5	790.5
Freight Other (including marine insurance) (c)	88.0 17.9 	18.0 121.0 22.3	110.0 14.3 — 124.3 22.2	123.0 16.4 — 139.4 27.5
12. Income from investment— Public authority interest Portfolio investment Direct investment	21.7 6.7 36.8	22.3 6.0 38.8	22.7 8.0 37.7	22.9 9.0 42.0
Undistributed income  13. Government— Defence	30.3 —— 95.5 14.9	39.9 —— 107.0	44.7 113.1 4.4	45.0 —— 118.9 5.7
Papua and New Guinea Other	9.5 12.4 — 36.8 25.3	11.0 13.3 — 35.8 22.7	11.5 12.4 ————————————————————————————————————	13.2 15.0 — 33.9 27.0
15. Donations, etc.— Personal Colombo Plan, etc. Other	13.9 3.5 8.2 —— 25.6	16.5 4.0 7.8 ———————————————————————————————————	18.2 4.5 8.5 —— 31.2	17.0 5.0 8.8 — 30.8
Total Debits	1,157.6	1,156.6	1,057.9	1,168.0
Balance on Current Account	-258.3	-237.1	92.6	-177.6

<sup>(</sup>a) Preliminary. (b) Includes gold sold on the premium market valued at the price obtained. (c) Total marine insurance premiums on imports, whether payable in Australia or overseas, were £4.3 million in 1954-55, £4.2 million in 1955-56, £3.7 million in 1956-57 and £4.2 million in 1957-38.

Note.—The amounts shown above for imports and exports exclude gold and represent the recorded figures adjusted for balance of payments purposes.

Capital Account, p. 370.—The following table shows revised estimates of Australia's balance of payments on capital account for the years 1954-55 to 1956-57 and preliminary estimates for 1957-58.

BALANCE OF PAYMENTS ON CAPITAL ACCOUNT: AUSTRALIA. (£A. million.)

	1. HHHIOH./			
Particulars.	1954–55.	1955–56.	1956–57.	1957–58.(a)
CHANGE IN ASSETS.		;		
1. Gold and foreign exchange	-142.4	- 73.3	211.5	- 42.0
2. Subscriptions to I.M.F., I.B.R.D. and		73.3	211.5	42.0
I.F.C.	1	i	1.0	
3. Other official transactions	- 0.4	- 9.9	- 27.3	- 1.6
4. Marketing authorities	1	9.3	- 4.4	- 2.7
5. Portfolio investment		- 1.7	- 0.9	- 2.8
6. Direct investment—				
Branches—		<b>\</b>		
Unremitted profits		0.4	0.7	1.0
Other	3.9	4.0	6.8	(b)
Subsidiaries—		1		
Undistributed profits		2.5	2.6	3.0
Other	1.0	1.6	0.8	(b)
-				
The seal of the season to the season	-134.3	- 67.1	100.0	- 45.1
Total Change in Assets	-134.3	- 67.1	190.8	- 45.1
		·		
CHANGE IN LIABILITIES.				;
7. Official loans				
I.B.R.D.	23.5	17.9	3.1	13.2
Other Commonwealth		6.8	3.2	0.7
State		1.4	- 33.4	2.1
Other		- 0.3	- 3.2	- 3.6
Discounts and bonuses		- 0.1	0.1	0.2
8. Other I.M.F. and I.B.R.D.	- 11.6		- 1.0	- 3.1
9. Papua and New Guinea adjustment	1.0	2.0	2.0	2.0
10. Australian currency held by foreign	ιĮ	Į	Į	1
banks	- 0.5	- 0.3	0.3	- 0.4
<ol> <li>Portfolio investment—</li> </ol>				
Government securities		- 4.0	- 1.4	(b)
Companies, etc.	6.2	7.2	11.1	(b)
12. Direct investment—		,		
Branches—	1 22	6.6	7.5	0.0
Unremitted profits			8.3	8.0
Other Subsidiaries—	9.7	12.3	6.3	(b)
Undistributed profits	26.4	33.3	37.2	37.0
Other		57.9	33.8	(b)
13. Life assurance offices	· · · -	- 1.1	- 1.1	- 4.0
14. Balancing item			31.7	80.4
•				
Total Change in Liabilities .	. 124.0	170.0	98.2	132.5
Balance on Capital Account .	. 258.3	237.1	- 92.6	177.6

 <sup>(</sup>a) Preliminary.
 (b) Not available; included in balancing item.
 Note.—Minus sign (-) denotes decrease.

Balance of Payments on Current Account—Monetary Areas, p. 371.—Revised estimates of Australia's regional balance of payments are shown in the following table for the years 1954-55 to 1956-57, together with preliminary estimates for 1957-58.

# BALANCE OF PAYMENTS ON CURRENT ACCOUNT WITH VARIOUS COUNTRIES AND MONETARY AREAS (a): AUSTRALIA.

(£A.million.)

		Sterlin	д Агеа.	Г	Pollar Are	a.		Non-		
Particulars.	Gold Pro- duction.	United King- dom.	Other.	U.S.A.	Canada.	Other.		Other.(b)	Total,	
1954–55.										
Exports f.o.b Imports f.o.b Invisibles (net)	i6.2	288.6 -378.7 - 85.3	131.8 -141.6 - 21.7	52.7 -108.1 - 44.8	10.5 - 23.8 - 9.1	- 6.4 - 1.2 0.3	185.7 -122.3 - 12.6	- 71.2 - 15.8	761.4 -846.9 -172.8	
Balance on Cur- rent Account	16.2	-175.4	- 31.5	-100.2	- 22.4	5.5	50.8	- 1.3	-258.3	
		-2	06.9		-117.1			49.5		
1955–56.										
Exports f.o.b Imports f.o.b Invisibles (net)	 i5.6	257.1 -355.3 - 77.6	131.4 - 128.1 - 31.7	- 55.0 - 98.7 - 46.1	- 10.9 - 23.3 - 11.5	- 4.4 - 1.1	187.5 -125.8 - 15.0	121.4 - 83.9 - 22.5	772.3 -819.5 -189.9	
Balance on Cur- rent Account	15.6	-175.8	- 28.4	- 89.8	- 23.9	3.5	46.7	15.0	-237.1	
		2	04.2		-110.2			61.7		
1956-57.									i	
Exports f.o.b Imports f.o.b Invisibles (net)	 iė.o	277.5 -295.9 - 53.7	176.7 -124.1 - 31.7	- 66.1 - 97.0 - 51.6	- 10.7 - 22.2 - 9.7	9.3 - 4.8 - 0.8	250.2 -100.5 - 12.7	187.6 - 73.0 - 23.8	978.1 -717.5 -168.0	
Balance on Cur- rent Account	16.0	- 72.1	20.9	- 82.5	- 21.2	3.7	137.0	90.8	92.6	
		<u> </u>	51.2		-100.0		2	27.8		
1957-58.(c)										
Exports f.o.b Imports f.o.b Invisibles (net)	 i7.2	220.4 324.9 62.2	159.7 -124.9 - 39.5	45.5 106.1 59.1	- 14.1 - 23.0 - 13.2	- 3.6 - 0.6	201.2 -114.9 - 16.5	162.0 - 93.1 - 26.9	813.7 -790.5 -200.8	
Balance on Cur- rent Account	17.2	-166.7	- 4.7	-119.7	- 22.1	6.6	69.8	42.0	-177.6	
. Sin Planedit	.,.2	-17	71.4		-135.2		1	11.8		

<sup>(</sup>a) For a list of the countries included in each monetary area, see p. 346. (b) Includes international agencies. (c) Preliminary.

Note.—The amounts shown above for imports and exports exclude gold and represent the recorded figures adjusted for balance of payments purposes.

Minus sign (-) denotes debits; other items are credits.

1168 Appendix.

Balance of Payments with the Dollar Area, p. 372.—The following table presents estimates, in revised form, of Australia's balance of payments with the dollar area for the years 1954-55 to 1956-57, and preliminary estimates for 1957-58.

BALANCE OF PAYMENTS WITH THE DOLLAR AREA: AUSTRALIA. (£A. million.)

(807.5		,		
Particulars.	1954–55.	1955–56.	1956–57.	1957–58.(a)
CURRENT ACCOUNT.				
		1		
Credits with the Dollar Area.	(0.6	74.9	86.1	70.4
1. Exports f.o.b	69.6	2.3	3.2	1
2. Transportation	2.4 5.0	5.3	6.0	3.1 6.7
3. Other	3.0	3.3	0.0	6.7
Total Credits	77.0	82.5	95.3	80. <b>2</b>
Debits with the Dollar Area.				
4. Imports f.o.b	133.1	126.4	124.0	132.7
5. Transportation—				
, Freight	14.5	18.5	20.7	22.3
Other (including marine insurance)	1.2	1.2	1.2	. 1.3
6. Investment income—			ļ	
Public authorities	3.0	2.7	2.7	3.1
Undistributed income	15.8	19.3	19.6	19.7
Dividends, profits, etc	12.7	11.3	12.9	16.5
7. Miscellaneous—	İ	1		
Travel	1.5	1.6	2.3	3.9
Business expenses	2.5	2.4	2.3	2.6
Film rentals	2.6	2.6	2.6	3.8
Other	7.2	6.7	7.0	9.5
Total Debits	194.1	192.7	195.3	215.4
		110.0	100.0	
8. Balance with the Dollar Area	-117.1	-110.2	-100.0	-135.2
9. Other current transactions	7.6	- 6.2	12.4	- 2.3
Balance on Current Account	-109.5	-104.0	-87.6	-137.5
		ļ		
INVESTMENT AND FINANCING ACCOUNT.			ļ	
10. Gold sales to the United Kingdom			25.0	
11. Net purchases of dollars from the		1		į
United Kingdom	54.0	40.2	23.2	69.9
12. Increase (-) in Australian dollar	1	1	1	
balances	- 4.8	- 1.8	4.9	- 0.3
13. Official loans—	1			
I.B.R.D	23.5	17.9	3.1	13.2
Other	- 4.8	8.6	0.1	9.2
14. I.M.F. and I.F.C	- 11.6		- 1.0	
15. Identified private capital—	1		1	
Undistributed income (net)	15.7	19.4	19.7	19.8
Other	24.5	13.3	7.0	(b)
16. Balancing item	13.0	6.4	15.4	25.7
Balance on Investment and				
Financing Account	109.5	104.0	87.6	137.5

<sup>(</sup>a) Preliminary. (b) Not available; included in balancing item.

Note.—The amounts shown above for imports and exports exclude gold and represent the recorded figures adjusted for balance of payments purposes.

# CHAPTER XI.—TRANSPORT AND COMMUNICATION.

# PART I.—TRANSPORT.

#### F. MOTOR VEHICLES.

Motor Vehicle Registrations, p. 411.—Motor vehicles registered at 30th June, 1958, and new motor vehicles registered during 1957-58 were as follows:—

# MOTOR VEHICLES: REGISTRATIONS, 1957-58.

		mber of Mered at 30			Number of New Motor Vehicles Registered, 1957-58.(a)					
State or Territory.	Motor Cars.(b)	Com- mercial Vehicles. (c)	Motor Cycles.	Total.	Motor Cars.(b)	Com- mercial Vehicles. (c)	Motor Cycles.	Total.		
New South Wales Victoria(d) Queensland South Australia Western Australia Tasmania Northern Territory Aust. Capital Territory	554,525 562,368 206,677 173,236 110,573 56,877 3,078 8,764	279,979 161,119 138,319 67,755 66,305 24,025 3,965 2,991	34,581 24,353 20,193 18,742 12,827 4,018 718 451	869,085 747,840 365,189 259,733 189,705 84,920 7,761 12,206	57,316 54,198 20,495 16,259 10,142 5,309 273 1,244	27,256 15,267 10,640 5,668 5,568 1,971 405 364	3,140 2,308 1,710 1,406 1,702 225 50 63	87,712 71,773 32,845 23,333 17,412 7,505 728 1,671		
Total	1,676,098	744,458	115,883	2,536,439	165,236	67,139	10,604	242.979		

<sup>(</sup>a) Excludes Defence Service vehicles, trailers, road tractors, etc., and dealer's plates. (b) Includes taxis and hire cars. (c) Includes utilities, panel vans, lorries, omnibuses and station wagons. (d) Registration in Victoria is according to purpose of use and not type of vehicle; consequently, motor car registrations are overstated by the inclusion of commercial vehicles registered for private use.

### PART II.—COMMUNICATION.

# A. POSTS; TELEGRAPHS; TELEPHONES; CABLE AND RADIO COMMUNICATION.

### § 5. Cable and Radio Communication.

Radio-communication Stations Authorized, p. 436.—The following radio-communication stations were authorized in Australia and the External Territories at 30th June, 1958:—Transmitting and receiving stations—Fixed—aeronautical, 103 (19); services with other countries, 87 (12); outpost, 1,428 (347); other, 612 (38); Land—aeronautical, 101 (16); land mobile services, 1,736 (nil); harbour mobile services, 68 (nil); coast, 80 (13); special experimental, 128 (nil); Mobile—aeronautical, 389 (nil); land mobile services, 16,455 (84); harbour mobile services, 284 (15); outpost, 715 (nil); ship, 1,833 (139); Amateur, 3,611 (77). In addition, there were 374 fixed and 61 mobile stations for the purpose of receiving only. The figures in parentheses refer to the External Territories and are included in the totals preceding them.

### B. BROADCASTING AND TELEVISION.

#### 8 2. Broadcasting.

Broadcasting Stations, p. 439.—The following table shows the number of broadcasting stations in operation at 30th June, 1958:—

# BROADCASTING STATIONS, 30th JUNE, 1958.

Type of Station.	N.S.W.	Vic.	Q1d.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua and New Guinea.	Total.
National— Medium Frequency High Frequency Commercial	15 1 37	5 3 20	12 2 20	<sub>8</sub>	7 2 14	8	2 .:.	1	1 1	55 9 108

# § 4. Licences, etc.

Broadcast Listeners' and Television Viewers' Licences, p. 443.—Broadcast listeners' licences in force at 30th June, 1958, were as follows:—New South Wales, 784,897; Victoria 557,960; Queensland, 320,626; South Australia, 238,916; Western Australia, 159,551; Tasmania, 75,915; Australia, 2,137,865. Figures for the Northern Territory and the Australian Capital Territory have been included with those for South Australia and New South Wales respectively.

Television viewers' licences in force at 30th June, 1958, were as follows:—New South Wales, 143,422; Victoria, 147,721; Tasmania, 43; Australia, 291,186.

#### CHAPTER XV.—WELFARE SERVICES.

#### A. COMMONWEALTH SOCIAL SERVICE BENEFITS.

### § 2. Commonwealth Expenditure on Social and Health Services.

States, p. 546.—The following table shows particulars of payments of social and health services in each State during 1957-58.

# COMMONWEALTH EXPENDITURE ON SOCIAL AND HEALTH SERVICES, 1957-58.

(£'000.)

Service.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Over- seas.	Total.
Social Benefits—							<u> </u>			
Age and Invalid Pensions	50,353	29,796	18,343	10,716	8,077	4,034	45		66	121,577
Child Endowment	21,219	15,719	9,117	5,430	4,572	2,237	180	248	12	58,734
Commonwealth Rehabili-		i '	1	i '		'				
tation Service	154	182	68	102	80	22	1		١	608
Funeral Benefits	129	88	46	28	23	11	١			325
Maternity Allowances	1,281	969	547	323	271	138	11	18	2	3,560
Sickness Benefits	792	406	305	157	131	59	2	5	l	1,857
Special Benefits(a)	162	222	97	37	19	16		1		554
Tuberculosis Allowances	447	296	227	145	76	64			١	1,255
Unemployment Benefits	1,727	1,011	1,282	306	482	104	1 2	6		4,920
Widows' Pensions	3,901	2,331	1,676	844	708	339	6	19	8	9,832
National Health Services—	1		1				1	1	1	} -,
Hospital Benefits	4,313	2,662	1,559	928	929	368	38	26		10,823
Medical Benefits	3,117	1,682	744	707	657	179				7,086
Medical Benefits for Pen-	,	1	ĺ	Í	1		İ	1	1	.,
sioners	1.450	786	392	278	216	70	١	6	١	3,198
Nutrition of Children	1,138	675	400	212	153	159	1 1	18	1	2,756
Pharmaceutical Benefits	5,292	3,629	1,664	1,035	864	317		b 110		12,911
Pharmaceutical Benefits	-,	1 -,	, , , , ,	1		i	1	1		,-
for Pensioners	965	455	335	183	139	46	١		١	2,123
Tuberculosis Campaign	1		!	1	\			1		,
maintenance payments	1.715	1,027	770	357	444	182	1	16	١	4,511
Miscellaneous	31	41	96	7	13	19	11	c 637		855
Total	98,186	61,977	37,668	21,795	17,854	8,364	296	1,257	88	247,485

<sup>(</sup>a) Includes special benefits to migrants in reception and training centres.
(b) Includes private hospitals, Canberra Community Hospital, Bush Nursing Centres, etc.
(c) Includes £536,927 for the production of poliomyelitis vaccine and £38,000 for running expenses of the Blood Fractionation Plant at the Commonwealth Serum Laboratories, Parkville, Victoria, £20,038 for Pooled Human Serum and Anti-Rh Serum, £6,495 for Public Health Measures (inoculation of government employees against influenza) and £18,135 for Home Nursing Service.

# § 3. Age and Invalid Pensions, § 4. Child Endowment, § 7. Maternity Allowances, § 8. Unemployment, Sickness and Special Benefits, § 9. Widows' Pensions.

General, pp. 547-558.—The following table gives a summary of age, invalid and widows' pensions, maternity allowances, child endowment, and unemployment, sickness and special benefits for the year 1957-58:—

SOCIAL SERVICES: SUMMARY, 1957-58.

SOCIAL SERVICES: SUMMARY, 1957-58.												
Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.			
Age Pensioners at end of year—			-									
Males Females Persons	140,727		45,046	14,818 30,689 45,507	12,094 21,030 33,124	4,884 10,230 15,114	87 74 161	, 400	160,998 335,759 496,757			
Invalid Pensioners at end o	f   '	1	, , , , , ,	,	,				,,,,,,,,			
Males Females		11,333 8,686 <b>20,0</b> 19		2,990 2,872 5,862		1,478 1,405 2,883	38 15 53	34 58 92	35,544			
Maternity Allowances— Claims paid during year Child Endowment at end of year—		60,666	34,000	20,001	16,829	8,509	666	1,137	221,149 (a)			
Family claims in force	531,556	383,926	204,503	132,079	104,472	49,812	3,043	5,818	1,415,378			
Endowed children Widows' Pensions at end o year—	1,111,199	818,258	466,846	286,358	234,265	114,832	6,658	12,923	3,051,699 (a)			
Pensions in force Class "A" pensions	18,593	11,252	7,784	4,066	3,542	1,581	31	79	46,928			
in force(b) Unemployment, Sickness	8,106	4,931	3,882	1,809	1,365	817	17	43	20,970			
and Special Benefits— Persons on benefit a									·			
end of year— Unemployment Bene fit—	1											
Males Females	2,974	4,712 2,187	992	1,586 672	404	525 114	8 1	23				
Persons	1	6,899	1	2,258	3,005	639	9	34	29,418			
Males Females Persons	872	1,336 525 1,861	1,022 303 1,325	519 126 645	464 110 574	205 42 247	6	8	1,986			
Special Benefit—(c) Males		94	104	59	31	20		1	568			
Females	1 200	499 593	300 404	110 169	74 105	89 109		3 4				
Total— Males Females	4.352	6,142 3,211	1,595	2,164 908		750 245	14 1	34	10,934			
Persons	15,754	9,353	6,634	3,072	3,684	995	15 	61	39,568			
fit— Males		20,386	34,503	8.418		2,912	120					
Females Persons		5,992 26,378	4,728 39,231	2,055 10,473	1,620 13,682	573 3,485	7 127	80 315				
Sickness Benefit— Males Females		9,325 3,160	1		3,477 722	1,506 319	52 11					
Persons	24,250	12,485	9,712	4,737	4,199	1,825			54,517			
Malcs Females	555	330 729 1.069	694 198 892	217 104 321		57 46 103		16	1,719			
Total—(r) Males		ł .		12,499				:				
Females	15,261	9,891	6,882	3,032 15,531	2,403	928 5,413			38,551			
Benefits paid— Unemployment Sickness Special (d)	1,726.525 792.335 161,818	406,032	281757 304,761 97,212	157,379	130.959	58,744	1,976 1,821 35	5,237	4,919,775 1,857,263 553.706			
Total (d) .	2,680.678	1639566	1683730	499,927	632,390	178,974	3,832	11,647	7,330,744			

<sup>(</sup>a) Includes claims paid overseas. (b) Pensions paid to widows who maintain at least one child under 15 years of age. (c) Excludes migrants. (d) Includes payments to migrants.

# CHAPTER XVI.-POPULATION.

# § 7. General Characteristics.

Race.—The term "Race" as used for Census purposes is not synonymous with ethnic group, but is based on geographical rather than ethnological descriptions. The form of inquiry at the 1954 Census was:—" For persons of European Race, wherever born, write 'European'. For non-Europeans, state the race to which they belong, for example, 'Aboriginal', 'Chinese', 'Negro', 'Afghan', etc. If the person is half-caste with one parent of European race, write also 'H.C.', for example 'H.C. Aboriginal', 'H.C. Chinese', etc." The complementary instruction was:—" In the case of a person both of whose parents are non-European but of different races, state the race of that person's father (and do not add 'H.C.')." This form of inquiry and the instruction are identical with those used at the 1947 Census. It follows that, as the essential distinction is between European and non-European races only, those having European blood to the extent of one half have been classed as half-castes of the non-European race.

A summary for the 1947 and 1954 Censuses is shown in the following table.

POPULATION: RACE, AUSTRALIA, 1947 AND 1954. (Excluding Full-blood Aboriginals.)

_	Censu	s, 30th Jun	e, 1947.	Censu	s, 30th Jun	e, 1954.	Increase.
Race.	Males.	Females.	Persons.	Males.	Females.	Persons.	1947–54.
Full-blood— European	3,765,238	3,758,891	7,524,129	4,508,795	4,412,896	8,921,691	1,397,562
Non-European— Arab Chinese Cingalese Filipino Indian(a) Japanese Javanese, Indonesian, Koepanger Malay Pacific Islander (n.e.i.)b Torres Strait Islander Siamese, Thailander Syrian, Lebanese Asiatic (n.e.i.) Other and Indefinite	100 6,594 97 133 2,278 108 84 425 } 2,840 15 888 } 1,045	38 2,550 53 102 202 49 23 155 2,492 12 787 425		247 311 534	35728 3,728 100 317 292 36 251 814 2,210 60 916 221 72	262 12,878 268 227 2,209 539 347 785 1,884 4,253 2,290 1,069 252	124 3,734 118 - 8 - 271 382 240 205 805 196 615 } -149
Total, Non-European Full-blood	14,607	6,888	21,495	18,332	9,154	27,486	5,991
Haif-caste— Australian Aboriginal Chinese Filipino Indian(a) Japanese Malay Pacific Islander (n.e.i.)b Torres Strait Islander Syrian, Lebanese Asiatic (n.e.i.) Other and Indefinite	14,026 1,599 111 235 91 196 } 359 111 } 797	87 198 353 112	27,179 2,950 214 418 178 394 712 223 1,466	1,404 101 259	15,510 1,276 100 179 132 235 366 49 96 217 202	31,359 2,680 201 438 246 449 737 109 199 467 - 468	4,180 -270 -13 20 68 55 } 134 - 24 } -531
Total, Half-caste	17,525	16,209	33,734	18,991	18,362	37,353	3,619
Total, Non-European Full-blood and Haif-caste	32,132	23.097	55,229	37,323	27,516	64,839	9,610
Grand Total	3,797,370	3,781,988	7,579,358	4,546,118	4,440,412	8.986,530	1,407,172

<sup>(</sup>a) Native of India or Pakistan. and South Sea Islander, so described.

<sup>(</sup>b) Includes Fijian, Maori, Papuan, Pacific Islander, Polynesian

# CHAPTER XVII.--VITAL STATISTICS.

# § 2. Marriages.

Age and Conjugal Condition at Marriage, p. 611.—A summary of the previous conjugal condition of bridegrooms and brides in 1957 in relation to age at marriage is as follows.

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1957.

Age at Marriage		Brideg	rooms.		Brides.						
(Years).	Bachelors.	Widowers.	Divorced.	Total.	Spinsters.	Widows.	Divorced.	Total.			
Under 20 20-24	3,073 30,630 20,056 7,288 2,578 1,170 696 386 203 83 105	13 64 148 178 319 315 406 450 416 835	50 435 893 852 734 591 357 218 84 70	3,073 30,693 20,555 8,329 3,608 2,223 1,602 1,149 871 583 1,010	18,084 32,849 8,582 3,003 1,300 684 407 270 145 87	4 99 217 309 379 456 486 404 337 307 307	5 240 963 1,128 989 692 472 210 81 54	18,093 33,188 9,762 4,440 2,668 1,832 1,365 884 563 448 448			
Total	66,268	3,144	4,284	73,696	65,471	3,359	4,866	73,696			

In 1957 the proportional distribution (per cent.) of bridegrooms and brides according to previous conjugal condition was:—

Bridegrooms: Bachelors, 89.92; Widowers, 4.27; Divorced, 5.81.

Brides: Spinsters, 88.84; Widows, 4.56; Divorced, 6.60.

In 1957 the average age of bridegrooms was 28.54 years and of brides 25.18 years.

Celebration of Marriages, p. 613.—The number of marriages in 1957 celebrated by ministers of religion in the various denominations or by civil officers was as follows:—

### MARRIAGES IN EACH DENOMINATION, 1957.

									Aust	ralia.
Denomination.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	No.	Pro- portion of Total.
Church of England Roman Catholic Methodist Presbyterian Greek Orthodox Baptist Lutheran Congregational Church of Christ Salvation Army Seventh-Day Adventist Unitarian	9,417 7,283 2,735 3,113 692 367 137 245 89 102	4,885 5,331 2,447 3,308 962 280 237 252 355 102	42	1,297 1,171 1,566 346 338 161 391 227 142 46	1,456 1,143 588 355 50 77 27 99 87 23	907 482 393 135 4 78 6 42 19 17	34 50 9 17  1 2 1 4	77 93 12 27 5  6	20,909 18,202 9,424 9,146 2,146 1,124 1,086 940 748 425	28.37 24.70 12.79 12.41 2.91 1.53 1.47 1.28 1.01 0.58
Other Christian Hebrew Other Non-Chris-	168 142	175 183	145	37	142 7	25 6	22		715 340	0.97 0.46
tian Total	24,576	18,576	9,985	5,747	4,073	2,128	140	224	65,449	88.81
Civil Officers	4,191	1.663	286	834	824	379	38	32		11.19
Grand Total	28,767	20,239	10,271	6,581	4,897	2,507	178	256	73,696	100.00

# Proportion of Total. (Per cent.)

Denominational	85.43	91.78	97.22	87.28	83.17	84.88	78.65	87.50	88.81
Civil	14.57	8.22	2.78	12.72	16.83	15.12	21.35	12.50	11.19

# § 4. Fertility and Reproduction.

Number of Live Births and Confinements, p. 614.—A summary of live births and confinements registered in 1957 is shown in the following table. The table also shows the confinements resulting in one or more live births. The figures exclude cases where the births were of still-born children only.

# LIVE BIRTHS AND CONFINEMENTS, 1957.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
					<del></del> _				

### LIVE BIRTHS.

Single Births Twins Triplets	 	77,615 1,801 40	59,052 1,382 30	33,078 668 17	19,083 453	16,533 388 3	8,268 167	628 18	1,113 21	215,370 4,898 90
Males Females	 		30,968 29,496		10,025 9,511	8,738 8,186	4,365 4,070	337 309	596 538	113,237 107,121
Total	 	79,456	60,464	33,763	19,536	16,924	8,435	646	1,134	220,358

# STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE.

				 	~	 		 
Twins Triplets	::	:-	53 2	 10 1	5	 5	::	 92 3

# CONFINEMENTS RESULTING IN ABOVE BIRTHS.

Nuptial Ex-nuptial	 ••	75,153 3,403	57,718 2,039	31,491 1,932	18,670 642	15,943 790	8,011 343	551 86	1,102 22	208,639 9,257
Total	 ••	78,556	59,757	33,423	19.312	16,733	8,354	637	1,124	217,896

Ex-nuptial Live Births, p. 619.—The following table shows the number of ex-nuptial live births and the proportion of total live births in each State and Territory in 1957:—

# EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, 1957.

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number Proportion of Total Births Per cent	3,438 4.33	'	· 1	651	799 4.72	346 4.10	87 13.47	22 1.94	9,362 4.25

# § 5. Mortality.

Australian Life Tables, p. 633.—The complete expectation of life at selected ages, in respect of the Australian Life Tables, 1953-55, is as follows:—

AUSTRALIAN LIFE TABLES, 1953–55: COMPLETE EXPECTATION OF LIFE  $(\hat{e}_x)$  AT SELECTED AGES.

			Comp	lete Expec	tation of	Life (Yea	rs) at Age	(x)—	
		0.	10.	20.	30.	40.	50.	60.	70.
Males Females	 	67.14 72.75	59.53 64.78	50.10 55.06	40.90 45.43	31.65 35.99	22.92 27.03	15.47 18.78	9.59 11.62

Age Distribution, p. 639.—A summary of the ages at death for Australia for the year 1957 is given in the following table:—

AGE AT DEATH: AUSTRALIA, 1957.

Age at Death.	Males.	Fe- males.	Per- sons.	Age at Death.	Males.	Fe- males.	Per- sons.
Under 1 week  1 week and under 2 weeks 2 weeks ,, ,, 3 ,, 3 ,, ,, ,, 28 days	1,705 142 64 42	1,267 75 54 35	2,972 217 118 77	5- 9 years 10-14 " 15-19 " 20-24 "	293 237 492 568 602	188 152 179 186 264	481 389 671 754 866
Total under 28 days	1,953	1,431	3,384	30–34 " 35–39 " 40–44 " 45–49 "	771 828 1,176	393 535 804	1,164 1,363 1,980 2,916
28 days and under 3 months 3 months and under 6 6 12	242 238 260	163 222 208	405 460 468	50-54 ,, 55-59 ,, 60-64 ,, 65-69 ,,	2,609 3,662 4,709 6,365 6,640	1,098 1,316 1,924 2,803 4,141 5,046	3,925 5,586 7,512 10,506 11,686
Total under 1 year	2,693	2,024	4,717	75 70 "	5,879 4,080 2,511	5,539 5,046 3,453	11,418 9,126 5,964
1 year	268 162 103 94	222 124 77 47	490 286 180 141	90–94 ,, 95–99 ,, 100 and over Age not stated	874 180 21 24	1,401 290 30 12	2,275 470 51 36
Total under 5 years	3,320	2,494	5,814	Total, All Ages	47,659	37,294	84,953

Causes of Death, p. 641.—The following table shows deaths of males, females and persons registered in 1957, classified according to the Abbreviated List of 50 Causes provided in the Sixth Revision of the International List:—

CAUSES OF DEATH: AUSTRALIA, 1957.

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SIXTH REVISION OF THE INTERNATIONAL LIST).

Cause of Death.	Detailed List Numbers.	Males.	Females.	Persons
B 1 Tuberculosis of respiratory system	001-008	429	114	54:
B 2 Tuberculosis, other forms	010-019	27	15	4:
B 3 Syphilis and its sequelae	020-029	126	28	154
B 4 Typhoid fever				• • •
	043 045–048		٠٠ ,	
D. 7. Canadat Carray and attended a seal same thought	050, 051	6 3	. 6	12
B 8 Diphtheria	050, 051	4	5	ا ا
B 9 Whooping cough	056	7	5	9
B10 Meningococcal infections	057	38	23	6
B11 Plague	058			
B12 Acute poliomyelitis	080	5	3	
B13 Smallpox	084		• • •	
B14 Measles	085	10	5	1:
B15 Typhus and other rickettsial diseases	100-108	!	1	1
B16 Malaria	110-117	1		1
B17 All other diseases classified as infective and	١ .			
parasitic	(a)	180	131	311
B18 Malignant neoplasms, including neoplasms of	140 005	6 001		10 (70
lymphatic and haematopoietic tissues	140-205 210-239	6,801		12,679
B19 Benign and unspecified neoplasms B20 Diabetes mellitus	260	112 ± 421	138 730	250
B20 Diabetes mellitus	290-293	92	208	1,151 300
B22 Vascular lesions affecting central nervous system	330-334	5,037	6,440	11,477
B23 Non-meningococcal meningitis	340	81	54	11,477
B24 Rheumatic fever	400-402	40 1	18	58
B25 Chronic rheumatic heart disease	410-416	335	413	748
B26 Arteriosclerotic and degenerative heart disease	420-422	13.765	9.048	22,813
B27 Other diseases of heart	430-434	1,395	1,110	2,505
B28 Hypertension with heart disease	440-443	979	1,108	2,087
B29 Hypertension without mention of heart	444-447	513	561	1,074
B30 Influenza	480-483	275	170	445
B31 Pneumonia	490-493	1,784	1,461	3,245
B32 Bronchitis	500-502	763	213	976
B33 Ulcer of stomach and duodenum	540, 541	527	183	710
B34 Appendicitis	550-553	98	57	155
B35 Intestinal obstruction and hernia	560, 561, 570	285	237	522
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn	542 571 572	196	212	408
D27 C1 1 C11	543, 571, 572 581	271	164	435
B38 Nephritis and nephrosis	590-594	669	570	1,239
B39 Hyperplasia of prostate	610	556	3/0	556
840 Complications of pregnancy, childbirth and the	£ 640-652,	ן "כ" ו		
puerperium	1 670-689	} ·· ·	138	138
B41 Congenital malformations	750-759	627	549	1,176
B42 Birth injuries, post-natal asphyxia and atelec-				-,
tasis	760-762	717	504	1,221
B43 Infections of the newborn	763-768	101	74	175
B44 Other diseases peculiar to early infancy, and		1		
immaturity unqualified	769-776	803	589	1,392
345 Senility without mention of psychosis, ill-defined			1	
and unknown causes	780-795	535	615	1,150
B46 All other diseases	Residual	4,251	3,667	7,918
BE47 Motor vehicle accidents	E810-E835	1,823	470	2,293
BE48 All other accidents {	E800-E802,	2,048	1,004	3,052
<b>}</b>	E840-E962	ן '	, i	.,
BE49 Suicide and self-inflicted injury $\langle \cdot  $	E963, E970-E979	844	326	1,170
}	E964, E965,	Κ!		•
BE50 Homicide and operations of war {	E980-E999	<b>84</b> ,	49	133
ļ				
All Causes		47,659	37,294	84,953

<sup>(</sup>a) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138.

#### CHAPTER XVIII.—HOUSING.

### § 3. Statistical Summary—New Building.

New Houses, p. 659.—The number of new houses commenced, completed and under construction in each State and Territory during 1957-58 was as follows:—

# NEW HOUSES: NUMBER, 1957-58. (Including Owner-built Houses.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.(a)	A.C.T.	Aust.
Commenced Completed Under construc-	24,177 25,114	21,933 21,367	7,050 7,357	6,951 7,606	5,328 6,196	2,378 2,566	311 275	1,139 698	69,267 71,179
tion at 30th June, 1958	17,546	18,429	3,154	5,199	3,951	1,949	199	974	51,401

(a) Includes flats.

Of the 71,179 new houses completed during 1957-58, 25,876 had outer walls of brick, brick veneer, concrete or stone, 26,854 of wood (weatherboard, etc.), 17,864 of fibro-cement and 585 of other materials.

New Flats, p. 661.—The following table shows the number of new flats commenced, completed and under construction in each State and the Australian Capital Territory during 1957-58:—

# NEW FLATS: NUMBER, 1957-58. (Individual Flats.)

Particulars.	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	A.C.T.	Aust.(a)
Commenced	1,668 1,331	1,283 1,104	295 331	499 372	234 171	85 41	16 56	4,080 3,406
June, 1958	1,094	971	177	311	163	78	428	3,222

<sup>(</sup>a) Excludes figures for the Northern Territory, which are not available for publication.

Value of New Buildings, p. 662.—The values of all new buildings commenced, completed and under construction in each State and Territory are shown in the following table for the year 1957-58:—

# NEW BUILDINGS: VALUE, 1957-58. (Including Estimated Value of Owner-built Houses.) (£'000.)

Particulars.	N.S.W.	Vic.	QId.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Commenced Completed Under construc-	137,189 169,240	122,133 131,756	37,128 37,694	35,659 38,047	25,065 27,262	12,735 12,840	2,259 2,110	8,588 5,841	380,756 424,790
tion at 30th June, 1958	113,548	122,750	30,968	35,337	24,587	11,946	1,745	14,589	355,470

The value of new buildings completed in Australia during 1957–58, according to kind of building, was as follows:—Houses—Brick, brick veneer, concrete and stone, £97,782,000; wood (weatherboard, etc.), £79,631,000; fibro-cement, £43,836,000; other, £1,662,000; Total, £222,911,000; Other Buildings—Flats, £8,238,000; hotels, guest-houses, etc., £6,768,000; shops, £13,588,000; factories, £59,883,000; business premises—office, £33,678,000; other, £17,302,000; educational, £19,630,000; religious, £4,825,000; health, £19,889,000; entertainment and recreation, £8,815,000; miscellaneous, £9,263,000; Total, £201,879,000; Grand Total, New Buildings, £424,790,000.

Persons Engaged in New Building, p. 663.—The number of tradesmen engaged on jobs carried out by builders of new buildings in Australia at 30th June, 1958 was as follows:—Carpenters, 43,062; bricklayers, 10,273; painters, 9,803; electricians, 5,524; plumbers, 8,949; builders' labourers, 17,628; other, 14,377; total, 109,616. Contractors actually working on jobs numbered 9,329, sub-contractors actually working on jobs 14,562 and wage earners 85,725.

### CHAPTER XX.—PRIVATE FINANCE.

#### A. CURRENCY.

### § 2. Coinage.

Issues of Australian Coins, p. 721.—The net issues of Australian coins to 30th June, 1958, were:—silver, £36,686,000; bronze, £3,001,000; total, £39,687,000.

### § 3. Notes.

The Australian Note Issue, p. 723.—The average value of notes in circulation for the year 1957-58 was £391,965,000. This amount was distributed in denominations as follows:—10s., £11,170,000, £1, £69,704,000; £5, £174,430,000; £10, £135,967,000; £20, £4,000; £50, £42,000; £100, £47,000; and £1,000, £601,000. The amount held by the banks was £45,490,000 and by the public, £346.475,000.

#### B. BANKING.

### § 1. Cheque-Paying Banks.

Commonwealth Bank, p. 733.—The average liabilities of the Central Banking Business (including Note Issue Department) of the Commonwealth Bank for the year ended June, 1958, amounted to £983,494,000. Capital and Reserve Funds amounted to £21,618,000; Notes on Issue to £389,544,000; Special Accounts of Trading Banks to £328,337,000; Other Deposits of Trading Banks to £25,602,000; Other Liabilities to £218,393,000.

Particulars of the average assets were as follows:—Gold and Balances held abroad; £461,721,000; Australian Coin, £2,026,000; Cheques and Bills of other Banks, £4,177,000; Government and Other Securities (including Treasury Bills), £478,603,000; Bills Receivable and Remittances in Transit, £4,488,000; and Other Assets, £32,479,000.

Commonwealth Trading Bank, p. 735.—The average liabilities in Australia of the Commonwealth Trading Bank for the year ended June, 1958, were £225,002,000. Of this amount, Deposits not bearing interest amounted to £150,220,000; Deposits bearing interest to £54,837,000; Balances due to other Banks to £422,000; Other Liabilities to £19,523,000.

The average assets in Australia, £223,316,000, included Cash and Cash Balances £10,829,000; Special Deposit Account with Central Bank, £40,193,000; Balances with other Banks, £1,596,000; Treasury Bills, £5,500,000; Other Commonwealth and State Government Securities, £46,476,000; Other Securities, £3,313,000; Loans, Advances and Bills Discounted, £107,815,000; Other Assets, £7,594,000.

Private Trading Banks, p. 736.—Average liabilities in Australia of the Private Trading Banks for the year ended June, 1958, were £1,415,525,000. Interminable Deposits or Deposit Stock amounted to £6,000; Deposits not bearing interest to £1,045,881,000; Deposits bearing interest to £345,415,000; Notes in Circulation to £157,000; Balances due to other Banks to £5,561,000; Other Liabilities to £18,505,000.

Average assets in Australia amounted to £1,431,017,000. These comprised Cash and Cash Balances, £59,805,000; Special Accounts with Commonwealth Bank, £287,399,000; Balances with other Banks, £18,254,000; Treasury Bills, £39,027,000; Other Commonwealth and State Government Securities, £176,152,000; Other Securities, £13,284,000; Loans, Advances and Bills Discounted, £774,302,000; All Other Assets, £62,794,000.

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Classification of Advances within Australia—Commonwealth Trading Bank and Private Trading Banks, p. 739.—Advances within Australia at the end of December, 1957, dissected by industries were:—Resident Borrowers: Business Advances—Agriculture, Grazing and Dairying, £200,411,000; Manufacturing, £170,535,000; Transport, Storage and Communication, £13,224,000; Finance, £55,848,000; Commerce, £181,295,000; Building and Construction, £21,169,000; Other Business and Services, £51,690,000; Unclassified, £3,621,000; Total Business advances, £697,793,000; Advances to Public Authorities, £19,768,000; Personal advances, £133,655,000; Advances to Non-Profit Organizations, £13,890,000; Total Resident Borrowers, £865,106,000; Total Non-Resident Borrowers, £241,000; Total advances, £865,347,000.

Clearing House Returns, p. 742.—The average weekly bank clearings in each capital city for the year ended June, 1958, were as follows:—Sydney, £124,172,000; Melbourne, £114,854,000; Brisbane, £25,835,000; Adelaide, £24,099,000; Perth, £15,598,000; Hobart, £4,427,000; Total, £308,985,000.

Debits to Customers' Accounts—All Cheque-paying Banks, p. 742.—The average weekly debits to customers' accounts in each State for the year 1957-58 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £230,335,000; Victoria, £207,059,000; Queensland, £65,655,000; South Australia, £44,276,000; Western Australia, £30,215,000; Tasmania, £12,930,000; Australian Capital Territory, £1,533,000; Total, £592,003,000.

#### § 2. Savings Banks.

All Savings Banks, pp. 745-6.—The numbers of operative accounts in the several States at 30th June, 1958, were:—New South Wales, 2,740,000; Victoria, 2,437,000; Queensland, 1,014,000; South Australia, 863,000; Western Australia, 498,000; Tasmania, 295,000; Northern Territory, 13,000 and Australian Capital Territory, 26,000; Total, 7,886,000. The amounts on deposit in the several States at 30th June, 1958, were:—New South Wales, £449,018,000; Victoria, £433,631,000; Queensland, £153,244,000; South Australia, £148,858,000; Western Australia, £65,948,000; Tasmania, £40,241,000; Northern Territory, £2,098,000 and Australian Capital Territory, £3,805,000; Total, £1,296,843,000. Total excess of deposits over withdrawals during 1957-58 was £38,223,000 and interest added was £31,210,000.

## D. INSURANCE.

### § 2. Life Assurance.

Life Assurance, p. 757.—The following is a summary of the life assurance business transacted in Australia during 1957 (figures for 1956 in parentheses) compiled from monthly returns collected from the 24 (21) companies registered under the Life Insurance Act 1945–1953, and excluding the Government Insurance Office of New South Wales and the Queensland State Government Insurance Office which operate only within their respective States. Particulars shown are therefore not entirely comparable with those in Chapter XX., which are derived from annual returns and include business of the State Government Offices.

Ordinary Department and Industrial Department, respectively:—New Policies issued: in Australia—Number, 303,355 (289,359), 209,153 (211,146); Sum Assured, £436,053,000 (£359,238,000), £33,383,000 (£32,975,000); Policies Matured or Otherwise Discontinued in Australia—Number, 182,173 (173,086), 290,851 (270,407); Sum Assured, £130,386,000 (£115,365,000), £26,272,000 (£24,699,000). Particulars of annuities are excluded.

Premium receipts of Ordinary and Industrial Departments in Australia in 1957 amounted, respectively, to £82,912,000 (£72,868,000) and £15,120,000 (£14,898,000). Claims, etc., paid amounted to £31,846,000 (£28,325,000) and £10,781,000 (£9,813,000) respectively. Particulars of annuities are included.

### CHAPTER XXI.—PUBLIC FINANCE.

### A. COMMONWEALTH FINANCE.

Consolidated Revenue Fund, pp. 784 and 792.—The table below shows details of revenue and expenditure for the year 1957-58:—

# COMMONWEALTH CONSOLIDATED REVENUE FUND: REVENUE AND EXPENDITURE, 1957–58.

### (£'000.)

	Revenue	•		Expenditure.	
Item.			Amount.	Item.	Amount.
Taxation—				Defence Services	150,337
Customs			71,717	War and Repatriation Services	127,924
Excise			231,334	Subsidies and Bounties	15,660
Sales Tax			137,777	Departmental	108,847
Land Tax			11	National Welfare Fund-	
Income Taxes			650,419	Expenditure on Social Services	247,485
Pay-roll Tax			48,552		
Estate Duty			13,774	Business Undertakings-	
Other Taxes			7,949	Postmaster-General's Depart-	
				ment	96,952
Total			1,161,533	Broadcasting Services	7,334
10	• •	• •	1,101,500	Railways	4,321
Business Undertaki	1101				108.607
Postmaster-Gene		enart.		Total	100,007
ment	,1413 13	cpart	96,776	<b>—</b>	10.000
Broadcasting Ser	-vices	• • •	6,876	Territories	19,288
Railways	VICCS		4,576		i
Railways	••	• •	4,570	Capital Works and Services—	
(T )				Defence Services	34,760
Total	• •	• •	108,228	Business Undertakings	38,939
				Other	84,572
				Total	158,271
<b>_</b>					
Territories	• •	• •	2,845	Payments to or for States	270,566
Other Revenue	• •	• •	51,165	Loan Consolidation and Invest-	1
				ment Reserve	104,378
				Other Expenditure	12,408
Grand Total			1,323,771	Grand Total	1,323,771

#### C. COMMONWEALTH AND STATE FINANCE.

Revenue and Expenditure, p. 823.—The following table shows particulars of Commonwealth and State revenue and expenditure during the year 1956-57 and preliminary figures of revenue and expenditure for the year 1957-58.

# COMMONWEALTH AND STATE REVENUE AND EXPENDITURE. (£'000.)

				Consol	idated Revent	ıe Fı	ınd.	Loan Fund—
Gove	rnment of			Revenue.	Expendi- ture.	1	plus (+) or ficit (-)	Net Expen- diture on Works and Services.
			195	56–57.				
New South Wales	• •	<del></del>		(a)223,829	(a)223,700	1+	129	48,975
Victoria				133,254	137,565		4,311	38,449
Queensland				85,158	85,142	+	16	20,114
South Australia				61,561	61,610	<u> </u>	49	23,953
Western Australia				54,331	56,243	-	1,912	16,278
Tasmania	• •	• •		18,801	19,615	-	814	10,535
Six States				576,934	583,875	=	6,941	158,304
Commonwealth				1,311,835	1,311,835	ļ		43,999
Grand Total-	—Unadjus	sted		1,888,769	1,895,710	1=	6,941	202,303
	Adjuste	d(b)		1,673,075	1,680,016	-	6,941	202,303
			195	7–58. <b>(</b> c)				
New South Wales				(a)232,744	232,649	1+	95	52,610
Victoria				143,337	145,551	<u> </u>	2,214	42,736
Queensland				87,956	89,470	<u> </u>	1,514	20,022
South Australia				66,342	66,742	<u>                                     </u>	400	21,753
Western Australia				57,054	58,177	<del> </del> —	1,123	15,837
Tasmania				19,986	20,798		812	10,773
Six States				607,419	613,387	=	5,968	163,731
Commonwealth				1,323,771	1,323,771	ì		45,134
Grand Total-	—Unadjus	sted		1,931,190	1,937,158		5,968	208,865
	Adjusted	$\mathbf{I}(b)$		1,693,043	1,699,011	_	5,968	208,865

<sup>(</sup>a) Represents the combined transactions of the Consolidated Revenue Fund and the Business Undertakings—Railways, Tramways and Omnibuses and Sydney Harbour Section of the Maritime Services Board—included in the annual Budget Papers. Adjustments have been made to exclude duplications. (b) To avoid duplication in aggregating particulars for the Commonwealth and States, the grand totals have been adjusted to exclude State payments to the Commonwealth in respect of pay-roll tax and Commonwealth payments to the States included in State Consolidated Revenue Funds in respect of interest on State debts, special grants, uniform taxation, special financial assistance, grants to universities, tuberculosis, capital expenditure and National Welfare payments. There are other relatively minor payments for which adjustments have not been made and the adjusted figures are therefore still slightly overstated. (c) Preliminary.

### D. COMMONWEALTH AND STATE PUBLIC DEBT.

### § 3. Commonwealth and State Public Debt Outstanding.

Public Debt and Annual Interest Payable, pp. 827-8.—The following table shows details of the public debt of the Commonwealth and States and the annual interest payable thereon at 30th June, 1957 and 1958.

# COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1957.

		M	aturing in-	_		1
Particulars.	Australia.	London.	New York.	Switzer- land.	Canada.	Total.
	£A'000.	£Stg.'000.	£'000.(a)	£'000.(b)	£'000.(a)	£'000.
	·	<b>ДЕВТ.</b>	·			•
Commonwealth—						
War (1914–18)	112,606	7,534				120,140
War (1939–45)	1,334,093	5,725				1,339,818
Works and other purposes	299,297	48,711	62,145	12,251	3,069	425,473
Total	1,745,996	61,970	62,145	12,251	3,069	1,885,431
States	1,822,442	261,621	22,414			2,106,477
Grand Total	3,568,438	323,591	84,559	12,251	3,069	3,991,908
	ANNUAL II	NTEREST P.	AYABLE.			
Commonwealth	51,333	2,203	2,754	475	123	56,888
States	70,370	8,490	879	••		79,739
Grand Total	121,703	10,693	3,633	475	123	136,627

<sup>(</sup>a) £ payable in dollars which have been arbitrarily converted to £ at the rate of \$4.8665 to £1.
(b) Loan raised in Switzerland has been converted to £ at the rate of 1,000 Swiss francs to £102 1s. 10d. as provided in Loan Agreement.

# COMMONWEALTH AND STATE PUBLIC DEBT AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1958.

			•			
		М	aturing in-			
Particulars.	Australia.	London.	New York.	Switzer- land.	Canada.	Total.
	£A'000.	£Stg.'000.	£'000.(a)	£'000.(b)	£'000.(a)	£'000.
		<b>ДЕВТ.</b>				<u></u>
Commonwealth-			ļ	[		
War (1914–18)	97,140	7,534		١		104,674
War (1939-45)	1,190,558	5,655		l		1,196,213
Works and other purposes	301,506	48,476	68,849	12,251	2,907	433,989
Total	1,589,204	61,665	68,849	12,251	2,907	1,734,876
States	1,964,954	256,755	26,223			2,247,932
Grand Total	3,554,158	318,420	95,072	12,251	2,907	3,982,808
	ANNUAL II	NTEREST P	AYABLE.			
Commonwealth	47,133	2,193	3,078	475	116	52,995
States	78,188	8,821	1,065		••	88,074
Grand Total	125,321	11,014	4,143	475	116	141,069

<sup>(</sup>a) £ payable in dollars which have been arbitrarily converted to £ at the rate of \$4.8665 to £1.

(b) Loan raised in Switzerland has been converted to £ at the rate of 1,000 Swiss francs to £102 is. 10d. as provided in Loan Agreement.

# § 4. Commonwealth Loan Raisings.

Loans Raised, pp. 835.—Particulars of loans raised by the Commonwealth between 1st July, 1956, and 30th June, 1958, are given in the following table.

### COMMONWEALTH LOANS RAISED, 1956-58.(a)

Month of Rais	ing.	Where Raised.	Amount Invited.	Amount Sub- scribed.	Rate of In- terest. (b)	Year of Ma- turity.	Purpose.
1056 57			£'000.	£'000.	%		
1956-57—		Į.		14,085	32	1957	State purposes, £31,432,000
August, 1956	••	Australia	30,000	9,734 7,636	5	1963 } 1976 }	Advances for Housing, £23,000
August, 1956	••	Australia	70,181	$ \begin{cases} 20,738 \\ 22,157 \\ 12,943 \end{cases} $	3 <del>2</del> 5 5 4	1957 1963 1976	Conversion
October, 1956		Australia	70,000	30,797 20,660 15,120	4 5 5	1958 \ 1965 \ 1976 \	State purposes,£30,092,000 Advances for Housing, £5,000
						-	Conversion, £36,480,000
October, 1956	• •	London	6,951	6,951	51	1972	Conversion
December, 1956		Australia	5,575	2,800 2,775	4 5	1958 } 1976 }	Conversion
March, 1957		New York	4,110	4,110	5	1972	State purposes, £493,000 Advances for Housing,
			,				£100,000 Conversion, £3,517,000
Manah 1057		A	25.000	12,202	4	1958	State purposes, £36,270,000
March, 1957	••	Australia	35,000	14,008	5 5	1965 } 1976 }	Advances for Housing, £32,000
				102,570	4	1958 )	
March, 1957	••	Australia	141,931	10,066	5	1965 } 1976 J	Conversion
				[ 17,481	,	19/0)	(War (1939-45) and Re-
				( 40,000	4	1958 ]	patriation Services,
June, 1957		Australia	99,000	₹ 30,000	5	1965 >	£7,115,000; Advances for Housing, £31,931,000
				29,000	5	1976	State purposes,
1957–58				6 0 530		40.50	( £59,954,000
August, 1957		Australia	30,000	$\begin{cases} 9,539 \\ 15,637 \end{cases}$	4 5	1959 ] 1965 }	State purposes, £31,400,000 Advances for Housing,
	••	Australia	30,000	6,252	5	1976	£28,000
August, 1957		Australia	150 505	98,650	4 5 5	1959	
August, 1937	• •	Austrana	150,527	₹ 9,592 ₹ 34,701	5	1965 }	Conversion
N 1 1000				14,468	4	1960 1	State purposes, £32,550,000
November, 1957	•••	Australia	30,000	₹ 9,909     8,183	4 5 5 4 5	1967 } 1973	Advances for Housing,
				21,457	4	1960	£10,000
November, 1957	••	Australia	75,293	₹ 26,233	5	1967 }	Conversion
February, 1958		London	16,000	7,913 16,000	5	1973 J 1976	Conversion
	•				1		State purposes, £4,285,000
April, 1958	••	New York	5,137	5,137	42	1973	Advances for Housing, £852.000
April, 1958		Australia	35,000	10,807 5,370	4 43	1961 ) 1967 }	State purposes, £39,241,000 Advances for Housing,
	''	1100111111	,	L 23,073	5	1973 j	£9,000
April, 1958		A	172 221	108,579	4.	1961 🧻	,
April, 1730		Australia	173,371	₹ 10,651 ₹ 26,577	43	1967 } 1973	Conversion
	ł			` '		1	War and Repatriation
June, 1958		Australia	02.002	31,000	4.	1961	Services, £8,262,000;
June, 1730	• •	Austrana	92,000	27,000 34,000	43	1967 } 1973	Advances for Housing, £31,605,000; State pur-
	J	i		,	· - )	.,,,,	poses, £52,133,000'

<sup>(</sup>a) During 1956-57 and 1957-58, \$11,959,000 and \$32,702,000 respectively were drawn against loans made available by the International Bank for Reconstruction and Development. In 1956-57 and 1957-58, loans of \$8,691,000 and \$7,389,000 respectively were raised in New York for Qantas Empire Airways. (b) Australian loans bearing interest at 5 per cent. were issued at par and those at other rates were issued at prices ranging from par to £98 17s. 6d. London loans raised in 1956-57 were issued at £97 10s. and in 1957-58, at £99 10s. The New York loan in 1956-57 was issued at par and in 1957-58 at £99.

### CHAPTER XXIII.—PASTORAL PRODUCTION.

Livestock Numbers, p. 917.—The following table shows, for each State, the numbers of livestock at 31st March, 1958.

# LIVESTOCK NUMBERS, 31st MARCH, 1958. (a) ('000.)

	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Horses Cattle Sheep Pigs	 220 3,748 65,800 400	98 2,750 27,090 279	243 7,187 22,274 422	36 597 15,237 108	44 998 15,724 151	13 371 3,298 63	40 1,267 30 1	1 10 256	695 16,928 149,709 1,424

<sup>(</sup>a) Preliminary, subject to revision.

### CHAPTER XXVI.-MINERAL INDUSTRY.

# § 1. The Mineral Wealth of Australia.

Quantity and Value of Production, pp. 1003-4.—In the table hereunder particulars are given of the quantity and value of production in Australia of the principal minerals during the year 1957:—

### MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA, 1957.

#### METALLIC MINERALS.

<b>У</b> еаг.	Principal Contents of Metallic Minerals Produced.										
rear.	Copper.	Gold.	Iron.	Lead.	Silver.	Tin.	Zinc.	Sulphur.	Metal Mining.		
	Tons.	Fine oz.	Tons.	Tons.	'000 fine oz.	Tons.	Tons.	Tons.	£'000.		
1957	56,703	1,083,941	2,465,523	333,264	15,739	1,952	291,582	373,378	83,182		

#### NON-METALLIC AND FUEL MINERALS.

					Quantities	Produced.			Total Value of
	Year.		Co	pal.	Gypsum.	Limestone.	Mica.	Salt.	Output of Non- metal and
			Black.	Brown.		(b)			Fuel Mining.
1957		••	'000 tons. 19,919	'000 tons. 10,741	Tons. 478,435	Tons. 4,566,725	lb. 77,313	Tons. 432,000	£'000. 66,874

<sup>(</sup>a) Includes sulphur content of spent oxide roasted.

<sup>(</sup>b) Excludes limestone used as a construc-

# § 2. Gold, § 3. Silver, Lead, Zinc, § 4. Copper, § 5. Tin, pp. 1008-1019.

The smelter and refinery production of the principal metals in Australia during the year 1957 is shown below.

# SMELTER AND REFINERY PRODUCTION OF PRINCIPAL METALS: AUSTRALIA, 1957.

Year.	Refined Gold.	Refined Silver. (a)	Refined Lead. (a)	Lead Content of Lead Bullion Produced for Export. (a)	Refined Zinc. (a)	Refined Copper.	Refined Tin. (a)
1957	'000 fine oz.	'000 fine oz.	Tons.	Tons.	Tons.	Tons.	Tons.
	1,078	8,050	192,363	46,891	110,370	32,892	1,806

<sup>(</sup>a) Source: Bureau of Mineral Resources.

# CHAPTER XXX.—MISCELLANEOUS.

# § 1. Valuation of Australian Production.

1. Value of Production, Australia, p. 1080.—The following table shows particulars of the gross, local and net values of production in Australia by industries during the year 1956-57:—

# GROSS, LOCAL AND NET VALUE OF PRODUCTION(c) OF PRIMARY INDUSTRIES AND FACTORIES: AUSTRALIA, 1956-57.

(£'000.)

Indu	stry.		Gross Production Valued at Principal Markets.	Local Value— Gross Production Valued at Place of Production.	Net Value of Production (with- out deduction of depreciation or maintenance).
Agriculture Pastoral Dairying Poultry Bee-farming Total, Rural Trapping Forestry Fishing and Whaling Mining and Quarrying Total, Non-rural Total, All Primary		 	351,680 678,777 188,852 54,997 2,530 1,276,836 6,697 54,137 11,603 (a) 176,320 248,757 1,525,593	299,302 634,014 175,493 49,331 2,254 <i>J,160,394</i> 6,013 50,670 10,555 176,320 243,558 <i>J,403,952</i>	254,504 598,392 141,211 28,402 2,254 1,024,763 (a) 6,013 (a) 50,670 (a) 10,555 139,977 207,215 7,231,978
Factories Total, All Industries	••	 	(b) 1,622,415 3,148,008	(b) 1,622,415 3,026,367	1,622,415 2,854,393

<sup>(</sup>a) Local value.

<sup>(</sup>b) Net value.

<sup>(</sup>c) See letterpress on p. 1079.

1186 Appendix.

2. Net Value of Production, States, p. 1080.—The following tables show the total net value of production, and the net value per head of population, for each industry and State during the year 1956-57:—

# $\operatorname{NET}(a)$ VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES, 1956-57.

(£'000.)

Industry.	N.S.W.	Vic.	Q'land.	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
Agriculture	48,425	63,802	59,770	49,683	24,640	7,978	58	143	254,504
Pastoral	231,674	129,883	113,548	62,093	47,343	10,666	2,338	847	598,392
Dairying	45,355	47,933	24,837	12,511	3,645	6,752	17 50	161	141,211
Poultry	11,592 905	12,506 506	838 161	1,597	697 268	1,015		107	28,402 2,254
Total, Rural	337,951	254,630	199,154	126,277	76,593	26,435	2,463	1,260	1,024,763
Trapping(b)	1,602	3,333	181	638	111	144	4		6,013
Forestry(b)	16,758	11,850	8,505	4.051	4,779	4.523	40	164	50,670
Fishing and Whalingb	2,939	1,178	1,567	1,295	2,737	609	230	l	10.555
Mining and Quarry-	_, _,	.,	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	-,				1	1
ing	72,048	9,457	24,148	9,487	14,350	8,298	2,084	105	139,977
Total, Non-rural	93,347	25,818	34,401	15,471	21,977	13,574	2,358	269	207,215
Total, All Primary	431.298	280,448	233.555	141.748	98,570	40,009	4.821	1,529	1,231,978
Factories	707,379	527,582	138,564	126,766	73,442	48,682		٠	1,622,415
Total, All Indus-	1,138,677	808,030	372,119	268,514	172,012	88,691	4,821	1,529	2,854,393

<sup>(</sup>a) See letterpress on p. 1079.

# NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES PER HEAD OF POPULATION, 1956-57.

(£ s. d.)

Industry.	N	s.v	V. !	Vje	ctor	ia,	Q	'lan	d.	s.	Au	st.	w.	Au	st.		Tas.	· 	Au	stra (b)	lia.
Agriculture Pastoral Dairying Poultry Bee-farming(c)	13 64 12 3 0	11 12 4 5	10 7 1	24 49 18 4 0	3 3 3 14 3	4 11 1 9	43 82 17 0	5 19 12 2	1 10 2 4	57 72 14 1 0	17 9	8 9 6 1 0	35 69 5 1	19 3 6 0 7	11 3 6 4 10	24 32 20 3 0	9 14 14 2 1	3 1 0 3 6	62 14 2 0	15 16 19 4	10 1 2 7 9
Total, Rural Trapping(c) Forestry(c) Fishing and Whalingc Mining and Quarry-	94 0 4 0	8 13 16	9 11 5 5	96 1 4 0		3 9 11	0 6 1	2 3 2	-4 7 3 8	146 0 4 1	14 14 14 10	10 1 1	0 6 4	17 19 0	3 8 0	81 0 13 1	8 17 17	10 4 4	107 0 5 1	9 12 6 2	7 3 2
ing Total, Non-rural Total, All Primary	20 26 120 197	0 4 3	7 4 1 0	3 9 106 199	11 15 4 16	8 7 6 8	17 24 169 100	9 18 3 7	11 5 9 6	11 17 164 147	0 19 11 3	3 3 4	20 32 144 107	19 2 0 5	3 2 0 9	25 41 122 149	12 13 5	11 5 6 5	14 21 129 170	13 14 4 3	8 1 1
	317	7	1	306	1		269	11	3		14	7	251	5	9	271	18	11	299	7	2

<sup>(</sup>a) See letterpress on p. 1079. Territory. (c) Local value.

<sup>(</sup>b) Local value.

<sup>(</sup>b) Includes the Northern Territory and the Australian Capital

# LIST OF SPECIAL ARTICLES AND MISCELLANEOUS MATTER CONTAINED IN PREVIOUS ISSUES.

This list refers to special articles and other more or less important miscellaneous matter which have appeared in previous issues of the Official Year Book, but which are not included, or are included in abbreviated form only, in the present issue. The list is, in the main, restricted to articles, etc., to which references are not given in the various chapters of this issue.

The figures below indicate, respectively, the number and page of the Official Year Book to which reference is made. In cases where matter was published in more than one previous issue, the volume and page for the last issue containing such matter are given. For possible revisions, however, issues immediately following the one referred to should also be consulted.

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				Price.	
				Includin	g Postage.
Printed Publications.	Latest Number.	Date of Issue.	Ex- cluding Postage.	Australia and Other British Countries.	Foreign Coun- tries.
General Publications—	1		s. d.	s. d.	s. d.
Official Year Book of the Commonwealth*	44, 1958	Dec., 1958	10 0	†	14 6
I. Discovery, Physiography, Government, Land Tenure II. The Territories of Australia III. Labour, Wages and Prices	" " " " " " " " " " " " " " " " " " "	April, 1958 April, 1958 May, 1958	1 6 1 6 1 6	2 0 1 10 1 10	2 2 2 0 2 0
IV. Manufacturing, Electric Power, Water Conservation	,, ,,	May, 1958 July, 1958	1 6 1 6	2 0 2 0	2 2 2 2
VI. Education, Justice, Health, Welfare Services VII. Population, Vital Statistics, Housing VIII. Finance and Local Government	22 22 22 22 22 22 22 22 22 22 22 22 22	July, 1958 July, 1958 July, 1958	1 6 1 6 1 6 1 6	2 0 2 0 2 0 2 0 2 0	2 2 2 2 2 4 2 4
IX. Primary Production  X. Defence, Repatriation, Principal Events, Miscellaneous  XI. Appendix and Indexes  Pocket Compendium of Australian Statistics  Quarterly Summary of Australian Statistics	" " 43, 1958 231, June,	Sept., 1958 Oct., 1958 Nov., 1958 Mar., 1958 Nov., 1958	1 6 1 6 1 0 52 6	2 0 2 0 1 4 3 0	2 2 2 2 1 4 3 2
Monthly Review of Business Statistics§	1958 251, Aug., 1958	Nov., 1958	₹ 10 0‡	12 0	12 04
ANNUAL STATISTICAL REPORTS— Demography (Population and Vital) Finance—	74, 1956	July, 1958	7 6	8 6	9 4
Part I.—Public and Private Finance Part II.—Commonwealth Taxation Labour Report Oversea Trade	48, 1956–57 47, 1955–56 45, 1957 54, 1956–57	Aug., 1958 May, 1958 July, 1958 Dec., 1957	5 0 5 0 5 0 21 0	6 0 5 6 5 6 23 0	6 10 5 10 5 10 24 10
Primary Industries— Part I.—Rural Industries Part II.—Non-rural Industries and Value of	50, 1955–56	Mar., 1958	5 0	5 8	6 2
Production	50, 1955–56 50, 1955–56 48. 1956–57	April, 1958 Mar., 1958 Aug., 1958	5 0 5 0 5 0	5 6 5 10 5 6	5 10 6 4 5 10

Also issued in Parts; price per Part (excluding postage), 1s. 6d.——† Australia, 10s. (from Government Printer, Canberra); Cocos Is., Lord Howe Is., Norfolk Is., Nauru and Territory of Papua and New Guinea, 11s. 7d.; United Kingdom and other parts, 12s. 4d.——‡ Annual subscription.——§ Available from Commonwealth Statistician only.

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Printed Publications.	1		Price.		
	Latest Number.	Date of Issue.		Includin	g Postage.
			Ex- cluding Postage.	Australia and Other British Countries.	Foreign Coun- tries.
CENSUS PUBLICATIONS, 1954  — Bulletins—			s. d.	s. d.	s. d.
Nos. 1 to 3: Population and Dwellings	1954	Feb., 1955- Feb., 1956	2 6¶	2 10 to 3 0	2 10 to 3 2
Volumes— I.—VI.: States— Parts I.—V.: Population in Local		1 60., 1930		, ,	3 2
Government Areas, etc.; Cross- classifications of the Population; Dwellings in Local Government Areas, etc.; Cross-classifications of Dwellings and Householders; Pop- ulation and Occupied Dwellings in Localities	,,	June, 1955– Nov., 1957	2 6¶	2 10 to 3 4	2 10 to 4 0
VII.: Territories— Parts I.—V.: Northern Territory Population; N.T. Dwellings; Australian Capital Territory Population; A.C.T. Dwellings; External Territories Population and Dwellings VIII.: Australia—	] "	MarJune, 1958	2 6¶	2 10 to 3 2	3 0 to 3 6
Parts I.—III.: Population; Dwellings	} "	Dec., 1956-	2 6¶	3 0 to	
and Householders; Localities	) "	Jan., 1958	2 (	3 4	4 0
Supplement to Part I.: Race Census Silhouette**	,,	July, 1958 Nov., 1956	2 6	2 10 2 10	3 0 3 0
SPECIAL PUBLICATIONS—		,	,		
Occupation Survey, 1945—					
Detailed Tables††	1945	April, 1947			
Report of Proceedings of the Conference of British Commonwealth Statisticians, 1951††	1951	Mar., 1952			
Census of Motor Vehicles, 31st Dec., 1955— Bulletins Nos. 1 to 8	1955	July, 1957-	2 6¶	2 10 to	3 0 to
771 A A 11 D A CD	.	June, 1958		3 0	3 2
The Australian Balance of Payments, 1928-29 to 1951-52	3, 1951–52	June, 1954	3 6	4 0	1 1
The Australian Mineral Industry (Quarterly	2, 1931–32	Julie, 1734	3 0	4 0	
Review and Statistics) ‡‡	Vol. 11, No. 1	Sept., 1958	3 0	3 0	3 0

<sup>|</sup> List of publications in respect of the Censuses of 1911, 1921, 1933 and 1947 may be obtained on application to the Commonwealth Statistician.——¶ Per Bulletin or Part.——•\* Available from Deputy Commonwealth Statistician, Melbourne.——†† Available from Commonwealth Statistician only.——‡‡ Prepared jointly by the Bureau of Mineral Resources and the Commonwealth Bureau of Census and Statistics. Available from the Department of National Development in each capital city.