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The Right Honorable the Treasurer

BY

K. M. ARCHER,
COMMONWEALTH STATISTICIAN

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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 fifty-first Official Year Book issued under the authority of the Commonwealth Government.

The Synopsis on pp. xi to xxix 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, in order to conserve 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.

Among the new matter included and existing matter revised or rearranged in this volume the following items may be especially mentioned.

Chapter II. Physiography. Section relating to Climate and Meteorology of Australia revised by the Director of the Commonwealth Bureau of Meteorology; includes added Climatological data for Selected Australian Country Towns and a new feature, The Weather of 1964, which will be advanced each year (pp. 28-66).

Chapter VIII. Water Conservation and Irrigation. Some Recent Developments in the Measurement of Australia's Water Resources—a survey specially prepared by officers of the Department of National Development (pp. 228-31).

Chapter XIV. Oversea Trade. New table, Values of Imports of Merchandise by Economic Classes (p. 525).

Chapter XIX. Education, Cultural Activities and Research. New and revised matter on museums and art galleries (pp. 743-8).

Chapter XXI. Private Finance. A summary of events leading up to the *Currency Act* 1963, a brief description of the major provisions of the Act, and an account of action taken by the Government and the Decimal Currency Board relative to the introduction of decimal currency; a special article providing a short history of Australian Coinage and minting, with a description of the Royal Australian Mint, Canberra (pp. 809-14).

Chapter XXV. Marine Industries. A map of Australia showing the principal ports and the locations of the fishery resources under exploitation (p. 1121).

Chapter XXVI. Mineral Industry. Maps of Australia showing the locations of principal mining centres, mineral discoveries, and mineral processing centres (facing p. 1154), and the main sedimentary basins and locations of oil and gas discoveries (p. 1189).

Appendix. Three conversion tables, as issued by the Decimal Currency Board, showing values in pounds, shillings and pence in terms of the new decimal currency; photo showing designs for Australian decimal coins (p. 1287).

PREFACE

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.

The statistics contained in the majority of the chapters of this volume relate to the years ended June or December, 1964, and the Appendix contains a selection of the more significant data which have become available since the chapters were prepared. As with previous Year Books, the contents of this issue have already been published in separate parts as the successive chapters or groups of chapters were printed.

More detailed statistics on subjects dealt with in the Year Book are available in the various annual printed reports published by this Bureau. The more recent statistics published by the Bureau are contained in the *Digest of Current Economic Statistics* (monthly), the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and in other publications issued monthly, quarterly, half-yearly, or yearly. These publications are listed in Chapter XXX. Miscellaneous, § 7, Statistical Publications of Australia, and the last pages of this volume contain a list of current and recent printed publications, showing issue numbers, dates and prices.

The Deputy Commonwealth Statisticians in New South Wales, Victoria, Queensland and Western Australia publish Year Books concerning their respective States, and the Deputy Commonwealth Statisticians of all States issue a number of printed and mimeographed publications. These are listed on pages 1163-5 of the 1962 issue of this Year Book, and, together with publications of the central Bureau, in *Publications of the Commonwealth Bureau of Census and Statistics* issued by this Bureau.

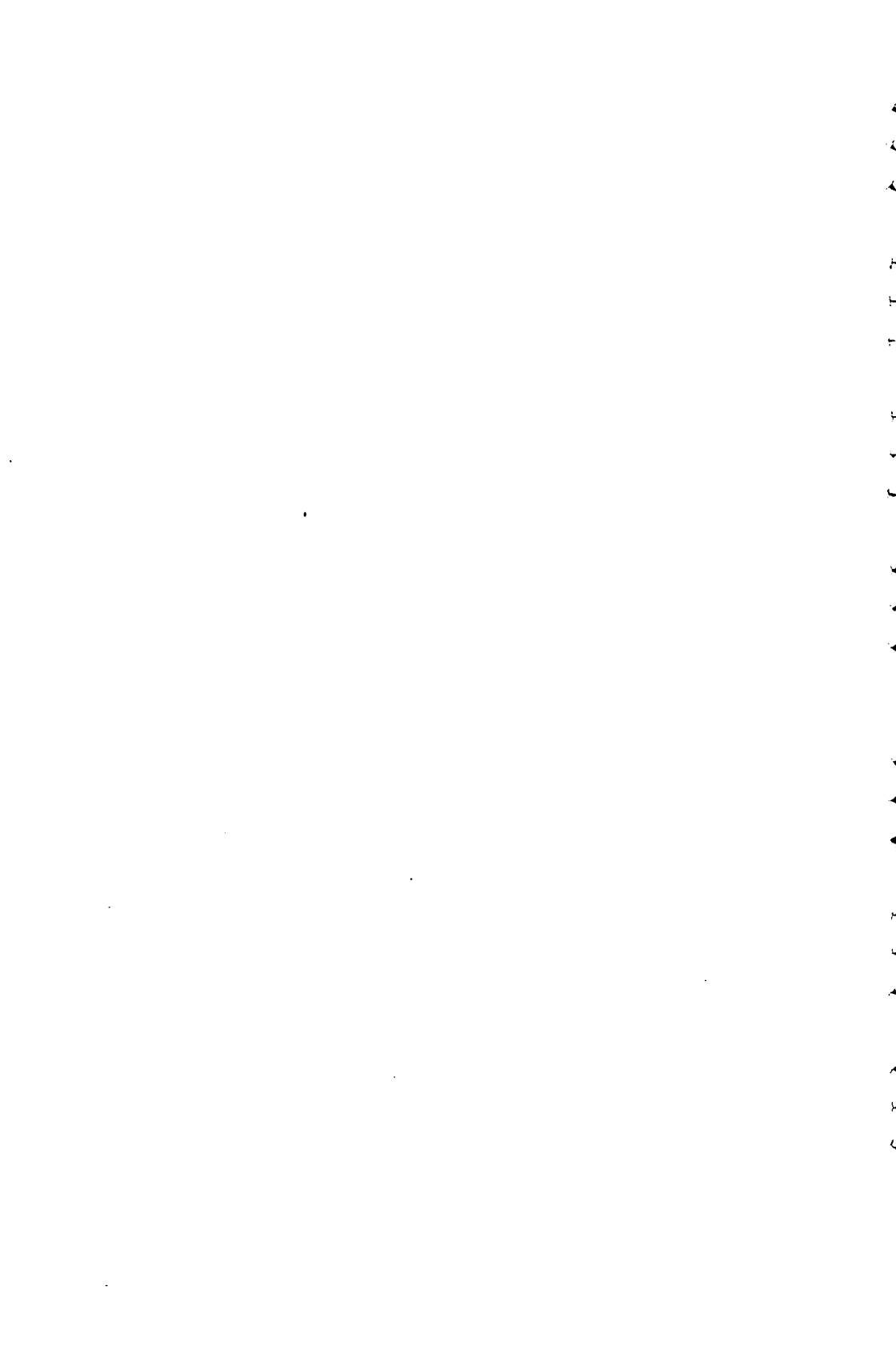
My thanks are tendered to the Deputy Commonwealth Statistician in each State, who has collected and compiled the data on which a great part of the information given in the Year Book is based. Thanks are also tendered to the responsible officers of the various Commonwealth and State Departments and to others who have kindly, and often at considerable trouble, supplied information, and to the Government Printer and his staff for their services in printing this Year Book and in assisting and advising throughout its preparation.

K. M. ARCHER,
Commonwealth Statistician

COMMONWEALTH BUREAU OF CENSUS AND STATISTICS,
Canberra, A.C.T., September, 1965

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COMMONWEALTH BUREAU OF CENSUS AND STATISTICS (p. 1353)

CORRIGENDA

Page

- 30—sub-paragraph (iii), line 2—*for 34 read 35*
- 177—table, Coke—Other, 1961–62—*for 762,455 read 761,355* 1962–63—*for 761,355 read 694,575*
- 208—sub-paragraph (ii), line 8—*for 1963 read 1964* sub-paragraph (iv), second last line—*for 2,703,757 read 2,835,000*
- 266—table, Victoria, Wodonga—*for 7,998 read 7,498*
- 520—table, Timber, undressed, quantity, 1961–62—*for 264,171 read 300,175*
- 526—table, Mines and quarries (other than gold), Total (c)—~~delete (c)~~
- 1082—table Exports of Dairy Products, Milk—Dried or powdered—Skim, quantity, 1962–63—*for 55,467 read 53,467* Infants' and invalids' foods—Essentially of milk, quantity, 1963–64—*for 8,567 read 8,577*

SYMBOLS AND OTHER FORMS OF USAGE IN THIS YEAR BOOK

The following symbols, where shown in columns of figures, mean—

- n.a. —not available.
- . . —nil or less than half the final digit shown, or not applicable.
- p —preliminary—figure or series subject to revision.
- r —figure or series revised since previous issue.
- n.e.i.—not elsewhere included.
- n.e.c.—not elsewhere classified.
- n.s. —not stated.

A blank space in a column of figures means that the figure concerned is not yet available.

Yearly periods shown as, e.g., 1964, refer to the year ended 31st December, 1964; those shown as, e.g., 1963-64, refer to the year ended 30th June, 1964. Other yearly periods are specifically indicated.

Unless otherwise indicated, the British system of weights and measures is used.

Values are expressed in £ Australian, shown with or without the letter A., unless another currency is specifically stated.

DECIMAL CURRENCY

In accordance with the provisions of the *Currency Act* 1965, February 14th, 1966, has been determined as the date for commencement of the changeover of the Australian monetary system to a dollar/cent decimal currency system.

The relationship between pounds, shillings and pence, and dollars and cents, as prescribed in the Act, is as follows:—

- 1 pound = 2 dollars
- 1 shilling = 10 cents
- 1 penny = 5/6ths of a cent

For further information on this subject *see* Chapter XXI. Private Finance, pp. 809-14 of this Year Book.

Three conversion tables showing values in pounds, shillings and pence in terms of the new decimal currency have been issued by the Decimal Currency Board. They are:

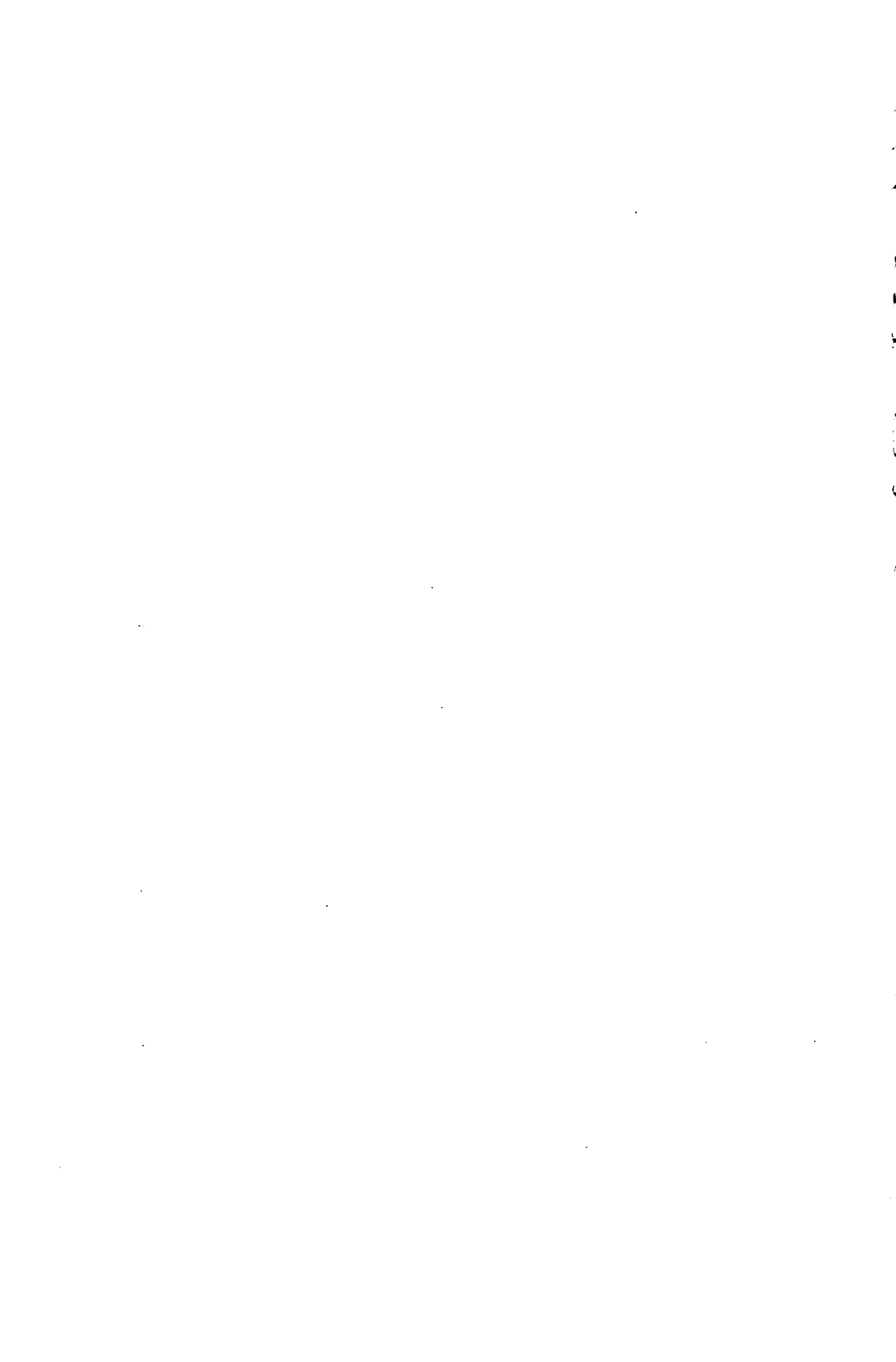
An EXACT EQUIVALENTS table, which converts amounts of £ s. d. to their exact equivalents in dollars and cents;

A BANKING AND ACCOUNTING table, which converts amounts of whole pence to the nearest whole cent;

A COMPREHENSIVE CONVERSION TABLE which converts amounts of £ s. d. ending in half pence to the nearest whole cent.

These tables, accompanied by notes setting out when each table should be used, are set out in the Appendix to this Year Book (pp. 1319-20). A photo of the Australian decimal coins is shown on page 1287.

It is intended that, in consequence of the changeover to decimal currency, all monetary amounts in the next issue of this Year Book will in general be expressed in terms of the new currency.



OFFICIAL YEAR BOOK

OF THE

COMMONWEALTH OF AUSTRALIA

CHAPTER I

DISCOVERY, COLONIZATION AND FEDERATION OF AUSTRALIA

§ 1. Early Knowledge and Discovery of Australia

NOTE.—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 Year Book No. 39 (see p. 1) and earlier issues.

1. *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 Ælianus (A.D. 205–234), Manilius (probably a contemporary of Augustus or Tiberius Caesar), and Ptolemy (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 oft-quoted passage in his *Descriptionis Ptolemaicæ Augmentum* describing the *Australis 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.

2. *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 Company sent the *Duyfken* from Bantam, Java, to explore the island 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.

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).

3. **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 *Cygnets*, 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, draftsmen 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 he discovered Botany Bay 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 the 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° S. 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 Fleet".

A full historical account of the period referred to may be found in the *Historical Records of New South Wales*, Vol. I., 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 Captain Cook had taken possession of the North Island of New Zealand in November, 1769, and of the South Island in January, 1770, 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 his 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 due mainly 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 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 until 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 east 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. Following the transfer of the Australian Capital Territory to the Commonwealth in 1911, the area was further reduced to 309,433 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 249 at the Census of 30th June, 1961.

2. **Tasmania.**—Van Diemen's Land, first settled in 1803, was politically separated from New South Wales in 1825, being constituted a separate colony on 14th June. The area of the colony was 26,215 square miles. The name of the colony was officially changed to Tasmania in 1856, when responsible government was established. Following a resurvey of local government areas, the area of Tasmania was determined at 26,383 square miles at the end of 1964.

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 Australasian Antarctic Expedition landed on the island and remained there until 1915. On 3rd March, 1948, another party was landed to man a new station which has since been maintained as a scientific base. The island is about 21 miles long and two 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, except for the settlement on King George Sound (*see p. 3*), which remained under the jurisdiction of New South Wales until 1831.

4. **South Australia.**—On 15th August, 1834, the Act 4 and 5 William IV., cap. 95, was passed, creating South Australia a "province", and settlement took place towards the end of the year 1836. 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 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 east 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 brought under the jurisdiction of South Australia, which thereupon controlled an area of 903,690 square miles. The Territory was transferred to the Commonwealth on 1st January, 1911 (*see p. 5*).

5. **New Zealand.**—New Zealand, nominally annexed by Captain Cook and formally declared by proclamation in 1840 as a dependency of New South Wales by letters patent of 16th November of that year, was 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 by 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. Following a thorough revision of the area of each Local Government Area of Queensland, based on the most recent maps available, the Surveyor-General, in 1958, determined the area of Queensland as 667,000 square miles—a reduction of 3,500 square miles from the area previously determined.

§ 4. 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 to 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 transfer of the Northern Territory to the Commonwealth, 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.

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.

The area of Ashmore Reef is approximately 60 square miles (to the limit of the reef), and it is situated 220 statute miles off the western coast of Australia and 520 statute miles west of Darwin. Cartier Islands are approximately 17 square miles in area (to the limit of the reef), and are situated 184 statute miles off the western coast of Australia and 490 statute miles west of Darwin.

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.**—Following the revision of the area of Queensland, as mentioned in § 3 above, and of the areas of the Northern Territory and Tasmania during 1964, the total area of the Commonwealth of Australia has been determined as 2,967,909 square miles. The dates of creation and the areas of its component States and Territories 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	520,280
Victoria ..	1851	87,884	Australian Capital Territory ..	1911	939
Queensland ..	1859	667,000	Commonwealth of Australia ..	..	2,967,909
South Australia ..	1834	380,070			
Western Australia	1829	975,920			
Tasmania ..	1825	26,383			

§ 5. The Constitution of the Commonwealth

NOTE.—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 Year Book up to and including No. 22.

1. **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, 1964.

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:—

- Chapter I.—The Parliament:
 - 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:
- Chapter II.—The Executive Government:
- Chapter III.—The Judicature:
- Chapter IV.—Finance and Trade:
- Chapter V.—The States:
- Chapter VI.—New States:
- Chapter VII.—Miscellaneous:
- Chapter VIII.—Alteration of the Constitution.
- The Schedule.

CHAPTER I.—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 once.

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 service.

The election to fill vacant places shall be made [in the year at the expiration of which] *within one year before*† 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,

* 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 ..	23	South Australia ..	6
Victoria ..	20	Tasmania ..	5
Queensland ..	8		

Provided that if Western Australia is an Original State, the numbers shall be as follows:—

New South Wales ..	26	South Australia ..	7
Victoria ..	23	Western Australia ..	5
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 1918-1962*, Sections 39 and 39A (repealing an earlier provision made by the *Commonwealth Franchise Act 1902*). For present qualifications see Chapter III. General Government.

† The Parliament has otherwise provided, by means of the *Commonwealth Electoral Act 1918-1962*, Section 69. 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:

* The Parliamentary allowance has been varied from time to time (see Chapter III., General Government). In 1964, it was increased to £3,500, while additional allowances of £2,000 and £4,250, respectively, were granted to the Leaders of the Opposition in the Senate and the House of Representatives, and an additional allowance of £1,000 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.

† Particulars of proposed laws which were submitted to referendums are referred to in the List of Special Articles at the end of this volume.

- (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.

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

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.

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.

* The number of Ministers of State has been increased from time to time and has been 25 since 1964. The annual appropriation for Ministers' salaries has been correspondingly increased and has been £95,650 since 1964.

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.

* The *Judiciary Act* 1903 provided for a Chief Justice and two other Justices, increased by subsequent amendments 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, increased by subsequent amendments to £10,000 and £8,500 a year, respectively.

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 he 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 commencement 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) 1909*, the words in square brackets were omitted.

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

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 State is 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.*)

2. The Royal Proclamation.—The preceding Act received the Royal assent on 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 17th September, 1900, constituted the Commonwealth as from 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.

§ 6. 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 approximately 14 square miles.

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* 1905. The area of Papua is about 86,100 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 92,160 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 on 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' S., and longitude 166° 55' E. and is in area about 8½ square miles. 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. So far, the administrators have been appointed by the Commonwealth Government. The administration under the mandate operated from 17th December, 1920, to 1st November, 1947, since when Nauru has been administered under a Trusteeship Agreement with the United Nations.

5. **Australian Antarctic Territory.**—An Imperial Order in Council of 7th February, 1933, placed under Australian authority "all the islands and territories other than Adelie 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 passing of the *Australian Antarctic Territory Acceptance Act 1933* by the Commonwealth Parliament. The boundaries of Adelie Land were definitely fixed by a decree of 1st April, 1938, as latitude 60° S., longitude 135° E. and longitude 142° E.

6. **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. Heard Island is approximately 27 miles long and 13 miles wide, and McDonald Islands, about 26 miles to the west of Heard Island, are small, rocky and precipitous.

7. **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. Their approximate area is about 5½ square miles.

8. **Territory of Christmas Island.**—*The Christmas Island Act 1958* provided for the acceptance of Christmas Island, in the Indian Ocean, as a Territory under the authority of the Commonwealth of Australia. Complementary legislation having been passed by the Parliament of the United Kingdom, the island was transferred to the Australian administration on 1st October, 1958, and an Official Representative was appointed to administer the Territory. The area of the island is about 52 square miles.

CHAPTER II

PHYSIOGRAPHY

§ 1. General Description of Australia

1. **Geographical Position.**—(i) *General.* The Australian Commonwealth, which includes the island continent of Australia proper and the island of Tasmania, is situated in the Southern Hemisphere, and comprises an area of 2,967,909 square miles, the mainland alone containing 2,941,526 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 Indian 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. The difference in latitude between Cape York and Wilson's Promontory is 1,959 miles, and in longitude between Steep Point and Cape Byron 2,489 miles.

(ii) *Tropical and Temperate Regions.* Of the total area of Australia, nearly 39 per cent. lies within the tropics. Taking the latitude of the Tropic of Capricorn as 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. (a)	Vic.	Qld	S. Aust.	W. Aust.	Tas.	N. Terr.	Total
Within tropical zone ..	310,372	87,884	360,642	380,070	364,000	26,383	422,980	1,147,622
" temperate zone ..			306,358		611,920		97,300	1,820,287
Total Area ..	310,372	87,884	667,000	380,070	975,920	26,383	520,280	2,967,909

(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.

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 excluding Alaska, four-fifths of that of Canada, more than half as large again as Europe excluding the U.S.S.R., and about 25 times that of 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* 1962

('000 square miles)

Country	Area	Country	Area
Continental Divisions—		Africa—<i>continued</i>	
Europe (a)	1,912	Niger	489
Asia (a)	10,654	Rhodesia and Nyasaland ..	485
U.S.S.R. (Europe and Asia)	8,650	Angola	481
Africa	11,673	South Africa, Republic of ..	472
North and Central America and West Indies	9,362	Mali	465
South America	6,870	Ethiopia	457
Oceania	3,298	Mauritania	419
Total, excluding Arctic and Antarctic Conts. ..	52,419	United Arab Republic (b) ..	386
Europe (a)—		Tanganyika	362
France	211	Nigeria, Federation of ..	357
Spain (incl. possessions) ..	195	South-West Africa	318
Sweden	174	Mozambique	302
Finland	130	Somalia	246
Norway	125	Central African Republic ..	238
Poland	120	Madagascar	230
Italy	116	Kenya	225
Yugoslavia	99	Other	1,772
Germany, Fed. Republic of	96	<i>Total</i>	<i>11,673</i>
United Kingdom	94	North and Central America—	
Romania	92	Canada	3,852
Other	460	United States of America (c)	3,609
<i>Total (a)</i>	<i>1,912</i>	Greenland	840
Asia (a)—		Mexico	762
China, Mainland	3,692	Nicaragua	57
India	1,176	Cuba	44
Saudi Arabia	870	Honduras	43
Iran	636	Other	155
Mongolia	593	<i>Total</i>	<i>9,362</i>
Indonesia	576	South America—	
Pakistan	366	Brazil	3,286
Turkey	292	Argentina	1,072
Burma	262	Peru	496
Afghanistan	254	Colombia (excl. of Panama)	440
Thailand	198	Bolivia	424
Iraq	173	Venezuela	352
Other	1,566	Chile	286
<i>Total (a)</i>	<i>10,654</i>	Paraguay	157
U.S.S.R.	8,650	Ecuador	105
Africa—		Other	252
Sudan	968	<i>Total</i>	<i>6,870</i>
Algeria	920	Oceania—	
Congo (Leopoldville)	906	Commonwealth of Australia	2,968
Libya	679	New Zealand	104
Chad	496	New Guinea (d)	93
		Papua	91
		Other	42
		<i>Total</i>	<i>3,298</i>

(a) Excludes U.S.S.R., shown below. (b) Egypt only. Syria seceded September, 1961.
(c) Excludes State of Hawaii, which is included in Other Oceania. (d) Australian Trust Territory.
Western New Guinea (West Irian) is included in Other Asia.

The areas shown in the table are obtained from the *Demographic Yearbook*, 1963, 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 Territory and Australian Capital Territory. 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	Percentage of total area	Coastline	Area per mile of coastline	Standard times	
					Meridian selected	Ahead of G.M.T.
	Sq. miles		Miles	Sq. miles		Hours
New South Wales	309,433	10.43	(a) 700	(a) 443	150° E.	10
Victoria	87,884	2.96	680	129	150° E.	10
Queensland	667,000	22.47	3,236	206	150° E.	10
South Australia	380,070	12.81	1,540	247	142°30' E.	9½
Western Australia	975,920	32.88	4,350	224	120° E.	8
Northern Territory	520,280	17.53	1,040	500	142°30' E.	9½
Australian Capital Territory	939	0.03	..	..	150° E.	10
<i>Mainland</i>	<i>2,941,526</i>	<i>99.11</i>	<i>11,546</i>	<i>255</i>	..	..
Tasmania	26,383	0.89	900	29	150° E.	10
Australia	2,967,909	100.00	12,446	238	..	..

(a) Includes Australian Capital Territory.

4. Geographical Features of Australia:—The following description is a broad summary of the main physical characteristics of the Australian continent.

A section through the Australian 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. Bordering this plain is the Great Dividing Range, which extends from the north of Queensland to the south of New South Wales, and thence one branch sweeps westwards towards the boundary of Victoria and South Australia, and the other, the main branch, terminates in Tasmania. This range, which rises, often abruptly, from the plain, frequently presents bold escarpments on its eastern face, but 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 mountains of Australia are relatively low, the highest peak, Mount Kosciusko, in New South Wales, being only about 7,300 feet. Three-quarters of the land-mass of Australia lies between the 600 and 1,500 feet contours in the form of a huge plateau, constituting the most distinctive feature of the Australian continent and to which the peculiarities of Australia's climate can probably be largely ascribed.

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 and the Fitzroy in Queensland. The Hunter is the largest coastal river of New South Wales, and the Murray River, with its great tributary the Darling, drains part of Queensland, the major part of New South Wales and a large part of Victoria, debouching into the arm of the sea known as Lake Alexandrina, on the eastern side of the South Australian coast. The total length of the Murray is about 1,600 miles, 400 being in South Australia and 1,200 constituting the boundary between New South Wales and Victoria. The total length of the Murray-Darling from the source of the Darling to the mouth of the Murray is about 2,300 miles. The rivers of the north-west coast of Australia (Western Australia), e.g. the Murchison, Gascoyne, Ashburton, Fortesque, De Grey, Fitzroy, Drysdale and Ord are of considerable size. So also are those in the Northern Territory, e.g. the Victoria and Daly, and those on the Queensland side of the Gulf of Carpentaria, such as the Gregory, Leichhardt, Cloncurry, Gilbert and Mitchell. The rivers of Tasmania have short and rapid courses, as might be expected from the configuration of the country.

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 Lakes Torrens, Gairdner, Eyre and Frome, are of considerable extent.

For further information on the geographical features of Australia earlier issues of the 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.

§ 2. Climate and Meteorology of Australia

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

1. **Introduction.**—Australia extends from about latitude 10°S. to latitude 44°S., but owing largely to the moderating effects of the surrounding oceans and the absence of very pronounced and extensive mountain masses it is less subject to extremes of climate than are regions of similar size in other parts of the world. The average elevation of the land surface is low—probably close to 900 feet above the sea; while the maximum altitude is just above 7,300 feet. Latitude for latitude the Australian climate is generally more temperate than that of the other large land masses of the earth, although it varies considerably from the tropical to the alpine.

The Australian meteorological seasons are: Summer, December, January, February; Autumn, March, April, May; Winter, June, July, August; Spring, September, October, November.

The following general discussion of the climate of Australia is necessarily brief. However, extensive records of Australian climatic data are held and published in various forms by the Bureau of Meteorology. A programme of regional climatic survey has been in progress for some years, and a large number of studies has been published by the Bureau of Meteorology and by the Department of National Development and State Development Authorities. The Bureau of Meteorology welcomes inquiries for climatic information, which may be made at its Central Office in Melbourne or through the Regional Offices which are situated in each of the State capital cities and in Darwin. Reference may also be made to various bulletins and research papers mentioned in this text for more detailed information on particular topics.

2. **Precipitation.**—(i) *General.* Precipitation of moisture from the atmosphere may take various forms depending chiefly on the thermal conditions existing at the time. Within the Australian region, precipitation occurs chiefly as rain because of the generally mild temperatures, but may also occur as snow or hail. Broadly, the immediate physical cause of rainfall may be said to be the lifting of moist air with resultant cooling, condensation into cloud, and eventual precipitation of the heavy water droplets as rain. This process may be achieved by three different means each of which may be combined with either or both of the others.

(a) Orographic lifting caused by winds blowing onto rising terrain;

(b) convectional lifting resulting in the development of individual rain clouds of the cumulus or cumulonimbus type producing showers and thunderstorms;

(c) lifting of a warm air mass as it rises over cooler air—known as a “frontal” process.

(ii) *Average Annual Rainfall.* The distribution of the average annual rainfall over Australia is shown in the map on page 33, while the map on page 34 shows the distribution in 1964.

While Australia is a continent of comparatively low relief, the orographic processes in rain production are very marked in the chain of the Great Dividing Range bordering the whole eastern coast of the continent, in the ranges of the south-western corner of Western Australia, and in Tasmania. Thus on the eastern coast the higher rainfall areas lie between the ranges and the Pacific Ocean in the region of prevailing south-east wind circulation. In Tasmania and the south-west of Western Australia the region of high rainfall lies between the ranges and the ocean to the west, these areas lying in a region of predominantly westerly wind flow.

The north-western part of the continent and to some extent the whole region of the Northern Territory and inland north Queensland comes under the influence of the Australian-Asian monsoon. This results in high rainfalls in a summer wet season with the inflow of moist air from the north-west, and a winter dry season with predominantly south-east winds blowing across the dry regions of the interior and producing little rainfall.

Tropical cyclones affect the waters adjacent to the north-east and north-west of Australia between December and April. Their frequency varies greatly from season to season, but on the average about three of these disturbances occur in the Coral Sea each season and about two in the eastern Indian Ocean adjacent to the western coast of the continent. When tropical cyclones move close to the tropical coast of the continent they cause very heavy rainfalls over the coastal regions. On occasions these cyclones move over the land and lose intensity, but may still continue to be accompanied by heavy rainfall along their path.

Southern Australia lies in the region of the mid-latitude westerlies for the winter half of the year and is subject to the rain-producing influences of the great depressions of the Southern Ocean and their associated frontal systems. The combined effects of these systems and the topography lead to high winter rainfalls in south-western and south-eastern Australia and in Tasmania, with the highest falls occurring on the windward side of the mountains.

The rainfall generally decreases inland with distance from the coast, although the 10-inch isohyet reaches the shore of the Great Australian Bight and the central western coast of Western Australia in regions which are of very flat relief and which because of their position and the orientation of the coastline are only rarely exposed to moist winds.

The region with the highest average annual rainfall is the eastern coast of Queensland between Port Douglas and Cardwell, where Tully has an annual average of 177 inches. A further very high rainfall region is the mountainous west coast of Tasmania, where Lake Margaret has the highest average annual total of 145 inches.

The area of lowest average annual rainfall is that of some 180,000 square miles surrounding Lake Eyre in South Australia, where on the average only 4 to 6 inches are received annually. The lowest average over a long period of record is at Troudaninna—4.13 inches. Rain occurs very irregularly, averaging only about one or two days a month in this region.

The proportional areas of each State of Australia as a whole which receive various amounts of average annual rainfall are set out in the following table.

AVERAGE ANNUAL RAINFALL: AREA DISTRIBUTION
(Per Cent.)

Average annual rainfall	W. Aust.	N. Terr.	S. Aust.	Q'land	N.S.W. (a)	Vic.	Tas. (b)	Total
Under 10 inches ..	58.0	24.7	82.8	13.0	19.7	Nil	Nil	39.0
10 and under 15 inches	22.4	32.4	9.4	14.4	23.5	22.4	Nil	20.6
15 and under 20 "	6.8	9.7	4.5	19.7	17.5	15.2	0.7	11.2
20 and under 25 "	3.7	6.6	2.2	18.8	14.2	17.9	11.0	9.0
25 and under 30 "	3.7	9.3	0.8	11.6	9.1	18.0	11.4	7.2
30 and under 40 "	3.3	4.7	0.3	11.1	9.9	16.1	20.4	6.1
40 inches and over ..	2.1	12.6	Nil	11.4	6.1	10.4	56.5	6.9
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes Australian Capital Territory. (b) Over an area of 2,777 square miles no records are available.

Of all the continents (excluding Antarctica), Australia receives the least average depth of rainfall and has the least run-off from its rivers into the oceans. Only in relatively small areas of the continent could the rainfall be described as abundant.

(iii) *Seasonal Distribution of Rainfall.* The average monthly distribution of rainfall in the various Australian rainfall districts is shown by the histograms of the map on page 34. The following are the most marked features:

(a) The clearly defined wet summer and dry winter of the monsoon region of northern Australia.

(b) The more regular distribution of rainfall throughout the year in south-eastern Australia. In the region to the south and west of the Great Dividing Range a less pronounced maximum of rainfall is noticeable in the winter or early spring. On the Gippsland (eastern Victoria) coast the rainfall is fairly evenly distributed throughout the year but further along the east coast of the continent the rainfall minimum in late winter and early spring begins to appear and becomes more marked as the tropical regions are approached.

(c) The marked maximum of rainfall in the south-western districts of Western Australia in winter—the period of the most active southern depressions and frontal systems in this region.

For further information on monthly rainfalls reference may be made to the various Australian rainfall bulletins, to the Climatological Surveys of particular districts and to the annual rain maps and books of normals (standard 30 year periods), all published by the Bureau of Meteorology.

(iv) *Variability of Rainfall.* For most agricultural pursuits a more important criterion of the value of rainfall is its variability or reliability. The adequate description of rainfall variability over an extensive geographical area is a matter of some difficulty. Probably the best available measures are to be found in the tables which have been calculated for a number of individual stations in some of the Climatological Survey districts. These tables show the percentage chances of receiving specified amounts of rainfall in monthly seasonal or annual time spans. Statistical indexes of rainfall variation based on a number of different techniques have been used to produce maps which show the main features of the variability of annual rainfall over Australia. A discussion of these methods and the maps is given by F. Loewe in *Some Considerations Regarding the Variability of Annual Rainfall in Australia*, Bureau of Meteorology Bulletin No. 39 (1948).

In general it may be stated that the regions of most reliable rainfall are the south-west of Western Australia, western Tasmania, and western and southern Victoria south of the divide. These areas have one of the most reliable rainfalls in the world. Elsewhere in Australia the degree of variability, in general, increases inland, but the region of the highest variability for low average annual rainfalls extends across the central part of the continent from south-western Queensland to the central coast of Western Australia. Some outstanding examples of the numerous instances of high rainfall variability throughout Australia are given below.

At Onslow (Western Australia) annual totals vary from 0.05 inches to 28 inches, and in the four consecutive years 1921 to 1924 the annual totals were 22.25, 2.71, 26.82, and 2.18 inches respectively. At Whim Creek, where 29.41 inches have been recorded in a single day, only 17 points (0.17 inches) were received in the whole of 1924. Great variability can also occur in the heavy rainfall areas, e.g. at Tully the annual rainfalls have varied from 310.92 inches in 1950 to 104.98 inches in 1943.

The following table of monthly and annual rainfall for the Australian Capital cities for the past 30 years indicates the variation in rainfall at these sites.

RAINFALL: AUSTRALIAN CAPITAL CITIES

Year	PERTH		ADELAIDE		BRISBANE		SYDNEY		CANNBERRA(a)		MELBOURNE		HOBART(b)	
	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
	in.		in.		in.		in.		in.		in.		in.	
1934 ..	40.61	120	20.24	125	54.26	117	64.91	183	35.58	131	33.53	157	23.17	194
1935 ..	32.28	129	23.45	140	34.64	111	30.97	131	23.78	95	29.98	183	32.22	196
1936 ..	30.64	118	19.34	121	21.77	101	30.22	130	26.24	108	24.30	187	19.60	178
1937 ..	35.28	120	23.01	128	34.79	113	52.00	157	20.46	82	21.45	144	20.65	160
1938 ..	29.64	111	19.26	119	43.49	110	39.17	132	19.26	79	17.63	131	31.32	169
1939 ..	45.70	123	23.29	139	41.43	122	33.67	127	27.63	116	33.11	166	27.23	188
1940 ..	20.00	98	16.16	116	42.37	93	39.34	125	17.38	64	19.83	126	17.17	135
1941 ..	34.74	122	22.56	126	31.50	105	26.74	129	19.55	91	31.78	157	23.49	145
1942 ..	39.24	140	25.44	133	44.01	125	48.29	121	25.76	104	29.79	148	19.42	163
1943 ..	31.46	117	17.84	135	50.68	126	50.74	136	24.59	123	18.80	150	20.84	149
1944 ..	27.39	123	17.13	114	27.85	100	31.04	115	12.05	75	21.32	143	26.23	151
1945 ..	52.67	137	17.85	105	48.16	130	46.47	136	22.35	100	19.22	152	16.92	157
1946 ..	41.47	122	22.59	135	38.66	83	36.05	111	22.31	94	29.80	177	39.45	193
1947 ..	43.42	137	21.89	146	60.30	146	41.45	137	27.95	135	30.47	163	38.61	181
1948 ..	34.75	126	21.40	122	41.54	106	38.83	131	32.11	101	20.98	155	23.42	178
1949 ..	27.15	126	18.23	119	47.18	121	66.26	149	27.71	100	31.41	163	22.85	157
1950 ..	32.27	122	16.06	91	63.93	152	86.33	183	43.35	132	26.18	147	19.25	131
1951 ..	34.14	127	25.44	135	33.89	87	53.15	143	22.00	103	29.85	155	24.57	163
1952 ..	39.28	123	19.99	128	33.49	122	59.19	130	37.87	141	34.39	177	30.35	165
1953 ..	37.14	119	20.00	121	43.60	101	40.86	110	19.40	102	28.38	148	28.06	162
1954 ..	28.05	112	16.73	109	61.36	142	41.29	134	18.81	82	33.53	139	27.20	143
1955 ..	46.52	138	24.58	134	50.41	136	72.46	160	30.85	124	30.70	160	22.32	168
1956 ..	37.35	107	27.24	154	59.18	120	67.33	155	40.46	150	30.96	188	36.63	175
1957 ..	33.40	117	16.71	110	20.58	80	27.13	110	14.41	81	20.68	146	28.66	129
1958 ..	32.08	107	17.57	121	46.61	115	59.19	144	30.23	117	26.98	155	36.55	166
1959 ..	24.23	114	11.32	88	45.84	146	59.67	164	34.41	112	25.84	131	19.28	136
1960 ..	28.21	112	23.07	129	27.51	103	51.01	152	30.99	136	33.50	162	29.35	140
1961 ..	32.27	113	14.91	122	42.36	134	57.08	161	32.34	116	22.05	129	18.03	156
1962 ..	28.75	123	17.96	125	41.39	131	44.90	137	28.91	126	23.06	140	25.40	161
1963 ..	39.14	140	24.43	118	49.09	134	80.11	169	25.37	141	29.04	149	15.51	129
Average	34.76	121	20.91	121	44.67	125	47.84	151	25.50	106	25.95	143	24.84	165
No. of years Standard 30 years' normal (c) ..	88	88	125	125	112	104	105	105	36	36	108	108	81	81
(c) ..	35.99	128	21.09	122	40.09	117	44.80	143	d24.53	d103	25.89	156	25.03	180

(a) Commonwealth Forestry Bureau; records in issues of the Year Book prior to No. 36 were for the station at Acton which closed down in 1939. (b) Records taken from present site commenced 1883. (c) 1911-1940. (d) Thirty years to 1957 inclusive.

Prolonged dry spells are fairly common in much of Australia particularly in inland areas.

A detailed discussion of the history of droughts and the frequency in particular areas may be found in Foley, J. C., *Droughts in Australia*, Bureau of Meteorology Bulletin No. 43 (1957). A shorter account of droughts in Australia will be found in a special article in Year Book No. 45, pages 51-6.

(v) *Climate and Vegetation.* In general, the three main climatic zones of the continent exert a particular controlling influence on the general vegetation. These are the northern third of the continent where rainfall is almost always restricted to the warmer months of the year, the southern third where rainfall is predominantly a winter and spring event, and a transitional zone which experiences rainfall from both sources, although in greatly reduced quantity over the interior, which is subject to frequent drought.

The length of the growing season, or conversely the extent of dry periods during the year, decides the type of vegetation which establishes in a region. The climatic influence on vegetative response is primarily through soil moisture and temperature. Thus in colder south eastern areas, the growing season is mainly temperature dependent, but elsewhere the

availability of soil moisture is the prime factor. All rainfall is not equally effective in increasing the soil moisture, its availability from the soil storage to plants depending on the extent of surface run-off, seepage beyond the root zone, and loss by surface evaporation. Furthermore, the effectiveness of available soil moisture depends on the evaporative demand of the local climate; for example, an inch of stored moisture may maintain vigorous plant growth for twice as long in Tasmania as in the warmer, drier atmosphere of inland New South Wales. Thus it is not a sound practice to assess the agricultural potential of different areas simply by reference to average rainfall.

Generally speaking, the length of the growing season exceeds nine months over the far south-west of Western Australia and in all eastern coastal districts from Cape York Peninsula to Western Victoria, and within this region humid and semi-humid plant formations thrive. Soil types, of course, also play a part in the distribution of vegetation, but they too are to a considerable extent the result of climate and weather.

The climate of Arnhem Land (Northern Territory) is such that there is a considerable surplus of moisture for about five months of the warm season, followed regularly by a virtual drought which frequently reaches severe intensity, and this special combination of meteorological conditions results in annual and perennial vegetation adapted to this cycle.

Over the interior the position is more complex because of the lower levels of the rainfall, its greater variability, and the high evaporative power of the drier, warmer atmosphere. In this vast section of the continent the climatic demands are so severe that the vegetative formations of the moister zones (i.e. the mesophytes, requiring about five months or longer growing season) are unable to exist. Thus a plant species adapted to these very dry and variable conditions (xerophytes), e.g. spinifex, salt bush, blue bush and stunted eucalypts capable of maintaining a cattle population, predominates over the arid interior.

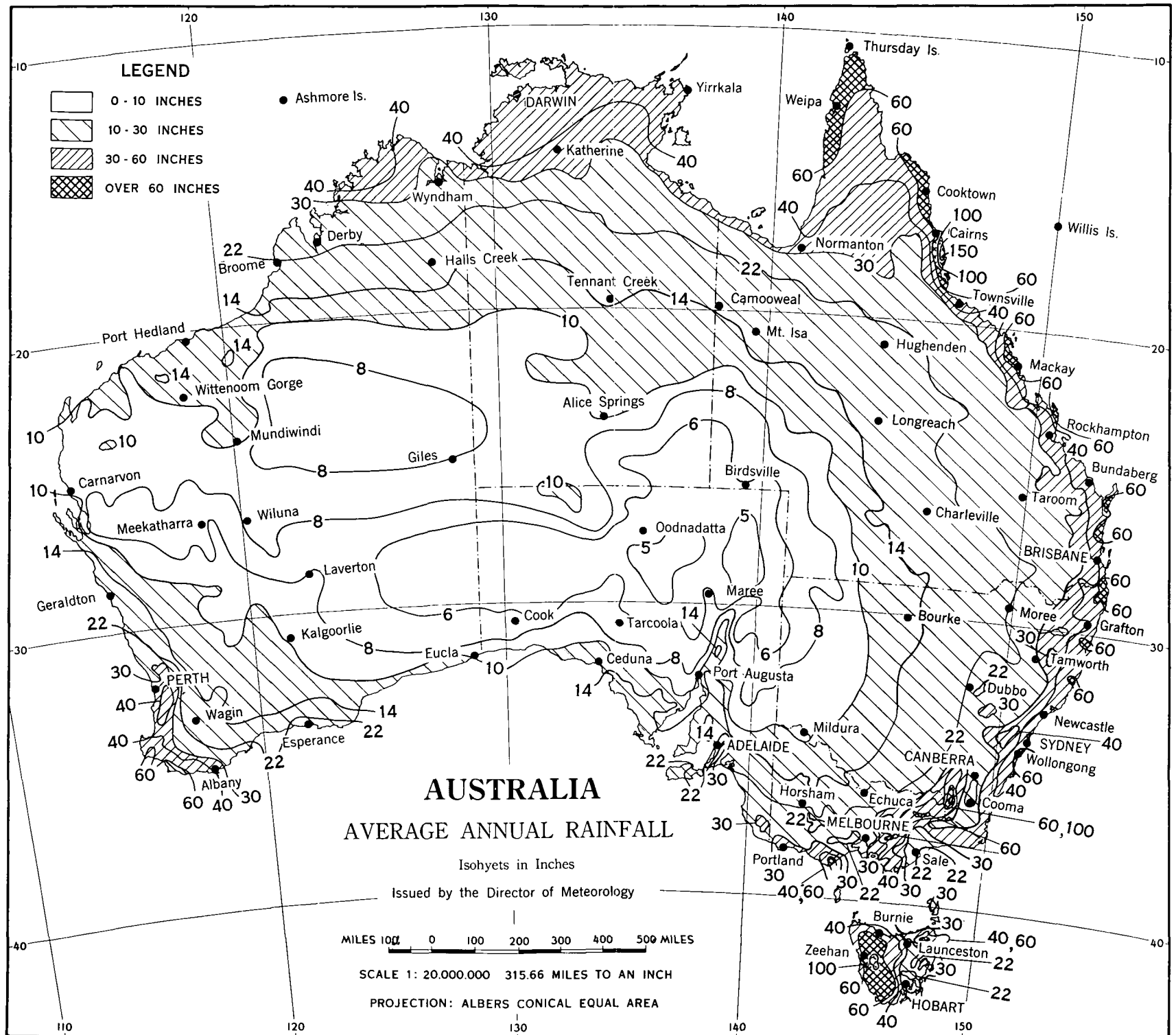
The arid and semi-arid lands of Western Australia and inland New South Wales which border the desert carry the majority of the sheep in these States. In New South Wales the most important vegetative formations in these areas are savannah (treeless plains), savannah woodland, mulga scrub and mallee scrub. In Western Australia sclerophyllous grass steppe and mulga scrub border the deserts and are succeeded to the south by zones of mallee scrub and mallee heath.

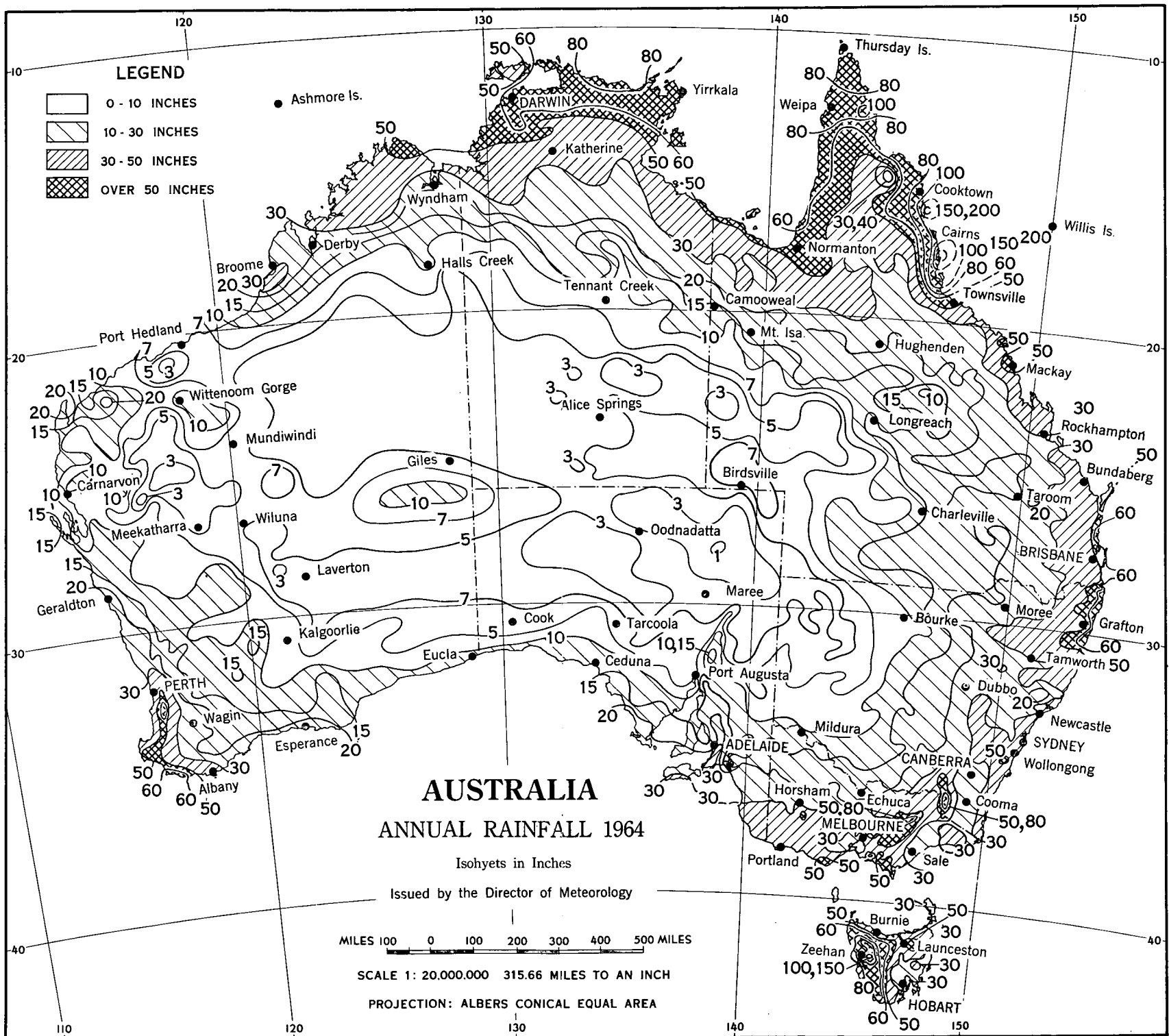
(vi) *Rainfall Intensity.* The study of extremely high rainfall intensities is important in the investigation of the flow characteristics of river systems and flood prevention measures, the design of irrigation works and hydro-electric schemes. Some of the more notable falls in a period of 24 hours are listed for the various States in the following tables. Most of the very high intensities have occurred in the coastal strip of Queensland, where the combination of a tropical cyclone moving close to mountainous terrain provides ideal conditions for spectacular falls. The highest fall recorded in 24 hours, 35.71 inches, occurred at Crohamhurst, Queensland on February 3rd, 1893,

Rainfall at most reporting stations in Australia is recorded only for the 24 hour period from 9 a.m. to 9 a.m. The data in this table are based on these records. Where automatic recording gauges are installed, more detailed intensity data are available for shorter and exactly measured time intervals. For other very heavy falls at various localities, reference may be made to Year Book No. 14, pages 60-4, No. 22, pages 46-8 and No. 29, pages 43, 44 and 51.

HEAVY RAINFALLS: WESTERN AUSTRALIA, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt. in.	Name of town or locality	Date	Amt. in.
Whim Creek ..	3 Apr., 1898	29.41	Roebuck Plains ..	5 Jan., 1917	14.01
Fortesque ..	3 May, 1890	23.36	Broome ..	6 Jan., 1917	14.00
Roebuck Plains ..	6 Jan., 1917	22.36	Onslow P.O. ..	8 Feb., 1963	14.00
Widjip ..	1 Apr., 1934	19.54	Carlton Hill ..	7 Feb., 1942	12.75
Kimberley (Research) ..	6 Apr., 1959	16.98	Wyndham ..	4 Mar., 1919	12.50
Derby ..	7 Jan., 1917	16.47	Onslow P.O. ..	3 Mar., 1961	12.38
Boodarie ..	21 Mar., 1899	14.53	Onslow Aero. ..	3 Mar., 1961	12.29
Balla Balla ..	21 Mar., 1899	14.40	Towrana ..	1 Mar., 1943	12.16
Winderrrie ..	17 Jan., 1923	14.23	Marble Bar ..	2 Mar., 1941	12.00
Pilbara ..	2 Apr., 1898	14.04	Jimba Jimba ..	1 Mar., 1943	11.54

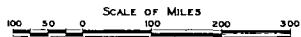




BUREAU OF METEOROLOGY.

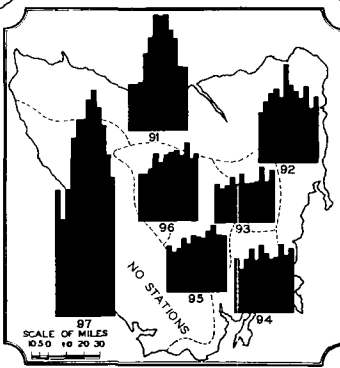
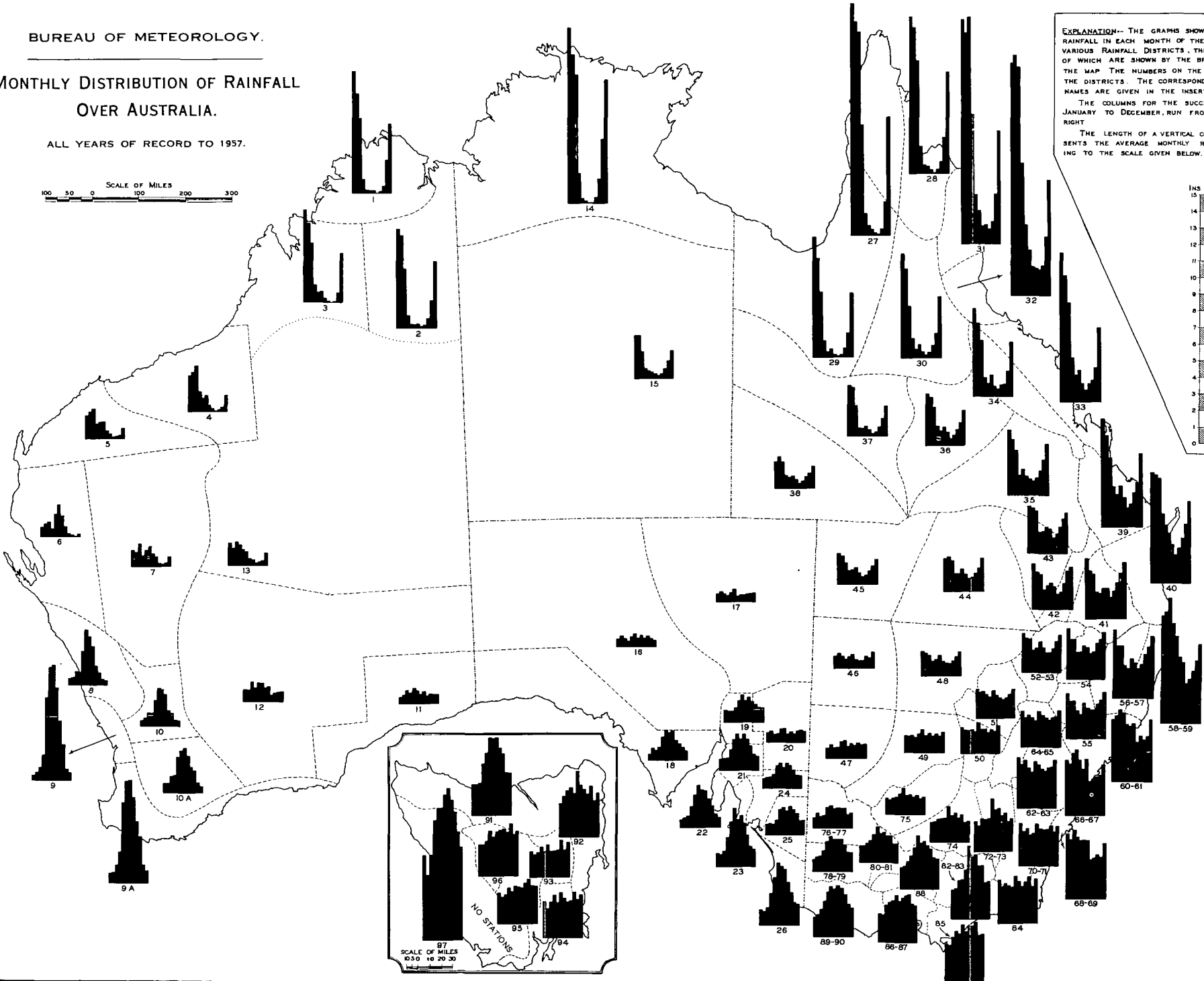
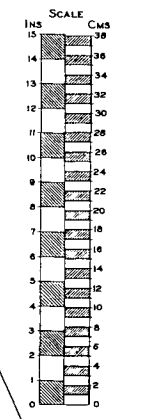
MONTHLY DISTRIBUTION OF RAINFALL OVER AUSTRALIA.

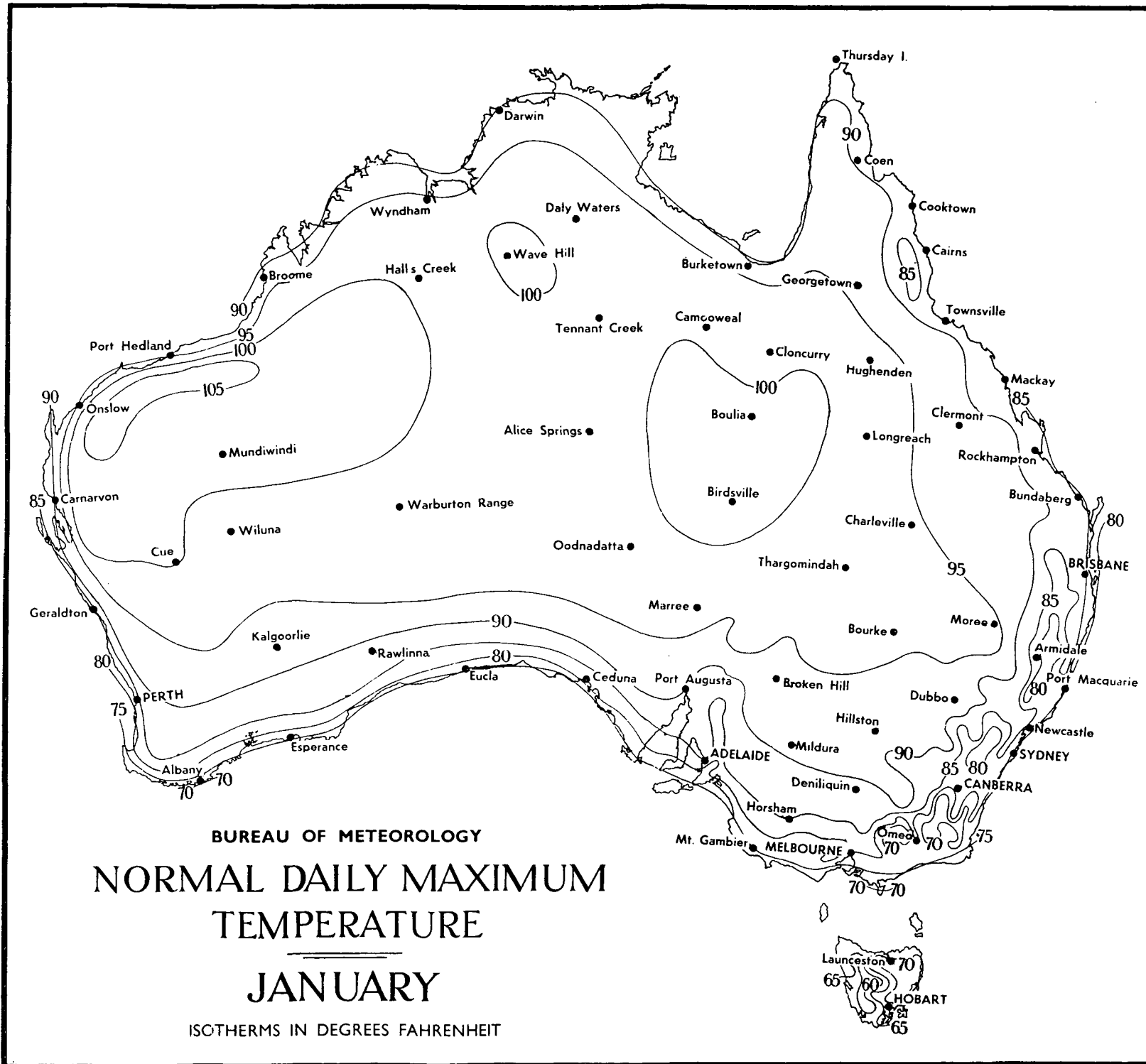
ALL YEARS OF RECORD TO 1957.

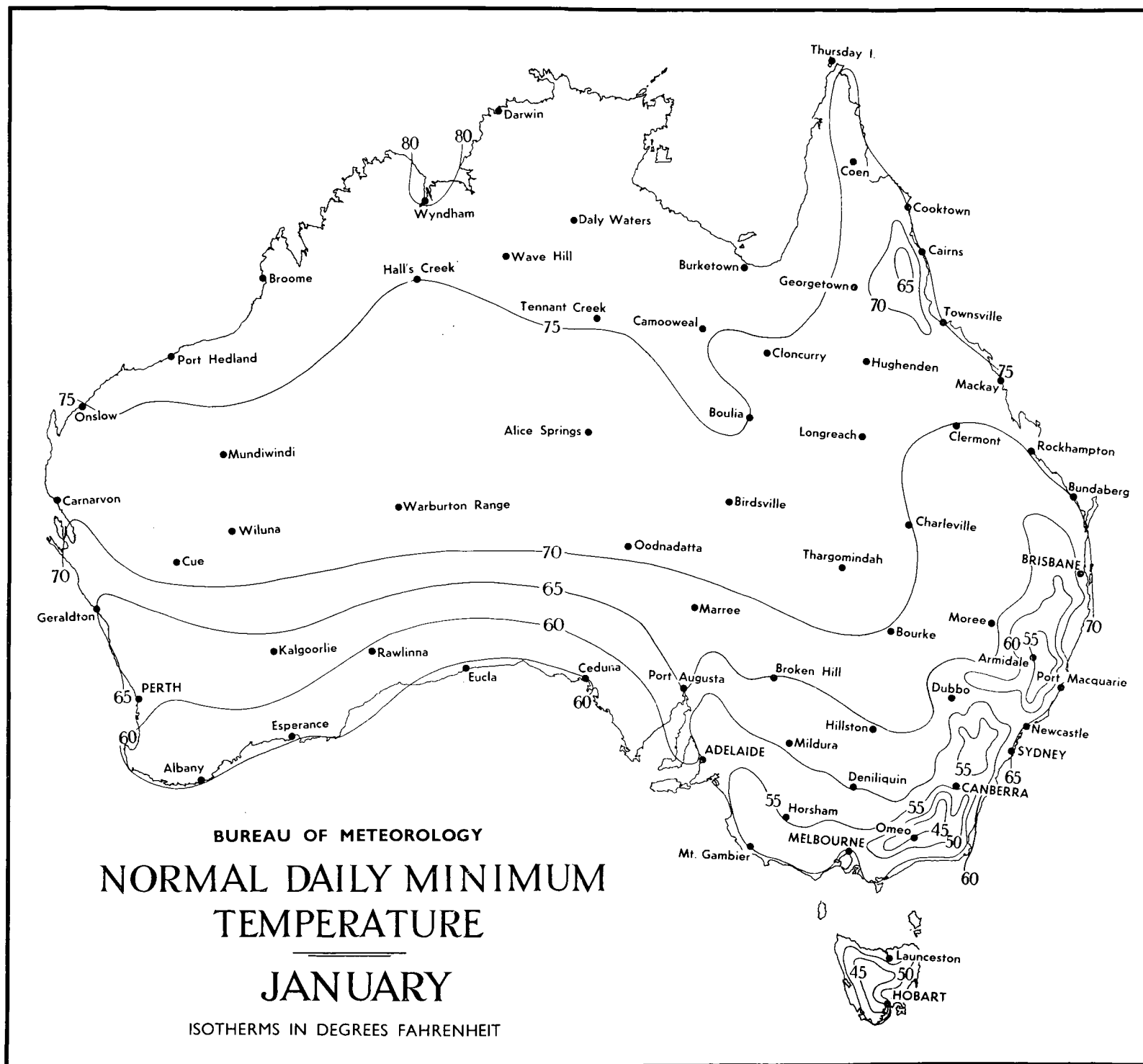


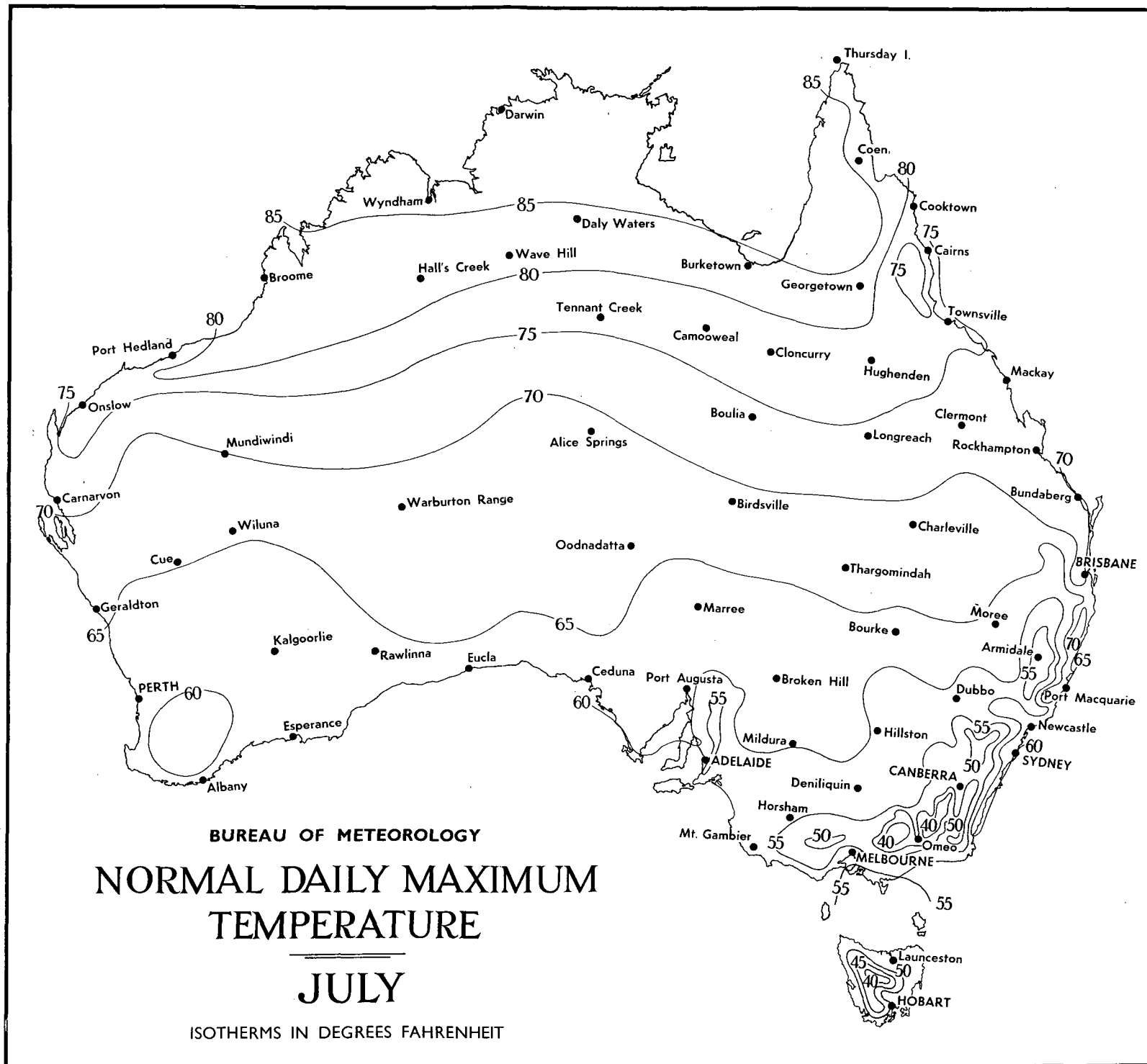
EXPLANATION-- THE GRAPHS SHOW THE AVERAGE RAINFALL IN EACH MONTH OF THE YEAR IN THE VARIOUS RAINFALL DISTRICTS. THE BOUNDARIES OF WHICH ARE SHOWN BY THE BROKEN LINES ON THE MAP. THE NUMBERS ON THE MAP REFER TO THE DISTRICTS. THE CORRESPONDING DISTRICT NAMES ARE GIVEN IN THE INSERT ON PAGE 89. THE COLUMNS FOR THE SUCCESSIVE MONTHS, JANUARY TO DECEMBER, RUN FROM LEFT TO RIGHT.

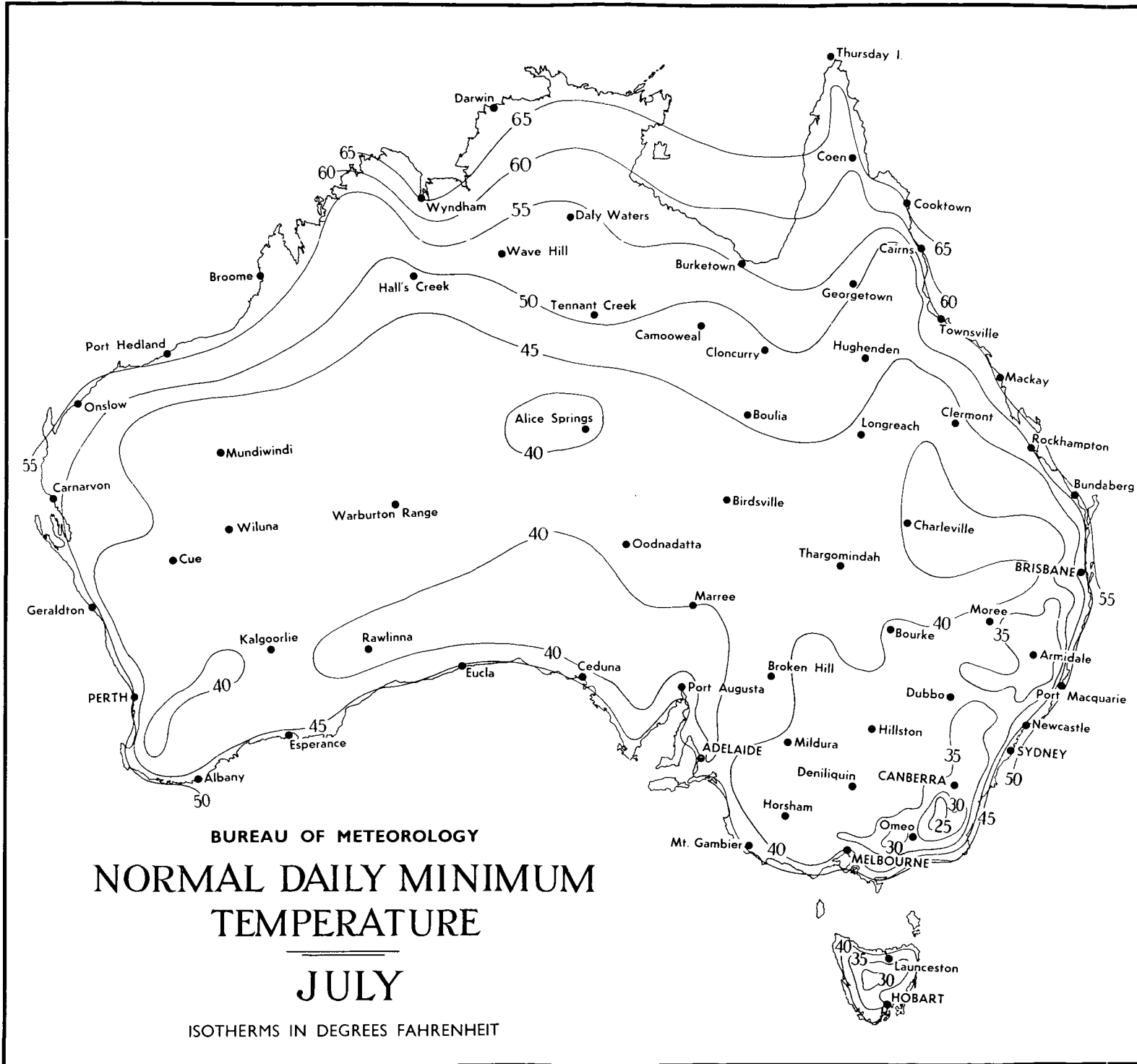
THE LENGTH OF A VERTICAL COLUMN REPRESENTS THE AVERAGE MONTHLY RAINFALL ACCORDING TO THE SCALE GIVEN BELOW.











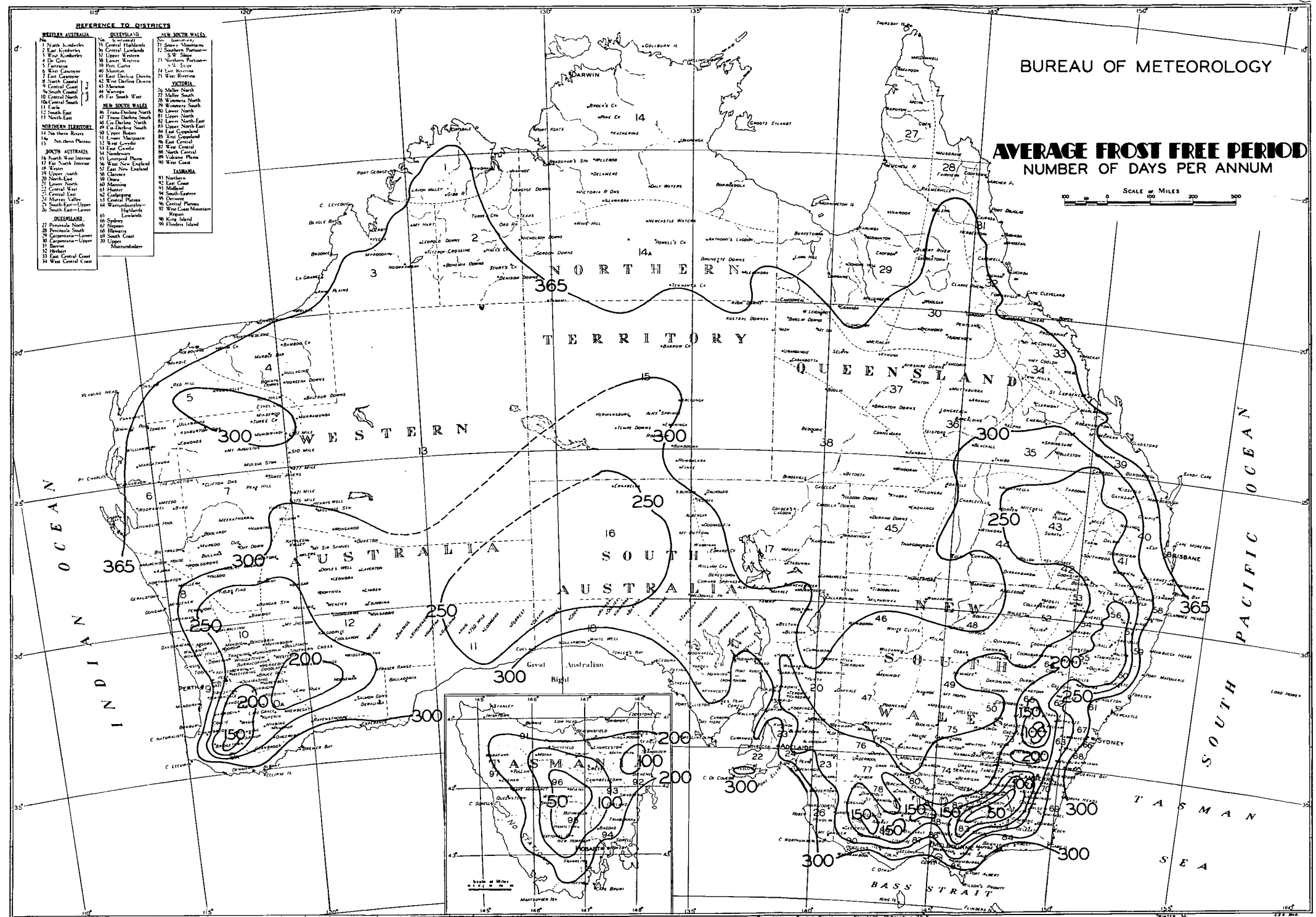
BUREAU OF METEOROLOGY

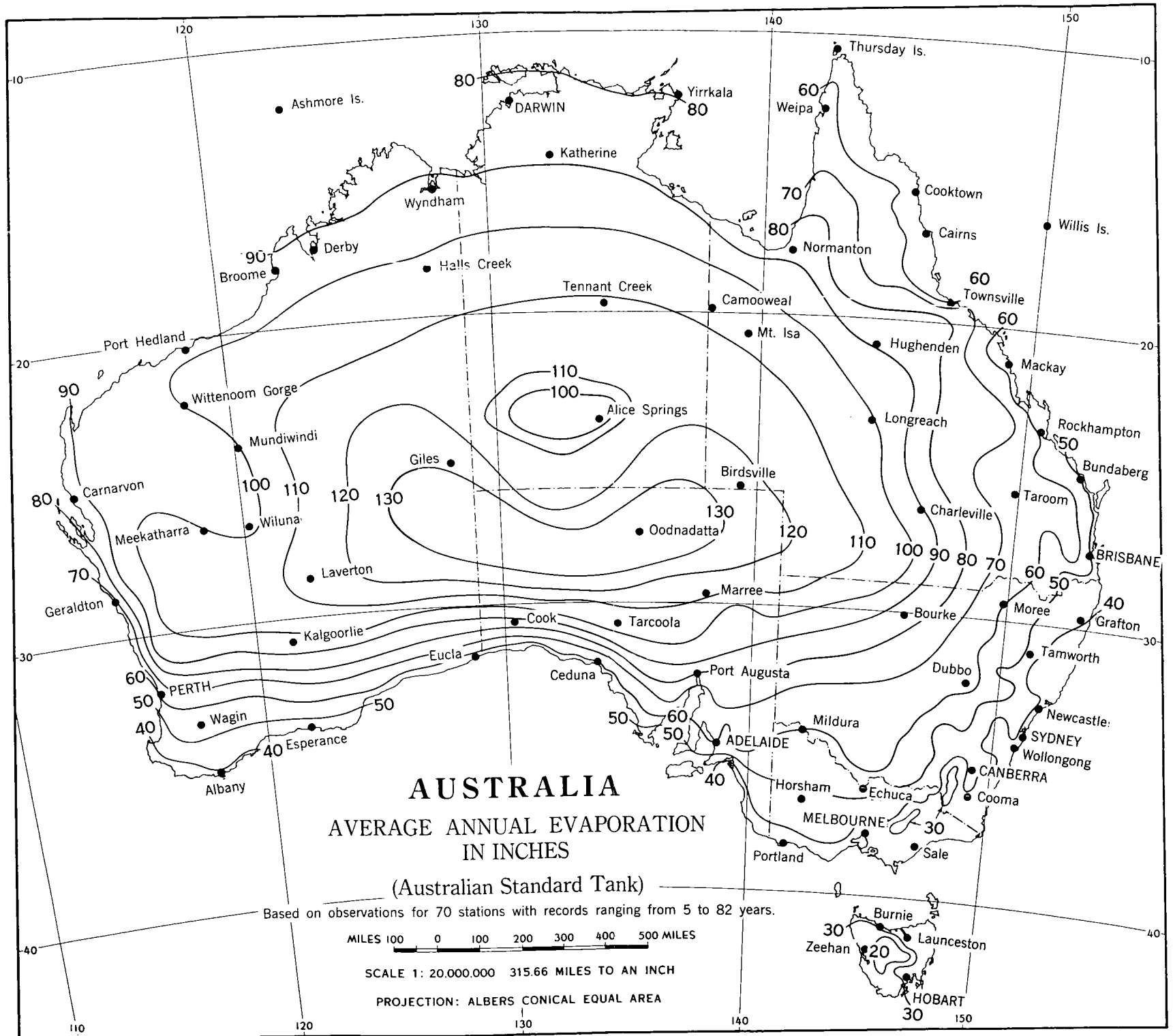
AVERAGE FROST FREE PERIOD
NUMBER OF DAYS PER ANNUM

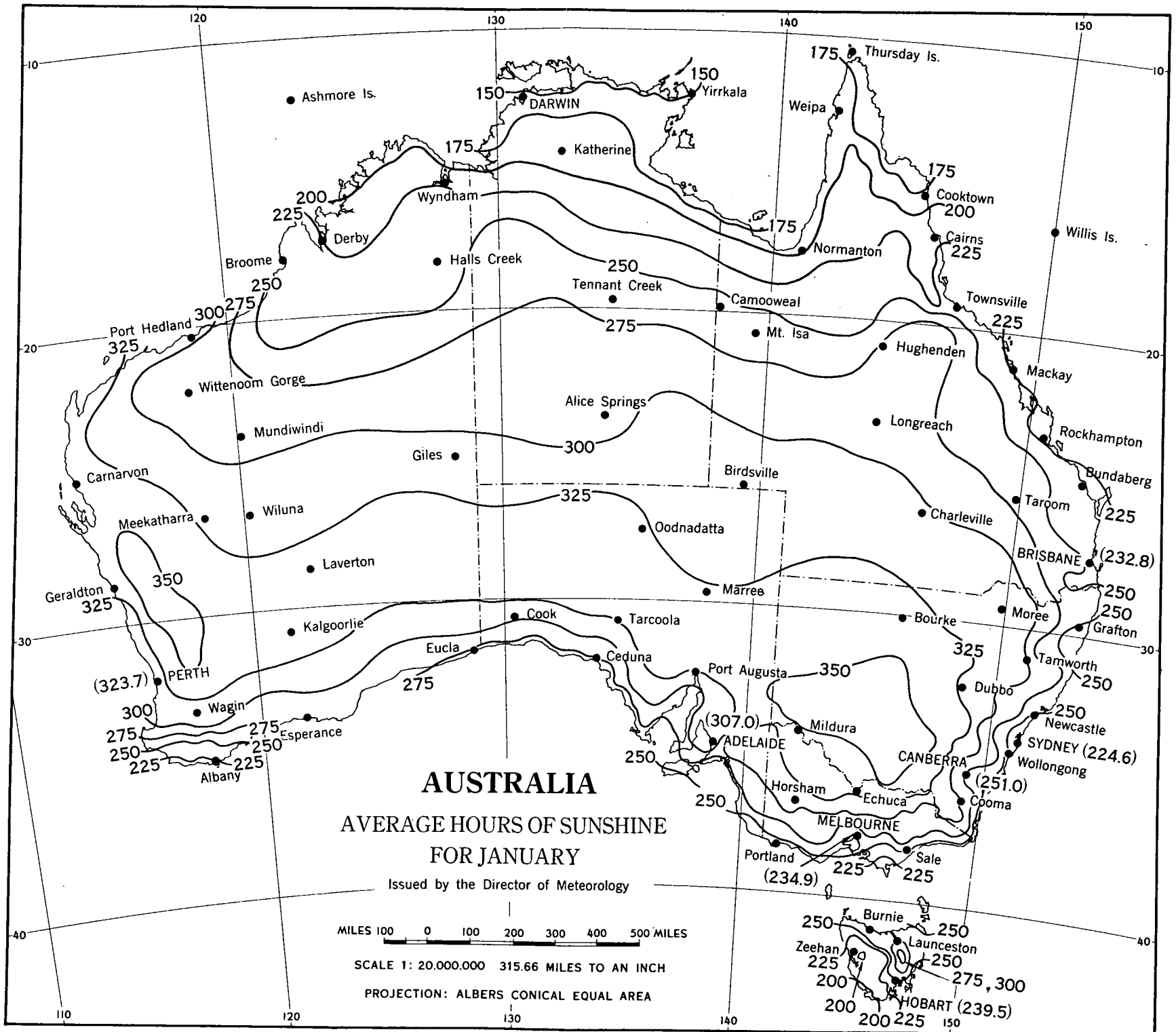
SCALE OF MILES
0 100 200 300

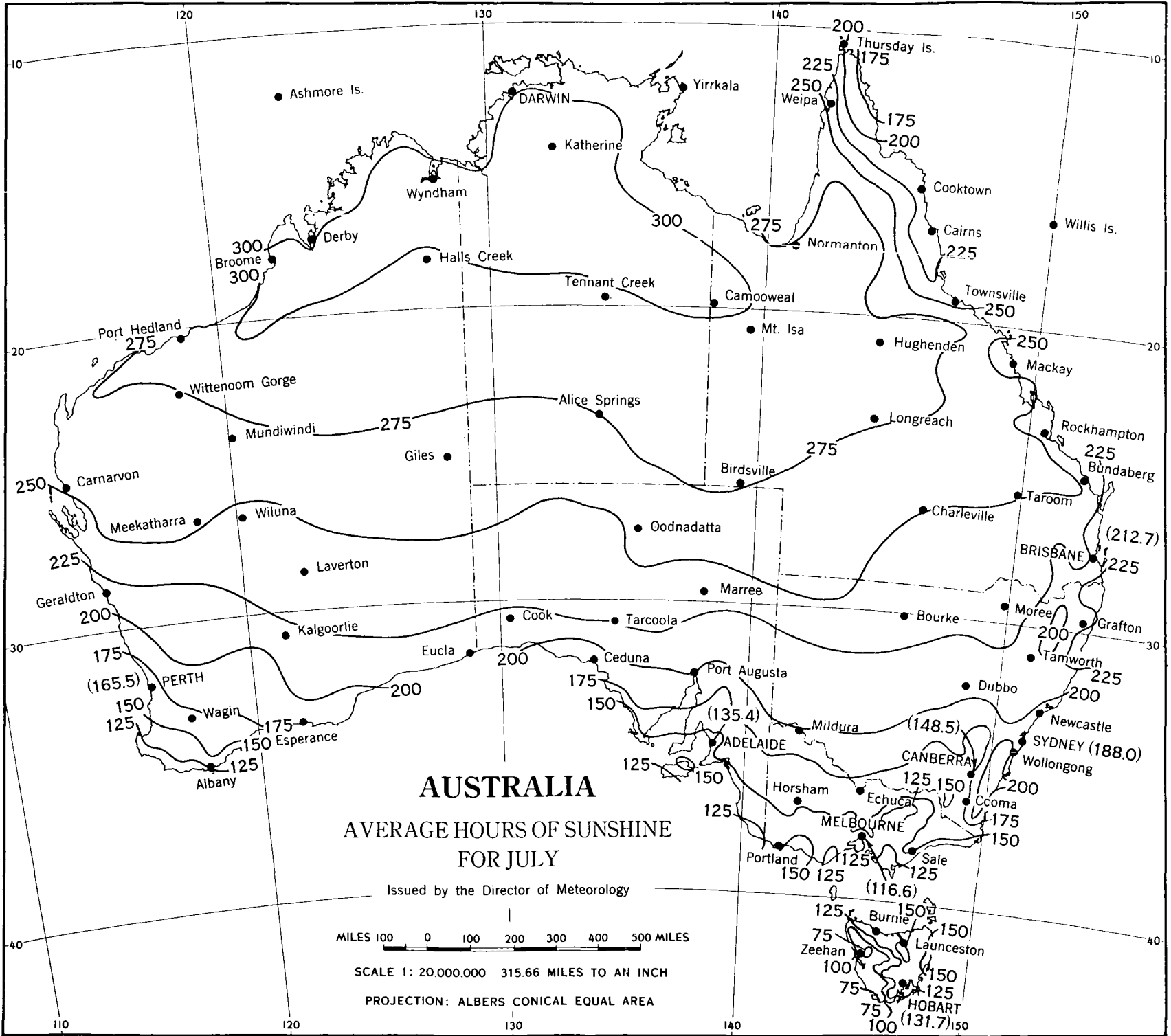
REFERENCE TO DISTRICTS

WESTERN AUSTRALIA	SOUTH AUSTRALIA	NORTH AUSTRALIA
1 North Kimberley	16 North West Interior	17 North West Interior
2 East Kimberley	17 Far North Interior	18 Far North Interior
3 West Kimberley	18 Far North Interior	19 Far North Interior
4 De Grey	19 Far North Interior	20 Far North Interior
5 Fort Pearce	20 Far North Interior	21 Far North Interior
6 North East Coast	21 Far North Interior	22 Far North Interior
7 East Coast	22 Far North Interior	23 Far North Interior
8 East Coast	23 Far North Interior	24 Far North Interior
9 North Coast	24 Far North Interior	25 Far North Interior
10 Central Coast	25 Far North Interior	26 Far North Interior
11 Central North	26 Far North Interior	27 Far North Interior
12 Central South	27 Far North Interior	28 Far North Interior
13 South East	28 Far North Interior	29 Far North Interior
14 North East	29 Far North Interior	30 Far North Interior
15 North West	30 Far North Interior	31 Far North Interior
16 North West Interior	31 Far North Interior	32 Far North Interior
17 Far North Interior	32 Far North Interior	33 Far North Interior
18 Far North Interior	33 Far North Interior	34 Far North Interior
19 Far North Interior	34 Far North Interior	35 Far North Interior
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59 Far North Interior	74 Far North Interior	75 Far North Interior
60 Far North Interior	75 Far North Interior	76 Far North Interior
61 Far North Interior	76 Far North Interior	77 Far North Interior
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63 Far North Interior	78 Far North Interior	79 Far North Interior
64 Far North Interior	79 Far North Interior	80 Far North Interior
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81 Far North Interior	96 Far North Interior	97 Far North Interior
82 Far North Interior	97 Far North Interior	98 Far North Interior
83 Far North Interior	98 Far North Interior	99 Far North Interior
84 Far North Interior	99 Far North Interior	100 Far North Interior







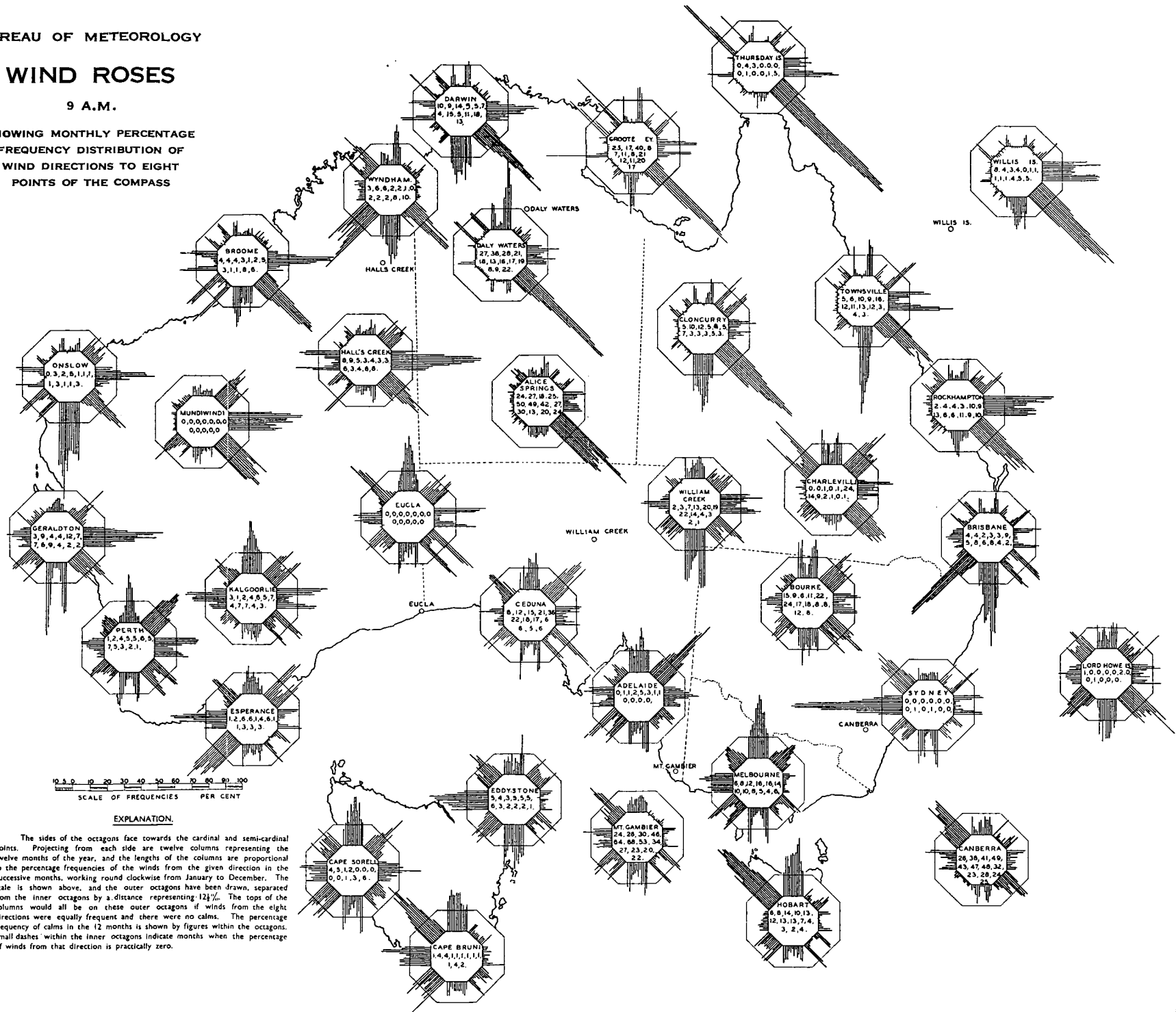


BUREAU OF METEOROLOGY

WIND ROSES

9 A.M.

SHOWING MONTHLY PERCENTAGE
FREQUENCY DISTRIBUTION OF
WIND DIRECTIONS TO EIGHT
POINTS OF THE COMPASS

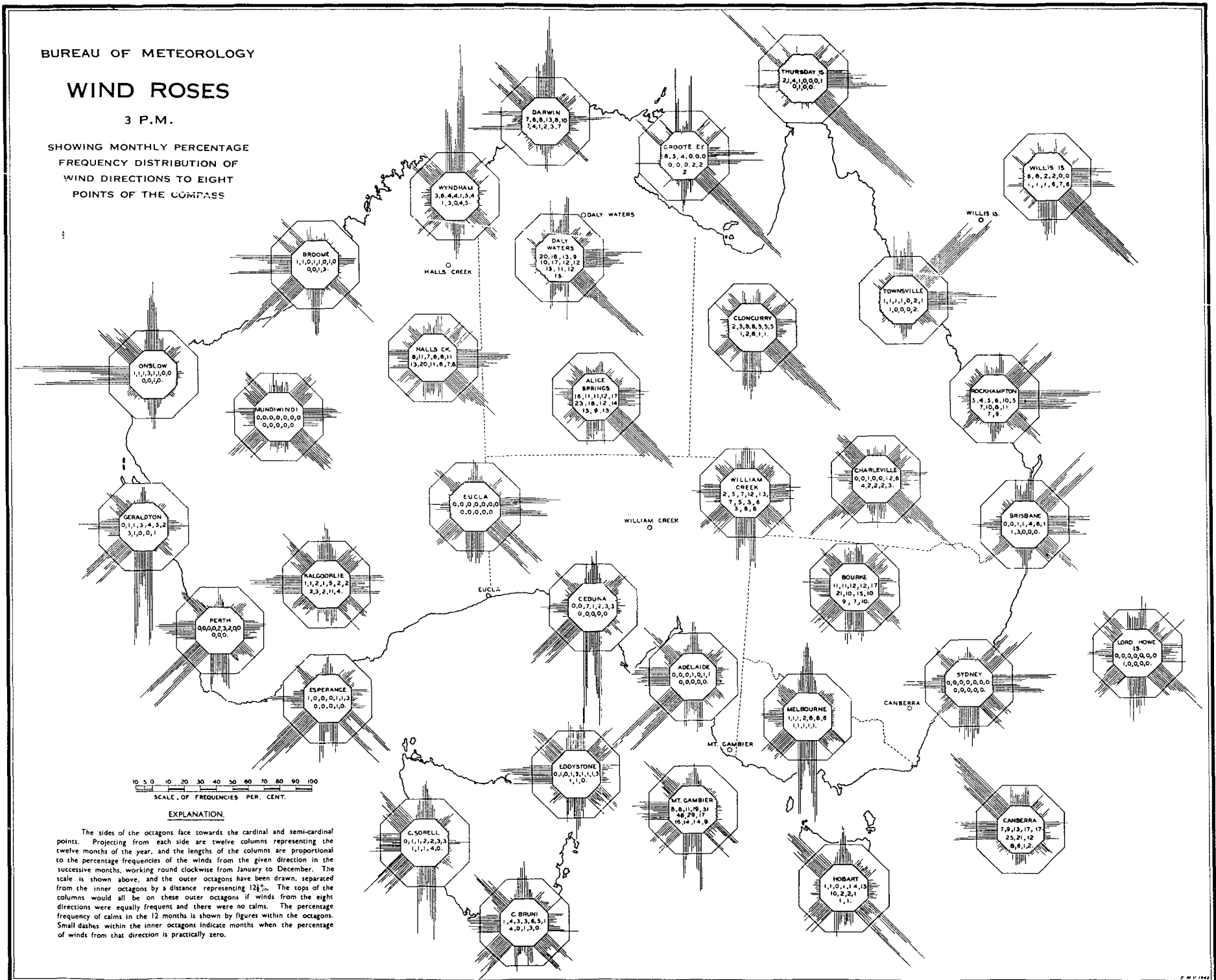


BUREAU OF METEOROLOGY

WIND ROSES

3 P.M.

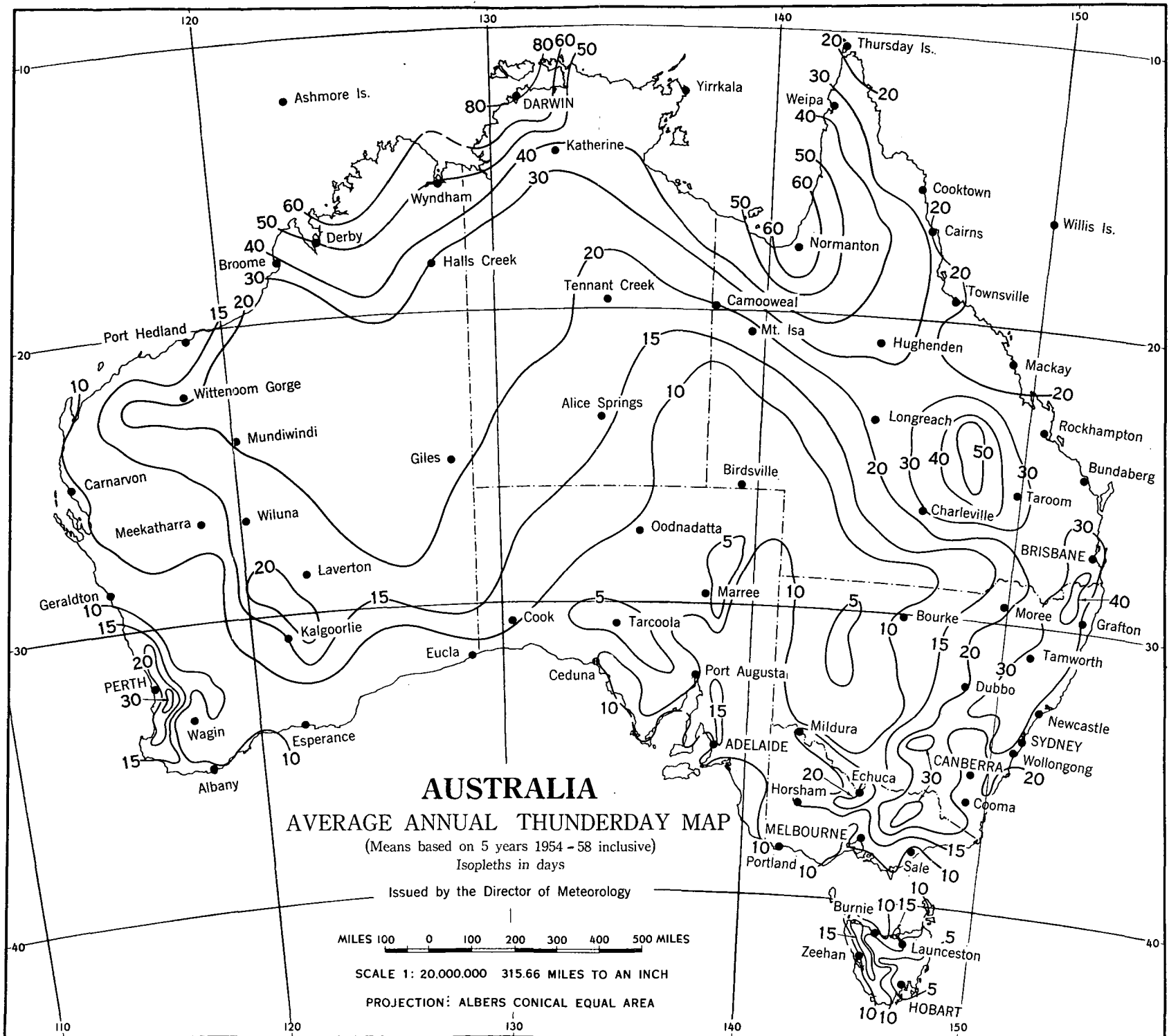
SHOWING MONTHLY PERCENTAGE
FREQUENCY DISTRIBUTION OF
WIND DIRECTIONS TO EIGHT
POINTS OF THE COMPASS



10 5 0 10 20 30 40 50 60 70 80 90 100
SCALE OF FREQUENCIES PER CENT.

EXPLANATION.

The sides of the octagons face towards the cardinal and semi-cardinal points. Projecting from each side are twelve columns representing the twelve months of the year, and the lengths of the columns are proportional to the percentage frequencies of the winds from the given direction in the successive months, working round clockwise from January to December. The scale is shown above, and the outer octagons have been drawn, separated from the inner octagons by a distance representing 12%. The tops of the columns would all be on these outer octagons if winds from the eight directions were equally frequent and there were no calms. The percentage frequency of calms in the 12 months is shown by figures within the octagons. Small dashes within the inner octagons indicate months when the percentage of winds from that direction is practically zero.



HEAVY RAINFALLS: NORTHERN TERRITORY, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Brocks Creek ..	24 Dec., 1915	14.33	Borroloola ..	7 Jan., 1940	12.68
Groote Eylandt ..	9 Apr., 1931	14.29	Borroloola ..	4 Feb., 1938	12.00
Borroloola ..	14 Mar., 1899	14.00	Bathurst Island		
Timber Creek ..	5 Feb., 1942	13.65	Mission ..	7 Apr., 1925	11.85
Cape Don ..	13 Jan., 1935	13.58	Darwin ..	7 Jan., 1897	11.67

HEAVY RAINFALLS: SOUTH AUSTRALIA, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Arddrossan ..	18 Feb., 1946	8.10	Port Victoria ..	18 Feb., 1946	7.08
Carpa ..	18 Feb., 1946	7.83	Wynbring ..	28 Feb., 1921	7.00
Edithburgh ..	18 Feb., 1946	7.46	Mannum ..	25 Jan., 1941	6.84
Hesso ..	18 Feb., 1946	7.36	Wirrabarra Forest		
Maitland ..	18 Feb., 1946	7.21	Reserve ..	7 Mar., 1910	6.80
Wilmington ..	1 Mar., 1921	7.12	Cape Willoughby	18 Feb., 1946	6.80

HEAVY RAINFALLS: QUEENSLAND, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Crohamhurst ..	3 Feb., 1893	35.71	Springbrook ..	21 Feb., 1954	27.04
Finch-Hatton ..	18 Feb., 1958	34.58	Mt. Jukes ..	18 Feb., 1958	26.40
Port Douglas ..	1 Apr., 1911	31.53	Buderim Mountain	12 Jan., 1898	26.20
Yarrabah ..	2 Apr., 1911	30.65	Byfield (Parnass	3 Mar., 1949	25.43
Mt. Charlton ..	18 Feb., 1958	29.95	Vale) ..		
Mooloolah ..	3 Feb., 1893	29.11	Flat Top Island ..	21 Jan., 1918	25.18
Kuranda ..	2 Apr., 1911	28.80	Landsborough ..	3 Feb., 1893	25.15
Calen ..	18 Feb., 1958	27.84	Harvey Creek ..	31 Jan., 1913	24.72
Harvey Creek ..	3 Jan., 1911	27.75	Kuranda ..	1 Apr., 1911	24.30
Sarina ..	26 Feb., 1913	27.75	Babinda (Cairns)	2 Mar., 1935	24.14
Plane Ck. (Mackay)	26 Feb., 1913	27.73	Goondi ..	30 Jan., 1913	24.10
Deeral ..	2 Mar., 1935	27.60	Banyan (Cardwell)	12 Feb., 1927	24.00
Yarrabah Mission	24 Jan., 1916	27.20	Carruchan ..	24 Jan., 1934	24.00
Springbrook ..	24 Jan., 1947	27.07	Tully Mill ..	12 Feb., 1927	23.86

HEAVY RAINFALLS: NEW SOUTH WALES, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Dorrigo ..	24 June, 1950	25.04	Tallowood Point	21 Feb., 1954	19.87
Cordeaux River ..	14 Feb., 1898	22.58	Buladelah ..	16 Apr., 1927	19.80
Morpeth ..	9 Mar., 1893	21.52	Orara Upper ..	24 June, 1950	19.80
Broger's Creek ..	13 Jan., 1911	20.83	Dorrigo (Townsend)	11 July, 1962	19.18
South Head (Sydney Harbour)	16 Oct., 1844	20.41	Tallowood Point	24 June, 1950	18.82
" " ..	29 Apr., 1841	20.12	Madden's Creek ..	13 Jan., 1911	18.68
Mount Pleasant ..	5 May, 1925	20.10	Condong ..	27 Mar., 1887	18.66
Broger's Creek ..	14 Feb., 1898	20.05	Candelo ..	27 Feb., 1919	18.58
Towamba ..	5 Mar., 1893	20.00	Tallowood Point	22 Jan., 1959	18.55
Viaduct Creek ..	15 Mar., 1936	20.00	Mt. Kembla ..	13 Jan., 1911	18.25
			Bega ..	27 Feb., 1919	17.88

HEAVY RAINFALLS: AUSTRALIAN CAPITAL TERRITORY, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Jervis Bay ..	29 Apr., 1963	7.15	Uriarra (Woodside)	27 May, 1925	6.57
Cotter Junction ..	27 May, 1925	7.13	Land's End ..	27 May, 1925	6.35
Canberra (Acton)	27 May, 1925	6.84			

HEAVY RAINFALLS: VICTORIA, UP TO 1963, INCLUSIVE

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

HEAVY RAINFALLS: TASMANIA, UP TO 1963, INCLUSIVE

Name of town or locality	Date	Amt.	Name of town or locality	Date	Amt.
		in.			in.
Mathinna ..	5 Apr., 1929	13.25	Riana	5 Apr., 1929	11.08
Cullenswood ..	5 Apr., 1929	11.12	Triabunna ..	5 June, 1923	10.20

(vii) *Snow and Hail.* For varying periods from late autumn to early spring snow usually covers the ground to a great extent on the Australian Alps above a level of about 4500 to 5000 feet, where in both New South Wales and Victoria ski-ing resorts operate throughout the season.

In Tasmania also, the highlands are frequently covered above the 3500 feet level for extended periods of the winter. There are, however, some years when snowfalls are much lighter than normal and even fail completely. Light snow has been known to fall occasionally as far north as the New England plateau in New South Wales (latitude 31°S.), and in exceptional seasons much of the dividing range from Victoria to Toowoomba (Queensland) has been covered above a level of about 4000 feet. In ravines around Mount Kosciusko small areas of snow may persist throughout the summer after a heavy winter fall. This winter snowfall of south-eastern Australia is important in aiding the reliable flow of many streams which are utilized in the hydro-electric schemes of the Snowy Mountains, northern Victoria, and Tasmania. Snowfall at low terrain elevations occurs from time to time, particularly in Tasmania and Victoria, but falls are usually light and rarely lie more than a few days.

Hail is most frequent in winter and spring along the south-eastern coastal region of the continent and in Tasmania, where it is usually of a relatively small size. Summer storms, however, which are quite frequent, particularly in the highland plateau regions of eastern Australia, often produce stones of large size and of destructive intensity. Very large stones capable of piercing light gauge galvanized iron are reported from time to time, and damage to fruit crops in south-eastern Australia from large hail stones is quite frequent.

(viii) *Floods.* In general, flooding in Australia is most pronounced on the shorter streams flowing from the Great Dividing Range into the Pacific Ocean along the seaboard of Queensland and New South Wales. These floods are particularly destructive on the more densely populated coast of New South Wales. The chief rivers in this area are the Tweed, Richmond, Clarence, McLeay, Nepean, Hawkesbury, Hunter and Shoalhaven, all of which experience quite frequent and considerable flooding. These floods occur chiefly in summer but may occur at any time of the year.

The great Fitzroy and Burdekin river systems in Queensland are also subject to floods during the summer wet season, while much of the heavy monsoon rain in northern Queensland flows southward through the normally dry channels of the network of rivers draining into Lake Eyre. This water may cause extensive floods over a vast area, but it is soon lost by seepage and evaporation and rarely reaches the lake in any quantity. The Condamine and the other tributaries of the Darling also carry considerable volumes of water south through western New South Wales to the Murray, and flooding along their courses occurs from time to time.

Flooding also occurs from time to time, usually in autumn, winter and spring, in the Murray-Murrumbidgee system of New South Wales and Victoria and on the smaller coastal streams of southern Victoria. In Tasmania, flooding of the north coast streams particularly the South Esk system, is common in the same seasons. In South Australia, some flooding has occurred in the lower reaches of the Murray owing to rainfall as far away as Queensland and south-eastern New South Wales. In the north of Western Australia and the Northern Territory, flooding of the coastal streams occurs frequently in summer but is not of such economic importance as the flooding of the eastern coastal streams of the continent, where many localities are more vulnerable to damage.

3. **Temperature.**—(i) *General.* The accurate measurement of the temperature of the air is not easy, as temperature sensitive devices also absorb radiant heat or can lose heat by radiation. Following international practice, air temperature measurements in Australia are made by thermometers freely exposed in a double louvered box (the Stevenson screen).

Maximum and minimum air temperatures during each day are measured by means of special thermometers exposed in the Stevenson screen. The minimum air temperature at the surface of the earth as the ground cools at night by outgoing radiation (the terrestrial or grass minimum) is also measured at many stations.

Such temperature recordings measure a theoretical physical quantity which bears only an indirect relation to the comfort or discomfort a person feels. Temperature measurements alone may be regarded only as a first approximation to a measurement of personal comfort. The actual degree of personal comfort is related to a number of meteorological factors such as air temperature, windspeed, humidity, exposure to the sun's rays, and the temperature of surrounding surfaces (i.e. the radiation balance of the body).

In addition to these quantities which are all physically measurable, a number of personal quantities are involved which vary greatly from person to person and which cannot be precisely expressed, e.g., race and acclimatization, age and state of health, type of clothing, and degree of physical activity in work and recreation.

Conditions thus vary very greatly for a particular individual even in a fixed location, so that it is difficult to describe general comfort variability uniquely throughout a region as varied climatically as Australia. A number of indexes which attempt to incorporate some of the factors described above have been used experimentally from time to time, and further research continues on this very difficult problem.

Generally speaking, however, there is an increase in discomfort northward within the tropical regions of Australia in summer, owing to the heat and high absolute humidity which reach a maximum in the extreme north of the continent. Such conditions are, however, ameliorated to a large extent in highland areas such as the Atherton Tablelands in Queensland. No part of Australia is uncomfortably hot in winter, and only in a small area of the Australian Alps and highland Tasmania does bodily strain due to cold exist in winter.

The history of the settlement of the northern regions of Queensland and the Northern Territory indicates that with accelerating development of studies and experience in the arrangement of living and working accommodation, clothing, and general way of life, the effects of extremes of climate can be minimized.

For some further discussion of the problems of temperature and comfort conditions reference may be made to Ashton, H. T., *Meteorological Data for Air conditioning in Australia*, Bureau of Meteorology Bulletin No. 47 (1964).

(ii) *Average Seasonal Temperature Distribution.* The maps on pages 36–9 show the normal daily maximum and minimum temperature for January and July, which may be taken as indicative respectively of the summer and winter seasons in Australia. Further detailed temperature data are presented on pages 55–64 for the capital cities and more important country towns of the Commonwealth.

On the basis of average annual mean temperatures, and latitude for latitude, Australia is somewhat cooler than the other land masses of the southern hemisphere and considerably cooler than the same latitudes in the large continental areas of the northern hemisphere. This is due to the insular nature of Australia and the stronger general circulation of the atmosphere in the southern hemisphere resulting in the transport of higher latitude (cooler) air into the subtropical regions.

July is the month with the lowest mean temperature in all parts of the continent, while the month with the highest mean temperature varies from February in Tasmania and southern Victoria to December in the northern part of the continent and November in Darwin.

The lateness of the month of highest average temperature in the extreme south of the continent is due in part to the effect of the south Indian Ocean, where the sea surface temperature reaches its maximum in February. The cooler period of the late summer in the north is due largely to increased cloudiness associated with the inflow of north-west winds with the onset of the monsoon season.

In January, average maximum temperatures exceed 95° F. over a vast area of the interior of the continent, and over large areas exceed 100° F. The hottest part of Australia is situated in the north of Western Australia around the Marble Bar and Nullagine area, where the daily maximum screen temperature during the summer frequently exceeds 100° F. for weeks at a time.

The marked change of maximum temperature in summer with distance from the sea, in areas close to the coasts, particularly along the Great Australian Bight and the Indian Ocean coast of Western Australia, is due to the penetration inland of the vigorous sea breezes which are initiated by the considerable temperature contrast between land and sea surface temperatures. The 75° F. isotherm of January mean maximum temperature skirts the southern coast of the continent from south-western Western Australia to Gippsland.

In January the mean minimum temperatures in the tropics, except for some highland regions, exceed 72° F. with a gradual decrease southward to values of 55° F. in Victoria and 50° F. in Tasmania. Highland regions in the south have mean values of 45° F. and lower.

In July a more regular latitudinal distribution of mean maximum temperature is evident, only the extreme north of the continent having mean maxima higher than 80° F. Values lower than 60° F. are general over the south-eastern part of the continent, with mean maxima falling below 40° F. in small alpine areas. Average night minimum temperatures in July fall below 45° F. in areas south of the tropics and away from the coast. Alpine regions again record the lowest temperatures with some areas experiencing means lower than 25° F.

(iii) *Extreme Variation and Daily Range.* Only at a few inland places in Australia does the absolute range of temperature (i.e. the range from the highest maximum to the lowest minimum) exceed 100° F. Generally it is in the range 70° F. to 90° F. in the inland areas and somewhat less on the coasts. The highest temperature recorded in Australia was 127.5° F. at Cloncurry (Queensland) on 16th January, 1889, and the lowest -8° F. at Charlotte Pass in the southern Alps on 14th July, 1945, and again on 22nd August, 1947. The world record maximum temperature is 136° F. at Azizia (Tripoli) on 13th August, 1922 and the world record minimum temperature -126.9° F. at Vostok on the Antarctic plateau on 24th August, 1960.

(a) *High Temperatures.* Heat waves with a number of successive days higher than 100° F. are relatively common in many parts of Australia. With the exception of the north-western coast of Western Australia, however, most coastal areas do not usually experience more than a few days in succession of such conditions. The frequency of such conditions increases inland, and periods of up to twenty days have been recorded over most of the settled areas. This figure increases in western Queensland and north-western Western Australia to more than 60 days in places. The central part of the Northern Territory and the Marble Bar-Nullagine area of Western Australia have recorded the most prolonged heat waves for the Australian region. The longest consecutive period of daily maxima greater than 100° F. was 160 consecutive days recorded in Marble Bar during the summer of 1923-24.

(b) *Frosts.* 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 grass thermometer has fallen below 30.4° F. However, as terrestrial minima are not recorded at all stations, it is usual for statistical purposes to regard the registration of a screen thermometer of 36° F. as indicating a "light" frost. A map showing frequency of days with screen minima higher than 36° F. (i.e. the frost free period) is reproduced on page 40. A "heavy" frost is taken as a screen reading of less than 32° F. A "black" frost occurs with a combination of low temperature and low humidity, and, although frost crystals are not observed on the ground, damage takes place to the plant cells by the freezing and expansion of the moisture they contain.

The frequency of frost depends largely on altitude, latitude, and proximity to the sea, and locally, to a very large extent, on even minor variations in contour of the land. The parts of Australia which are most subject to frost are the eastern highlands from north-eastern Victoria to the western Darling Downs in southern Queensland. Most stations in this region experience more than ten nights a month with readings of 32° F. or under for three to five months of the year. On Tasmania's Central Plateau similar conditions occur for three to six months of the year. Heavy frosts are comparatively infrequent in Western Australia, except in parts of the south and south-west. In South Australia frosts are most frequent in the agricultural areas of the south-east.

Frosts may occur within a few miles of the coast over the whole continent except the Northern Territory and most of north Queensland. Regions subject to frost at all times of the year comprise the whole of Tasmania, the tablelands of New South Wales, much of inland Victoria particularly the north-east, and a small part of south-western Western Australia.

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

For further details of frost conditions in Australia reference should be made to Foley, J. C., *Frost in the Australian Region*, Bureau of Meteorology Bulletin No. 32 (1945).

4. Humidity and Saturation Deficit.—The amount of water vapour in the atmosphere is mainly determined by the temperature. The higher the temperature the more water vapour may be contained in a given mass of air. Vapour pressure is the pressure exerted by the water vapour of the atmosphere. At any given temperature there is a definite upper limit to the amount of water that can exist as vapour in the air. When this limit is reached the air is said to be saturated and the pressure of the water vapour is the saturation vapour pressure. Both these quantities may be expressed in millibars or in inches of mercury. The usual measure of humidity or moistness of the air is the relative humidity (which is measured by means of wet and dry bulb screen thermometers). This term is applied to the ratio of the existing vapour pressure to the saturated vapour pressure at the existing temperature and expressed as a percentage. However, from the point of view of physical comfort and in many industrial and agricultural problems, the more important measure of atmospheric water vapour is the absolute humidity or the actual mass of moisture contained in a fixed mass of air.

The annual variation of vapour pressure for regions outside the tropics closely follows that of temperature. However, the mean relative humidity in the temperate regions is generally highest in winter and lowest during the summer. In northern Australia the highest relative humidity occurs during the rainy summer season. The relative humidity variation during the day closely follows the diurnal variation of temperature, being highest with low temperatures and lowest with high temperatures. The relative humidity at 9 a.m. for Australian conditions may be considered as a close approximation to the mean for the whole day. In the tables for the capital cities, pages 55–62, the mean monthly vapour pressure and relative humidity for 9 a.m., together with the monthly extremes, are listed. The order of the stations in descending values of mean annual vapour pressure at 9 a.m. is Darwin, Brisbane, Sydney, Perth, Melbourne, Adelaide, Canberra, and Hobart, while the annual mean of the 9 a.m. relative humidities diminishes in the order Hobart, Melbourne, Sydney, Darwin, Brisbane, Canberra, Perth, and Adelaide.

Another method of humidity measurement which may be employed is the saturation vapour deficit. This may be defined as the difference between the saturation vapour pressure and the actual vapour pressure both referred to the dry bulb temperature. It is thus a measure of the drying power of the air and like vapour pressure may be expressed in millibars or inches of mercury.

In January the mean saturation deficit at the mean temperature for the month has a maximum value of over 0.90 inches in the central parts of Western Australia and in south-eastern Queensland. Gradual decreases occur towards the coast, where values close to the north, east, and south coastlines are around 0.20 inches. On the western coast values are somewhat higher, and a strong gradient exists in the saturation deficit in the narrow region bordering the Indian Ocean. In July the variation is less, with maxima of 0.40 inches in the dry north of the Northern Territory and Western Australia slowly decreasing generally to the south, with values over most of the south-east and extreme south-west of the continent being less than 0.10 inches. Extremely low values (less than 0.025 inches) exist in July over the highlands of south-eastern Australia and Tasmania.

5. **Evaporation.**—Evaporation is a process which results in the transfer of water vapour from the surface of the earth into the atmosphere and takes place from free water surfaces, from moist soil, and by the process of transpiration from plants. The figures quoted in this section, however, refer to evaporation as measured from an Australian standard evaporation tank. This instrument consists of a copper tank surrounded by a six-inch water jacket sunk in the ground to a depth of 36 inches and exposing at ground level a water surface 36 inches in diameter from which the evaporation loss of water is measured. Earlier estimates of Australian evaporation data were supplemented by calculations based on an empirical formula dependent on saturation deficit, but more recent measurements have enabled charts of monthly and annual evaporation to be constructed wholly from observational records. Such a map is that on page 41. The rate and quantity of evaporation in any territory are influenced by the net radiation, prevailing temperature, vapour pressure, and turbulent diffusion by wind.

In Australia the study of evaporation is of great importance, since in its drier regions water conservation must be practised by the use of tanks and dams. The magnitude of the economic loss by evaporation may be appreciated from the map on page 41, which shows that the yearly amount varies from 20 inches over the highland areas of central Tasmania to more than 130 inches in the northern and north-western part of South Australia.

Over an area of some 70 per cent. of the continent, comprising most inland districts and extending to the coast in the north-west of Western Australia and to the head of the Great Australian Bight, the rainfall does not exceed the evaporation loss in any month of the year. The central and north-western portions of the continent experience evaporation far in excess of their rainfall. Vegetation over these areas is characterized by acacia, scrub steppe, and arid scrub, while many areas are merely sand hills and stony desert.

Over many of the drier areas, however, particularly in the inland areas of south-eastern Australia, the loss of rainfall by evaporation is made good to some extent by the development of irrigation schemes. Some of these schemes, such as those at the Murrumbidgee Irrigation Area in New South Wales and at Mildura in Victoria and Renmark in South Australia, have been very successful. The Snowy Mountains Hydro-electric Scheme will also result in the large scale supply of water from the south-eastern highlands of Australia for use in the drier areas to the west of the ranges in New South Wales and Victoria. The future further development of such schemes as these holds promise for the reclamation of many marginal areas in Australia, which because of low rainfall and high evaporation are at present of little economic value.

Since the loss by evaporation depends largely on the net radiation absorbed and consequently on the extent of the exposed area, tanks and dams so designed that the surface area shall be a minimum are advantageous. Further, the more protected they are from the direct rays of the sun and from winds by means of suitable tree planting the less will be the evaporation loss.

The Mansfield process for the treatment of tanks and dams by a mono-molecular chemical film which materially reduces evaporation is a recent development which is already giving beneficial results, particularly on large water storage areas. Such improvements are of considerable importance to the pastoralists of the drier regions of Australia and to water supply authorities.

Further information on evaporation may be found in Hounam, C. E., "*Evaporation in Australia*", Bureau of Meteorology Bulletin No. 44 (1961).

6. **Sunshine and Cloud.**—The proportion of the sky covered by cloud is of considerable meteorological and climatological importance. A cloud cover inhibits both incoming and outgoing radiation and thus profoundly affects the temperature distribution and other factors at the earth's surface. Cloud amount is measured in eighths of the sky covered.

In Australia the seasonal changes in cloudiness correspond closely to that of rainfall. In the southern or more temperate parts of the continent, particularly in the coastal and low lying areas, the winter months are generally more cloudy than the summer. This is due to the formation of extensive areas of stratiform cloud and fog during the colder months, when the structure of the lower layers of the atmosphere favours the physical processes resulting in this type of cloud. A particularly strong annual periodicity exists in the monsoonal regions of northern Australia, where it is heavily clouded during the summer wet season and practically cloudless during the winter "dry". Cloudiness is higher near coasts and on the windward slopes of the mountains of eastern Australia and is a minimum over the dry interior parts of the continent.

A close relationship exists between cloud amount and number of sunshine hours, and it is possible to estimate from cloud data the equivalent number of sunshine hours over a given period. These data can be incorporated with records of direct measurement of sunshine hours, and approximate distribution maps produced for Australia. Maps of the mean sunshine distribution for January and July are reproduced on pages 42-3 and indicate the main features of the variation over Australia in these months.

Except for Tasmania and a narrow fringe bordering the southern, eastern, and northern coasts, the greater part of the continent receives more than 3,000 hours of sunshine each year, and in Central Australia and the mid-western coast of Western Australia, totals in excess of 3,500 hours occur. The extreme southern coast receives in the main 2,000 to 2,500 hours annually, while the eastern coast regions of New South Wales and Queensland receive 2,500 to 3,000 hours. A minimum of less than 1,750 hours occurs on the western coast and highlands of Tasmania.

Mean amounts of cloud for each month at the capital cities are included in the tables on pages 55-62, as are the mean daily hours of sunshine. The latter figure is a good single measure of the relative climatic characteristics of the individual cities for different months of the year.

7. Wind.—Australia lies in those latitudes of the southern hemisphere where it is influenced largely by two wind systems:

- (a) the south-east trade winds blowing on the equatorial side of the mid-latitude anticyclones; and
- (b) the westerlies south of the mid-latitude anticyclones in which successive low pressure systems move eastward over the south Indian Ocean.

The only pronounced seasonal variations of atmospheric pressure in the middle and high latitudes of the southern hemisphere are related to the latitudinal shift in the axes of the subtropical high pressure systems and to the change in the tracks of the migratory anticyclones. The latter systems move generally from west to east in the Australian region between the semi-permanent oceanic anticyclones of the Indian and Pacific Oceans. The mean path of these systems lies over southern Australia during the summer but moves northwards during the winter with the thermal equator. The movement is only of a few degrees of latitude but is of very great importance to the climate of the Australian continent. During the summer months, when the anticyclones move on a more southerly track, the south east trades affect the whole coast of eastern Australia north of around latitude 30° S., the westerlies retreating to higher latitudes, and conditions are more settled over southern Australia which then lies close to the axis of the anticyclones. In winter the anticyclones move further north, the trades affect only the northern parts of the continent, and southern Australia is exposed to the westerlies of the south Indian Ocean.

In summer, with the retreat of the anticyclones to the south, the whole of northern and north-western Australia is exposed initially to light wind systems, and then during the period from December to April to the effects of the north-west monsoon. This process, which is associated with an inflow of north-west winds and intensive rains, is not so regular or persistent as the south-west monsoon of South-East Asia. However, it is sufficiently regular a feature of the climate of northern Australia to be designated as the north-west season, or, as it is best known in the area, "the wet". Its influence affects areas as far south as central Queensland, but southern Queensland and the area east of the Great Dividing Range are largely still under the influence of the south-east trades. Fringe or marginal areas on the southern limits of the monsoonal penetration over the continent have a shorter and more uncertain "wet" season, which in some years fails to appear at all. With the northward advance of the anticyclones in autumn, the monsoon gives way again to the trades, and "the dry" of northern and north-western Australia commences.

The general features of these wind patterns may be seen in the wind rose diagrams of pages 44-5. It is important, however, to note the dynamic nature of the atmosphere, and that the continual growth, decay and motion of the pressure systems result in a wide diversity of wind-flow types. Descriptions of wind conditions for particular geographical areas and seasons can thus be only of a very generalized kind. Further, local features can also be imposed on the overall wind pattern-channelling of winds due to topography (e.g. the high frequency of north-west winds in Hobart) and the marked summer sea breeze characteristics of most of the Australian coast, particularly near the Great Australian Bight as shown in the diagrams of 3 p.m. wind frequencies.

8. Storms and Tropical Cyclones.—In general there are two types of weather system in Australia which produce very strong winds and heavy rainfalls over large areas of the continent:—

- (a) the active depressions which move westwards over the south Indian Ocean; and
- (b) the tropical cyclones or hurricanes of north-eastern and north-western Australia.

During the winter the southern shores of the continent are subject to the deep depressions of the southern low pressure belt. They are felt most severely over the south-west of Western Australia, the south-east of South Australia, southern Victoria, and Tasmania, and may move inland in all these regions bringing strong winds and heavy rainfall. Further extensions of this type of system frequently develop close to the coast of New South Wales, often bringing severe weather to this region and to southern Queensland. These are generally known as "east coast lows".

The frontal systems (i.e. the narrow zones characterized by cloud and bad weather separating two air masses of different density) which are associated with these depressions vary widely in character. A common type in south-east Australia is a cold front located in a Λ shaped trough. Such a system usually brings very strong north to north-west winds in advance of the front with a very abrupt backing of the wind to colder west to south-westerly winds after the frontal passage.

Such frontal passages are in their most severe form associated with thunderstorms and line squalls, heavy rain, and a change to cold winds and showers. These violent changes with the passage of a cold front and strong southerly winds frequently affect the New South Wales coast as far north as Newcastle during the winter, and are popularly known as "southerly busters".

The most extensive rains of inland Australia occur when moist tropical air which has moved inland is lifted by convergence ahead of a slow moving colder air mass moving from the south Indian Ocean.

The coast of Queensland, particularly the section from Cooktown to Mackay and the adjacent waters, is subject to visitations by tropical cyclones (the "hurricanes" of the Caribbean and "typhoons" of the China Sea). These destructive systems can affect this region from December to April, normally forming in the Coral Sea, moving south-west close to the coast and then passing away to the south-east into the Pacific. They may, however, from time to time cross the coast and bring torrential rain and violent winds (often more than 100 m.p.h.) to the coastal regions.

Similar systems affect the north-west coast of Western Australia where they bear the local name of "willy willies", a name which is, however, often used generally in Australia for minor local whirlwinds or dust devils. The season in this region generally lasts from November to April, the storms originating in the Timor or Arafura Seas travelling usually south-west and approaching the coast most commonly between latitudes 20°S. and 22°S. Thence the systems may move southward following the coast, or sometimes cross inland bringing high rainfalls in the otherwise dry interior of the continent. A further region which is affected somewhat less frequently by tropical cyclones is the coast of Arnhem Land in the Northern Territory and the waters and coasts of the Gulf of Carpentaria.

Tropical cyclones, in general, soon lose their intensity on crossing from sea to land, and although the wind force rapidly abates, they are still capable of producing the heavy rainfall which leads to flooding of coastal rivers, damage to stock and property, and general disruption of transport.

Thunderstorms which bring local heavy rain and strong winds are common to most of Australia. They are also of particular importance because of the lightning damage which they cause to power transmission lines, and have been extensively studied for the purpose of siting electrical installations as far as possible in areas of low thunderstorm occurrence.

The map on page 46 shows the number of days annually on which thunder is heard, which is a better observational criterion than lightning observed.

The region of maximum thunderstorm activity is the extreme north-west of the continent and the region south-east of the Gulf of Carpentaria. In the more settled areas, maximum thunderstorm occurrence is in central western and south-eastern Queensland and the high-land areas of New South Wales. The minimum number of storms occur over the interior of South Australia, western New South Wales, and eastern Tasmania.

9. **Climatological Tables.**—The averages and extremes for a number of elements which have been determined from long series of observations at the Australian capitals up to and including the year 1963 are given in the following pages, together with more limited data for the larger country towns of the Commonwealth.

NOTE.—The following points apply throughout.

- (a) Where records are available, mean or average values have been calculated on a standard period of 30 years from 1911 to 1940.
- (b) 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

Month	Bar. corrected to 32° F. m.m. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 71 feet)				Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 9 p.m.(a)	No. of clear days	
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction					
					9 a.m.					3 p.m.
No. of years of observations..	30(b)	30(b)	66	51	30(b)	30(b)	30(b)	30(b)		
January ..	29.897	10.9	26.3 27/98	50	E	SSW	10.37	2	2.9	14
February ..	29.922	10.7	21.5 6/08	54	ENE	SSW	8.63	2	3.1	13
March ..	29.976	10.1	21.5 6/13	70	E	SSW	7.52	2	3.5	12
April ..	30.071	8.5	31.5 25/00	63	ENE	SSW	4.62	2	4.2	9
May ..	30.062	8.4	27.3 29/32	74	NE	WSW	2.80	3	5.4	6
June ..	30.068	8.4	30.2 17/27	80	N	NW	1.82	3	5.9	5
July ..	30.082	8.8	33.5 20/26	77	NNE	W	1.76	2	5.6	6
August ..	30.084	9.4	31.9 15/03	97	N	WNW	2.37	2	5.6	6
September ..	30.073	9.4	28.5 11/05	68	ENE	SSW	3.44	1	4.9	8
October ..	30.033	10.0	26.7 6/16	65	SE	SW	5.38	1	4.8	8
November ..	29.989	10.7	25.7 18/97	63	E	SW	7.65	2	3.9	9
December ..	29.923	11.0	25.6 6/22	64	E	SSW	9.69	2	3.2	13
Year { Totals ..	30.015	9.7	—	—	E	SSW	66.05	23	—	108
Year { Averages ..	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	33.5 20/7/26	97	—	—	—	—	4.4	—

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

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass	
No. of years over which observation extends..	30(a)	30(a)	30(a)	67	67	67	63(c)	65	30(a)
January ..	84.6	63.3	73.9	110.7 29/56	48.6 20/25	62.1	177.3 22/14	39.5 20/25	10.4
February ..	85.1	63.5	74.3	112.2 8/33	47.7 1/02	64.5	173.7 4/34	39.8 1/13	9.8
March ..	81.3	61.5	71.4	106.4 14/22	45.8 8/03	60.6	167.0 19/18	36.7 8/03	8.8
April ..	76.3	57.4	66.8	99.7 9/10	39.3 20/14	60.4	157.0 8/16	31.0 20/14	7.5
May ..	69.0	52.8	60.9	90.4 2/07	34.3 11/14	56.1	146.0 4/25	25.3 11/14	5.7
June ..	64.4	49.8	57.1	81.7 2/14	34.9 22/55	46.8	135.5 9/14	25.9 27/46	4.8
July ..	62.8	48.0	55.4	76.4 21/21	34.2 7/16	42.2	133.2 13/15	25.1 30/20	5.4
August ..	63.8	48.4	56.1	82.0 21/40	35.4 31/08	46.6	145.1 29/21	26.7 24/35	6.0
September ..	66.8	50.4	58.6	90.9 30/18	36.7 6/56	54.2	153.6 29/16	27.2 (b)	7.2
October ..	69.7	52.6	61.1	99.0 26/61	40.0 16/31	59.0	161.2 19/54	29.8 16/31	8.1
November ..	76.7	57.3	67.0	104.6 24/13	42.0 1/04	62.6	167.0 30/25	35.0 3/47	9.6
December ..	81.2	60.9	71.0	107.9 20/04	47.5 29/57	60.4	168.8 11/27	38.0 29/57	10.4
Year { Averages ..	73.5	55.5	64.5	—	—	—	—	—	7.8
Year { Extremes ..	—	—	—	112.2 8/2/33	34.2 7/7/16	78.0	177.3 22/1/14	25.1 30/7/20	—

(a) Standard 30 years' normal (1911-1940). (b) 8/1952 and 6/1956. (c) Records discontinued 1963.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.				Rainfall (inches)				Fog Mean No. of days of fog
		Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day	
No. of years over which observation extends..	30(a)	30(a)	67	67	30(a)	30(a)	88	88	88	30(a)
January ..	0.438	51	63	41	0.33	3	2.17 1879	Nil (b)	1.74 27/79	0
February ..	0.434	51	65	43	0.50	3	6.55 1955	Nil (b)	3.43 17/55	0
March ..	0.432	57	66	46	0.90	5	5.71 1934	Nil (b)	3.03 9/34	0
April ..	0.397	61	75	51	1.75	8	5.85 1926	Nil	2.62 30/04	1
May ..	0.365	70	81	61	5.14	15	12.13 1879	0.77 1949	3.00 17/42	2
June ..	0.337	75	85	68	7.55	17	18.75 1945	2.16 1877	3.90 10/20	2
July ..	0.322	76	88	69	7.08	19	16.73 1958	2.42 1876	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	0.34 1916	1.82 4/31	0
October ..	0.345	60	75	52	2.30	12	7.87 1890	0.15 1946	1.73 3/33	0
November ..	0.374	52	63	41	0.75	7	2.78 1916	Nil	1.54 29/56	0
December ..	0.409	51	63	39	0.54	5	3.17 1951	Nil (b)	1.84 3/51	0
Year { Totals ..	—	—	—	—	35.99	128	—	—	—	8
Year { Averages ..	0.376	62	—	—	—	—	—	—	—	—
Year { Extremes ..	—	88	—	39	—	—	18.75 6/1945	Nil(c)	3.90 10/6/20	—

(a) Standard 30 years' normal (1911-1940). (b) Various years. (c) November to April, various years. Dates in italics relate to nineteenth century.

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

Month	Bar. corrected to 32° F. m.n. sea level and standard at 9 a.m. and 3 p.m. readings	Wind				Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m., 9 p.m.(g)	No. of clear days	
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction					
					9 a.m.					3 p.m.
No. of years of observations . . .	30	14	—	13(b)	—	—	30	30	30	
January . . .	29.706	6.1	—	66	NW & S	W & NW	16	7.1	1	
February . . .	29.728	6.7	—	54	W & S	W & NW	16	7.0	1	
March . . .	29.751	5.3	—	98	SE	W & NW	14	6.2	3	
April . . .	29.809	6.1	—	42	SE	E	6	3.5	11	
May . . .	29.859	6.5	—	37	SE	E	1	2.1	19	
June . . .	29.892	6.5	—	37	SE	E & SE	0	1.6	22	
July . . .	29.911	6.2	—	38	SE	E & SE	0	1.4	23	
August . . .	29.914	5.9	—	40	SE	NW & N	0	1.3	23	
September . . .	29.886	6.2	—	36	SE & S	NW & N	1	2.0	18	
October . . .	29.850	6.2	—	46	S	NW & N	8	3.2	10	
November . . .	29.797	5.5	—	57	W & S	NW & N	17	4.8	4	
December . . .	29.738	6.2	—	66	NW & S	NW & N	17	6.0	2	
Year { Totals	29.820	6.1	—	—	—	—	96	—	137	
Year { Averages	—	—	—	—	SE	NW	—	—	—	
Year { Extremes	—	—	—	—	—	—	—	—	—	

(a) Scale 0-10. (b) No records 1943-1958 inclusive.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)			Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun		Lowest on grass		
									83(a)		83(a)		25(d)
No. of years over which observation extends . . .	30	30	30	83(a)	83(a)	83	25(d)	—	—	
January . . .	89.9	77.3	83.6	100.0	68.8	31.2	168.0	26/42	—	
February . . .	89.8	77.1	83.4	100.9	63.0	37.9	163.6	23/38	—	
March . . .	90.2	77.1	83.6	102.0	66.6	35.4	165.6	23/38	—	
April . . .	91.9	75.9	83.9	104.0	60.8	43.2	163.0	1/38	—	
May . . .	90.9	72.6	81.4	98.6	59.2	43.1	160.0	5/20	—	
June . . .	87.5	69.8	78.5	98.0	53.8	44.8	155.2	2/16	—	
July . . .	86.6	67.8	77.2	98.0	50.7	47.3	156.0	28/17	—	
August . . .	88.5	69.7	79.1	98.0	56.4	45.8	156.2	28/16	—	
September . . .	91.0	73.9	82.5	102.0	62.1	39.9	157.0	—	—	
October . . .	92.6	77.2	84.9	104.9	68.5	36.4	160.5	30/38	—	
November . . .	92.6	78.2	85.7	103.3	66.8	36.5	170.4	14/37	—	
December . . .	92.0	78.1	85.0	102.0	68.5	33.5	169.0	26/23	—	
Year { Averages	90.3	74.5	82.4	—	—	—	—	—	—	
Year { Extremes	—	—	—	104.9	50.7	54.2	170.4	—	—	
				17/10/1892	29/7/42	—	14/11/37	—	—	

(a) Years 1832-1941 at Post Office, 1942-1963 at Aerodrome; sites not strictly comparable. (b) 26/1883 and 27/1883. (c) 28/1916 and 3/1921. (d) Records discontinued 1941.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.				Rainfall (inches)					Fog Mean No. of days of fog		
		Mean 9 a.m.	Mean	Highest	Lowest	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day			
												57(a)		57(a)		95(b)		95(b)
No. of years over which observation extends	57(a)	57(a)	57(a)	57(a)	30	21	95(b)	95(b)	95(b)	30			
January . . .	0.925	78	89	69	16.18	20	27.86	1906	2.25	1930	11.67	7/97	0.0
February . . .	0.920	79	88	71	12.37	18	28.23	1956	0.44	1931	11.00	18/55	0.0
March . . .	0.912	78	84	69	11.18	17	21.88	1898	0.81	1911	7.18	6/19	0.0
April . . .	0.800	69	80	60	3.08	6	23.74	1891	Nil	(c)	6.22	4/59	0.0
May . . .	0.652	63	76	49	0.33	1	14.00	1953	Nil	(c)	2.19	6/22	0.0
June . . .	0.545	61	75	52	0.09	1	1.53	1902	Nil	(c)	1.32	10/02	0.4
July . . .	0.522	59	71	47	0.01	0	2.56	1900	Nil	(c)	1.71	2/00	1.1
August . . .	0.613	63	73	53	0.02	0	3.30	1947	Nil	(c)	3.15	22/47	0.7
September . . .	0.732	65	73	54	0.60	2	4.26	1942	Nil	(c)	2.78	21/42	0.2
October . . .	0.832	65	72	60	1.93	5	13.34	1954	Nil	(c)	3.74	18/56	0.0
November . . .	0.868	68	75	62	4.32	10	15.72	1938	0.40	1870	4.73	9/51	0.0
December . . .	0.890	73	83	65	8.57	15	22.38	1910	0.98	1934	7.87	28/10	0.0
Year { Totals	—	—	—	—	58.68	95	—	—	—	—	—	—	2.4
Year { Averages	0.768	68	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes	—	—	89	47	—	—	28.23	2/56	Nil	(d)	11.67	7/1/1897	—

(a) 1882 to 1938 at Post Office. (b) The figures below are the highest or lowest recorded at either the Post Office or Aerodrome sites. (c) Various years. (d) April to October, various years. Dates in italics relate to nineteenth century.

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

Month	Bar. corrected to 32° F., mn. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 75 feet)					Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m., 9 p.m. to 6 a.m.	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction					
					9 a.m.	3 p.m.				
No. of years of observations..	30(b)	30(b)	74(d)	47	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.917	9.9	31.6 19/99	72	SW	SW	9.27	2.3	3.6	12.9
February ..	29.953	8.8	28.8 22/96	66	NE	SW	7.56	2.0	3.7	11.2
March ..	30.037	8.3	26.2 9/12	78	S	SW	6.39	1.8	4.0	10.6
April ..	30.119	8.0	32.2 10/96	81	NE	SW	3.78	1.5	5.2	7.2
May ..	30.131	8.1	31.7 9/80	70	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	75	NE	SW	1.99	2.0	5.5	5.6
September ..	30.050	9.2	30.0 2/87	69	NNE	SW	3.05	2.0	5.3	5.8
October ..	30.007	9.8	32.0 28/98	75	NNE	SW	5.03	2.8	5.3	5.7
November ..	29.990	9.9	32.2 7/48	81	SW	SW	6.89	3.3	4.9	7.2
December ..	29.922	9.9	28.1 12/91	75	SW	SW	8.74	2.2	4.2	9.5
Year { Totals ..	—	—	—	—	—	—	57.68	24.0	—	89.0
{ Averages ..	30.037	9.0	—	—	NE	SW	—	—	5.0	—
{ Extremes ..	—	—	32.2 (c)	81	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 10/4/1896, 31/8/1897 and 7/11/1948.
(d) Records during 1878-1951 were taken from a Robinson/Beckley anemometer. Records from 1952-1963 were taken from a Munro anemometer and are not comparable.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass	
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	61.8	73.7	113.6 12/99	45.5 23/18	68.1	170.5 10/00	35.8 23/26	9.3
March ..	81.3	59.1	70.2	110.5 9/34	43.9 21/33	66.6	174.0 17/83	32.1 21/33	7.9
April ..	73.0	54.4	63.7	98.6 5/38	39.6 15/59	59.0	155.0 1/83	28.0 14/63	6.0
May ..	66.8	50.8	58.8	89.5 4/21	36.9 (c)	52.6	148.2 12/79	25.6 19/28	4.8
June ..	61.0	46.6	53.8	78.1 4/57	32.5 (d)	45.6	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 26/60	22.1 30/29	4.8
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	95.1 30/61	32.7 4/58	62.4	160.5 23/82	25.0 25/27	6.3
October ..	72.5	51.7	62.1	102.9 21/22	36.1 20/58	66.8	162.0 30/21	27.8 (e)	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 (f)	71.6	175.7 7/99	32.5 4/84	9.5
Year { Averages ..	72.9	53.3	63.1	—	—	—	—	—	7.0
{ Extremes ..	—	—	—	117.7 12/139	32.0 24/7/08	85.7	180.0 18/1/1882	21.0 24/6/44	—

(a) Standard 30 years' normal (1911-1940). (b) Records incomplete, 1931-1934. Discontinued, 1934.
(c) 26/1895 and 24/1904. (d) 27/1876 and 24/1944. (e) 4/1931 and 2/1918. (f) 4/1906 and 16/1861.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.				Rainfall (inches)				Fog	
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day
January ..	0.327	39	59	29	0.76	5	3.31 1941	Nil (b)	2.30 2/89	0.0	
February ..	0.352	41	57	30	1.10	5	6.09 1925	Nil (b)	5.57 7/25	0.0	
March ..	0.332	44	58	29	0.87	5	4.59 1878	Nil (b)	3.50 5/78	0.0	
April ..	0.329	55	72	37	1.45	10	5.81 1938	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	63	2.93	15	8.58 1916	0.23 1958	2.11 1/20	1.1	
July ..	0.282	75	87	66	2.49	16	5.44 1890	0.39 1899	1.75 10/65	1.4	
August ..	0.282	68	78	54	2.58	16	6.20 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	
October ..	0.287	48	67	29	1.54	10	5.24 1949	0.17 1914	2.24 16/08	0.0	
November ..	0.292	41	58	31	1.22	8	4.45 1839	0.08 1922	2.96 12/60	0.0	
December ..	0.322	40	56	31	1.27	6	3.98 1861	Nil 1904	2.42 23/13	0.0	
Year { Totals ..	—	—	—	—	21.09	—	—	—	—	3.7	
{ Averages ..	0.308	54	—	—	—	—	—	—	—	—	
{ Extremes ..	—	87	29	—	—	—	8.58 6/1916	Nil (c)	5.57 7/2/25	—	

(a) Standard 30 years' normal (1911-1940). (b) Various years. (c) December to April, various years.
Dates in italics relate to nineteenth century.

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

Month	Bar. corrected to 32° F., mn. sea-level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 105 feet)								Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m., 9 p.m.(a)	No. of clear days		
		Average miles per hour	Highest mean speed in one day (miles per hour)		Prevailing direction	9 a.m.	3 p.m.	Mean amount of evaporation (inches)	No. of days of lightning					Mean amount of clouds, 9 a.m. to 3 p.m., 9 p.m.(a)	No. of clear days
			49	49												30(b)	30(b)
No. of years of observations	30(b)	30(b)	49	49	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)			
January	29.865	6.8	19.7	23/47	58	SE	NE	6.74	9.8	5.7	3.5				
February	29.912	7.0	23.2	21/54	67	SE	NE	5.49	6.5	5.6	2.4				
March	29.975	6.5	20.3	1/29	65	S	E	5.05	5.9	5.1	5.4				
April	30.035	5.9	16.7	3/25	64	S	E	4.05	5.0	4.3	7.8				
May	30.083	5.8	17.9	17/26	49	SW	W & SW	3.09	4.1	4.3	8.3				
June	30.091	5.7	19.0	14/28	59	SW	W & SW	2.45	2.9	4.4	9.2				
July	30.090	5.6	22.0	13/54	67	SW	W & SW	2.69	2.8	3.8	12.4				
August	30.105	5.8	14.8	4/35	62	SW	NE	3.51	3.8	3.1	13.1				
September	30.067	5.9	16.1	1/48	63	SW	NE	4.51	5.8	3.3	13.0				
October	30.019	6.3	15.7	1/41	62	S	NE	5.81	7.1	4.2	8.5				
November	29.958	6.7	15.5	10/28	69	SE & N	NE	6.32	9.5	4.9	5.9				
December	29.890	7.0	19.5	15/26	79	SE	NE	7.02	10.6	5.3	3.8				
Year { Totals	—	—	—	—	—	—	—	56.73	73.8	—	—				
Year { Averages	30.007	6.3	—	—	—	SW	NE	—	—	4.5	—				
Year { Extremes	—	—	23.2	21/2/54	79	—	—	—	—	—	—				

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

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine			
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass				
										77	77	50(b)	77
No. of years over which observation extends	30(a)	30(a)	30(a)	77	77	77	50(b)	77	30(a)			
January	85.5	69.1	77.3	109.8	26/40	51.0	169.0	2/37	49.9	4/93	7.6	
February	84.6	68.7	76.6	105.7	21/25	47.2	165.2	6/10	49.1	22/31	7.4	
March	82.3	66.2	74.3	99.4	5/19	47.0	162.5	6/39	45.4	29/13	7.0	
April	79.1	61.5	70.3	95.2	(c)	44.4	153.8	11/16	36.7	24/25	7.1	
May	73.7	55.6	64.7	90.3	21/23	40.6	147.0	1/10	29.8	8/97	6.6	
June	69.4	51.5	60.5	88.9	19/18	36.3	136.0	3/18	25.4	23/88	6.3	
July	68.6	49.4	59.0	84.3	23/46	36.1	146.1	20/15	23.9	11/90	6.8	
August	71.1	50.0	60.6	91.0	14/46	37.4	141.9	20/17	27.1	9/99	7.9	
September	75.5	54.8	65.1	100.9	22/43	40.7	155.5	26/03	30.4	1/89	8.2	
October	79.2	60.3	69.8	105.3	30/58	43.3	157.4	31/18	34.9	8/89	8.4	
November	82.3	64.6	73.4	106.1	18/13	48.5	162.3	7/89	38.8	1/05	8.2	
December	84.5	67.5	76.0	105.9	26/93	56.3	165.9	2/42	49.1	3/94	8.2	
Year { Averages	78.0	59.9	69.0	—	—	—	—	—	—	—	7.5	
Year { Extremes	—	—	—	109.8	26/1/40	36.1	(d)	73.7	169.0	2/1/37	23.9	11/7/1890

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

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.				Rainfall (inches)				Fog Mean No. of days of fog			
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day		
												30(a)	77
No. of years over which observation extends	30(a)	30(a)	77	77	30(a)	30(a)	112(b)	112(b)	112(b)	30(a)			
January	0.636	66	79	53	5.72	12	27.72	1895	0.32	1919	18.31	21/87	0.6
February	0.644	69	82	55	5.47	12	40.39	1893	0.58	1849	10.61	6/31	0.9
March	0.606	72	85	56	4.97	14	34.04	1870	Nil	1849	11.18	14/08	1.6
April	0.512	71	80	56	3.68	11	15.28	1867	0.04	1944	5.46	5/33	4.0
May	0.420	71	85	59	2.35	9	13.85	1876	Nil	1846	5.62	9/79	5.4
June	0.357	73	84	54	2.75	8	14.03	1873	Nil	1847	6.41	15/48	4.5
July	0.331	71	88	53	1.88	8	8.60	1950	Nil	1841	3.54	(c)	4.9
August	0.338	67	80	53	1.07	7	14.67	1879	Nil	(d)	4.89	12/87	5.9
September	0.396	62	76	47	1.69	7	5.43	1886	0.10	1907	2.46	2/94	2.8
October	0.459	59	72	48	2.27	8	11.41	1949	0.03	1948	5.34	25/49	1.6
November	0.533	61	73	45	4.00	10	12.40	1917	Nil	1842	4.46	16/86	0.7
December	0.589	62	70	51	4.24	11	17.36	1942	0.35	1865	6.60	28/71	0.4
Year { Totals	—	—	—	—	—	—	—	—	—	—	—	—	—
Year { Averages	0.485	67	—	—	40.09	117	—	—	—	—	—	—	33.3
Year { Extremes	—	—	88	45	—	—	40.39	2/1893	Nil	(e)	18.31	21/1/1887	—

(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 and 1880. (e) Various months in various years. Dates in italics relate to nineteenth century.

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

Month	Bar. corrected to 32° F., m.m. sea level and standard gravity from 9 a.m. and 3 p.m. readings	(Height of anemometer 58 feet)							Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m. (g)	No. of clear days		
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning					Mean amount of clouds, 9 a.m. to 3 p.m. (g)	No. of clear days
					9 a.m.	3 p.m.								
No. of years of observations ..	30(b)	26(c)	50	47	26(c)	26(c)	26(c)	30(d)	30(b)	30(b)				
January ..	29.875	8.9	24.9	2/22	93	S	ENE	5.71	4.8	5.7	4.8			
February ..	29.942	8.1	20.1	14/18	63	S	ENE	4.68	3.3	5.5	5.4			
March ..	30.009	7.5	20.7	10/44	58	W	ENE	4.05	2.8	5.3	5.8			
April ..	30.063	7.0	23.4	19/27	72	W	NE	2.91	2.4	5.0	7.0			
May ..	30.098	6.8	21.1	18/55	63	W	S	2.17	1.6	4.9	7.4			
June ..	30.078	7.1	22.4	10/47	84	W	W	1.61	1.5	4.8	8.3			
July ..	30.070	7.2	26.6	6/31	68	W	W	1.69	1.1	4.5	10.1			
August ..	30.060	7.4	24.6	9/51	68	W	NE	2.30	2.1	3.9	11.1			
September ..	30.018	8.0	22.3	19/17	70	W	NE	3.00	3.0	4.2	10.0			
October ..	29.976	8.2	24.5	1/57	95	W	ENE	4.17	3.9	4.9	7.4			
November ..	29.935	8.5	22.5	14/30	71	W & E	ENE	4.97	4.5	5.5	5.7			
December ..	29.881	8.9	25.0	10/20	75	S	ENE	5.64	5.4	5.8	4.8			
Year { Totals ..	—	—	—	—	—	—	—	—	—	—	—			
Year { Averages ..	30.000	7.8	—	—	—	W	—	42.90	36.4	—	87.8			
Year { Extremes ..	—	—	26.6	6/7/31	95	—	NE	—	—	5.0	—			

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) 1915-1940. (d) 1921-1950.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)			Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine			
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun		Lowest on grass					
									Extreme range				
No. of years over which observation extends ..	30(a)	30(a)	30(a)	105	105	105	84(c)	105	30(b)				
January ..	78.6	65.1	71.8	113.6	14/39	51.1	18/49	62.5	164.3	26/15	43.7	6/25	7.5
February ..	78.7	65.5	72.1	107.8	8/26	49.3	28/63	58.5	168.3	14/39	42.8	22/33	7.0
March ..	76.6	62.9	69.8	102.6	3/69	48.8	14/86	53.8	158.3	10/26	39.9	17/13	6.4
April ..	72.0	57.7	64.9	91.4	1/36	44.6	27/64	46.8	144.1	10/77	33.3	24/09	6.1
May ..	67.0	52.4	59.7	86.0	1/19	40.2	22/59	45.8	129.7	1/96	29.3	25/17	5.7
June ..	62.8	48.1	55.5	80.4	11/31	35.7	22/32	44.7	125.5	2/23	28.0	22/32	5.3
July ..	61.8	46.4	54.1	78.3	22/26	35.9	12/90	42.4	124.7	19/77	24.0	4/93	6.1
August ..	64.3	47.6	56.0	86.8	24/54	36.8	3/72	50.0	149.0	30/78	26.1	4/09	7.0
September ..	68.3	51.4	59.9	92.3	27/19	40.8	2/45	51.5	142.2	12/78	30.1	17/05	7.3
October ..	71.7	55.9	63.8	99.4	4/42	42.2	6/27	57.2	152.2	20/33	32.7	9/05	7.5
November ..	74.5	59.8	67.1	104.5	6/46	45.8	1/05	58.7	158.5	28/99	36.0	6/06	7.5
December ..	76.9	63.2	70.1	108.0	20/57	48.4	3/24	59.6	164.5	27/89	41.4	3/24	7.5
Year { Averages ..	71.1	56.3	63.7	—	—	—	—	—	—	—	—	—	6.7
Year { Extremes ..	—	—	—	113.6	14/1/39	35.7	22/6/32	77.9	168.3	14/2/39	24.0	4/7/1893	—

(a) Standard 30 years' normal (1911-1940). (b) 1921-1950 (different exposure prior to 1921). (c) Records discontinued 1946.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. of days of fog			
		Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
											Rainfall (inches)		
No. of years over which observation extends ..	30(a)	30(a)	88	88	30(a)	30(a)	105	105	105	43			
January ..	0.537	65	78	58	3.86	13	15.26	1911	0.25	1932	7.08	13/11	0.3
February ..	0.560	68	81	60	3.15	12	22.22	1956	0.12	1939	8.90	25/73	0.8
March ..	0.527	71	85	62	4.44	13	20.52	1942	0.42	1876	11.05	28/42	1.7
April ..	0.441	73	87	63	5.65	14	24.49	1861	0.06	1868	7.52	29/60	2.4
May ..	0.362	75	90	63	4.98	12	23.03	1919	0.14	1957	8.36	28/89	3.4
June ..	0.303	76	89	63	3.68	11	25.30	1950	0.16	1962	5.17	16/84	2.8
July ..	0.282	74	88	63	4.89	12	13.23	1950	0.10	1946	7.80	7/31	2.5
August ..	0.288	68	84	54	2.41	10	14.89	1899	0.04	1885	5.33	2/60	2.0
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	11.13	(b)	0.21	1867	6.37	13/02	0.6
November ..	0.433	60	79	42	2.54	11	20.36	1961	0.07	1915	5.24	27/55	0.5
December ..	0.501	63	77	51	3.63	13	15.82	1920	0.23	1913	4.75	13/10	0.4
Year { Totals ..	—	—	—	—	—	—	—	—	—	—	—	—	18.4
Year { Averages ..	0.411	68	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	90	42	—	—	25.30	6/1950	0.04	8/1885	11.05	28/3/42	—

(a) Standard 30 years' normal (1911-1940). (b) 1916 and 1959.

Dates in italics relate to nineteenth century.

CLIMATOLOGICAL DATA: CANBERRA, AUSTRALIAN CAPITAL TERRITORY

(LAT. 35° 18' S., LONG. 149° 6' E. HEIGHT ABOVE M.S.L., 1,906 FT.)

Barometer, Wind, Evaporation, Lightning, Clouds and Clear Days

Month	Bar. corrected to 17° F. min. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 20 feet)				Prevaling direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., and 3 p.m. (d)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevaling direction						
					9 a.m.	3 p.m.					
No. of years of observations..	26	27	34	25	27	27	28	20	26	27	
January ..	29.856	4.7	14.9	23/33	65	NW	NW	8.31	1.5	4.9	7.3
February ..	29.900	4.2	15.3	24/33	64	E	NW	6.42	2.3	5.1	6.3
March ..	30.009	3.7	18.2	28/42	52	E	NW	5.20	0.2	5.1	6.9
April ..	30.059	3.6	18.6	8/45	62	NW	NW	3.28	0.3	5.4	6.7
May ..	30.126	3.0	13.2	27/58	60	NW	NW	1.95	0.2	5.6	5.8
June ..	30.120	3.6	16.1	2/30	64	NW	NW	1.29	0.1	6.0	4.5
July ..	30.133	3.4	23.4	7/31	62	NW	NW	1.27	0.0	5.7	4.6
August ..	30.063	4.1	15.7	25/36	59	NW	NW	1.81	0.1	5.4	5.1
September ..	30.057	4.2	17.4	28/34	61	NW	NW	2.87	0.4	5.1	5.7
October ..	29.954	4.3	14.7	12/57	74	NW	NW	4.43	1.0	5.4	5.2
November ..	29.885	4.7	17.2	28/42	66	NW	NW	5.87	1.1	5.5	4.5
December ..	29.834	4.7	16.1	11/38	66	NW	NW	7.64	0.7	5.0	6.3
Year { Totals ..	30.000	4.0	—	—	—	NW	NW	50.34	7.9	—	68.9
Year { Averages ..	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	23.4	7/7/31	74	—	—	—	—	5.3	—

(a) Scale 0-10.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)			Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine			
	Mean max.	Mean min.	Mean	Highest	Lowest	Highest in sun		Lowest on grass					
									Extreme temperature (°Fahr.)				
No. of years over which observation extends..	30(a)	30(a)	30(a)	36	36	36	(b)	36	27				
January ..	82.5	55.9	69.3	107.4	11/39	38.0	1/56	69.4	—	30.1	10/50	8.4	
February ..	80.7	56.1	68.4	99.8	13/33	35.0	(c)	64.8	—	26.5	23/43	7.3	
March ..	76.2	52.6	64.4	89.7	6/38	34.8	31/49	64.3	—	26.4	26/35	7.2	
April ..	66.8	45.4	56.1	89.7	6/38	29.0	29/34	60.7	—	19.0	18/44	6.7	
May ..	59.3	38.9	49.1	72.6	1/36	22.5	(d)	50.1	—	15.6	(e)	5.2	
June ..	52.8	35.7	44.3	64.9	1/54	18.1	20/35	43.9	—	8.9	25/44	4.2	
July ..	51.8	33.7	42.7	63.5	16/34	20.0	(f)	43.5	—	10.8	9/37	4.8	
August ..	55.1	35.4	45.3	71.0	24/54	21.0	3/29	50.0	—	10.1	6/44	5.8	
September ..	65.1	38.9	50.1	81.5	16/34	25.2	6/46	56.3	—	13.0	6/45	7.2	
October ..	67.1	44.2	55.6	90.0	13/46	28.0	26/61	62.0	—	18.2	2/45	7.8	
November ..	73.0	48.7	60.9	101.4	19/44	32.2	11/36	69.2	—	22.9	6/56	8.2	
December ..	79.6	53.4	66.5	103.5	27/38	36.0	24/28	67.5	—	29.1	21/56	8.5	
Year { Averages ..	67.2	44.9	56.1	—	—	—	—	—	—	—	—	6.8	
Year { Extremes ..	—	—	—	107.4	11/1/39	18.1	20/6/35	89.3	—	—	8.9	25/6/44	—

(a) Thirty year period 1928-1957. (b) No record. (c) 22/1931 and 23/1931. (d) 9/1929 and 15/1957. (e) 13/1937 and 15/1946. (f) 19/1929, 9/1937 and 27/1943.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. of days of fog			
		Mean 9 a.m.	Mean	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly		Greatest in one day		
												Rainfall (inches)	
No. of years over which observation extends..	26	28	28	28	30(a)	30(a)	36	36	36	25			
January ..	0.370	53	69	39	2.09	7	6.69	1941	0.02	1932	3.22	30/58	0.1
February ..	0.388	59	71	40	2.15	7	6.03	1948	0.01	1933	3.24	17/28	0.2
March ..	0.378	66	82	48	2.43	7	12.69	1950	0.01	1940	2.72	1/61	1.0
April ..	0.315	71	81	54	2.12	8	5.19	1952	0.07	1942	2.52	9/45	1.4
May ..	0.254	79	89	67	2.00	7	6.13	1948	0.06	1935	3.88	3/48	4.8
June ..	0.212	81	90	72	1.89	9	6.09	1931	0.18	1944	2.32	25/56	5.8
July ..	0.196	81	91	73	1.63	10	5.08	1960	0.27	1940	2.02	13/33	5.3
August ..	0.213	75	88	60	1.98	11	4.71	1939	0.36	(b)	2.07	12/29	2.4
September ..	0.239	66	78	51	1.58	9	4.52	1960	0.13	1946	1.78	16/62	1.4
October ..	0.273	60	72	46	2.70	11	6.98	1959	0.34	1940	5.19	21/59	0.4
November ..	0.301	55	67	38	2.08	9	5.98	1961	0.28	1936	2.45	9/50	0.1
December ..	0.338	51	70	37	1.88	8	8.80	1947	0.16	1938	2.29	28/29	0.0
Year { Totals ..	0.290	66	—	—	24.53	103	—	—	—	—	—	—	22.9
Year { Averages ..	—	—	—	—	—	—	—	—	—	—	—	—	—
Year { Extremes ..	—	—	91	37	—	—	12.69	3/50	0.01	2/33, 3/40	5.19	21/10/59	—

(a) Thirty year period 1928-1957. (b) 1944 and 1949. All dates relate to twentieth century.

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

Month	Bar. corrected to 32° F. m.m. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 93 feet)				Prevailing direction		Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m. to 3 p.m., 9 p.m.(a)	No. of clear days
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations ..	30(b)	15(c)	51	54	30(b)	30(b)	30(b)	30(b)	30(b)	30(b)	
January ..	29.897	8.8	21.1	27/41	66	S & SW	S	6.55	1.8	4.9	6.8
February ..	29.950	8.4	19.0	13/47	74	N & S	S	5.10	2.3	4.8	6.4
March ..	30.025	7.8	18.0	3/61	66	S	S	4.26	1.8	5.3	5.5
April ..	30.092	7.1	19.9	16/43	67	NZZ	S	2.53	1.2	5.9	4.6
May ..	30.113	7.4	21.8	1/57	72	NZZ	NZZ	1.57	0.5	6.1	3.4
June ..	30.097	7.2	22.8	16/47	62	NZZ	NZZ	1.18	0.4	6.5	2.7
July ..	30.079	8.7	22.7	22/60	68	NZZ	NZZ	1.16	0.3	6.3	2.9
August ..	30.048	8.2	21.3	20/42	65	NZZ	NZZ	1.54	0.9	6.0	3.1
September ..	30.001	8.5	21.0	21/59	69	N & W	N & S	2.41	1.3	5.9	3.3
October ..	29.968	8.4	18.6	12/52	69	N	S	3.54	1.8	6.1	3.8
November ..	29.951	8.6	21.2	13/58	71	S & SW	S	4.62	2.3	6.0	3.6
December ..	29.896	8.7	21.0	11/52	61	S & SW	S	5.85	1.9	5.6	4.5
Year { Totals ..	—	—	—	—	—	—	—	40.31	16.5	—	50.6
Year { Averages ..	30.010	8.1	—	—	—	N	S	—	—	5.8	—
Year { Extremes ..	—	—	22.8	16/6/47	74	—	—	—	—	—	—

(a) Scale 0-10. (b) Standard 30 years' normal (1911-1940). (c) Early records not comparable.

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine				
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass					
										No. of years over which observation extends ..			
No. of years over which observation extends ..	30(a)	30(a)	30(a)	108	108	108	86(b)	104	35(c)				
January ..	77.7	56.9	67.3	114.1	13/39	42.0	28/85	72.1	178.5	14/62	30.2	28/85	7.8
February ..	78.6	58.0	68.3	109.5	7/01	40.2	24/24	69.3	167.5	15/70	30.9	6/91	7.4
March ..	74.9	55.2	65.1	107.0	11/40	37.1	17/84	69.9	164.5	1/68	28.9	(d)	6.5
April ..	67.9	50.8	59.3	94.8	5/38	34.8	24/88	60.0	152.0	8/61	25.0	23/97	5.0
May ..	62.0	46.9	54.5	83.7	7/05	29.9	29/116	53.8	142.6	2/59	21.1	26/16	4.1
June ..	56.8	43.8	50.3	72.3	2/57	28.0	11/66	44.3	129.0	11/61	19.9	30/29	3.4
July ..	56.2	42.6	49.4	69.3	22/26	27.0	21/69	42.3	125.8	27/80	20.5	12/03	3.7
August ..	58.7	43.7	51.2	77.0	20/85	28.3	11/63	48.7	137.4	29/69	21.3	14/02	4.6
September ..	63.3	46.0	54.7	88.6	28/28	31.0	3/40	57.6	142.1	20/67	22.8	8/18	5.5
October ..	67.9	48.7	58.3	98.4	24/14	32.1	3/71	66.3	154.3	28/68	24.8	22/18	5.8
November ..	71.3	51.8	61.5	105.7	27/94	36.5	2/96	69.2	159.6	29/65	24.6	2/96	6.2
December ..	75.4	55.3	65.3	110.7	15/76	40.0	4/70	70.7	170.3	20/69	33.2	1/04	7.0
Year { Averages ..	67.6	50.0	58.8	—	—	—	—	—	—	—	—	—	5.6
Year { Extremes ..	—	—	—	114.1	13/13/39	27.0	21/7/1869	87.1	178.5	14/1/1862	19.9	30/6/29	—

(a) Standard 30 years' normal (1911-1940). (b) Records discontinued, 1946. (c) 1916-1950. (d) 17/1884 and 20/1897.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog			
		Mean	Highest	Lowest	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
											No. of years over which observation extends ..		
No. of years over which observation extends ..	30(a)	30(a)	56	56	30(a)	30(a)	108	108	108	30(a)			
January ..	0.382	58	68	50	1.88	9	6.92	1963	0.01	1932	4.25	29/63	0.1
February ..	0.417	62	77	48	2.00	8	7.72	1939	0.03	1870	3.44	26/46	0.3
March ..	0.385	64	79	50	2.22	9	7.50	1911	0.14	1934	3.55	5/19	1.1
April ..	0.351	72	82	66	2.30	13	7.67	1960	Nil	1923	3.15	23/60	2.3
May ..	0.311	79	88	70	1.94	14	5.60	1942	0.14	1934	1.85	7/97	6.8
June ..	0.276	83	92	73	2.06	16	4.51	1859	0.61	1958	1.74	21/04	6.5
July ..	0.264	82	86	75	1.93	17	7.02	1891	0.57	1902	2.71	12/91	6.5
August ..	0.271	76	82	65	2.02	17	4.35	1939	0.48	1903	1.94	26/24	3.7
September ..	0.288	68	76	60	2.20	15	7.93	1916	0.52	1907	2.62	12/80	1.3
October ..	0.307	62	71	52	2.63	14	7.61	1869	0.29	1914	3.00	17/69	0.3
November ..	0.336	60	69	52	2.33	13	8.11	1954	0.25	1895	2.86	21/54	0.3
December ..	0.373	59	69	48	2.38	11	7.18	1863	0.11	1904	3.92	4/54	0.2
Year { Totals ..	—	—	—	—	25.89	156	—	—	—	—	—	—	29.4
Year { Averages ..	0.330	69	—	—	—	—	8.11	11/1954	Nil	4/1923	4.25	29/1/63	—
Year { Extremes ..	—	—	92	48	—	—	—	—	—	—	—	—	—

(a) Standard 30 years' normal (1911-1940). Dates in italics relate to nineteenth century.

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

Month	Bar. corrected to 30° F. m. sea level and standard gravity from 9 a.m. and 3 p.m. readings	Wind (Height of anemometer 40 feet)					Mean amount of evaporation (inches)	No. of days of lightning	Mean amount of clouds, 9 a.m., 3 p.m., 3 p.m.(d)	No. of clear days	
		Average miles per hour	Highest mean speed in one day (miles per hour)	Highest gust speed (miles per hour)	Prevailing direction						
					9 a.m.	3 p.m.					
No. of years of observations..	30(b)	30(b)	71	73	30(b)	30(b)	30(b)	30(b)	30(b)		
January ..	29.819	8.0	20.8	30/16	76	NNW	SSE	4.84	0.9	6.4	1.9
February ..	29.913	7.2	25.2	4/27	67	NNW	SSE	3.71	1.0	6.2	2.3
March ..	29.961	6.8	21.4	13/38	79	NW	SSE	3.10	1.2	6.1	2.4
April ..	29.997	6.7	24.1	9/52	74	NW	W	1.98	0.7	6.5	1.7
May ..	30.009	6.3	20.2	20/36	84	NNW	NW	1.37	0.4	6.1	2.4
June ..	29.986	6.2	23.7	27/20	75	NW	NW	0.91	0.4	6.2	2.4
July ..	29.958	6.5	22.9	22/53	80	NNW	NNW	0.94	0.3	6.1	2.0
August ..	29.906	6.8	25.5	19/26	87	NNW	NW	1.28	0.4	6.1	2.1
September ..	29.860	7.9	21.5	26/15	84	NNW	NW	1.97	0.7	6.3	1.5
October ..	29.833	8.2	19.2	8/12	74	NNW	SW	3.05	0.6	6.6	1.0
November ..	29.831	7.9	21.2	18/15	84	NNW	S	3.77	0.7	6.4	1.3
December ..	29.816	7.6	23.4	1/34	70	NNW	SSE	4.37	0.5	6.8	1.1
Year { Totals	—	—	—	—	—	—	—	31.29	7.8	—	—
Year { Averages	29.907	7.2	—	—	—	NNW	W	—	—	6.3	—
Year { Extremes	—	—	25.5	19/8/26	87	—	—	—	—	—	—

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

Temperature and Sunshine

Month	Mean temperature (°Fahr.)			Extreme shade temperature (°Fahr.)		Extreme range	Extreme temperature (°Fahr.)		Mean daily hours of sunshine	
	Mean max.	Mean min.	Mean	Highest	Lowest		Highest in sun	Lowest on grass		
										No. of years over which observation extends..
No. of years over which observation extends..	30(a)	30(a)	30(a)	94(b)	94(b)	94(b)	57(c)	76(b)	30(i)	
January ..	69.8	52.4	61.0	105.0	<i>d</i>	40.1	64.9	160.0	<i>f</i>	7.7
February ..	70.6	53.7	62.2	104.4	<i>12/99</i>	39.0	20/87	165.0	<i>24/98</i>	7.1
March ..	67.5	51.3	59.4	99.1	13/40	35.2	31/26	150.9	<i>26/44</i>	6.4
April ..	62.2	48.0	55.1	87.1	1/41	33.2	14/63	142.0	<i>18/93</i>	5.0
May ..	57.8	44.6	51.2	77.8	5/21	29.2	20/02	128.0	<i>g</i>	4.4
June ..	52.8	41.2	47.0	69.2	1/07	29.2	28/44	122.0	<i>12/94</i>	4.0
July ..	52.7	40.6	46.6	66.1	14/34	27.7	11/95	121.0	<i>12/93</i>	4.4
August ..	55.4	41.7	48.7	71.6	28/14	28.9	9/51	129.0	—/87	5.1
September ..	59.0	43.7	51.4	81.7	23/26	31.0	16/97	138.0	<i>23/93</i>	5.9
October ..	62.5	46.1	54.3	92.0	24/14	32.0	12/89	156.0	9/93	6.1
November ..	65.0	48.2	56.6	98.3	26/37	35.0	16/41	154.0	<i>19/92</i>	7.2
December ..	67.9	51.3	59.6	105.2	<i>30/97</i>	38.0	3/06	161.5	10/39	7.4
Year { Averages	61.9	46.9	54.4	—	—	—	—	—	—	5.9
Year { Extremes	—	—	—	105.2	<i>30/12/1897</i>	27.7	<i>11/7/1895</i>	165.0	<i>24/2/1898</i>	—

(a) Standard 30 years' normal (1911-1940). (b) Records 1855-1882 not comparable. (c) Period 1934-1938 not comparable; records discontinued, 1946. (d) 1/1900 and 19/1959. (e) 9/1937 and 11/1937. (f) 5/1886 and 13/1905. (g) —/1899 and —/1893. (h) 1/1886 and —/1899. (i) 1921-1950.

Humidity, Rainfall and Fog

Month	Vapour pressure (inches)	Rel. hum. (%) at 9 a.m.			Rainfall (inches)					Fog Mean No. of days of fog			
		Mean 9 a.m.	Highest mean	Lowest mean	Mean monthly	Mean No. of days of rain	Greatest monthly	Least monthly	Greatest in one day				
											No. of years over which observation extends..		
No. of years over which observation extends..	30(a)	55	70	70	30(a)	30(a)	81(b)	81(b)	81(b)	30(c)			
January ..	0.309	59	72	46	1.82	13	5.91	1893	0.17	<i>d</i>	2.96	30/16	0.0
February ..	0.342	63	77	48	1.68	10	5.15	1954	0.11	1914	2.20	1/54	0.0
March ..	0.323	67	77	52	2.13	13	10.05	1946	0.29	1943	3.47	17/46	0.3
April ..	0.290	72	84	58	2.31	14	9.77	1960	0.07	1904	5.25	23/60	0.2
May ..	0.263	78	89	65	1.71	14	8.43	1958	0.14	1913	1.75	2/93	0.9
June ..	0.233	80	91	68	2.25	16	9.38	1954	0.28	1886	5.80	7/54	0.8
July ..	0.227	80	94	72	2.14	17	6.02	1922	0.17	1950	2.51	18/22	1.0
August ..	0.232	76	92	60	1.82	18	6.32	1946	0.30	1892	2.28	14/90	0.4
September ..	0.240	67	85	58	1.90	17	7.93	1957	0.38	1951	6.15	15/57	0.1
October ..	0.258	63	73	51	2.52	18	7.60	1947	0.39	1914	2.58	4/06	0.0
November ..	0.274	60	72	50	2.23	16	7.39	1885	0.33	1921	3.70	30/85	0.1
December ..	0.306	58	67	45	2.52	14	7.72	1916	0.17	1931	3.33	5/41	0.0
Year { Totals	—	—	—	—	—	—	—	—	—	—	—	—	—
Year { Averages	0.275	69	—	—	25.03	180	—	—	—	—	—	—	3.8
Year { Extremes	—	—	94	45	—	—	10.05	3/1946	0.07	4/1904	6.15	15/9/57	—

(a) Standard 30 years' normal (1911-1940). (b) Records prior to 1883 not comparable. (c) 1922-1951. (d) 1915 and 1958.

Dates in italics relate to nineteenth century.

10. Rainfall and Temperatures, Various Cities.—Year Book No. 34, page 28, shows rainfall and temperature, and No. 38, page 42, temperature, for various important cities throughout the world and for the Australian capitals.

11. Climatological Data for Selected Australian Country Towns.—The following table shows some of the more important climatological data for selected Australian country towns.

CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS

Town	Rainfall		Temperature				Relative humidity			
	Average annual rainfall	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)	Average index of mean relative humidity,* January	Average index of mean relative humidity,* July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
WESTERN AUSTRALIA										
Albany	39.67	172	73.8	60.9	58.5	46.3	73	76	65	70
Broome	22.87	38	91.3	81.8	79.2	57.0	75	52	67	43
Bunbury	33.22	125	82.1	62.5	59.1	47.1	66	78	57	71
Carnarvon ..	9.01	35	87.2	71.7	72.1	51.6	64	66	61	57
Esperance ..	26.73	124	76.6	62.1	59.9	45.4	70	77	63	65
Geraldton ..	18.58	80	84.5	67.7	66.3	51.7	61	68	60	60
Kalgoorlie ..	9.46	62	93.2	62.5	64.2	42.9	43	66	27	50
Meekatharra ..	9.17	36	100.4	67.5	73.1	44.0	31	59	21	44
Narrogin .. .	21.38	108	87.3	57.9	56.3	41.3	..	..	..	..
Port Hedland ..	11.01	20	94.3	79.3	79.4	55.6	67	49	63	47
Wyndham .. .	25.15	55	95.9	85.0	80.2	66.2	66	38	54	35
NORTHERN TERRITORY										
Alice Springs ..	9.93	31	95.3	66.9	69.8	38.9	33	49	26	32
Tennant Creek ..	13.85	30	98.5	75.4	75.9	51.1	41	36	27	25
SOUTH AUSTRALIA										
Ceduna	10.50	68	81.5	62.6	58.8	43.8	..	..	..	..
Mount Gambier ..	26.86	192	74.2	56.2	53.5	42.4	65	79	50	69
Oodnadatta .. .	4.44	20	99.0	66.4	72.1	42.7	27	49	17	34
Port Augusta .. .	9.28	62	89.5	62.8	65.3	43.9	50	66	33	52
Port Lincoln .. .	18.24	119	77.4	60.2	58.5	46.4	64	76	53	70
Port Pirie .. .	12.99	78	89.2	61.7	62.6	45.4	51	72	..	..
QUEENSLAND										
Atherton	53.99	116	83.8	70.9	65.0	50.0	78	79	..	..
Bundaberg .. .	42.37	84	86.1	71.6	69.7	49.2	74	72	63	55
Cairns	86.35	140	89.7	78.1	74.2	61.0	77	74	69	63
Charleville .. .	17.97	49	97.6	68.3	70.8	40.1	44	61	28	39
Charters Towers ..	23.26	59	92.9	76.0	71.3	51.6	65	64	46	47
Cloncurry .. .	16.89	35	98.7	76.4	76.5	51.5	40	40	30	27
Ipswich	28.97	76	90.4	70.0	67.8	43.8	65	65	..	..
Longreach .. .	15.54	37	99.6	73.2	73.3	44.3	49	56	29	35
Mackay	63.16	116	86.2	71.0	73.6	53.4	80	77	..	..
Maryborough .. .	45.43	122	87.9	71.5	68.8	47.6	73	74	..	..
Normanton .. .	37.56	56	94.3	84.0	77.0	58.6	70	48	52	34
Rockhampton .. .	37.36	93	90.3	73.7	72.3	51.2	68	65	55	45
Roma	20.43	52	94.4	67.4	68.3	39.3	51	64	32	40
Toowoomba .. .	35.19	105	82.7	61.1	61.2	40.7	73	79	..	..
Townsville .. .	43.06	75	87.3	76.0	76.2	59.8	75	64	69	59

* For footnote see next page.

CLIMATOLOGICAL DATA FOR SELECTED AUSTRALIAN COUNTRY TOWNS—continued

Town	Rainfall		Temperature				Relative humidity			
	Average annual rainfall	Average number of wet days	Mean maximum, January (°F.)	Mean maximum, July (°F.)	Mean minimum, January (°F.)	Mean minimum, July (°F.)	Average index of mean relative humidity,* January	Average index of mean relative humidity,* July	Mean 3 p.m., January (%)	Mean 3 p.m., July (%)
NEW SOUTH WALES										
Albury	27.66	99	89.9	56.4	59.8	38.2	47	74	29	64
Armidale	28.98	107	80.8	54.0	56.5	33.8	60	61	44	57
Bega	35.92	80	81.2	62.9	57.3	34.5	72	70	..	..
Bourke	11.74	44	98.0	63.8	69.3	40.8	37	64	24	48
Broken Hill	9.20	46	90.5	59.5	64.5	41.2	36	67	24	49
Cooma	18.85	88	78.8	50.4	52.2	30.2	55	67	38	56
Dubbo	20.91	72	92.1	59.7	63.8	37.5	48	74	32	56
Goulburn	24.27	112	81.5	52.4	56.2	35.8	59	74	43	67
Grafton	34.68	105	89.1	70.6	67.2	43.9	..	..	..	..
Katoomba	53.17	126	73.9	48.4	54.6	36.7	61	71	54	68
Leeton	15.76	78	88.9	56.8	63.2	38.9	44	76	..	..
Moree	21.43	56	96.0	64.8	67.4	39.0	..	..	..	..
Newcastle	41.36	132	77.7	61.4	66.6	47.7	74	70	69	61
Orange	31.52	95	83.9	51.6	53.7	31.4	..	..	..	..
Tamworth	24.41	..	91.0	60.4	63.4	36.8	..	..	..	..
Taree	47.48	110	83.9	64.5	62.0	42.7	..	..	..	..
Wagga	21.42	86	89.8	57.1	61.5	37.8	50	77	31	65
Wollongong	44.04	112	78.4	61.7	62.6	47.1	78	71	..	..
VICTORIA										
Ballarat	27.38	170	75.7	49.8	50.5	38.4	60	81	41	75
Bendigo	20.27	111	83.0	54.2	56.5	39.4	47	75	30	64
Geelong	21.32	133	76.2	56.5	55.4	42.0	65	81	52	70
Horsham	17.57	104	85.1	56.0	55.2	38.8	50	77	33	67
Mildura	10.37	61	89.8	59.5	61.0	40.5	48	71	..	..
Sale	23.70	128	77.5	56.8	54.4	38.6	65	79	51	68
Seymour	22.17	94	84.7	55.2	54.6	37.4	56	79	..	..
Shepparton	19.94	103	86.3	55.7	58.8	39.3	49	77	32	63
Wangaratta	25.57	104	86.7	55.2	58.5	38.1	41	75	26	66
Warrnambool	25.79	153	69.9	55.6	54.7	43.6	73	83	69	77
TASMANIA										
Burnie	38.99	170	67.6	53.7	51.9	41.7	70	82	65	74
Launceston	28.56	149	75.8	53.7	52.1	36.9	60	77	..	..
Zeehan	94.06	246	66.3	51.6	48.0	38.2	73	81	61	74

* NOTE.—The average index of mean relative humidity has been derived from the ratio of the average 9 a.m. vapour pressure to the saturation vapour pressure at the average mean temperature of the month. Being thus related to the mean temperature this value of relative humidity is a good approximation to the daily mean.

12. The Weather of 1964 (December, 1963 to November, 1964).—The following is a brief summary of weather experienced during the four seasons ended in November, 1964. A map showing the rainfall distribution for 1964 is to be found on page 34.

In the summer of 1963-64 temperatures were close to normal over most of the continent, but rainfall over most areas was less than 80 per cent. of the normal amount. The incidence of bush and grass fires was less than had been feared, and not many large fires occurred. Cyclone *Audrey* caused heavy rainfall and flooding in south-west Queensland and northern New South Wales, and wind damage to towns and station properties along its path between Windorah and Goondiwindi. Cyclone *Dora* caused further flooding and damage in the Gulf Country of Queensland, and *Bessie* produced torrential rain in the Kimberleys in Western Australia. The pastoral and agricultural conditions in Australia at the end of summer were, in general, reasonably good apart from a wide belt of the Northern Territory and western Queensland where conditions were poor and bordering in some areas on drought.

Autumn in 1964 was generally warmer than average throughout Australia with rainfall not markedly different from normal over most of the continent. Cyclone *Katie* brought excellent rains to parts of coastal Western Australia, but in western Queensland, central Australia, and the Finke district of South Australia the drought conditions had worsened. Pastoral and agricultural conditions were, however, good in most parts of the continent. A very large sugar crop was harvested in North Queensland and a record apple crop reported from Tasmania. Large bush fires in March caused damage in southern New South Wales and in Victoria, and widespread dust storms occurred in the Mallee on several days during the season. Northern coastal streams in New South Wales were flooded in early March and flash flooding occurred elsewhere in that State during the season. The first substantial snow of the year fell in the Snowy Mountains late in March.

In winter, 1964, conditions were warmer than normal over almost the whole continent and much higher than normal rainfall was recorded over most of the south-western and south-eastern parts of Australia.

In many parts of Victoria it was the wettest winter since 1955. However, the drought conditions in the interior of Queensland, South Australia, and the Northern Territory continued, though with some relief in parts of Queensland. By contrast, rain and wind caused some damage to citrus, vegetable and grain crops in Victoria, South Australia, and Tasmania, and there were heavy falls of snow on the Southern Alps and in Tasmania. From 9th to 13th June, disastrous flooding occurred on the Hawkesbury-Nepean and the Hunter rivers in New South Wales and on 12th and 13th July, Launceston and north-east Tasmania experienced the worst flooding since 1929. Winter flooding also occurred in the south-west of Western Australia and Victoria. Little bushfire damage occurred in Queensland and northern New South Wales.

Days in spring, 1964 were cooler than normal over most of the continent, and extensive and valuable rainfall over the greater part of Australia was the feature of the season, particularly in the eastern half where many areas recorded rainfall considerably in excess of normal. The rains relieved conditions to a large extent in many areas of the Northern Territory and Queensland, while in western New South Wales it was considered to have

been the best season for many years. However, dry conditions still continued in the north of Western Australia and in parts of the Northern Territory. Although rust appeared in some crops, an excellent wheat crop was harvested in all States and barley and oat crops were also good. Flooding occurred in many parts of Victoria in September and mid-October. A violent squall on Port Phillip resulted in the loss of three lives in boating disasters on September 22nd and extensive wind damage occurred at Healesville (Victoria) on November 30th.

CHAPTER III

GENERAL GOVERNMENT

§ 1. Scheme of Parliamentary Government

1. **General.**—Under Section 1 of the Commonwealth of Australia Constitution, 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 in detail of the manner in which his duties are to be fulfilled. The Legislature in each State was bi-cameral until 1922, when the Queensland Upper House was abolished and the Parliament became uni-cameral. In the bi-cameral Parliaments, the Upper House is known in the Commonwealth Parliament as the Senate, and in the State Parliaments as the Legislative Council, while the Lower House is known in the Commonwealth Parliament as the House of Representatives, in the State Parliaments of New South Wales, Victoria and Western Australia as the Legislative Assembly, and in the State Parliaments of South Australia and Tasmania as the House of Assembly. In Queensland, the Legislative Assembly constitutes the legislature. The legislative powers of the Parliaments are delimited by the Commonwealth and State Constitutions. The Assembly, which is the larger House, 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, formerly, some property or special qualification for the electorate being required. In Victoria, however, under the *Legislative Council Reform Act 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, extending to adult British subjects who have lived in Australia for six months continuously.

For further information on each State Parliament and the qualifications for members and for electors see *Year Book No. 50, pages 69–72, and earlier issues.*

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.* Following a conference of Prime Ministers and other representatives of the British Commonwealth in London in December, 1952, the passing of the *Royal Style and Titles Act 1953* gave 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."

3. **Powers and Functions of the Governor-General and of the State Governors.**—

(i) *Governor-General of the Commonwealth.* As the Queen's representative in Australia, the Governor-General exercises certain prerogative powers and functions assigned to him by the Queen. Other powers and functions are conferred on the Governor-General by the Constitution. Powers which have been so assigned or conferred include, among others, the power to grant pardons and to remit fines for offences against the laws of the Commonwealth; to appoint certain officers in the Diplomatic or Consular Service of the Commonwealth; to appoint times for holding the sessions of the Parliament, prorogue Parliament and dissolve the House of Representatives; to cause writs to be issued for general elections of members of the House of Representatives; to assent in the Queen's name to a proposed law passed by both Houses of the Parliament or withhold assent, or to reserve the law for the Queen's pleasure, or to return the proposed law to the House in which it originated and transmit therewith any amendments which he may recommend; to exercise the executive power of the Commonwealth; to choose and summon Executive Councillors, who hold

* And in Western Australia under the *Constitution Acts Amendment Act (No. 2), 1963.*

office during his pleasure; to appoint Ministers of State for the Commonwealth. In addition, the command in chief of the naval and military forces of the Commonwealth is vested in the Governor-General, as the Queen's representative.

Most Acts of the Commonwealth Parliament provide that the Governor-General may make regulations to give effect to the Act. The Governor-General may also be authorized by statute to issue proclamations—for example, to declare an Act in force or a state of things to exist, e.g. the existence of an epidemic. He has been given power by statute to legislate for certain Territories of the Commonwealth.

Under the conventions of responsible government obtaining in British Commonwealth countries, the Governor-General's functions are exercised generally on the advice of Ministers of State.

(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 the present State Governors, see § 3, page 74.

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 through 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 other Ministers* of non-Cabinet rank who attend meetings of the Cabinet only when

* Thirteen, as from 4th March, 1964.

required, as, for example, when the business of the Cabinet concerns their departments. 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 must be 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. 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.

(v) *Ministers in Upper and Lower Houses.* The following table shows the distribution of Ministers in the Houses of each Parliament in December, 1964.

AUSTRALIAN PARLIAMENTS: MINISTERS IN UPPER OR LOWER HOUSES, DECEMBER, 1964

Ministers with seats in—	C'wealth (a)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
The Upper House ..	5	2	5	(b) 13	3	2	1	17
The Lower House ..	20	14	9	13	5	8	8	75
Total ..	25	16	14	13	8	10	9	92

(a) By the *Ministers of State Act 1964*, the number of Ministers was increased to 25, of whom 5 were senators, as from 4th March, 1964. (b) Abolished in 1922.

For the names of the occupants of ministerial office in each of the Parliaments of Australia in December, 1964, see § 3 of this chapter, pages 76–9. Subsequent changes 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, the number and salaries have been increased from time to time, and from 1964 the annual sum payable for salaries has been fixed at £95,650 and the number of Ministers at 25. An additional ministerial allowance of £4,000 a year has been payable to the Prime Minister since 1964, and an additional ministerial allowance of £1,800 a year for senior Ministers and £1,500 a year for junior Ministers.

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

5. Number and Salary of Members of the Legislatures, Australian Parliaments, December, 1964.—The following table shows the number and annual salary of members in each of the legislative chambers in December, 1964.

**AUSTRALIAN PARLIAMENTS: MEMBERS AND ANNUAL SALARIES,
31st DECEMBER, 1964**

Members in—	C'wealth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
NUMBER OF MEMBERS								
Upper House ..	60	60	34	(a)	20	30	19	223
Lower House ..	124	94	66	78	39	50	35	486
Total ..	184	154	100	78	59	80	54	709
ANNUAL SALARY (£)								
Upper House ..	(b)3,500	750	(c)2,800	(a)	(d)2,500	(e)2,520	(f)2,300	..
Lower House ..	(b)3,500	(g)2,650	(c)2,800	(h)2,650	(d)2,500	(e)2,520	(f)2,300	..

(a) Abolished in 1922. (b) Plus expense allowances—Senators, £1,050; Members of the House of Representatives, city electorates, £1,100, country electorates, £1,300. Certain additional allowances are also provided for holders of parliamentary offices, etc. (c) Plus allowances from £850 for metropolitan to £1,050 for urban, £1,150 for inner country, and £1,200 for outer country electorates. (d) Plus allowance of £600 where electorate is less than 50 miles from Adelaide or if a Minister; £800 if more than 50 miles, £950 if more than 200 miles. (e) Plus expense reimbursement ranging from £600 for a Metropolitan member to £950 for a North Province member. (f) Plus allowance according to area of electorate and distance from the capital varying from £300 to £550 in the case of the Legislative Council, and from £550 to £925 in the case of the House of Assembly. (g) Plus allowance varying from £750 to £1,050 according to location of electorate. (h) Plus individual electoral allowances ranging from £600 to £1,525.

6. Enactments of the Parliaments.—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. Generally, assent to Bills passed by the legislatures is given by the Governor-General or State Governor acting on behalf of, and in the name of, the Sovereign. In certain special cases, Bills are reserved for the Royal assent. The 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) *The Parliament of the Commonwealth of Australia.* A special article describing the Commonwealth Parliament, its functions and procedure, prepared by the Clerk of the Senate and the Clerk of the House of Representatives, appears in Year Book No. 49, pages 65–71.

(ii) *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 disqualified on other grounds, who has lived in Australia for six months continuously. Residence in a subdivision for a period of one month prior to enrolment is necessary to enable a qualified person to enrol. Enrolment and voting are compulsory except that the compulsory enrolment provisions do not relate to an Aboriginal native of Australia. 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 persons who are holders of temporary entry permits under the *Migration Act* 1958 or are prohibited immigrants under that Act, are excluded from the franchise. In the main, these or similar grounds for disqualification apply also to State Parliament membership and franchise.

(iii) *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 passed the *Representation Act* 1948 which provided that there should be ten Senators from each State instead of six, increasing the total to 60 Senators, thus enlarging both Houses of Parliament and providing a representation ratio nearer to the proportion which existed at Federation.

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, 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 subdivisions, 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 10th 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 the States into electoral divisions was effected by Distribution Commissioners appointed for each State.

The population as disclosed by the Census taken on 30th June, 1961, revealed that, under the provisions of the Representation Act, New South Wales, Queensland, and Western Australia would each lose one member in the House of Representatives, while Victoria would gain a member. The Distribution Commissioners' reports were duly laid before both Houses of Parliament, but the Government decided not to proceed with the proposals and announced that it would amend the Representation Act. In November, 1964, the formula provided by Section 10 of the Representation Act for determining the number of members of the House of Representatives was amended so as to give a State an additional member for "any portion of a quota". The effect of this amendment will be that at the next redistribution (based on the population as at the 1961 Census), Victoria and South Australia will each gain one member, i.e. to 34 and 12 members respectively, while all other States will retain their existing representation, namely, New South Wales 46, Queensland 18, Western Australia 9, and Tasmania 5.

Since the general election 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 any proposed law which relates solely to the respective Territories, on a motion for the disallowance of any ordinance of the Territory or on any amendment to such motion, or on a motion for the disallowance of a regulation under an ordinance. 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. As from the date of establishment of the Legislative Council, power to disallow ordinances was vested in the Governor-General in Council. In certain cases, ordinances passed must be reserved for the pleasure of the Governor-General.

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 purpose 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 Year Book.

There have been twenty-four complete Parliaments since Federation. Until 1927, the Parliament met in Melbourne; it now meets in 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 *Commonwealth Electoral Act 1948*, introduced with the *Representation Act 1948* to enlarge the Commonwealth Parliament (*see p. 71*), changed the system of scrutiny and counting of votes in Senate elections from the alternative vote to that of proportional representation. For a description of the system, *see Year Book No. 38*, pages 82-3. The system of voting for both the Senate and the House of Representatives is preferential.

The twenty-fourth Parliament opened on 20th February, 1962, and was dissolved on 1st November, 1963. Elections for the House of Representatives were held on 30th November, 1963. An election was also held on the same date to fill a single casual vacancy in the Senate for the State of Queensland. Particulars of electors and voting are given on page 68 of Year Book No. 49. For particulars of electors enrolled and of electors who voted in the several States and Territories at previous Commonwealth elections, *see Year Book No. 48* and earlier issues. Particulars of electors and voting at the Senate Election which was held on 5th December, 1964, may be found in the Appendix to this volume.

The state of the parties in each House at the end of 1964 was:—*Senate*—Liberal Party, 25; Country Party, 6; Australian Labour Party, 27; Australian Democratic Labour Party, 1; Independent, 1. *House of Representatives*—Liberal Party, 52; Country Party, 20; Australian Labour Party, 52 (including Northern Territory and Australian Capital Territory members with restricted voting rights).

The twenty-fifth Parliament opened on 25th February, 1964.

(iv) *Commonwealth Referendums*. According to Section 128 of the Constitution, any proposed law for the alteration of the Constitution, in addition to being passed by an absolute majority of each House of Parliament, must be submitted to a referendum of the electors in each State, and must be approved also by a majority of the States and of the electors who voted, before it can be presented for Royal Assent. So far, 24 such proposals have been submitted to referendums and the consent of the electors has been received in four cases, 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 referendums and the voting thereon were given in previous issues of the Year Book (*see List of Special Articles preceding General Index to this volume*), and a brief summary was given in Year Book No. 41 (pp. 67-70).

2. *State Elections*.—(i) *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, Western Australia and Tasmania. 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

State	Year of latest election	Electors enrolled—whole State			Contested electorates					
					Electors who voted			Percentage of electors who voted		
		Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
Victoria	1964	800,620	834,691	1,635,311	758,124	785,654	1,543,778	94.69	94.13	94.40
South Australia ..	1962	(a)	(a)	b118,218	(a)	(a)	98,786	(a)	(a)	83.56
Western Australia	1962	b117,858	b49,354	b167,212	31,707	14,307	46,014	42.11	40.71	41.66
Tasmania	1964	b4,137	b4,733	b8,870	3,444	3,913	7,357	83.25	82.67	82.94

(a) Not available. (b) Total electors enrolled in contested divisions.

(ii) 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

State	Year of latest election	Electors enrolled—whole State			Contested electorates					
					Electors who voted			Percentage of electors who voted		
		Males	Fe-males	Total	Males	Fe-males	Total	Males	Fe-males	Total
New South Wales	1962	1060,658	1113,110	2,173,768	960,514	996,894	1,957,408	94.38	93.52	93.94
Victoria	1964	800,620	834,691	1,635,311	758,124	785,654	1,543,778	94.69	94.13	94.40
Queensland	1963	416,507	422,816	839,323	388,773	394,261	783,034	94.53	94.06	94.29
South Australia ..	1962	(a)	(a)	b444,197	(a)	(a)	417,462	(a)	(a)	93.98
Western Australia	1962	189,517	192,288	381,805	146,788	150,732	297,520	93.26	92.93	93.09
Tasmania	1964	96,111	97,307	193,418	91,747	92,824	184,571	95.46	95.39	95.43

(a) Not available. (b) Total electors in contested districts.

Official Year Book No. 50 and earlier issues contain particulars of the voting at elections for both Upper and Lower State Houses in years prior to those shown above.

3. The Parliaments of the States.—Pages 67 and 70 of this chapter contain summarized information on the Parliaments of each State, the qualifications for members, the numbers of Houses and members and salaries payable. For greater detail, including some historical material, reference should be made to Year Book No. 50, pages 69–72, and to earlier issues.

4. The Parliament of Western Australia.—The *Constitution Acts Amendment Act (No. 2)*, 1963, which came into operation on the 26th March, 1964, provides for the division of the State into fifteen Electoral Provinces each returning two members of the Legislative Council, instead of ten provinces each returning three members as was formerly the case. The term of office of a member will continue to be six years, with half the members retiring every three years.

The Act provided also for the qualifications for election as a member of the Legislative Council to be identical with those for election as a member of the Legislative Assembly, and for the qualifications required for Council franchise to be those prescribed for electors of members of the Legislative Assembly.

§ 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	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	16th September, 1929
Twelfth	20th November, 1929	27th November, 1931
Thirteenth	17th February, 1932	7th August, 1934
Fourteenth	23rd October, 1934	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)
Twentieth	12th June, 1951	21st April, 1954
Twenty-first	4th August, 1954	4th November, 1955
Twenty-second	15th February, 1956	14th October, 1958
Twenty-third	17th February, 1959	2nd November, 1961
Twenty-fourth	20th February, 1962	1st November, 1963
Twenty-fifth	25th February, 1964	

(a) A dissolution of both the Senate and the House of Representatives was granted by the Governor-General, acting on the advice of the Cabinet 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), P.C., K.T., G.C.M.G., G.C.V.O. From 1st January, 1901, to 9th January, 1903.
- Rt. Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 17th July, 1902, to 9th January, 1903, (Acting).
- Rt. Hon. HALLAM, BARON TENNYSON, P.C., G.C.M.G. From 9th January, 1903, to 21st January, 1904.
- Rt. Hon. HENRY STAFFORD, BARON NORTHCOTE, P.C., 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, P.C., G.C.B., G.C.M.G., G.C.V.O. From 9th September, 1908, to 31st July, 1911.
- Rt. Hon. THOMAS, BARON DENMAN, P.C., G.C.M.G., K.C.V.O. From 31st July, 1911, to 18th May 1914.
- 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, P.C., G.C.M.G. From 6th October, 1920, to 8th October, 1925.
- Rt. Hon. JOHN LAWRENCE, BARON STONEHAVEN, P.C., G.C.M.G., D.S.O. From 8th October, 1925, to 22nd January, 1931.
- Rt. Hon. SIR ISAAC ALFRED ISAACS, P.C., G.C.B., G.C.M.G., K.C. From 22nd January, 1931, to 23rd January, 1936.
- General the Rt. Hon. ALEXANDER GORE ARKWRIGHT, BARON GOWRIE, V.C., P.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., Q.C. From 11th March, 1947, to 8th May, 1953.
- Field-Marshal SIR WILLIAM JOSEPH SLIM (afterwards VISCOUNT SLIM OF YARRALUMLA), K.G., 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, to 2nd February, 1960.
- Rt. Hon. WILLIAM SHEPHERD, VISCOUNT DUNROSSIL, P.C., G.C.M.G., M.C., K.St.J., Q.C. From 2nd February, 1960, to 3rd February, 1961.
- Rt. Hon. WILLIAM PHILIP, VISCOUNT DE L'ISLE, V.C., P.C., G.C.M.G., G.C.V.O., K.St.J. From 3rd August, 1961.

(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. Administrators are appointed in the event of the death, illness or absence from Australia of the Governor-General, or for the period between the departure of a Governor-General and the arrival of his successor. 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; 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; 30th July, 1956, to 22nd October, 1956
General Sir Reginald Alexander Dallas Brooks, K.C.B., G.C.M.G., K.C.V.O., D.S.O. K.St.J.	8th January, 1959, to 16th January, 1959; 3rd February, 1961, to 3rd August, 1961; 5th June, 1962, to 4th October, 1962; 21st November, 1962, to 19th December, 1962
General Sir Eric Winslow Woodward, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O.	16th June, 1964, to 30th August, 1964

(iii) *Commonwealth Ministries.* (a) *Names and Tenure of Office, 1901 to 1964.* 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.
- (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.

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

COMMONWEALTH MINISTRIES—*continued*

- (xxix) MENZIES MINISTRY, 19th December, 1949, to 11th May, 1951.
 (xxx) MENZIES MINISTRY, 11th May, 1951, to 11th January, 1956.
 (xxxii) MENZIES MINISTRY, 11th January, 1956, to 10th December, 1958.
 (xxxiii) MENZIES MINISTRY, 10th December, 1958, to 18th December, 1963.
 (xxxiii) MENZIES MINISTRY, 18th December, 1963.

(b) *Names of Holders of Ministerial Office, to 31st December, 1964.* In Year Book No. 17, 1924, the names are given 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 contains a list, commencing with the Bruce-Page Ministry, which covers 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, as constituted on 21st November, 1964.

MENZIES MINISTRY—from 18th December, 1963

(Portfolios from 21st November, 1964)

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

*Prime Minister—

THE RT. HON. SIR ROBERT MENZIES,
K.T., C.H., Q.C., M.P. (Vic.)

*Minister for Trade and Industry—

THE RT. HON. J. McEWEN, M.P. (Vic.)

*Treasurer—

THE RT. HON. H. E. HOLT, M.P. (Vic.)

*Minister for External Affairs—

THE HON. PAUL HASLUCK, M.P.
(W.A.)

*Minister for Labour and National Service and
Vice-President of the Executive Council—

THE HON. W. McMAHON, M.P.
(N.S.W.)

*Minister for Primary Industry—

THE HON. C. F. ADERMANN, M.P.
(Qld.)

*Minister for Defence—

SENATOR THE HON. SHANE PALTRIDGE
(W.A.)

*Minister for Supply—

THE HON. ALLEN FAIRHALL, M.P.
(N.S.W.)

*Minister for Civil Aviation—

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

*Postmaster-General—

THE HON. A. S. HULME, M.P. (Qld.)

*Minister for National Development—

THE HON. D. E. FAIRBAIRN, D.F.C.,
M.P. (N.S.W.)

*Minister for Works and, under the Prime
Minister, Minister in Charge Common-
wealth Activities in Education and
Research—*

SENATOR THE HON. J. G. GORTON
(Vic.)

Minister for Shipping and Transport—

THE HON. GORDON FREETH, M.P.
(W.A.)

Minister for Immigration—

THE HON. HUBERT OPPERMAN, O.B.E.,
M.P. (Vic.)

Minister for Social Services—

THE HON. H. S. ROBERTON, M.P.
(N.S.W.)

Minister for Health—

THE HON. R. W. C. SWARTZ, M.B.E.,
E.D., M.P. (Qld.)

Attorney-General—

THE HON. B. M. SNEDDEN, M.P. (Vic.)

Minister for Territories—

THE HON. C. E. BARNES, M.P. (Qld.)

Minister for Housing—

THE HON. L. H. E. BURY, M.P.
(N.S.W.)

*Minister for the Army and assisting the
Treasurer—*

THE HON. A. J. FORBES, M.C., M.P.
(S.A.)

Minister for the Interior—

THE HON. J. D. ANTHONY, M.P.
(N.S.W.)

Minister for the Navy—

THE HON. F. C. CHANEY, A.F.C., M.P.
(W.A.)

Minister for Air—

THE HON. PETER HOWSON, M.P. (Vic.)

Minister for Customs and Excise—

SENATOR THE HON. KEN ANDERSON
(N.S.W.)

Minister for Repatriation—

SENATOR THE HON. G. C. MCKELLAR
(N.S.W.)

* Minister in the Cabinet.

(iv) *Commonwealth Ministers of State.* In Year Book No. 38, a statement is 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. 74-9). This is in continuation of a similar statement covering the period from the inauguration of the Commonwealth Government to 1925 which appears in Year Book No. 18.

3. *Governors and State Ministers.*—The names of the Governors and members of the Ministries in each State in December, 1964, are shown in the following statement.

GOVERNORS AND STATE MINISTERS

NEW SOUTH WALES

Governor—LIEUT.-GENERAL SIR ERIC WINSLOW WOODWARD, K.C.M.G., K.C.V.O., C.B., C.B.E., D.S.O.

Ministry (from 30th April, 1964)

Premier, Treasurer and Minister for Industrial Development and Decentralization—
THE HON. J. B. RENSHAW, M.L.A.

Deputy Premier, Minister for Local Government and Minister for Highways—
THE HON. P. D. HILLS, M.L.A.

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

Chief Secretary and Minister for Tourist Activities—
THE HON. C. A. KELLY, M.L.A.

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

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

Minister for Agriculture and Minister for Conservation—
THE HON. A. G. ENTICKNAP, M.L.A.

Minister for Housing and Minister for Co-operative Societies—
THE HON. A. LANDA, M.L.A.

Minister for Education—
THE HON. E. WETHERELL, M.L.A.

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

Minister for Mines—
THE HON. J. B. SIMPSON, M.L.A.

Minister for Transport—
THE HON. J. M. A. MCMAHON, M.L.A.

Minister for Public Works—
THE HON. P. N. RYAN, M.L.A.

Minister of Justice—
THE HON. N. J. MANNIX, M.L.A.

Minister for Lands—
THE HON. K. C. COMPTON, M.L.A.

Assistant Minister—
THE HON. T. P. MURPHY, M.L.A.

VICTORIA

Governor—MAJOR-GENERAL SIR ROHAN DELACOMBE, K.C.M.G., K.B.E., C.B., D.S.O.

Ministry (from 7th June, 1955)

(Portfolios as from 8th July, 1964)

Premier and Treasurer—
THE HON. H. E. BOLTE, M.P.

Chief Secretary and Attorney-General—
THE HON. A. G. RYLAH, E.D., M.P.

Minister of Agriculture—
THE HON. G. L. CHANDLER, C.M.G., M.L.C.

Minister of Housing and Minister of Forests—
THE HON. L. H. S. THOMPSON, M.L.C.

Minister of Education—
THE HON. J. S. BLOOMFIELD, M.P.

Minister of Labour and Industry and Minister of Electrical Undertakings—
THE HON. G. O. REID, M.P.

Commissioner of Public Works—
THE HON. M. V. PORTER, M.P.

Minister of Health—
THE HON. R. W. MACK, M.L.C.

Minister of Transport—
THE HON. E. L. MEAGHER, M.P.

Minister for Local Government—
THE HON. R. J. HAMER, E.D., M.L.C.

Commissioner of Crown Lands and Survey, Minister of Soldier Settlement and Minister for Conservation—
THE HON. J. C. M. BALFOUR, M.P.

Minister of Water Supply and Minister of Mines—
THE HON. T. A. DARCY, M.P.

Assistant Minister of Education—
THE HON. J. F. ROSSITER, M.P.

Minister of Immigration—
THE HON. V. F. WILCOX, M.P.

Minister of State Development—
THE HON. V. O. DICKIE, M.L.C.

GOVERNORS AND STATE MINISTERS—continued

QUEENSLAND

Governor—COLONEL SIR HENRY ABEL SMITH, K.C.M.G., K.C.V.O., D.S.O.

Ministry (from 14th June, 1963)

(Portfolios as from 14th April, 1964)

Premier and Minister for State Development and Vice-President of the Executive Council—

THE HON. G. F. R. NICKLIN, M.M., M.L.A.

Minister for Industrial Development—

THE HON. A. W. MUNRO, M.L.A.

Minister for Education—

THE HON. J. C. A. PIZZEY, M.L.A.

Treasurer—

THE HON. T. A. HILEY, M.L.A.

Minister for Mines and Main Roads—

THE HON. E. EVANS, M.L.A.

Minister for Transport—

THE HON. G. W. W. CHALK, M.L.A.

Minister for Lands—

THE HON. A. R. FLETCHER, M.L.A.

Minister for Local Government and Conservation—

THE HON. H. RICHTER, M.L.A.

Minister for Labour and Industry—

THE HON. A. T. DEWAR, M.L.A.

Minister for Primary Industries—

THE HON. J. A. ROW, M.L.A.

Minister for Works and Housing—

THE HON. J. BJELKE-PETERSEN, M.L.A.

Minister for Justice and Attorney-General—

THE HON. P. R. DELAMOTHE, O.B.E., M.L.A.

Minister for Health—

THE HON. S. D. TOOTH, M.L.A.

SOUTH AUSTRALIA

Governor—LIEUT.-GENERAL SIR EDRIC MONTAGUE BASTYAN, K.C.M.G., K.C.V.O., K.B.E., C.B.

Ministry (from 15th May, 1944)

(Portfolios as from 28th February, 1963)

Premier, Treasurer and Minister of Immigration—

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

Chief Secretary, Minister of Health and Minister of Mines—

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

Attorney-General and Minister of Labour and Industry—

THE HON. C. D. ROWE, M.L.C.

Minister of Works, Minister of Marine, and Minister of Aboriginal Affairs—

THE HON. G. G. PEARSON, M.P.

Minister of Agriculture and Minister of Forests—

THE HON. D. N. BROOKMAN, M.P.

Minister of Education—

THE HON. SIR BADEN PATTINSON, K.B.E., M.P.

Minister of Local Government, Minister of Roads and Minister of Railways—

THE HON. N. L. JUDE, M.L.C.

Minister of Lands, Minister of Repatriation and Minister of Irrigation—

THE HON. P. H. QUIRKE, M.P.

WESTERN AUSTRALIA

Governor—MAJOR-GENERAL SIR DOUGLAS ANTHONY KENDREW, K.C.M.G., C.B., C.B.E., D.S.O.

Ministry (from 12th April, 1962)

Premier, Treasurer and Minister for Tourists—

THE HON. D. BRAND, M.L.A.

Deputy Premier, Minister for Agriculture and Electricity—

THE HON. C. D. MALDER, M.L.A.

Minister for Industrial Development, Railways and the North West—

THE HON. C. W. M. COURT, O.B.E., M.L.A.

Minister for Education and Native Welfare—

THE HON. E. H. M. LEWIS, M.L.A.

Minister for Works, Water Supplies and Labour—

THE HON. G. P. WILD, M.B.E., M.L.A.

Minister for Mines, Housing and Justice—

THE HON. A. F. GRIFFITH, M.L.C.

Minister for Lands, Forests and Immigration—

THE HON. W. S. BOVELL, M.L.A.

Chief Secretary and Minister for Health and Fisheries—

THE HON. R. HUTCHINSON, D.F.C., M.L.A.

Minister for Local Government, Town Planning and Child Welfare—

THE HON. L. A. LOGAN, M.L.C.

Minister for Transport and Police—

THE HON. J. F. CRAIG, M.L.A.

GOVERNORS AND STATE MINISTERS—*continued*

TASMANIA

Governor—LIEUT.-GENERAL SIR CHARLES HENRY GAIRDNER, K.C.M.G., K.C.V.O., K.B.E., C.B.

Ministry (from 13th May, 1964)

<i>Premier, Treasurer and Minister for Mines—</i>	<i>Chief Secretary—</i>
THE HON. E. E. REECE, M.H.A.	THE HON. B. K. MILLER, M.L.C.
<i>Deputy Premier and Attorney-General—</i>	<i>Minister for Housing and Forests—</i>
THE HON. R. F. FAGAN, M.H.A.	THE HON. S. V. WARD, M.H.A.
<i>Minister for Education—</i>	<i>Minister for Transport and Police—</i>
THE HON. W. A. NEILSON, M.H.A.	THE HON. H. J. MCLOUGHLIN, M.H.A.
<i>Minister for Lands and Works—</i>	<i>Minister for Health—</i>
THE HON. D. A. CASHION, M.H.A.	THE HON. M. G. EVERETT, Q.C., M.H.A.
<i>Minister for Agriculture and Tourists—</i>	
THE HON. A. C. ATKINS, M.H.A.	

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 March, 1965.

Leader of the Opposition, Commonwealth and State Parliaments—

Commonwealth—The Hon. A. A. Calwell, M.P.

New South Wales—R. W. Askin, M.L.A.

Victoria—The Hon. C. P. Stoneham, M.P.

Queensland—J. E. Duggan, M.L.A.

South Australia—F. H. Walsh, M.P.

Western Australia—The Hon. A. R. G. Hawke, M.L.A.

Tasmania—The Hon. W. A. Bethune, M.H.A.

5. **The Course of Legislation.**—The actual legislation by the Commonwealth Parliament during 1964 is indicated in alphabetical order in *The Acts of the Parliament of the Commonwealth of Australia passed during the year 1964 in the First Session of the Twenty-fifth Parliament of the Commonwealth, with Appendix, Tables and Index.*

A chronological table of Acts passed from 1901 to 1964 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 1964 in relation to the several provisions of the Constitution is furnished in the same volume. Reference should be made to these for complete information.

6. **Legislation during 1964.**—The Acts passed by the Commonwealth Parliament during the year 1964 are listed hereunder. In many cases the title of the Act indicates the general scope of the Act, but brief explanatory notes have been added where necessary. Appropriate chapters of this Year Book should be referred to for further information which may be available there.

The total enactments of the Commonwealth Parliament for a number of years at fairly even intervals since 1901 show a general increase. Seventeen Acts were passed in 1901, 36 in 1914, 38 in 1927, 87 in 1939, 109 in 1952, and 130 in 1964.

Commonwealth Legislation passed during 1964.

- Acts Interpretation Act 1964* (No. 52), amended the *Acts Interpretation Act 1901-1963* so as to clarify the circumstances in which regulations may prescribe matters by reference to other instruments and provided for judicial notice to be taken of regulations under Commonwealth Acts and Territory Ordinances. In common with other Acts it provided that compliance with a standing order of either House of Parliament is compliance with any statutory provision that requires the presentation of papers to that House.
- Air Force Act 1964* (No. 94) amended the *Air Force Act 1923-1956* to provide for the formation of a voluntary Emergency Reserve for the Air Force and for the calling up of the Citizen Air Force to the extent necessary to meet the requirements of the Air Force in circumstances short of general war (*see* Chapter XXVII. Defence).
- Air Navigation Charges Act* (No. 95) 1964 increased the unit charge for an aircraft by 10 per cent.
- Apple and Pear Organization Act 1964* (No. 38) amended the *Apple and Pear Organization Act 1938-1960* to give the Australian Apple and Pear Board power to control directly the quantity of fruit to be shipped to a particular country.
- Appropriation Act* (No. 2) 1963-64 (No. 33); *Appropriation Act 1964-65* (No. 73); *Appropriation Act* (No. 2) 1964-65 (No. 122).
- Appropriation (Special Expenditure) Act 1964-65* (No. 74) appropriated funds for special expenditure, such as flood relief and special industry grants as set out in the Budget, not regarded as expenditure for the ordinary annual services of the Government.
- Appropriation (Works and Services) Act* (No. 2) 1963-64 (No. 34).
- Australian Capital Territory Supreme Court Act 1964* (No. 109) amended the *Australian Capital Territory Supreme Court Act 1933-1960* to provide for an appropriate right of appeal for persons pleading guilty to criminal charges before a magistrate and committed by him for sentence and sentenced by the Supreme Court.
- Australian Coastal Shipping Commission Act 1964* (No. 88) amended the *Australian Coastal Shipping Commission Act 1956-1962* to widen the borrowing powers of the Commission.
- Australian Institute of Aboriginal Studies Act 1964* (No. 56) provided for the establishment of an Institute in the Australian Capital Territory to promote Aboriginal studies, to publish the results of such studies, and to encourage co-operation between universities, museums and other institutions concerned with Aboriginal studies and assist such institutions in training research workers.
- Broadcasting and Television Act 1964* (No. 67) amended the *Broadcasting and Television Act 1942-1963* to provide for the issue of joint television and broadcast listeners' licences and increased licence fees.
- Broadcasting and Television Act* (No. 2) 1964 (No. 121) amended the last-mentioned Act by making the lessor of furnished premises liable for the licence fee in respect of radio or television sets included in such furniture, defining liability where back-dated licences are issued, and providing for refunds when licences are surrendered.
- Broadcasting and Television Stations Licence Fees Act 1964* (No. 120) repealed the *Broadcasting and Television Stations Licence Fees Act 1956*; and instead of a common basis for assessment of fees the *Broadcasting Stations Licence Fees Act 1964* (No. 119) and the *Television Stations Licence Fees Act 1964* (No. 118) provided for separate methods of fixing fees payable.
- Cattle and Beef Research Act 1964* (No. 12); *Cattle Slaughter Levy Repeal Act 1964* (No. 11).*
- Cellulose Acetate Flake Bounty Act 1964* (No. 48) extended the operation of the *Cellulose Acetate Flake Bounty Act 1956-1961* until 31st December, 1964.

* See page 84.

- Cellulose Acetate Flake Bounty Act (No. 2) 1964* (No. 114) extended the operation of the last-mentioned Act until 31st March, 1965.
- Commonwealth Aid Roads Act 1964* (No. 32) provided for grants to the States for roads in the five years from 1st July, 1964, up to a total of £375 million (see Chapter XXII. Public Finance).
- Commonwealth Bureau of Roads Act 1964* (No. 65) established a Commonwealth Bureau of Roads to investigate and report on matters relating to roads or road transport to assist consideration by the Commonwealth Government of grants of financial assistance to the States in connexion with roads or road transport or other matters referred to it by the Minister for Shipping and Transport.
- Commonwealth Employees Compensation Act 1964* (No. 101) increased the maximum sum payable to dependents of a deceased Commonwealth employee to £4,300 and provided for additional payments for dependent children under 16.
- Conciliation and Arbitration Act 1964* (No. 99) increased the number of judges of the Commonwealth Industrial Court, apart from the Chief Judge, from three to four.
- Copper and Brass Strip Bounty Act 1964* (No. 96) extended the operation of the *Copper and Brass Strip Bounty Act 1962* to 31st March, 1965.
- Crimes (Overseas) Act 1964* (No. 116) provides that if an Australian serving in a civilian capacity with a United Nations force commits breaches of the law the offender shall be returned to Australia and there charged with an offence.
- Customs Tariff 1964* (No. 17); *Customs Tariff (No. 2) 1964* (No. 21); *Customs Tariff (No. 3) 1964* (No. 58); *Customs Tariff (No. 4) 1964* (No. 123); *Customs Tariff (Canada Preference) 1964* (No. 18); *Customs Tariff (Canada Preference) (No. 2) 1964* (No. 22); *Customs Tariff (Canada Preference) (No. 3) 1964* (No. 59); *Customs Tariff (New Zealand Preference) (No. 1) 1964* (No. 19); *Customs Tariff (New Zealand Preference) (No. 2) 1964* (No. 23); *Customs Tariff (New Zealand Preference) (No. 3) 1964* (No. 60); *Customs Tariff (New Zealand Preference) (No. 4) 1964* (No. 124); *Customs Tariff (Papua and New Guinea Preference) 1964* (No. 20); *Customs Tariff (Papua and New Guinea Preference) (No. 2) 1964* (No. 61); *Customs Tariff Validation Act 1964* (No. 128).
- Dairy Produce Levy Act 1964* (No. 40) extended the operation of the *Dairy Produce Levy Act 1958* to cover butteroil and ghee.
- Dairy Produce Research and Sales Promotion Act 1964* (No. 41) made certain machinery amendments consequent on the last-mentioned Act.
- Defence Act 1964* (No. 92) amended the *Defence Act 1903-1956* by establishing a Regular Army Emergency Reserve of some 3,600 men to provide a readily available source of trained manpower which may be called out when the Governor-General considers it desirable; and provided that the Citizen Military Forces may be called up by proclamation after a state of defence emergency has been proclaimed (see Chapter XXVII. Defence).
- Dried Vine Fruits Contributory Charges Act 1964* (No. 43); and *Dried Vine Fruits Contributory Charges (Collection) Act 1964* (No. 44) imposed charges on dried vine fruits received for packing for the purposes of the *Dried Vine Fruits Stabilization Act 1964* (No. 42) (see below).
- Dried Fruits Export Charges Act 1964* (No. 90); and *Dried Fruits Export Control Act 1964* (No. 89) amended existing legislation by providing for the appointment of one additional member to the Dried Fruits Export Control Board, by removing the requirement that the Government's representative must be the chairman of the Board, and by substituting "raisins" for "lexias" in the definitions of the fruit controlled by the Board.
- Dried Vine Fruits Stabilization Act 1964* (No. 42) set up Stabilization Funds for the stabilization of returns to dried vine fruit growers for a period of five years, commencing with the 1964 crop (see Chapter XXIII. Rural Industry).
- Evidence Act 1964* (No. 53).†

† See page 84.

Excise Tariff 1964 (No. 125).

Explosives Act 1964 (No. 47) amended the *Explosives Act* 1961 to ensure that its provisions extend to defence explosives intended for dumping at sea, to enable orders to be made for the carriage of Commonwealth explosives by rail, to control storage, transport, etc., of Commonwealth explosives for other than defence purposes and to ensure that explosives manufactured by the Commonwealth for supply to Governments of other countries can be handled on the same basis as other Commonwealth explosives.

Export Payments Insurance Corporation Act 1964 (No. 104) amended the *Export Payments Insurance Corporation Act* 1956–1961 to empower the corporation to issue guarantees of payment to lending institutions, to increase the maximum contingent liability which the corporation may assume under its contracts and generally to strengthen and improve its ability to provide payments insurance.

Home Savings Grant Act 1964 (No. 51) provided for grants to be made subject to certain conditions to married persons under the age of 36 years to encourage and assist such young married persons to purchase or build their own homes. Grants under the act are matched against savings, with a maximum of £250 to any one couple.

Income Tax and Social Services Contribution Act 1964 (No. 69); *Income Tax and Social Services Contribution Act* (No. 2) 1964 (No. 111); *Income Tax and Social Services Contribution Assessment Act* 1964 (No. 46); *Income Tax and Social Services Contribution Assessment Act* (No. 2) 1964 (No. 68); *Income Tax and Social Services Contribution Assessment Act* (No. 3) 1964 (No. 110); *Income Tax (International Agreements) Act* 1964 (No. 112).

Interim Forces Benefits Act 1964 (No. 106).‡

Law Officers Act 1964 (No. 91) provided for the separation of the office of Solicitor-General from the office of permanent head of the Attorney-General's Department.

Live-stock Slaughter Levy 1964 (No. 8); *Live-stock Slaughter Levy Collection Act* 1964 (No. 9).*

Loan (Airlines Equipment) Act 1964 (No. 117) approved the borrowing by the Commonwealth of up to £13.4 million on behalf of Qantas Empire Airways Limited and Trans-Australia Airlines.

Loan (Housing) Act 1964 (No. 85) authorized the raising and expending of up to £51 million for housing purposes.

Loan (Qantas Empire Airways Limited) Act 1964 (No. 15) approved an agreement between the Commonwealth and the Morgan Guaranty Trust Company of New York as agent for certain United States Banks for the raising of a loan of \$25 million to be lent to Qantas Empire Airways Limited.

Loan (War Service Land Settlement) Act 1964 (No. 86) authorizes the raising and expending of up to £4.5 million for assistance to the States of South Australia, Western Australia and Tasmania in connexion with War Service Land Settlement.

Meat Agreement (Deficiency Payments) Act 1964 (No. 13); *Meat Export (Additional Charge) Act* 1964 (No. 14).*

Meat Export Charge Repeal Act 1964 (No. 10)* repealed the *Meat Export Charge Act* 1935–1954.

Meat Industry Act 1964 (No. 7) repealed the *Meat Export Control Act* 1935–1960 and reconstituted the Australian Meat Board to give effect to industry proposals for a plan of meat market development and diversification. It established a fund by way of levy on sheep, cattle, and lamb slaughterings to be used to develop overseas markets for Australian meat and to undertake additional meat promotion in Australia and overseas. It also provided for the Board to control meat exports, where necessary to the attainment of its objectives (see also Chapter XXIII. Rural Industry).

- Meat Inspection Arrangements Act 1964* (No. 100) made provision for the Commonwealth to enter into an arrangement with a State or a State meat authority for Commonwealth inspectors to undertake the inspection of meat for consumption in Australia.
- Migration Act 1964* (No. 87) amended the *Migration Act 1958* to enable the Minister for Immigration to facilitate the entry into Australia of important visitors and their parties and other persons and groups, such as delegates to international conferences, whose admission on a temporary basis it is desired to facilitate. It also simplified documentation required for sea-borne passengers arriving in Australia.
- Ministers of State Act 1964* (No. 1) increased the number of Ministers of State from twenty-two to twenty-five and the amount payable for ministerial salaries to £73,350.
- Ministers of State Act (No. 2) 1964* (No. 71) increased the amount payable for ministerial salaries to £95,650.
- Mint Employees Act 1964* (No. 45) set out conditions of transfer of Royal Mint employees to the Commonwealth Public Service and provided for continuation of leave rights and superannuation entitlement for such employees.
- National Health Act 1964* (No. 37) amended the *National Health Act 1953–1963* to provide for increased Commonwealth medical benefits to contributors to registered medical benefits funds (see Chapter XVIII. Public Health).
- National Service Act 1964* (No. 126) reintroduced national service training. It provided for registration by men aged 20 and selective call-up for five years, two years in the Regular Army Supplement and three years in the Regular Army Reserve (see Chapter XXVII. Defence).
- Naval Defence Act 1964* (No. 93) amended the *Naval Defence Act 1910–1952* to provide for the formation of a voluntary Naval Emergency Reserve Force and for the calling up of the Citizen Naval Forces in time of defence emergency (see Chapter XXVII. Defence).
- New South Wales Grant (Flood Mitigation) Act 1964* (No. 4) granted financial assistance to the State of New South Wales for the purpose of flood mitigation works in relation to the Macleay, Clarence, Richmond, Tweed, Shoalhaven and Hunter Rivers.
- Papua and New Guinea Act 1964* (No. 103) made provision for the office of a senior puisne judge on the Supreme Court of Papua and New Guinea.
- Parliamentary Allowances Act 1964* (No. 70); *Parliamentary Retiring Allowances Act 1964* (No. 72); provided for increased salaries and allowances for members of Parliament (see p. 70).
- Petroleum Search Subsidy Act 1964* (No. 57) amended the *Petroleum Search Subsidy Act 1959–1961* to extend its operations to include the sea-bed and sub-soil of the continental shelf contiguous to the coast of Australia and New Guinea and made more flexible provisions for determining the rate and amount of subsidy (see Chapter XXVI. Mineral Industry).
- Post and Telegraph Rates Act 1964* (No. 66) increased charges for some telegrams and provided for special postage rates for articles addressed to "The Householder".
- Processed Milk Products Bounty Act 1964* (No. 39) extended the operation of the *Processed Milk Products Bounty Act 1962–1963* until 30th June, 1965, and fixed the maximum amount payable for the year 1964–65 at £400,000.
- Public Service Act 1964* (No. 2) provided for changing the name of the Department of Trade to the Department of Trade and Industry, and adding the Department of Housing, in schedules to the Act.
- Repatriation Act 1964* (No. 62) provided for increased rates of pensions for ex-servicemen and their dependants (see Chapter XXVIII. Repatriation).
- Repatriation Act (No. 2) 1964* (No. 105); *Repatriation (Far East Strategic Reserve) Act 1964* (No. 107); *Repatriation (Special Overseas Service) Act 1964* (No. 108)†

† See page 84.

Representation Act 1964 (No. 97) provided that where redistribution was necessary following a Census, there should not be any reduction in the number of electorates in any one State (see p. 71).

Rules Publication Act 1964 (No. 55)†

Salaries (Statutory Offices) Adjustment Act 1964 (No. 75); *Salaries (Statutory Offices) Adjustment Act (No. 2) 1964* (No. 115) increased the amount of salary payable to the holders of certain statutory offices.

Sales Tax Act (No. 1) 1964 (No. 76); *Sales Tax Act (No. 2) 1964* (No. 77); *Sales Tax Act (No. 3) 1964* (No. 78); *Sales Tax Act (No. 4) 1964* (No. 79); *Sales Tax Act (No. 5) 1964* (No. 80); *Sales Tax Act (No. 6) 1964* (No. 81); *Sales Tax Act (No. 7) 1964* (No. 82); *Sales Tax Act (No. 8) 1964* (No. 83); *Sales Tax Act (No. 9) 1964* (No. 84).

Seamen's Compensation Act 1964 (No. 102) provided for increases in seamen's compensation rates similar to those provided for Commonwealth Employees under the *Commonwealth Employee's Compensation Act 1964* (see p. 81).

Seamen's War Pensions and Allowances Act 1964 (No. 64) increased the rates of pension payable to eligible persons under the Act.

Seamen's War Pensions and Allowances Act (No. 2) 1964 (No. 113)‡.

Social Services Act 1964 (No. 3) extended benefits to include student children aged 16 years but under 21, and increased rates payable for the third and subsequent children in a family (see Chapter XVI. Welfare Services).

Social Services Act (No. 2) 1964 (No. 63) increased rates of pensions paid to age, invalid and widow pensioners.

State and Territorial Laws and Records Recognition Act (1964) No. 54†.

States Grants (Mental Health Institutions) Act 1964 (No. 16); *States Grants (Science Laboratories and Technical Training) Act 1964* (No. 50); *States Grants (Special Assistance) Act 1964* (No. 98); *States Grants (Universities) Act 1964* (No. 130); *States Grants (Water Resources) Act 1964* (No. 127).

Sulphate of Ammonia Bounty Act 1964 (No. 49).

Supply Act 1964-65 (No. 35); *Supply (Special Expenditure) Act 1964-65* (No. 36) (see also *Appropriation (Special Expenditure) Act 1964-65*, p. 80).

Tasmania Grant (Gordon River Road) Act 1964 (No. 5) provided for the grant of up to £2.5 million to the State of Tasmania to assist with the construction of the Gordon River Road.

Universities (Financial Assistance) Act 1964 (No. 129) provided for increased financial assistance to universities to enable them to raise the level of professorial salaries.

Weights and Measures (National Standards) Act 1964 (No. 6) placed the examination and approval of measuring instruments under the authority of the National Standards Commission and clarified the method of verifying and checking measurements under the Act.

Wool Industry Act 1964 (No. 24) amended the method of financing of the Australian Wool Board and the Wool Research Trust Fund and gave the Wool Board power to borrow on overdraft money for temporary purposes.

Wool Tax (No. 1) Act 1964 (No. 25); *Wool Tax (No. 2) Act 1964* (No. 26); *Wool Tax (No. 3) Act 1964* (No. 27); *Wool Tax (No. 4) Act 1964* (No. 28); *Wool Tax (No. 5) Act 1964* (No. 29); *Wool Tax (Administration) Act 1964* (No. 30).

Wool Tax Legislation Repeal Act 1964 (No. 31) repealed Wool Tax legislation prior to 1964.

* These Acts were complementary to the *Meat Industry Act 1964* and provided for the necessary machinery to put the objects of that Act into effect. † These Acts made amendments consequential to the *Acts Interpretation Act 1964* clarifying the circumstances in which regulations may prescribe matters by reference to other instruments and providing for judicial notice to be taken of regulations. ‡ These Acts made amendments to existing legislation to remove certain anomalies and administrative difficulties in the interests of ex-servicemen and their dependants.

§ 4. Commonwealth Government Departments

In Year Book No. 49 (pp. 87-98) a list appears of the Commonwealth Government Departments, giving particulars for each Department of the principal matters dealt with and the Acts administered by the Minister concerned as at the end of 1962, and changes made during 1963 are shown on page 83 of Year Book No. 50.

§ 5. Cost of Parliamentary Government

The tables in this section are intended to show, in broad groups, 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. Only broad groups are shown, but even these are not entirely comparable because of differences in accounting procedures and in the presentation of accounts. A very large part of the expenditure under the head of Governor-General or Governor represents official services entirely outside the Governor's personal interest, carried out at the request of the Government. The item includes salaries of Government House staffs and maintenance of residences, official establishments, grounds, etc.

The following statement shows this expenditure for the Commonwealth and for each State for the year ended 30th June, 1964.

COST OF PARLIAMENTARY GOVERNMENT, 1963-64

(£)

Particulars	C'wth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Governor - General or								
Governor(a)	212,444	55,021	92,191	51,835	45,880	86,948	46,338	590,657
Ministry(c)	281,846	38,800	45,752	38 154	17,853	27,665	29,815	479,885
Parliament—								
Upper House(d)	262,840	72,844	104,314	..	69,126	110,786	46,342	666,252
Lower House(d)	514,914	387,644	184,194	297,677	134,680	185,657	95,044	1,799,810
Both Houses(e)	954,786	366,266	293,318	157,587	180,945	182,673	52,710	2,188,285
Miscellaneous(f)	500,336	90,382	36,612	24,998	30,944	12,667	16,649	712,588
Total, Parliament ..	2,232,876	917,136	618,438	480,262	415,695	491,783	210,745	5,366,935
Electoral(g)	1,265,129	44,980	116,107	62,178	28,785	45,878	44,326	1,607,383
Royal Commissions, Select Committees, etc.	15,407	2	46,013	13,428	1,131	1,517	3,601	81,099
Grand Total	4,007,702	1,055,939	918,501	645,857	509,344	653,791	334,825	8,125,959

(a) Salaries and other expenses, including maintenance of house and grounds. (b) Includes official establishments, £41,015. (c) Salaries as ministers, and travelling and other expenses. (d) Allowances to members (including ministers' salaries as members), travelling and other expenses. (e) Government contribution to Members' Superannuation Funds, printing, reporting staff, library, etc. (f) Services, furniture, stores, etc. (g) Salaries, cost of elections, etc.

Figures for total cost and cost per head during each of the years 1959-60 to 1963-64 are shown in the next table.

COST OF PARLIAMENTARY GOVERNMENT

Year	C ^o wealth	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
TOTAL (£)								
1959-60 ..	3,181,262	906,100	695,399	599,125	390,741	479,357	279,896	6,531,880
1960-61 ..	3,240,180	1,082,508	748,491	582,588	418,241	536,496	280,394	6,888,898
1961-62 ..	3,708,681	1,214,538	870,167	576,018	470,617	629,898	289,062	7,758,981
1962-63 ..	3,515,322	1,009,612	824,118	629,511	463,018	620,095	309,537	7,371,213
1963-64 ..	4,007,702	1,055,939	918,501	645,857	509,344	653,791	334,825	8,125,959

PER HEAD OF POPULATION

(s. d.)

1959-60 ..	6 3	4 9	4 11	8 1	8 4	13 4	16 3	12 10
1960-61 ..	6 3	5 7	5 2	7 9	8 9	14 8	16 0	13 3
1961-62 ..	7 0	6 2	5 11	7 7	9 7	16 11	16 3	14 8
1962-63 ..	6 6	5 0	5 5	8 1	9 3	16 3	17 1	13 8
1963-64 ..	7 3	5 2	5 11	8 2	10 0	16 9	18 4	14 9

CHAPTER IV

LAND TENURE AND SETTLEMENT

§ 1. Disposal of Crown Lands

1. **Land Legislation and Tenures.**—Descriptions of the land tenure systems of the several States and the internal Territories, and conspectuses of land legislation in force and of the systems of land tenure, have appeared in earlier issues of the Year Book (*see* List of Special Articles, etc., preceding General Index to this volume).

Land tenures may be classified under broad headings indicating the nature of the tenure, namely:—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. The following sections contain figures showing the extent of the different tenures in the several States and Territories, together with some general descriptive matter. Information in greater detail was provided in Year Book No 48 and previous issues (*see also* Year Book No. 50, p. 85).

2. **Forms of Land Tenure.**—(i) *Free Grants and Reservations.* Provision exists in all States except Tasmania for the disposal of Crown lands for public purposes by free grants, and in all States for the temporary and/or permanent reservation of Crown lands for public purposes. In the Northern Territory, any Crown lands not subject to any right of, or contract for, purchase, may be resumed for public purposes, and the whole or any portion of the lands resumed may be reserved for that purpose. In the Australian Capital Territory, under the *Seat of Government (Administration) Act 1910*, Crown lands may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act.

The following table shows the total areas reserved in each State (except Tasmania) and in the Northern Territory, and the grand totals, at the end of the years 1959 to 1963.

AREAS RESERVED
(’000 Acres)

Year	N.S.W. (a)	Victoria (b)	Old (b)	S. Aust. (a)	W. Aust. (a)	Nor. Terr. (a)	Total (c)
1959.. ..	20,901	8,624	24,891	22,742	59,807	48,985	185,950
1960.. ..	15,956	8,642	25,002	22,747	59,860	59,591	191,798
1961.. ..	15,877	8,646	25,006	22,750	59,885	59,590	191,754
1962.. ..	15,883	8,783	25,126	22,743	68,672	59,595	200,802
1963.. ..	15,958	8,810	25,053	22,754	74,353	59,663	206,591

(a) At 30th June.
not available.

(b) At 31st December.

(c) Excludes Tasmania, for which details are

Details of the purposes for which areas at the end of 1963, as shown above, were reserved are given hereunder.

New South Wales. For travelling stock, 5,005,950 acres; forest reserves, 1,545,510 acres; water and camping reserves, 773,846 acres; mining reserves, 1,043,871 acres; for recreation and parks, 713,431 acres; other reserves, 6,875,645 acres; total, 15,958,253 acres.

Victoria. For roads, 1,705,129 acres; water reserves, 315,440 acres; agricultural colleges, 8,434 acres; forest and timber reserves, 5,731,211 acres; mallee reserves, 410,000 acres; other reserves, 639,494 acres; total, 8,809,708 acres.

Queensland. Timber reserves, 2,640,388 acres; for State forests and national parks, 6,462,253 acres; Aboriginal reserves, 6,604,349 acres; for streets, surveyed roads and stock routes, 3,908,391 acres; general reserves, 5,437,388 acres; total, 25,052,769 acres.

South Australia. Total area of surveyed roads, railways and other reserves, 22,754,071 acres, including 18,833,362 acres set apart as Aboriginal reserves.

Western Australia. For State forests, 4,454,309 acres; timber reserves, 1,839,351 acres; other reserves, 68,059,187 acres; total, 74,352,847 acres.

Northern Territory. For Aboriginal, defence and public requirements, 59,663,467 acres.

(ii) *Conditional and Unconditional Purchases of Freehold.* Crown lands in the States may be disposed of by unconditional purchase at public auction or by certain other forms of purchase (for details see Year Book No. 48, pp. 91-2), and conditional purchases of various types may also be made. In the Northern Territory, only 0.1 per cent. of the total area is alienated, the remainder being held under lease or licence, or reserved for various purposes or unoccupied. In the Australian Capital Territory, about 18 per cent. of the area is alienated or in process of alienation in consequence of contracts existing prior to the establishment of the Territory.

(iii) *Leases and Licences.* (a) *General.* Well over half the area of the States of New South Wales and South Australia and of the two Territories and more than four-fifths of that of Queensland are occupied under some form of lease or licence. In Victoria, only about one-tenth of the area is leased or licensed, more than half being alienated; in Western Australia, more than one-third is leased or licensed, most of the remainder being unoccupied; and in Tasmania only one-twelfth is leased or licensed, while about half the area of the State is occupied by the Crown or unoccupied, and the remainder alienated. Areas leased or licensed in the States are held under Crown lands Acts, closer settlement Acts, mining Acts, etc., and in the Territories under various Ordinances.

(b) *Land Acts and Ordinances.* The types of lease and licence which obtain under land legislation cover a wide range, and vary with each State or Territory. The following are examples:—grazing or pastoral, settlement and closer settlement, settlement purchase, conditional and conditional purchase, perpetual and Crown; however, the variations of these forms and the special forms of lease and licence which exist would extend this list considerably. Details of the various types in existence are given in Year Book No. 48, pages 93-4, and some detail is included in the tables on pages 92-4.

The following table shows the areas held under lease or licence other than mining and forestry in the States, the total under lease or licence for the Territories, and the grand totals, at the end of the years 1959 to 1963.

AREAS OCCUPIED UNDER LEASE OR LICENCE OTHER THAN MINING AND FORESTRY

(’000 Acres)

Year	N.S.W. (a)	Vic.	Q’land	S. Aust. (a)	W. Aust. (a)	Tas. (a)	N.T. (a) (b)	A.C.T. (a) (b)	Total
1959 ..	114,801	7,186	362,146	138,304	223,476	r 1,091	174,697	293	r1,021,994
1960 ..	113,359	7,188	366,277	145,377	223,532	r 1,090	179,021	293	r1,036,137
1961 ..	111,065	6,459	366,279	145,752	227,702	r 1,073	179,049	293	r1,037,672
1962 ..	111,809	5,542	364,928	146,889	235,914	r 1,092	174,102	292	r1,040,568
1963 ..	110,066	5,936	364,140	146,807	243,976	r 1,032	178,017	289	1,050,263

(a) Year ended 30th June.

(b) Leases and licences for all purposes.

(c) *Mining Acts and Ordinances.* In addition to the lands held under lease or licence under land legislation, there are also areas occupied under mining Acts for the purpose of prospecting or mining for gold and other minerals. Details of the various types of mining lease and licence are given in Year Book No. 48, pp. 94-5.

Areas occupied in the States at the end of the years 1959 to 1963 are shown in the following table.

AREAS OCCUPIED UNDER MINING ACTS AND ORDINANCES
(⁰00 Acres)

Year	N.S.W. (a)	Victoria	Q'land (b)	S. Aust. (a) (b)	W. Aust. (c)	Tasmania (b)	N. Terr.	Total (d)
1959 ..	399	40	2,102	784	164	r 37	25	r 3,551
1960 ..	310	47	2,127	1,852	168	r 46	36	r 4,586
1961 ..	321	66	2,184	1,176	155	r 52	36	r 3,990
1962 ..	492	55	2,168	5,364	166	r 45	38	8,328
1963 ..	425	46	2,274	7,894	201	44	62	10,946

(a) Year ended 30th June.

(b) Excludes lands held under miners' rights and dredging claims.

(c) Excludes holdings under miners' rights.

(d) Excludes Australian Capital Territory, included in previous table.

(d) *Oil Prospecting or Exploring.* The following table shows for each year from 1959 to 1963 the areas occupied in each State under authorities to prospect or explore for petroleum. The legislation relating to the search for petroleum differs from State to State, and the terminology of, and the conditions applying to, the forms of authorization differ accordingly. The figures below relate to the exploratory stage of operations.

**AREAS OCCUPIED UNDER AUTHORITIES TO PROSPECT OR EXPLORE
FOR PETROLEUM**
(⁰00 Acres)

Year	N.S.W. (a)	Victoria	Q'land	S. Aust. (a)	W. Aust.	Tasmania	N. Terr.	Total
1959 ..	37,251	31,653	527,954	170,385	319,598	..	36,938	1,123,779
1960 ..	121,636	34,703	517,650	207,217	402,830	..	49,008	1,333,044
1961 ..	17,139	34,703	496,915	201,521	394,071	..	70,543	1,214,892
1962 ..	127,658	53,310	563,795	199,409	471,856	..	67,366	1,483,394
1963 ..	175,026	53,345	464,567	228,235	441,795	..	160,498	1,523,466

(a) Year ended 30th June.

§ 2. Closer Settlement and War Service Settlement

1. *Closer Settlement.*—Particulars of the methods of acquisition and disposal of land for the closer settlement of civilians and returned service personnel (1914-18 War) in the several States are given in issues of the 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. However, the amalgamation in some States of closer settlement records with those of other authorities has since made it impossible to obtain up-to-date figures for those States and for Australia as a whole. Page 96 of Year Book No. 48 contains particulars as at 30th June, 1960, of the areas and costs for those States for which separate information is available.

2. *Settlement of Returned Service Personnel, 1939-45 War and Korea-Malaya Operations.*—(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 capital expenditure under the scheme in South Australia, Western Australia and Tasmania and for special loans to New South Wales and Victoria is provided through Loan (War Service Land Settlement) Acts. Finance for other aspects

of the Scheme in all States is provided by annual parliamentary appropriation. 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.

Detailed information about the agreements and the methods of operation and administration of the Scheme are contained in earlier Year Books (*see List of Special Articles, etc., preceding General Index to this volume*).

(ii) *Summary of Operations to 30th June, 1964.* The following table shows the operations of the War Service Land Settlement Scheme in each State up to 30th June, 1964.

WAR SERVICE LAND SETTLEMENT
SUMMARY TO 30TH JUNE, 1964

State	Land acquired	Farms allotted		Farms in course of development		Other
		No.	Acres	No.	Acres	
New South Wales ..	9,094,021	3,047	9,094,021	..	..	..
Victoria ..	1,181,599	3,048	1,181,599	..	..	..
Queensland ..	398,524	470	218,640	..	..	(a) 179,884
South Australia ..	755,873	1,024	679,672	..	..	(b) 76,201
Western Australia ..	2,053,972	998	1,902,475	..	..	(b) 151,497
Tasmania ..	447,624	523	421,000	40	20,000	(b) 6,624
Total ..	13,931,613	9,110	13,497,407	40	20,000	414,206

(a) War Service Land Settlement was discontinued in 1954, and unallotted lands were made available for general settlement. (b) Includes land disposed of outside the Scheme and discrepancies to be corrected upon survey.

(iii) *Expenditure.* The following table shows a dissection of the Commonwealth expenditure on War Service Land Settlement to 30th June, 1964.

WAR SERVICE LAND SETTLEMENT (1939-45 WAR AND KOREA-MALAYA OPERATIONS): COMMONWEALTH EXPENDITURE TO 30th JUNE, 1964
(£'000)

Advances to States	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Total
For acquisition of land ..	..	..	..	3,418	3,546	2,522	9,486
For development and improvement of land ..	..	..	..	14,713	19,745	16,118	50,576
Special loans ..	6,771	7,199	..	..	..	..	13,970
Commonwealth contributions to excess cost over valuation ..	629	6,166	116	2,053	858	720	10,542
To provide credit facilities to settlers ..	..	..	..	12,066	22,409	5,287	39,762
For remission of settlers' rent and interest ..	435	188	36	272	531	162	1,624
For payment of living allowances to settlers ..	1,010	1,214	163	409	481	162	3,439
For operation and maintenance of irrigation projects ..	..	..	..	1,037	16	3	1,056
Loss on advances ..	176	5	335	49	169	20	754
Cost of administration of credit facilities ..	..	..	..	495	836	209	1,540
Total ..	9,021	14,772	650	34,512	48,591	25,203	132,749

(iv) *Loans and Allowances (Agricultural Occupations) Scheme.* Full details of the measures taken for the re-establishment of ex-servicemen in rural occupations were given in an earlier Year Book (see List of Special Articles, etc., preceding General Index to this volume). These measures provide for a scheme of loans and allowances to assist ex-servicemen in establishing themselves in agricultural occupations.

The 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. At 30th June, 1964, 14,307 loans had been approved and advances amounting to £10,177,284 had been made.

The 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. At 30th June, 1964, 16,114 applications for allowances had been made, and the total amount paid in allowances was £2,276,597.

Year Book No. 48 contains details, on page 98, of the applications received and approved and the amounts involved for the individual States and Territories to 30th June, 1961. There has been little subsequent change.

(v) *War Service Land Settlement Branch—Total Expenditure.* The following table shows details of the total expenditure on various projects by the War Service Land Settlement Branch from the commencement of operations to 30th June, 1964.

**COMMONWEALTH WAR SERVICE LAND SETTLEMENT BRANCH:
EXPENDITURE TO 30th JUNE, 1964
(£'000)**

Project	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Total expenditure	Receipts and repayments	Net expenditure
War Service Land Settlement expenditure from revenue or loan funds	9,021	14,772	650	34,512	48,591	25,203	132,749	(a) 39,591	93,158
Agricultural loans(b) ..	4,284	1,797	874	827	1,973	405	(c) 10,177	(d) 9,401	776
Agricultural allowances	580	296	478	325	481	116	(e) 2,277	..	2,277
Administration expenses	775	169	71	93	390	47	1,545	..	1,545
Rural training ..	330	504	106	190	227	108	1,465	149	1,316
Total	14,990	17,538	2,179	35,947	51,662	25,879	f148,213	(g) 49,141	99,072

(a) Excludes interest, rent, and rates, £8,583,000.

(b) Includes expenditure on new loans of moneys repaid by borrowers.

(c) Includes Northern Territory, £10,000, and New Guinea, £7,000.

(d) Excludes interest, £1,472,000.

(e) Includes New Guinea, £1,000.

(f) Includes Northern Territory, £10,000, and New Guinea, £8,000.

(g) Excludes interest, rent, and rates, £10,055,000.

§ 3. Alienation and Occupation of Crown Lands

1. *General.*—The figures in the previous parts of this chapter show separate particulars of various forms of land settlement. 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 1963. A summary for each State and Territory and for Australia as a whole is also included. Particulars for each year from 1953 to 1963 appear in the bulletin *Rural Industries* No. 1, 1962-63, 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 or 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 29.4 per cent. had been alienated at 30th June, 1963; 4.2 per cent. was in process of alienation; 57.1 per cent. was held under leases and licences; and the remaining 9.3 per cent. was unoccupied, or held by the Crown.

ALIENATION AND OCCUPATION OF CROWN LANDS: NEW SOUTH WALES
30th JUNE, 1963
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated	58,174,727	3. Held under leases and licences— Homestead selections and grants Alienable leases, long-term and perpetual	1,605,007 24,430,998
		Long-term leases with limited right of alienation	1,255,537
		Other long-term leases	81,372,748
		Short-term leases and temporary tenures	2,401,810
		Forest leases	1,687,175
		Mining and auriferous leases	210,784
		<i>Total</i>	112,964,059
2. In process of alienation— Conditional purchases	6,949,617	4. Unoccupied— Particulars of Lord Howe Island not being available, the area, 3,220 acres, is included under unoccupied (approximate)	18,487,583
Closer settlement purchases	958,064		
Soldiers' group purchases	126,193		
Other forms of sale	376,877		
<i>Total</i>	8,410,751	5. Total Area of State	198,037,120

3. Victoria.—The total area of Victoria is 56,245,760 acres, of which 56.4 per cent. had been alienated up to the end of 1963; 4.2 per cent. was in process of alienation under deferred payments and closer settlement schemes; 10.6 per cent. was occupied under leases and licences; and 28.8 per cent. was unoccupied or held by the Crown.

ALIENATION AND OCCUPATION OF CROWN LANDS: VICTORIA
31st DECEMBER, 1963
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated	31,712,214	3. Leases and licences held— Under Lands Department— Perpetual leases	175,576
		Agricultural college leases	28,285
		Other leases and licences	1,679
		Temporary (yearly) grazing licences	5,730,317
2. In process of alienation— Exclusive of mallee and closer settlement lands	212,156	<i>Total</i>	5,935,857
Mallee lands (exclusive of closer settlement lands)	1,037,073	4. Occupied by the Crown or un- occupied	16,207,321
Closer settlement lands	1,141,139		
<i>Total</i>	2,390,368	5. Total Area of State	56,245,760

4. Queensland.—The total area of this State is 426,880,000 acres, of which, on 31st December, 1963, 6.2 per cent. was alienated; 0.6 per cent. was in process of alienation; and 85.8 per cent. was occupied under leases and licences. The remainder, 7.4 per cent., was either unoccupied or held as reserves or for roads.

ALIENATION AND OCCUPATION OF CROWN LANDS: QUEENSLAND
31st DECEMBER, 1963
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated	26,262,579	3. Occupied under leases and licences—	
		Pastoral leases	243,753,600
		Occupation licences	14,386,721
		Grazing selection and settlement farm leases	95,435,277
		Leases—special purposes(a)	3,606,610
		Mining leases	2,282,763
		Perpetual lease selections	6,598,980
		Auction perpetual leases, etc.	44,863
		Forest grazing leases (of reserves)	306,240
		Development leases	7,231
		<i>Total</i>	366,422,285
		4. Reserves (net, not leased)	17,811,021
		5. Surveyed roads and surveyed stock routes	3,908,391
		6. Unoccupied	9,697,477
2. In process of alienation	2,778,247	7. Total Area of State	426,880,000

(a) Special leases of Crown land, 579,493 acres; special leases of reserves, 3,027,117 acres.

5. South Australia.—The area of South Australia is 243,244,800 acres and at 30th June, 1963, 6.5 per cent. was alienated; 0.2 per cent. in process of alienation, 60.4 per cent. occupied under leases and licences; and 32.9 per cent. occupied by the Crown or unoccupied.

ALIENATION AND OCCUPATION OF CROWN LANDS: SOUTH AUSTRALIA
30th JUNE, 1963
 (Acres)

Particulars	Area	Particulars	Area
1. Alienated	15,864,153	3. Held under lease and licence(a)—	
		Perpetual leases, including irrigation leases	20,545,506
		Pastoral leases	123,123,113
		Other leases and licences	3,138,231
		<i>Total</i>	146,806,850
		4. Area unoccupied(b)	80,114,158
2. In process of alienation	459,639	5. Total Area of State	243,244,800

(a) Mining leases and licences have also been issued over an area comprising 236,128,335 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 30th June, 1963, 4.6 per cent. was alienated; 2.2 per cent. was in process of alienation; and 39.8 per cent. was occupied under leases and licences issued either by the Lands, Mines or Forests Departments. The balance of 53.4 per cent. was unoccupied.

ALIENATION AND OCCUPATION OF CROWN LANDS: WESTERN AUSTRALIA
30th JUNE, 1963
(Acres)

Particulars	Area	Particulars	Area
1. Alienated	28,721,958	3. Leases and licences in force—	
		(i) Issued by Lands Department—	
		Pastoral leases ..	237,203,687
		Special leases ..	4,147,379
		Leases of reserves ..	785,059
		Residential lots ..	4,546
		Perpetual leases ..	1,834,978
		(ii) Issued by Mines Department—	
		Gold-mining leases ..	17,917
		Mineral leases ..	25,196
		Miners' homestead leases ..	31,556
		(iii) Issued by Forests Department—	
		Timber permits ..	4,196,090
		<i>Total</i>	248,246,408
		4. Area unoccupied	333,735,685
<i>Total</i>	13,884,749	5. Total Area of State	624,588,800

(a) Includes areas previously separately recorded as grazing land.

7. **Tasmania.**—The total area of Tasmania is 16,885,120 acres, of which, at 30th June, 1963, 38.3 per cent. had been alienated; 1.2 per cent. was in process of alienation; 8.6 per cent. was occupied under leases and licences for either pastoral, agricultural, timber or mining purposes, or for closer settlement; while the remainder (51.9 per cent.) was unoccupied or reserved by the Crown.

ALIENATION AND OCCUPATION OF CROWN LANDS: TASMANIA
30th JUNE, 1963
(Acres)

Particulars	Area	Particulars	Area
1. Alienated	6,430,166	3. Leases and licences— <i>continued</i>	
		(i) Issued by Lands Department for— <i>continued</i>	
		Soldier settlement ..	42,359
		Short-term leases ..	1,128
		(ii) Issued by Mines Department ..	44,245
		<i>Total</i>	1,447,102
		4. Area occupied by the Crown or unoccupied	8,808,989
2. In process of alienation ..	198,863	5. Total Area of State	16,885,120
3. Leases and licences—			
(i) Issued by Lands Department for—			
Pastoral purposes ..	972,533		
Timber getting ..	370,375		
Closer settlement ..	16,462		

NOTE.—The total area of Tasmania has been adjusted in accordance with a resurvey of local government areas. This adjustment has been included in item 4 of the foregoing table.

8. **Northern Territory.**—The area of the Northern Territory is 332,979,200 acres, of which, at 30th June, 1963, only 0.1 per cent. was alienated; 53.5 per cent. was held under leases and licences; 17.9 per cent. was reserved for Aboriginal, defence and public requirements; and the remaining 28.5 per cent. was unoccupied and unreserved.

The following shows the mode of occupancy of areas at 30th June, 1963:—alienated, 328,294 acres; leased—pastoral leases, 157,202,169 acres; other leases, licences and mission stations, 20,814,402 acres; total leased, 178,016,571 acres; reserved for Aboriginal, defence and public requirements, 59,663,467 acres; unoccupied and unreserved, 94,970,868 acres; total 332,979,200 acres.

9. **Australian Capital Territory.**—Alienated land of the Territory at the end of 1963 comprised 11.0 per cent. of the total area; land in process of alienation 6.8 per cent.; land held under lease and licence 48.1 per cent.; land otherwise occupied, including city tenures, 8.5 per cent.; and unoccupied 25.6 per cent.

The following are the particulars of land areas in the Australian Capital Territory at the end of 1963:—alienated 65,857 acres; in process of alienation 41,224 acres; leased—grazing, agricultural, etc., leases, 269,842 acres; grazing licences, 12,440 acres; total leased, 282,282 acres; otherwise occupied, including city area leases, 51,380 acres; unoccupied, 142,186 acres; total, 582,929 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 600,929 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 1963.

ALIENATION AND OCCUPATION OF CROWN LANDS, 1963

State or Territory	Private lands				Crown lands				Total area '000 acres
	Alienated		In process of alienation		Leased or licensed		Other (a)		
	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	'000 acres	Per cent.	
N.S.W.(b) ..	58,175	29.4	8,411	4.2	112,964	57.1	18,487	9.3	198,037
Victoria(c) ..	31,712	56.4	2,391	4.2	5,936	10.6	16,207	28.8	56,246
Queensland(c) ..	26,263	6.2	2,778	0.6	366,422	85.8	31,417	7.4	426,880
S. Aust.(b) ..	15,864	6.5	460	0.2	146,807	60.4	80,114	32.9	243,245
W. Aust.(b) ..	28,722	4.6	13,885	2.2	248,246	39.8	333,736	53.4	624,589
Tasmania(b) ..	6,430	38.3	199	1.2	1,447	8.6	8,809	51.9	16,885
Nor. Terr.(b) ..	328	0.1	..	..	178,017	53.5	154,634	46.4	332,979
A.C.T.(c)(d) ..	66	11.0	41	6.8	289	48.1	205	34.1	601
Australia ..	167,560	8.8	28,165	1.5	1,060,128	55.8	643,609	33.9	1,899,462

(a) Occupied by Crown; reserved; unoccupied; unreserved. (b) At 30th June. (c) At 31st December. (d) Includes Jervis Bay area.

§ 4. 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 Year Book (see List of Special Articles, etc., preceding General Index to this issue).

The summaries of loans and advances under State authorities in the following paragraphs are compiled from returns supplied by the various State Government lending agencies in the several States. They include transactions in lands acquired under closer and soldier settlement schemes, but exclude balances owing on former Crown lands sold on the conditional purchase, etc., system. Advances made by general banking institutions in the course of their ordinary business are not included. For information on such advances see Chapter XXI. Private Finance.

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 re-appraisements 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 § 2, pp. 90-1).

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 § 2, page 90.

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, 1963.

ADVANCES TO SETTLERS, ETC.: NEW SOUTH WALES

Advances, etc.	Advances, etc., made during 1962-63	Total advances, etc., to 30th June, 1963	Balances outstanding at 30th June, 1963	
			Number	Amount
	£	£		£
<i>Department of Lands—</i>				
Closer land settlement	518,719	a 17,453,382	6,137	(b) 1,500,014
Soldier settlers 1914-18 War .. .. .	.. .. .	3,196,005	31	7,901
.. .. . 1939-45 War	54,979	14,711,280	2,960	2,887,089
Soldier land settlement—Acquisition, development and improvement of land, War Service Land Settlement Agreement Act	49,212	28,839,613	2,185	c 26,203,240
Wire netting .. .. .	.. .. .	1,494,653	2	212
Prickly pear	34,027	516,939	297	27,014
<i>Rural Bank—</i>				
<i>General Bank Department (including Commonwealth Re-establishment Scheme Advances) ..</i>	6,594,319	114,721,526	8,119	22,636,772
<i>Government Agency Department—</i>				
Rural Industries Agency	217,639	9,593,264	733	388,694
Advances to Settlers Agency including unemployment relief and dairy promotion advances	365,151	5,075,714	2,042	1,248,837
Rural Reconstruction Agency (d)	454,490	15,921,985	772	2,737,330
Irrigation Agency—				
Shallow bores	138,627	2,340,475	509	601,704
Farm water supplies	226,045	1,454,904	1,055	932,080
Soil conservation	29,310	182,221	241	137,292
Rivers and foreshores improvement	3	4,919	23	656
Irrigation areas	171,835	n.a.	12,989	4,608,870
Government Guarantee Agency .. .. .	.. .. .	225,475	.. .. .	.. .. .
Closer Settlement Agency	3	167,917	31	31,589
Total	8,854,359	£215,900,272	38,126	63,949,294

(a) In addition, the sum of £1,927,959 had been expended to 30th June, 1963, on subdivision maintenance, improvement and disposal of land acquired for closer settlement. (b) Excludes an amount of £4,690,656 capitalized to 30th June, 1963, on conversion into leasehold under the Closer Settlement Amendment (Conversion) Act, 1943. (c) Includes capital value of 2,621 Closer Settlement Leases, £19,665,954, and unpaid balances on 2,185 Structural Improvement Accounts, £6,425,648. (d) Includes Debt Adjustment, Drought Relief, and Marginal Wheat Areas Scheme Advances (Commonwealth and State Moneys), amount outstanding £1,827,059. (e) Incomplete.

3. Victoria.—The following table shows particulars respecting advances, etc., under State authorities to 30th June, 1963.

ADVANCES TO SETTLERS, ETC.: VICTORIA

Advances, etc.	Advances, etc., made during 1962-63	Total advances, etc., to 30th June, 1963	Balances outstanding at 30th June, 1963	
			Number	Amount
	£	£		£
<i>State Savings Bank, Crédit Foncier—</i>				
Civilians	172,865	12,295,653	429	574,192
Discharged soldiers .. .. .	.. .. .	848,567	3	753
<i>Treasurer—</i>				
Cool stores, canneries, etc. .. .. .	.. .. .	1,842,783 (a)	2	794,420
<i>Department of Lands and Survey—</i>				
Closer settlement settlers and soldier settlers .. .. .	.. .. .	b 46,904,855	1,491	1,880,109
Cultivators of land .. .. .	.. .. .	2,463,557	16	8,158
Wire netting	1,273	738,254	39	7,137
<i>Rural Finance and Settlement Commission—</i>				
<i>For Soldier Settlement—</i>				
Purchase of land	577	c19,715,490	n.a.	} 25,393,623
Development and improvement of holdings	27,390	c27,169,690	n.a.		(d)
Advances for—				
Development of single unit farms	8,773	11,957,265	1,592	6,108,126
Improvements, stock, etc.	51,932	6,083,360	482	481,311
Other advances	14,458	3,465,832	359	371,338
<i>For general land settlement—</i>				
Purchase of land	(e) 16,348	635,623	n.a.	} 6,622,395
Development and improvement of holdings	(e) 1,319,065	6,065,734	n.a.	
Advances for sale of land not required for land settlement	8,992	32,917	2	8,104
Improvements, stock, etc.	75,072	94,526	57	69,572
Total	1,696,745	140,314,106 (f)	4,472	42,319,238

(a) Number of companies. (b) Represents consolidated debts of settlers (Section 30, Act 4091). (c) Includes advances for settlers' lease liability £27,269,513. (d) After allowing an amount of £14,669,425, representing excess acquisition, development and improvement costs, which has been written off. Includes £22,742,261 outstanding for settler's lease liability. (e) Includes amounts transferred from Soldier Settlement at 1st July, 1959. (f) Incomplete.

4. Queensland.—The following table shows particulars of advances, etc., to 30th June, 1963. The figures exclude transactions in land.

ADVANCES TO SETTLERS, ETC.: QUEENSLAND

Advances, etc.	Advances, etc., made during 1962-63	Total advances, etc., to 30th June, 1963	Balances outstanding at 30th June, 1963	
			Number	Amount
Co-ordination of Rural Advances and Agricultural Bank Acts	£ 4,514,969	£ 45,092,555	5,750	£ 18,928,317
Discharged soldiers' settlement(a)	.. .. .	2,467,913	155	30,088
Water facilities	.. .. .	58,079	..	..
Wire netting, etc.	.. .. .	1,019,403	4	201
Seed wheat and barley	7,398 (b)	177,921	n.a.	12,670
Drought relief	.. .. .	1,413,908	70	88,669
War Service Land Settlement	84,287	4,866,028	213	1,078,947
Income (Unemployment Relief and State Development) Tax Acts(c)	.. .. .	1,183,891 (d)	20	1,825
Irrigation	.. .. .	54,914	..	..
Farmers' Assistance (Debt Adjustment Acts)	.. .. .	1,055,590	16	24,110
Commonwealth Re-establishment and Employment Act 1945	.. .. .	874,155	34	10,203
Water Supplies Assistance Act	199,126	691,683	361	650,545
Total	4,805,780	58,956,040 (d)	6,623	20,825,575

(a) Includes advances to group settlers through the Lands Department, as well as advances through the Agricultural Bank. (b) Includes accrued interest. (c) Largely for relief to cotton and tobacco growers and for rural development (ringbarking, clearing, fencing, etc.). (d) Incomplete.

5. South Australia.—The following table shows particulars respecting advances, etc., under State authorities to 30th June, 1963.

ADVANCES TO SETTLERS, ETC.: SOUTH AUSTRALIA

Advances, etc.	Advances, etc., made during 1962-63	Total advances, etc., to 30th June, 1963	Balances outstanding at 30th June, 1963(a)	
			Number	Amount
<i>Department of Lands—</i>	£	£		£
Advances to soldier settlers	.. .. .	5,071,780	23	211,559
Advances to blockholders	.. .. .	41,451	..	..
Advances under Closer Settlement Acts	.. .. .	2,730,516	479	512,484
Advances under Agricultural Graduates Settlement Act	.. .. .	62,258	..	..
Settlement of Returned Service Personnel, 1939-45	.. .. .	..	..	..
War	.. .. .	..	..	..
Advances under Crown Lands Development Act	1,098,311	10,756,033	1,001	5,956,178
Primary Producers Assistance Department—	2,540	410,386	55	304,621
Advances in drought-affected areas	.. .. .	2,146,768	4	1,088
Advances under Farmers Relief Acts	.. .. .	4,435,509	2	413
<i>Irrigation Branch—</i>				
Advances to civilians	.. .. .	291,443	14	5,386
Advances to soldier settlers	.. .. .	1,048,174	161	179,306
<i>State Bank of South Australia—</i>				
Advances to settlers for improvements	112,315	1,497,054	339	475,017
Advances under Vermin and Fencing Acts	5,915	1,436,836	90	48,577
Advances under Loans to Producers Act	243,594	3,358,067	156	2,329,265
Commonwealth Re-establishment and Employment Act 1945	.. .. .	827,486	223	108,576
Total	1,462,675	34,113,761	2,547	10,132,470

(a) After writing off of non-recoverable amounts totalling £745,803.

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 in similar manner 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 § 2, page 90.

7. *Tasmania*.—The following table shows particulars of advances under State authorities to 30th June, 1963. Particulars of advances made for the purchase of land for closer and soldier land settlement were included in the table for earlier years but have now been omitted, as they are not regarded as outstanding advances by the Department of Agriculture; the areas so purchased have been leased on 99-year terms with an option of purchase which the leaseholder may exercise at any time.

ADVANCES TO SETTLERS, ETC.: TASMANIA

Advances, etc.	Advances, etc., made during 1962-63	Total advances, etc., to 30th June, 1963	Balances outstanding at 30th June, 1963	
			Number	Amount
<i>Agricultural Bank—</i>	£	£		£
State Advances Act and Rural Credits ..	262,944	4,662,770	804	1,291,065
Commonwealth Re-establishment and Employ- ment Act 1945 .. .. .	..	407,429	118	62,753
Primary Producers' Relief Act 1947 .. .. .	..	297,846	32	7,871
<i>Minister for Agriculture—</i>				
<i>Soldier Settlers—</i>				
Advances	6,340	1,030,217	220	47,709
<i>Closer Settlers—</i>				
Advances	17,664	154,307	52	54,257
Total	286,948	6,552,569	1,226	1,463,655

8. *Northern Territory*.—During the year 1962-63, 22 advances totalling £20,336 were approved and advances made totalled £21,942. At 30th June, 1963, the balance outstanding from 109 settlers, including interest, was £178,333.

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 Cocos (Keeling) Islands; and the Territory of Christmas Island. There is also the Territory of Ashmore and Cartier Islands, to which the laws, ordinances and regulations of the Northern Territory, of which it is deemed to form part, apply wherever applicable. 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 pages 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 east 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 520,280 square miles.

2. **Population.**—(i) *Population, excluding Full-blood Aborigines.* At the Census of 30th June, 1961, the population of the Territory, excluding full-blood Aborigines, was 16,206 males, 10,889 females, 27,095 persons. Corresponding figures at the Census of 30th June, 1954, were 10,288, 6,181 and 16,469 respectively.

The European population of the 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. It had risen to 9,116 at the Census of 1947, to 14,031 at the Census of 1954 and to 23,599 at the Census of 1961. At 30th June, 1964, population, excluding full-blood Aborigines, was 32,317.

(ii) *The Aborigines.* For particulars relating to the Aboriginal population, see Chapter IX. Population. All Aborigines, by virtue of the *Nationality and Citizenship Act 1948–1960*, are British subjects and Australian citizens. Northern Territory Aborigines are not subject to special legislation, but the special welfare needs of individuals are met by the *Welfare Ordinance 1953–1963* (see § 9 below, p. 106). Reserves for Aborigines comprise an area of 94,025 square miles.

§ 2. Legislation and Administration

On 1st January, 1911, the Territory was transferred from South Australia to the Commonwealth. The terms were outlined in Year Book No. 15, page 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 Year Book No. 38 and earlier issues.

The *Northern Territory (Administration) Act 1910–1962* provides for the constitution of a Legislative Council consisting of the Administrator as President, six official members, three nominated non-official members and eight elected members. The Council makes 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 may vote only on matters that relate solely to the Northern Territory.

§ 3. Physiography

The Territory is within the torrid zone, with the exception of a strip about 180 miles wide which lies south of the Tropic of Capricorn.

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 for 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 months. Further particulars appear in Year Book No. 6, page 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 termite is a pest which is capable of serious damage to wooden buildings unless special preventive measures are taken. A species of the ant builds anthills which sometimes attain great dimensions. Mosquitoes and sandflies are very troublesome, particularly in the wet season. Some types of native fauna are protected. Buffalo formerly existed in large herds, but their number has been reduced by indiscriminate shooting. Buffalo shooting is, however, 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. In the coastal regions, tropical vegetation grows luxuriantly to the water's edge. In the north, cypress pine, bloodwood and paper-bark timbers are now cut and milled for local building purposes. Cypress pine is 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*, *Goodeniaceae*, *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 fruits, cashew nuts, 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 vegetables and small-scale fruit production (mainly pineapple and citrus) for local consumption. A small industry is being developed in Townsville lucerne seed production and in the production of hay.

In 1946, the Commonwealth Scientific and Industrial Research Organization commenced scientific surveys to determine more accurately the potentialities of the Territory. Surveys have been completed of the Katherine-Darwin, Barkly Tableland, Victoria River, and Alice Springs Regions. The survey of the Katherine-Darwin Region indicated that further investigations into agricultural possibilities were warranted. As a result, the C.S.I.R.O. 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. In 1956, the Administration established an experimental farm at Berrimah, near Darwin. Investigations into fruit and vegetable growing and pasture production are being carried out under both dry land 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. Trials on soil types are carried out by agricultural field officers of the Administration in various areas of the Territory considered potentially suitable for agriculture.

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. Since the 1959-60 season, rice research work on the sub-coastal plains has been carried out in the Territory by the C.S.I.R.O. at its Coastal Plains Research Station at Middle Point, near Humpty Doo. The Administration carries out rice investigational work outside the coastal plains at the Upper Adelaide River Agricultural Experiment Station. At the rice research stations, it has been demonstrated that rice can be grown in the Territory, but that the main problems are adequate water control and drainage, determination of cultivation techniques in the soil conditions, and the production of suitable rice varieties. Territory Rice Limited, a firm with Australian and American capital, carried out commercial scale operations near Humpty Doo from the 1954-55 season until the 1959-60 season. Under arrangements with the company, four former employees grew rice crops in the 1960-61, 1961-62 and 1962-63 seasons.

On 25th July, 1959, the Minister for Territories appointed an expert committee to investigate the prospects of promoting agricultural settlement in the Northern Territory on an economic basis and the major factors to be considered in shaping an agricultural policy for the Territory, including the areas best suited to agricultural settlement, the crops most likely to prove economic, the relationship of agriculture to the expansion of the pastoral industry, the availability of land and the distribution and tenure of land, credit and other forms of assistance to primary producers, marketing opportunities, research and agricultural extension work, and water use and conservation. The committee has presented its report, and some of its recommendations have been accepted and implemented, while others are under consideration.

A scientific liaison conference, convened jointly by the C.S.I.R.O. and the Northern Territory Administration, was held in Darwin during February, 1961. This conference was attended by various Commonwealth departments, universities, and the Australian Meat Board. Fifty-eight papers were presented to the conference, and all aspects of rural and pastoral activities in the Territory were covered.

Early in 1964, three pilot farms commenced operations in the Marrakai area, two being mixed farms based on rice growing and cattle fattening, and one on cattle fattening on native and improved pastures.

2. Pastoral Industry.—The pastoral possibilities of certain parts of the Territory were recognized at an early date, and both cattle and sheep raising have been attempted. For various reasons, sheep-raising has not been very successful, but the cattle industry has progressed steadily and is continuing to expand.

Cattle exported during 1963-64 numbered 107,872—65,605 to Queensland, 34,701 to South Australia, 4,295 to Western Australia and 3,271 to Hong Kong. Other livestock exports included 1,002 horses. Imports of livestock were—bulls, 912; other cattle, 18,518; horses, 150; sheep, 3,452; pigs, 341; and poultry, 17,724.

The estimated numbers of livestock in the Territory at 30th June, 1960 to 1964, are given in the following table.

NORTHERN TERRITORY: LIVESTOCK

At 30th June—				Horses	Cattle	Sheep	Pigs	Goats
1960	..	..	..	38,340	1,110,520	14,960	4,400	9,440
1961	..	..	..	40,054	1,154,656	16,089	2,845	5,958
1962	..	..	..	40,809	1,063,528	10,388	2,762	4,949
1963	..	..	..	38,191	1,086,627	9,469	1,842	4,275
1964	..	..	..	39,756	1,067,721	9,830	1,806	4,727

3. **Hides and Skins.**—The numbers of hides and skins exported from the Territory during 1963–64 were as follows: sheep, 2,563; crocodile, 13,416; cattle, 33,521; and buffalo 1,660.

4. **Mining.**—During 1963, the value of output of the mining industry in the Territory, excluding uranium mining, was £2,873,000.

The mining of copper ores and concentrates is the most important in terms of value of output, and accounts for more than two-thirds of the Territory's total recorded production. Prior to 1956, gold minerals, first mined in 1869, accounted for most of the value of output, but from 1956 onwards gold production has remained relatively constant while copper production has increased considerably. The bulk of the copper and gold is won at Tennant Creek, where, in 1958, the government battery was re-opened to encourage gold mining by smaller operators.

Although some oversea contracts held by uranium producers have recently terminated, the Moline mine operated by a private company and the Rum Jungle mine operated on behalf of the Commonwealth continue to produce, the uranium product from the latter mine being stockpiled at present. Prospecting and survey programmes are being continued by the Commonwealth Bureau of Mineral Resources. An important incidental outcome of this work was the discovery during 1962 of a large deposit of rock phosphate near Castlemaine Hill.

Production of mica and wolfram concentrates, both of which were important in the past, is now negligible. Increasing interest is being shown in tin mining, and production is expanding.

Plans are now being put into operation to work large bauxite deposits at Gove Peninsula.

The following table shows the value of output of the mining industry in the Territory for the years 1959 to 1963. Particulars of the value of output from quarries are not included.

**NORTHERN TERRITORY: VALUE OF OUTPUT^(a) OF THE MINING INDUSTRY
(EXCLUDING URANIUM)
(£'000)**

Year	Copper (b)	Gold	Manganese	Mica	Tin	Other	Total, all minerals
1959	.. 1,455	901	37	45	7	26	2,471
1960	.. 2,080	881	41	17	15	39	3,073
1961	.. 2,063	895	1	1	4	23	2,987
1962	.. 1,632	842	2	..	35	13	2,524
1963	.. 1,959	873	1	..	40	..	2,873

(a) Selling value at point of sale of mine products less transport costs from mine to point of sale.
(b) Ore and concentrate.

5. **Forestry.**—In August, 1958, the Commonwealth Government approved a six-year programme of forestry improvement and development to preserve existing forest areas and increase possible timber resources. The programme is being carried out by the Forestry and Timber Bureau. Experimental work in reforestation is being carried out in small plantation areas. Cypress pine appears the most promising species for large-scale commercial plantings. Local production of log timber, mainly cypress pine, amounted to 2,376,284 super. feet in 1963–64, but this was insufficient to meet local requirements, and about 2,950,000 super. feet of timber was imported from the States and overseas.

6. **Pearl 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 ended January, 1960 to 1964, are shown in the following table.

NORTHERN TERRITORY: PEARL FISHING(a)

Season ended January—	Boats engaged	Pearl-shell taken	
		Quantity ('000 lb.)	Value (£'000)
1960.. .. .	5	188	36
1961.. .. .	5	222	45
1962.. .. .	3	147	29
1963.. .. .	2	115	20
1964.. .. .	2	11	2

(a) Excludes operations of Queensland and Japanese pearlers operating in Northern Territory waters.

Competition from plastic materials has reduced the price being paid for pearl-shell to a low level, and pearling has declined in recent years. Experimental work is being conducted on pearl culture operations in territorial waters, and it is hoped that a new industry will be established to replace the old pearling industry.

7. **Secondary Industries.**—The secondary industries that have so far been established in the Territory have been largely the service industries normally associated with a developing area, for example, home building, electrical repairs, printing, motor and marine engineering, plumbing, welding, joinery, sheet metal work, and blue metal crushing. Major industrial investments by private interests in recent years include two breweries and a factory for the manufacture of milk products, ice cream, and aerated waters. The total number of factories (i.e., establishments in which four or more persons are employed or where power—other than manual—is used in any manufacturing process) in 1962–63 was 141; the average number of employees, 967; the value of production (value added), £2,246,000; and the value of output, £3,964,000.

§ 6. Land Tenure

Almost half the land in the Territory is reserved or unoccupied and unreserved, the remainder, apart from a very small proportion alienated, being held under various forms of lease or licence, which are described in Year Book No. 48, pages 111–12, and in more detail in Year Book No. 39, pages 329–30. Chapter IV. Land Tenure and Settlement of this issue contains up-to-date statistical information concerning areas occupied under various forms of tenure.

§ 7. Trade, Transport and Communication

1. **Trade.**—No record is kept of the trade between the States and the Territory. The following table shows the values of the total direct oversea trade into and from the Northern Territory during the years 1959–60 to 1963–64.

NORTHERN TERRITORY: OVERSEA TRADE

(£)

Year						Imports	Exports
1959-60	..	..	..	..	..	1,484,791	551,199
1960-61	..	..	..	..	..	1,206,246	435,069
1961-62	..	..	..	..	..	2,084,216	611,722
1962-63	..	..	..	..	..	1,192,321	544,462
1963-64	..	..	..	..	..	1,468,626	1,236,978

2. **Shipping.**—Shipping services to Darwin are provided from the eastern States at intervals of about four weeks by ships of the Australian National Line, and from Western Australia by three to four ships a month of the Western Australian State Shipping Service. Oversea tankers visit Darwin approximately ten times annually with supplies of aircraft fuel and other petroleum products. Other overseas vessels call at irregular intervals. During 1963-64, approximately 180,000 tons of merchandise were discharged at Darwin. A vessel operated from Thursday Island serves settlements on the Gulf of Carpentaria, and some mission-owned boats carry cargo from Darwin to mission stations and government settlements along the coast.

3. **Air Services.**—At 30th June, 1964, there were 10 government aerodromes and 118 licensed aerodromes in the Territory. The overseas passenger services using the Darwin international airport are Air India; Qantas/B.O.A.C. (Sydney to London); B.O.A.C. (Sydney to Hong Kong); and K.L.M. (Sydney to Amsterdam). Qantas also conducts a freight service from Sydney to London. Regular inland services to Darwin, with, in some cases, intermediate stops at Territory centres, are operated by Trans-Australia Airlines and Ansett-A.N.A. (from Adelaide, Melbourne, Sydney and Brisbane), and MacRobertson-Miller Airways Ltd. (from Perth and Derby). 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 Royal Flying Doctor Service also operates aircraft, while charter services can be secured at Darwin and Alice Springs.

4. **Railways.**—The Commonwealth Railways Commissioner operates the Central Australia Railway from Port Augusta in South Australia to Alice Springs over a distance of more than 750 miles, of which about 200 are in the Northern Territory. The line is standard gauge from Port Augusta to Maree, a distance of 217 miles, and 3 ft. 6 in. from Maree to Alice Springs. The Commissioner also operates the North Australia Railway between Darwin and Birdum on a 3 ft. 6 in. gauge over a distance of 317 miles. The two inland terminals, Alice Springs and Birdum, are about 630 miles apart and are connected by road transport along the Stuart Highway. Larrimah, on the highway and 6 miles north of Birdum, is the point of trans-shipment for passengers and goods and is, at present, the effective terminal. A road-rail freight service operates between Adelaide and Darwin via Alice Springs.

5. **Roads.**—The Stuart Highway, 954 miles long, connects Alice Springs with Darwin and runs via Larrimah and Tennant Creek. The Barkly Highway, 403 miles long, connects Mount Isa (Queensland) with Tennant Creek and joins the Stuart Highway some 16 miles north of Tennant Creek. These highways are used for carrying various freights including cattle, particularly to and from the railheads at Alice Springs, Larrimah and Mount Isa. The routes are 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 11,200 miles of road in the Territory of which 1,430 miles are sealed.

Work on a programme for reconstruction of beef cattle roads, estimated to cost £4,570,000 over a period of three to four years, commenced in 1961-62. Expenditure to 30th June, 1964, was £2,235,000. The transport of cattle by road is expected to increase the number, quality and value of cattle turned off.

6. **Posts, Telegraphs, Telephones and Wireless.**—Postal communication is maintained by road, rail and air transport between Darwin and the capital cities of Australia. In addition, vessels belonging to the Western Australian State Shipping Service provide a regular service between Fremantle and Darwin. 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 overland telegraph line, covering a length of 2,230 miles, runs 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 or Perth is also available.

Regional national broadcasting stations are situated at Darwin, Alice Springs, Tennant Creek and Katherine, and there is a commercial station at Darwin. The majority of homesteads on pastoral leases are equipped with radio transceivers 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), Broken Hill (New South Wales), 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 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 30th June, 1964, there were 20 government schools in the Territory, with 4,858 pupils, and four private schools, with 934 pupils, providing instruction according to the South Australian curriculum. There were also three subsidized schools on pastoral properties with a total enrolment of 26. High schools have been established with classes to Leaving Certificate level at Alice Springs and Leaving Honours level at Darwin.

All children who live more than 10 miles from an established school receive an allowance of up to £160 (£100 plus £60 on a graduated scale according to family income) per annum plus fare concessions if they board away from home in order to attend school. Twelve Intermediate exhibitions or 10 per cent. of the number of candidates, whichever is the greater, are available annually, and carry benefits of £5. There are also book allowances ranging from £8 to £10 per annum for secondary students.

Approximately 353 children receive correspondence education under the South Australian Correspondence School system. The radio session "School of the Air" supplements normal correspondence instruction for certain children in isolated areas.

Thirteen pre-school centres are in operation in the Territory, the staff of all except one being officers of the Northern Territory Administration. A number of scholarships are offered each year for Territory girls to qualify as pre-school teachers.

2. **Special Aboriginal Schools.**—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. Nineteen schools 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 19 Administration schools, 15 schools for Aboriginal children are conducted by missions with the aid of Government subsidies. Also, five schools aided by Government subsidies have been established on pastoral properties, and the establishment of others along similar lines is planned. Five pre-school centres are operated by the Administration for Aboriginal children, and three others are organized by the missions.

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. Aboriginal Welfare

The Commonwealth and State Governments have adopted a common policy of assimilation which aims at ensuring that "all Aborigines and part-Aborigines will attain the same manner of living as other Australians and live as members of a single Australian community, enjoying the same rights and privileges, accepting the same responsibilities, observing the same customs and influenced by the same beliefs, hopes and loyalties as other Australians". In the Northern Territory, Aborigines, as such, are not subject to special conditions, but the *Welfare Ordinance* 1953–1963 provides that any person, regardless of race, may be declared a ward if by any reason of his manner of living, his inability without assistance to manage his own affairs, his standard of social habits and behaviour, and his personal associations, he stands in need of the special care and assistance the Ordinance provides. An intensive welfare programme to prepare Aboriginal wards for the demands of modern living is being carried out, and 13 Government settlements and 14 mission stations have been established, where Aborigines are encouraged to adopt a settled way of life, and health services, particularly child welfare services, education, housing, vocational training and employment are provided. Aborigines are also encouraged to take part in the social activities of the community.

§ 10. Finance

Details of revenue and expenditure of the Territory for the years 1959–60 to 1963–64 are shown below. The information given covers the transactions of the Commonwealth Consolidated Revenue Fund relating to the Northern Territory.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE (£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
REVENUE					
Taxation—					
Stamp duties	15,177	20,923	24,656	38,092	20,728
Motor registration	60,429	70,602	75,360	81,374	93,904
<i>Total</i>	<i>75,606</i>	<i>91,525</i>	<i>100,016</i>	<i>119,466</i>	<i>114,632</i>
Business undertakings—					
Electricity supply	532,915	573,875	687,252	731,867	896,983
Other—					
Rent			289,940	292,442	333,576
Rates	394,651	418,299	212,620	198,453	232,815
Housing			111,511	122,190	169,423
Mining			40,462	64,932	65,846
Harbour and wharf	(a)	(a)	60,448	87,782	57,675
Health			135,528	184,005	217,804
Attorney-General	16,640	27,905	31,685	24,386	126,441
Miscellaneous	406,558	628,334	330,864	279,189	256,801
Grand Total	1,426,370	1,739,938	2,000,326	2,104,712	2,471,996

(a) Not available separately; included in Miscellaneous.

NORTHERN TERRITORY: REVENUE AND EXPENDITURE—continued

(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
EXPENDITURE					
Business undertakings—					
Electricity supply ..	363,378	351,020	401,215	469,743	605,864
Water supply	101,783	115,861	167,930	199,578	213,284
Hostels' loss	42,738	18,000	14,000	14,000	3,175
<i>Total</i>	<i>507,899</i>	<i>484,881</i>	<i>583,145</i>	<i>683,321</i>	<i>822,323</i>
Social expenditure—					
Aboriginal affairs ..	979,984	965,227	1,011,983	1,297,386	1,522,608
Educational services ..	278,096	352,993	437,201	483,149	564,424
Public health, recreation and charitable	857,423	1,049,686	1,322,833	1,366,474	1,454,360
Law, order and public safety	118,831	123,735	129,860	135,906	205,710
<i>Total</i>	<i>2,234,334</i>	<i>2,491,641</i>	<i>2,901,877</i>	<i>3,282,915</i>	<i>3,747,102</i>
Capital works and services—					
Water supplies, roads, stock routes, etc.	386,583	509,516	751,580	1,652,949	1,335,810
Buildings, works, sites, etc. . .	2,705,798	2,967,054	4,015,773	3,830,763	3,937,774
Plant and equipment ..	322,440	348,552	1,013,264	1,072,141	1,004,872
Loans for housing ..	379,298	617,953	575,798	556,205	806,371
Loans for encouragement of primary production ..	10,038	23,315	23,863	21,996	47,939
Northern Territory Port Authority .. ..	..	..	..	..	60,000
Other	69,730	65,000	..	44,712	79,551
<i>Total</i>	<i>3,873,887</i>	<i>4,531,390</i>	<i>6,380,278</i>	<i>7,178,766</i>	<i>7,272,317</i>
All other—					
Territory administration ..	2,159,480	2,448,306	2,840,989	3,248,114	3,678,903
Developmental services ..	221,600	219,997	243,610	274,694	316,000
Municipal, sanitary and garbage services	223,632	206,710	228,900	270,026	320,833
Shipping subsidy	2,333	2,563	4,250	4,250	4,250
Railway freight subsidies ..	35,615	33,149	36,013	40,225	45,722
Airmail service subsidy ..	22,500	22,845	33,311	36,250	57,750
Rent, repairs and maintenance, n.e.i.	(a)837,021	(a)942,535	(a)885,408	(a)929,278	(a)1,248,476
<i>Total</i>	<i>3,502,181</i>	<i>3,876,105</i>	<i>4,272,481</i>	<i>4,802,837</i>	<i>5,671,934</i>
Grand Total	10,118,301	11,384,017	14,137,781	15,947,839	17,513,676

(a) Includes maintenance expenditure on Stuart and Barkly Highways: 1959-1960, £499,900; 1960-61, £515,892; 1961-62, £499,997; 1962-63, £498,364; 1963-64, £700,000.

THE AUSTRALIAN CAPITAL TERRITORY

§ 1. Population, Works and Services

1. **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.

Little growth was made thereafter until the later thirties, and at the outbreak of the 1939–45 War the population had reached just under 13,000 persons. During the war, growth was again slow, and at the Census of 30th June, 1947, the population was 16,905 persons. Subsequently, the population showed steady increases and at the Census of 30th June, 1954, it was 30,315 persons. With further transfers of departments from Melbourne, the population reached 58,828 persons (including 527 in Jervis Bay) at the Census of 30th June, 1961. At 30th June, 1964, the population was 80,413, made up of 77,644 in Canberra City and 2,769 in rural areas (including Jervis Bay).

2. **Progress of Works.**—(i) *National Capital Development Commission.* The *National Capital Development Commission Act 1957–1960* provides for a Commission to undertake and carry out the planning, development and construction of the City of Canberra as the National Capital of the Commonwealth. The year 1963–64 was the sixth year of the Commission's operations. Construction work was carried out by means of agency arrangements with the Department of Works and private consultants.

Details of expenditure by the Commission in each year from 1959–60 to 1963–64 are included in the table on page 114.

(ii) *Department of Works.* Apart from the work it carries out for the National Capital Development Commission, the Department of Works acts as design and supervision agent for other Commonwealth departments and instrumentalities. Total expenditure during 1963–64 on all operations amounted to £5,020,173 (£5,125,084 in 1962–63), comprising:—Building Works—Housing, £19,746, Other Building, £2,683,501; Engineering Works, £306,066; Repairs and Maintenance—Building, £826,706, Engineering, £1,112,077; Purchase of Plant, £72,077.

(iii) *Major Works.* The following major works were completed during 1964. *National Capital Development Commission:* The Australian National Mint; Watson Infants' School; Hackett Primary School; Russell Building, No. 5; Brassey House Extension; Zoology Building, Australian National University; Dickson Swimming Pool; and Hackett Reservoir.

Department of Works: A.B.C. Studios, Dickson; Land Research and Regional Surveys Laboratory; permanent officers' sleeping quarters, and communications and navigation building, R.A.A.F., Fairbairn; and mechanical workshop and store at civil aerodrome.

Works under construction at the beginning of 1965 included the following projects. *National Capital Development Commission.* Further buildings in the Defence Office Group at Russell and at the Canberra Technical College; National Library; Economics Building, Australian National University; Civic Auditorium; Commonwealth Hostel, Northbourne Avenue; Commonwealth Avenue Offices; Bureau of Mineral Resources Building; Anzac Parade West Building; Campbell High School; Curtin Primary School; Watson High School; Anzac Parade; Bachelor Flats (120 units); and New Oakey Hill Reservoir.

Department of Works: Additions and alterations to Canberra Community Hospital; computer building and laboratories for Council for Scientific and Industrial Research; Civic Telephone Exchange; and deep space tracking station, Tidbinbilla.

(iv) *Roads and Water Supply.* The total length of roads in the Territory at 30th June, 1964, was:—bitumen and concrete—379 miles; gravel—177 miles; and other formed roads—86 miles; total—642 miles.

At 30th June, 1964, about 17,500 homes were connected to the city water supply, drawn through nine service reservoirs from two storages on the Cotter River with a total capacity of nearly 3,500 million gallons. A third storage dam site is currently being investigated.

Treatment works at Weston Creek dispose of Canberra sewage. At 30th June, 1964, 283 miles of sewers were laid.

(v) *Housing Development.* To provide for additional home development three new suburbs are being opened in Yarralumla Creek Valley, south-west of the existing city area. The first of these, Hughes, is well advanced and 603 homes were completed by the end of 1964. In all parts of Canberra 1,609 houses and 248 flats were completed during 1964.

3. *Transport and Communication.*—Canberra is connected with the railway system of New South Wales at Queanbeyan by a line $4\frac{1}{2}$ miles long. This line was opened for goods traffic on 25th May, 1914, and for passenger traffic on 15th October, 1923. Direct or linking services operate 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 Territory, 2CY and 2CN of the national broadcasting system, and 2CA, a commercial station, and two television stations, ABC Channel 3 of the national broadcasting system, and CTC Channel 7, a commercial station.

4. *Education, Health and Justice.*—The *Education Ordinance 1937–1959* provides for the compulsory attendance at school of children between the ages of six and fifteen years. The Commonwealth Department of the Interior is primarily responsible for the education of children in the Australian Capital Territory. By agreement, however, the New South Wales Department of Education arranges the teaching programme in accordance with its own curriculum and provides the teaching staff. It is reimbursed for expenses incurred.

At 31st December, 1964, there were four public secondary schools in Canberra providing courses to the Leaving Certificate standard—Canberra High School, Telopea Park High School, Lyneham High School, and Narrabundah High School. One high school, Dickson, is proceeding to fifth form in 1965 and two new high schools, Campbell and Watson, are scheduled to commence with first and second form pupils. Twenty schools provided courses for children in infants and primary classes, including two in the Jervis Bay area and three in rural districts. There were also a school for mentally handicapped children; a therapy clinic for children suffering from speech defects; a clinic for educational guidance; and a class for deaf children.

At the same date, there were sixteen private schools in Canberra. Of these, St. Edmund's Christian Brothers' College, the Catholic Girls' High School, the Canberra Grammar School (Boys), and the Canberra Church of England Girls' Grammar School provide courses leading to the Leaving Certificate Examination. A fifth private secondary school, Daramalan College, is annually extending its courses to reach Leaving Certificate standard in 1966. A sixth private secondary school, the Griffith Catholic Girls' High School, commenced with first and second form pupils at the beginning of 1965.

Twenty-six pre-school centres, including two occasional care centres and a mobile unit which visits outlying areas, provide pre-school facilities for approximately 2,040 children between the ages of three and five years.

The Canberra Technical College, which follows generally the curriculum set by the New South Wales Department of Technical Education, provides trade, post-trade, certificate and some hobby courses. At present 80 separate courses are provided and the number of enrolments exceeds 3,500. The college is located in two areas, Reid and Kingston. Eventually the Reid College will replace the Kingston College.

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. Provision for undergraduate studies and some post-graduate study is made by the School of General Studies.

Further reference to education in the Australian Capital Territory appears in Chapter XIX. Education, Cultural Activities and Research.

The Canberra Community Hospital serves the population of Canberra and surrounding districts. At 30th June, 1964, it had 427 beds, an honorary medical staff of 78, seven salaried medical staff, and a nursing staff of 356. Extensions are being made to the hospital to enable it to cope better with the needs of Canberra's growing population. For further information see Chapter XVIII. Public Health.

The Australian Capital Territory has a Supreme Court and a Court of Petty Sessions. There is an Australian Capital Territory Police Force, which at the end of 1963 numbered 115, including two policewomen.

§ 2. Production

1. **Lands.**—Reference has been made in earlier issues of the Year Book to the general conditions of land tenure in the 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. (See also § 1. Canberra: Fifty Years of Development, p. 123 of Year Book No. 49.)

Under the *Seat of Government (Administration) Act* 1910, Crown lands in the Territory may not be sold or disposed of for any estate in freehold except in pursuance of some contract entered into before the commencement of the Act. Leases of land in the city area are granted under the *City Area Leases Ordinance* 1936–1961, and leases of other lands under the *Leases Ordinance* 1918–1958. Land is also leased for various purposes in the city area under the *Church Lands Leases Ordinance* 1924–1932 and the *Leases (Special Purposes) Ordinance* 1925–1943, while one lease under the *Church of England Lands Ordinance* 1926 has been granted for church purposes. As considerable portions of the Territory lands are not immediately required in connexion with the establishment of the city, large areas have been leased for agricultural or grazing purposes.

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 is situated in this area. Some 5,000 acres of land in the area, mostly of little value agriculturally, are used for grazing purposes. The natural forest is being utilized for the production of hardwood building material, and the area treated is being reforested with softwoods on an experimental basis.

2. **Forestry.**—A considerable amount of reforestation 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, 1964, was 27,224 acres, of which 24,863 acres were *Pinus radiata*, the balance consisting of other softwood species, chiefly *Pinus ponderosa* and *Pinus nigra*, and 409 acres of experimental planting at Jervis Bay, mainly *Pinus radiata* and *Pinus elliotii*.

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, mainly from thinning operations. The yearly output of pine logs has increased from 2,500 cubic feet in 1930–31 to about 1.1 million cubic feet at the present time, the total amount cut to date being about 17.5 million cubic feet. The present output consists of approximately 45 per cent. case-making material, 40 per cent. logs yielding building material, and 15 per cent. cordwood, pulpwood, and fence posts.

In 1926, a comprehensive review was undertaken of the Territory's potentialities for forest development. The existing forest area has been placed under management 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 log production during 1963–64 was 99,226 cubic feet, approximately 75 per cent. of this being cut in the Tidbinbilla forest and used locally, the balance cut in Jervis Bay, and used in New South Wales. The total amount of hardwood cut from Australian Capital Territory forests to date is about 4,066,917 cubic feet and only small quantities now remain unexploited.

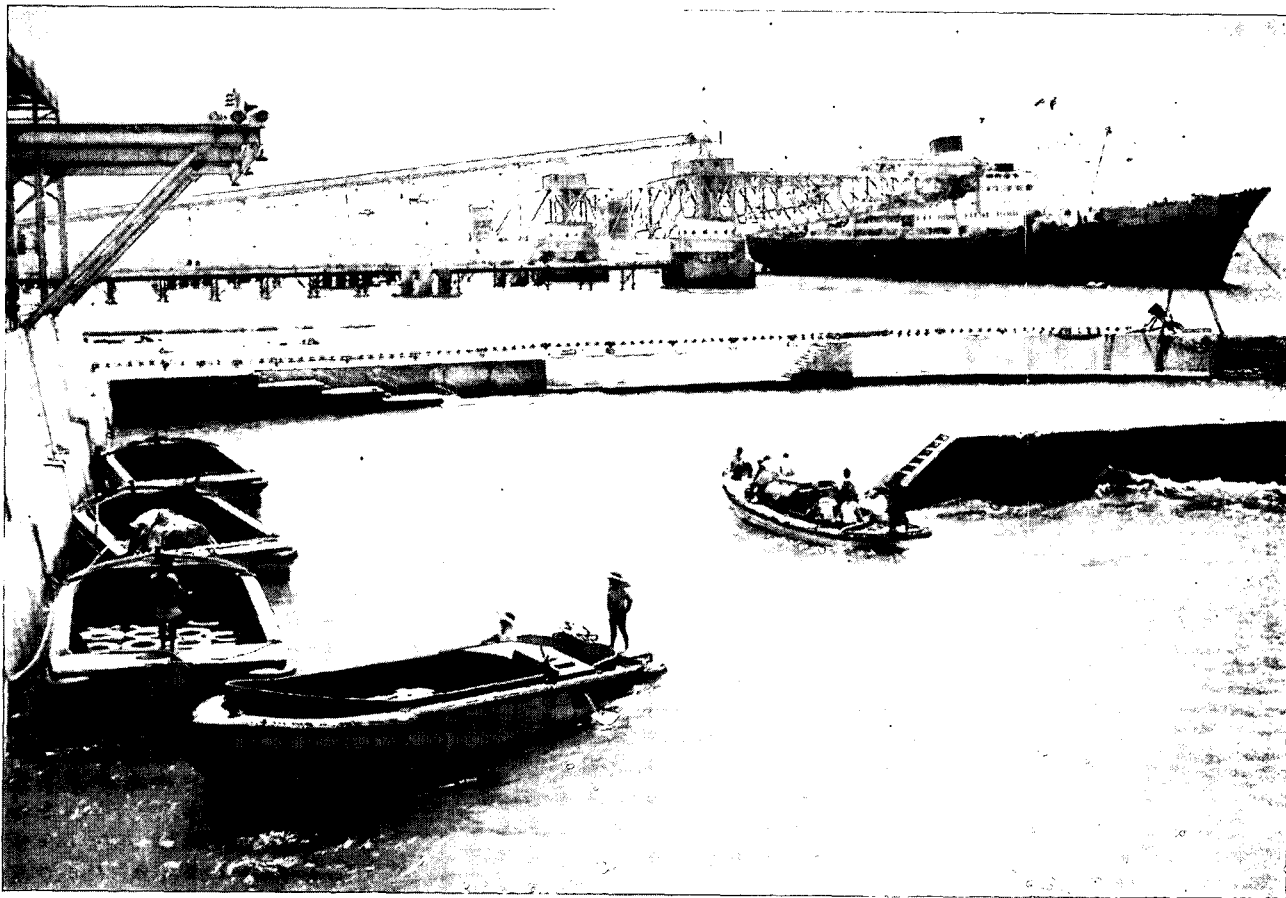
3. **Production.**—During 1963–64, the production of the more important items of the agricultural and pastoral industry was—wheat, 69,384 bushels; wool, 2,552,000 lb.; whole milk, 1,153,000 gallons; meat (carcass weight, fresh), 4,482 tons. The numbers of livestock depastured at 31st March, 1964, were—horses, 622; cattle, 14,399; sheep, 289,104; and pigs, 121.

As in the Northern Territory, the secondary industries established in the Australian Capital Territory are largely the service industries associated with the growth of the Territory. For the year 1963–64, factories (i.e. establishments in which four or more persons are employed or where power—other than manual—is used in any manufacturing process) numbered 170, the average number of employees was 2,694; the value of production (value added) was £5,548,000; and the value of output, £10,103,000.



Mining phosphate on Nauru from pockets in the coral pinnacles.

Photograph by courtesy of Australian News and Information Bureau.



Phosphate loading depot at Boat Harbour, Nauru.

Photograph by courtesy of Australian News and Information Bureau.

§ 3. Finance

Details of revenue and expenditure for the years 1959-60 to 1963-64 as recorded in the Commonwealth Consolidated Revenue Fund are given in the following table. Particulars of railways operations are excluded from this table.

AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
REVENUE					
Taxation—					
Motor registration ..	143,884	161,421	185,297	203,797	236,906
Liquor	39,783	47,534	52,048	55,706	64,674
Department of Health licences	257	362	353	421	425
Medical, dental, pharmacy and nursing registrations ..	102	103	110	135	187
Stock rates	1,732	1,851	2,079	2,067	1,889
Rates	173,540	176,912	204,122	254,480	341,606
<i>Total</i>	<i>359,298</i>	<i>388,183</i>	<i>444,009</i>	<i>516,606</i>	<i>645,687</i>
Business undertakings(a)—					
A.C.T. Electricity Authority—interest and repayments of principal	(b)	(b)	(b)	(b)	155,200
Abattoirs	33,498	34,884	39,225	56,087	61,925
Rent—					
Housing	1,052,792	1,185,673	1,584,078	1,740,093	1,818,829
Land	214,920	259,986	278,079	336,568	396,615
Miscellaneous	17,146	25,217	33,326	20,978	37,593
<i>Total, Rent</i>	<i>1,284,858</i>	<i>1,470,876</i>	<i>1,895,483</i>	<i>2,097,639</i>	<i>2,253,037</i>
Fees for services and fines ..	120,397	245,481	283,305	297,978	335,757
Housing—interest and principal repayments	309,586	424,225	687,292	1,004,708	1,206,576
Premiums on lease sales	519,696	1,037,160	511,970	1,439,916	2,240,038
Other	139,081	110,951	130,934	211,819	145,152
<i>Grand Total</i>	<i>2,766,414</i>	<i>3,711,760</i>	<i>3,992,218</i>	<i>5,624,753</i>	<i>7,043,372</i>
EXPENDITURE					
Business undertakings(a)(c)—					
Water supply and sewerage ..	254,884	328,109	372,233	415,908	518,420
Abattoirs	32,010	35,698	35,629	39,806	40,729
Transport services(d)	62,000	60,000	62,000	58,000	87,300
Other .. .. .	..	10,359	..	..	..
<i>Total</i>	<i>348,894</i>	<i>434,166</i>	<i>469,862</i>	<i>513,714</i>	<i>646,449</i>
Social expenditure—					
Education—					
Primary and secondary ..	601,130	805,795	936,106	1,143,049	1,302,380
Technical college	68,719	75,687	84,545	97,541	127,687
University scholarships ..	11,000	10,723	13,756	15,426	18,848
Art, community activities, etc.	8,445	23,419	16,632	23,246	25,896
Nursery schools and pre-school centres	32,861	38,196	49,483	51,033	56,699
Public health and recreation	132,261	160,926	187,426	215,153	261,767

NOTE.—For footnotes see end of table, p. 114.

AUSTRALIAN CAPITAL TERRITORY: REVENUE AND EXPENDITURE

—continued

(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
EXPENDITURE—continued					
Charitable—					
Hospital—general ..	396,250	408,800	457,400	536,600	560,000
Relief of aged, indigent, etc.	5,102	12,485	13,672	15,340	16,823
Other	38,674	51,805	51,271	59,451	69,478
Law, order and public safety—					
Justice	45,942	53,428	67,404	95,455	105,509
Police	168,952	197,275	215,921	263,148	304,973
Public safety	68,523	79,880	92,395	120,772	129,731
<i>Total</i>	<i>1,577,859</i>	<i>1,918,419</i>	<i>2,186,011</i>	<i>2,636,214</i>	<i>2,979,791</i>
Works and services(e)—					
National Capital Development Commission—					
National works ..	75,075	156,054	815,718	1,573,742	736,384
Commonwealth offices ..	738,121	1,391,219	1,119,074	831,952	4,211,611
Territory works—					
Education	1,036,265	1,500,804	1,103,433	782,808	1,046,655
Housing	4,616,827	3,426,679	3,247,651	3,440,502	3,138,020
Main roads, bridges, water, sewerage and storm water ..	1,487,460	1,505,599	1,991,431	1,823,032	1,399,253
Other buildings ..	463,979	333,866	248,347	370,390	122,266
City works	865,280	683,860	337,766	948,401	898,344
Land development ..	835,183	1,099,250	1,153,011	1,199,490	1,460,250
Minor works	197,047	254,684	264,673	250,520	253,337
Other	684,763	597,985	718,896	929,163	653,880
<i>Total</i>	<i>11,000,000</i>	<i>10,950,000</i>	<i>11,000,000</i>	<i>12,150,000</i>	<i>13,920,000</i>
Other authorities—					
Electricity	494,788	629,251	461,729	524,776	575,000
Transport services ..	67,406	79,500	243,717	193,639	293,526
Health buildings ..	52,498	284,881	316,495	797,615	1,074,151
Housing	317,000	350,000	275,000	1,240,000	1,200,000
Forestry	70,000	70,000	84,000	105,000	99,000
Loans to co-operative building societies	17,500	500,000	1,000,000	650,000	703,026
Public works. n.e.i. ..	392,182	293,470	430,152	812,979	501,619
<i>Total</i>	<i>1,411,514</i>	<i>2,207,102</i>	<i>2,811,093</i>	<i>4,524,009</i>	<i>4,440,522</i>
<i>Total, Works and Services</i>	<i>12,411,374</i>	<i>13,157,102</i>	<i>13,811,093</i>	<i>16,474,009</i>	<i>18,366,322</i>
All other—					
Roads and bridges ..	329,955	378,255	378,942	379,910	377,875
Parks and gardens, etc. ..	350,396	459,721	522,076	607,531	799,464
Surveys, land services, etc. ..	176,471	180,474	210,153	220,578	248,106
Legislative and general administration	658,043	590,257	595,082	780,422	967,793
Miscellaneous	507,996	687,700	658,056	686,964	633,319
<i>Total</i>	<i>2,022,861</i>	<i>2,296,407</i>	<i>2,364,309</i>	<i>2,675,405</i>	<i>3,026,557</i>
<i>Grand Total</i>	<i>16,360,988</i>	<i>17,806,094</i>	<i>18,831,275</i>	<i>22,299,342</i>	<i>25,019,119</i>

(a) Revenue collections in respect to water supply and sewerage are not available separately and are included in Rates and Other. (b) Electricity transactions included in Australian Capital Territory Electricity Supply Trust Account. (c) Other than Works and services. (d) Payment to Australian Capital Territory Transport Trust Account (loss on omnibus service). (e) Excludes repairs and maintenance.

NORFOLK ISLAND

1. **General.**—Norfolk Island, discovered by Captain Cook in 1774, is situated in latitude $29^{\circ} 3' 30''$ S., longitude $167^{\circ} 57' 5''$ E. Its total area is approximately 14 square miles, the island being about 5 miles long and 3 miles wide. It is 930 miles distant from Sydney and 660 miles from Auckland. 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.

Having served as a penal station from 1788 to 1813 and from 1826 to 1855, Norfolk Island in 1856 became the home of the remaining descendants of the *Bounty* mutineers. At the Census of 30th June, 1961, the population was 844, consisting of 421 males and 423 females. Total population at 30th June, 1964, was 896.

2. **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 Commonwealth Parliament as a territory of Australia. It is controlled by the Minister for Territories through an Administrator. The *Norfolk Island Act* 1957 provided for a local government body, the Norfolk Island Council, which replaced the former advisory council, retaining its advisory functions, but in addition having a certain autonomy in local government matters on the island. The Council did not in fact exercise its local government powers, and at its request the Act was again amended in 1963 to make it once more a purely advisory body. The amendment provided, however, for fuller consultation with the Council in the administration of the Territory, particularly in regard to the raising and spending of revenues. The amendment came into operation after the election of the Council in 1964.

3. **Economic Activity.**—The major economic activities of the island are primary production, the tourist trade and 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 presents trading difficulties.

Bean seed is exported, but wide fluctuations in prices, as in recent years, react unfavourably against the industry. The conditions on Norfolk Island also favour the production of other types of seed.

Fish abound off the island. In the past, a number of ventures have been formed to exploit this resource. They have been short-lived owing, for the most part, to the lack of a sheltered harbour. 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 in 1956, 120 in 1957 and in 1958, 150 in 1959, and 170 in 1960 and in 1961, was caught and processed at the station. Owing to a marked scarcity of whales, however, only four were caught in 1962, and the station has been closed down.

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 have always attracted a number of tourists. Before the 1939–45 War, the only means of transport to the island was by ship, but the building of the aerodrome in 1943 made the island far more accessible for tourists and the number of tourists has increased steadily during recent years. There are at present three licensed residential hotels and five guest houses; additional accommodation is being planned.

(iii) *Government Instrumentalities.* A large proportion of the population is employed by Commonwealth Government instrumentalities, namely:—Department of Civil Aviation, Norfolk Island Administration, 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.

4. *Trade, Transport and Communication.*—Imports to Norfolk Island since the 1939–45 War have risen from £32,402 in 1945–46 to £601,830 in 1963–64. In 1963–64 the major proportion (£420,949 or 70 per cent.) came from Australia, while New Zealand and Pacific Islands supplied £17,485 or 2·9 per cent. Exports rose from £9,024 in 1945–46 to £210,182 in 1960–61, but declined to £79,679 in 1963–64, when the whaling industry ceased operations. Australia was the principal market, exports thereto amounting to £67,874 in 1963–64, while exports to New Zealand and to Pacific Islands amounted to £10,477.

No duties are chargeable on goods imported into Australia from Norfolk Island if the goods are the produce or manufacture of Norfolk Island, shipped direct to Australia, and not goods which if manufactured or produced in Australia would be subject to excise duty.

A shipping service to the island is maintained at approximately seven-week intervals from Sydney via Norfolk Island to the New Hebrides, Solomon Islands and other island groups and thence back to Sydney, while other vessels plying between Sydney and Noumea call at Norfolk Island about every three weeks. Shipping between the island and New Zealand is infrequent.

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 the island. As a substantial section of the population possesses private motor cars, and taxi-cab and bus services are available, transport is almost exclusively by motor vehicle.

5. *Education.*—Education is free and compulsory up to the age of fifteen years. The school, which is conducted by the New South Wales Department of Education, conforms to the Australian standard of public education, ranging from kindergarten to the School Certificate examination. The teachers are provided by the New South Wales Education Department, but they are paid by the Norfolk Island Administration. The number of scholars enrolled at 30th June, 1964, was 174.

6. *Judiciary.*—The judicial system of the Territory was reconstituted by the *Norfolk Island Act 1957*, which was proclaimed in the Territory on 7th April, 1960. There is now a Supreme Court of Norfolk Island and a Court of Petty Sessions, which replaced the Court of Norfolk Island in its full and limited jurisdictions. The Supreme Court is the highest judicial authority in the Territory with original criminal and civil jurisdiction. The jurisdiction of this Court is exercised by a judge sitting in Court to the extent provided by the *Supreme Court Ordinance 1960* or any other Ordinance or by rules of Court, and in all matters of practice and procedure by a judge sitting in Chambers. The jurisdiction of the Court of Petty Sessions is exercised by a Chief Magistrate or any three Magistrates other than the Chief Magistrate. This Court has jurisdiction to hear and determine in a summary manner, under the provisions of the *Court of Petty Sessions Ordinance 1960*, cases arising under a law in force in the Territory where, under the law, an offence is punishable by summary conviction, a person is made liable to a penalty or punishment or to pay a sum of money for any offence, and no other provision is made for the trial of the person committing the offence, or jurisdiction is conferred upon a Court of Petty Sessions. The Court can also hear and determine civil claims in respect of a sum or matter or issue that does not exceed, or the value of which does not exceed, £200. There is right of appeal to the Supreme Court from the Court of Petty Sessions, and, in certain circumstances, a right of appeal to the High Court of Australia from judgments of the Supreme Court.

7. *Finance.*—The revenue of the Territory, together with an annual grant from the Commonwealth Government for 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 items of revenue and expenditure for the five years 1959–60 to 1963–64 were as follows.

NORFOLK ISLAND: REVENUE AND EXPENDITURE
(£)

Item	1959-60	1960-61	1961-62	1962-63	1963-64
REVENUE					
Commonwealth subsidy	32,000	32,000	32,000	32,000	33,700
Customs duties	12,884	14,474	15,305	17,805	22,666
Sale of liquor	9,021	9,627	11,091	12,993	14,882
Post office	16,620	43,930	38,505	24,195	27,546
All other	11,479	8,806	11,565	11,476	16,993
Total Revenue	82,004	108,837	108,466	98,469	115,787
EXPENDITURE					
Administrative	24,196	23,643	27,758	28,181	26,979
Miscellaneous services	26,915	22,855	27,193	31,832	31,388
Repairs and maintenance	10,406	8,715	9,195	8,176	8,539
Capital works and services	12,748	7,010	21,093	23,014	28,810
Postal services	5,211	14,722	7,449	7,653	12,879
Other business undertakings .. .. .	..	299	287	467	680
Total Expenditure	79,476	77,244	92,975	99,323	109,275

PAPUA AND NEW GUINEA

NOTE.—The information under this heading is applicable to both the Territory of Papua and the Trust Territory of New Guinea. For details of the respective Territories see pages 124 (Papua) and 129 (New Guinea) and following pages.

§ 1. Administration

The *Papua-New Guinea Provisional Administration Act 1945-1946*, which provided for the transfer back of control from the military authorities to civil authorities after the 1939-45 War, 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 provided for an Administrative Union of the Territory of Papua and the Territory of New Guinea with one Administrator, one Supreme Court and one Public Service.

Provision was made for an Executive Council of not less than nine officers of the Territory, to be appointed by the Governor-General, and a Legislative Council consisting of twenty-nine members:—the Administrator; sixteen officers of the Territory (to be known as official members); three non-official members possessing such qualifications as are provided by Ordinance and elected, as provided by Ordinance, by electors of the Territory; three non-official members representing the interests of the Christian missions in the Territory; three non-official native members; and three other non-official members.

The Legislative Council was inaugurated on 26th November, 1951, by His Excellency Sir John Northcott, while Administrator of Australia.

In October, 1960, the Commonwealth Parliament passed amendments to the Papua and New Guinea Act to change the composition of the Legislative Council, the new Council consisting of 37 members, namely:—the Administrator; 14 official members (to be either indigenous or non-indigenous); 12 elected members (six elected by the native people); and 10 nominated members, of whom at least five will be indigenes. The Executive Council was replaced by the Administrator's Council, consisting of the Administrator and six persons, appointed from the Legislative Council by the Minister for Territories, on the recommendation of the Administrator.

In May, 1963, the Commonwealth Government passed a further amendment to the Act, which made provision for a House of Assembly to replace the Legislative Council. The House now consists of 64 members—10 official members appointed by the Governor-General on the advice of the Administrator; 44 members elected by the people of the Territory on a common roll in 44 open electorates; and 10 non-indigenous persons elected on a common roll in 10 special electorates comprising one or more open electorates.

The first elections for the House of Assembly were held in February-March, 1964.

The 1963 Act also provides for membership of the Administrator's Council to be increased from 7 to 11, seven of whom must be elected members of the House of Assembly.

§ 2. Judiciary

The courts which exercise jurisdiction within the Territory are:—

- (i) The Supreme Court of the Territory of Papua and New Guinea;
- (ii) Courts of Petty Sessions (Papua), District Courts (New Guinea);
- (iii) Courts for Native Matters (Papua), Courts for Native Affairs (New Guinea); and
- (iv) Warden's Courts.

The Supreme Court is the highest judicial authority in the Territory and has unlimited criminal and civil jurisdiction. Courts of Petty Sessions and District Courts have criminal jurisdiction over the less serious offences which are punishable on summary conviction, but have no jurisdiction to try treason crimes, misdemeanours and other indictable offences. They also exercise a limited civil jurisdiction. The jurisdiction of the Courts for Native Matters and Native Affairs covers offences by indigenous inhabitants against the Native Administration Regulations, and civil actions of any kind other than matters relating to the ownership of land or water if all parties are indigenes. The Administrator has power to establish, in respect of each gold field or mineral field, warden's courts with jurisdiction over civil cases respecting mining or mining lands held under the *Mining Ordinance 1937-1959* and offences against the mining laws of the Territory.

In addition, there are the Native Land Commission set up under the *Native Land Registration Ordinance 1952* and the Commissioner of Titles appointed under the *New Guinea Land Titles Restoration Ordinance 1951-1955*, whose function is to inquire into and determine what land in the Territory is the rightful and hereditary property of persons or communities by customary right; and the persons or communities by whom, and the shares in which, that land is owned.

§ 3. Agriculture and Animal Industry

1. Soils.—Although a large part of Papua and New Guinea is covered by skeletal soils unsuitable for agriculture, there are extensive areas in all districts 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 River

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 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, from the end of December to 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 inches at Gasmata in New Britain and 231 inches at Kikori in Papua, to about 88 inches at Wewak in New Guinea and 40 inches 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 varying 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. **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. Following a close study of the problems in relation to land holdings by indigenes the Government has laid down the following broad principles of policy.

The ultimate and long-term objective in Papua and New Guinea is to introduce throughout the Territory a single system of land holding regulated by the central Government by statute, administered by the Department of Lands of the central Government, and providing for secure individual registered titles after the pattern of the Australian system.

Only the central Government (i.e., the Administration working through the Department of Lands and the Registrar of Titles) may issue and register land titles.

Land subject to native custom remains subject to native custom only until it is taken out of custom either by acquisition by the Administration or by a process, to be provided for by Ordinance of the Territory, of conversion of title to an individual registered title.

Upon either acquisition or conversion of title, compensation is to be provided in respect of extinction of rights under native custom.

Land held under native custom may not be acquired outside of native custom by other than the Administration.

For the time being, land may not be acquired by the Administration unless the native owners are willing to sell and in the opinion of the Administration the land is not required by them; and conversion of title from native custom to individual registered title may take place only if the majority of those interested in the land under native custom consent to conversion and the method of conversion.

The services of Commissioners under the *Land Titles Commission Ordinance 1962*, which came into operation on 23rd May, 1963, are to be used, as a first priority, on investigations into claims by the Administration that land is ownerless and may therefore be declared administration land, on investigation into the ownership under native custom of land proposed to be acquired by the Administration, on settlement of disputes about the ownership of land held under native custom, and, when legislative provision has been made, on investigations into the rights held under native custom in land proposed to be converted to individual registered title. The aim is that all the time of the Commissioners should be taken up with this work. To the extent that at any time it is not, the Commissioners should continue investigations into the holding of land under native custom; the results of such investigations are to be recorded for use in connexion with future acquisitions or conversions of title, but are no longer to be registered.

The legislation and administrative steps necessary to put the remainder of this policy into effect are well advanced.

4. Suitable Crops.—The crops which can be grown in Papua and New Guinea include coconuts, rubber, tea, coffee, cocoa, fibres, 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 coconuts, cocoa, rubber, coffee, peanuts and passion fruit.

5. Plantation Agriculture.—*Coconuts.* Territory coconut plantations suffered severely from damage and neglect during the 1939–45 War but rehabilitation was rapid. In 1962–63 about 680 plantations, together with native coconut stands, produced about 114,000 tons of copra and exported 72,499 tons valued at £4,718,000. In 1963–64, 21,096 tons of coconut oil, valued at £2,318,379, 11,742 tons of copra oilcake and meal, valued at £276,346, and 69,272 tons of copra, valued at £5,008,958 were exported. A copra crushing mill was established at Rabaul in 1952. Native stands produce about 25 per cent. of the copra exported.

Rubber. Exports of rubber have increased from 1,952 tons, valued at £802,177, in 1950–51 to 5,005 tons, valued at £1,226,031, in 1963–64.

Cocoa. Exports of cocoa beans increased from 317 tons, valued at £92,181, in 1950–51 to 15,640 tons, valued at £3,421,466, in 1963–64. Nearly 50 per cent. of the exports go to Australia. At present, native growers produce about 33 per cent. of the cocoa production in the Territory.

Coffee. Exports of coffee rose from 33 tons, valued at £8,359, in 1950–51, to 6,831 tons valued at £2,682,929, in 1963–64. Of the 25,000 acres planted to coffee in the Territory, about 60 per cent. is in native-owned groves and the rest grown by Europeans in plantations. More than half of the Territory coffee production is marketed in Australia.

6. Native Agriculture.—Most of the indigenous 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 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 indigenes 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. Some small-scale rubber growing is now being undertaken. In coconut areas, large quantities of copra are produced. In 1962–63, native production of copra was 30,157 tons, and that of cocoa and coffee 3,441 tons and 2,390 tons respectively. In many localities, the indigenes follow a farming system known as bush fallowing rotation, which is described in Year Book No. 48 and previous issues.

The growing of 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, have a high priority in Government policy for the Territory. A five-year (1962-63 to 1966-67) programme for intensification of agricultural work among the indigenous inhabitants of the Territory is being implemented.

7. Animal Industry.—Livestock in the Territory as at 31st March, 1963, included cattle, sheep, goats and pigs, approximate figures for each species being:—cattle, 27,120; sheep, 334; goats, 2,525; and pigs, 5,015. Other livestock includes horses, mules and poultry. These figures represent European-owned livestock only; native-owned livestock consists almost entirely of pigs and poultry.

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. There are a small number of Romney Marsh sheep at Nondugl in the highlands of New Guinea.

A central abattoir controlled by the Administration is under construction at Lae to provide slaughtering facilities for beef producers in the Wau-Bulolo Area, the Markham and Ramu Valleys, and part of the Eastern Highlands District. At first, provision will be made only for immediate needs, but the design and layout will make it possible to expand the abattoir to handle smallgoods manufacture, snap freezing, and canning as the need develops.

8. Co-operative Societies.—Co-operatives are under the supervision and guidance of a Registry of Co-operatives within the Department of Trade and Industry, and trained staff are stationed in districts throughout the Territory. Societies fall into two main categories, primary and secondary. The primary consist of marketing and consumer retailing bodies dealing directly with individual members. A society which combines both these activities is termed a dual purpose primary. Secondary organization is represented by associations of societies, formed to achieve an amalgamation of purchasing power in retail consumer store operation and marketing volume in relation to agricultural production, and to concentrate capital to facilitate the purchase of large assets such as shipping, land transport, agricultural machinery, etc.

For the year ended 31st March, 1964, primary societies numbered 280, with a membership of 85,699, a total capital of £643,795, and a turnover of £1,259,075. Secondary organizations numbered 14, with 236 member societies, a total capital of £304,375, and a turnover of £814,630.

§ 4. Native Labour

At 31st March, 1964, approximately 80,000 indigenous persons were engaged in wage employment, 57,000 of these being employed by private enterprise.

Minimum wages and conditions of employment for indigenous workers are prescribed under the *Native Employment Ordinance* 1958-1963. An employer is required to pay a minimum cash wage to every worker employed by him and provide the worker, and his family in appropriate cases, with accommodation, food, clothing, cooking and eating utensils, towels, soap and other articles, and medical attention. The major portion of the workers employed under the conditions prescribed under the Ordinance are unskilled rural workers.

In recent years an increasing number of workers in the urban areas have obtained employment under the conditions laid down in industrial agreements negotiated between representatives of workers and employers. These agreements, covering the majority of workers in the towns of Port Moresby, Rabaul, Lae, Madang, Wewak and Goroka, provide for the payment of a total cash wage, as distinct from the payment of cash-and-kind, to the workers covered by them. The agreements are registered as awards under the Territory's Industrial Relations Ordinance.

There has been a continued expansion of the trade union movement since industrial legislation for the Territory was introduced in March, 1963. In December, 1964, 10 associations with a membership of over 11,000 had been registered as industrial organizations of workers under the Industrial Organizations Ordinance.

Provision is made in other legislation for the establishment and maintenance of modern standards of industrial safety and for the payment of compensation for injury or disease arising out of, or in the course of, employment.

A local apprenticeship scheme was inaugurated in 1955. An Apprenticeship Board, comprising representatives of private enterprise and government, advises the Administrator on apprenticeship matters. At 30th June, 1964, a total of 177 apprentices had already received trade certificates and over 449 were currently being trained.

A Department of Labour handles matters relating to industrial organizations, industrial relations, industrial safety and workers' compensation, carries out labour inspections, and provides industrial services and training in industrial fields.

§ 5. Secondary Industries

Secondary industries which have been established in the Territory are most frequently of the type associated with the elementary processing for export of local products such as copra, rubber, cocoa, coffee, passion-fruit and timber on or near the plantations. There has been a gradual growth in the manufacture of more highly processed products, and industries already established include a paint factory, cigarette factory, twist tobacco factories, a copra crushing mill, a plywood factory, bakeries, biscuit factories, soft drink factories and breweries. Large service industries already well established include air, sea, and land transport services and the building industry, which is serviced by sawmilling, joinery, furniture and metal industries, concrete products manufactures, brickworks, etc.

A wide variety of maintenance facilities is also available to service the various Territory industries, including engineering workshops, slipways, etc.

The following table shows details of factory operations for the year ended 30th June, 1963.

TERRITORY OF PAPUA AND NEW GUINEA: FACTORY OPERATIONS, 1962-63

Particulars	Class of industry				
	Industrial metals, machines and conveyances	Food, drink and tobacco	Sawmills, plywood and joinery	Other industries (a)	Total
Number of factories	151	62	76	42	331
Employees—					
Non-indigenous	716	113	318	174	1,321
Indigenous	1,422	1,270	2,269	664	5,625
Total	2,138	1,383	2,587	838	6,946
	£'000	£'000	£'000	£'000	£'000
Salaries and wages paid	1,163	287	727	366	2,543
Value of output	3,444	2,635	3,227	3,893	13,199
power, fuel and light, etc. . .	71	74	97	195	437
materials and fuel used	1,607	1,532	1,562	2,876	7,577
production (b)	1,837	1,103	1,665	1,017	5,622

(a) Includes coconut oil processing, tyre retreading, paint manufacture, printing, powerhouses, etc.
 (b) Value added.

§ 6. Finance

1. General.—The following table shows particulars of the financial operations of the Papua and New Guinea Administration for the years 1959–60 to 1963–64. Further information on each Territory will be found on pages 129 and 135.

TERRITORY OF PAPUA AND NEW GUINEA: REVENUE AND EXPENDITURE

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
REVENUE					
Taxation—					
Income tax	1,812,963	2,347,978	2,211,929	2,578,706	3,255,830
Customs duties	2,411,529	2,433,732	2,678,514	3,053,995	3,530,733
Motor registration	77,770	87,768	102,380	112,648	125,972
Stamp duties	81,672	86,489	123,169	119,582	97,353
Licences	31,497	34,251	38,644	45,092	65,518
Personal	175,489	146,867	111,174	94,830	52,652
Business undertakings—					
Post office	412,428	496,256	580,911	658,479	780,445
Harbour dues, wharfage, etc.	156,323	189,211	192,108	203,061	229,507
Electricity supply	471,060	521,673	576,628	670,966	(a)116,595
Sale of timber	128,497	129,326	74,258	21,305	..
Agricultural production	128,619	103,746	180,687	145,711	197,750
Water supply	22,800	27,301	32,846	42,631	52,434
Transport	40,795	22,277	..	..	..
Lands—					
Mining—					
Royalties	9,230	7,417	7,942	6,913	7,205
Other	8,650	9,418	8,814	9,062	8,634
Forestry	101,415	121,394	147,078	159,959	194,468
Land sales, rents, etc.	99,515	127,328	113,191	145,107	167,401
Commonwealth grant	12,808,282	14,796,648	17,293,398	20,000,207	25,249,308
Fees and fines	159,940	166,949	185,429	215,391	242,165
All other	263,736	392,719	340,097	738,923	b2,252,217
Total	19,402,210	22,248,748	24,999,197	29,024,568	36,626,187
EXPENDITURE					
Business undertakings—					
Post office	815,305	881,968	1,031,191	1,160,622	1,368,319
Harbours	138,773	122,411	142,422	137,526	161,156
Electricity supply	409,070	447,354	511,092	570,864	(a)217,461
Saw-mill	84,397	76,678	43,577	..	..
Water supply and sewerage	120,416	128,107	139,039	149,881	172,142
Social expenditure—					
Education	1,290,592	1,641,296	2,138,048	2,763,260	3,471,902
Grants to missions for education	261,093	405,260	341,272	374,233	489,506
Public health, hospitals, etc.	2,113,460	2,401,447	2,783,561	3,236,629	3,677,756
Mission medical services—grants	286,233	305,264	304,583	240,487	144,691
Law, order and public safety	862,115	1,023,707	1,234,428	1,407,992	1,505,155
District services and native affairs	1,246,727	1,372,150	1,465,154	1,470,207	1,669,199
Capital works and services	4,822,424	5,133,965	5,381,834	6,584,986	8,341,407
All other	6,882,042	8,391,451	9,484,599	10,941,229	15,407,360
Total	19,332,647	22,331,058	25,000,800	29,037,916	36,626,054

(a) Subsequent to the takeover by the Electricity Commission of the complete operation of major power houses, the Administration is responsible for the operation of minor power houses only.

(b) Owing to changes in accounting practices affecting motor transport usage, output by the Government Printer, and stores issued by the Government Stores, this figure is not comparable with those for earlier years.

2. Taxation.—The main forms of taxation are income tax, personal tax and import duties.

Income Tax was imposed on 1st August, 1959, to operate from 1st July, 1959. The scale of taxation is about 50 per cent. of the tax payable on the same taxable income in Australia. Deductions for dependants the taxpayer is maintaining, and maximum deductions for medical, dental and educational expenses, are considerably higher than those allowed in Australia. The tax on public companies is at a flat rate of 4s. in the £1, which is a little over half the predominant rate of company tax in Australia, while on private companies the rate is 2s. 6d. in the £1 for the first £5,000 and 3s. 6d. for the remainder,

and generally comparable deductions are allowed. On 1st January, 1958, a Personal Tax was introduced for all males (including non-indigenous) of 18 years of age and over in Papua and New Guinea. The maximum tax is £2 per annum; the tax assessed is subject to the taxpayers' ability to pay, and consequently large areas have been exempted. Native Local Government Councils (which are formed voluntarily by the indigenes) are, however, empowered to levy taxes on villagers for the purpose of providing for local services carried out by the Councils. These taxes are set off against the indigene's Personal Taxation.

The present Customs Tariff provides high revenue rates on imports of ale, spirits, tobacco and cigarettes, timepieces, cigarette papers, fancy goods and jewellery, but allows entry of most necessities affecting living and building costs duty free, or at a low rate of duty. There is a by-law provision under the Customs Tariff to enable duty-free admission to be granted for plant, machinery and chemicals to be used mainly for industrial and developmental purposes and for goods imported by passengers. No preferential rates are specified in the schedule. Export duties imposed on copra, cocoa, rubber, mother-of-pearl, trochus and burgos shell, and gold were repealed in July, 1959.

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 (see Chapter XIV. Oversea Trade), and a proclamation of 25th September, 1935, exempted from primage duty goods produced or manufactured in the Territory.

PAPUA

§ 1. General Description

1. *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 86,100 square miles, of which 83,325 are on the mainland, and 2,775 on the islands. A description of the physical characteristics of the Territory appears in previous issues of the Year Book (see No. 18, p. 633).

2. *Administration.*—Particulars of the early administration of Papua are given in Year Book No. 19, page 576. 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 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.

§ 2. Population

1. *Non-indigenous Population.*—At the Census of 30th June, 1961, the non-indigenous population of Papua was 5,490 males, 4,304 females, 9,794 persons. The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 2,078, 2,173, 3,239 and 6,313 persons. At 30th June, 1964, the total non-indigenous population was 12,888.

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. At the 1961 Census, it amounted to 8,260 persons.

2. *Indigenous Population.*—It is not possible to give exact data regarding the number of indigenes 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, 1964, numbered 548,852 persons. This comprised 530,772 enumerated persons and 18,080 estimated. The total number was distributed through districts as follows:—Southern Highlands, 176,934; Western, 59,135; Gulf (including the former Delta district), 58,835; Central, 108,486; Milne Bay, 93,772; and Northern, 51,690.

§ 3. Land Tenure

The basic principle of the land laws of Papua is that all land not specifically alienated by due process from the native people, or established to be vacant and ownerless, is native land. At 30th June, 1964, of the total area of Papua, approximately 55,000,000 acres, only 1,888,172 acres had been alienated. The distribution of alienated land at 30th June, 1964, according to tenure, was as follows:—held by private non-indigenous inhabitants, freehold, 24,280 acres, leasehold, 369,299 acres; native reserves, 68,192 acres; other, including public reserves and land available for leasing, 1,426,401 acres.

Although a small amount of freehold land exists in Papua, no further estates in freehold can be granted under the provisions of the *Land Ordinance* 1911–1961 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.

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.

§ 4. Production

1. **General.**—The products of the Territory are obtained principally from its agricultural, forestry, mining and fishing industries. Native subsistence agriculture, fishing and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, bananas and papaws. Peanuts are becoming of increasing importance in native diet. Non-indigenous enterprise produces most of the commodities exported. Indigenous, however, produce copra for export, while native enterprise in other fields of agricultural production for export purposes, e.g., cocoa and coffee, is undertaken. The principal agricultural products of Papua for the export trade are copra and rubber. Native production of copra is increasing. In 1963–64 nearly 3 million super. feet of logs were exported, valued at £60,700. The main products of fisheries exported from Papua are trochus shell and mother-of-pearl. Gold, manganese, zinc-lead and copper ores have been mined in commercial quantities in the past, but current production is limited.

For the sake of convenience, agricultural and pastoral conditions in Papua and New Guinea have been dealt with as a whole, and reference should be made to pages 118–21 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.**—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 pages 131–2.

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. Mangroves occur in large areas fringing the Gulf of Papua. Forestry field work is carried out in Papua with a view to assessing the forest resources available and also to survey areas subsequently made available for cutting.

At 30th June, 1964, 18 permits and 21 licences were current. The total areas of forest involved were 214,921 acres and 38,076 acres respectively. The total number of mills was 21, and the total sawn-timber produced for the year was 5.2 million super. feet, most of which was used locally.

3. **Mining.**—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, current mineral production is not of economic importance.

Gold was discovered in 1888 and has been found since in many parts of Papua. Before the 1939–45 War, gold was an important item in the Territory's production, but it has since dwindled to insignificance.

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.

Since the search for oil began in Papua in 1911, approximately £36 million has been spent. The existence of petroleum has been proved at scattered intervals over a large area, but commercial quantities have not been discovered. At 30th June, 1964, eight companies held interests in petroleum prospecting permits and licences under the provisions of the *Petroleum (Prospecting and Mining) Ordinance 1951–1962*. Oil prospecting is confined mainly to the Gulf and Western Districts, including off-shore areas in the Gulf of Papua.

4. **Fisheries.**—Surveys have been carried out of the fisheries resources of Papua. These have been demonstrated to be considerable, and efforts are being made to increase the present small degree of utilization. Assistance is also being given by the Administration in improving the indigenous methods of fishing, and the use of improved gear is being encouraged by extension workers. Shell fishing, particularly trochus, provides the main cash return, exports being valued at £12,000 in 1963–64.

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 at least 10 million horse-power could be developed.

§ 5. Trade, Transport and Communication

1. **Imports and Exports.**—(i) *Total Values.* The table below summarizes the values of imports and exports for the years 1959–60 to 1963–64.

TERRITORY OF PAPUA: IMPORTS AND EXPORTS

(£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
<i>Imports(a)</i>	8,409,546	9,935,271	9,850,986	10,719,230	13,808,532
Exports—					
Domestic exports	2,986,448	2,468,161	2,389,825	2,524,738	2,659,004
Re-exports	871,111	1,420,992	729,892	812,633	928,290
<i>Total Exports</i>	3,857,559	3,889,153	3,119,717	3,337,371	3,587,294

(a) Includes outside packages.

(ii) *Imports.* The following table shows the countries of origin of imports.

TERRITORY OF PAPUA: COUNTRY OF ORIGIN OF IMPORTS (a)
(£)

Country of origin	1959-60	1960-61	1961-62	1962-63	1963-64
Australia	5,439,082	6,496,989	6,071,044	6,790,355	8,784,170
Canada	6,991	8,801	33,501	17,814	30,021
Germany (Federal Republic) ..	140,250	168,359	186,745	210,110	291,119
Hong Kong	278,796	335,999	416,614	425,076	482,990
Indonesia	365,920	332,358	320,979	403,650	431,176
Japan	407,997	502,695	523,660	508,980	787,717
United Kingdom	552,241	738,164	723,205	772,983	823,786
United States of America	754,548	697,646	676,974	577,086	887,736
Other countries	463,721	654,260	898,264	1,013,176	1,289,817
Total	8,409,546	9,935,271	9,850,986	10,719,230	13,808,532

(a) Includes outside packages except for 1958-59.

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of exports from Papua are shown below.

TERRITORY OF PAPUA: COUNTRY OF DESTINATION OF EXPORTS
(£)

Country of destination	1959-60	1960-61	1961-62	1962-63	1963-64
Australia	3,102,673	2,894,485	2,428,595	2,675,303	2,876,012
United Kingdom	603,453	447,368	423,097	363,800	324,883
Other countries	151,433	547,300	268,025	298,268	386,399
Total	3,857,559	3,889,153	3,119,717	3,337,371	3,587,294

(b) *Principal Commodities.* The following table provides details of the value of the principal domestic exports for the same years.

TERRITORY OF PAPUA: PRINCIPAL DOMESTIC EXPORTS
(£)

Commodity	1959-60	1960-61	1961-62	1962-63	1963-64
Rubber	1,500,197	1,292,151	1,203,786	1,165,370	1,216,948
Copra	1,362,650	1,032,724	945,578	1,042,087	983,805
Cocoa beans	19,185	30,264	22,127	24,066	49,761
Gold	2,003	1,171	295	745	446
Shell (marine)	37,970	19,556	27,486	10,269	12,227
Crocodile skins	21,360	51,577	126,962	157,529	264,337
Other	43,083	40,718	63,591	124,672	131,480
Total	2,986,448	2,468,161	2,389,825	2,524,738	2,659,004

2. **Shipping.**—In 1963–64, 197 British vessels and 40 of other nationalities called at Territory ports and discharged 154,019 tons of cargo and loaded 33,103 tons.

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 monthly services from continental and United Kingdom ports. Coastal and inter-island shipping services are maintained by vessels operating from the two principal ports of Port Moresby and Samarai.

3. **Other Forms of Transport and Communication.**—Scheduled flights provide a network of air transport throughout Papua and regular air services link the Territory with Australia and neighbouring Territories. There were 98 aerodromes and seaplane alighting areas in Papua at 30th June, 1964, and of these 11 were the responsibility of the Department of Civil Aviation, 46 were operated and maintained by the Administration, and 41 owned and maintained by Missions, plantation and mining interests. Much of the internal traffic and freight is carried on a charter basis.

At 30th June, 1964, there were 2,016 miles of road in Papua, of which 1,101 miles were suitable for medium and heavy traffic, the greater proportion being located in the Central, Milne Bay, and Northern Districts.

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, Samarai, Kerema, and Daru to 197 outstations.

Medium and short-wave programmes are broadcast from the Australian Broadcasting Commission stations 9PA and VLT6 located at Port Moresby.

§ 6. Education and Health

1. **Education.**—Education in the Territory is provided by the Administration and various Mission organizations. Schools for indigenes have been also established by Local Government Councils. The *Education Ordinance 1952–1957* enables the Administration to establish an education advisory board, district education committees and European and native schools, and to grant financial aid for educational purposes. European teachers are recruited from Australia and overseas, and indigenous teachers are trained in the Territory by the Administration and Missions. During the year ended 30th June, 1964, 169 schools were maintained by the Administration for 22,365 children, of whom 1,224 were Europeans, 137 Asian or of mixed race, and 21,004 indigenes. A further 1,522 children, all indigenes, were receiving tuition by correspondence. The total number of pupils in the various grades of mission schools was 49,636, of whom there were 256 Europeans, and 38 Asian or 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 £134,370 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1964.

2. **Health.**—The Department of Public Health of the Territory of Papua and New Guinea has the general oversight of all dental and medical services. The Department has the following seven functional divisions: medical services; preventive medicine; medical training; infant, child and maternal health; medical research; administration; and mental health. The services for the Territory of Papua are under the administrative control of a regional medical officer, with headquarters staff at Port Moresby.

At 30th June, 1964, the Administration had established 27 general hospitals, two hospitals (together with special wards in four general hospitals) for the treatment of Hansen's disease, one Hansenide-tuberculosis hospital, two tuberculosis hospitals and one mental hospital; the Missions had established 34 general hospitals, with special wards at Eroro, Sideia and Orokololo for the treatment of Hansen's disease and two Hansenide hospitals. There were 416 village aid posts or medical centres (100 Mission) and 145 maternal and child welfare clinics (5 Mission). School medical examinations, immunization, ante-natal and post-natal care and pre-school services are also provided. The Missions employ their own doctors and nurses in their medical establishments.

For some years, suitably qualified indigenes attended the Central Medical School at Suva, Fiji, to be trained as Assistant Medical Officers. In 1959, the Administration began training to a similar standard at the Papuan Medical College which is associated with the Port Moresby General Hospital. The College, planned to accommodate 600 students eventually, is being built in stages. The course consists of a preliminary year and five years further study. Training for nurses and medical auxiliaries in many categories is also being provided.

The cases treated in hospital are mainly malaria, tropical ulcers, pneumonia, tubercular infections and tuberculosis, bronchitis, and confinements.

§ 7. Finance

The following table shows the principal items of revenue and expenditure for the Territory for each year from 1959-60 to 1963-64.

TERRITORY OF PAPUA: REVENUE AND EXPENDITURE (£)

Item	1959-60	1960-61	1961-62	1962-63	1963-64
REVENUE					
Commonwealth grant	4,948,361	5,515,054	7,179,031	7,864,056	10,011,051
Customs duties(a)	868,813	1,023,644	1,089,571	1,269,993	1,554,320
Income tax	882,558	1,136,394	1,248,973	1,434,735	1,808,281
All other	1,017,446	1,162,620	1,173,730	1,499,561	1,881,929
Total Revenue	7,717,178	8,837,712	10,691,305	12,068,345	15,255,581
EXPENDITURE					
Public health	899,370	1,004,342	1,166,258	1,243,088	1,387,347
Native affairs	446,895	490,154	519,225	521,818	615,417
Education	672,504	754,051	913,156	1,166,377	1,503,601
Maintenance	862,487	1,026,019	1,252,818	1,320,114	1,570,351
Capital works and assets	1,996,824	2,277,046	2,662,845	3,490,684	4,977,893
All other	2,769,535	3,368,410	4,178,606	4,339,612	5,200,839
Total Expenditure	7,647,615	8,920,022	10,692,908	12,081,693	15,255,448

(a) Includes harbour dues and wharfrage.

For particulars of the finances of the combined Territory administration, *see* p. 123.

TRUST TERRITORY OF NEW GUINEA

§ 1. General Description

1. Area, etc.—The land area of the Territory of New Guinea is 92,160 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 coastlines have not been completely surveyed, the areas of the various islands are known only approximately.

The approximate area of the New Guinea mainland is 69,095 square miles and that of adjacent islands, including the Solomon Islands and the Bismarck Archipelago is 23,065 square miles.

Information regarding physiography and climate will be found in Year Book No. 22 page 613, and in the *Official Handbook of the Territory of New Guinea*.

2. **Early Administration.**—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.

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 to the Government of the Commonwealth under Mandate from the League of Nations. However, the issuing of the Mandate was 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 Year Book No. 33 (*see* p. 264).

For particulars of the administration of the Territory of New Guinea prior to the setting-up of the Papua and New Guinea Administration, *see* Year Book No. 36 and earlier issues, and for events following the outbreak of the Pacific War *see* Year Book No. 37 and subsequent issues up to No. 48.

3. **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 Year Book No. 39, pages 355–7.

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.

§ 2. Population

1. **Non-indigenous Population.**—At the Census of 30th June, 1961, the non-indigenous population of the Territory was 9,158 males, 6,378 females, 15,536 persons. The total non-indigenous population at the Censuses of 1921, 1933, 1947 and 1954 was, respectively, 3,173, 5,216, 6,200 and 11,442 persons. At the 1961 Census, the European population numbered 11,702 persons. At 30th June, 1964, the total non-indigenous population was estimated to be 16,920.

2. **Indigenous Population.**—The indigenes 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* Year Book No. 16, p. 670, and *Official Handbook of the Territory of New Guinea*, Pt. V.)

The enumerated and estimated indigenous population of the Territory as at 30th June, 1964, numbered 1,522,156 persons, comprising enumerated, 1,505,586 (791,501 males and 714,085 females), and estimated, 16,570. The total population was distributed throughout the several districts as follows:—Eastern Highlands, 362,243 persons; Western Highlands, 291,718; Sepik, 257,486; Madang, 149,599; Morobe, 214,379; New Britain, 122,196; New Ireland, 41,438; Bougainville, 64,080; Manus, 19,017.

§ 3. 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* 1922–1961, 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 59,000,000 acres, of which at 30th June, 1964, only 1,534,638 acres were alienated. The following was the distribution of alienated land according to tenure at 30th June, 1964:—held by private non-indigenous inhabitants—freehold, 537,401 acres, leasehold, 371,973 acres; held by Administration, 588,637 acres; held by New Guineans 8,961 acres; native reserves, 27,666 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 the *Lands Registration Ordinance* 1924–1955. The land registers were lost during the 1939–1945 War, but provision for restoration of the lost titles is made in the *New Guinea Land Titles Restoration Ordinance* 1951–1955. A start has been made on the recording of native land interests under the *Native Land Registration Ordinance* 1952.

§ 4. Production

1. **General.**—The products of the Territory are obtained principally from its agricultural, mining, fishing and forestry industries. A copra crushing mill near Rabaul, established in 1952, commenced crushing at about 18,000 tons of copra per annum, and its capacity is now about 60,000 tons of copra per annum. Crushing of about 40,000 tons of copra was in view for 1964. At Bulolo, a company is producing high quality moisture-proof plywood in a factory whose capacity is 40 million square feet, on a $\frac{3}{8}$ -in. basis, per annum. Native subsistence agriculture, fishing, and hunting produce most of the food requirements of the indigenous population. The main native agricultural products are taro, yams, sweet potatoes, coconuts, bananas and papaw. Non-indigenous enterprise produces most of the commodities exported. Indigenes, 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 coconut oil, cocoa, and coffee, but exports of timber and timber products are at a high level (see para. 2 below). The main products of fisheries exported from New Guinea are trochus and green snail shell, including that collected by indigenes. Gold is the principal mineral mined. Indigenes are taking an increasing interest in mining for alluvial gold on their own account, and production from this source is continually rising, in contrast to falling European production.

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 pages 118–21. The following paragraphs relate to the timber, fishing and mining industries in the Territory of New Guinea alone.

2. **Timber.**—Various species of timber are found in the Territory, and one accessible pure stand is the valuable pine forests of the Bulolo Valley. This timber is used mainly for the production of plywood and veneer by Commonwealth-New Guinea Timbers Ltd., which has an annual cut of about 10 million super. feet of logs. About 23.3 million square feet of plywood, on a $\frac{3}{8}$ -in. basis, were produced by the company in 1963–64 from these logs and from veneer produced by South Pacific Timbers Limited at Lae. In 1963–64, 20.7 million square feet of plywood valued at £974,199, and 4.5 million square feet of veneer, on a $\frac{1}{8}$ -in. basis, valued at £34,164, were exported. During the year, 16.3 million super. feet of logs, valued at £313,368, and 4.6 million super. feet of sawn timber, valued at £350,952, were also exported from the Territory. The Territory forests also provided fitches, battery veneer and egg-case parts for export.

The Administration operates a training centre for forestry workers, nurseries and a herbarium, and is establishing a research institute in Port Moresby.

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 native people, but must be obtained through the Administration. Royalty is payable on all forest produce taken under permit or licence. Reforestation of areas dedicated for forestry in perpetuity is carried out by the Administration.

At 30th June, 1964, 40 permits and nine licences were current, the total area of forest involved being 479,133 acres and 24,542 acres respectively.

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 £14,862 and green snail shell to the value of £3,214 were exported during 1962–63.

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 first 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 usually found 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 ore occurs as magnetite and haematite in the Baining District. 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 associated silver has not been undertaken.

The granting of rights, leases and claims for mining purposes is provided for in the *Mining Ordinance 1928–1962* and regulations thereunder.

The production of gold in New Guinea since the 1939–45 War has been on a much smaller scale than before the war, averaging less than £700,000 in value per annum for the last five years. The 1963–64 production was valued at only £661,741.

The *Petroleum (Prospecting and Mining) Ordinance 1951–1961* has facilitated the carrying out of geological surveys and prospecting activities generally. There are, however, no prospecting permits for oil current at the present time.

§ 5. Trade, Transport and Communication

1. Imports and Exports.—(i) *Total Values.* The table below summarizes the values of imports and exports for the years 1959–60 to 1963–64.

TERRITORY OF NEW GUINEA: IMPORTS AND EXPORTS

(£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
<i>Imports(a)</i>	12,622,354	16,803,152	16,078,490	17,825,814	21,559,406
<i>Exports—</i>					
Domestic exports	14,117,463	11,788,503	11,932,091	13,844,472	15,671,145
Re-exports	844,893	928,386	849,235	960,300	1,185,921
<i>Total Exports</i>	14,962,356	12,716,889	12,781,326	14,804,981	16,857,066

(a) Includes outside packages.

(ii) *Imports.* The following table summarizes the countries of origin of imports.

TERRITORY OF NEW GUINEA: COUNTRY OF ORIGIN OF IMPORTS(a)
(£)

Country of origin	1959-60	1960-61	1961-62	1962-63	1963-64
Australia	7,836,181	9,741,714	8,710,921	9,724,175	12,014,433
Germany (Federal Republic) ..	286,545	511,325	615,541	644,774	716,344
Hong Kong	745,040	1,050,158	1,053,324	995,368	1,312,446
India	139,720	257,170	146,957	146,406	151,503
Indonesia	629,332	788,183	649,482	823,151	213,415
Japan	945,853	1,246,878	1,406,688	1,310,168	1,874,558
United Kingdom	857,968	1,451,073	1,191,493	1,364,060	1,376,107
United States of America	688,035	965,060	1,142,092	1,227,253	1,300,907
Other countries	493,680	791,591	1,161,992	1,590,459	2,599,693
Total	12,622,354	16,803,152	16,078,490	17,825,814	21,559,406

(a) Includes outside packages except for 1958-59.

(iii) *Exports.* (a) *Countries of Destination.* The countries of destination of exports from New Guinea are shown below.

TERRITORY OF NEW GUINEA: COUNTRY OF DESTINATION OF EXPORTS
(£)

Country of destination	1959-60	1960-61	1961-62	1962-63	1963-64
Australia	6,150,483	5,494,956	5,544,437	6,026,824	7,468,150
United Kingdom	5,371,634	5,013,038	4,594,178	5,265,794	5,487,895
Other countries	3,440,239	2,208,895	2,642,711	3,512,363	3,901,021
Total	14,962,356	12,716,889	12,781,326	14,804,981	16,857,066

(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
(£)

Commodity	1959-60	1960-61	1961-62	1962-63	1963-64
Copra	4,763,793	4,080,590	3,664,845	3,675,913	4,025,153
Other coconut products	4,160,072	2,644,813	2,238,451	2,662,871	2,594,725
Cocoa beans	1,652,132	1,636,060	1,960,436	2,931,632	3,371,705
Coffee beans	709,445	1,094,104	1,546,263	2,011,935	2,662,821
Peanuts	273,797	278,691	303,866	296,012	286,360
Gold	632,729	680,224	717,596	666,787	659,760
Shell (marine)	71,609	34,427	28,589	18,930	38,320
Timber	360,769	260,496	229,070	557,675	664,320
Plywood	1,254,734	865,610	935,100	695,065	974,199
Veneer	41,136	38,051	31,574	36,242	34,164
Other	197,247	175,437	276,301	291,410	359,618
Total	14,117,463	11,788,503	11,932,091	13,844,472	15,671,145

2. **Shipping.**—Regular passenger and freight services operate between Australia, Papua and the Territory of New Guinea. Vessels trading between the East and Australia and the Pacific Islands call at Territory ports, and there are monthly services from continental and United Kingdom ports. 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 Ordinance 1951–1960* and the Coastal Shipping, Ports and Harbours Regulations.

Main ports of call for oversea vessels are Lae, Madang, Alexishafen, 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 Vanimo (mainland), Gasmata and Talasea (New Britain), Namatanai (New Ireland), and Buka Passage (Bougainville).

There are no inland waterways and the natural river system is not generally suitable for vessels except those of small tonnage.

In 1963–64, 289 British vessels and 106 vessels of other nationalities called at Territory ports and discharged 226,594 tons of cargo and loaded 171,729 tons. Corresponding figures for 1962–63 were 268, 111, 199,509 and 177,524 respectively.

3. **Other Forms of Transport and Communication.**—There are no railways in New Guinea, but a road construction programme is being undertaken progressively 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, 1964, was 5,577, of which 3,650 were suitable for heavy and medium traffic.

Scheduled flights provide a network of air transport throughout New Guinea and regular air services link the Territory with Australia and neighbouring territories. There were 182 aerodromes and seaplane alighting areas in New Guinea at 30th June, 1964, and of these 11 were controlled by the Department of Civil Aviation, 68 by the Administration, and 103 by private interests.

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. Nine zone or group centres for radio telegraph communication with out-stations have been established at Lae, Rabaul, Kavieng, Lorengau, Madang, Mt. Hagen, Wewak, Sohano and Goroka. From these centres, radio telegraph services are also available to 508 out-stations.

§ 6. Education and Health

1. **Education.**—Education in the Territory is provided by the Administration and various Mission organizations. Schools for indigenes have also been established by Local Government Councils. The *Education Ordinance 1952–1957* enables the Administrator to establish an education advisory board, district education committees and European and native schools, and to grant financial aid for educational purposes. European teachers are recruited from Australia and overseas, and indigenous teachers are trained in the Territory by the Administration and the Missions. During the year ended 30th June, 1964, 316 schools were maintained by the Administration for 36,113 children, of whom 1,439 were Europeans, 369 Asians, 190 of mixed race and 34,115 indigenes. In addition, 1,819 indigenes were studying by correspondence. The total number of pupils in the various grades of mission schools was 134,494, of whom 239 were Europeans, 132 Asians and 322 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 £355,136 was distributed among the Missions as grants-in-aid during the year ended 30th June, 1964.

For details of the missions operating in the Territory, see Year Book No. 48 and earlier issues.

2. Health.—The cases treated in hospital are mainly malaria, pneumonia, tropical ulcers, bronchitis, tubercular infections and tuberculosis, skin infections and confinements. At 30th June, 1964, there were 70 Administration hospitals, including three Hansenié colonies, two tuberculosis hospitals and one Hansenié and tuberculosis hospital. The Missions have established an additional 79 hospitals, including two Hansenié colonies and one Hansenié and tuberculosis hospital. There are 1,198 village aid posts or medical centres (140 conducted by Missions) and 584 maternity and child welfare centres (110 provided by Missions). The Missions staff their own medical establishments but receive financial assistance from the Administration, which also provides much of their medical stores and supplies.

§ 7. Finance

The principal items of revenue and expenditure for the Territory of New Guinea during the years 1959-60 to 1963-64 are shown in the following table.

TRUST TERRITORY OF NEW GUINEA: REVENUE AND EXPENDITURE (£)

Item	1959-60	1960-61	1961-62	1962-63	1963-64
REVENUE					
Commonwealth grant	7,859,921	9,281,595	10,114,366	12,136,151	15,238,257
Customs duties ^(a)	1,699,039	1,599,298	1,781,050	1,987,063	2,205,920
Income tax	930,405	1,211,584	962,956	1,143,972	1,447,549
All other	1,195,667	1,318,559	1,449,520	1,689,038	2,478,880
Total Revenue	11,685,032	13,411,036	14,307,892	16,956,224	21,370,606
EXPENDITURE					
Public health	1,449,560	1,644,306	1,844,215	2,159,662	2,350,999
Native affairs	801,832	871,085	948,503	948,390	1,053,782
Education	873,159	1,286,235	1,560,054	1,968,847	2,455,677
Police	404,793	459,703	535,688	619,389	626,480
Agriculture, stock and fisheries	552,375	627,431	680,851	777,753	957,758
Posts and telegraphs	446,519	516,499	563,253	663,270	768,562
Trade and industry	144,569	168,722	179,437	276,469	336,929
Forestry	282,786	310,435	305,161	320,017	337,106
Public works department	253,472	315,503	256,538	373,236	477,153
Maintenance	1,204,329	1,319,104	1,551,346	1,814,699	1,863,717
Capital works and assets	2,825,600	<i>b</i> 3,122,576	<i>b</i> 2,803,782	<i>b</i> 3,550,982	<i>b</i> 5,061,718
Other	2,446,038	3,129,769	3,369,500	4,004,985	6,140,404
Total Expenditure	11,685,032	<i>b</i> 13,771,368	<i>b</i> 14,598,328	<i>b</i> 17,477,699	<i>b</i> 22,430,285

(a) Includes harbour dues and wharfage. (b) Includes expenditure chargeable to Loan Fund, £360,332 in 1960-61, £290,436 in 1961-62, £521,475 in 1962-63, and £1,059,679 in 1963-64.

For information on the finances of the combined Territory administration see Papua and New Guinea, § 6, page 123.

TRUST TERRITORY OF NAURU

1. **General.**—Nauru is an oval-shaped atoll about 12 miles in circumference, having an area of about $8\frac{1}{2}$ square miles, of which approximately two-thirds is phosphate-bearing. It is situated in latitude $0^{\circ} 32' S.$ and longitude $166^{\circ} 55' E.$ Portion of the island between the sandy beach and the coral cliffs is comparatively 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 $76^{\circ} F.$ at night to $94^{\circ} F.$ during the day and the average humidity about 80 per cent. Normally the rainfall is comparatively low for islands of the Pacific, the annual 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 the 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, the island was occupied by Japanese forces and communications with Nauru ceased. 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 Year Book No. 39, pages 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. The Administrator is advised on matters affecting the Nauruan community by the Nauru Local Council, consisting of nine Nauruan Councillors elected by adult suffrage. This Council also carries out works and supplies certain services for the Nauruan community, and acts as the Board of Directors of the Nauru Co-operative Society. 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.

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, 1964, had risen to 2,661. Chinese have, for many years, formed a considerable part of the population of Nauru, but their numbers are not as great as formerly; at 30th June, 1964, they amounted to 835. The number of other Pacific Islanders in the early 1920's was almost 300, but they subsequently decreased, then rose again, and at 30th June, 1964, there were 1,023. The European population after 1921 fluctuated, but with a generally upward trend, between one and two hundred, and in recent years has gradually increased, reaching 395 at 30th June, 1964. The total population of Nauru at the Census of 30th June, 1961, was 3,019 males, 1,594 females, 4,613 persons.

Investigations were made to find a suitable alternative home for the Nauruan people after the exhaustion of the phosphate deposits towards the end of this century. After inspection of several islands, Curtis Island, off the Queensland coast, was agreed upon as a suitable location for resettlement purposes. The Nauruans subsequently expressed their intention to remain on Nauru and not resettle elsewhere.

6. **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 administered by the Colonial Office). The quantity remaining on Nauru has been estimated at about 64 million net 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 on 25th June, 1920, 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, a royalty has been payable since 1st July, 1953, for each ton of phosphate exported. As from 1st July, 1962, the rate was increased to 3s. 8d. a ton made up as follows:—

- 10d. to the Nauru Royalty Trust Fund to be used for the benefit of Nauruans;
- 1s. 10d. to the landowner, being an immediate payment of 1s. 2d. a ton, and 8d. a ton to be invested on his account;
- 1s. to the Nauruan Community Long Term Investment Fund.

From 1st July, 1962, the lump sums payable to landowners from whom phosphate-bearing lands are leased were also increased to £120 an acre in respect of land above the 80 ft. contour line.

(iii) *Phosphate Industry.* Exports of phosphate from Nauru in 1963–64 amounted to 1,654,980 tons, valued at £4,427,072, 58 per cent. to Australia, 29 per cent. to New Zealand and 13 per cent. to the United Kingdom. During the five years ended 30th June, 1964, 7,377,150 tons of phosphate were exported.

Apart from a limited number of Europeans, the employees of the Commissioners are Chinese and Pacific Islanders engaged under one year contracts. Increasing numbers of Nauruans are being employed, mainly in trade capacities.

7. **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. Articles imported by the Administration for its own use and spirits for scientific purposes are exempt. The tariff rates apply to all countries alike. In 1963–64 imports were valued at £5,604,100 and exports, 1,654,980 tons of phosphate, at £4,427,072. Of the total imports in 1963–64, Australia supplied 94 per cent. valued at £5,253,508; the balance came mainly from Hong Kong, New Zealand and the United Kingdom.

In 1963–64, 961,530 tons of phosphate were exported to Australia, 480,650 tons to New Zealand and 212,800 tons to the United Kingdom.

8. **Transport.**—There is no regular air service to Nauru, but when the need arises charter flights are made to the island.

There is relatively frequent communication by sea with the island. 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. The total calls by vessels were 178 in 1963-64.

9. **Health.**—Cases of the usual diseases known in the Pacific occur, but the health of all sections of the population is generally satisfactory. 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, 1964, was 37, of whom, however, only three were in segregation at the Hansenside colony. Three hospitals are maintained on the island, one by the Administration for Nauruans, and two by the British Phosphate Commissioners, one for European and one for non-European employees. The Administration also conducts eleven maternity and child health centres. 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 medical examination at intervals of three months.

10. **Education.**—The Administration assumed full responsibility for education on 1st October, 1923. Prior to that date, the education of Nauruan children was undertaken by the Missions, which were subsidized by the Administration. There are four infant schools, three primary schools, one Nauruan secondary school and one mission school providing primary and secondary classes. At 30th June, 1964, 1,019 Nauruans, 94 other Pacific Islanders, 13 Chinese and 80 Europeans were enrolled in the infant and primary schools, and 254 at the two secondary schools.

The curriculum is based generally on that used in Victorian schools, and the teaching is generally in English. Education is compulsory for Nauruan children from six to seventeen years of age. At 30th June, 1964, 58 Nauruans were studying in Australia. Of these, 44 were at secondary schools, and the remainder were receiving vocational training. Thirty-five held Administration scholarships, 12 were Administration cadets, and the remaining 11 were privately sponsored. In addition to these, there were three students at the Central Medical School, Suva, one at the Papuan Medical College, Port Moresby, and two apprentices and one tradesman in Victoria.

11. **Judiciary.**—The District Court is a court of record and consists of such magistrates as the Administrator appoints. Additionally, there is the Central Court which, as a superior court of record, consists of such judges or magistrates as are appointed and which, *inter alia*, may hear and determine appeals from judgments of the District Court. A Court of Appeal comprising a judge appointed by the Administrator has also been constituted, with jurisdiction to hear and determine appeals from judgments of the Central Court.

12. **Revenue and Expenditure.**—The revenue of the Administration for the year 1963-64 amounted to £919,921 and expenditure to £734,724.

Of the revenue, payments by the British Phosphate Commissioners amounted to £878,995, post office and radio receipts, £23,576, and import duties, £6,247. Expenditure comprised salaries, £294,933, general expenses, £56,458, miscellaneous services, £220,993, and capital works and services, £162,340.

HEARD ISLAND AND McDONALD ISLANDS

These islands, about 2,500 miles south-west of Fremantle, were transferred from the United Kingdom to Australia as from 26th December, 1947. The laws of the Australian Capital Territory were declared to be in force in the Territory of Heard Island and McDonald Islands by the *Heard and McDonald Islands Act 1953*.

In December, 1947, an Australian scientific station was established on Heard Island, and meteorological investigations were conducted until the station was closed in March, 1955, following the establishment of Mawson station on the Antarctic mainland. Australian expeditions have since visited the island from time to time. Heard Island 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

An Imperial Order in Council of 7th February, 1933, placed under Australian authority all the islands and territories other than Adelie Land situated south of 60° S. lat. and lying between 160° E. long. and 45° E. long. The Order came into force with a Proclamation issued by the Governor-General on 24th August, 1936, after the passage of the *Australian Antarctic Territory Acceptance Act 1933*. The boundaries of Adelie Land were definitively fixed by a French Decree of 1st April, 1938, as the islands and territories south of 60° S. lat. lying between 136° E. long. and 142° E. long. The *Australian Antarctic Territory Act 1954* declared that the laws in force in the Australian Capital Territory are, so far as they are applicable and are not inconsistent with any ordinance made under the Act, in force in the Australian Antarctic Territory.

On 13th February, 1954, the Australian National Antarctic Research Expeditions (A.N.A.R.E.) established a base on MacRobertson Land at latitude 67° 36' S. and longitude 62° 53' E. The base was named Mawson in honour of the late 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' 36" S. and longitude 77° 58' 36" E. The station was named Davis in honour of Captain John King Davis of Melbourne, who commanded a number of famous Antarctic ships. In February, 1959, the Australian Government accepted from the United States Government custody of Wilkes Station, which was established by the United States on 16th January, 1957, on Vincennes Bay, at latitude 66° 15' S. and longitude 110° 33' E. The station was named in honour of Lieut. Charles Wilkes, who commanded the 1838-40 United States expedition to the area. Scientists from both countries participate in the programme of research at Wilkes. A.N.A.R.E. have also operated a station, since the 1947-48 Antarctic season, at Macquarie Island, approximately 850 miles south-east of Hobart. Macquarie Island is a dependency of the State of Tasmania.

On 1st December, 1959, Australia signed the Antarctic Treaty with Argentina, Belgium, Chile, France, Japan, New Zealand, Norway, South Africa, the U.S.S.R., the United Kingdom and the United States of America. Poland and Czechoslovakia subsequently acceded to the Treaty. The Treaty reserves the Antarctic area south of 60° S. latitude for peaceful purposes, provides for international co-operation in scientific investigation and research, and preserves, for the duration of the Treaty, the *status quo* with regard to territorial sovereignty, rights and claims. The Treaty entered into force on 23rd June, 1961. Since then, the Antarctic Treaty powers have held three consultative meetings under the Treaty, the first at Canberra in July, 1961, the second at Buenos Aires in July, 1962, and the third at Brussels in June, 1964. A meeting on telecommunications was held in Washington in June, 1963.

COCOS (KEELING) ISLANDS

1. **General.**—The Cocos (Keeling) Islands, two separate atolls comprising some 27 small coral islands with a total area of about 5½ 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-west of Perth and 2,290 miles almost due west of Darwin, while 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 are the aerodrome and most of the European community; Home Island, the head-quarters of the Clunies-Ross Estate; Direction Island, on which are situated the Cable and Wireless Station and the Department of Civil Aviation's marine base; and Horsburgh Island. 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., and the average rainfall is 80 inches. There are occasional violent storms. The worst cyclone in the recorded history of the islands was in 1909, when about 400,000 coconut palms were uprooted or decapitated and the accompanying tidal wave left only five buildings standing.

The population at 30th June, 1964, was 663.

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 by 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.

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 were 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.

3. **Administration.**—Responsibility for the administration of the Territory rests with the Minister for Territories. The first Official Representative was appointed on 23rd November, 1955, to take charge of the local administration of the Territory. Under the *Official Representative Ordinance 1955-1961* of the Territory, the Official Representative is given such powers and functions in relation to the Territory as are delegated to him by the Minister under the *Cocos (Keeling) Islands Act 1955-1958* or are otherwise conferred on him under that Act or by or under any other law of the Territory. The laws of the Colony of Singapore which were in force in the islands immediately before the date of the transfer were, with certain exceptions, continued in force by the *Cocos (Keeling) Islands Act 1955-1958*. They 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.

4. **Transport.**—There is an international airport at West Island under the control of the Department of Civil Aviation. This is a re-fuelling point for aircraft of Qantas Empire Airways Ltd., which operates a weekly service between Australia and South Africa, and also for South African Airways, which operates a fortnightly service on the same route. Although there is no regular shipping service, vessels from Australia and Singapore call at intervals.

CHRISTMAS ISLAND

1. **General.**—Christmas Island is an isolated bank situated in the Indian Ocean in latitude 10° 25' 19" S., longitude 105° 42' 57" E. It is approximately 220 miles south from Java Head, at the south entrance to Sunda Strait, 810 miles from Singapore and 1,625 miles from Fremantle. Christmas Island covers an area of about 52 square miles. It

consists of a central plateau at about 600 to 800 feet with several prominent rises up to 1,170 feet. The plateau descends to the sea in a series of steep slopes alternating with terraces, the last dropping in a cliff of 200 to 300 feet to a shore terrace, terminating in a sea cliff of 10 to 150 feet, which is continuous round the island except in a few places, the chief of which is Flying Fish Cove where the shore is formed of coral shingles.

The principal settlement is at Flying Fish Cove which is also the only known anchorage. Vessels are moored close inshore opposite two piers with extension conveyors, by which means direct loading to ships is carried out. The main installations of the phosphate industry are located here, together with the European married quarters and the Chinese and Malay settlements. There is a secondary settlement with maintenance shops, etc., at South Point, and several other small settlements or camps across the central plateau and at the small pumping plants at springs and wells. A stream at Waterfall Beach feeds a dam which supplies the settlement at Flying Fish Cove.

The climate is healthy and pleasant, the prevailing winds being from the south-east to east-south-east from May to December, but from then to April (the wet season) they occasionally shift round from north to north-east. The average yearly rainfall is about 80 inches with a marked summer incidence. The porous nature of the ground prevents the formation of pools of water, but there are several good springs which maintain an adequate supply of fresh water for the small population and the installations. The mean average temperature is about 80° and does not vary greatly throughout the year.

The population of Christmas Island at 30th June, 1961, was 3,099 (1,963 males and 1,136 females). At 30th June, 1964, the total population was 3,382.

2. **Education.**—At 30th June, 1964, there were two school systems on the Island—the Christmas Island school system which serves the majority of the children, and a European school which serves a small number of children. The Christmas Island school system follows the Singapore curriculum, with 23 teachers, mostly Singapore trained, and 787 pupils (641 primary and 146 secondary). The European school follows the Western Australian primary school syllabus, with one teacher seconded from the Western Australian Department of Education, and 30 pupils.

Four Administration scholarships are available each year for Asian students who have completed a three year secondary course to enable them to receive further secondary education at Singapore or Malaya up to University Matriculation level. An education allowance of £145 per annum, plus annual return fare for the scholar, is paid to Europeans resident in the Territory who send their children to Australia for secondary education. The British Phosphate Commission awards scholarships from time to time.

3. **History and Administration.**—The first mention of Christmas Island appears in a map published in Holland in 1666, in which it is called Moni Island, although it is believed that Captain William Mynors of the East India Company had sighted the island on Christmas Day in 1643 and had named it accordingly.

In June, 1888, it was annexed by Captain H. W. May of H.M.S. *Imperieuse* as part of the British Dominions and placed under the supervision of the Straits Settlements Government for administrative purposes. Following upon this, a small settlement was established at Flying Fish Cove by Mr. G. Clunies-Ross of Cocos (Keeling) Islands. In February, 1891, Sir John Murray and Mr. Clunies-Ross were granted a 99-year lease of the Island. This lease was transferred to the Christmas Island Phosphate Co. Ltd. in 1897, following the discovery of large deposits of phosphate of lime on the island. In 1900, Christmas Island was incorporated for administrative purposes with the Settlement of Singapore and the laws of Singapore were generally applied to the island.

The Straits Settlements (Repeal) Act 1946, passed by the United Kingdom, repealed the Act establishing the whole of the Straits Settlements as a single colony. Subsequently, the Singapore Colony Order in Council, in 1946, decreed that the Island of Singapore and its dependencies, the Cocos or Keeling Islands and Christmas Island should be governed and administered as a separate Colony and called the Colony of Singapore. From 1st January, 1958, pending transfer to Australia, Christmas Island was administered by the United Kingdom as a separate Crown Colony. The Island was transferred to the Commonwealth of Australia on 1st October, 1958, by the *Christmas Island Act 1958*, and is now administered as a Territory under the authority of the Commonwealth.

Responsibility for the administration and government of the Territory rests with the Minister for Territories, and day to day affairs on the island are administered by an Official Representative under delegation from the Minister. The laws which were in force in the island at 30th September, 1958, were continued as the laws of the Territory after its transfer to Australia on 1st October.

4. Phosphate Deposits.—The only commercial activity carried out is the mining of phosphate. The British Phosphate Commissioners act as managing agents for the Christmas Island Phosphate Commission.

There are three principal phosphate deposits on the island of which the largest is that now being worked at South Point. This field is situated on the 600 feet to 800 feet level and is approximately 11 miles from the drying and shipping plant at Flying Fish Cove. During 1963-64, 747,809 tons of phosphate ore were mined and exported to Australia; 4,202 tons of phosphate dust were shipped to Australia and 66,865 tons to Malaya. The extraction rate is being progressively increased.

There is little prospect of any economic development outside the phosphate industry.

5. Transport.—Transport to and from the island is maintained by vessels operated under charter by the Christmas Island Phosphate Commission. One vessel makes regular trips between Christmas Island and Singapore, and other vessels carry phosphate to Fremantle and other Australian ports.

CHAPTER VI

MANUFACTURING INDUSTRY

NOTE.—Further detail on the subjects dealt with in this chapter is contained in the annual printed bulletins *Secondary Industries*, Parts I and II. Information is also published, as soon as the data can be prepared, in a series of 35 annual mimeographed bulletins, *Manufacturing Industries*, each relating to a particular industry or group of industries. Details of the industries covered are contained in Statistical Publications of Australia, of the Miscellaneous chapter. Advance annual information is published in mimeographed form in *A Summary of Principal Statistics of Factories* and in *Principal Factory Products*. Current information on factory products is available in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Monthly Bulletin of Production Statistics*. A preliminary annual statement (*Factory Statistics*) and monthly statement (*Production Statistics*) are also issued.

In addition to the above-mentioned publications, there is also a series of 48 *Monthly Production Summaries*, each relating to the production of a particular commodity or group of commodities (see reference above to Statistical Publications).

§ 1. General

1. **Introduction.**—A complete statistical account of the growth of the manufacturing industry in Australia cannot be given, as the necessary statistics were not collected by the several States on a definite and uniform basis prior to 1906. A standard classification of manufacturing industries was formulated at a conference of Australian statisticians in 1902 and adopted by all States in 1906, and 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 engaged primarily in the production of goods for local use, mainly 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 factor in the post-war growth of manufacturing industry in Australia was the creation in 1921 of the Tariff Board (see Chapter XIV. Oversea Trade). As well as encouraging primary industries, the Board, by means of protective tariffs, assisted new manufacturing industries until they were soundly established, and local manufacturers who had been adversely affected by oversea competition.

This expansion was checked 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 their demands, as well as those arising locally because of interruption of oversea imports, 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 responsibility 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 has been 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 assisted decentralization by allocating munitions and other defence buildings in decentralized areas to private industry and by 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.

In the last ten years the proportion of total factory employment engaged in metropolitan factories has been relatively steady, varying from 73.6% in 1953-54 to 73.8% in 1956-57, 73.9% in 1959-60 and 73.7% in 1962-63.

3. 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 XIV. Oversea 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.

Products on which bounties were paid in 1962-63 included tractors, certain processed milk products, sulphuric acid, sulphate of ammonia, cellulose acetate flake and rayon yarn.

4. Scientific Research and Standardization.—(i) *The Commonwealth Scientific and Industrial Research Organization.* The function of this Organization is to initiate and conduct research in connexion with industries in Australia, to train research workers, to establish industrial research studentships 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. For further information concerning the work of the Organization, see Chapter XIX. Education, Cultural Activities and Research.

(ii) *The 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. For further information on this organization see Chapter XIX. Education, Cultural Activities and Research.

(iii) *The National Association of Testing Authorities.* The National Association of Testing Authorities organizes testing facilities throughout Australia to serve private and governmental needs. For further information on this organization see Chapter XIX. Education, Cultural Activities and Research.

(iv) *Industrial Design Council of Australia.* The Industrial Design Council of Australia was established in June, 1958, for the purpose of encouraging better design in Australian-made goods and fostering an appreciation of good design throughout the community. The decision to set up the Council arose from a realization on the part of representatives of industry and government, designers and educationists, that there was a pressing need in Australia for an independent and authoritative body to promote better design in the interests of trade development.

The Council has a membership fully representative of industry, commerce and government, together with designers and educationists. It is financed by donations from industry and by Commonwealth grants. In 1962, the Commonwealth Government announced a grant to the Council of up to £20,000 a year for the next three years. State Committees for Industrial Design are being set up in order to extend the Council's activities throughout Australia and to co-ordinate efforts for the promotion of better design.

The Australian Design Index provides a detailed, illustrated record of well-designed Australian products. Housed in visual index cabinets, this constantly growing record of good Australian design is freely available for reference. Products accepted for the Design Index carry the "Good Design" label.

The first Australian Design Centre, established at 21 Degraves Street, Melbourne, exhibits products included in the Design Index and presents exhibitions which show the meaning of good design in everyday things. Displays and exhibitions are also arranged in other States.

As part of its programme of assisting industry, the Council conducts lectures dealing with various aspects of design and issues information bulletins. Design counselling is available to manufacturing companies on request, and manufacturers seeking the services of designers are put in touch with qualified people. A Record of Designers has been set up to register information about industrial designers and their work.

The Council is also concerned, in co-operation with education authorities, with raising the standard of training in industrial design.

5. Definitions in Factory Statistics.—The statistics relating to factories have been compiled from tabulations made by the Deputy Commonwealth Statisticians in the several States from returns supplied to them annually by manufacturers in accordance with the statistical acts of the States and the Commonwealth. 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 small-goods makers, laundries, 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, etc., of their employees, salaries and wages paid, the value of premises and equipment, the horse-power of machinery, the value of raw materials (including containers, tools replaced, etc., the values and in most cases the quantities of fuel used, and quantities and values of principal materials used and articles produced. The returns obtained from manufacturers are not intended to show a complete record of the income and expenditure of factories nor to show the profits or losses of factories collectively or individually.

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 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.

Value of materials used 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 includes also the cost of power and light used, of lubricants and of water.

The value of factory output is the value of the goods manufactured or their value after passing through the particular process of manufacture concerned, 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 material 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, timber from the sawmills used in furniture factories and in joinery, and synthetic resins from chemical works used to make plastic products. 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.

The rated horse-power of engines used for factories other than central electric stations relates to the rated horse-power of engines ordinarily in use.

Statistics relating to factory activity in the Australian Capital Territory and Northern Territory are not included in the figures contained in this chapter.

6. 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 1945 Conference of Statisticians.

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. Some 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, Part I—Factory and Building Operations*, published annually.

The 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, vegetable
Oils, mineral
Oils, animal
Boiling-down, tallow-refining
Soap and candles.
Chemical fertilizers
Inks, polishes, etc.
Matches
Other

CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES

Smelting, converting, refining, rolling of iron and steel
Foundries (ferrous)
Plant, equipment and machinery, including machine tools
Other engineering
Extracting and refining of other metals; alloys
Electrical machinery, cables and apparatus
Construction and repair of vehicles (9 groups)
Ship and boat building and repairing, marine engineering (government and other)
Cutlery and small hand tools
Agricultural machines and implements
Non-ferrous metals—
Rolling and extrusion
Founding, casting, etc.
Sheet metal working, pressing, and stamping
Pipes, tubes and fittings—ferrous
Wire and wire working (including nails)
Stoves, ovens and ranges
Gas fittings and meters
Lead mills
Sewing machines

CLASS IV.—INDUSTRIAL METALS, MACHINES, CONVEYANCES—continued

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
Textile dyeing, printing and finishing
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 and other goods of leather and leather substitutes

CLASS VIII.—CLOTHING (EXCEPT KNITTED)

Tailoring and ready-made clothing
Waterproof and oilskin clothing
Dressmaking, hemstitching
Millinery
Shirts, collars, underclothing
Foundation garments
Handkerchiefs, ties and scarves
Hats and caps
Gloves
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 corncrushing
Bakeries (including cakes and pastry)
Biscuits
Sugar-mills
Sugar-refining

CLASS IX.—FOOD, DRINK AND TOBACCO—

continued

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 cream
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
Woodturning, woodcarving, etc.
Basketware and wickerware (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 XII.—FURNITURE OF WOOD, BEDDING, ETC.—
continued

Picture frames
Blinds

CLASS XIII.—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 material (including developing and printing)
Toys, games and sports requisites
Artificial flowers
Other

CLASS XVI.—HEAT, LIGHT, AND POWER

Electric light and power
Gas works

7. Factory Development since 1901, Australia.—The development of the manufacturing industries in Australia at intervals since 1901 is summarized in the following table.

FACTORIES: AUSTRALIA

Year	Factories	Employment(a)	Salaries and wages paid(b)	Value of—				
				Materials and fuel used	Output	Production (c)	Land and buildings	Plant and machinery
	No.	'000.	£'000.	£'000.	£'000.	£'000.	£'000.	£'000.
1901 ..	11,143	198	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
1911 ..	14,455	312	27,528	81,763	133,022	51,259	32,701	31,516
1920-21 ..	17,113	367	62,932	213,559	323,993	110,434	60,831	68,655
1930-31 ..	21,751	339	62,455	172,489	290,799	118,310	112,211	124,498
1940-41 ..	27,300	650	137,919	386,881	644,795	257,914	144,094	161,356
1950-51 ..	43,147	969	491,718	1,306,963	2,150,835	843,872	302,785	336,615
1958-59 ..	54,888	1,088	970,553	2,649,331	4,491,932	1,842,601	947,899	1,108,385
1959-60 ..	56,657	1,132	1,086,359	2,948,814	5,023,696	2,074,882	1,063,852	1,220,064
1960-61 ..	57,782	1,145	1,143,836	3,047,344	5,217,148	2,169,804	1,193,590	1,391,490
1961-62 ..	58,450	1,121	1,142,519	3,047,151	5,242,089	2,194,938	1,403,838	1,524,787
1962-63 ..	59,146	1,167	1,222,466	3,332,149	5,728,163	2,396,014	1,502,180	1,642,028
1963-64p ..	59,362	1,210	1,325,971	3,684,267	6,319,040	2,634,773	1,602,181	1,739,633

(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 added in process of manufacture (i.e., value of output less value of materials and fuel, etc., used).

Note.—Revised figures for the motor engineering and electricity generating industries in Victoria were received too late for insertion in §§ 1-9 of this chapter. They have however, been incorporated in the individual industry tables in § 11, pages 187 and 202. Amended figures for the earlier sections will be found in the appendix.

§ 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 1958-59 to 1962-63.

FACTORIES: NUMBER

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1958-59	22,684	16,527	5,651	4,235	4,125	1,666	54,888
1959-60	23,274	16,979	5,758	4,684	4,279	1,683	56,657
1960-61	23,585	17,173	5,882	5,042	4,334	1,766	57,782
1961-62	23,629	17,300	5,824	5,519	4,418	1,760	58,450
1962-63	23,729	17,500	5,895	5,766	4,492	1,764	59,146

2. Number of Factories in Industrial Classes.—(i) *Australia*. The next table shows the number of factories in Australia for the years 1958-59 to 1962-63 classified to 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.

FACTORIES: NUMBER IN INDUSTRIAL CLASSES, AUSTRALIA

Class of industry	1958-59	1959-60	1960-61	1961-62	1962-63
I. Treatment of non-metalliferous mine and quarry products	1,344	1,374	1,434	1,454	1,493
II. Bricks, pottery, glass, etc.	663	682	694	694	692
III. Chemicals, dyes, explosives, paints, oils, grease ..	1,218	1,248	1,258	1,285	1,288
IV. Industrial metals, machines, conveyances	21,254	22,622	23,532	24,193	24,914
V. Precious metals, jewellery, plate	818	823	859	911	918
VI. Textiles and textile goods (not dress)	1,373	1,435	1,421	1,386	1,368
VII. Skins and leather (not clothing or footwear) ..	729	727	703	671	656
VIII. Clothing (except knitted)	7,195	7,267	7,493	7,561	7,614
IX. Food, drink and tobacco	7,580	7,449	7,331	7,251	7,161
X. Sawmills, joinery, boxes, etc., wood turning and carving	5,676	5,771	5,732	5,634	5,521
XI. Furniture of wood, bedding, etc.	2,184	2,211	2,176	2,157	2,154
XII. Paper, stationery, printing, bookbinding, etc. ..	2,518	2,619	2,688	2,739	2,774
XIII. Rubber	606	620	629	650	659
XIV. Musical instruments	86	87	88	85	86
XV. Miscellaneous products	1,251	1,330	1,370	1,409	1,486
<i>Total, Classes I. to XV.</i>	<i>54,495</i>	<i>56,265</i>	<i>57,408</i>	<i>58,080</i>	<i>58,784</i>
XVI. Heat, light and power	393	392	374	370	362
Grand Total	54,888	56,657	57,782	58,450	59,146

(ii) *States, 1962-63.* The following table shows the number of factories in each State classified by nature of industry.

FACTORIES: NUMBER IN INDUSTRIAL CLASSES, 1962-63

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	512	477	120	182	151	51	1,493
II. Bricks, pottery, glass, etc. ..	307	183	53	80	50	19	692
III. Chemicals, dyes, explosives, paints, oils, grease ..	612	390	86	97	74	29	1,288
IV. Industrial metals, machines, conveyances ..	10,087	6,944	2,440	2,781	2,060	602	24,914
V. Precious metals, jewellery, plate ..	365	247	44	169	74	19	918
VI. Textiles and textile goods (not dress) ..	440	781	31	58	39	19	1,368
VII. Skins and leather (not clothing or footwear) ..	302	240	44	40	24	6	656
VIII. Clothing (except knitted) ..	3,423	2,545	565	594	390	97	7,614
IX. Food, drink and tobacco ..	2,530	1,989	976	744	624	298	7,161
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	2,072	1,332	799	409	451	458	5,521
XI. Furniture of wood, bedding, etc. ..	802	635	260	218	170	69	2,154
XII. Paper, stationery, printing, bookbinding, etc. ..	1,187	987	214	197	146	43	2,774
XIII. Rubber ..	234	180	115	57	51	22	659
XIV. Musical instruments ..	36	24	7	11	8	..	86
XV. Miscellaneous products ..	731	484	74	96	85	16	1,486
<i>Total Classes I. to XV. ..</i>	<i>23,640</i>	<i>17,438</i>	<i>5,828</i>	<i>5,733</i>	<i>4,397</i>	<i>1,748</i>	<i>58,784</i>
XVI. Heat, light and power ..	89	62	67	33	95	16	362
Grand Total ..	23,729	17,500	5,895	5,766	4,492	1,764	59,146

§ 3. Classification of Factories by Number of Persons Employed

NOTE.—The size classification of factories is based on the average weekly number of persons employed during the period of operation (including working proprietors).

1. *States, 1962-63.*—The following table shows, for each State, the number of factories classified by the average number of persons employed.

FACTORIES: CLASSIFICATION BY SIZE OF FACTORY, 1962-63

Size of factory (Persons employed)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
NUMBER OF FACTORIES							
Under 4	10,357	6,332	2,186	2,674	2,235	759	24,543
4	1,872	1,347	542	491	355	180	4,787
5 to 10	5,283	4,124	1,550	1,228	950	425	13,560
11 to 20	2,773	2,424	731	621	440	179	7,168
21 to 50	1,977	1,856	524	429	328	140	5,254
51 to 100	761	709	172	171	111	40	1,964
101 to 200	381	397	99	82	42	22	1,023
201 to 300	114	129	52	25	17	6	343
301 to 400	71	55	18	12	7	4	167
401 to 500	34	36	6	8	4	1	89
501 to 750	42	55	9	12	..	2	120
751 to 1,000	29	15	3	4	2	2	55
Over 1,000	35	21	3	9	1	4	73
Total ..	23,729	17,500	5,895	5,766	4,492	1,764	59,146

The relative importance of large and small factories is illustrated by the following classification of the average number of persons employed by the size of factory in which they worked.

FACTORIES: AVERAGE NUMBER OF PERSONS EMPLOYED, BY SIZE OF FACTORY, 1962-63

Size of factory (Persons employed)	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING PERIOD WORKED							
Under 4	19,086	12,665	4,516	4,846	4,130	1,512	46,755
4	7,484	5,388	2,168	1,964	1,420	720	19,144
5 to 10	36,733	29,129	10,668	8,531	6,453	2,973	94,487
11 to 20	40,954	35,766	10,619	9,149	6,333	2,595	105,416
21 to 50	62,108	58,890	16,623	13,739	10,317	4,477	166,154
51 to 100	54,360	49,734	12,114	11,819	7,653	2,860	138,540
101 to 200	52,918	56,308	13,950	11,497	5,670	2,939	143,282
201 to 300	27,661	31,505	12,563	5,913	3,811	1,473	82,926
301 to 400	24,768	18,940	6,464	3,984	2,305	1,297	57,758
401 to 500	15,181	16,100	2,581	3,555	1,833	448	39,698
501 to 750	25,633	32,908	5,331	7,684	..	1,282	72,838
751 to 1,000	24,663	13,578	2,787	3,497	1,713	1,757	47,995
Over 1,000	86,856	38,247	5,229	19,584	2,686	6,797	159,399
Total	478,405	399,158	105,613	105,762	54,324	31,130	1,174,392
Average per factory ..	20.16	22.81	17.92	18.34	12.09	17.65	19.86

2. Australia.—(i) *Size Group, 1958-59 to 1962-63.* The following table gives details according to broad groups for the last five years.

FACTORIES: CLASSIFICATION BY NUMBER OF PERSONS EMPLOYED, AUSTRALIA

Year	Establishments employing on the average—							
	20 and under		21 to 100		101 and upwards		Total	
	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed
1958-59—								
Number	46,345	253,375	6,825	282,735	1,718	560,553	54,888	1,096,663
Average per establish- ment .. .. .	..	5.47	..	41.43	..	326.28	..	19.98
1959-60—								
Number	47,791	258,162	7,078	293,400	1,788	587,832	56,657	1,139,394
Average per establish- ment .. .. .	..	5.40	..	41.45	..	328.77	..	20.11
1960-61—								
Number	48,728	260,276	7,241	301,251	1,813	591,808	57,782	1,153,335
Average per establish- ment .. .. .	..	5.34	..	41.60	..	326.42	..	19.96
1961-62—								
Number	49,546	261,679	7,111	296,907	1,793	569,976	58,450	1,128,562
Average per establish- ment .. .. .	..	5.28	..	41.75	..	317.89	..	19.31
1962-63—								
Number	50,057	265,802	7,217	304,694	1,872	603,896	59,146	1,174,392
Average per establish- ment .. .. .	..	5.31	..	42.22	..	322.59	..	19.86

(ii) *Classes of Industry, 1962-63.* In the following table, factories in industrial classes are classified in the same broad groups by the number of persons employed in 1962-63.

FACTORIES: AVERAGE NUMBER OF PERSONS EMPLOYED IN INDUSTRIAL CLASSES, BY SIZE OF FACTORY, AUSTRALIA, 1962-63

Class of industry	Establishments employing on the average—							
	20 and under		21 to 100		101 and upwards		Total	
	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed	Es- tablish- ments	Persons em- ployed
I. Treatment of non-metalliferous mine and quarry products ..	1,299	7,094	154	6,393	40	10,577	1,493	24,064
II. Bricks, pottery, glass, etc. ..	437	3,290	207	9,364	48	12,715	692	25,369
III. Chemicals, dyes, explosives, paints, oils, grease ..	913	5,917	274	12,945	101	29,017	1,288	47,879
IV. Industrial metals, machines, conveyances ..	21,680	107,540	2,476	105,185	758	313,558	24,914	526,283
V. Precious metals, jewellery, plate ..	876	3,707	41	1,483	1	140	918	5,330
VI. Textiles and textile goods (not dress)	839	6,441	359	16,353	170	49,649	1,368	72,443
VII. Skins and leather (not clothing or footwear) ..	515	3,341	123	5,244	18	3,726	656	12,311
VIII. Clothing (except knitted) ..	6,367	31,908	1,077	44,316	170	32,876	7,614	109,100
IX. Food, drink and tobacco ..	6,064	31,155	850	36,642	247	65,172	7,161	132,969
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	4,908	28,443	555	20,897	58	8,882	5,521	58,222
XI. Furniture of wood, bedding, etc. ..	1,904	9,849	226	8,711	24	3,508	2,154	22,068
XII. Paper, stationery, printing, book-binding, etc. ..	2,065	14,754	582	24,746	127	36,958	2,774	76,458
XIII. Rubber ..	584	3,012	45	1,755	30	14,188	659	18,955
XIV. Musical instruments	76	316	10	433	..	..	86	749
XV. Miscellaneous products ..	1,257	7,628	184	7,760	45	10,876	1,486	26,264
<i>Total, Classes I. to XV. ..</i>	<i>49,784</i>	<i>264,395</i>	<i>7,163</i>	<i>302,227</i>	<i>1,837</i>	<i>591,842</i>	<i>58,784</i>	<i>1,158,464</i>
XVI. Heat, light and power	273	1,407	54	2,467	35	12,054	362	15,928
Grand Total ..	50,057	265,802	7,217	304,694	1,872	603,896	59,146	1,174,392

§ 4. 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 "out-workers" (see para. 4, p. 155), 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. From 1945-46 the occupational groupings collected were—(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; but from 1960-61 the last three categories were amalgamated into one group—(iv) foremen and overseers, workers in factory and others.

Statistics of factory employment represent the equivalent average number employed over a full year of fifty-two weeks except for the classification of factories according to the number of persons employed (see § 3, p. 150), which is based on the average number employed over the period worked.

(ii) *Australia.* Particulars of the numbers employed, the increase in employment and the rate per cent. of such increase are given for the years 1958-59 to 1962-63 in the following table.

FACTORIES: EMPLOYMENT, AUSTRALIA

Year	Males			Females			Persons		
	Number employed	Increase on preceding year		Number employed	Increase on preceding year		Number employed	Increase on preceding year	
		Number	Per cent.		Number	Per cent.		Number	Per cent.
1958-59 ..	834,940	12,425	1.51	253,316	2,024	0.81	1,088,256	14,449	1.35
1959-60 ..	862,185	27,245	3.26	269,492	16,176	6.39	1,131,677	43,421	3.99
1960-61 ..	872,100	9,915	1.15	272,632	3,140	1.17	1,144,732	13,055	1.15
1961-62 ..	857,457	-14,643	-1.68	263,209	-9,423	-3.46	1,120,666	-24,066	-2.10
1962-63 ..	888,113	30,656	3.58	278,745	15,536	5.90	1,166,858	46,192	4.12

NOTE.—Minus sign (—) indicates decrease.

(iii) States. The following table shows, for the same years, the average number of persons employed in manufacturing industries in each State; the percentage for each State of the total number employed in factories in Australia; and the number so employed per thousand of mean population in each State and Australia.

FACTORIES: EMPLOYMENT

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
AVERAGE NUMBER EMPLOYED DURING FULL YEAR (52 WEEKS)							
1958-59 ..	449,518	362,979	104,753	94,165	48,417	28,424	1,088,256
1959-60 ..	467,139	381,514	104,693	99,018	49,651	29,662	1,131,677
1960-61 ..	472,061	387,430	104,462	99,955	50,666	30,158	1,144,732
1961-62 ..	461,087	377,745	101,637	99,094	51,033	30,070	1,120,666
1962-63 ..	475,249	397,156	104,998	105,265	53,435	30,755	1,166,858
PERCENTAGE OF AUSTRALIAN TOTAL							
1958-59 ..	41.31	33.35	9.63	8.65	4.45	2.61	100
1959-60 ..	41.28	33.71	9.25	8.75	4.39	2.62	100
1960-61 ..	41.24	33.85	9.13	8.73	4.43	2.62	100
1961-62 ..	41.14	33.71	9.07	8.84	4.56	2.68	100
1962-63 ..	40.72	34.04	9.00	9.02	4.58	2.64	100
PER 1,000 OF POPULATION							
1958-59 ..	121	132	72	104	69	84	109
1959-60 ..	123	135	71	106	69	86	111
1960-61 ..	120	131	68	102	68	85	108
1961-62 ..	117	128	67	101	68	84	106
1962-63 ..	118	131	68	105	70	85	109

2. Rates of Increase, 1958-59 to 1962-63.—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

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1958-59 ..	0.83	1.63	2.86	1.83	-0.09	1.21	1.35
1959-60 ..	3.92	5.11	-0.06	5.15	2.55	4.36	3.99
1960-61 ..	1.05	1.55	-0.22	0.95	2.04	1.67	1.15
1961-62 ..	-2.32	-2.50	-2.70	-0.86	3.22	-0.29	-2.10
1962-63 ..	3.07	5.14	3.31	6.23	4.71	2.28	4.12

NOTE.—Minus sign (—) indicates decrease.

3. Persons Employed in Industrial Classes.—(i) *Australia*. The following table shows the average number of persons employed in factories in each industrial class in Australia for the years 1958–59 to 1962–63.

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, AUSTRALIA

Class of industry	1958–59	1959–60	1960–61	1961–62	1962–63
I. Treatment of non-metalliferous mine and quarry products	21,093	21,778	23,363	23,182	23,889
II. Bricks, pottery, glass, etc.	23,093	24,308	24,612	24,108	25,152
III. Chemicals, dyes, explosives, paints, oils, grease	47,876	47,617	46,833	46,830	47,535
IV. Industrial metals, machines, conveyances	469,446	498,192	509,939	496,975	524,641
V. Precious metals, jewellery, plate	5,483	5,308	5,342	5,226	5,308
VI. Textiles and textile goods (not dress)	67,467	72,263	71,092	67,949	72,022
VII. Skins and leather (not clothing or footwear)	12,935	12,952	12,310	11,955	12,264
VIII. Clothing (except knitted)	106,098	106,830	107,158	104,655	107,932
IX. Food, drink and tobacco	125,408	126,154	126,477	128,590	131,301
X. Sawmills, joinery, boxes, etc., wood turning and carving	60,101	61,651	60,810	57,279	57,114
XI. Furniture of wood, bedding, etc.	22,110	22,902	22,219	21,374	21,815
XII. Paper, stationery, printing, bookbinding, etc.	68,327	71,672	74,582	73,839	76,263
XIII. Rubber	18,467	18,663	18,395	17,174	18,916
XIV. Musical instruments	1,025	936	812	733	749
XV. Miscellaneous products	22,286	23,851	24,757	24,682	26,124
<i>Total, Classes I. to XV.</i>	<i>1,071,215</i>	<i>1,115,077</i>	<i>1,128,701</i>	<i>1,104,551</i>	<i>1,151,025</i>
XVI. Heat, light and power	17,041	16,600	16,031	16,115	15,833
Grand Total	1,088,256	1,131,677	1,144,732	1,120,666	1,166,858

(ii) *States*. Particulars of the numbers employed in each industrial class are shown for each State in the following table.

FACTORIES: PERSONS EMPLOYED IN INDUSTRIAL CLASSES, 1962-63

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	9,582	7,156	2,280	2,282	1,776	813	23,889
II. Bricks, pottery, glass, etc.	12,617	7,007	1,403	2,225	1,518	382	25,152
III. Chemicals, dyes, explosives, paints, oils, grease	23,160	16,062	1,751	2,944	2,692	926	47,535
IV. Industrial metals, machines, conveyances	230,313	161,978	38,296	60,470	23,249	10,335	524,641
V. Precious metals, jewellery, plate	2,179	2,022	316	539	209	43	5,308
VI. Textiles and textile goods (not dress)	21,232	41,930	2,243	2,533	871	3,213	72,022
VII. Skins and leather (not clothing or footwear)	5,237	3,993	1,184	1,164	625	61	12,264
VIII. Clothing (except knitted)	44,566	46,795	7,765	5,098	2,992	716	107,932
IX. Food, drink and tobacco	41,046	39,425	26,941	11,241	7,560	5,088	131,301
X. Sawmills, joinery, boxes, etc., wood turning and carving	19,055	14,639	9,097	5,311	5,347	3,665	57,114
XI. Furniture of wood, bedding, etc.	8,758	6,375	2,643	2,191	1,372	476	21,815
XII. Paper, stationery, printing, bookbinding, etc.	31,617	25,927	6,426	4,868	3,006	4,419	76,263
XIII. Rubber	7,591	7,806	1,891	1,148	348	132	18,916
XIV. Musical instruments	458	192	33	32	34	..	749
XV. Miscellaneous products	12,339	11,056	734	1,256	619	120	26,124
<i>Total, Classes I. to XV.</i>	<i>469,750</i>	<i>392,363</i>	<i>103,003</i>	<i>103,302</i>	<i>52,218</i>	<i>30,389</i>	<i>1,151,025</i>
XVI. Heat, light and power	5,499	4,793	1,995	1,963	1,217	366	15,833
Grand Total	475,249	397,156	104,998	105,265	53,435	30,755	1,166,858

4. Persons Employed According to Occupational Grouping.—In the following table, the average number of persons employed in each State during 1962–63 is classified according to occupational grouping. As stated in para. 1 of this section (*see p. 152*), persons employed in factories are now classified on a basis different from that adopted prior to 1960–61.

FACTORIES: PERSONS EMPLOYED, OCCUPATIONAL GROUPING, 1962-63

State	Average number of persons employed				
	Working proprietors	Managerial and clerical staff, etc.(a)	Chemists, draftsmen, etc.	Foremen and overseers, workers in factory and others(b)	Total
New South Wales	14,299	62,300	8,771	389,879	475,249
Victoria	12,784	50,730	7,839	325,803	397,156
Queensland	4,717	11,806	1,339	87,136	104,998
South Australia	4,103	13,237	1,923	86,002	105,265
Western Australia	2,879	5,242	620	44,694	53,435
Tasmania	1,080	3,407	674	25,594	30,755
<i>Total Males</i>	<i>33,886</i>	<i>90,245</i>	<i>19,110</i>	<i>744,872</i>	<i>888,113</i>
<i>Total Females</i>	<i>5,976</i>	<i>56,477</i>	<i>2,056</i>	<i>214,236</i>	<i>278,745</i>
Total Persons	39,862	146,722	21,166	959,108	1,166,858

(a) Includes salaried managers and working directors at home.

(b) Includes persons working regularly at home.

The term "outworker" or "homeworker" has acquired a special meaning in connexion with manufacturing industries, and includes only persons to whom work is given out by factories to be done at home. Persons working regularly at home for factories are included in the group foremen, overseers, workers in factory and others, and separate details are not available.

5. Monthly Employment, 1958-59 to 1962-63.—(i) *Australia*. The following table shows the number of persons (excluding working proprietors) employed in factories on the last pay-day of each month during the years 1958-59 to 1962-63.

FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA

(EXCLUDING WORKING PROPRIETORS)

Month	1958-59	1959-60	1960-61	1961-62	1962-63
MALES					
July	794,374	811,912	844,659	809,433	842,528
August	794,537	814,297	846,325	810,822	845,144
September	795,464	817,277	848,593	806,514	847,175
October	796,964	820,178	849,211	816,327	849,228
November	799,368	821,316	849,265	820,488	851,666
December	792,351	817,217	843,037	816,602	846,391
January	794,996	824,919	843,995	822,210	852,458
February	800,208	831,022	838,482	830,641	859,136
March	802,408	835,371	829,781	834,926	862,292
April	804,259	835,236	823,500	832,434	860,614
May	804,691	839,084	818,065	837,001	860,682
June	805,641	840,832	810,295	839,177	862,579

FACTORIES: MONTHLY EMPLOYMENT, AUSTRALIA—continued

Month	1958-59	1959-60	1960-61	1961-62	1962-63
FEMALES					
July	244,610	251,512	270,302	243,839	266,110
August	245,349	253,864	272,491	245,882	267,667
September	245,882	257,906	274,698	248,688	270,444
October	246,199	260,105	275,647	253,485	272,697
November	247,098	262,514	276,226	256,261	273,746
December	244,235	259,753	271,401	255,779	270,252
January	243,625	260,749	267,386	257,742	270,734
February	249,847	267,234	269,012	263,919	276,821
March	250,384	270,364	263,623	266,971	280,206
April	249,209	267,916	256,478	261,519	274,303
May	248,365	269,200	250,137	264,039	273,249
June	248,915	270,402	245,088	264,374	271,997

PERSONS					
July	1,038,984	1,063,424	1,114,961	1,053,272	1,108,638
August	1,039,886	1,068,161	1,118,816	1,056,704	1,112,811
September	1,041,346	1,075,183	1,123,291	1,055,202	1,117,619
October	1,043,163	1,080,283	1,124,858	1,069,812	1,121,925
November	1,046,466	1,083,830	1,125,491	1,076,749	1,125,412
December	1,036,586	1,076,970	1,114,438	1,072,381	1,116,643
January	1,038,621	1,085,668	1,111,381	1,079,952	1,123,192
February	1,050,055	1,098,256	1,107,494	1,094,560	1,135,957
March	1,052,792	1,105,735	1,093,404	1,101,897	1,142,498
April	1,053,468	1,103,152	1,079,978	1,093,953	1,134,917
May	1,053,056	1,108,284	1,068,202	1,101,040	1,133,931
June	1,054,556	1,111,234	1,055,383	1,103,551	1,134,576

(ii) *States.* Particulars of the numbers employed in each State on the last pay-day of each month in 1962-63 are shown in the following table.

FACTORIES: MONTHLY EMPLOYMENT, 1962-63
(EXCLUDING WORKING PROPRIETORS)

Month	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
MALES							
July	342,420	268,558	84,171	81,180	42,337	23,862	842,528
August	343,013	269,449	84,460	81,790	42,603	23,829	845,144
September	343,725	270,637	84,160	81,950	42,834	23,869	847,175
October	345,267	271,697	83,370	82,038	42,914	23,942	849,228
November	346,018	273,300	82,495	82,494	43,348	24,011	851,666
December	345,033	273,432	77,162	82,407	43,503	24,854	846,391
January	345,723	275,857	78,746	83,379	43,676	25,077	852,458
February	348,061	277,551	81,028	83,820	43,830	24,846	859,136
March	348,576	277,848	82,455	84,492	44,231	24,690	862,292
April	347,931	276,937	82,255	84,594	44,192	24,705	860,614
May	347,464	276,533	83,324	84,581	44,154	24,626	860,682
June	347,403	276,362	85,510	84,946	43,844	24,514	862,579

FACTORIES: MONTHLY EMPLOYMENT, 1962-63—continued

Month	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
FEMALES							
July	113,443	105,947	17,565	17,320	6,729	5,106	266,110
August	113,838	106,718	17,998	17,434	6,790	4,889	267,667
September	115,149	108,045	18,138	17,505	6,831	4,776	270,444
October	116,248	109,281	18,043	17,510	6,826	4,789	272,697
November	116,831	109,812	17,691	17,634	6,947	4,831	273,746
December	114,575	108,707	17,116	17,739	6,902	5,213	270,252
January	114,047	109,053	17,021	18,382	6,732	5,499	270,734
February	116,120	112,131	17,665	18,574	6,853	5,478	276,821
March	116,621	113,894	18,057	18,756	7,141	5,737	280,206
April	115,051	110,847	17,386	18,085	7,234	5,700	274,303
May	114,369	109,925	18,046	18,127	7,219	5,563	273,249
June	114,031	109,670	18,022	18,001	7,034	5,239	271,997
PERSONS							
July	455,863	374,505	101,736	98,500	49,066	28,968	1,108,638
August	456,851	376,167	102,458	99,224	49,393	28,718	1,112,811
September	458,874	378,682	102,298	99,455	49,665	28,645	1,117,619
October	461,515	380,978	101,413	99,548	49,740	28,731	1,121,925
November	462,849	383,112	100,186	100,128	50,295	28,842	1,125,412
December	459,608	382,139	94,278	100,146	50,405	30,067	1,116,643
January	459,770	384,910	95,767	101,761	50,408	30,576	1,123,192
February	464,181	389,682	98,693	102,394	50,683	30,324	1,135,957
March	465,197	391,742	100,512	103,248	51,372	30,427	1,142,498
April	462,982	387,784	99,641	102,679	51,426	30,405	1,134,917
May	461,833	386,458	101,370	102,708	51,373	30,189	1,133,931
June	461,434	386,032	103,532	102,947	50,878	29,753	1,134,576

6. Distribution of Employees According to Age.—The following table shows the number of each sex employed in each age group on the last pay day in June for Australia in the years 1959 to 1963.

FACTORIES: DISTRIBUTION OF EMPLOYEES BY AGE, AUSTRALIA
(EXCLUDING WORKING PROPRIETORS)

June—	Males			Females			Persons		
	Under 16 years	16 to 20 years	21 years and over	Under 16 years	16 to 20 years	21 years and over	Under 16 years	16 to 20 years	21 years and over
1959	8,411	78,461	718,769	7,234	46,011	195,670	15,645	124,472	914,439
1960	8,627	82,016	750,189	7,457	48,845	214,100	16,084	130,861	964,289
1961	8,849	79,941	721,505	7,162	44,432	193,494	16,011	124,373	914,999
1962	9,176	86,498	743,503	8,764	48,817	206,793	17,940	135,315	950,296
1963	8,736	92,163	761,680	7,852	51,778	212,367	16,588	143,941	974,047

§ 5. 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 the years 1958-59 to 1962-63.

FACTORIES: MALES AND FEMALES EMPLOYED

State	1958-59	1959-60	1960-61	1961-62	1962-63
MALES					
New South Wales	340,757	351,208	355,392	349,154	358,116
Victoria	263,847	275,315	279,675	273,435	285,101
Queensland	87,454	86,985	86,488	84,130	86,536
South Australia	77,427	81,312	81,898	81,803	86,655
Western Australia	41,951	42,957	43,836	44,193	46,252
Tasmania	23,504	24,408	24,811	24,742	25,453
Australia	834,940	862,185	872,100	857,457	888,113
FEMALES					
New South Wales	108,761	115,931	116,669	111,933	117,133
Victoria	99,132	106,199	107,755	104,310	112,055
Queensland	17,299	17,708	17,974	17,507	18,462
South Australia	16,738	17,706	18,057	17,291	18,610
Western Australia	6,466	6,694	6,830	6,840	7,183
Tasmania	4,920	5,254	5,347	5,328	5,302
Australia	253,316	269,492	272,632	263,209	278,745

2. 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 1958-59 to 1962-63.

FACTORIES: ANNUAL PERCENTAGE INCREASES OF MALES AND FEMALES EMPLOYED

State	1958-59	1959-60	1960-61	1961-62	1962-63
MALES					
New South Wales	1.05	3.07	1.19	-1.76	2.57
Victoria	1.71	4.35	1.58	-2.23	4.27
Queensland	3.04	-0.54	-0.57	-2.73	2.86
South Australia	2.00	5.02	0.72	-0.12	5.93
Western Australia	-0.21	2.40	2.05	0.81	4.66
Tasmania	1.83	3.85	1.65	-0.28	2.87
Australia	1.51	3.26	1.15	-1.68	3.58
FEMALES					
New South Wales	0.16	6.59	0.64	-4.06	4.65
Victoria	1.43	7.13	1.47	-3.20	7.42
Queensland	1.92	2.36	1.50	-2.66	5.45
South Australia	1.06	5.78	1.98	-4.24	7.63
Western Australia	0.67	3.53	2.03	0.15	5.01
Tasmania	-1.66	6.79	1.77	-0.36	-0.49
Australia	0.81	6.39	1.17	-3.46	5.90

NOTE.—Minus sign (-) indicates decrease.

3. **Masculinity of Persons Employed in Factories.**—The following table shows, for the years 1958–59 to 1962–63, the proportion of males to females employed in factories in each State.

FACTORIES: MASCULINITY(a) OF PERSONS EMPLOYED

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1958–59	313	266	506	463	649	478	330
1959–60	303	259	491	459	642	465	320
1960–61	305	260	481	454	642	464	320
1961–62	312	262	481	473	650	467	326
1962–63	306	254	469	466	644	480	319

(a) Number of males per 100 females.

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 1962–63, these industries accounted for 78.27 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 139 females to every 100 males, and in Class VIII., Clothing, with 257 females to every 100 males. The following table shows the average number of males and females employed in each of the four classes in 1962–63.

MALES AND FEMALES EMPLOYED IN PARTICULAR INDUSTRIES, 1962-63

Class	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
MALES							
IV. Industrial metals, etc. ..	200,455	140,678	35,686	53,643	22,048	9,768	462,278
VI. Textiles and textile goods (not dress) ..	8,747	17,316	888	1,242	467	1,478	30,138
VIII. Clothing (except knitted) ..	11,707	13,986	2,046	1,790	910	325	30,764
IX. Food, drink and tobacco ..	28,011	27,064	22,244	7,868	5,822	3,531	94,540
All other classes ..	109,196	86,057	25,672	22,112	17,005	10,351	270,393
Total	358,116	285,101	86,536	86,655	46,252	25,453	888,113
FEMALES							
IV. Industrial metals, etc. ..	29,858	21,300	2,610	6,827	1,201	567	62,363
VI. Textiles and textile goods (not dress) ..	12,485	24,614	1,355	1,291	404	1,735	41,884
VIII. Clothing (except knitted) ..	32,859	32,809	5,719	3,308	2,082	391	77,168
IX. Food, drink and tobacco ..	13,035	12,361	4,697	3,373	1,738	1,557	36,761
All other classes ..	28,896	20,971	4,081	3,811	1,758	1,052	60,569
Total	117,133	112,055	18,462	18,610	7,183	5,302	278,745

(ii) *Females Employed in Clothing Manufacture.* The employment of females in the several industries of Class VIII., Clothing, the class in which 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.

EMPLOYMENT IN CLOTHING INDUSTRIES: FEMININITY(a), 1962-63

Industry	New South Wales			Victoria			Other States		
	Males	Fe- males	Femi- ninity (a)	Males	Fe- males	Femi- ninity (a)	Males	Fe- males	Femi- ninity (a)
Tailoring and ready-made clothing ..	2,994	15,422	515	2,818	8,231	292	913	2,856	312
Waterproof and oilskin clothing ..	147	564	384	160	429	268	5	12	240
Dressmaking, hemstitching ..	130	1,035	796	1,080	7,390	684	139	2,515	1,809
Millinery ..	206	1,193	579	156	728	467	46	475	1,033
Shirts, collars, underclothing ..	480	4,907	1,022	604	5,203	861	163	1,947	1,194
Foundation garments ..	128	1,605	1,254	271	1,620	598	35	353	1,009
Handkerchiefs, ties and scarves ..	170	1,048	616	67	264	394	10	111	1,110
Hats and caps ..	390	384	98	26	75	288	20	111	555
Gloves ..	138	519	376	36	105	292	45	133	296
Boots and shoes (not rubber) ..	2,811	3,201	114	5,369	6,538	122	1,408	1,175	83
Boot and shoe repairing ..	1,484	164	11	976	129	13	767	74	10
Boot and shoe accessories ..	263	177	67	860	401	47	84	29	35
Umbrellas and walking sticks ..	37	73	197	33	92	279	22	46	209
Dyeworks and cleaning (including renovating and repairing) ..	2,291	2,269	99	1,460	1,343	92	1,410	1,656	117
Other ..	38	298	784	70	261	373	4	7	175
Total ..	11,707	32,859	281	13,986	32,809	235	5,071	11,500	227

(a) Number of females per 100 males.

§ 6. Children Employed in Factories

1. Number of Children Employed, 1961 to 1963.—In the returns for the various States, the term "child" denotes any person under sixteen years of age. The following table shows the number of children of each sex employed in manufacturing industries in June of the years 1961 to 1963.

FACTORIES: CHILDREN(a) EMPLOYED

State	June, 1961			June, 1962			June, 1963		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
New South Wales	2,710	2,009	4,719	2,955	2,646	5,601	2,623	2,196	4,819
Victoria ..	2,707	2,586	5,293	2,625	3,049	5,674	2,444	2,653	5,097
Queensland ..	1,478	1,318	2,796	1,521	1,564	3,085	1,665	1,630	3,295
South Australia	878	804	1,682	953	993	1,946	893	872	1,765
Western Australia	947	350	1,297	1,031	411	1,442	1,016	432	1,448
Tasmania ..	129	95	224	91	101	192	95	69	164
Australia ..	8,849	7,162	16,011	9,176	8,764	17,940	8,736	7,852	16,588

(a) Under sixteen years of age.

2. Industries Employing Children.—The distribution of children employed in factories in June, 1963, and the proportion of children employed to total employees are shown in the following table by the main classes of industry employing persons under sixteen years of age.

FACTORIES: CHILDREN^(a) EMPLOYED, BY CLASSES, AUSTRALIA, JUNE, 1963

Class of industry	Children employed (a)		Total employees (b)		Proportion (per cent.) of children employed to total employees (b)	
	Males	Females	Males	Females	Males	Females
Industrial metals, machines, conveyances	3,946	656	454,693	61,660	0.87	1.06
Textiles and textile goods (not dress)	408	1,352	29,627	41,499	1.38	3.26
Clothing (except knitted)	585	3,507	25,625	75,115	2.28	4.67
Food, drink and tobacco	1,092	880	90,294	34,026	1.21	2.59
Sawmills, joinery, boxes, etc.	801	72	49,974	3,352	2.39	2.15
Furniture of wood, bedding, etc.	397	99	15,572	4,264	2.55	2.32
Paper, stationery, printing, bookbinding, etc.	614	714	55,602	20,107	1.10	3.55
All other industries	893	572	141,192	31,974	0.63	1.79
Total	8,736	7,852	862,579	271,997	1.01	2.89

(a) Under sixteen years of age.

(b) Excludes working proprietors.

3. Apprenticeship.—Acts are in force in all States 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.

§ 7. 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.

2. Rated Horse-power of Engines in Factories other than Central Electric Stations.—The following table shows the total number of factories and the total rated horse-power of engines and electric motors ordinarily in use and in reserve or idle during 1962–63.

FACTORIES^(a): TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS, 1962-63

State	Factories ^(a)	Rated horse-power of engines and motors	
		Ordinarily in use ^(b)	In reserve or idle (omitting obsolete)
New South Wales	23,675	2,756,795	401,433
Victoria	17,465	1,679,254	225,852
Queensland	5,844	605,931	85,817
South Australia	5,737	499,139	62,991
Western Australia	4,400	292,425	43,518
Tasmania	1,750	302,742	43,298
Australia	58,871	6,136,286	862,909

(a) Includes gas works but excludes central electric stations, details of which are shown on p. 163.

(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, 1962-63

State	Steam		Internal combustion			Water	Motors driven by electricity		Total (b)(c)
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils		Purchased	Own generation (d)	
N.S.W. ..	54,959	210,448	5,869	38,369	18,032	..	2,429,118	117,049	2,756,795
Victoria ..	19,154	91,877	1,760	43,816	1,320	890	1,520,437	58,334	1,679,254
Queensland ..	76,732	64,799	1,906	18,839	7,890	..	435,765	117,994	605,931
S. Australia ..	3,882	16,645	688	9,275	3,273	10	465,366	23,221	499,139
W. Australia ..	9,645	13,444	3,395	21,674	5,699	..	238,568	5,957	292,425
Tasmania ..	1,040	..	..	10,812	692	..	290,198	273	302,742
Australia ..	165,412	397,213	13,618	142,785	36,906	900	5,379,452	322,828	6,136,286

- (a) Includes gas works but excludes central electric stations, details of which are shown on p. 163.
 (b) Excludes motors driven by electricity generated in factories not classified as central electric stations.
 (c) Excludes particulars in column (d).

(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 1958-59 to 1962-63.

FACTORIES(a): TYPES AND TOTAL RATED HORSE-POWER OF ENGINES AND ELECTRIC MOTORS ORDINARILY IN USE, AUSTRALIA

Year	Steam		Internal combustion			Water	Motors driven by electricity		Total (b)(c)
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils		Purchased	Own generation (d)	
1958-59 ..	190,905	302,594	10,821	122,916	56,503	1,271	4,295,456	270,981	4,980,466
1959-60 ..	188,892	328,116	9,484	137,835	48,441	1,092	4,543,175	302,091	5,257,035
1960-61 ..	177,892	334,908	9,045	140,384	42,238	1,092	4,843,868	293,051	5,549,427
1961-62 ..	169,287	359,631	11,687	137,818	40,142	1,092	5,025,141	308,740	5,744,798
1962-63 ..	165,412	397,213	13,618	142,785	36,906	900	5,379,452	322,828	6,136,286

- (a) Includes gas works but excludes central electric stations, details of which are shown on p. 163.
 (b) Excludes motors driven by electricity generated in factories not classified as central electric stations.
 (c) Excludes particulars in column (d).

(iii) *In Classes of Industry, 1962-63.* 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), 1962-63

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	110,123	95,448	28,539	36,366	21,356	21,029	312,861
II. Bricks, pottery, glass, etc. . .	69,019	49,610	12,405	12,400	13,532	3,067	160,033
III. Chemicals, dyes, explosives, paints, oils, grease . . .	253,251	182,219	13,515	35,052	51,671	15,946	551,654
IV. Industrial metals, machines, conveyances . . .	1,524,050	569,924	124,785	219,531	80,185	63,475	2,581,950
V. Precious metals, jewellery, plate	4,822	3,776	485	2,314	656	97	12,150
VI. Textiles and textile goods (not dress) . . .	60,813	111,315	7,316	8,063	3,043	9,851	200,401
VII. Skins and leather (not clothing or footwear) . . .	18,472	14,728	6,586	6,142	2,916	518	49,362
VIII. Clothing (except knitted) . . .	27,247	29,636	5,065	4,352	2,676	831	69,807
IX. Food, drink and tobacco . . .	230,771	225,064	241,617	67,708	47,031	28,538	840,729
X. Sawmills, joinery, boxes, etc., wood turning and carving	195,757	127,645	118,018	54,187	53,459	48,856	597,922
XI. Furniture of wood, bedding, etc.	20,202	13,940	7,727	7,253	4,182	1,598	54,902
XII. Paper, stationery, printing, bookbinding, etc. . .	118,219	116,650	24,042	26,196	7,124	107,996	400,227
XIII. Rubber	61,593	70,873	11,752	8,444	1,613	546	154,821
XIV. Musical instruments	1,217	322	52	14	13	..	1,618
XV. Miscellaneous products	42,132	41,156	1,097	2,631	1,526	318	88,860
<i>Total, Classes I. to XV. . .</i>	<i>2,737,688</i>	<i>1,652,306</i>	<i>603,001</i>	<i>490,653</i>	<i>290,983</i>	<i>302,666</i>	<i>6,077,297</i>
XVI. Gas works	19,107	26,948	2,930	8,486	1,442	76	58,989
Grand Total	2,756,795	1,679,254	605,931	499,139	292,425	302,742	6,136,286

(a) Excludes central electric stations, details of which are shown below. (b) Excludes motors driven by electricity generated in factories not classified as central electric stations.

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 1962-63 are given in the following table.

CENTRAL ELECTRIC STATIONS: POWER EQUIPMENT, AUSTRALIA, 1962-63

Particulars	Capacity of engines and generators						Total
	Steam		Internal combustion			Water	
	Reciprocating	Turbine	Gas	Petrol or other light oils	Heavy oils		
Engines installed .. Rated H.P.	2,350	7,306,757	10,445	39,022	289,535	2,550,045	10,198,154
Generators installed—							
Kilowatt capacity—							
Total installed .. kW	1,760	5,419,472	7,359	27,234	192,940	1,850,310	7,499,075
Effective capacity	1,700	5,267,930	5,074	24,038	173,336	1,844,801	7,316,879
Horse-power equivalent—							
Total installed .. H.P.	2,359	7,264,694	9,865	36,507	258,632	2,480,303	10,052,360
Effective capacity	2,279	7,061,555	6,802	32,222	232,353	2,472,919	9,808,130

(ii) *States.* Details of the capacity of engines and generators installed in Central Electric Stations in each State in 1962-63 are given in the next table.

CENTRAL ELECTRIC STATIONS: NUMBER AND POWER EQUIPMENT, 1962-63

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Central electric stations ..	No.	54	35	51	29	92	14	275
Engines installed ..	Rated H.P.	4,553,430	2,221,290	1,164,170	818,163	556,167	884,934	10,198,154
Generators installed—								
Kilowatt capacity—								
Total installed ..	kW	3,365,562	1,657,498	857,584	609,103	380,798	628,530	7,499,075
Effective capacity ..	„	3,263,084	1,672,694	779,932	602,570	372,899	625,700	7,316,879
Horse-power equivalent—								
Total installed ..	H.P.	4,511,469	2,221,843	1,149,574	816,490	510,452	842,532	10,052,360
Effective capacity ..	„	4,374,099	2,242,213	1,045,483	807,733	499,864	838,738	9,808,130

§ 8. Value of Production, Materials Used, Salaries and Wages

Note.—In all tables relating to salaries and wages paid in factories, the amounts drawn by working proprietors are excluded.

1. *General.*—The gross value of factory output for 1962-63 was £5,728 million, of which £3,130 million was the value of the materials used, including containers, etc., tools replaced, and repairs to plant and buildings, and £202 million the value of the power, fuel, light, water and lubricating oil used. The difference between the sum of the last two amounts and the gross value of output, namely, £2,396 million, represents the net value of factory production, defined as “the value of consumable commodities produced during the year, deducting, so far as possible, the value of goods consumed in process of production”. Depreciation, however, is not deducted (*see* para. 6 of this section, p. 171). The gross value of factory output and the value of materials used each contain inherent elements of duplication, as the output of some factories becomes the materials used in other factories. The net value of factory production indicates the relative importance of manufacturing in the Australian economy in current money terms. The total amount of salaries and wages paid in factories in 1962-63 was £1,222 million, excluding amounts drawn by working proprietors.

2. *Salaries and Wages Paid.*—(i) *In Classes of Industry, 1962-63.* The amounts of salaries and wages paid in the various classes of industry in each State are shown in the following table.

FACTORIES: SALARIES AND WAGES PAID, 1962-63

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	11,761	8,582	2,523	2,678	1,869	934	28,347
II. Bricks, pottery, glass, etc. ..	14,440	7,918	1,430	2,530	1,567	412	28,297
III. Chemicals, dyes, explosives, paints, oils, grease ..	28,394	20,339	1,830	3,466	3,250	1,252	58,531
IV. Industrial metals, machines, conveyances ..	265,393	182,237	36,272	67,030	21,807	11,649	584,388
V. Precious metals, jewellery, plate ..	2,029	2,051	241	410	149	30	4,910
VI. Textiles and textile goods (not dress) ..	18,850	37,793	1,641	2,178	719	2,896	64,077
VII. Skins and leather (not clothing or footwear) ..	5,212	3,891	1,116	1,180	593	65	12,057
VIII. Clothing (except knitted) ..	32,332	36,334	4,531	3,299	1,651	481	78,628
IX. Food, drink and tobacco ..	41,591	40,450	27,242	10,397	7,129	4,835	131,644
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	19,022	15,147	7,882	4,925	4,798	3,425	55,199
XI. Furniture of wood, bedding, etc. ..	8,665	5,838	2,145	1,765	1,057	366	19,836
XII. Paper, stationery, printing, bookbinding, etc. ..	36,139	30,277	6,456	5,168	3,010	5,335	86,385
XIII. Rubber ..	9,262	9,122	1,693	1,451	306	124	21,958
XIV. Musical instruments ..	494	201	21	25	25		766
XV. Miscellaneous products ..	12,925	11,684	575	1,039	477	97	26,797
<i>Total, Classes I. to XV.</i>	<i>506,509</i>	<i>411,864</i>	<i>95,598</i>	<i>107,541</i>	<i>48,407</i>	<i>31,901</i>	<i>1,201,820</i>
XVI. Heat, light and power ..	7,099	6,687	2,317	2,492	1,533	518	20,646
Grand Total ..	513,608	418,551	97,915	110,033	49,940	32,419	1,222,466

(ii) *Totals and Averages, 1958-59 to 1962-63.* The following table shows the total amount of salaries and wages paid, and the average amount paid per employee in each State, for each year. The figures exclude working proprietors and the amounts drawn by them.

In comparing the figures in the following 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 are employed in Class VIII., Clothing, comprising a relatively high percentage of women and children.

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES PAID

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
TOTAL AMOUNT PAID (£'000)							
1958-59	413,015	324,336	85,497	83,145	38,732	25,828	970,553
1959-60	461,144	370,181	89,367	95,238	41,643	28,786	1,086,359
1960-61	490,016	387,221	92,159	98,983	45,127	30,330	1,143,836
1961-62	488,070	384,433	93,345	99,531	46,420	30,720	1,142,519
1962-63	513,608	418,551	97,915	110,033	49,940	32,419	1,222,466
AVERAGE PER EMPLOYEE (£)							
1958-59	952.82	928.60	856.33	911.89	847.81	942.94	927.13
1959-60	1021.03	1005.62	896.09	995.96	890.43	1004.27	996.16
1960-61	1072.15	1034.77	927.20	1028.33	942.04	1041.07	1036.14
1961-62	1092.38	1053.31	963.84	1047.56	962.57	1057.29	1057.00
1962-63	1114.24	1088.89	976.41	1087.71	987.82	1092.47	1084.71

(iii) *Total and Average Earnings of Males and Females, 1958-59 to 1962-63.* Particulars for these years are given in the following table.

FACTORIES: TOTAL AND AVERAGE SALARIES AND WAGES—MALES AND FEMALES

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
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MALES

TOTAL AMOUNT PAID (£'000)

1958-59	348,302	265,615	77,049	74,268	35,647	23,138	824,019
1959-60	387,166	302,678	80,345	85,333	38,276	25,618	919,416
1960-61	412,560	317,907	82,669	88,623	41,474	26,952	970,185
1961-62	411,835	314,959	83,763	89,385	42,703	27,248	969,893
1962-63	432,252	341,980	87,743	98,911	45,958	28,918	1,035,762

AVERAGE PER MALE EMPLOYEE (£)

1958-59	1,065.21	1,052.69	926.77	992.28	905.12	1,026.66	1,031.05
1959-60	1,145.65	1,145.80	971.95	1,088.21	950.85	1,091.42	1,111.86
1960-61	1,204.20	1,183.16	1,006.38	1,125.21	1,005.06	1,130.89	1,158.71
1961-62	1,222.45	1,198.21	1,046.50	1,140.33	1,026.38	1,146.51	1,177.70
1962-63	1,249.71	1,245.42	1,063.35	1,188.42	1,054.64	1,183.51	1,212.51

FEMALES

TOTAL AMOUNT PAID (£'000)

1958-59	64,713	58,721	8,448	8,877	3,085	2,690	146,534
1959-60	73,978	67,503	9,022	9,905	3,367	3,168	166,943
1960-61	77,456	69,314	9,490	10,360	3,653	3,378	173,651
1961-62	76,235	69,474	9,582	10,146	3,717	3,472	172,626
1962-63	81,356	76,570	10,172	11,123	3,982	3,501	186,704

AVERAGE PER FEMALE EMPLOYEE (£)

1958-59	607.71	605.66	505.75	543.49	489.60	554.24	591.74
1959-60	650.82	649.38	528.65	575.58	516.95	610.25	633.25
1960-61	676.83	656.91	550.13	592.18	550.25	637.26	651.26
1961-62	693.66	670.55	570.16	610.23	561.55	656.42	670.76
1962-63	707.02	697.47	572.59	620.25	570.57	668.00	684.48

(iv) *Managers, Clerical Staff and Other Employees.* The following table shows, for 1962-63, 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. Amounts drawn by working proprietors are excluded in all cases.

FACTORIES: SALARIES AND WAGES PAID TO MANAGERS, CLERICAL STAFF, ETC., AND OTHER EMPLOYEES, AUSTRALIA, 1962-63

Class of industry	Managers, clerical staff, chemists, draftsmen, etc.		All other employees	
	Males	Females	Males	Females
	£'000	£'000	£'000	£'000
I. Treatment of non-metalliferous mine and quarry products	4,428	760	23,017	142
II. Bricks, pottery, glass, etc.	2,949	659	23,729	960
III. Chemicals, dyes, explosives, paints, oils, grease ..	15,414	3,404	35,434	4,279
IV. Industrial metals, machines, conveyances	93,199	18,556	447,546	25,087
V. Precious metals, jewellery, plate	629	224	3,590	467
VI. Textiles and textile goods (not dress)	6,514	2,638	29,200	25,725
VII. Skins and leather (not clothing or footwear)	1,428	309	8,404	1,916
VIII. Clothing (except knitted)	6,263	3,268	23,173	45,924
IX. Food, drink and tobacco	19,680	5,932	87,419	18,613
X. Sawmills, joinery, boxes, etc., wood turning and carving	6,754	1,403	46,290	752
XI. Furniture of wood, bedding, etc.	2,286	793	14,609	2,148
XII. Paper, stationery, printing, bookbinding, etc. .. .	13,025	3,955	60,064	9,341
XIII. Rubber	3,529	753	15,581	2,095
XIV. Musical instruments	102	24	559	81
XV. Miscellaneous products	4,347	1,426	16,053	4,971
<i>Total, Classes I. to XV.</i>	<i>180,547</i>	<i>44,104</i>	<i>834,668</i>	<i>142,501</i>
XVI. Heat, light and power	2,051	76	18,496	23
Grand Total	182,598	44,180	853,164	142,524
	£	£	£	£
Average paid per employee	1,669.77	754.79	1,145.38	665.27

3. Power, Fuel and Light Used.—(i) *In Classes of Industry, 1962-63.* The expenditure by factories on power, fuel and light, including the value of lubricants and water, is shown in the following table for each State and Australia for 1962-63.

FACTORIES: VALUE OF POWER, FUEL AND LIGHT USED(a), 1962-63
 (£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	5,516	2,865	1,011	1,052	629	463	11,536
II. Bricks, pottery, glass, etc.	4,113	2,501	546	728	568	166	8,622
III. Chemicals, dyes, explosives, paints, oils, grease ..	8,530	7,307	303	1,095	2,299	539	20,073
IV. Industrial metals, machines, conveyances	47,762	10,925	2,924	5,772	1,538	2,992	71,913
V. Precious metals, jewellery, plate	173	161	16	41	11	2	404
VI. Textiles and textile goods (not dress)	1,761	2,786	98	218	51	259	5,173
VII. Skins and leather (not clothing or footwear)	444	446	96	148	68	7	1,209
VIII. Clothing (except knitted)	1,074	1,008	195	151	81	39	2,548
IX. Food, drink and tobacco	6,720	6,456	3,431	1,456	1,158	640	19,861
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	1,520	858	656	369	343	364	4,110
XI. Furniture of wood, bedding, etc.	230	135	51	48	29	9	502
XII. Paper, stationery, printing, bookbinding, etc. .. .	2,111	2,517	410	525	132	1700	7,395
XIII. Rubber	1,182	1,399	203	168	33	19	3,004
XIV. Musical instruments	35	10	1	1	(b)	..	47
XV. Miscellaneous products	916	1,131	20	60	26	3	2,156
<i>Total, Classes I. to XV.</i>	<i>82,087</i>	<i>40,505</i>	<i>9,961</i>	<i>11,832</i>	<i>6,966</i>	<i>7,202</i>	<i>158,553</i>
XVI. Heat, light and power	16,667	11,255	7,638	4,204	3,895	17	43,676
Grand Total	98,754	51,760	17,599	16,036	10,861	7,219	202,229

(a) Includes value of lubricants and water.

(b) Less than £500.

(ii) *Values of Items, 1962-63.* 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), 1962-63
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Coal, black	18,767	1,566	9,277	(b)3,496	2,589	981	36,676
.. brown .. ..	..	6,567	..	..	..	..	6,567
Brown coal briquettes .. ..	..	6,111	..	..	..	..	6,111
Coke	17,470	743	400	2,445	219	333	21,610
Wood	389	449	312	364	384	96	1,994
Fuel oil	10,538	10,406	1,618	3,042	3,979	1,213	30,796
Tar (fuel)	1,427	79	28	103	4	14	1,655
Electricity	30,324	19,918	4,526	4,985	2,505	3,976	66,234
Gas	10,204	1,724	264	298	98	43	12,631
Other (charcoal, etc.)	4,023	657	167	447	456	324	6,074
Water	4,009	2,481	557	551	369	148	8,115
Lubricating oils	1,603	1,059	450	305	258	91	3,766
Total	98,754	51,760	17,599	16,036	10,861	7,219	202,229

(a) Includes value of lubricants and water.
of sub-bituminous Leigh Creek coal.

(b) Includes £2,343,975, the value of 1,382,095 tons

(iii) *Quantities of Fuel Used, 1962-63.* The following table shows the quantities of fuel used in factories in each State during the year.

FACTORIES: QUANTITIES OF FUEL USED, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Coal, black '000 tons	6,376	250	1,976	(a)1,601	674	196	11,073
.. brown .. ..	..	12,762	..	..	..	..	12,762
Brown coal briquettes .. ..	..	1,089	..	..	..	..	1,089
Coke	2,551	63	25	274	17	18	2,948
Wood	182	235	151	249	239	68	1,124
Fuel oil '000 gals.	243,013	254,738	23,829	74,391	99,177	25,095	720,243
Tar (fuel)	36,593	1,612	622	3,020	137	298	42,282

(a) Includes 1,382,095 tons of Leigh Creek coal.

(iv) *Total Value, 1958-59 to 1962-63.* 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
1958-59	76,275	43,377	14,964	14,590	9,587	5,459	164,252
1959-60	87,108	47,140	15,183	15,093	10,071	6,220	180,815
1960-61	92,262	49,201	15,544	15,183	10,616	6,437	189,243
1961-62	93,911	49,529	16,066	15,323	10,368	6,568	191,765
1962-63	98,754	51,760	17,599	16,036	10,861	7,219	202,229

(a) Includes value of lubricants and water.

4. *Value of Materials Used.*—(i) *In Classes of Industry, 1962-63.* 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 1962-63 reached £3,130 million, or 54.6 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, 1962-63
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	45,018	21,843	6,006	6,733	4,099	2,285	85,984
II. Bricks, pottery, glass, etc. ..	13,405	8,058	1,188	3,052	1,036	252	26,991
III. Chemicals, dyes, explosives, paints, oils, grease ..	150,995	123,662	10,176	14,331	36,034	2,955	338,153
IV. Industrial metals, machines, conveyances ..	603,632	292,721	91,341	134,181	38,966	24,022	1,184,863
V. Precious metals, jewellery, plate ..	2,262	2,234	143	326	83	13	5,061
VI. Textiles and textile goods (not dress) ..	45,188	97,134	4,864	4,789	2,982	7,028	161,985
VII. Skins and leather (not clothing or footwear) ..	15,032	10,086	2,955	6,849	749	407	36,078
VIII. Clothing (except knitted) ..	58,033	57,770	5,192	3,755	1,949	426	127,125
IX. Food, drink and tobacco ..	198,193	216,498	195,732	46,592	35,981	21,436	714,432
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	43,031	30,653	15,407	12,550	8,403	8,348	118,392
XI. Furniture of wood, bedding, etc. ..	18,650	12,060	5,231	3,754	2,566	646	42,907
XII. Paper, stationery, printing, bookbinding, etc. ..	69,191	65,376	11,275	8,200	4,654	9,537	168,233
XIII. Rubber ..	21,758	21,292	3,964	2,273	721	255	50,263
XIV. Musical instruments ..	1,124	183	22	9	14	..	1,352
XV. Miscellaneous products ..	21,808	24,223	698	2,008	781	64	49,582
<i>Total, Classes I. to XV.</i>	<i>1,307,320</i>	<i>983,793</i>	<i>354,194</i>	<i>249,402</i>	<i>139,018</i>	<i>77,674</i>	<i>3,111,401</i>
XVI. Heat, light and power ..	7,504	5,093	2,670	2,028	860	364	18,519
Grand Total ..	1,314,824	988,886	356,864	251,430	139,878	78,038	3,129,920

(ii) *Total Amounts, 1958-59 to 1962-63.* The following table shows the value 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.
1958-59 ..	1,070,862	778,716	280,757	188,358	107,853	58,533	2,485,079
1959-60 ..	1,206,255	875,973	291,388	207,636	119,138	67,609	2,767,999
1960-61 ..	1,236,484	897,167	305,677	216,382	133,324	69,067	2,858,101
1961-62 ..	1,223,666	907,804	305,003	212,560	135,085	71,268	2,855,386
1962-63 ..	1,314,824	988,886	356,864	251,430	139,878	78,038	3,129,920

5. *Value of Output.*—(i) *In Classes of Industry, 1962-63.* The value of the output of factories in the various classes in each State in 1962-63 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 net value of factory production (see paras. 1 and 6 of this section).

FACTORIES: VALUE OF OUTPUT, 1962-63

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	75,284	44,473	13,218	15,149	9,332	5,017	162,473
II. Bricks, pottery, glass, etc. ..	42,212	24,635	4,543	8,629	4,548	1,096	85,663
III. Chemicals, dyes, explosives paints, oils, grease ..	257,713	202,440	16,986	25,773	54,920	6,082	563,914
IV. Industrial metals, machines, conveyances	1,113,718	599,107	151,968	241,745	78,806	50,377	2,235,721
V. Precious metals, jewellery, plate	6,051	5,812	565	1,175	413	72	14,088
VI. Textiles and textile goods (not dress)	83,685	167,007	7,848	8,855	4,372	12,283	284,050
VII. Skins and leather (not clothing or footwear) ..	23,974	17,221	5,140	8,718	1,851	513	57,417
VIII. Clothing (except knitted) ..	115,607	118,664	12,943	9,413	4,855	1,359	262,841
IX. Food, drink and tobacco ..	315,783	322,468	259,532	68,749	53,513	32,706	1,052,751
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	77,916	56,692	29,430	21,371	17,426	14,845	217,680
XI. Furniture of wood, bedding, etc.	33,747	22,702	9,008	7,062	4,589	1,296	78,404
XII. Paper, stationery, printing, bookbinding, etc. ..	146,028	128,515	23,798	18,380	10,949	23,414	351,084
XIII. Rubber	36,118	41,080	7,928	5,231	1,529	542	92,428
XIV. Musical instruments ..	2,929	482	62	55	52		3,580
XV. Miscellaneous products ..	46,386	47,506	1,691	4,120	1,702	217	101,622
<i>Total, Classes I. to XV.</i>	<i>2,377,151</i>	<i>1,798,804</i>	<i>544,660</i>	<i>444,425</i>	<i>248,857</i>	<i>149,819</i>	<i>5,563,716</i>
XVI. Heat, light and power ..	73,871	41,132	20,286	12,612	10,093	6,453	164,447
Grand Total	2,451,022	1,839,936	564,946	457,037	258,950	156,272	5,728,163

(ii) *Totals, 1958-59 to 1962-63.* 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.
1958-59	1,952,452	1,431,041	451,186	342,758	196,202	118,293	4,491,932
1959-60	2,209,809	1,609,614	468,963	385,702	215,583	134,025	5,023,696
1960-61	2,295,502	1,649,650	491,848	401,627	240,570	137,951	5,217,148
1961-62	2,283,998	1,674,660	496,367	401,797	243,494	141,773	5,242,089
1962-63	2,451,022	1,839,936	564,946	457,037	258,950	156,272	5,728,163

6. *Value of Production.*—(i) *In Classes of Industry, 1962-63.* 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". Because of the difficulty experienced in securing accurate figures for depreciation, however, it was subsequently decided that no deduction should be made on this account. All the deductions mentioned above, with the exception of depreciation, are included in the items "value of materials used" and "value of fuel used" as defined above. The net value of production as given in the following tables is obtained, therefore, by deducting only "value of materials used" and "value of fuel used" from the "value of output". The value of factory production, therefore, approximates "net value added" in the manufacturing process.

Only certain selected items of costs are recorded in the annual census of production. It must not, therefore, 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, as many miscellaneous expenses such as taxation, insurance, advertising and other overhead charges, as well as depreciation, also have to be taken into account.

The following table shows, for 1962-63, the value of production in each State for the various classes of industry.

FACTORIES: VALUE OF PRODUCTION, 1962-63
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	24,749	19,765	6,201	7,364	4,604	2,270	64,953
II. Bricks, pottery, glass, etc. ..	24,694	14,075	2,809	4,850	2,944	678	50,050
III. Chemicals, dyes, explosives, paints, oils, grease ..	98,188	71,471	6,506	10,347	16,587	2,589	205,688
IV. Industrial metals, machines, conveyances ..	462,324	295,461	57,702	101,792	38,303	23,363	978,945
V. Precious metals, jewellery, plate ..	3,617	3,416	405	809	318	58	8,623
VI. Textiles and textile goods (not dress) ..	36,736	67,088	2,886	3,848	1,339	4,995	116,892
VII. Skins and leather (not clothing or footwear) ..	8,498	6,689	2,089	1,721	1,034	99	20,130
VIII. Clothing (except knitted) ..	56,501	59,886	7,555	5,507	2,825	894	133,168
IX. Food, drink and tobacco ..	110,871	99,514	60,369	20,700	16,374	10,630	318,458
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	33,365	25,182	13,367	8,452	8,680	6,133	95,179
XI. Furniture of wood, bedding, etc. ..	14,865	10,507	3,726	3,261	1,995	640	34,994
XII. Paper, stationery, printing, bookbinding, etc. ..	74,725	60,622	12,114	9,656	6,164	12,176	175,457
XIII. Rubber ..	13,178	18,389	3,762	2,789	775	268	39,161
XIV. Musical instruments ..	1,770	289	40	45	37	..	2,181
XV. Miscellaneous products ..	23,663	22,152	973	2,051	894	150	49,883
<i>Total, Classes I. to XV.</i>	<i>987,744</i>	<i>774,506</i>	<i>180,504</i>	<i>183,192</i>	<i>102,873</i>	<i>64,943</i>	<i>2,293,762</i>
XVI. Heat, light and power ..	49,699	24,784	9,979	6,379	5,338	6,073	102,252
Grand Total ..	1,037,443	799,290	190,483	189,571	108,211	71,016	2,396,014

(ii) *Totals and Averages, 1958-59 to 1962-63.* The value of production and the amount per person employed and per head of population are shown in the following table.

FACTORIES: VALUE OF PRODUCTION

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
VALUE (£'000)							
1958-59	805,315	608,948	155,465	139,810	78,762	54,301	1,842,601
1959-60	916,446	686,501	162,392	162,973	86,374	60,196	2,074,882
1960-61	966,756	703,282	170,627	170,062	96,631	62,446	2,169,804
1961-62	966,421	717,327	175,298	173,914	98,041	63,937	2,194,938
1962-63	1,037,443	799,290	190,483	189,571	108,211	71,016	2,396,014

PER PERSON EMPLOYED (£)							
1958-59	1,792	1,678	1,484	1,485	1,627	1,910	1,693
1959-60	1,962	1,799	1,551	1,646	1,740	2,029	1,833
1960-61	2,048	1,815	1,633	1,701	1,907	2,071	1,895
1961-62	2,096	1,899	1,725	1,755	1,921	2,162	1,959
1962-63	2,183	2,013	1,814	1,801	2,025	2,309	2,053

PER HEAD OF POPULATION (£)							
1958-59	215.96	221.44	107.18	153.92	111.58	160.36	186.45
1959-60	241.40	243.47	109.86	174.56	120.41	174.93	205.65
1960-61	249.43	243.06	111.74	173.51	129.57	175.07	208.82
1961-62	244.76	242.41	114.80	177.44	131.46	179.25	206.95
1962-63	258.36	264.51	122.79	189.77	141.56	196.12	223.63

§ 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 1962-63.

FACTORIES: VALUE OF LAND, BUILDINGS, PLANT AND MACHINERY^(a), 1962-63
(£'000)

Value of—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Land and buildings	689,767	475,802	96,742	106,482	51,428	81,959	1,502,180
Plant and machinery	719,191	500,344	140,292	146,804	66,318	69,079	1,642,028
Total ..	1,408,958	976,146	237,034	253,286	117,746	151,038	3,144,208

(a) At end of year. 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. Consequently, the totals shown in the table do not represent the actual amount of capital invested in the items specified.

2. Value of Land and Buildings.—(i) *Totals 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 1958-59 to 1962-63.

FACTORIES: VALUE OF LAND AND BUILDINGS(a), AUSTRALIA
(£'000)

Class of industry	1958-59	1959-60	1960-61	1961-62	1962-63
I. Treatment of non-metalliferous mine and quarry products	15,175	22,325	27,330	31,132	32,841
II. Bricks, pottery, glass, etc. ..	16,580	19,616	22,249	26,099	31,530
III. Chemicals, dyes, explosives, paints, oils, grease	76,645	80,477	87,052	95,874	100,514
IV. Industrial metals, machines, conveyances	336,282	387,934	455,442	505,778	550,370
V. Precious metals, jewellery, plate ..	3,845	3,955	4,516	4,984	5,394
VI. Textiles and textile goods (not dress)	46,671	48,379	53,313	57,791	61,477
VII. Skins and leather (not clothing or footwear)	7,702	9,166	9,333	10,000	10,796
VIII. Clothing (except knitted)	43,203	47,762	53,776	57,964	63,404
IX. Food, drink and tobacco	138,625	149,341	160,716	172,358	185,007
X. Sawmills, joinery, boxes, etc., wood turning and carving	30,656	34,903	40,283	41,088	42,816
XI. Furniture of wood, bedding, etc. ..	14,677	16,251	17,884	18,881	20,541
XII. Paper, stationery, printing, book-binding, etc.	61,059	68,997	77,498	85,219	91,395
XIII. Rubber	12,821	13,439	15,532	16,875	18,704
XIV. Musical instruments	730	930	922	796	797
XV. Miscellaneous products	14,688	18,345	20,720	26,092	29,107
<i>Total, Classes I. to XV.</i>	<i>819,359</i>	<i>921,820</i>	<i>1,046,566</i>	<i>1,150,931</i>	<i>1,244,693</i>
XVI. Heat, light and power	128,540	142,032	147,024	252,907	257,487
Grand Total	947,899	1,063,852	1,193,590	1,403,838	1,502,180

(a) At end of year. Includes estimated value of rented premises.

(ii) *In Classes of Industry in States, 1962-63.* The following table gives particulars of the various classes of industry in each State.

FACTORIES: VALUE OF LAND AND BUILDINGS(a), 1962-63
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	11,806	12,331	2,136	3,493	2,292	783	32,841
II. Bricks, pottery, glass, etc. ..	16,046	10,115	1,633	1,963	1,346	427	31,530
III. Chemicals, dyes, explosives, paints, oils, grease	49,388	37,481	2,170	4,820	5,259	1,396	100,514
IV. Industrial metals, machines, conveyances	258,048	181,927	28,967	50,714	17,336	13,378	550,370
V. Precious metals, jewellery, plate	2,307	1,998	191	619	208	71	5,394
VI. Textiles and textile goods (not dress)	20,444	35,918	1,051	1,872	588	1,604	61,477
VII. Skins and leather (not clothing or footwear)	4,936	4,347	409	720	341	43	10,796
VIII. Clothing (except knitted)	27,059	27,012	3,270	3,382	1,883	798	63,404
IX. Food, drink and tobacco	58,011	65,347	28,322	15,339	10,425	7,563	185,007
X. Sawmills, joinery, boxes, etc., wood turning and carving	16,794	13,445	4,376	4,020	2,196	1,985	42,816
XI. Furniture of wood, bedding, etc.	8,564	6,327	2,475	1,719	1,037	419	20,541
XII. Paper, stationery, printing, bookbinding, etc.	40,226	29,942	5,924	5,868	2,952	6,483	91,395
XIII. Rubber	6,423	7,593	2,316	1,355	623	394	18,704
XIV. Musical instruments	463	205	36	56	37	..	797
XV. Miscellaneous products	12,117	14,759	510	989	610	122	29,107
<i>Total, Classes I. to XV.</i>	<i>532,632</i>	<i>448,747</i>	<i>83,786</i>	<i>96,929</i>	<i>47,133</i>	<i>35,466</i>	<i>1,244,693</i>
XVI. Heat, light and power	157,135	27,055	12,956	9,553	4,295	46,493	257,487
Grand Total	689,767	475,802	96,742	106,482	51,428	81,959	1,502,180

(a) At end of year. Includes estimated value of rented premises.

(iii) *Totals in each State.* The following table shows the value of land and buildings in each State for the years 1958-59 to 1962-63.

FACTORIES: VALUE OF LAND AND BUILDINGS(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1958-59	400,273	309,833	68,995	66,278	40,690	61,830	947,899
1959-60	440,548	353,735	76,352	77,632	43,573	72,012	1,063,852
1960-61	501,793	400,751	84,158	87,729	45,610	73,549	1,193,590
1961-62	643,483	443,683	89,632	98,297	49,168	79,575	1,403,838
1962-63	689,767	475,802	96,742	106,482	51,428	81,959	1,502,180

(a) At end of year. Includes estimated value of rented premises.

3. *Value of Plant and Machinery.*—(i) *Totals for Australia, 1958-59 to 1962-63.* 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)

Class of industry	1958-59	1959-60	1960-61	1961-62	1962-63
I. Treatment of non-metalliferous mine and quarry products	35,099	49,658	68,426	74,431	76,793
II. Bricks, pottery, glass, etc.	14,564	16,286	20,076	23,944	31,817
III. Chemicals, dyes, explosives, paints, oils, grease	153,820	157,731	162,695	199,211	212,491
IV. Industrial metals, machines, conveyances	319,665	358,039	448,825	501,731	548,982
V. Precious metals, jewellery, plate	1,348	1,541	1,572	1,448	1,509
VI. Textiles and textile goods (not dress)	41,380	42,775	45,749	48,315	52,016
VII. Skins and leather (not clothing or footwear)	4,348	4,216	4,491	4,516	4,608
VIII. Clothing (except knitted)	16,407	17,244	18,659	19,167	21,503
IX. Food, drink and tobacco	138,940	147,262	159,600	168,620	181,270
X. Sawmills, joinery, boxes, etc., wood turning and carving	29,121	30,841	33,264	34,197	34,462
XI. Furniture of wood, bedding, etc.	4,130	4,369	4,544	4,774	4,982
XII. Paper, stationery, printing, book-binding, etc.	63,757	74,776	86,988	91,862	99,543
XIII. Rubber	10,333	12,240	12,990	13,074	14,278
XIV. Musical instruments	426	386	354	349	322
XV. Miscellaneous products	11,077	13,455	15,904	17,766	21,139
<i>Total, Classes I. to XV.</i>	<i>844,415</i>	<i>930,819</i>	<i>1,084,137</i>	<i>1,203,405</i>	<i>1,305,715</i>
XVI. Heat, light and power	263,970	289,245	307,353	321,382	336,313
Grand Total	1,108,385	1,220,064	1,391,490	1,524,787	1,642,028

(a) At end of year. Includes estimated value of rented plant and machinery.

(ii) *In Classes of Industry in States, 1962-63.* The following table shows the value of plant and machinery used in factories in each State during 1962-63 according to class of industry.

FACTORIES: VALUE OF PLANT AND MACHINERY(a), 1962-63

(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products ..	36,402	24,918	4,427	7,305	2,415	1,326	76,793
II. Bricks, pottery, glass, etc. ..	15,873	10,427	2,030	1,839	1,230	418	31,817
III. Chemicals, dyes, explosives, paints, oils, grease ..	93,237	74,441	3,001	18,312	20,558	2,942	212,491
IV. Industrial metals, machines, conveyances ..	316,784	127,871	20,254	53,815	10,714	19,544	548,982
V. Precious metals, jewellery, plate ..	645	579	59	163	49	14	1,509
VI. Textiles and textile goods (not dress) ..	16,742	28,814	1,329	2,019	477	2,635	52,016
VII. Skins and leather (not clothing or footwear) ..	2,050	1,512	413	429	180	24	4,608
VIII. Clothing (except knitted) ..	8,611	9,242	1,358	1,308	593	391	21,503
IX. Food, drink and tobacco ..	49,706	57,740	47,168	12,190	7,593	6,873	181,270
X. Sawmills, joinery, boxes, etc., wood turning and carving ..	12,527	7,889	5,524	4,151	2,100	2,271	34,462
XI. Furniture of wood, bedding, etc. ..	1,897	1,364	735	569	308	109	4,982
XII. Paper, stationery, printing, bookbinding, etc. ..	37,158	30,148	8,287	8,359	2,092	13,499	99,543
XIII. Rubber ..	4,321	7,928	945	678	273	133	14,278
XIV. Musical instruments ..	237	65	3	14	3	..	322
XV. Miscellaneous products ..	8,491	11,339	260	710	309	30	21,139
<i>Total, Classes I. to XV.</i>	<i>604,681</i>	<i>394,277</i>	<i>95,793</i>	<i>111,861</i>	<i>48,894</i>	<i>50,209</i>	<i>1,305,715</i>
XVI. Heat, light and power ..	114,510	106,067	44,499	34,943	17,424	18,870	336,313
Grand Total ..	719,191	500,344	140,292	146,804	66,318	69,079	1,642,028

(a) At end of year. Includes estimated value of rented plant and machinery.

(iii) *Totals in each State.* The following table shows the value of plant and machinery in each State during the years 1958-59 to 1962-63.

FACTORIES: VALUE OF PLANT AND MACHINERY(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1958-59 ..	459,678	337,107	112,528	84,749	66,097	48,226	1,108,385
1959-60 ..	506,638	377,092	120,211	98,240	64,225	53,658	1,220,064
1960-61 ..	607,281	417,918	132,569	113,100	64,306	56,316	1,391,490
1961-62 ..	670,635	467,887	137,251	126,503	61,716	60,795	1,524,787
1962-63 ..	719,191	500,344	140,292	146,804	66,318	69,079	1,642,028

(a) At end of year. Includes estimated value of rented plant and machinery.

4. **Depreciation of Land and Buildings and Plant and Machinery, 1962-63.**—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, 1962-63**
(£'000)

Class of industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
I. Treatment of non-metalliferous mine and quarry products	3,976	1,900	673	776	302	145	7,772
II. Bricks, pottery, glass, etc.	1,614	1,026	227	215	127	45	3,254
III. Chemicals, dyes, explosives, paints, oils, grease	10,242	9,709	321	1,070	2,929	398	24,669
IV. Industrial metals, machines, conveyances	32,863	15,760	2,272	6,407	1,250	1,646	60,198
V. Precious metals, jewellery, plate	64	49	6	14	4	1	138
VI. Textiles and textile goods (not dress)	1,886	3,939	185	188	51	424	6,673
VII. Skins and leather (not clothing or footwear)	211	158	48	59	27	3	506
VIII. Clothing (except knitted)	800	856	133	100	61	34	1,984
IX. Food, drink and tobacco	5,747	6,625	4,796	1,375	932	759	20,234
X. Sawmills, joinery, boxes, etc., wood turning and carving	1,325	790	668	387	300	356	3,826
XI. Furniture of wood, bedding, etc.	231	153	70	54	31	7	546
XII. Paper, stationery, printing, bookbinding, etc.	3,861	4,321	966	692	325	1,404	11,569
XIII. Rubber	940	1,375	172	179	53	30	2,749
XIV. Musical instruments	41	7	1	1	..	..	50
XV. Miscellaneous products	1,142	1,658	29	76	33	4	2,942
Total, Classes I. to XV.	64,943	48,326	10,567	11,593	6,425	5,256	147,110
XVI. Heat, light and power	12,657	5,055	2,849	1,446	1,399	793	24,199
Grand Total	77,600	53,381	13,416	13,039	7,824	6,049	171,309

5. Land and Buildings, Plant and Machinery—Values, Additions and Replacements, Depreciation, 1958-59 to 1962-63.—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)

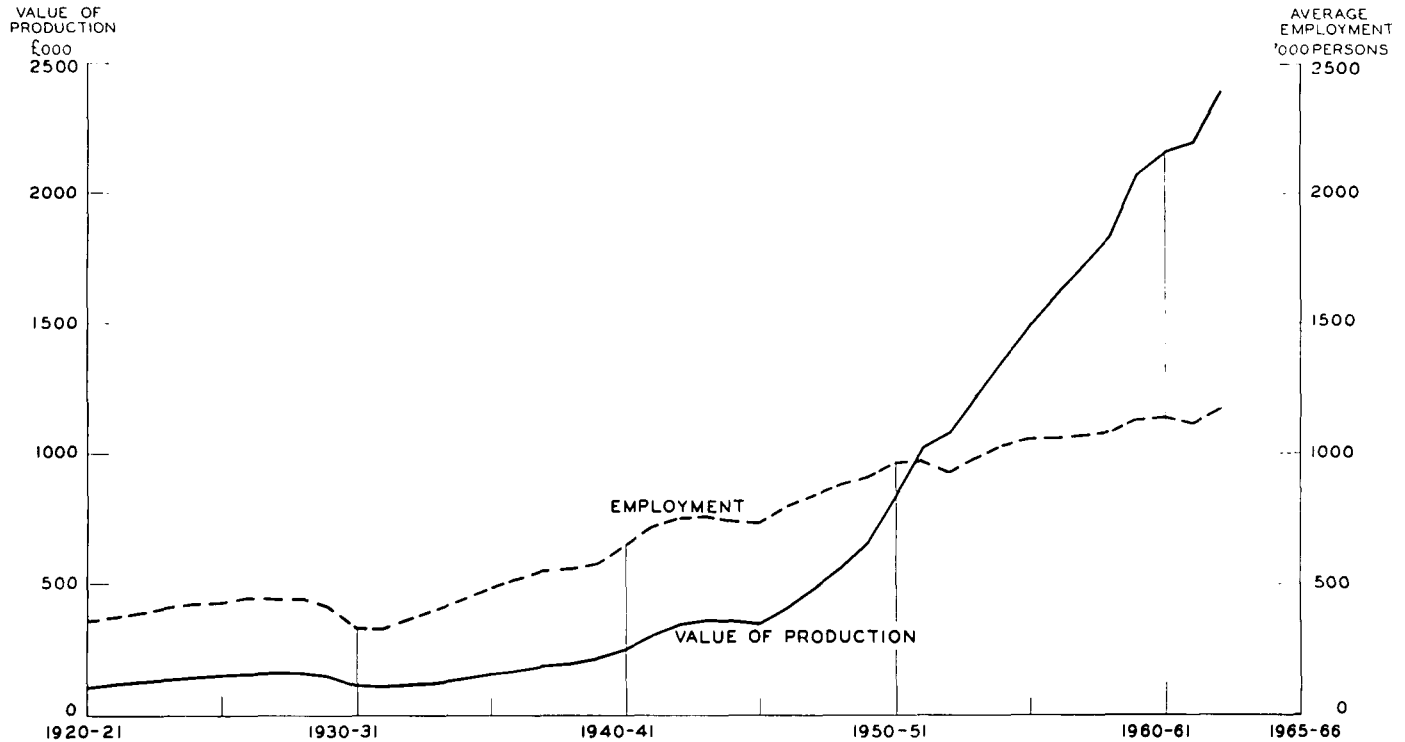
Year	Book values at 30th June(a)		Additions and replacements during year(a)		Depreciation allowed during year	
	Land and buildings	Plant and machinery	Land and buildings	Plant and machinery	Land and buildings	Plant and machinery
1958-59.. .. .	947,899	1,108,385	94,823	197,566	13,000	96,752
1959-60.. .. .	1,063,852	1,220,064	101,971	231,162	13,303	108,486
1960-61.. .. .	1,193,590	1,391,490	90,018	244,048	16,902	125,269
1961-62.. .. .	1,403,838	1,524,787	179,861	280,466	18,446	139,764
1962-63.. .. .	1,502,180	1,642,028	95,645	282,804	19,398	151,911

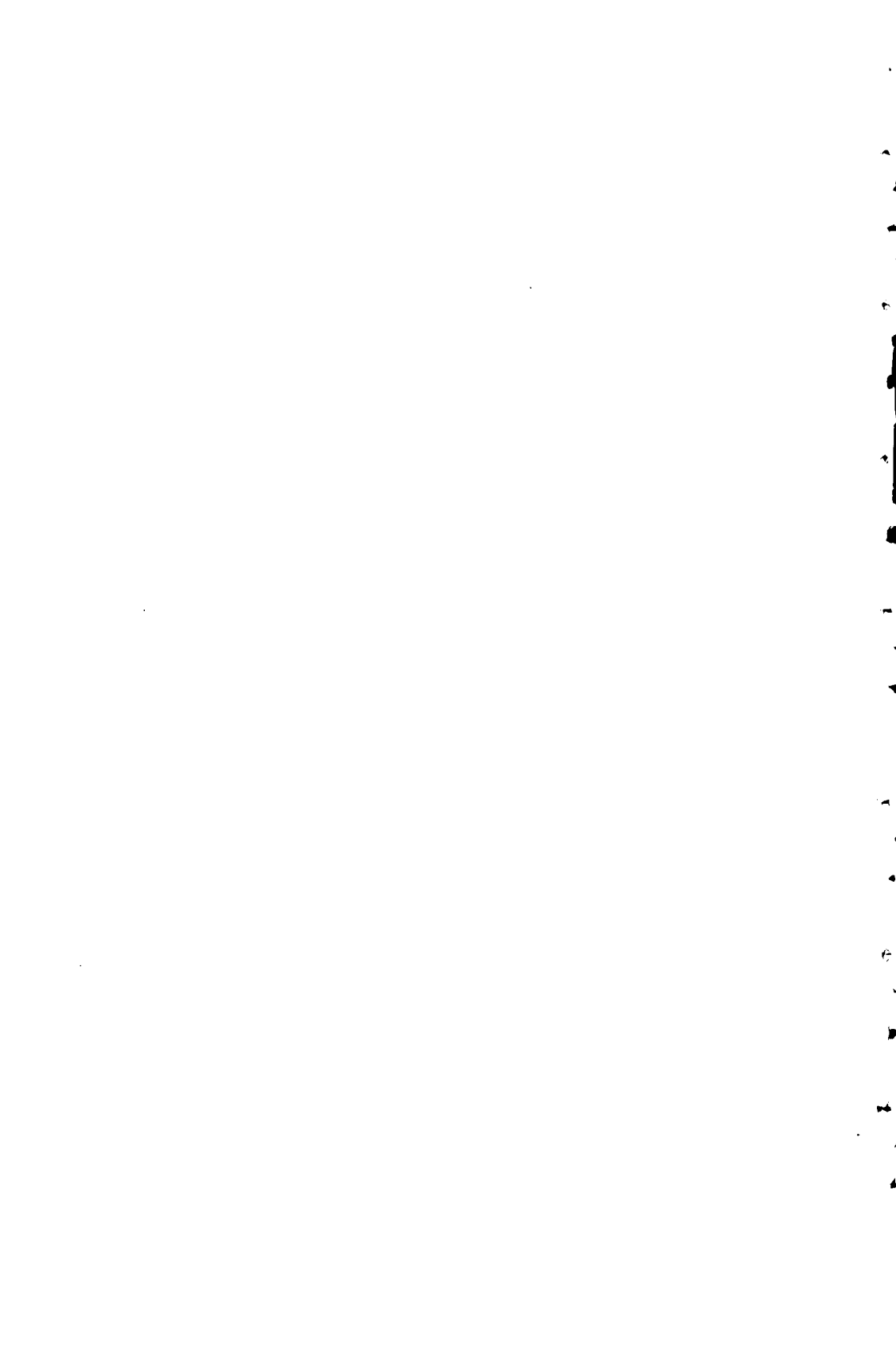
(a) Includes estimated value of rented premises, plant and machinery.

§ 10. Principal Factory Products

The factory production of certain commodities is shown in the monthly and quarterly publications of this Bureau, in the series *Manufacturing Industries*, and in the bulletin *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories* (see NOTE at beginning of this chapter).

VALUE OF PRODUCTION AND AVERAGE EMPLOYMENT IN AUSTRALIAN FACTORIES, 1920-21 TO 1962-63





The following table shows the total recorded production of some of the principal articles manufactured in Australia during the years ended 30th June, 1961 to 1964. A more complete list, together with values, where available, is published in the bulletin *Secondary Industries, Part II.—Materials Used and Articles Produced in Factories.*

Preliminary figures for a restricted number of major commodities for the year 1964—65 are shown in the Appendix to this volume.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES: AUSTRALIA

Article	1960-61	1961-62	1962-63	1963-64(a)
Abrasive cleansers and/or scourers—				
Soap based cwt.	62,509	61,287	61,569	54,959
Other "	145,043	125,640	145,605	173,255
Acid—				
Hydrochloric tons	3,662	3,779	4,295	4,388
Nitric "	16,986	17,885	19,836	19,752
Sulphuric "	1,122,193	1,136,227	1,256,456	1,429,049
Aerated and carbonated waters '000 gals.	80,983	83,223	87,335	91,623
Air conditioning equipment—				
Room air conditioners (refrigerated) .. no.	24,006	11,151	5,918	3,844
Room air coolers (evaporative coolers) .. "	40,620	15,231	3,620	1,811
Package unit air conditioners "	2,603	2,313	1,835	1,732
Asbestos cement building sheets '000 sq. yds.	29,759	26,862	27,800	30,937
Bacon and ham (cured weight) '000 lb.	72,938	77,743	82,183	83,602
Bags, leather, fibre, etc.—				
Handbags—				
Leather no.	777,283	643,991	534,486	(b)
Plastic "	1,809,128	1,746,582	2,082,222	(b)
Other "	108,117	158,133	276,526	(b)
Hessian and calico bags doz.	2,936,354	2,488,111	2,745,621	(b)
Suitcases, kitbags and trunks .. no.	1,334,594	1,217,784	1,419,945	(b)
All other (c) "	1,901,734	2,036,572	2,108,143	(b)
Baking powder lb.	584,824	761,969	754,159	(b)
Bath heaters—				
Electric no.	14,016	14,828	11,783	14,461
Gas "	17,186	18,006	14,143	11,967
Solid fuel "	23,775	20,987	19,967	17,342
Bathing suits doz.	223,487	191,698	209,753	199,564
Baths, C.I.P.E. no.	84,848	78,351	76,034	77,279
Batteries, wet cell type—				
Auto (S.L.I.) 6 Volts no.	604,419	555,334	599,751	581,104
12 Volts "	839,343	887,512	1,115,569	1,183,848
Radio, homelight, fencer .. no. of 2 Volt cells	207,709	185,884	192,146	186,559
Traction "	33,218	36,646	40,623	38,222
Other types "	24,894	17,404	18,357	14,126
Beer (excluding waste beer) '000 gals.	236,408	241,636	249,454	(d)269,972
Biscuits '000 lb.	181,324	179,959	185,238	197,912
Blankets '000	1,903	1,689	1,845	2,187
Boots and shoes (see Footwear).				
Bran (wheaten) tons (2,000 lb.)	250,372	236,272	225,185	251,046
Brandy proof gals.	1,166,978	1,177,943	1,128,997	(b)
Brassieres doz.	516,691	571,465	609,575	685,612
Bread (2 lb. loaf equivalent) '000	761,496	760,002	769,221	(b)
Breakfast food, cereal (ready to eat) .. cwt.	736,288	796,565	811,592	832,791
Bricks, clay '000	1,060,887	992,410	1,058,675	1,240,162
Brooms gross	21,060	23,411	21,727	(b)
Brushes (e) "	98,943	95,044	105,991	(b)
Butter tons	179,209	197,256	201,234	202,540
Candles cwt.	9,845	8,020	6,315	(b)
Cardigans, sweaters, etc. doz.	1,273,814	1,136,229	1,261,126	1,312,986
Casein '000 lb.	25,178	30,356	36,236	37,351
Caustic soda tons	47,758	47,539	56,481	64,222
Cement, portland "	2,859,738	2,782,785	2,942,045	3,321,997
Cheese (green weight) "	46,804	55,252	59,520	57,704
Chlorine "	26,932	27,787	36,803	43,683
Chutney '000 pints	1,817	2,052	1,414	(b)
Cigarettes and cigars '000 lb.	42,976	42,539	45,346	45,999
Cloth (incl. mixtures)—				
Cotton (f) '000 sq. yds.	43,695	45,630	48,433	53,096
Woollen and worsted(g) "	26,466	24,991	28,254	23,600
Coke—				
Metallurgical tons	2,738,505	2,716,894	2,759,060	2,916,020
Other "	764,626	762,455	761,355	(b)
Confectionery—				
Chocolate '000 lb.	79,306	77,544	83,815	92,611
Other "	94,674	96,854	97,708	99,997

(a) Subject to revision. (b) Not yet available. (c) Excludes canvas waterbags. (d) As reported by Department of Customs and Excise; includes waste. (e) Excludes tooth brushes and industrial metal and bristle brushes. (f) Excludes towelling and tyre-cord fabric. (g) Excludes blanketing.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued

Article	1960-61	1961-62	1962-63	1963-64(a)
Copper, refined(c) tons	68,986	63,769	85,652	90,890
Coppers—				
Electric no.	15,437	13,188	10,385	(b)
Gas "	15,282	14,405	10,867	(b)
Inserts (all types) "	24,627	19,008	15,356	(b)
Corjials and syrups '000 gals.	5,289	5,415	6,259	6,999
Corsets and corselets doz.	217,278	237,555	274,353	295,696
Mustard powder '000 lb.	5,559	5,770	6,493	(b)
Cycles, assembled no.	64,384	55,065	59,168	62,571
Dentifrices (toothpaste) '000 lb.	8,180	8,687	8,309	(b)
Dynamos—				
Alternators no.	582	687	1,022	(b)
Generators "	5,381	3,865	3,359	(b)
Electricity mill. kWh	24,814	26,275	29,279	32,124
Engines—				
Diesel, other than marine no.	3,072	2,450	2,544	3,025
Petrol—				
Marine "	9,229	6,137	6,005	7,751
Other(d) "	183,731	203,764	268,405	285,673
Essences, flavouring—				
Domestic gals.	101,445	131,281	114,239	(b)
Industrial "	447,779	480,951	530,649	(b)
Face powder cwt.	2,180	2,279	2,214	(b)
Fans, electric no.	267,520	183,819	146,193	156,664
Fats, edible '000 lb.	66,710	75,934	60,225	(b)
Felt(e) sq. yds.	11,115,055	11,373,394	12,239,938	(b)
Fence posts and droppers tons	54,820	37,397	53,934	66,621
Fibrous plaster sheets '000 sq. yds.	17,176	15,332	15,830	15,363
Fish, canned (including fish loaf) '000 lb.	8,197	12,040	10,327	11,104
Floorboards—				
Australian timber '000 super. ft.	144,817	135,125	139,284	(b)
Imported timber "	1,178	733	776	(b)
Floor coverings—				
Soft '000 sq. yds.	7,481	7,067	8,801	10,301
Smooth surface "	6,214	6,445	7,566	8,284
Flour, self-raising cwt.	955,417	1,024,098	1,006,692	(b)
Wheaten(f) tons (2,000 lb.)	1,523,066	1,466,706	1,420,694	1,668,887
Footwear (not rubber)—				
Boots, shoes and sandals '000 pairs	25,215	25,995	26,606	28,179
Slippers "	10,308	9,827	10,662	11,177
Fruit juices, natural '000 gals.	4,864	6,755	7,710	(b)
Gas (town) mill. cubic ft.	50,684	50,247	51,351	52,594
Gloves—				
Dress—				
Leather doz. pairs	330	527	1,021	(g)
Other "	43,013	27,161	27,333	27,898
Work (excluding unsupported rubber) "	391,759	349,775	420,687	483,347
Golf clubs doz.	27,002	36,173	29,598	29,789
Handkerchiefs—				
Men's "	1,595,645	1,552,687	1,737,533	(b)
Women's "	1,685,630	1,455,530	1,355,133	(b)
Hats and caps (excluding berets)(h) "	605,161	621,541	613,147	(b)
Hose, rubber, garden '000 lin. ft.	2,179	2,152	2,543	(b)
Other "	11,840	10,644	14,858	(b)
Plastic, garden "	36,408	36,296	36,118	(b)
Hot water systems—				
Instantaneous no.	33,885	27,136	25,726	30,039
Storage "	87,880	89,757	106,586	130,042
Heat exchange type "	14,363	14,163	12,960	15,152
Ice tons	278,848	252,669	238,924	(b)
Ice cream '000 gals.	17,770	19,221	20,661	22,177
Ice cream mix powder '000 lb.	1,248	1,360	1,341	1,003
Infants' and invalids' milk based health beverages(i) lb.	36,415	38,137	38,710	45,284
Ink, printing, news inks "	13,620,686	11,611,223	12,396,605	(b)
Other "	10,122,811	12,205,625	12,407,377	(b)
Writing and drawing £	131,612	153,005	110,757	(b)
Iron and steel—				
Pig iron '000 tons	3,002	3,380	3,400	3,763
Steel ingots "	3,748	4,076	4,260	4,755
Blooms and slabs "	3,193	3,326	3,672	4,081

(a) Subject to revision. (b) Not yet available. (c) Primary origin only. (d) Excludes motor car, motor cycle, tractor and aero engines. (e) Includes underfelt. (f) Includes wheatmeal for baking and sharps. (g) Not available for publication. (h) Includes hoods and capelins. (i) Includes malted milk and milk sugar (lactose).

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued

Article	1960-61	1961-62	1962-63	1963-64(a)
Irons, electric (hand, domestic) no.	286,140	305,374	354,636	362,157
Jams (including conserves, jellies, etc.) .. '000 lb.	83,080	98,313	92,175	88,355
Jelly crystals "	12,679	13,656	14,214	(b)
Lacquer, clear and colours gals.	1,366,721	1,309,553	1,442,937	1,513,850
Lard cwt.	50,094	47,463	46,120	(b)
Lawn mowers—				
Petrol, rotary no.	196,017	200,712	217,570	198,921
Other types(c) "	21,029	8,962	15,158	16,475
Lead refined(d) tons	174,816	174,497	208,946	217,296
Leather—				
Dressed from hides, sold by measurement '000 sq. ft.	54,826	62,357		
Sold by weight '000 lb.	140	122		
Skins '000 sq. ft.	18,854	15,920		
Harness, skirt, belting, etc. '000 lb.	1,131	1,205		
Sole "	23,355	20,137		
Upholstery '000 sq. ft.	863	736		
Dressed or finished, chrome tanned (incl. retanned) '000 sq. ft.			77,887	(b)
Vegetable tanned by weight '000 lb.			20,838	(b)
Vegetable tanned by area '000 sq. ft.			3,449	(b)
Tanned or dressed skins with hair or wool retained '000 doz.			51	(b)
Lime, crushed tons	161,632	191,501	161,129	(b)
Hydrated "	62,317	85,126	76,401	(b)
Quick "	98,425	96,792	78,545	(b)
Lipstick lb.	92,446	92,404	86,318	(b)
Lubricating oil '000 gals.	13,973	13,316	12,242	(b)
Malt, barley '000 bus.	9,015	10,207	10,429	11,855
Margarine—				
Table '000 lb.	36,117	35,262	35,703	35,243
Other "	61,307	65,066	70,645	73,938
Mattresses, box spring no.	19,202	26,937	37,825	46,623
Woven wire "	371,629	402,651	408,866	479,847
Inner spring "	593,779	635,298	644,510	688,986
Other "	288,733	266,163	256,462	273,229
Meat, canned(e) '000 lb.	111,442	117,088	95,151	99,241
Meters—				
Electric (domestic) no.	280,147	245,246	235,753	254,884
Gas "	65,756	50,439	48,198	53,351
Water "	119,159	138,883	131,882	127,593
Milk, condensed, concentrated and evaporated—				
Full cream, sweetened '000 lb.	66,156	63,299	75,533	96,906
Skim and/or buttermilk " Unsweetened(f)	71,830	77,153	74,834	93,631
Milk powder—				
Full cream '000 lb.	10,044	12,004	19,203	24,231
Skim "	41,563	45,325	39,703	42,109
Buttermilk and whey " "	82,772	84,441	94,176	95,985
Mops, floor gross	17,534	18,918	21,831	21,665
Motor bodies no.	16,116	17,449	18,024	(b)
Motor spirit (including benzol) '000 gals.	300,174	246,840	351,896	379,972
Motors, electric no.	1,149,591	1,212,864	1,262,767	1,358,499
Motors, electric no.	1,862,595	1,699,865	1,935,866	2,215,797
Mustard prepared for instant use .. lb.	301,322	368,695	353,943	(b)
Nails tons	25,168	22,186	25,447	25,106
Neckties doz.	492,268	516,975	524,622	(b)
Oatmeal and rolled oats for porridge .. cwt.	317,365	312,225	301,976	295,048
Paint—				
Ready-mixed, liquid and enamels .. '000 imp. gals.	12,729	13,290	13,846	15,262
Other than water, in paste form (heavy-bodied whites, etc.) '000 lb.	3,322	3,160	3,088	3,187
Water—				
Emulsion type '000 imp. gals.	2,492	2,778	3,077	3,351
Powder (including kalsomine) '000 lb.	2,736	2,540	2,226	2,432
Paper—				
Newsprint tons	88,039	89,758	92,245	92,039
Other paper "	215,804	213,921	255,751	291,099
Paperboard "	210,559	207,700	242,019	256,353
Peanut butter and paste '000 lb.	6,976	7,488	7,727	(b)
Perambulators, pushers and strollers .. no.	145,468	145,236	140,449	147,285
Pickles '000 pints	9,324	6,038	7,969	(b)
Pigments, tinting colours, all types .. gals.	38,897	53,859	66,306	(b)

(a) Subject to revision. (b) Not yet available. (c) Petrol cylinder, electric and hand.
(d) Includes lead content of lead alloy from primary sources, but excludes lead-silver bullion produced for export. (e) Excludes poultry and baby food. (f) Includes liquid ice-cream mix.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—continued

Article	1960-61	1961-62	1962-63	1963-64(a)
Pigments, Zinc oxide	cwt. 147,068	122,847	152,156	(b)
Other (synthetic or chemical)	" 409,884	425,762	472,310	(b)
Ground, natural earths	" 1,292,997	993,417	1,294,429	(b)
Plaster of Paris	tons 246,888	228,299	240,863	260,043
Plywood, $\frac{1}{4}$ inch basis	'000 sq. ft. 223,389	202,807	195,263	(b)
Pollard	tons (2,000 lb.) 325,726	315,381	305,923	347,251
Preserves—				
Fruit, canned or bottled	'000 lb. 307,866	450,484	431,739	468,395
Pulp and puree	cwt. 135,546	139,478	140,974	(b)
Vegetables, canned or bottled	'000 lb. 99,728	133,597	132,620	142,890
Quick frozen	" 21,046	47,232	47,834	49,754
Pyjamas—				
Men's and boys' (suits only)	doz. 342,631	361,459	406,946	431,081
Women's and girls' (incl. nightdresses)	" 552,835	562,577	626,441	646,289
Racquet frames (all types)	" 12,673	12,538	15,034	14,466
Records (phonograph)—				
Single play (78 and 45 r.p.m.)	'000 3,210	3,018	3,629	3,855
Extended play	" 1,245	755	898	1,121
Long play	" 2,925	3,422	3,660	4,075
Refrigerators, domestic	no. 219,506	209,415	206,349	207,070
Resins, plastic and synthetic	'000 cwt. 1,382	1,672	1,833	1,942
Rice (cleaned)(c)	cwt. 1,744,310	1,537,899	1,692,821	(b)
Ropes and cables (excluding wire)	" 141,396	139,789	143,490	147,181
Rugs	'000 183	161	198	169
Sauce	'000 pints 36,840	34,257	33,153	(b)
Semolina	tons (2,000 lb.) 11,453	11,385	10,065	12,757
Shirts (men's and boys')	doz. 1,814,274	1,619,935	1,929,374	1,956,024
Sink heaters	no. 15,901	15,195	13,398	12,998
Sinks, stainless steel	" 197,525	172,380	173,565	194,714
Soap and detergents—				
Soap, personal toilet	cwt. 403,511	400,276	419,845	427,191
Household	" 711,127	683,829	699,551	707,389
Industrial (incl. wool scouring)(d)	" 125,382	92,224	90,383	78,452
Extracts and powders, household	" 594,035	562,196	543,858	524,103
Industrial	" 91,638	91,923	94,797	96,777
Detergents, personal toilet	" 13,664	18,485	18,115	22,876
Household	" 259,313	311,387	379,080	413,267
Industrial	" 40,437	37,707	45,869	53,949
Extracts and powders—				
Household	" 425,599	473,747	477,300	543,073
Industrial	" 73,804	77,500	88,796	91,509
Socks and stockings—				
Men's and youths'	'000 doz. pairs 1,359	1,315	1,643	1,607
Women's and maids'	" 2,834	3,052	3,663	3,979
Children's and infants'	" 840	902	899	934
Soup, canned	'000 pints 49,071	44,650	48,063	(b)
Dry-mix	'000 lb. 6,217	6,267	7,621	(b)
Spades and shovels	doz. 32,163	36,670	33,067	(b)
Starch	cwt. 645,925	742,200	821,687	901,135
Stearine (stearic acid)	" 72,331	88,269	89,736	88,363
Steel, structural, fabricated	tons 380,073	401,440	421,714	(b)
Stoves, ovens and ranges—				
Domestic cooking—				
Electric(e)	no. 107,902	123,380	147,732	175,842
Gas	" 92,306	87,326	82,376	103,402
Solid fuel	" 31,722	28,712	27,149	28,081
Sugar, raw (94 net titre)	tons 1,382,611	1,382,841	1,849,808	1,608,324
Refined	" 524,784	553,472	563,765	575,127
Sulphate of ammonia	" 98,988	103,918	93,675	82,474
Superphosphate(f)	" 2,530,884	2,591,379	2,895,099	3,346,903
Talcum powder	cwt. 49,751	55,447	58,670	(b)
Tallow—				
Edible (including dripping)	" 902,064	1,309,258	1,483,081	(b)
Inedible	" 1,979,671	2,808,780	3,285,350	(b)
Television sets	no. 315,966	289,493	295,694	271,110
Tiles, roofing—				
Cement	'000 52,654	53,220	60,482	76,732
Terracotta	" 55,185	50,048	51,298	54,158
Timber—				
From native logs—				
Hardwood	'000 super. ft. 1,152,995	1,063,086	1,088,197	} 1,463,000
Softwood	" 264,838	289,117	322,370	
From imported logs—				
Hardwood	" 35,330	21,249	22,255	(b)
Softwood	" 2,999	6,685	9,694	(b)
Toasters, electric (domestic)	no. 235,158	216,923	289,063	305,065
Tobacco	'000 lb. 15,259	13,011	11,553	10,188
Tomato juice	gals. 2,082,245	2,354,924	2,353,029	1,043,663
Paste and puree	'000 pints 14,067	12,357	7,709	(b)

(a) Subject to revision. (b) Not yet available. (c) Polished, unpolished or broken.
(d) Includes industrial flakes and chips. (e) Includes stovettes, cookers, etc. (f) Source—
Department of Primary Industry.

QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA—*continued*

Article	1960-61	1961-62	1962-63	1963-64(a)
Tomato Pulp	cwt. 1,093,841	591,219	449,767	(b)
Towels	doz. 695,241	762,400	729,680	823,653
Tractors	no. 8,609	8,542	10,779	(b)
Transformers, chokes and ballasts—				
For distribution of power and light, etc.	75,730	18,057	18,788	(b)
For fluorescent lights and neon signs	2,153,124	1,766,410	2,477,253	(b)
For radio receivers, record players, etc.	1,174,079	1,085,208	1,272,258	(b)
For television receivers	822,563	1,057,277	947,925	(b)
For other purposes	171,865	212,286	302,403	(b)
Tubes, rubber	3,036,255	2,834,781	3,261,681	3,400,863
Twine (all types)	cwt. 213,278	142,142	150,972	189,091
Tyres, pneumatic—				
Motor car and motor cycle	no. 3,654,861	3,468,724	4,319,657	4,412,293
Truck and omnibus	470,244	354,124	465,617	517,227
Aero and tractor	199,996	179,401	228,131	260,511
Umbrellas	640,643	694,128	736,780	(b)
Underwear (men's, women's, children's) .. '000 doz.	5,408	5,518	5,870	(b)
Vacuum cleaners (domestic)	no. 109,753	114,189	127,348	140,708
Wash basins—				
C.I.P.E.	no. 96,800	82,794	77,717	72,504
Earthenware	67,596	81,095	97,404	110,756
Pressed steel	34,461	32,687	37,333	45,567
Washing machines, household, electric	195,541	220,102	215,844	224,308
Weatherboards—				
Australian timber	'000 super. ft. 26,743	25,146	20,123	(b)
Imported timber	930	1,378	3,093	(b)
Wheatmeal(c)	tons (2,000 lb.) 114,140	102,285	97,203	111,198
Wheelbarrows (metal)	no. 81,988	85,292	87,642	(b)
Wine, beverage—				
Fortified	'000 gals. 9,865	11,077	8,761	10,839
Unfortified	5,752	6,897	6,091	7,925
Wireless and television cabinets	no. 533,022	482,887	440,843	433,066
Wireless receiving sets (incl. radiograms)	454,786	367,778	500,873	466,457
Wool, scoured or carbonized	'000 lb. 158,198	168,279	171,175	160,303
Wool tops	40,781	46,031	47,957	50,878
Yarn(d)—				
Cotton	42,806	43,222	46,693	55,183
Woollen	25,732	23,436	26,662	28,290
Wool worsted	23,347	22,519	25,892	23,782
Zinc oxide (see pigments)				
Zinc, refined(e)	tons 125,936	153,742	175,850	186,386

(a) Subject to revision. (b) Not yet available. (c) Excludes wheatmeal for baking included with flour; includes wheatmeal for porridge and stock food. (d) Includes mixtures predominantly the fibre mentioned. (e) Primary origin only—includes small quantities of zinc dust.

§ 11. Individual Industries

1. **General.**—Particulars on pages 149-76, §§ 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 publication, 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 or capital, or for other features of special interest.

In order to make room for a wider range of industries, tables showing particulars for each State which were included in previous issues of the Year Book have been discontinued. These details are available from publications issued by the Deputy Commonwealth Statistician in each State and, for selected industries, in the Central Office series *Manufacturing Industries*.

Details of some of the principal articles produced in factories in Australia during the years 1960-61 to 1963-64 are shown in the table on 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 1. Particulars for the three industries under this general heading are shown for 1962-63 and for the years 1958-59 to 1962-63 in the following table.

PORTLAND CEMENT, ASBESTOS CEMENT SHEETS, ETC., AND OTHER CEMENT GOODS

AUSTRALIA, 1962-63

Particulars	Portland cement	Asbestos cement sheets and mouldings	Other cement goods	Total
Number of factories	16	16	607	639
Number of persons employed	3,130	2,963	7,484	13,577
Salaries and wages paid	£'000 3,959	3,567	9,043	16,569
Value of power, fuel, etc., used	£'000 5,264	584	583	6,431
Value of materials used	£'000 7,984	6,212	30,417	44,613
Value of production	£'000 12,481	8,045	19,085	39,611
Total value of output	£'000 25,729	14,841	50,085	90,655
Value of land and buildings	£'000 4,951	4,082	7,814	16,847
Value of plant and machinery	£'000 22,870	4,596	9,614	37,080
Horse-power of engines ordinarily in use h.p.	104,540	23,934	33,365	161,839

AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	499	523	577	600	639
Number of persons employed	11,392	12,054	12,998	12,965	13,577
Salaries and wages paid	£'000 11,648	13,431	15,122	15,451	16,569
Value of power, fuel, etc., used	£'000 5,265	5,616	5,968	6,053	6,431
Value of materials used	£'000 28,739	33,394	40,326	40,493	44,613
Value of production	£'000 26,178	30,785	34,905	35,530	39,611
Total value of output	£'000 60,182	69,795	81,199	82,076	90,655
Value of land and buildings	£'000 8,308	10,614	13,549	15,772	16,847
Value of plant and machinery	£'000 21,754	24,274	31,683	35,123	37,080
Horse-power of engines ordinarily in use	h.p. 125,082	132,710	145,903	155,925	161,839

3. Bricks, Tiles, Pottery and Earthenware.—The following table shows particulars of this industry for the years 1958-59 to 1962-63.

BRICKS, TILES, POTTERY AND EARTHENWARE: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	434	437	434	427	419
Number of persons employed	14,276	14,980	15,012	14,305	14,496
Salaries and wages paid	£'000 14,252	15,916	16,663	15,999	16,538
Value of power, fuel, etc., used	£'000 4,983	5,312	5,509	5,366	5,812
Value of materials used	£'000 6,665	7,856	8,495	8,424	8,898
Value of production	£'000 22,934	26,384	27,244	26,083	27,489
Total value of output	£'000 34,582	39,552	41,248	39,873	42,199
Value of land and buildings	£'000 9,616	11,005	12,506	13,151	15,737
Value of plant and machinery	£'000 10,509	11,688	14,376	16,792	21,095
Horse-power of engines ordinarily in use	h.p. 93,403	97,471	101,389	108,491	118,673

4. Glass and Glass Bottles.—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63.

GLASS AND GLASS BOTTLES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	208	229	242	248	255
Number of persons employed	8,659	9,189	9,444	9,651	10,510
Salaries and wages paid	£'000 7,859	9,361	9,992	10,688	11,585
Value of power, fuel, etc., used	£'000 2,775	2,899	2,945	2,697	2,788
Value of materials used	£'000 13,794	16,705	16,263	16,268	17,961
Value of production	£'000 15,225	17,892	19,238	20,212	22,239
Total value of output	£'000 31,794	37,495	38,444	39,177	42,988
Value of land and buildings	£'000 6,784	8,514	9,626	12,826	15,677
Value of plant and machinery	£'000 4,024	4,565	5,665	7,137	10,694
Horse-power of engines ordinarily in use	h.p. 27,011	33,565	32,058	35,969	40,627

5. **Industrial and Heavy Chemicals.**—The following table shows particulars of the industrial and heavy chemical industry for Australia for the years 1958–59 to 1962–63. 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):
AUSTRALIA**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	302	287	297	308	320
Number of persons employed	15,813	14,423	13,945	13,746	14,165
Salaries and wages paid	£'000 17,242	17,146	17,475	17,724	18,783
Value of power, fuel, etc., used	£'000 4,616	4,874	4,652	6,015	6,652
Value of materials used	£'000 46,604	46,212	43,810	50,586	58,724
Value of production	£'000 42,513	43,497	41,066	46,627	55,800
Total value of output	£'000 93,733	94,583	89,528	103,228	121,176
Value of land and buildings	£'000 22,948	24,657	28,509	34,059	34,337
Value of plant and machinery	£'000 38,137	41,326	44,518	70,576	68,063
Horse-power of engines ordinarily in use	h.p. 130,928	117,311	124,629	165,055	174,380

6. **Pharmaceutical and Toilet Preparations.**—The following table shows particulars of the pharmaceutical and toilet preparations industry for Australia for the years 1958–59 to 1962–63. The bulk of the output of this industry comes from New South Wales and Victoria.

PHARMACEUTICAL AND TOILET PREPARATIONS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	210	216	212	211	209
Number of persons employed	6,976	7,791	7,805	7,910	8,058
Salaries and wages paid	£'000 5,886	7,074	7,448	7,864	8,470
Value of power, fuel, etc., used	£'000 754	810	842	797	925
Value of materials used	£'000 19,575	23,311	23,630	25,585	27,588
Value of production	£'000 23,130	28,985	32,155	33,129	31,998
Total value of output	£'000 43,459	53,106	56,627	59,511	60,511
Value of land and buildings	£'000 10,750	11,528	13,431	14,544	17,087
Value of plant and machinery	£'000 4,519	5,347	6,003	5,732	6,319
Horse-power of engines ordinarily in use h.p.	16,702	18,084	19,237	20,322	22,772

7. **White Lead, Paints and Varnish.**—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63.

WHITE LEAD, PAINTS AND VARNISH: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	188	181	182	188	184
Number of persons employed	5,532	5,475	5,208	5,096	5,144
Salaries and wages paid	£'000 5,448	5,710	5,746	5,669	5,830
Value of power, fuel, etc., used	£'000 419	416	393	404	436
Value of materials used	£'000 25,448	26,892	24,924	26,762	28,732
Value of production	£'000 13,184	15,446	15,407	15,467	17,317
Total value of output	£'000 39,051	42,754	40,724	42,633	46,485
Value of land and buildings	£'000 6,327	6,942	7,736	7,745	8,400
Value of plant and machinery	£'000 3,696	4,219	4,177	5,440	5,392
Horse-power of engines ordinarily in use h.p.	25,093	25,879	27,952	28,780	29,262

8. **Mineral Oil Extraction and Refining.**—Particulars of factories engaged in the extraction and refining of mineral oil products are shown in the following table for Australia for the years 1958-59 to 1962-63. Victoria, New South Wales, and Western Australia produce most of the refined mineral oil and by-products.

MINERAL OILS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	70	70	76	77	79
Number of persons employed	4,888	4,972	5,020	5,028	5,044
Salaries and wages paid £'000	5,990	6,514	7,062	7,356	7,745
Value of power, fuel, etc., used £'000	7,531	7,848	7,537	7,990	8,795
Value of materials used £'000	123,526	133,417	136,503	136,357	143,504
Value of production £'000	39,149	43,724	44,405	36,338	47,786
Total value of output £'000	170,206	184,989	188,445	180,685	200,085
Value of land and buildings £'000	19,154	18,261	18,493	19,517	20,122
Value of plant and machinery £'000	85,504	84,954	86,755	95,475	109,194
Horse-power of engines ordinarily in use h.p.	106,771	108,231	132,640	145,383	183,935

9. **Soap and Candle Factories.**—The following table shows particulars of factories in the soap and candle industry for Australia for the years 1958-59 to 1962-63. New South Wales and Victoria are the major centres of production in this industry.

SOAP AND CANDLES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	89	(a) 120	119	117	117
Number of persons employed	2,929	3,210	3,234	3,290	3,340
Salaries and wages paid £'000	2,822	3,220	3,538	3,568	3,771
Value of power, fuel, etc., used £'000	387	383	430	420	419
Value of materials used £'000	15,253	15,835	16,279	16,138	16,438
Value of production £'000	11,941	14,131	15,210	15,003	16,377
Total value of output £'000	27,581	30,349	31,919	31,561	33,234
Value of land and buildings £'000	2,039	2,652	2,965	3,000	2,982
Value of plant and machinery £'000	3,118	3,054	3,220	3,440	3,218
Horse-power of engines ordinarily in use h.p.	12,632	13,689	14,452	14,495	16,256

(a) The increase in the number of factories is due mainly to the reclassification of a number of factories in New South Wales.

10. **Chemical Fertilizers.**—The following table shows particulars of the factories engaged in the manufacture of chemical fertilizers in Australia for the years 1958-59 to 1962-63.

CHEMICAL FERTILIZERS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	48	49	44	47	48
Number of persons employed	4,959	4,763	4,567	4,525	4,432
Salaries and wages paid £'000	5,207	5,369	5,475	5,469	5,508
Value of power, fuel, etc., used £'000	995	994	1,001	970	920
Value of materials used £'000	25,756	26,348	26,930	27,718	29,680
Value of production £'000	11,440	11,520	12,325	12,334	12,458
Total value of output £'000	38,191	38,862	40,256	41,022	43,058
Value of land and buildings £'000	7,633	7,508	6,072	6,280	6,356
Value of plant and machinery £'000	10,808	10,257	8,651	8,734	9,380
Horse-power of engines ordinarily in use h.p.	57,587	58,519	53,194	55,089	55,894

11. **Iron and Steel Works and Engineering.**—(i) *General.* The first group included under this heading (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 engineering 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 Australia for the years 1958-59 to 1962-63 for the group Smelting, converting, refining and rolling of iron and steel. The greater part of the output of this industry comes from New South Wales, with Western Australia, Victoria, and South Australia producing nearly all the remainder.

**SMELTING, CONVERTING, REFINING AND ROLLING OF IRON AND STEEL:
AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	34	35	34	34	33
Number of persons employed	29,982	31,825	33,804	34,504	35,605
Salaries and wages paid £'000	34,220	38,793	45,721	44,237	47,545
Value of power, fuel, etc., used £'000	23,539	30,202	33,929	33,953	36,774
Value of materials used £'000	153,563	162,677	174,276	163,778	184,437
Value of production £'000	78,154	86,256	100,618	97,653	108,252
Total value of output £'000	255,256	279,135	308,823	295,384	329,463
Value of land and buildings £'000	11,400	14,417	31,660	36,972	39,380
Value of plant and machinery £'000	82,451	95,110	147,676	180,428	194,903
Horse-power of engines ordinarily in use h.p.	633,180	690,291	757,451	778,470	872,050

Particulars of the production of pig-iron and steel will be found on page 178 and in Chapter XXVI. Mineral Industry.

(iii) *Foundries (Ferrous).* Particulars covering those industries classified as founding of iron and steel are shown for Australia for the years 1958-59 to 1962-63 in the following table. Tasmanian foundry output is relatively small and details are included in "Other engineering" (see p. 186).

FOUNDRIES—FERROUS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	346	312	245	239	231
Number of persons employed	7,376	7,853	7,797	7,183	7,711
Salaries and wages paid £'000	7,293	8,504	8,776	8,089	8,970
Value of power, fuel, etc., used £'000	955	1,121	1,114	1,016	1,160
Value of materials used £'000	6,687	7,905	8,654	7,398	8,978
Value of production £'000	10,615	12,325	12,756	11,243	12,485
Total value of output £'000	18,257	21,351	22,524	19,657	22,623
Value of land and buildings £'000	3,912	4,866	5,128	5,040	5,474
Value of plant and machinery £'000	2,963	3,791	3,727	3,579	3,730
Horse-power of engines ordinarily in use h.p.	31,612	32,455	31,471	31,506	32,617

(iv) *Plant, Equipment and Machinery (including Machine Tools).* The next table shows particulars for this group for Australia for the years 1958-59 to 1962-63.

**PLANT, EQUIPMENT AND MACHINERY (INCLUDING MACHINE TOOLS):
AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	2,345	2,518	2,587	2,744	2,857
Number of persons employed	70,905	76,096	77,733	77,464	80,758
Salaries and wages paid £'000	70,371	81,885	86,669	86,794	93,146
Value of power, fuel, etc., used £'000	3,161	3,574	3,789	3,759	4,115
Value of materials used £'000	122,408	144,405	152,329	148,464	167,358
Value of production £'000	115,472	138,402	143,925	142,741	155,671
Total value of output £'000	241,041	286,381	300,043	294,964	327,144
Value of land and buildings £'000	49,927	56,116	66,337	74,008	81,407
Value of plant and machinery £'000	36,400	39,407	43,122	46,178	49,132
Horse-power of engines ordinarily in use h.p.	250,580	267,497	278,138	293,577	303,606

(v) *Other Engineering.* Details covering jobbing and general engineering works not elsewhere included are shown for Australia for the years 1958-59 to 1962-63 in the following table.

OTHER ENGINEERING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	2,220	2,318	2,439	2,457	2,472
Number of persons employed	23,467	25,780	27,997	27,897	28,997
Salaries and wages paid £'000	21,682	23,858	28,794	29,561	31,732
Value of power, fuel, etc., used £'000	806	1,018	1,048	1,111	1,249
Value of materials used £'000	26,059	31,110	35,141	35,958	41,099
Value of production £'000	34,829	42,264	47,369	47,192	52,219
Total value of output £'000	61,694	74,392	83,558	84,261	94,567
Value of land and buildings £'000	16,655	19,233	24,015	26,423	28,187
Value of plant and machinery £'000	12,201	13,782	16,441	17,590	18,300
Horse-power of engines ordinarily in use h.p.	76,109	89,374	93,019	101,245	107,735

12. *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, in Australia for the years 1958-59 to 1962-63. Ore dressing and elementary smelting of metallic minerals (e.g. in the case of gold), when these are carried out in an associated plant at or near the mine, are included in the mineral industry (*see* Chapter XXVI. Mineral Industry).

EXTRACTING AND REFINING OF NON-FERROUS METALS; ALLOYS:
AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	68	71	69	62	64
Number of persons employed	7,269	7,438	7,545	7,974	8,277
Salaries and wages paid £'000	8,880	9,535	9,842	10,642	11,452
Value of power, fuel, etc., used £'000	4,724	4,833	4,703	5,281	6,665
Value of materials used £'000	61,060	64,376	74,673	71,691	97,143
Value of production £'000	18,129	20,502	21,984	21,714	26,045
Total value of output £'000	83,913	89,711	101,360	98,686	129,853
Value of land and buildings £'000	7,326	10,105	10,724	11,956	14,026
Value of plant and machinery £'000	15,764	21,495	23,918	31,950	39,753
Horse-power of engines ordinarily in use h.p.	76,680	86,776	90,216	94,081	93,482

13. *Electrical Machinery, Cables and Apparatus.*—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63. New South Wales factories account for almost two-thirds of the output of this industry.

ELECTRICAL MACHINERY, CABLES AND APPARATUS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,213	1,360	1,339	1,349	1,404
Number of persons employed	50,069	53,089	54,072	52,918	55,692
Salaries and wages paid £'000	46,979	54,011	57,179	57,020	61,556
Value of power, fuel, etc. used £'000	2,493	2,685	2,821	2,835	3,077
Value of materials used £'000	94,964	108,712	110,680	112,737	116,070
Value of production £'000	76,808	90,199	93,897	93,017	100,904
Total value of output £'000	174,265	201,596	207,398	208,589	220,051
Value of land and buildings £'000	32,958	38,679	42,775	46,007	51,663
Value of plant and machinery £'000	23,627	27,602	26,830	27,728	28,743
Horse-power of engines ordinarily in use h.p.	111,980	118,299	122,609	128,326	134,043

14. **Railway and Tramway Workshops (Government and Local Authority).**—The railway and tramway workshops, which form an important part of Class IV., are owned chiefly by State governments and local authorities. *Workshops (fourteen in 1962-63) controlled by non-public bodies are not included in the figures below.*

TRAMCARS AND RAILWAY ROLLING STOCK(a): AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	139	129	126	122	122
Number of persons employed	37,993	36,746	35,323	35,466	34,653
Salaries and wages paid	£'000 33,599	34,208	34,795	35,995	35,332
Value of power, fuel, etc., used	£'000 1,080	1,112	1,097	1,085	1,072
Value of materials used	£'000 19,563	19,414	19,390	19,624	19,685
Value of production	£'000 41,557	41,473	42,889	43,685	42,747
Total value of output	£'000 62,200	61,999	63,376	64,394	63,504
Value of land and buildings	£'000 12,374	12,761	13,681	14,654	14,679
Value of plant and machinery	£'000 16,547	17,174	17,657	17,699	18,583
Horse-power of engines ordinarily in use h.p.	115,162	116,443	116,063	115,416	116,027

(a) Government and local authority only.

15. **Motor Vehicles.**—The industries catering for the motor trade are included in Class IV., Industrial metals, machines and conveyances. In the following table, a summary is given of the principal statistics for 1962-63 for each branch of industry associated with the motor trade of Australia.

**MOTOR VEHICLES—CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.: AUSTRALIA
1962-63**

Particulars	Construction and assembly	Repairs	Motor bodies (a)	Motor accessories	Total
Number of factories	45	11,076	2,199	303	13,623
Number of persons employed	22,693	65,857	30,948	16,081	135,579
Salaries and wages paid	£'000 28,954	57,526	35,918	18,147	140,545
Value of power, fuel, etc., used	£'000 2,274	1,901	1,483	1,234	6,892
Value of materials used	£'000 68,105	63,016	85,208	29,362	245,691
Value of production	£'000 47,526	91,848	53,568	31,111	224,053
Total value of output	£'000 117,905	156,765	140,259	61,707	476,636
Value of land and buildings	£'000 29,571	86,966	30,414	13,986	160,937
Value of plant and machinery	£'000 24,159	14,999	24,786	15,292	79,236
Horse-power of engines ordinarily in use h.p.	87,605	78,492	85,140	59,281	310,518

(a) Includes motor body repairing, panel beating, duco spraying, etc.

In the next table, similar details are shown for Australia for these industries combined for the years 1958-59 to 1962-63. Victoria, New South Wales, and South Australia account for about four-fifths of the output of these industries. Most of the output of the other States is from repair work.

**MOTOR VEHICLES—CONSTRUCTION, ASSEMBLY, REPAIRS, ETC.:
AUSTRALIA**

Particulars	1958-59	1959-60 r	1960-61 r	1961-62 r	1962-63
Number of factories	11,354	12,089	12,757	13,135	13,623
Number of persons employed	113,200	120,561	127,274	121,409	135,579
Salaries and wages paid	£'000 97,078	114,185	124,386	120,294	140,545
Value of power, fuel, etc., used	£'000 4,603	5,123	5,893	5,878	6,892
Value of materials used	£'000 149,577	186,330	201,777	187,547	245,691
Value of production	£'000 161,569	183,365	198,000	195,610	224,053
Total value of output	£'000 315,749	374,818	405,670	389,035	476,636
Value of land and buildings	£'000 99,734	114,487	128,985	145,397	160,937
Value of plant and machinery	£'000 47,742	51,848	66,027	69,644	79,236
Horse-power of engines ordinarily in use h.p.	223,901	234,930	266,266	276,293	310,518

16. Ship and Boatbuilding and Repairing, Marine Engineering.—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63, and includes Government factories as well as those owned privately and by municipal authorities. About half the output of this industry comes from New South Wales shipyards, with Victoria and South Australia accounting for the greater part of the balance.

**SHIP AND BOAT BUILDING AND REPAIRING, MARINE ENGINEERING:
AUSTRALIA**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	274	297	318	318	353
Number of persons employed	14,779	13,786	14,155	14,293	14,218
Salaries and wages paid	£'000 14,502	14,672	16,114	16,464	16,683
Value of power, fuel, etc., used	£'000 395	376	400	431	437
Value of materials used	£'000 8,124	9,597	10,980	11,667	14,053
Value of production	£'000 17,672	18,142	19,710	19,965	20,198
Total value of output	£'000 26,191	28,115	31,090	32,063	34,688
Value of land and buildings	£ 000 5,284	5,934	6,470	6,248	6,654
Value of plant and machinery	£'000 4,604	5,087	5,297	5,341	5,629
Horse-power of engines ordinarily in use	h.p. 83,216	75,827	75,300	75,568	77,691

17. Agricultural Machines and Implements.—The following table shows details of establishments classified as agricultural implement works in Australia for the years 1958–59 to 1962–63. Victorian factories produce more than half the output of this industry.

**AGRICULTURAL MACHINES AND IMPLEMENTS:
AUSTRALIA**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	358	404	450	497	531
Number of persons employed	10,727	11,359	11,307	11,317	11,785
Salaries and wages paid	£'000 10,178	11,316	11,436	11,450	12,805
Value of power, fuel, etc., used	£'000 674	722	737	768	816
Value of materials used	£'000 14,162	17,607	17,324	18,244	19,456
Value of production	£'000 15,426	16,847	16,870	18,162	19,816
Total value of output	£'000 30,262	35,176	34,931	37,174	40,088
Value of land and buildings	£'000 6,666	6,857	8,219	9,587	10,066
Value of plant and machinery	£'000 4,418	4,725	5,245	5,442	5,721
Horse-power of engines ordinarily in use	h.p. 39,201	42,922	39,648	41,339	43,226

18. Non-ferrous Metals; Rolling and Extrusion.—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63.

NON-FERROUS METALS—ROLLING AND EXTRUSION: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	16	21	25	30	30
Number of persons employed	5,207	5,811	6,304	6,566	6,751
Salaries and wages paid	£'000 6,081	7,416	7,842	8,468	8,925
Value of power, fuel, etc., used	£'000 1,199	1,260	1,288	1,566	1,581
Value of materials used	£'000 32,505	40,426	36,644	40,121	43,491
Value of production	£'000 11,676	15,038	14,158	15,434	17,867
Total value of output	£'000 45,380	56,724	52,090	57,121	62,939
Value of land and buildings	£'000 3,067	5,657	8,536	9,773	10,011
Value of plant and machinery	£'000 6,711	8,601	16,588	17,311	19,870
Horse-power of engines ordinarily in use..h.p.	55,641	59,203	73,869	80,662	90,942

19. Non-ferrous Metals; Founding, Casting, etc.—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63.

NON-FERROUS METALS—FOUNDING, CASTING, ETC.: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	471	480	490	477	462
Number of persons employed	10,142	10,602	10,510	9,833	10,467
Salaries and wages paid £'000	9,435	10,885	11,036	10,395	11,307
Value of power, fuel, etc., used £'000	805	906	909	897	982
Value of materials used £'000	16,627	20,637	20,148	19,936	23,351
Value of production £'000	16,859	18,415	18,459	18,367	20,457
Total value of output £'000	34,291	39,958	39,516	39,200	44,790
Value of land and buildings £'000	5,768	6,963	8,196	9,338	9,827
Value of plant and machinery £'000	4,988	5,508	6,539	6,720	7,308
Horse-power of engines ordinarily in use h.p.	29,282	31,150	34,082	34,285	36,561

20. Sheet Metal Working, Pressing and Stamping.—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63.

SHEET METAL WORKING, PRESSING AND STAMPING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,010	1,076	1,111	1,142	1,156
Number of persons employed	24,902	26,843	27,474	26,545	27,924
Salaries and wages paid £'000	22,753	26,851	28,582	27,833	29,927
Value of power, fuel, etc., used £'000	1,411	1,628	1,549	1,608	1,771
Value of materials used £'000	52,858	60,801	65,226	66,105	69,884
Value of production £'000	39,909	48,433	50,480	51,152	56,854
Total value of output £'000	94,178	110,862	117,255	118,864	128,509
Value of land and buildings £'000	17,503	20,865	24,900	27,885	29,906
Value of plant and machinery £'000	13,312	15,041	17,369	18,054	20,231
Horse-power of engines ordinarily in use h.p.	71,956	77,233	80,020	79,963	84,487

21. Pipes, Tubes and Fittings—Ferrous.—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63. New South Wales, South Australia, and Victoria produce most of the output of this industry.

PIPES, TUBES AND FITTINGS—FERROUS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	40	49	55	62	58
Number of persons employed	7,651	8,332	8,547	8,272	8,784
Salaries and wages paid £'000	8,419	9,655	10,339	10,122	11,197
Value of power, fuel, etc., used £'000	1,252	1,357	1,350	1,288	1,606
Value of materials used £'000	22,996	26,454	25,530	25,878	27,387
Value of production £'000	14,967	19,544	20,021	18,891	19,376
Value of output £'000	39,215	47,355	46,901	46,057	48,369
Value of land and buildings £'000	3,756	6,301	6,818	7,345	8,796
Value of plant and machinery £'000	4,038	6,955	7,183	7,741	9,789
Horse-power of engines ordinarily in use h.p.	46,237	50,038	52,300	47,547	59,619

22. Wire and Wire Working (including Nails).—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63. New South Wales and Victoria predominate in this industry.

WIRE AND WIRE WORKING (INCLUDING NAILS): AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	275	286	282	283	289
Number of persons employed	9,035	9,974	10,195	9,804	10,377
Salaries and wages paid £'000	8,722	10,418	11,298	10,614	11,910
Value of power, fuel, etc., used £'000	778	905	923	881	944
Value of materials used £'000	28,636	35,875	37,301	34,968	40,290
Value of production £'000	16,701	20,986	21,050	19,361	21,955
Total value of output £'000	46,115	57,766	59,274	55,210	63,189
Value of land and buildings £'000	7,289	8,122	8,958	9,785	10,600
Value of plant and machinery £'000	5,266	6,127	6,588	6,994	8,084
Horse-power of engines ordinarily in use h.p.	35,261	37,162	37,233	39,010	43,818

23. **Wireless and Amplifying Apparatus.**—This industry is confined mainly to New South Wales, Victoria and South Australia. Details for Australia for the years 1958–59 to 1962–63 are shown in the following table.

WIRELESS AND AMPLIFYING APPARATUS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	257	289	301	327	330
Number of persons employed	16,482	19,559	17,273	14,707	16,586
Salaries and wages paid £'000	14,264	17,644	17,092	14,602	16,620
Value of power, fuel, etc., used £'000	550	621	648	585	657
Value of materials used £'000	39,255	50,129	40,259	35,995	39,470
Value of production £'000	23,431	30,304	25,504	23,587	27,219
Total value of output £'000	63,236	81,054	66,411	60,167	67,346
Value of land and buildings £'000	7,897	8,941	10,479	11,564	12,052
Value of plant and machinery £'000	5,018	5,744	6,468	6,446	6,633
Horse-power of engines ordinarily in use h.p.	12,952	14,302	14,850	15,353	15,216

24. **Cotton.**—(i) *General.* The growing of cotton, which is confined mainly to Queensland, is treated in some detail in Chapter XXIII. Rural Industry. The production of raw cotton is insufficient for local factory requirements and is supplemented by imports from overseas, chiefly (in 1962–63) from the United States of America, Mexico, Brazil and Colombia.

(ii) *Spinning and Weaving.* 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 1958–59 to 1962–63.

COTTON SPINNING AND WEAVING: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	97	92	88	88	88
Number of persons employed	9,770	9,780	9,121	8,980	9,313
Salaries and wages paid £'000	8,116	8,853	8,122	8,245	8,631
Value of power, fuel, etc., used £'000	988	997	958	1,033	1,134
Value of materials used £'000	19,403	20,631	18,336	19,161	20,818
Value of production £'000	14,751	16,224	15,169	14,827	16,760
Total value of output £'000	35,142	37,852	34,463	35,021	38,712
Value of land and buildings £'000	10,625	9,706	10,392	12,909	14,430
Value of plant and machinery £'000	9,949	9,414	10,105	10,805	12,191
Horse-power of engines ordinarily in use h.p.	38,779	37,240	36,193	40,592	41,581

25. **Wool Carding, Spinning and Weaving.**—Details for Australia for the years 1958–59 to 1962–63 are shown in the following table. Victoria produces more than half the output of this industry.

WOOL CARDING, SPINNING AND WEAVING: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	141	134	135	134	134
Number of persons employed	20,809	22,433	21,400	20,102	21,131
Salaries and wages paid £'000	15,714	18,052	17,372	17,081	18,230
Value of power, fuel, etc., used £'000	1,445	1,563	1,484	1,456	1,507
Value of materials used £'000	37,252	47,440	40,629	43,122	48,513
Value of production £'000	26,458	29,131	28,119	26,594	29,326
Total value of output £'000	65,155	78,134	70,232	71,172	79,346
Value of land and buildings £'000	10,519	10,625	10,904	10,911	11,575
Value of plant and machinery £'000	12,082	12,599	12,552	13,235	13,720
Horse-power of engines ordinarily in use h.p.	72,301	70,811	69,488	70,610	71,354

26. **Hosiery and Other Knitted Goods.**—Details for Australia for the years 1958–59 to 1962–63 are shown in the following table. Victorian mills produce about three-quarters of the Australian output of knitted goods, most of the balance being produced in New South Wales.

HOSIERY AND OTHER KNITTED GOODS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	663	701	687	658	625
Number of persons employed	22,851	24,414	24,741	23,403	24,627
Salaries and wages paid	£'000 16,421	18,791	19,101	18,495	20,323
Value of power, fuel, etc., used	£'000 787	798	810	794	807
Value of materials used	£'000 34,701	41,479	42,228	41,773	46,259
Value of production	£'000 31,325	34,629	36,085	35,948	38,089
Total value of output	£'000 66,813	76,906	79,123	78,515	85,155
Value of land and buildings	£'000 12,144	12,962	14,606	15,229	15,750
Value of plant and machinery	£'000 9,353	9,171	9,967	10,610	11,376
Horse-power of engines ordinarily in use h.p.	23,290	22,019	22,738	23,250	23,106

27. **Rayon, Nylon and Other Synthetic Fibres.**—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63. Victoria produces nearly two-thirds of the total Australian output of synthetic fibre textiles, most of the balance being produced in New South Wales.

RAYON, NYLON AND OTHER SYNTHETIC FIBRES: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	31	33	40	44	45
Number of persons employed	2,888	3,072	3,878	3,947	4,329
Salaries and wages paid	£'000 2,502	2,918	3,876	3,933	4,540
Value of power, fuel, etc., used	£'000 328	401	470	516	572
Value of materials used	£'000 4,672	6,819	8,658	9,884	12,867
Value of production	£'000 3,892	5,005	6,171	6,823	8,044
Total value of output	£'000 8,892	12,225	15,299	17,223	21,483
Value of land and buildings	£'000 2,151	2,247	3,217	3,675	4,298
Value of plant and machinery	£'000 2,605	2,855	3,821	3,978	4,571
Horse-power of engines ordinarily in use h.p.	9,298	10,669	12,161	13,632	14,202

28. **Rope and Cordage.**—Particulars of factories manufacturing rope and cordage are shown in the following table for Australia for the years 1958–59 to 1962–63. Most of the production takes place in New South Wales and Victoria.

ROPE AND CORDAGE: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	29	28	27	26	26
Number of persons employed	2,239	2,387	2,335	2,146	2,307
Salaries and wages paid	£'000 1,995	2,285	2,272	2,189	2,431
Value of power, fuel, etc., used	£'000 133	158	171	173	184
Value of materials used	£'000 3,790	4,167	5,121	4,240	4,795
Value of production	£'000 4,065	4,407	4,257	4,122	4,752
Total value of output	£'000 7,988	8,732	9,549	8,535	9,731
Value of land and buildings	£'000 2,447	2,625	2,629	2,701	2,754
Value of plant and machinery	£'000 1,441	1,558	1,694	1,718	1,784
Horse-power of engines ordinarily in use h.p.	13,935	14,057	15,015	15,153	15,240

29. **Woolscouring and Fellmongery.**—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63. Most of the production comes from New South Wales and Victoria.

WOOLSCOURING AND FELLMONGERY: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	61	59	58	58	56
Number of persons employed	2,959	3,014	2,740	2,803	2,842
Salaries and wages paid	£'000 3,015	3,351	3,088	3,154	3,297
Value of power, fuel, etc., used	£'000 645	641	555	585	619
Value of materials used	£'000 12,491	15,544	12,459	14,031	15,964
Value of production	£'000 4,726	4,960	4,421	4,433	4,636
Total value of output	£'000 17,862	21,144	17,436	19,049	21,219
Value of land and buildings	£'000 2,163	2,196	2,068	2,401	2,844
Value of plant and machinery	£'000 1,446	1,348	1,362	1,361	1,535
Horse-power of engines ordinarily in use h.p.	18,280	17,479	16,926	16,779	17,544

30. Tanning, Currying and Leather Dressing.—The following table shows particulars of the tanning industry in each State for Australia for the years 1958-59 to 1962-63. New South Wales, Victorian and Queensland factories produce most of the output of this industry.

TANNING, CURRYING AND LEATHER DRESSING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	123	118	112	108	102
Number of persons employed	4,617	4,435	4,245	4,159	4,215
Salaries and wages paid	£'000 4,510	4,612	4,575	4,612	4,736
Value of power, fuel, etc., used	£'000 490	484	484	488	501
Value of materials used	£'000 12,635	15,766	14,421	14,281	12,578
Value of production	£'000 6,919	6,967	6,748	7,392	8,114
Total value of output	£'000 20,044	23,217	21,653	22,161	21,193
Value of land and buildings	£'000 2,535	3,399	3,418	3,537	3,665
Value of plant and machinery	£'000 2,223	2,152	2,230	2,241	2,266
Horse-power of engines ordinarily in use h.p.	30,749	33,516	31,516	31,278	27,598

31. Leather Goods (including Saddlery and Belting).—Particulars of the leather goods industry in Australia for the years 1958-59 to 1962-63 are shown in the following table. As with other industries of this class, New South Wales and Victorian factories dominate the industry.

LEATHER GOODS (INCLUDING SADDLERY AND BELTING): AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	430	433	418	392	386
Number of persons employed	4,727	4,873	4,658	4,315	4,519
Salaries and wages paid	£'000 3,140	3,471	3,419	3,276	3,475
Value of power, fuel, etc., used	£'000 59	66	66	66	74
Value of materials used	£'000 5,670	6,607	6,504	6,032	6,576
Value of production	£'000 5,280	6,063	5,878	5,679	6,168
Total value of output	£'000 11,009	12,736	12,448	11,777	12,818
Value of land and buildings	£'000 2,351	2,821	3,084	3,192	3,444
Value of plant and machinery	£'000 607	645	834	846	742
Horse-power of engines ordinarily in use h.p.	2,738	3,769	3,678	3,155	3,387

32. Tailoring and Ready-made Clothing.—Statistics of this industry for Australia for the years 1958-59 to 1962-63 are shown in the following table. New South Wales and Victorian factories account for more than 90 per cent. of the output of this industry.

TAILORING AND READY-MADE CLOTHING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,841	1,860	1,871	1,839	1,847
Number of persons employed	31,406	33,170	33,890	32,496	33,234
Salaries and wages paid	£'000 19,533	22,133	23,542	23,050	24,271
Value of power, fuel, etc., used	£'000 440	467	495	500	513
Value of materials used	£'000 36,253	40,791	42,674	41,085	44,077
Value of production	£'000 31,371	35,166	36,970	37,585	40,021
Total value of output	£'000 68,064	76,424	80,139	79,170	84,611
Value of land and buildings	£'000 11,948	13,287	15,183	16,189	17,793
Value of plant and machinery	£'000 3,063	3,147	3,446	3,451	3,516
Horse-power of engines ordinarily in use h.p.	10,143	10,899	11,820	12,618	12,939

33. **Dressmaking and Millinery Establishments.**—Particulars of dressmaking and millinery establishments in Australia for the years 1958-59 to 1962-63 are shown in the following table. About two-thirds of the total Australian output comes from Victorian establishments.

DRESSMAKING AND MILLINERY: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,249	1,228	1,194	1,183	1,189
Number of persons employed	15,048	15,021	14,403	14,466	15,093
Salaries and wages paid	£'000 8,599	9,205	9,191	9,471	10,186
Value of power, fuel, etc., used	£'000 184	190	190	196	210
Value of materials used	£'000 11,272	11,758	11,666	12,038	13,028
Value of production	£'000 13,766	14,764	15,063	15,172	16,697
Total value of output	£'000 25,222	26,712	26,919	27,406	29,935
Value of land and buildings	£'000 6,937	7,623	8,277	8,661	9,115
Value of plant and machinery	£'000 1,171	1,114	1,085	1,083	1,182
Horse-power of engines ordinarily in use h.p.	5,159	4,880	4,398	4,543	4,831

34. **Shirts, Collars and Underclothing.**—Particulars of this industry are shown below for Australia for the years 1958-59 to 1962-63. Victorian and New South Wales factories produce most of the output of this industry.

SHIRTS, COLLARS AND UNDERCLOTHING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	394	376	368	353	351
Number of persons employed	13,589	12,891	12,864	12,276	13,304
Salaries and wages paid	£'000 8,223	8,326	8,424	8,242	8,983
Value of power, fuel, etc., used	£'000 147	137	148	156	166
Value of materials used	£'000 16,410	15,823	15,795	15,638	16,302
Value of production	£'000 13,271	13,572	13,360	13,276	14,557
Total value of output	£'000 29,828	29,532	29,303	29,070	31,025
Value of land and buildings	£'000 3,924	4,050	4,445	4,567	5,164
Value of plant and machinery	£'000 1,317	1,206	1,334	1,344	1,352
Horse-power of engines ordinarily in use h.p.	5,357	5,090	5,454	5,529	5,649

35. **Foundation Garments.**—The following table shows particulars of the foundation garment industry for Australia for the years 1958-59 to 1962-63.

FOUNDATION GARMENTS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	69	70	71	66	64
Number of persons employed	3,490	3,589	3,663	3,981	4,012
Salaries and wages paid	£'000 2,263	2,479	2,469	2,672	2,785
Value of power, fuel, etc., used	£'000 42	43	46	50	51
Value of materials used	£'000 5,230	5,231	5,030	5,779	5,814
Value of production	£'000 4,477	4,642	4,866	5,352	5,466
Total value of output	£'000 9,749	9,916	9,942	11,181	11,331
Value of land and buildings	£'000 1,384	1,612	1,891	2,005	2,297
Value of plant and machinery	£'000 415	420	470	534	690
Horse-power of engines ordinarily in use h.p.	1,604	1,739	1,995	2,023	1,987

36. **Boots and Shoes.**—The following tables for the boot and shoe industry in Australia for the years 1958-59 to 1962-63 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. 60, page 201. More than two-thirds of the output of boots and shoes is produced in Victoria.

BOOTS AND SHOES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	482	455	460	447	439
Number of persons employed	20,449	20,201	20,782	20,084	20,502
Salaries and wages paid £'000	15,148	16,101	16,913	16,718	17,449
Value of power, fuel, etc., used £'000	275	289	314	327	328
Value of materials used £'000	25,222	28,138	29,325	29,096	30,582
Value of production £'000	22,530	24,059	26,564	26,846	27,411
Total value of output £'000	48,027	52,486	56,803	57,169	58,321
Value of land and buildings £'000	5,254	5,551	6,158	6,713	7,119
Value of plant and machinery £'000	4,307	4,651	5,359	5,384	7,049
Horse-power of engines ordinarily in use h.p.	17,572	17,674	14,599	14,805	15,341

37. **Flour-milling.**—The following table shows particulars of the flour-milling industry in Australia for the years 1958-59 to 1962-63.

FLOUR-MILLING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	135	135	132	125	118
Number of persons employed	4,301	4,410	4,463	4,405	4,219
Salaries and wages paid £'000	4,281	4,657	4,917	4,964	4,840
Value of power, fuel, etc., used £'000	827	928	944	951	937
Value of materials used £'000	51,806	57,955	62,826	61,931	60,396
Value of production £'000	9,816	11,100	11,837	11,728	11,954
Total value of output £'000	62,449	69,983	75,607	74,610	73,287
Value of land and buildings £'000	6,711	6,982	7,359	7,114	7,885
Value of plant and machinery £'000	5,902	6,175	5,684	5,461	5,848
Horse-power of engines ordinarily in use h.p.	48,684	49,253	50,265	48,586	47,393

38. **Other Grain Mills.**—The following table shows particulars of cereal foods and starch factories and animal and bird food factories for Australia for the years 1958-59 to 1962-63.

OTHER GRAIN MILLS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	220	234	237	242	244
Number of persons employed	4,551	4,740	4,988	5,106	5,289
Salaries and wages paid £'000	4,205	4,607	4,978	5,211	5,477
Value of power, fuel, etc., used £'000	863	955	983	1,050	1,082
Value of materials used £'000	26,958	29,136	32,200	32,794	34,983
Value of production £'000	11,639	13,019	13,298	14,723	16,200
Total value of output £'000	39,460	43,110	46,480	48,567	52,265
Value of land and buildings £'000	5,027	5,549	5,802	6,234	6,980
Value of plant and machinery £'000	5,587	5,905	6,135	6,826	7,411
Horse-power of engines ordinarily in use h.p.	43,788	45,351	45,708	48,674	51,600

39. **Bakeries.**—Information regarding establishments in which the manufacture of bread, cakes, etc., was carried on is given in the table below for Australia for the years 1958-59 to 1962-63. Since the details refer only to establishments coming within the definition of a factory as explained at the beginning of this chapter, the table does not give complete details of the industry, as a large number of bakeries, etc. not coming within the definition are excluded.

BAKERIES (INCLUDING CAKES AND PASTRY): AUSTRALIA

Particulars	1958-59 (a)	1959-60 (a)	1960-61 (a)	1961-62	1962-63
Number of factories	4,150	3,999	3,895	3,855	3,779
Number of persons employed	20,994	21,253	21,743	20,566	21,061
Salaries and wages paid £'000	13,729	14,936	16,446	15,950	16,854
Value of power, fuel, etc., used £'000	2,546	2,624	2,737	2,669	2,739
Value of materials used £'000	45,612	48,387	51,507	48,877	50,005
Value of production £'000	32,182	35,395	38,309	38,532	41,529
Total value of output £'000	80,340	86,406	92,553	90,078	94,273
Value of land and buildings £'000	22,220	23,950	26,280	27,538	29,237
Value of plant and machinery £'000	13,551	15,122	17,601	16,892	18,704
Horse-power of engines ordinarily in use h.p.	33,716	34,953	40,899	35,934	37,589

(a) Includes confectionery in Tasmania.

40. **Biscuits.**—The following table shows particulars of the biscuit industry for Australia for the years 1958-59 to 1962-63. Three-quarters of the output of biscuits comes from New South Wales and Victoria.

BISCUITS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	48	51	52	53	52
Number of persons employed	5,993	6,079	6,153	6,092	6,199
Salaries and wages paid £'000	4,574	4,909	5,142	5,452	5,618
Value of power, fuel, etc., used £'000	542	538	544	553	573
Value of materials used £'000	11,057	11,623	12,085	12,724	13,026
Value of production £'000	8,375	9,171	9,829	10,335	10,480
Total value of output £'000	19,973	21,332	22,458	23,612	24,079
Value of land and buildings £'000	4,422	4,758	5,002	5,266	5,706
Value of plant and machinery £'000	3,277	3,727	4,001	4,171	4,231
Horse-power of engines ordinarily in use h.p.	13,259	13,290	13,720	14,017	13,443

41. **Sugar-mills and Sugar Refineries.**—Sugar-cane is grown in New South Wales and Queensland, and particulars of area, yield, etc., are given in detail in the chapter Rural Industry. 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.

The following table shows the number of sugar-mills and the number of persons employed therein in New South Wales and Queensland for the years 1958-59 to 1962-63.

SUGAR-MILLS

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
NEW SOUTH WALES					
Number of factories	3	3	3	3	3
Number of persons employed	254	243	200	219	261
QUEENSLAND					
Number of factories	31	31	31	31	31
Number of persons employed	6,621	6,197	6,014	6,053	6,387

In 1962-63, there were two sugar refineries in Queensland and one each in New South Wales, Victoria, South Australia and Western Australia.

42. **Confectionery.**—Particulars for Australia for the years 1958–59 to 1962–63 are shown hereunder. New South Wales, Victoria and Tasmania produce most of the output of the industry.

CONFECTIONERY: AUSTRALIA

Particulars	1958–59 (a)	1959–60 (a)	1960–61 (a)	1961–62	1962–63
Number of factories	209	214	209	197	189
Number of persons employed	6,704	6,765	6,890	7,978	8,015
Salaries and wages paid £'000	5,037	5,393	5,666	7,138	7,277
Value of power, fuel, etc., used £'000	536	555	591	725	771
Value of materials used £'000	16,842	17,674	17,883	22,478	23,213
Value of production £'000	10,586	11,139	12,391	14,830	15,802
Total value of output £'000	27,964	29,368	30,865	38,033	39,786
Value of land and buildings £'000	4,812	5,309	5,590	7,634	8,632
Value of plant and machinery £'000	4,572	4,745	5,428	7,635	8,477
Horse-power of engines ordinarily in use h.p.	30,504	30,571	32,006	38,948	42,665

(a) Excludes Tasmania.

43. **Jam, Fruit and Vegetable Canning, Pickles, Sauces, Vinegar.**—The following table shows particulars of factories included in this class for Australia for the years 1958–59 to 1962–63.

**JAM, FRUIT AND VEGETABLE CANNING, PICKLES, SAUCES, VINEGAR:
AUSTRALIA**

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	180	177	172	172	170
Number of persons employed	10,762	10,793	10,865	12,092	11,897
Salaries and wages paid £'000	9,186	9,894	10,077	11,826	12,076
Value of power, fuel, etc., used £'000	949	992	1,037	1,201	1,206
Value of materials used £'000	38,358	39,953	41,867	50,817	47,648
Value of production £'000	17,458	20,254	21,076	27,902	27,882
Total value of output £'000	56,765	61,199	63,980	79,920	76,736
Value of land and buildings £'000	11,630	12,095	13,149	14,419	14,920
Value of plant and machinery £'000	9,573	10,162	11,211	12,236	13,229
Horse-power of engines ordinarily in use h.p.	48,539	42,250	44,819	45,852	48,574

44. **Bacon-curing.**—The table hereunder shows particulars of factories engaged in bacon-curing in Australia for the years 1958–59 to 1962–63.

BACON-CURING: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	80	83	83	83	87
Number of persons employed	4,162	4,068	4,215	4,482	4,675
Salaries and wages paid £'000	3,649	3,853	4,135	4,416	4,658
Value of power, fuel, etc., used £'000	431	432	440	493	521
Value of materials used £'000	25,037	28,218	29,045	27,095	30,995
Value of production £'000	6,473	6,779	7,962	9,525	9,781
Total value of output £'000	31,941	35,429	37,447	37,113	41,297
Value of land and buildings £'000	3,104	3,388	3,963	4,023	4,273
Value of plant and machinery £'000	1,806	2,050	2,244	2,479	2,728
Horse-power of engines ordinarily in use h.p.	14,108	13,670	16,044	17,537	18,236

Bacon and ham and other pig products are dealt with more fully in Chapter XXIII. Rural Industry.

45. **Butter, Cheese and Condensed and Processed Milk.**—The following table shows particulars of butter, cheese and condensed and dried milk factories in Australia for the years 1958–59 to 1962–63. Victoria produces more than half the total Australian output of this industry.

BUTTER, CHEESE AND CONDENSED AND PROCESSED MILK: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	363	363	361	353	348
Number of persons employed	10,897	11,139	11,072	11,317	11,320
Salaries and wages paid £'000	10,270	11,042	11,524	12,238	12,441
Value of power, fuel, etc., used £'000	2,816	2,920	2,825	2,932	2,980
Value of materials used £'000	101,929	112,307	106,607	111,924	113,346
Value of production £'000	21,446	24,816	24,487	25,793	26,212
Total value of output £'000	126,191	140,043	133,919	140,649	142,538
Value of land and buildings £'000	13,518	14,022	14,702	15,277	15,516
Value of plant and machinery £'000	15,819	16,169	17,046	17,722	18,898
Horse-power of engines ordinarily in use h.p.	107,880	111,149	114,392	114,643	118,087

The butter, cheese and condensed milk industries are dealt with more fully in Chapter XXIII. Rural Industry.

46. Meat and Fish Preserving.—The industries included in this group are engaged chiefly in the freezing and preserving of meat. Most abattoirs are excluded, except in Queensland and Western Australia. 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. In recent years, there has been considerable expansion in the canning of meat and fish. The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63.

MEAT AND FISH PRESERVING: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	115	128	143	149	159
Number of persons employed	10,142	9,326	9,031	9,491	10,032
Salaries and wages paid £'000	10,699	9,914	9,319	10,524	10,958
Value of power, fuel, etc., used £'000	1,292	1,244	1,199	1,312	1,427
Value of materials used £'000	61,816	65,116	62,686	66,811	71,035
Value of production £'000	15,354	14,195	15,386	18,843	19,133
Total value of output £'000	78,462	80,555	79,271	86,966	91,595
Value of land and buildings £'000	7,459	8,617	9,347	10,430	10,312
Value of plant and machinery £'000	5,261	5,579	6,756	7,081	7,723
Horse-power of engines ordinarily in use h.p.	38,994	39,390	44,731	49,253	53,652

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. Rural Industry.

47. Condiments, Coffee, Spices.—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63.

CONDIMENTS, COFFEE, SPICES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	262	250	254	258	260
Number of persons employed	4,170	4,407	4,487	4,463	5,283
Salaries and wages paid £'000	3,114	3,487	3,771	3,851	4,903
Value of power, fuel, etc., used £'000	256	276	283	299	343
Value of materials used £'000	16,782	18,512	19,214	19,735	21,970
Value of production £'000	8,207	9,890	10,538	10,606	13,779
Total value of output £'000	25,245	28,678	30,035	30,640	36,092
Value of land and buildings £'000	5,250	5,854	6,826	7,642	9,259
Value of plant and machinery £'000	2,125	2,412	2,831	3,571	4,165
Horse-power of engines ordinarily in use h.p.	13,086	12,941	14,231	14,625	16,811

48. Breweries.—The following table gives particulars of breweries for Australia for each of the years 1958-59 to 1962-63.

BREWERIES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	27	25	25	25	24
Number of persons employed	5,830	5,701	5,626	5,512	5,741
Salaries and wages paid £'000	6,232	6,438	6,654	6,878	7,000
Value of power, fuel, etc., used £'000	1,488	1,491	1,494	1,531	1,559
Value of materials used £'000	22,416	22,731	24,303	25,748	27,156
Value of production £'000	16,964	18,620	19,789	21,556	22,805
Total value of output(a) £'000	40,868	42,842	45,586	48,835	51,520
Value of land and buildings £'000	12,716	12,924	13,003	13,574	14,841
Value of plant and machinery £'000	15,727	15,426	14,848	15,625	15,003
Horse-power of engines ordinarily in use h.p.	47,199	48,396	49,172	50,083	50,237

(a) Excludes excise duty

49. *Aerated Waters and Cordials.* The following table shows particulars of aerated water and cordial factories in Australia for the years 1958-59 to 1962-63.

AERATED WATERS AND CORDIALS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	559	552	548	535	525
Number of persons employed	4,877	5,021	5,275	4,960	5,190
Salaries and wages paid £'000	3,722	4,102	4,458	4,330	4,527
Value of power, fuel, etc., used £'000	367	406	410	404	439
Value of materials used £'000	11,328	12,765	13,400	12,771	14,029
Value of production £'000	10,024	11,355	11,658	11,993	13,346
Total value of output £'000	21,719	24,526	25,468	25,168	27,814
Value of land and buildings £'000	5,359	6,232	7,488	7,835	8,626
Value of plant and machinery £'000	3,874	4,516	5,162	5,701	5,995
Horse-power of engines ordinarily in use h.p.	14,988	15,799	16,363	16,350	17,116

50. *Wineries and Distilleries.*—The following table shows particulars of the operations of wineries and distilleries for Australia for the years 1958-59 to 1962-63. South Australia is the principal wine producing State, and produces more than half the Australian output. Most of the remainder comes from New South Wales and Victoria.

WINERIES AND DISTILLERIES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	158	165	164	153	161
Number of persons employed	2,021	2,058	2,095	2,111	2,084
Salaries and wages paid £'000	1,827	1,890	2,017	2,068	2,050
Value of power, fuel, etc., used £'000	396	402	383	405	386
Value of materials used £'000	7,900	7,987	9,328	9,767	9,136
Value of production £'000	3,889	4,900	4,427	4,864	4,733
Total value of output £'000	12,185	13,289	14,138	15,036	14,255
Value of land and buildings £'000	2,588	2,759	3,081	3,041	3,294
Value of plant and machinery £'000	2,573	2,808	3,015	3,330	3,715
Horse-power of engines ordinarily in use h.p.	10,773	11,604	16,450	16,676	17,601

51. *Tobacco, Cigars and Cigarettes.*—Particulars of establishments engaged in the manufacture of tobacco, cigars or cigarettes are shown below for Australia for the year 1958-59 to 1962-63. There were no such factories in South Australia or Tasmania, and Queensland and Western Australian production is relatively small.

TOBACCO, CIGARS AND CIGARETTES: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	22	21	20	18	18
Number of persons employed	4,779	5,046	5,178	4,914	4,671
Salaries and wages paid £'000	4,178	4,774	5,232	5,282	5,138
Value of power, fuel, etc., used £'000	160	176	225	234	256
Value of materials used £'000	35,775	36,578	40,716	38,568	39,296
Value of production £'000	13,451	16,889	18,378	19,491	20,189
Total value of output(a) £'000	49,386	53,643	59,319	58,293	59,741
Value of land and buildings £'000	2,700	3,620	3,551	4,307	4,640
Value of plant and machinery £'000	4,178	4,961	6,209	6,859	7,094
Horse-power of engines ordinarily in use h.p.	10,384	10,417	10,342	11,203	12,033

(a) Excludes excise duty.

52. Ice Cream.—The following table shows particulars of the ice cream industry for Australia for the years 1958–59 to 1962–63.

ICE CREAM: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	47	52	55	55	54
Number of persons employed	2,046	2,080	2,124	2,237	2,295
Salaries and wages paid	£'000 1,663	1,784	1,865	2,192	2,395
Value of power, fuel, etc., used	£'000 363	381	394	412	453
Value of materials used	£'000 6,165	6,176	6,461	7,162	7,637
Value of production	£'000 4,435	5,055	4,908	5,986	5,838
Total value of output	£'000 10,963	11,612	11,763	13,560	13,928
Value of land and buildings	£'000 3,257	3,395	3,536	3,593	4,827
Value of plant and machinery	£'000 2,962	3,166	3,260	3,750	6,734
Horse-power of engines ordinarily in use h.p.	12,714	15,959	15,068	16,071	18,468

53. 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. The figures, covering the years 1958–59 to 1962–63, exclude particulars of a small number of itinerant and travelling sawmills.

SAWMILLS AND PLYWOOD AND VENEER MILLS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	2,805	2,791	2,703	2,585	2,514
Number of persons employed	35,891	36,040	34,701	32,382	31,993
Salaries and wages paid	£'000 29,478	31,172	31,593	29,816	30,108
Value of power, fuel, etc., used	£'000 2,382	2,604	2,621	2,598	2,629
Value of materials used	£'000 70,253	76,676	75,056	71,677	73,033
Value of production	£'000 53,649	58,412	56,526	53,493	53,215
Total value of output	£'000 126,284	137,692	134,203	127,768	128,877
Value of land and buildings	£'000 14,545	16,656	18,548	18,014	18,795
Value of plant and machinery	£'000 18,737	19,635	20,517	20,222	20,286
Horse-power of engines ordinarily in use h.p.	395,630	407,440	425,280	417,084	428,421

54. Joinery.—The following table shows particulars of the joinery industry for Australia for the years 1958–59 to 1962–63.

JOINERY: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	2,031	2,149	2,217	2,256	2,247
Number of persons employed	15,564	17,203	17,912	17,239	17,509
Salaries and wages paid	£'000 13,036	15,431	17,191	17,026	17,670
Value of power, fuel, etc., used	£'000 367	413	456	460	482
Value of materials used	£'000 24,468	29,704	32,835	31,587	32,046
Value of production	£'000 20,874	24,445	27,218	26,712	27,880
Total value of output	£'000 45,709	54,562	60,509	58,759	60,408
Value of land and buildings	£'000 9,873	11,699	13,658	14,336	15,272
Value of plant and machinery	£'000 4,062	4,443	4,825	5,048	5,100
Horse-power of engines ordinarily in use h.p.	76,199	80,902	86,375	86,240	89,459

55. Cabinet and Furniture Making and Upholstery.—These industries constitute the principal manufactures in Class XI. The following table shows particulars for Australia for the years 1958–59 to 1962–63.

CABINET AND FURNITURE MAKING AND UPHOLSTERY: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,629	1,664	1,633	1,617	1,625
Number of persons employed	16,012	16,475	15,711	15,132	15,726
Salaries and wages paid £'000	12,963	14,187	14,218	14,083	14,697
Value of power, fuel, etc., used £'000	334	346	350	368	388
Value of materials used £'000	22,222	26,123	25,999	26,555	28,121
Value of production £'000	21,228	23,501	23,135	23,048	24,369
Total value of output £'000	43,784	49,970	49,484	49,971	52,878
Value of land and buildings £'000	10,457	11,618	12,719	13,623	14,654
Value of plant and machinery £'000	2,679	2,869	2,964	3,158	3,491
Horse-power of engines ordinarily in use h.p.	46,539	45,955	45,313	46,000	45,641

56. Printing Works.—The following table gives particulars of establishments engaged in general printing in Australia for the years 1958-59 to 1962-63. These establishments include those engaged in lithographic printing, bookbinding, paper ruling and linotyping, and Government printing works.

GOVERNMENT AND GENERAL PRINTING WORKS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	1,518	1,573	1,641	1,706	1,738
Number of persons employed	26,827	27,744	29,080	29,936	30,614
Salaries and wages paid £'000	23,705	26,711	29,365	30,912	32,296
Value of power, fuel, etc., used £'000	729	797	893	942	1,029
Value of materials used £'000	32,420	35,175	38,249	37,472	41,197
Value of production £'000	41,036	46,567	51,123	55,067	58,636
Total value of output £'000	74,185	82,539	90,265	93,481	100,862
Value of land and buildings £'000	19,041	21,599	25,613	29,682	30,523
Value of plant and machinery £'000	17,535	19,351	21,889	23,709	25,252
Horse-power of engines ordinarily in use h.p.	40,751	43,561	47,269	50,129	52,182

The following table gives similar particulars in respect of establishments producing newspapers and periodicals.

NEWSPAPERS AND PERIODICALS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	423	429	420	421	415
Number of persons employed	14,878	15,437	15,789	15,491	15,500
Salaries and wages paid £'000	15,291	17,056	19,005	18,874	19,070
Value of power, fuel, etc., used £'000	590	615	654	676	696
Value of materials used £'000	27,746	29,726	30,737	27,817	29,077
Value of production £'000	27,738	30,767	33,997	34,544	35,192
Total value of output £'000	56,074	61,108	65,388	63,037	64,965
Value of land and buildings £'000	13,739	15,193	16,016	16,618	17,198
Value of plant and machinery £'000	11,595	13,960	14,416	15,719	16,200
Horse-power of engines ordinarily in use h.p.	37,440	40,116	45,815	45,776	44,094

57. Manufactured Stationery.—The following table shows particulars of the Manufactured Stationery industry for Australia for the years 1958-59 to 1962-63. New South Wales and Victoria produce about 90 per cent. of the output of this industry.

MANUFACTURED STATIONERY: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	133	143	142	153	150
Number of persons employed	4,782	5,088	5,148	5,221	5,436
Salaries and wages paid £'000	4,095	4,541	4,763	5,131	5,473
Value of power, fuel, etc., used £'000	175	185	195	225	232
Value of materials used £'000	10,845	12,451	13,180	15,164	16,650
Value of production £'000	9,557	11,309	10,756	12,645	13,409
Total value of output £'000	20,577	23,945	24,131	28,034	30,291
Value of land and buildings £'000	4,626	5,187	5,509	6,421	7,164
Value of plant and machinery £'000	3,015	3,510	3,709	4,397	5,137
Horse-power of engines ordinarily in use h.p.	8,749	9,132	9,462	10,853	10,936

58. **Cardboard Boxes, Cartons and Containers and Paper Bags.**—The following table shows particulars of these industries for Australia for a series of years.

**CARDBOARD BOXES, CARTONS AND CONTAINERS AND PAPER BAGS:
AUSTRALIA**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	210	226	231	239	243
Number of persons employed	8,569	9,429	10,041	10,133	10,832
Salaries and wages paid	£'000 7,558	8,901	9,676	10,216	11,118
Value of power, fuel, etc., used	£'000 326	378	412	446	482
Value of materials used	£'000 26,983	31,580	33,497	35,687	39,926
Value of production	£'000 17,018	20,085	21,407	22,412	24,101
Total value of output	£'000 44,327	52,043	55,316	58,545	64,509
Value of land and buildings	£'000 7,904	8,801	10,595	11,443	13,541
Value of plant and machinery	£'000 6,858	8,083	10,200	10,924	12,541
Horse-power of engines ordinarily in use h.p.	17,020	19,594	21,613	22,961	26,217

59. **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. The number of factories operating in 1962-63 comprised four in New South Wales, eleven in Victoria, two in Queensland, two in South Australia, one in Western Australia, and four 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 for the years 1958-59 to 1962-63.

Mills producing pulp from eucalypt timber are operating in Victoria and Tasmania, while in South Australia pulp is being produced from locally-grown softwoods.

PAPER MAKING, INCLUDING PULP MILLS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	18	20	22	23	24
Number of persons employed	8,406	8,775	8,822	8,147	8,678
Salaries and wages paid	£'000 10,422	11,980	12,055	11,218	12,347
Value of power, fuel, etc., used	£'000 3,341	3,906	4,200	4,109	4,653
Value of materials used	£'000 25,025	26,601	27,924	26,505	29,900
Value of production	£'000 25,817	28,326	27,658	26,456	30,204
Total value of output	£'000 54,183	58,833	59,782	57,070	64,757
Value of land and buildings	£'000 12,317	13,307	13,982	15,904	17,168
Value of plant and machinery	£'000 22,482	27,018	33,377	33,735	36,955
Horse-power of engines ordinarily in use h.p.	179,364	189,774	216,539	215,927	256,291

60. **Rubber Goods.**—The following table shows particulars of this industry for Australia for the years 1958-59 to 1962-63. Victorian and New South Wales factories produce about 90 per cent. of the output of this industry.

RUBBER GOODS: AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of factories	122	118	116	114	117
Number of persons employed	15,227	15,620	15,416	13,993	15,702
Salaries and wages paid	£'000 15,442	17,142	17,038	15,719	18,741
Value of power, fuel, etc., used	£'000 2,205	2,318	2,382	2,281	2,556
Value of materials used	£'000 36,339	43,382	42,038	35,942	43,010
Value of production	£'000 27,108	26,072	28,026	26,223	30,717
Total value of output	£'000 65,652	71,772	72,446	64,446	76,283
Value of land and buildings	£'000 7,288	7,585	9,121	9,490	10,343
Value of plant and machinery	£'000 7,632	9,543	10,265	10,307	11,598
Horse-power of engines ordinarily in use h.p.	126,901	128,393	131,947	134,428	140,956

61. Tyre Retreading and Repairing.—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63.

TYRE RETREADING AND REPAIRING: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	484	502	513	536	542
Number of persons employed	3,240	3,043	2,979	3,181	3,214
Salaries and wages paid	£'000 2,722	2,686	2,746	3,061	3,217
Value of power, fuel, etc., used	£'000 396	406	416	443	448
Value of materials used	£'000 5,558	5,934	6,336	6,892	7,253
Value of production	£'000 5,696	6,066	6,899	8,064	8,445
Total value of output	£'000 11,650	12,406	13,651	15,399	16,146
Value of land and buildings	£'000 5,534	5,853	6,411	7,385	8,361
Value of plant and machinery	£'000 2,700	2,697	2,724	2,768	2,680
Horse-power of engines ordinarily in use h.p.	10,742	11,494	12,039	13,079	13,865

62. Plastic Moulding and Products.—The following table shows particulars of this industry for Australia for the years 1958–59 to 1962–63.

PLASTIC MOULDING AND PRODUCTS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	337	375	398	421	430
Number of persons employed	9,480	10,180	10,658	10,496	11,801
Salaries and wages paid	£'000 8,774	10,160	10,753	10,651	12,541
Value of power, fuel, etc., used	£'000 759	849	900	966	1,129
Value of materials used	£'000 22,272	26,393	24,613	24,260	28,799
Value of production	£'000 18,339	19,886	20,395	20,917	24,249
Total value of output	£'000 41,370	47,128	45,908	46,143	54,177
Value of land and buildings	£'000 6,081	7,806	8,778	10,056	11,660
Value of plant and machinery	£'000 7,005	8,009	9,747	10,605	12,698
Horse-power of engines ordinarily in use h.p.	34,384	37,055	41,635	47,083	54,576

63. Electric Light and Power Works.—For further information on this subject see Chapter VII. Electric Power Generation and Distribution. Particulars of the industry for Australia for the years 1958–59 to 1962–63 are shown below.

ELECTRIC LIGHT AND POWER WORKS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	305	304	290	285	275
Number of persons employed	13,124	12,810	12,298	12,441	12,272
Salaries and wages paid	£'000 14,011	14,564	15,018	15,916	16,003
Value of power, fuel, etc., used	£'000 39,383	40,756	42,367	41,680	40,821
Value of materials used	£'000 4,744	4,839	4,976	5,287	5,193
Value of production	£'000 63,422	r71,255	r75,472	r78,534	89,556
Total value of output	£'000 107,549	r116,850	r122,815	r125,501	135,570
Value of land and buildings	£'000 122,460	136,086	139,790	245,389	249,950
Value of plant and machinery	£'000 235,844	259,899	278,007	291,537	306,622
Generators installed—kilowatt capacity	'000 kW 5,531	5,953	6,665	7,215	7,499

Particulars of the types of engines and generators installed in Electric Light and Power Works and their rated horse-power are given on page 164.

64. Gas-works.—The following table shows particulars of gas-works in Australia for the years 1958–59 to 1962–63.

GAS-WORKS: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Number of factories	88	88	84	85	87
Number of persons employed	3,917	3,790	3,733	3,674	3,561
Salaries and wages paid	£'000 4,298	4,367	4,582	4,630	4,644
Value of power, fuel, light, etc., used	£'000 2,712	2,942	3,012	3,078	2,855
Value of materials used	£'000 14,996	14,738	14,889	14,180	13,325
Value of production	£'000 11,239	12,037	13,542	14,054	15,870
Total value of output	£'000 28,947	29,717	31,443	31,312	32,050
Value of land and buildings	£'000 6,079	5,946	7,235	7,518	7,536
Value of plant and machinery	£'000 28,127	29,346	29,347	29,846	29,691
Horse-power of engines ordinarily in use h.p.	46,743	46,058	46,363	52,037	58,989

CHAPTER VII

ELECTRIC POWER GENERATION AND DISTRIBUTION

This chapter is divided into three major parts:—the Introduction, which deals briefly with the resources, generation and distribution, and future development of electric power in Australia; the Snowy Mountains Hydro-electric Scheme; and the origins, development, present situation and new projects of electrical systems in each Australian State and Territory. A Statistical Summary is appended.

The information contained in the chapter relates to situations existing and projects contemplated in December, 1964, and may be considerably affected by changes in policy or plans, or by developments in the projects themselves.

INTRODUCTION

1. **Distribution of Population and Location of Power Resources.**—The two principal centres of population and industry in Australia, 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 Australia, 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, 1963, thermal power equipment represented 72 per cent., hydro plant 25 per cent., and internal combustion equipment 3 per cent. of the total installed generating capacity.

Most of Australia is poorly supplied with water, only about 13 per cent. receiving an annual rainfall of 30 inches or over, and these areas are confined largely to Tasmania and to the narrow coastal strip along the east coast of the mainland.

The only region on the mainland of Australia 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 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 available is smaller than 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. On the mainland the chief source of energy is coal in Tasmania it is water.

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 with some measure of governmental control designed to provide standards of safety and to define the scope and obligations of the private organizations. A trend towards public ownership commenced during the 1914–18 War and became more pronounced after the 1939–45 War. By 1961 all major generating stations supplying the public were, in varying degrees, under the control of statutory organizations constituted with the object of unifying and co-ordinating the generation and distribution of electricity supplies. There are 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 it has been, and remains, the practice for central authorities to sell power in bulk to local distributing organizations which undertake reticulation.

In addition to the private, local government and statutory organizations which generate and/or distribute electricity for sale, numerous firms generate 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, as the power regularly produced for such internal consumption is, in any case, a relatively small proportion of the total power produced.

(ii) *Power Production and Generating Capacity.* Since the 1939-45 War the demand for power has increased considerably, industry and commerce have expanded rapidly, many new houses have been built, the population has increased by approximately 50 per cent., electricity supply has been extended to rural areas, and the use of domestic electric appliances has increased. The measures taken by the various authorities to satisfy the demand created by these developments are described in the following pages.

At 30th June, 1963, installed generating capacity in Australia was 7.50 million kW compared with 7.22 million kW in 1962 an increase of nearly 4 per cent. In 1962-63 each kW of installed capacity produced an average of 3,904 kWh. 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. In 1962-63 the production of electric power in Australia was 29,279 million kWh. In 1963-64 production increased to 32,124 million kWh.

SNOWY MOUNTAINS HYDRO-ELECTRIC SCHEME*

1. *Snowy Mountains Hydro-electric Power Act 1949.*—In July, 1949, the Commonwealth Government established the Snowy Mountains Hydro-electric Authority, and empowered it to generate electricity by means of hydro-electric works in the Snowy Mountains Area; supply electricity to the Commonwealth (i) for defence purposes, (ii) for consumption in the Australian Capital Territory; and supply to a State, or to a State Authority, electricity not required for defence purposes or for consumption in the Australian Capital Territory.

The Authority is constituted by a Commissioner and two Associate Commissioners, the three appointments being made by the Governor-General. It is empowered 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 the electricity generated;
- (d) incidental or related to the construction, maintenance, operation, protection, management or control of any works otherwise specified in the Act.

The Snowy Mountains Act is supported by a detailed agreement between the States of New South Wales and Victoria and the Commonwealth with regard to the construction and operation of the Scheme, the distribution of power and water, charges to be made for electricity, and other such matters. The Snowy Mountains Council, established under the terms of the Agreement and consisting of representatives of the Commonwealth, the Authority and the two States, directs and controls the operation and maintenance of the permanent works of the Authority and the allocation of loads to generating stations.

2. *Geography of the Area.*—The Snowy Mountains area in south-eastern New South Wales is the only part of the continent in which 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 150 inches a year in the vicinity of Mt. Kosciuszko, 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 River, which flows southward to Bass Strait.

3. *Description of the Scheme.*—(i) *General.* The broad basis of the scheme is to transfer waters, which would otherwise flow to the sea unharnessed, from the Snowy River and its tributaries to the inland system, so that the water may be used for irrigation and to provide power. It involves two main diversions, the diversion of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River, and the diversion of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. These two diversions divide the scheme geographically into two sections, the Snowy-Tumut

* See also Chapter VIII, Water Conservation and Irrigation of this issue and special detailed article in Year Book No. 42, pp. 1103-1130.

Development and the Snowy-Murray Development (*see* map p. 209). For purposes of both power production and irrigation it is necessary to regulate run-off, and this will be achieved by the use of Lake Eucumbene (formed by the construction of Eucumbene Dam) and other smaller storages to control the waters of the Eucumbene, Murrumbidgee, Tooma, and Tumut Rivers for the Snowy-Tumut Development and of the Snowy and Geehi Rivers for the Snowy-Murray Development. A sectional diagram of the Scheme appears on page 210.

(ii) *Snowy-Tumut Development.* This development comprises works for the diversion and regulation of the waters of the Eucumbene, Upper Tooma, Upper Murrumbidgee and Upper Tumut Rivers and their combined development through a series of power stations down the Tumut River. A major dam has been constructed on the Eucumbene River to create Lake Eucumbene, which has an ultimate usable storage of 3.5 million acre feet. The waters of the Upper Murrumbidgee River are diverted into Lake Eucumbene by a dam at Tantangara and a 10½-mile tunnel from Tantangara Reservoir. From Lake Eucumbene, the water flows through a 14-mile tunnel to Tumut Pond Reservoir on the upper reaches of the Tumut River, where it joins the waters of the Tumut River itself and the waters of the Tooma River diverted to Tumut Pond Reservoir by a diversion dam and a 9-mile tunnel. The 14-mile Eucumbene-Tumut Tunnel is used during periods of high flow to divert waters of the Tumut River from Happy Jacks Shaft or the combined waters of the Tumut and Tooma Rivers from Tumut Pond Reservoir back to Lake Eucumbene for storage.

From Tumut Pond Reservoir water is conveyed by pressure tunnel to Tumut 1 underground Power Station (capacity 320,000 kW), returned to the Tumut River and then by another pressure tunnel to Tumut 2 underground Power Station (capacity 280,000 kW), thence discharging into Talbingo Reservoir, also on the Tumut River.

Tumut 3 Power Station, the largest station of the scheme (capacity 1,500,000 kW of which 500,000 kW will be provided by pump turbines) will be constructed below Talbingo Reservoir and will discharge into Jounama Pondage on the Tumut River. This pondage will provide a downstream pumping pool and also re-regulate discharges from Tumut 3 Power Station as required. Releases from Jounama Pondage will then enter Blowering Reservoir formed by Blowering Dam. This dam is under construction by the Snowy Mountains Authority as an agent for the State of New South Wales and will provide for the regulation of power station discharges for irrigation use in the Murrumbidgee Valley. The Authority will construct a power station at the foot of the dam to generate power from releases of water for irrigation purposes.

(iii) *Snowy-Murray Development.* The principal features of the Snowy-Murray Development are the diversion of the main stream of the Snowy River by tunnels, shafts, and pipelines westwards through the Great Dividing Range into the Swampy Plain River in the catchment of the Upper Murray, and the development of power on the western slopes of the Alps. The main works of the development will be as follows.

- (a) A tunnel from the Snowy River near Island Bend through the Great Dividing Range to Geehi Reservoir on the Geehi River, and two power projects between Geehi Reservoir and the Swampy Plain River near Khancoban. The power stations associated with these two power projects, Murray 1 and Murray 2, will have a combined capacity of 1,500,000 kW.
- (b) A tunnel from a small dam on the Snowy River near Island Bend to Eucumbene Dam to carry Snowy water to Lake Eucumbene for storage at times of high river flows. When river flows are lower than average, this stored water will be returned towards Island Bend and thence through the Snowy-Geehi Tunnel to Geehi Reservoir and Murray 1 and Murray 2 Power Stations.
- (c) A dam on the Snowy River near Jindabyne to store the residual flow of the Snowy and Eucumbene Rivers downstream from Island Bend and Eucumbene Dams, including the flows of major tributaries, the Crackenback and Mowamba Rivers; and the construction of a pumping plant, pipeline and tunnel to lift this water from Jindabyne Reservoir to the Snowy-Geehi Tunnel near Island Bend, where it will join the flow to the Geehi Reservoir for use through Murray 1 and Murray 2 Power Stations.

The power output of this section of the Scheme will be increased by the construction of subsidiary hydro-electric projects on the Upper Snowy River above Island Bend and on Windy Creek, a tributary of the Upper Geehi.

4. **Utilization of Power.**—The future electric power plants on the mainland of Australia will be predominantly thermal or thermo-nuclear installations, and in an electrical system in which the greater part of the energy is generated in thermal plants it is usually found that the hydro installations operate to the best advantage on peak load. However, the existing New South Wales and Victorian systems include a proportion of relatively old and less efficient installations which, for reasons of fuel economy, are also best used for the production of peak load power. Therefore, in order to utilize the potential of the Snowy Mountains Scheme most effectively, the order of development is being arranged so that the early stations operate, initially, somewhat below the peak of the system load, with a progressive change to predominantly peak load operation as construction proceeds and as the load increases in magnitude.

The Snowy Mountains Scheme is situated about midway between the principal load centres of Sydney and Melbourne and is connected to those cities by 330 kV transmission lines. It is, consequently, in a position to take advantage of the diversity in the power requirements of these two load systems, a most important factor in so far as it affects the economy of operation of the supply systems of the two States.

Although most of the output from the scheme will go to the States of New South Wales and Victoria, the Commonwealth Government has the right to draw from the scheme its requirements of power and energy for the Australian Capital Territory and for defence purposes. For convenience, the Commonwealth's requirements are drawn from the New South Wales transmission network by an exchange arrangement between the Commonwealth and the Electricity Commission of New South Wales. Electricity over and above that required by the Commonwealth Government is divided between the States of New South Wales and Victoria in the ratio 2 : 1.

5. **Progress and Future Programme.**—The scheme's first power station, Guthega, of 60,000 kW initial capacity, came into operation in February, 1955. It was followed by Tumut 1, an underground power station with a capacity of 320,000 kW, in 1959, and by the 280,000 kW Tumut 2 underground power station in 1962. The total installed capacity of the scheme at present is 660,000 kW. Eucumbene Dam, which provides the major regulating storage for the scheme, was completed in May, 1958. Tumut Pond Dam, completed in September, 1958, provides the balancing storage for the power stations of the Upper Tumut Works. The first trans-mountain diversion of water from Lake Eucumbene to the Tumut River at Tumut Pond was made possible when the 14-mile Eucumbene-Tumut Tunnel was completed in June, 1959. The 10½-mile Murrumbidgee-Eucumbene Tunnel and the 9-mile Tooma-Tumut Tunnel came into operation early in 1961. Following the completion of the Upper Tumut Works, construction activity has been concentrated on the Snowy-Murray development. Construction is well advanced on the 15-mile Eucumbene-Snowy Tunnel, the 9-mile trans-mountain Snowy-Geehi Tunnel, the 7½-mile Murray 1 Pressure Tunnel, the 1-mile Pressure Pipeline and the 950,000 kW Murray 1 Power Station. These works, together with the Khancoban Dam, which will regulate power station releases before discharge into the Murray River, are to be substantially completed in 1966. At this time, the first trans-mountain diversion of water from the Snowy River to the Murray River and the first generation of electricity from the Murray 1 Power Station will occur.

STATES AND TERRITORIES

§ 1. New South Wales

1. **General.**—In 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. At present, the following three main Acts govern electricity supply in New South Wales.

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.

The Electricity Development Act, 1945–1964, which established the Electricity Authority of New South Wales as the body responsible for the co-ordination of electricity supply throughout the State.

The Electricity Commission Act, 1950–1961, 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 is directly responsible to the Minister for Local Government, consists of five members, of whom one is full-time Chairman and one is full-time Vice-Chairman.

The main function of the Commission is the generation and transmission of electricity, which it sells in bulk to distributing authorities (mainly local government bodies) throughout a large part of the State, to the Government railways, and to certain large industrial consumers. As the major generating authority, it is also responsible for the development of new power sources except in the Snowy Mountains region.

(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 groups of shire and/or municipal councils), or private franchise holders. At 30th June, 1964, there were 51 supply authorities throughout the State, of which 13 also generated part or all of their power requirements. Most of the small power stations which had operated in many country centres have closed down as the main transmission network has been extended.

Over recent years there has been a distinct trend towards the consolidation of supply areas, many of which have been individually too weak 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 only for electricity supply purposes, and administered by a county council of representatives elected by the constituent councils. Of the 225 cities, municipalities and shires in New South Wales, 215 are included in one or other of the 34 electricity county districts. The majority of these county districts have been constituted since 1945. The largest of the county councils is the Sydney County Council, which at 30th June, 1964, was supplying 515,634 consumers in the Sydney Metropolitan Area.

(iii) *The Electricity Authority of New South Wales.* The Electricity Authority was constituted for the purpose of promoting and regulating the co-ordination, development, expansion, extension and improvement of electricity supply throughout the State. A regulatory body, it consists of seven members of whom one is a full-time Chairman. Like the Electricity Commission, it is responsible to the Minister for Local Government.

The following are the main functions of the Authority.

Distribution. The approval of the Authority is required 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 concerned mainly with seeing 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.

Rural Electrification. The Authority administers the rural electricity subsidy scheme under which rural electrification throughout the State is progressing very rapidly (see para. 4, p. 211).

Safety. The Electricity Development Act, 1945–1964, 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 consumers' installations, licensing of electricians and electrical contractors, approval of electrical appliances, safety of linesmen and overhead line construction.

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).

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 dependent mainly on steam power

stations. During the year ended 30th June, 1964, coal-fired stations generated 92.4 per cent. of the State's energy requirements, hydro-electric stations 7.1 per cent. and internal combustion plants 0.5 per cent. In addition, 934 million kWh were purchased from the Snowy Mountains Hydro-Electric Authority during the year.

With the future plant development of the Snowy Mountains scheme, an increasing amount of power will be generated by the Authority, but at no stage of its development will the scheme supply more than 15 per cent. of the State's energy requirements. Coal-fired steam power stations, therefore, 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 interconnected transmission networks. Whereas until a few years ago the greater part of the coal-fired generating plant was located in the industrial areas of Sydney, Newcastle and Wollongong, where most of the population is also located, major power stations are now being located on the coalfields to the north, south and west of Sydney, and power is transmitted to the load centres through high voltage transmission lines.

At 30th June, 1963, the major power stations of the State system of the Electricity Commission of New South Wales and their installed capacities were as follows:—*Steam*—Vales Point (Lake Macquarie), 400,000 kW; Bunnerong (Sydney), 375,000 kW; Wangi (Lake Macquarie), 330,000 kW; Tallawarra (Lake Illawarra), 320,000 kW; Wallerawang (near Lithgow), 240,000 kW; Pyrmont (Sydney), 200,000 kW; White Bay (Sydney), 172,000 kW; Balmain (Sydney), 107,000 kW; Port Kembla, 60,500 kW; Zarra Street (Newcastle), 42,500 kW; Muswellbrook, 30,000 kW; Lithgow, 27,000 kW; Tamworth, 27,000 kW; Maitland, 20,000 kW; Penrith, 20,000 kW; Liverpool, 20,000 kW; *Hydro*—Hume—(near Albury), 50,000 kW; Warragamba (near Penrith), 50,000 kW; Burrinjuck (near Yass), 20,000 kW. There were also various other steam, hydro and internal combustion stations aggregating 27,470 kW. The total installed capacity of the Electricity Commission's system was 2,538,470 kW.

The greater part of the Commission's generating plant is concentrated within a hundred mile radius of Sydney—the largest stations outside this area being located at Hume, Muswellbrook and Tamworth.

(iii) *Major Transmission Network.* The retailing of electricity to 97 per cent. of the population of New South Wales is in the hands of local distributing authorities, which obtain electricity in bulk from the Commission's major State network. This network of 330 kV, 132 kV, 66 kV and some 33 kV and 22 kV transmission lines links the Commission's power stations with the load centres throughout the eastern portions of the State, extending geographically up to 400 miles inland.

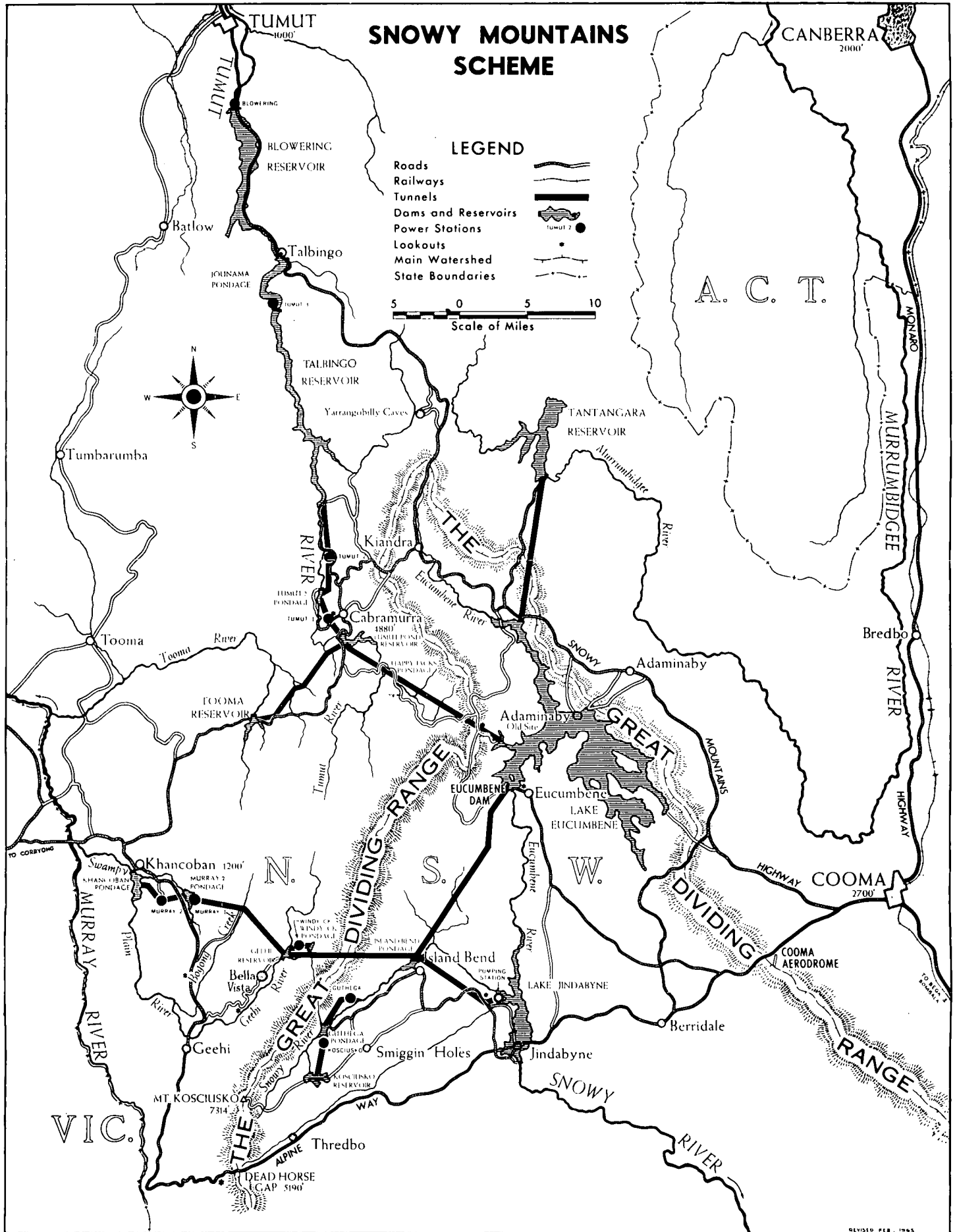
At 30th June, 1964, there were in service 838 route miles of 330 kV (including 153 miles operating for the time being at 132 kV) and 1,811 miles of 132 kV transmission lines (including 243 miles operating for the time being at 66 kV or lower). There were also in service 2,399 miles of transmission line of 66 kV and lower voltages.

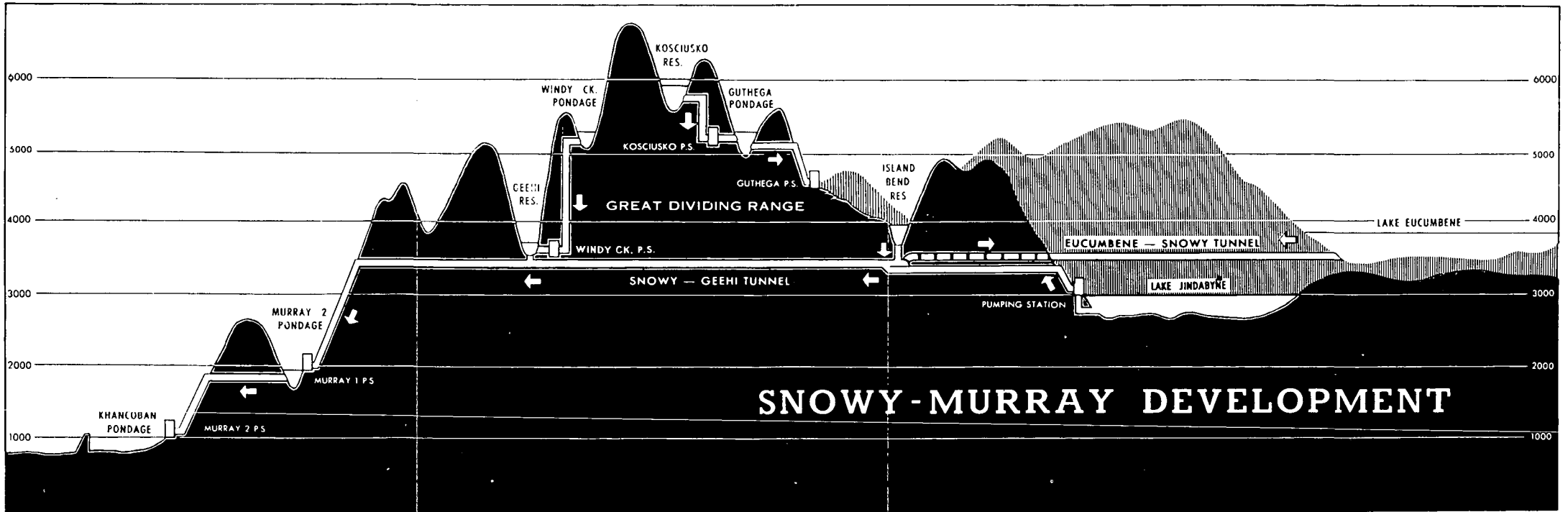
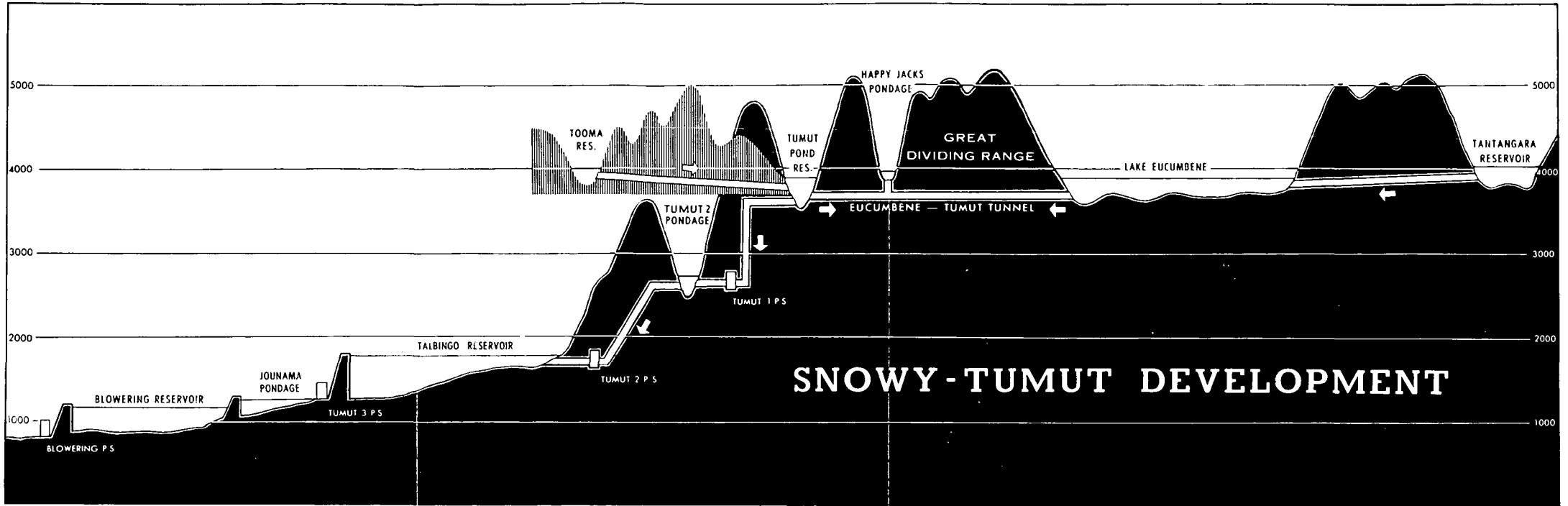
The installed transformer capacity at the Commission's 103 sub-stations was 7,751,080 kVA.

(iv) *Separate Systems and Total State Installed Capacity.* A number of small plants which supply isolated towns and villages have not yet been interconnected with the main network.

Some local government bodies have undertaken the development of independent power stations. Of these, the more important are:—the Northern Rivers County Council, which has constructed a steam power station at Koolkhan (near Grafton) with an installed capacity of 28,750 kW, and the North-West County Council, which has established a 12,500 kW steam power station on the Ashford coalfield.

The aggregate installed capacity for the whole of the New South Wales systems and isolated plants was 2,703,757 kW at 30th June, 1964, and the number of ultimate consumers at this date was 1,295,353.





(v) *Future Development.* The major new thermal stations already built and those now being developed on the coalfields will become the main base load centres for the northern, southern and western regions. Wangi, on Lake Macquarie, Wallerawang, near Lithgow, and Tallawarra, on Lake Illawarra, have been completed.

At Vales Point, on Lake Macquarie, work is in progress on a large thermal station with a designed capacity of 875,000 kW. The plant will consist of three 200,000 kW units and one 275,000 kW unit. Two 200,000 kW units have been commissioned and construction of the remaining two is progressing.

Construction of the Munmorah Power Station, located between Lakes Munmorah and Budgewoi (on the central coast), has commenced. The plant at Munmorah will comprise four 350,000 kW generating units, coming into operation from 1967 onwards.

The development of the 330 kV main system is continuing. With duplicate transmission completed over the whole distance from the Snowy Mountains to the northern coalfields, the main work now in hand is the construction of a third circuit between the Snowy area and Yass and between the Vales Point-Munmorah area and Sydney. Development of the 330 kV network around the Sydney metropolitan area is proceeding.

Work is considerably advanced on the Sydney West 330 kV Substation which is located near Mount Druitt. Plans to augment the transmission system during the next five years provide for the construction of 400 route miles of 330 kV lines and four associated substations, over 1,000 route miles of 132 kV line and 20 substations, as well as additions to existing substations and a number of lower voltage works.

(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. 204). Apart from this area, major hydro-electric stations are in operation at the Warragamba Dam (50,000 kW), Hume Dam (50,000 kW), Burrinjuck Dam (20,000 kW), and Keepit Dam (6,000 kW). The output of Warragamba Power Station depends upon the availability of water surplus to the requirements of the Sydney Metropolitan Area, and the output of the other stations on the release of water for irrigation.

Of the remaining hydro installations, the largest is that of the New England County Council on the Oakey River, a tributary of the Macleay River, which has a capacity of 5,250 kW.

The Northern Rivers County Council operates a hydro-electric power station on the Nymboida River, a tributary of the Clarence River. This station has a capacity of 4,500 kW.

The Bega Valley County Council has constructed a hydro-electric scheme at Brown Mountain utilizing the headwaters of the Bemboka River. This installation has a capacity of 3,950 kW.

The Mullumbimby Municipal Council has in operation two 150 kW hydro units on Wilson's Creek, a tributary of the Richmond River.

4. Rural Electrification.—When the Electricity Authority of New South Wales was constituted in 1946 only 16,000 New South Wales farms were being served with electricity—less than one-quarter of those within reasonable reach of public electricity supply systems. Under a subsidy scheme approved in August, 1946, 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 the proposed extension and the number of consumers able to be served by the new lines. The scheme was designed to encourage local electricity supply authorities to construct the more economic extensions first by fixing a limit to the cost for which suppliers could be subsidized. 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 was paid on higher cost extensions, but the excess over an average of £400 was not subsidized.

To assist supply authorities in extending supply to less populated, and thus high-cost, areas of the State the subsidy scheme was extended from May, 1959, to provide for payment of increased subsidy in respect of extensions where the average capital cost per consumer lies within the range of £600-£800.

Between August, 1946, and June, 1964, applications for subsidy had been made by electricity suppliers to the Authority covering rural extensions costing £35 million to give supply to some 55,000 farming properties and 33,500 other rural consumers and involving 51,000 miles of line. The greater part of this work had been completed at 30th June, 1964. At this date the Authority was committed to the payment of £14,524,623 in subsidies, of which £7,497,735 had been paid.

§ 2. Victoria

1. **General.**—In Year Book No. 39 a detailed description is given of the development of electricity generation in the cities of Melbourne, Geelong, Bendigo and Ballarat 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 nearly 98 per cent. of the population.

Development of Victoria's electricity system is based on the utilization for both power and fuel of Victoria's extensive brown coal resources in the Latrobe Valley in eastern Gippsland, with supplementary development of the hydro-electric potential of north-eastern Victoria. Victoria is entitled to one-third of the electricity from the Snowy Mountains Hydro-electric Scheme, after the Commonwealth has taken the power it needs for its purposes. Victoria also shares with New South Wales in the electricity generated at Hume Hydro Station on the River Murray. About 75 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. All the brown coal and briquette fuel is supplied by undertakings which the Commission itself owns and operates. Output of brown coal in 1963-64 from the three open cuts at Yallourn, Yallourn North and Morwell totalled 18,165,267 tons, of which 12,567,455 tons were used in the Commission's own power stations, and 5,191,919 tons were manufactured into 1,882,626 tons of brown coal briquettes, 38 per cent. of the briquette output then being 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 consumed in the power stations, the process of briquette manufacture results also in the generation of electricity, since the steam needed for processing the raw coal for briquetting is first used to operate turbo-generators.

(ii) *Status and Power.* Constituted by the *Electricity Commissioners Act 1918*, the State Electricity Commission is a semi-governmental authority administered since 1921 by a full-time Chairman and three part-time Commissioners. The principal duty of the Commission is 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 Ballarat and Bendigo. For the accommodation of its employees at Yallourn, the Commission owns and administers the town of Yallourn. It also owns large housing estates in the surrounding area, but is progressively selling houses in these estates to Commission employees. In the Kiewa hydro-electric works area it has built the two townships of Mount Beauty and Bogong, municipal administration of the former now being vested in the Shire of Bright. With construction at Kiewa now complete, many houses at Mount Beauty have been sold for holiday homes.

(iii) *Electricity Supply.* At 30th June, 1964, the number of ultimate consumers in Victoria was 1,017,355. Of these, 1,005,694 were served by the State system and 11,661 by local country undertakings. The State system supplies all the Melbourne metropolitan area and over 1,900 other centres of population.

Complete electrification of the State is now within sight. By 30th June, 1964, about 855,000 of the 888,000 homes in the State and 57,300 of Victoria's 71,750 farms were supplied with electricity. By 1970-71, allowing for extensions then in progress, only about 6,000 homes and fewer than 1,250 farms in remote areas will be out of reach of public electricity supply, but efforts will be continued to supply as many of these as possible.

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. The number of consumers served by the State system outside the Melbourne metropolitan area is 454,916. Of the new consumers connected to supply each year, more than two-thirds are outside the metropolitan area. New farm connexions average about 3,000 a year.

The Commission's retail consumers numbered 804,304 at 30th June, 1964. Retail supply is administered through the metropolitan branch and ten extra-metropolitan branches (Ballarat, Eastern Metropolitan, Geelong, Gippsland, Midland, Mildura, Northern, North-Eastern, South-Western and Wimmera). At 30th June, 1964, there were branch and district supply offices in Melbourne and 89 other cities and towns in Victoria.

(iv) *Electricity Production.* Electricity generated in the State system or purchased by it totalled 8,647 million kWh in 1963-64 or more than 99 per cent. of all Victoria's electricity. The system comprises a series of thermal and hydro-electric power stations. Inclusive of generator capacity both within the State and available to the Victorian system from outside the State, the total installed generator capacity at 30th June, 1964, was 1,888,000 kW. Power stations 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 nearly half of Victoria's electricity. Other power stations in the interconnected system comprise two further base load brown coal burning power stations, Morwell and Hazelwood (which began partial operation, with one generating set in service, late in 1964); steam stations in Melbourne (Newport, Richmond and Spencer Street), Geelong and Ballarat and also at Red Cliffs, which has, in addition, some internal combustion plant; hydro-electric stations at Kiewa, at Eildon, on the Rubicon and Royston Rivers near Eildon, and at Cairn Curran; and an internal combustion station at Warnambool. All within Victoria are Commission-owned, except Spencer Street Power Station, which remains the property of the Melbourne City Council, although operated as a unit in the interconnected system. A 330 kV transmission line links the Victorian system with the Snowy Mountains undertaking, and also provides facilities for interconnexion between the Victorian and New South Wales State generating systems. Also linked with the Victorian interconnected system is the hydro station 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 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 is assigned a predetermined function dependent upon the availability of power from each group and the economics of generation. The various stations are utilized in the combination that will meet the system load most economically at a given time.

(v) *Transmission and Distribution.* The electrical transmission and distribution system in the State supply network at 30th June, 1964, comprised 42,432 miles of power-lines, 19 terminal receiving stations, 89 main transmission sub-stations and nearly 38,000 distribution sub-stations. Main transmission is by 220 kV, 132 kV and 66 kV power lines which supply the principal distribution centres and also provide interconnexion between the power stations. The 220 kV system now totals 1,054 miles.

(vi) *Future Development.* Major new construction is concentrated on the erection of a large new brown coal burning power station (Hazelwood) on the brown coal fields of the Latrobe Valley, which is designed to operate on raw brown coal fuel supplied by belt conveyor direct from the Morwell open cut. Hazelwood Power Station is the largest project yet undertaken by the Commission and is designed to have a capacity of 1,200,000 kW in 1969. By that year the State's power resources, including Victoria's share of the output of the Snowy scheme, will have increased by 78 per cent. to 3,200,000 kW. The first of Hazelwood's six 200,000 kW turbo-generators was commissioned in October, 1964. A second generating set of the same capacity is due to go into service in 1965, and four other 200,000 kW sets will follow at yearly intervals. Power generated at Hazelwood Power Station is transmitted at high voltage to Melbourne metropolitan terminal stations for distribution through the State supply network.

3. **Local Country Electricity Undertakings.**—At 30th June, 1964, there were 14 independent electricity undertakings in country centres in Victoria generating and distributing their own local supply. All except three of these undertakings were in the 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 1963-64 the total production of the independent undertakings was 37 million kWh. The number of consumers at 30th June, 1964, was 11,661. With the exception of the Wonthaggi undertaking (which is operated by the State Coal Mine), the operation of the independent undertakings is governed by the *Electric Light and Power Act* 1958, which is administered by the State Electricity Commission.

§ 3. Queensland

1. **General.**—In Year Book No. 39 an account is given of the growth of electricity generation in Queensland, with particular reference to south-eastern Queensland.

The generation and distribution of electric power in Queensland in earlier years had tended to lag behind developments in this field in other States of Australia. By 1935 a total of 62 Orders in Council to supply electricity had been issued (41 to local authorities and other public bodies and 21 to private companies). With only four exceptions these were in respect of circumscribed areas which extended only to the limits of the cities or towns within which the generating facilities had been established. The exceptions were areas around Brisbane, Ipswich, Toowoomba and Cairns.

Because of the unco-ordinated and isolated development which had occurred, the Queensland Government, in 1935, 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 alternative proposals put before it will be found on page 1182 of Year Book No. 39). The Commission recommended that a commission to control the generation and distribution of electric power be vested in the State; but if the establishment of an operating commission was not found practicable, then electrification under public control with ultimate public ownership should be implemented by means of a controlling commission capable of being converted into an operating commission. In 1937 the State Government constituted the State Electricity Commission of Queensland.

2. **The State Electricity Commission of Queensland.**—The Commission commenced to function in January, 1938. Generally, the Commission is the statutory authority concerned, *inter alia*, with the administration of electricity supply legislation, the general control, organization and efficient development of the electricity supply industry in Queensland, the forward planning of such development, the control of electricity charges, the administration of regulations and rules relating to safety, the raising of capital, the provision of engineering and consulting services, the promotion of the use of electricity, particularly in manufacturing and rural industries, and the fixing of standards. In addition, it is an authority to which consumers may appeal on matters in dispute between them and their electric authorities. The Commission is also empowered to own directly and operate generating stations and transmission lines and to sell electricity in bulk, but up to the present it has not been found necessary or desirable to implement this power.

3. **Legislation.**—Electricity supply in Queensland is governed by the following Acts which are administered by the Commission.

“*The State Electricity Commission Acts, 1937 to 1964.*” These Acts constituted the Commission and define its powers, duties and responsibilities.

“*The Electric Light and Power Acts, 1896 to 1964.*” These Acts relate to the constitution of electric authorities, and define their powers, duties and responsibilities, and the conditions under which electricity is to be supplied and used, and also provide for the making of regulations governing safety and other matters.

“*The Regional Electric Authorities Acts, 1945 to 1964.*” These Acts provide for the constitution of Regional Electricity Boards representative of the Commission and the Local Authorities within each region, and define their powers and responsibilities.

“*The Southern Electric Authority of Queensland Acts, 1952 to 1964.*” These Acts established the Southern Electric Authority as a public authority and successor to the City Electric Light Co. Ltd., and define the powers and responsibilities of the Authority.

"*The Northern Electric Authority Acts, 1963 to 1964.*" These Acts established the Northern Electric Authority with responsibility for the generation and main transmission of electricity in north Queensland and for its sale in bulk to regional distributing authorities. They also define its powers and responsibilities.

"*The Electrical Workers and Contractors Acts, 1962 to 1964.*" These Acts deal with the execution of electrical works, the competency of electrical workers, and the licensing of electrical contractors.

4. Development and Organization.—Following the 1939–1945 War, regional systems of electricity supply were established in and adjacent to the eastern coastal area which is over 1,300 miles long. Five Regional Electricity Boards were established to replace the numerous individual electricity undertakings which had supplied only the larger centres of population. Under this system supply was delivered from central generating stations at or near the principal load centres. Each region comprised a homogeneous area, possessing relatively common interests, within which *integrated transmission and distribution systems* were established. Transmitted supply was taken to load centres previously served by relatively costly local generating stations and a vigorous policy of rural electrification was pursued. In south-eastern Queensland regional electrification was undertaken by the Southern Electric Authority and the Dalby Town Council. The Brisbane City Council supplies the metropolitan area.

In the pastoral areas west of the Great Dividing Range supply has been provided by means of small diesel-operated generating stations run by local authorities. These independent units are fairly uniformly scattered throughout western Queensland and no town or village with more than 50 potential consumers is without electricity. With increasing consumption there has been a trend in this area for local generating stations to be superseded by transmitted supply from larger centres. From such transmission lines it has been possible to provide electricity to many otherwise isolated rural properties.

Continued load growth led naturally to the interconnexion of regional systems and by this means the production of electricity was concentrated on the cheapest sources of power. The three northern Regional Electricity Boards (Cairns, Townsville and Mackay) were consolidated into one interconnected grid. In the south, the supply systems of the Southern Electric Authority, the Brisbane City Council, the Wide Bay-Burnett Regional Electricity Board and the Dalby Town Council also form an interconnected grid. The central Queensland network which is operated by the Capricornia Regional Electricity Board is not yet connected with either the northern or southern grids.

The natural sequel to the interconnexion of regional supply systems has been the severance of the production and distribution functions. For the northern grid, the Northern Electric Authority (which commenced operations on 1st July, 1964) is responsible for the operation of generation and main transmission facilities, with the Cairns, Townsville and Mackay Regional Electricity Boards buying in bulk and acting as distributing authorities. In the south, the Southern Electric Authority is responsible for generation and transmission, with the other authorities purchasing in bulk and performing the distribution function. However, the Southern Electric Authority also distributes over a large rural area surrounding Brisbane and the Wide Bay-Burnett Board generates on a small scale. The Capricornia, Townsville and Cairns Boards operate a number of small isolated diesel generating stations.

All electricity undertakings in Queensland are now publicly owned, and with the exception of the Southern Electric Authority are controlled by representatives of local authorities within the areas concerned. Further interconnexions and amalgamations within the electricity supply industry will be effected as soon as they will produce greater efficiency and lower costs to consumers. A major co-ordinating factor has been the inclusion of the Commissioner for Electricity Supply on the Boards of the Southern Electric Authority, the Northern Electric Authority and the five Regional Electricity Boards since their inception.

5. Generation.—Electricity generated in the State is based primarily on black coal, 83.4 per cent. of the total production during 1963–64 being derived from this fuel. Hydro-electric stations, located mainly in north Queensland, provided 15 per cent., and the balance of the production, 1.6 per cent., was from internal combustion plants located mainly in western Queensland, utilizing oil, wood, coal or natural gas as fuel. Natural gas is the principal fuel used at the Roma power station. Electricity generated in Queensland in power stations in 1963–64 totalled 3,330 million kWh. At 30th June, 1964, the major power stations within the State were as follows:—*Steam*—Bulimba A (Brisbane), 92,500 kW; Bulimba B (Brisbane),

180,000 kW; New Farm (Brisbane), 75,000 kW; Tennyson A (Brisbane), 120,000 kW; Tennyson B (Brisbane), 120,000 kW; Howard (near Maryborough), 37,500 kW; Rockhampton, 52,000 kW; Mackay, 12,250 kW; Townsville, 37,500 kW; *Hydro*—Kareeya (Tully Falls), 72,000 kW; Barron Gorge (near Cairns), 60,000 kW.

The Mackay station also contains 3,000 kW of internal combustion plant. The Southern Electric Authority also operates two packaged plants each of 10,000 kW capacity.

The total installed capacity of all Queensland generating stations was 1,007,984 kW which comprised 834,750 kW of steam plant, 139,015 kW of hydro-electric plant and 34,219 kW of internal combustion plant.

6. **Transmission and Distribution.**—The electrical transmission and distribution systems within the State comprised 30,600 miles of power lines at 30th June, 1964. The main transmission voltages are 132 kV, 110 kV, 66 kV and in certain areas 33 kV. Extensive rural electrification has been undertaken by means of the single wire earth return system. At 30th June, 1964, the total number of electricity consumers was 457,600 of whom 185,000 were in metropolitan Brisbane. The total number of farming properties supplied with electricity was 24,182.

7. **Future Development.**—Major new construction is concentrated on the development of three new power stations sited on coalfields. These are at Swanbank (360,000 kW) on the West Moreton coal field near Ipswich, Callide (150,000 kW) on the Callide open-cut coalfield near Biloela, and at Collinsville (180,000 kW) on the Collinsville coalfield. These stations will supply the southern, central and northern network, respectively. Cooling water for the Callide station will be provided from a multipurpose dam on Callide Creek which will also satisfy irrigation needs. A similar multipurpose dam on the Broken River will serve the Collinsville station. The water requirements of the Swanbank power station will be pumped from the Bremer River and supplied from the Moogerah Dam via Warrill Creek.

The Swanbank station will consist of six 60,000 kW generating sets, the first of which will be commissioned in 1966, two more in 1967 and one each year until 1970. The first stage of the Callide station consists of two 30,000 kW sets, the first to be commissioned in mid-1965 and the second a year later. A third similar set is planned for installation in 1968. At Collinsville the first stage of two 30,000 kW sets is planned for commissioning in 1968.

Subsequent development will depend upon the outcome of current investigations. For southern and central Queensland the alternatives are a further power station on the West Moreton coalfield or a new station at Callide to serve both the southern and central grids. In north Queensland the choice lies between further development at Collinsville or further development of the area's hydro-electric resources.

The electrical development in the west of Queensland is being assisted by the progressive extension westwards of the boundaries of the major regional electricity undertakings to include smaller western undertakings, bringing with it the advantages of incorporation within larger authorities, lower tariffs and greater financial and technical resources. Organizational changes involving amalgamation of isolated undertakings and their inter-connexion by transmission lines are being implemented as and when economic benefits to the consumers will result. In the extreme far west the isolated undertakings must inevitably continue to remain as such for the foreseeable future.

§ 4. South Australia

1. **General.**—An account of 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 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 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.

2. **The Electricity Trust of South Australia.**—In 1946 the assets of the Adelaide Electric Supply Co. Ltd. were transferred to a 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 supply and which took over the powers previously vested in the South Australian Electricity Commission. In addition to the powers specified in the Adelaide Electric Supply Company's Acts, 1897–1931, the Trust may supply electricity direct to consumers within a district or municipality with the approval of the local authority, and by agreement with other organizations which generate or supply electricity, arrange to inter-connect the mains of the Trust with those of other organizations, and give or receive supplies of electricity in bulk.

3. **Capacity and Production.**—Three main categories of organizations generate electric power in South Australia, namely:—(a) governmental, which include the Electricity Trust; (b) local authorities, e.g. municipal and district councils, and the 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 solely for their own use.

Of the total installed capacity in South Australia, the Electricity Trust operated plant with a capacity of 606,000 kW, and is the most important authority supplying electricity in the State. There were approximately 352,000 ultimate consumers of electricity in the State, of whom 328,600 were supplied directly and approximately 11,000 indirectly (i.e. through bulk supply) by the Trust. Its major steam stations are Osborne "A" (60,000 kW), Osborne "B" (180,000 kW), and Port Augusta Playford "A" (90,000 kW) and Playford "B" (240,000 kW), the balance of the capacity controlled consisting of house sets and regional stations at Port Lincoln and Mount Gambier, where the Trust operates steam power stations of 5,000 kW and 21,800 kW capacity respectively, the former burning fuel oil and the latter either wood waste or fuel oil. Mt. Gambier is connected with the Metropolitan system by a 132 kV line.

No hydro-electric potential exists in South Australia. Steam generating units comprise 98 per cent. of installed capacity and the balance is internal combustion equipment.

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, 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, 1964, 1,617,973 tons of coal were produced, practically all of which was used by the electricity undertaking at the Port Augusta Playford Power Stations which use Leigh Creek coal exclusively.

A further 60,000 kW turbo-alternator with an associated oil fired boiler is being installed at Osborne "B" station and is due to be commissioned early in 1965.

A large power station is to be constructed on Torrens Island near Adelaide and two 120,000 kW turbo-alternators and associated oil fired boilers have been ordered, the first to be commissioned early in 1967.

§ 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 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 Year Book No. 39, page 1189.

2. **The State Electricity Commission of Western Australia.**—The State Electricity Commission of Western Australia was established by the *State Electricity Commission Act, 1945*, and, as at present constituted, consists of nine members, including the Chairman, appointed by the Governor. Four of the Commissioners are representatives of consumers, one for the metropolitan area, two for the rest of the State and one representing commercial consumers. Of the remaining five, one is the Under Treasurer of the State or his deputy, one represents employees of the Commission and three are required to be qualified engineers.

The Commission is empowered to co-ordinate all State and other power undertakings in the State; to encourage and promote the use of electricity and other power, especially for industrial, manufacturing and rural purposes, and to carry out investigations to determine the safest, most economical and effective means for promoting, establishing, extending and improving works for the generation, transmission, distribution, supply and use of electricity or other power throughout the State. 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 that their proposals are not inconsistent with the Commission's plans.

3. General Pattern of Electricity Supply.—(i) General. The State Electricity Commission gives central power station supply to the metropolitan area and an area of approximately 25,000 square miles defined in the report which formed a basis for the *South West State Power Scheme Act, 1945*. These areas include the more highly developed rural districts with a greater population density, which can more readily be connected to a central power station system. The policy of extending power supplies to rural consumers is continuing and at 30th September, 1964, some 4,753 rural consumers were connected. A similar scheme known as the Northern Areas State Power Scheme will be developed and a depot is being established in the Geraldton area. It is the intention of the Commission to purchase power in bulk from the Geraldton Town Council to supply surrounding districts as far north as Northampton.

In the other areas of the State, towns are supplied by the local authority or by a concessionaire operating under an agreement with the local authority and the Commission. Power stations operated under these conditions are exclusively diesel of varying sizes. The number of ultimate consumers at 30th June, 1964, was 182,094.

(ii) Interconnected System. At the request of the Government, the Electricity Advisory Committee, in 1945, submitted a report which recommended, among other things, a national power scheme for the south-west. 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. In 1946, the State Electricity Commission acquired the Collie Power Station, and since then it 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-West Power Scheme was officially opened at Collie, and most of the south-west towns as well as towns in the eastern wheat belt area as far east as Merredin have now been connected by transmission line to the interconnected system.

Statistics relating to activities of the interconnected system are shown in the following table.

WESTERN AUSTRALIA: INTERCONNECTED SYSTEM

Particulars	1962-63	1963-64
Plant capacity kW	289,500	289,500
Maximum load kW	231,000	263,000
Units generated Million kWh	987	1,094
Fuel used per unit (kWh) generated lb.	1.49	1.49
Coal used tons	583,496	617,150

In Kalgoorlie, the large gold mines generate their own power requirements. The Power Corporation has ceased operations, and the Kalgoorlie Town Council operates a new 50 cycle diesel station to supply A.C. consumers in Kalgoorlie and Boulder. The D.C. stations of the Kalgoorlie and Boulder Town Council will continue to operate for some time at least.

4. New Projects.—Since its inception in 1946, the State Electricity Commission has made the provision of an adequate reserve of generating plant its primary object. With the commissioning of the first unit at South Fremantle Power Station in May, 1951, the lag

caused by shortages during the war and early post-war years was overcome. The system then developed rapidly to keep pace with the expansion of industry and housing. Generating plant has increased five-fold in the past eighteen years. The three major power stations have been interconnected with the South West Power Station at Collie enabling the most economical units to be used as a base load station. Continuous development of the transmission and distribution system is being undertaken to keep pace with the growth in consumer demand, which is being maintained at a high level.

Work has commenced on two 60,000 kW turbo alternators, boilers and buildings for the first section of a new station at Muja near Collie, adjacent to a source of open-cut coal. Contracts for a further two units have been completed and the overall construction of the new power station at Muja is running to schedule. The first unit is planned to be in service in 1965 with similar units to be ready for commercial service in 1967, 1968 and 1969. On the completion of this phase of construction the installed capacity of the system will be increased by 240,000 kW.

§ 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. Another factor contributing to the low cost is 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 and metallurgical works with high load factor, and as a consequence the system load factor is also very high (at present 67.0 per cent.).

For information on hydro-electric development in Tasmania prior to the establishment of the Hydro-Electric Commission in 1930, see Year Book No. 39, pages 1192-3.

2. The Hydro-Electric Commission.—(i) *Present System.* In 1929, the Government passed the *Hydro-Electric Commission Act 1929*, which established the Hydro-Electric Commission and 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. For details of projects undertaken by the Commission prior to 1957 see Year Book No. 48, pp. 243-4, and earlier issues.

Preliminary construction of the Catagunya Power Development began early in 1957. The scheme utilizes the whole of the waters flowing through Tarraleah and Tungatinah Power Stations and successively through the Liapootah and Wayatinah Power Stations plus water from the Florentine River. Four miles below Wayatinah, a diversion dam was constructed at Catagunya, and a power station with an installed capacity of 48,000 kW was completed at the end of June, 1962. The dam was designed and built as a pre-stressed concrete structure, 147 feet in height, and it is notable as being only the second of its type and the largest yet undertaken by this technique anywhere in the world.

In the Great Lake Power Development the water of the Great Lake, by its diversion to the north-east in the direction of the most precipitous fall, is used to much greater advantage than previously through Shannon and Waddamana. Eventually reaching the South Esk River, it is used again through the machines of the Trevallyn Power Station. The works consist of an intake at the Great Lake, a four-mile headrace tunnel through the Western Tiers, one mile of high pressure pipeline on the face of the Tiers, a vertical shaft leading to the Poatina Power Station some 500 feet underground, a two-mile tailrace tunnel discharging into a canal, and then a channel to the Lake River, a tributary of the South Esk. In this development the power is generated by the fall of water through a vertical distance of 2,730 feet to the underground Poatina Power Station. Three 50,000 kW generators had commenced operation by mid-1964 and a fourth in September, 1964. A fifth generator will be commissioned early in 1965 and a sixth at a later date will bring the station's installed capacity to 300,000 kW. A further section of the scheme, now nearing completion, includes a dam at Arthur Lakes from which water will be pumped via conduit into the Great Lake, thus increasing the storage for use through the Poatina Power Station.

With the commissioning of Poatina Power Station, Shannon Power Station was taken out of service in June, 1964. It is expected that the original Waddamana "A" Power Station will be taken out of service early in 1965. Waddamana "B" Station will be retained to provide peak load capacity and spare plant.

The total installed capacity of the present system throughout Tasmania in June, 1964, was as follows.

Power station	Installed capacity of alternators
	kW
Waddamana " A "	49,000
Waddamana " B "	48,000
Tarraleah	90,000
Butler's Gorge	12,200
Trevallyn	80,000
Tungatinah	125,000
Lake Echo	32,400
Liapootah	83,700
Wayatinah	38,250
Catagunya	48,000
Poatina	150,000
Total	756,550
King Island (diesel plant)	390

Approved construction will bring this total to approximately 1,240,000 kW by 1974. The number of ultimate consumers at 30th June, 1964, was 128,642.

(ii) *New Capacity.* Investigations are continuing into the very considerable resources as yet untouched, principally in the west and north-west of the State, and it is estimated that the potential which can be developed economically should ultimately harness 2,400,000 kW to the system.

The Hydro-Electric Commission is engaged on a construction programme which comprises the Lower Derwent Power Development and the Mersey-Forth Power Development. In the first-named, a three-stage development is under construction below Catagunya on the River Derwent. With dams and power stations named Repulse, Cluny and Meadowbank, the completion of this project by 1967 will add a further 85,000 kW to the system, and it will also bring to an end the exploitation of the power potential of the River Derwent and its tributaries.

The Mersey-Forth Power Development has been sanctioned for construction and is scheduled to be completed by 1974. In this development, the Mersey River will be diverted westward to the Forth River by the construction of the Parangana Dam about half a mile below the junction of the Mersey and Fisher Rivers. Thence the flow will be conducted by a tunnel and penstock to LEMONTHYME Power Station on the Forth River. The combined flow will be used for power generation at three power stations on the Forth River situated at the foot of dams at Cethana, Devil's Gate, and Palooa. The Wilmot River will be diverted to the east by a dam through a tunnel to a power station on the Forth River upstream from Cethana Dam. The diverted flow of the Wilmot River will also be used to produce power at Cethana, Devil's Gate, and Palooa. A sixth power station will result from the development of the Fisher River, where a rapid fall from Lake Mackenzie on the plateau to the Mersey River enables a head of some 2,100 feet to be exploited.

The principal storage in the development, Lake Rowallan, will be situated on the upper Mersey River at Walters Marsh, and Rowallan Power Station will exploit the water released from this storage. Smaller storages will be provided by Lake Mackenzie and by Parangana, Wilmot, Cethana and Devil's Gate Dams.

The six stages of the development are to be completed progressively between 1969 and 1974 and will add a total of 298,500 kW to the system.

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 have attracted to Tasmania a number of important secondary industries for which energy costs constitute a large proportion of the total cost of production. The continuous power demands of these organizations when plant is in full operation aggregates 276,000 kW, and a number of industrial undertakings are contemplating expansion of their activities.

§ 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.* The supply authority is the A.C.T. Electricity Authority which took over the functions of the Canberra Electric Supply Branch, Department of the Interior, on 1st July, 1963. Supply was first made available in Canberra during 1915 and was met from local steam plant. Connexion to the New South Wales interconnected system was effected in 1929, and all requirements are now taken from this system. Locally owned plant consists of 4,000 kW of diesel alternators which are retained as a standby for essential supplies.

The total number of ultimate consumers at 30th June, 1964, was 23,473. During the year 1963-64, the bulk electricity purchased was 243,863,000 kWh and the system maximum demand was 63,000 kW.

(iii) *Northern Territory.* At Darwin, supply was established by the Town Council in October, 1934, but during April, 1937, responsibility for generation and supply was transferred to the Northern Territory Administration. The power station is now equipped with turbo alternators with a total capacity of 15,000 kW. A tender was let during 1964 for an additional 15,000 kW turbo alternator and boiler for installation at Stokes Hill, Darwin, power station. In addition, diesel generating plant of approximately 6,500 kW is available. A 66 kV transmission system is used.

At Alice Springs the power station is equipped with a diesel generating plant of 3,800 kW capacity.

At Katherine the power station is equipped with a diesel generating plant of 960 kW capacity, with an additional 1,100 kW planned to be commissioned early in 1965.

The diesel station at Tennant Creek was closed down in 1957, supply for the township being purchased in bulk from Peko Mines N.L.

During the early part of 1964 two small package fully automatic non-attended plants of 45 kW capacity were opened at Pine Creek and Elliott. The total number of ultimate consumers served in the Territory at 30th June, 1964, was 5,990.

2. *External Territories—Papua and New Guinea.*—Responsibility for the operation and establishment of the electrical undertakings in Papua and New Guinea is vested in the Papua and New Guinea Electricity Commission, whose headquarters are located at Port Moresby. The Commission came into operation on 1st July, 1963, and assumed the functions and responsibilities previously vested in the Electrical Undertakings Branch of the Department of Public Works.

The Commission, on its own behalf, operates the public supplies in the main centres of population, and, on behalf of the Administration, operates the supply in the minor centres and patrol posts, hospitals, agricultural establishments, etc., where the supply cannot be considered to be a fully commercial supply.

The Commission also has regulatory functions associated with the licensing of electricians and contractors, the control of franchise holders and the approval of appliances and electrical materials for use in the Territory. The Appliance Approval By-laws will be based upon complete reciprocity with the Australian approval authorities.

The generating capacity in the centres under the control of the Commission is as follows:—Port Moresby—diesel, 2,223 kW, hydro, 5,500 kW; Rabaul—diesel, 3,000 kW; Lae—diesel, 2,640 kW; Madang—diesel, 870 kW; Wewak—diesel, 870 kW; Goroka—hydro, 400 kW; Samarai—diesel, 300 kW; Kavieng—diesel, 204 kW; Kokopo—diesel, 64 kW.

On behalf of the Administration, the Commission operates generating sets totalling some 4,000 kW distributed over 130 centres, with capacities between 5 and 100 kW.

The townships of Wau and Bulolo are supplied by power generated by Bulolo Gold Dredging Limited, which operates hydro-electric plant of 5,500 kW capacity. Power produced by this plant is used mainly in the plywood mill and gold dredges at Bulolo.

The Commission has a policy to take increasing advantage of the hydro potential existing in the Territory. Work has been completed on the Sirinumu Dam on the Laloki River near Port Moresby, which will provide regulation of the river to give a minimum flow of 200 cusecs.

Tenders have been let for the supply of three 6,000 kW generating sets, which will be installed in an underground power station, which will take advantage of the fall in the Laloki River over the Rouna Falls. This station will have an ultimate capacity of 30,000 kW. It is planned to commission the station in August, 1967.

Preliminary investigations have indicated the economics of developing the potential of the Upper Ramu River adjacent to Kainantu in New Guinea, to provide a regional supply to Lae, Madang, Kainantu, Goroka and Mount Hagen. The present planning is to provide a station designed for ultimate capacity of 48,000 kW, and for the installation of two 8,000 kW generators in the first stage.

Some 400 miles of 66 kV and 132 kV transmission line will be constructed to bring power to the centres of consumption.

To meet the growing needs of the Territory, pending the commissioning of the hydro-electric power stations on the Laloki and Upper Ramu Rivers, the Commission is adopting the policy of installing skid-mounted diesel generating sets of a capacity which will permit their transfer at a later date to other growing centres. Trends indicate that a total of seven 500 kW sets will be needed at Port Moresby. These will later be transferred to Lae and Madang.

Extensive investigations have been made to locate a suitable source of hydro-electric power to supply the township of Rabaul and the quickly developing area along the Gazelle Peninsula. However, the geological reports on those sites so far investigated have not been encouraging, and at present no firm proposal has been put forward.

Several small hydro-electric installations have been made or are in process of construction to serve isolated centres. These are—Aiyura Agricultural Station—30 kW; Mount Hagen—120 kW; Mendi (under construction)—100 kW; Tapini (under construction)—30 kW.

The Commonwealth Department of Works has a Stream Gauging Section and maintains records of many of the main rivers in order to provide material for future investigations into some of the major hydro-electric potential which exists in the Territory.

In 1950, the Commonwealth Government joined with the British Aluminium Co. Ltd. of London to locate and develop large capacity hydro-electric schemes in New Guinea. A company was formed, known as New Guinea Resources Prospecting Co. Ltd., with a capital of £100,000. The Commonwealth Government held 51 per cent. of the shares, and had a controlling interest on the Board of five members, but it later sold its interest to a company formed by Consolidated Zinc Pty. Ltd. and British Aluminium Co. Ltd., both of London. This company carried out very extensive investigations into the rivers of the Gulf of Papua and, in particular, into the Purari River.

The number of consumers served by the Commission as at 30th June, 1964, was 8,000. The consumers in minor centres approximate 2,000.

STATISTICAL SUMMARY

The following table shows statistics for each State separately and for the six States combined for the year 1962-63.

Statistics of the electricity supply industry for the years 1958-59 to 1962-63 are given in Chapter VI. Manufacturing Industry.

CENTRAL ELECTRIC STATIONS, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
Generating stations—							
Government .. No.	27	13	..	10	10	11	71
Local authority	13	8	50	8	41	..	120
Companies	14	14	1	11	41	3	84
Total	54	35	51	29	92	14	275
Installed capacity of generators—							
Steam .. '000 kW	2,484	1,291	745	596	305	..	5,421
Hydro	809	333	79	..	2	627	1,850
Internal combustion ..	73	33	34	13	74	1	228
Total	3,366	1,657	858	609	381	628	7,499
Persons employed(b) No.	4,279	3,379	1,682	1,548	(a)	(a)	12,272
Value of output(c) £'000	59,693	32,663	17,991	9,897	(a)	(a)	135,570
Value of production(d) ..	42,961	21,257	8,866	5,516	(a)	(a)	89,556
Electricity generated(e) million kWh	12,188	7,187	3,137	2,335	1,219	3,213	29,279
Ultimate consumers(f) No.	1,257,445	984,129	434,022	337,000	173,883	125,572	3,312,051

(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 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 identical with the number of persons served with electricity because one ultimate consumer may represent three or four persons, e.g. in a household.

CHAPTER VIII

WATER CONSERVATION AND IRRIGATION

RESOURCES, UTILIZATION AND NATIONAL AND INTERSTATE ASPECTS

§ 1. Introduction

This issue of the Year Book contains, on pages 228-31, a description of recent developments in the measurement of Australia's water resources prepared by officers of the Department of National Development. For information concerning general, descriptive and historical matter reference should also be made to Year Book No. 37, pages 1096-1141.

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 XX. Local Government; and on the generation of hydro-electric power to Chapter VII. 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 may be found on pages 259-65 of Year Book No. 46, and a map showing the extent of known artesian basins throughout Australia is shown on page 273 of Year Book No. 48.

§ 2. Water Resources and their Utilization

1. **Surface Supplies.**—An assessment of Australia's surface water resources has been made, based on measured and estimated stream flows within 197 river basins, as follows. The total average annual discharge of Australian rivers has been assessed at 280 million acre feet. This can be divided into 108 million acre feet measured discharge and 172 million acre feet estimated for areas where there are generally no gauging records. For the whole area of Australia (approximately 3 million square miles) only 1.9 million square miles are regarded as contributing to stream flow (i.e. there is practically no flow from Western Plateau drainage division and from arid parts of other divisions).

The flow of Australian rivers is small 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: Amazon, 1,780; Mississippi, 474; Danube, 228; Volga, 148; Nile, 72; and the ten major rivers of the United States of America in the aggregate; 900.

2. **Major Dams and Reservoirs.**—The table below lists existing major dams and reservoirs, together with those under construction and those projected, at June, 1964. The list is confined to dams and reservoirs with a capacity of 100,000 acre feet or more. There are many others of smaller capacity in Australia.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS				
Eucumbene ..	Eucumbene River, New South Wales	3,500,000	381	Part of Snowy Mountains Hydro- electric Scheme
Eildon	Upper Goulburn River, Victoria	2,750,000	260	Storage for irrigation and for the generation of electricity
Hume	Murray River near Albury	2,500,000	142	Part of Murray River Scheme— storage for domestic, stock and irrigation purposes. Hydro- electric power also developed
Menindee Storage Lakes	Darling River, near Menindee, New South Wales	2,000,000	..	Part of Darling River Water Con- servation Scheme for irrigation and possible hydro-electric power generation
Warragamba ..	Warragamba River, New South Wales	1,670,000	379	For Sydney water supply. Also provides for generation of hydro-electricity and flood mitigation

(a) Useful storage only.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—*continued*

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
EXISTING DAMS AND RESERVOIRS— <i>continued</i>				
Miena	Great Lake, Tasmania	a1,300,000	40	Storage for Poatina hydro-electric power station
Burrinjuck	Murrumbidgee River, New South Wales	837,000	264	Storage for irrigation and production 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 off-river storage for irrigation in South Australia. Storage improved by construction of embankments and control regulators
Lake Echo	Lake Echo, Tasmania	(a)412,200	60	Storage for Lake Echo, Tungatinah, Liapootah, Wayatinah and Catagunya hydro-electric power stations
Keepit	Namoi River, near Gunnedah, New South Wales	345,000	177	For rural water supplies and hydro-electricity generation
Arthur Lakes	Source of Lake River near Great Lake, Tasmania	(a)343,000	50	Part of Great Lake hydro-electric power development
Waranga	Goulburn River, Victoria	333,400	..	Irrigation storage
Tinaroo Falls	Barron River, north Queensland	330,000	136	For irrigation purposes in the Mareeba-Dimbulah area
Glenbawn	Hunter River, near Scone, New South Wales	293,000	251	Part of Hunter Valley conservation work, for irrigation and flood mitigation
Rocklands	Glenelg River, Victoria	272,000	..	Part of Wimmera-Mallee domestic and stock water supply system
Clark	Derwent River, Tasmania	(a)253,400	200	Storage for Tarraleah, Liapootah, Wayatinah, and Catagunya hydro-electric power stations
Eppalock	Campaspe River, near Heathcote, Victoria	252,860	150	To supplement supply to Bendigo and for irrigation
Wyangala	Lachlan River, New South Wales	(b)245,000	200	Storage for domestic, stock and irrigation purposes and for generation of hydro-electric power. (See also under Dams and Reservoirs under Construction)
Tantangara	Murrumbidgee River, New South Wales	(a)193,000	148	Part of Snowy Mountains Hydro-electric Scheme
Avon	Avon River, New South Wales	173,800	232	Part of Sydney water supply
Glenmaggie	Gippsland, Victoria	154,300	100	Storage for irrigation
Lake St. Clair	Central Highlands, Tasmania	(a)154,200	..	Improved natural storage for Tarraleah hydro-electric power station
Wellington	Collie River, Western Australia	150,100	112	For supply of water to irrigation districts and to agricultural areas and country towns
Serpentine	Serpentine River, Western Australia	144,000	171	For Perth water supply
Lake Brewster	Lachlan River, near Hillston, New South Wales	123,900	..	Storage of rural water supplies for the lower Lachlan
Cairn Curran	Loddon River, Victoria	120,600	..	Storage for irrigation
Upper Yarra	Yarra River, Victoria	110,000	270	For Melbourne water supply
DAMS AND RESERVOIRS UNDER CONSTRUCTION				
Burrendong	Macquarie River, near Wellington, New South Wales	1,361,000	250	For rural water supplies, flood mitigation and possible hydro-electric power generation
Wyangala	Lachlan River, New South Wales	1,000,000	270	Strengthening and enlarging of existing dam for increased water supply and hydro-electric power generation. (See also under Existing Dams and Reservoirs)
Koomboooloomba	Tully River, north Queensland	146,000	123	For hydro-electric and possible irrigation purposes

(a) Useful storage only.

(b) Temporary reduced level.

MAJOR DAMS AND RESERVOIRS IN AUSTRALIA—continued

Name	Location	Capacity (acre feet)	Height of wall (feet)	Remarks
DAMS AND RESERVOIRS PROJECTED				
Burdekin Falls ..	Burdekin River, North Queensland	6,584,000	150	For generation of hydro-electric power, irrigation and flood mitigation
Chowilla ..	Murray River, in South Australia, near Victorian border	5,000,000	41	Regulation of the lower Murray River
Ord River ..	Near Wyndham, Western Australia	3,500,900	200	For irrigation, generation of hydro-electric power and flood mitigation. (Additional 6,000,000 acre-feet flood control proposed)
Blowering ..	Tumut River, New South Wales	1,300,000	364	For regulation of discharges from stations of Snowy Mountains Hydro-electric Scheme, primarily for irrigation but also for power generation
Maraboon ..	Nogoa River, Central Queensland	1,170,000	148	For irrigation and probable thermal power station
Buffalo ..	Buffalo River, near Myrtleford, Victoria	800,000	260	For irrigation
Talbingo ..	Tumut River, New South Wales	600,000	500	Part of Snowy Mountains Hydro-electric Scheme
Jindabyne ..	Snowy River, New South Wales	560,000	210	Part of Snowy Mountains Hydro-electric Scheme
Warkworth ..	Wollombi Brook, Hunter Valley, New South Wales	406,000	130	Flood mitigation and irrigation dam for the Hunter Valley
Winton ..	Winton Swamp near Benalla, Victoria	300,000	35	To store flood flows in Broken River for irrigation
Wuruma ..	Nogo River, Central Queensland	150,000	120	For irrigation storage
Rowallan ..	Mersey River, North Tasmania	110,000	140	Storage for Mersey-Forth power development

(a) Subject to final survey.

3. Irrigation.—(i) *History*. For some brief remarks on the history of irrigation in Australia see issues of the Year Book prior to No. 39. Trends in irrigation practice in more recent years were described in Year Book No. 37, page 1099.

(ii) *Extent and Nature of Irrigated Culture*. The following table shows the area of land irrigated in each State during the seasons 1959-60 to 1963-64, and the nature of irrigated culture in each State in 1963-64.

AREA OF LAND IRRIGATED (Acres)

Season and crop	N.S.W. (a)(b)	Vic. (c)	Q'land	S. Aust.	W. Aust.	Tas.	N.T. (d)	A.C.T.	Aust. (e)
1959-60 ..	889,441	1,052,782	152,136	100,899	45,889	18,108	365	869	2,260,489
1960-61 ..	837,191	1,007,180	186,697	102,023	48,551	18,934	602	1,432	2,202,610
1961-62 ..	964,748	1,117,900	209,419	108,400	48,679	23,189	538	1,303	2,474,176
1962-63 ..	1,036,846	1,151,555	220,562	112,813	51,501	24,285	434	1,247	2,599,243
1963-64—									
Cotton ..	452	(f)	2,717	..	1,546	..	..	..	4,715
Hops ..	..	(f)	..	..	1,463	..	..	..	(h) 1,463
Orchards ..	24,451	43,891	(i) 7,315	28,787	10,425	5,933	87	13	120,902
Rice ..	59,331	..	..	..	(g)	..	(j)	..	(h) 59,331
Sugar-cane ..	(f)	..	98,204	..	..	..	..	..	(h) 98,204
Tobacco ..	n.a.	..	14,366	..	..	..	..	..	(h) 14,366
Vegetables ..	2,859	24,422	36,329	10,541	9,166	6,319	105	120	(h) 89,861
Vineyards ..	12,810	45,257	(k)	27,954	966	..	..	..	(h) 86,987
Other crops (including fodder and fallow land)	221,639	101,165	65,078	27,652	6,153	4,162	405	415	426,669
Total, Crops	321,542	214,735	224,009	94,934	28,236	17,877	597	543	912,428
Pastures ..	505,176	922,506	27,360	22,936	26,958	15,693	376	533	1,521,538
Total, 1963-64 ..	1,060,479	1,137,241	251,369	117,870	55,214	33,570	973	1,081	2,657,797

(a) Source: Water Conservation and Irrigation Commission. (b) Includes total area irrigated by licensed diversions, but details for individual crops, etc., in 1963-64 (233,761 acres), are not available. (c) Source: State Rivers and Water Supply Commission. (d) Incomplete, excludes area of rice irrigated. (e) See footnote (b) to New South Wales. (f) Not available separately; included in Other crops. (g) Not available for publication; included in Other crops. (h) Incomplete; see footnotes to individual States. (i) Includes vineyards. (j) Not available for publication; excluded from totals. (k) Included with Orchards.

(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; soil treatments to improve the physical condition of irrigated heavy clay soils; the utilization of irrigated pastures by stock; growth problems affecting plants and trees; the prevention of evaporation from water storages; the potability of saline waters for stock; the de-salting of brackish waters; and cloud-seeding over catchments.

Irrigation is studied by the Commonwealth Scientific and Industrial Research Organization at a number of its research stations and laboratories, the principal one being the Irrigation Research Laboratory at Griffith (New South Wales), where investigations are concerned with limiting the degradation of land by irrigation, improving the quality and range of irrigated crops, and assessing the amount of water required by irrigated crops and the most economical means of applying it. The crops being studied include citrus, cotton, wine grapes and lucerne. The Organization's Division of Plant Industry studies irrigated pastures at Deniliquin (New South Wales) and Canberra (Australian Capital Territory), and tobacco at Mareeba (Queensland). At Adelaide (South Australia) and Merbein (Victoria), the Horticultural Research Section is working on problems of the dried-fruit industry. The Division of Land Research and Regional Survey conducts research on rice at the Coastal Plains Research Station, Darwin (Northern Territory), and on a number of irrigated crops, including rice, safflower, linseed and cotton, at the Kimberley Research Station (Western Australia). The Division has also carried out a number of hydrological investigations in connexion with the utilization of underground water for irrigation. The Division of Soils and the Soil Mechanics Section are studying methods of reducing seepage from earthen dams, and take part in the examination of the physical properties of sediments beneath proposed dam sites. The Division of Soils is also looking at underground water movement and the water balance in the south-east of South Australia, and at the drainage and soil moisture regime of the irrigated swamps of the lower Murray River. The Division of Physical Chemistry is investigating methods of minimizing evaporation losses from water storages by the use of monomolecular layers.

The Irrigation Research and Extension Committee plays an important part in the agricultural activity of the Murrumbidgee Irrigation Areas. It is representative of the New South Wales 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 to co-ordinate 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 reforestation 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.* Much of Australia's underground water is obtained from artesian and sub-artesian basins and is used for stock purposes. These supplies are indispensable in most inland areas. The quality of the water ranges from usable to very saline. In inland areas a considerable amount of water has been tapped that is unusable because of its high salt content. Because of this, development of an economic desalting process would provide the interior with additional large quantities of usable water.

Considerable use is also made of sub-surface water, other than pressure water, from local storages, particularly in the well-settled areas. The water is used mainly for domestic and stock purposes. Compared with other countries with similar rainfall and climate, underground water is not used extensively for town and individual industrial supplies, but its use for these purposes is increasing.

(ii) *Artesian and Sub-artesian Supplies.* Pressure water (either artesian or sub-artesian), variable in quantity and quality, is obtainable in many parts of Australia, the various artesian basins extending over about half the continent. A map of Australia showing the extent of the known artesian basins appears on page 273 of Year Book No. 48.

The Great Artesian Basin, the most extensive in the world, underlies an area of approximately 676,250 square miles, comprising about 421,000 in Queensland, 135,000 in South Australia, 81,250 in New South Wales and 39,000 in the Northern Territory. The following are the principal defined water-bearing basins in Australia.

PRINCIPAL WATER-BEARING BASINS IN AUSTRALIA

Name	State	Geological age of chief aquifers	Approximate area	Depth to pressure water
			Square miles	Feet
Great Artesian ..	Queensland, New South Wales, South Australia and Northern Territory	Mesozoic	676,250	Up to 7,000
Canning ..	Western Australia	Mesozoic-Palaeozoic	150,000	100 to 1,800
Murray ..	Victoria, New South Wales and South Australia	Miocene-Eocene ..	109,000	100 to 1,300
Georgina (including Barkly and Daly) ..	Northern Territory, Queensland	Cretaceous, Ordovician, Cambrian and Upper Proterozoic	108,000	150 to 1,000
Eucla	Western Australia, South Australia	Pliocene-Miocene ..	74,000	300 to 2,000
Carnarvon ..	Western Australia	Cretaceous, Permian ..	45,000	200 to 4,000
Perth	Western Australia	Recent, Jurassic ..	21,000	200 to 2,500
Western District (Otway)	Victoria ..	Pleistocene-Upper Cretaceous	13,000	100 to 4,500
Basins of Ord-Victoria region	Northern Territory, Western Australia	Mainly Cambrian and Permian	12,000	200 to 1,000
Pirie-Torrens ..	South Australia ..	Recent, Pleistocene ..	9,000	Up to 600
East Gippsland ..	Victoria ..	Pleistocene-Eocene ..	3,500	200 to 3,500
Adelaide ..	South Australia ..	Recent, Oligocene ..	1,100	200 to 600

More than 18,000 artesian bores have been drilled within the Great Artesian Basin, while the daily free discharge from all bores continuing to flow in Australia has been stated as exceeding 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 most is unsuitable for plant life, while in certain areas sub-artesian waters are suitable for all uses including irrigation. In the Eucla Basin and parts of the Murray and Pirie-Torrens Basins the water is of poor quality, being barely suitable for stock.

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, others will assume a perpetually steady rate of flow, corresponding with the average intake of water from rainfall absorbed by permeable outcrops, mainly sandstone and limestone. 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* Year Book No. 37, pp. 1103-4 and § 4, para. 3.)

(iii) *Shallow Groundwater.* Shallow groundwater supplies are used in various parts of Australia for industry, irrigation, stock and domestic purposes. Two examples of use of these shallow supplies for industrial and domestic purposes occur 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 8-10 million gallons a day for its own use from similar sands. Exploration of the coastal sands north of the Tomago Sands has revealed a further potential production of 25 million gallons a day. Examples of the use of shallow groundwater supplies for irrigation include the Burdekin Delta and the Bundaberg area in Queensland. In the Burdekin Delta, which covers an area of some 200 square miles, the present extraction for irrigation from underground sources is in the region of 200,000 acre feet per annum (about 150 million gallons a day) and in the Bundaberg area it is approximately 35,000 acre feet per annum (about 25 million gallons a day).

In recent years there has been a marked increase, particularly in Queensland, New South Wales and Victoria, in investigation into the groundwater resources of river and coastal alluvium for irrigation and town water supplies.

§ 3. Some Recent Developments in the Measurement of Australia's Water Resources*

1. *Introduction.*—There has been a growing awareness in recent years that Australia does not have a reliable estimate of how much water is now available, and how much will be available in the future. Such an estimate is necessary so that the planning of water resources development projects can proceed on a sound basis. With the establishment of the Australian Water Resources Council in 1962 (*see* para. 5, p. 230) a means was provided of securing the highest level of basic information on Australian water resources and of making it readily available.

The following paragraphs offer some comments on the sources of water, the methods of assessing water resources, and the role of various authorities, including the Australian Water Resources Council, involved in the assessment which is currently proceeding.

2. *Sources of Water.*—The source of water can most generally be explained in terms of the hydrologic or water cycle. The cycle may be defined as the continuous movement of water between the ocean, the atmosphere and the land. This movement involves the physical processes of evaporation, transportation of water vapour in air masses, condensation leading to precipitation, the flow of water in streams and underground, and transpiration by vegetation.

* The following survey of recent developments in the measurement of Australia's water resources was specially prepared for this issue of the Year Book by officers of the Department of National Development.

Knowledge of the occurrence of water in the form of precipitation (rain and snow), rivers, streams and lakes and underground in the interstices of soils and rocks is a starting point in any inventory or assessment of resources. In Australia such an inventory broadly discloses that in this dry continent there is low and variable rainfall, high evaporation and low topography, with a dearth of cheap dam sites. Fortunately, underground water is fairly widespread both as pressure (artesian and sub-artesian) and non-pressure water.

3. Assessment and Measurement of Resources.—(i) *General.* A comprehensive national assessment of a country's water resources must show in quantitative terms the availability of water and indicate the possibilities of development of these resources by modern technology to meet specific needs such as irrigation, hydro-electric power generation, and urban, rural and industrial water supplies. Rainfall, evaporation and other meteorological elements, surface water and underground water must be measured by observations extending over long periods of fifty or more years at fixed locations or stations. Measurement of the quality of the water, particularly in the case of underground water, is essential. Although analytical methods are available for estimating water resources, there is no real alternative to direct measurement as a basis for the planning of water development projects or for the design of culverts, bridges and flood mitigation and drainage projects.

The Commonwealth Bureau of Meteorology is primarily responsible, *inter alia*, for the measurement of rainfall in Australia. The Bureau currently maintains some 7,500 rain gauges, but it is estimated that over 13,000 are required to provide an adequate national network. A continuous record of the intensity of rainfall is made by an instrument called a pluviograph. About 500 of the existing 7,500 gauges are pluviographs and a further 1,200 pluviographs are estimated to be required.

(ii) *Surface Water.* Surface water is assessed wherever possible by direct measurement of river flow (discharge) at stream gauging stations. Various authorities in each of the States and the Commonwealth are responsible for the measurement of stream flow in Australia (*see* para. 4, p. 230). The stream gauging requirements of these authorities have been compiled by the Australian Water Resources Council (*see* para. 5, p. 230), and it is estimated that a basic network of about 2,800 gauging stations is required to provide for an adequate assessment of the surface water resources of Australia. At present some 1,300 gauges are installed. Current plans call for the completion of the basic network within ten years.

Basically, stream gauging entails (a) obtaining records of water levels and (b) establishing a relationship or "rating" between the water level and the discharge.

Water levels can be recorded continuously by installing instruments at the gauging site. The discharge is obtained by visiting the site and measuring the velocity of the stream in vertical sections across the stream. Knowing the sectional area enables the discharge corresponding to the height of the stream at that particular time to be calculated. Measurement of the discharge over a range of water levels enables a relationship between discharge and water level to be established. In order to determine this relationship it is necessary to carry out measurements at the gauging site over a range of discharge conditions including periods of flood. "Rating" of the station can therefore require many years of measurement under arduous conditions before the records of water level can be correlated with discharge.

(iii) *Underground Water.* The measurement of underground water is a more complex task than is the measurement of rainfall and river discharge. The location of water beneath the ground entails surface and sub-surface geological investigations including geophysical exploration and the drilling of bores. Measurement involves controlled pumping tests and, over long periods, recording of water levels in observation bores to indicate the effects of continued pumping and the recharge capabilities of the aquifer. Quality testing is an important part of underground water investigations.

As in the case of surface water, the Water Resources Council has considered the deficiencies in underground water measurements, and many new underground water investigations extending over wide areas have been commenced. However, the large area involved and the problems encountered in attempting to measure precisely water flow in rocks mean that it could be more than fifty years before knowledge of Australia's resources becomes adequate.

4. **Authorities Responsible for Water Measurement.**—Surface and underground water resources are measured by both Commonwealth and State Government authorities. However, the greater part of the measurement programmes are undertaken by State Government authorities. As previously mentioned, meteorology (e.g. rainfall and evaporation measurement) is primarily a Commonwealth Government responsibility.

Commonwealth Government authorities carry out gauging in the Northern Territory (Water Resources Branch, Northern Territory Administration), and in the Australian Capital Territory and the Territory of Papua and New Guinea (Department of Works). In the Snowy Mountains Area and the Murray River basin both Commonwealth and State Government authorities have interests in stream gauging. The Commonwealth Bureau of Meteorology maintains river height stations which are used solely for flood warning.

State Government authorities are responsible for stream-gauging in their respective States. The principal authorities in each State are as follows.

New South Wales: Water Conservation and Irrigation Commission.

Victoria: State Rivers and Water Supply Commission; State Electricity Commission.

Queensland: Irrigation and Water Supply Commission.

South Australia: Engineering and Water Supply Department.

Western Australia: Public Works Department.

Tasmania: Hydro-Electric Commission; Rivers and Water Supply Commission.

Underground water resources are investigated by a number of the authorities that have responsibilities for stream-gauging, and by State Departments of Mines and the Bureau of Mineral Resources of the Commonwealth Department of National Development. The following are the principal authorities in each State and Territory.

New South Wales: Water Conservation and Irrigation Commission; Department of Mines.

Victoria: Department of Mines.

Queensland: Irrigation and Water Supply Commission; Department of Mines.

South Australia: Department of Mines.

Western Australia: Department of Mines.

Tasmania: Department of Mines.

Northern Territory: Water Resources Branch, Northern Territory Administration; Bureau of Mineral Resources.

Australian Capital Territory: Bureau of Mineral Resources.

Territory of Papua and New Guinea: Papua and New Guinea Administration; Bureau of Mineral Resources.

These authorities are assisted by various scientific and industrial foundations. In New South Wales, for example, the Hunter Valley Research Foundation is carrying out scientific investigations, including an integrated study of water, soils, and climate, in the catchment area of the Hunter River. In addition, the University of New South Wales recently formed the Water Research Foundation which has, among its objectives, research into underground water.

5. **Australian Water Resources Council.**—The assessment of Australia's water resources entered upon a new phase with the establishment, by joint action of the Commonwealth and State Governments, of the Australian Water Resources Council in 1962. The Council comprises the Minister for National Development as Chairman, the Minister for Territories and the Ministers for Water Supply in each State. It has as its principal objective the provision on a continuing basis of a comprehensive assessment of Australian water resources and the extension of measurement and research so that future planning can be carried out on a sound and scientific basis.

An important factor is that the Council is not concerned with particular works projects, normally the responsibility of the States or the Commonwealth, for which there are established channels for the exchange of views and allocation of funds such as the Premiers' Conference and Loan Council.

Assisting the Council is a Standing Committee of senior officers from Commonwealth and State water authorities, and there are a number of committees advising the Standing Committee, namely: Water Research and Education Steering Committee, Technical Committee on Surface Water, Technical Committee on Underground Water, Advisory Committee on Hydraulics Laboratory Facilities and several *ad hoc* panels.

The Water Resources Council has given close attention to a number of important matters of which the more urgent are the publication of a *Review of Australia's Water Resources (Stream Flow and Underground Resources)* 1963 (which was issued early in 1965) and the recommendation of accelerated programmes of stream-gauging and underground water investigations.

Australian Governments have adopted an accelerated programme of stream-gauging (surface water measurement) to extend over the next ten years, and have recognized the need for a continuous programme of underground water investigations. Under the *States Grants (Water Resources) Act 1964*, the Commonwealth Government grants financial assistance to the States in connexion with the measurement and investigation of their water resources. This means that £1,846,000 of additional funds (a sixty per cent. increase on current rates of expenditure) could be made available over the next three years relative to these programmes.

All authorities represented on the Council and its committees have agreed to work towards a common, nation-wide system of recording hydrologic data in a digital form suitable for rapid analysis by computer. The Council is also giving attention to the extent to which particular kinds of water research, and specialized training of research workers, can assist in bringing about the comprehensive water resources assessment envisaged as the Council's objective.

§ 4. National and Interstate Aspects

1. **General.**—As the Commonwealth Constitution makes special reference to water rights, 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 rests with 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 paragraphs.

2. **Australian Water Resources Council.**—For information regarding the constitution, establishment, functions and objects of the Australian Water Resources Council see § 3, para. 5, p. 230.

3. **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 Darling (1,700 miles), the Murrumbidgee (980 miles), and the Goulburn (350 miles). The average annual flow of each of the chief contributory streams is as follows:—Upper Murray, including the Mitta Mitta and Kiewa Rivers, 3,623,000 acre feet; Darling River, 2,896,000 acre feet; Goulburn River (including Broken River), 2,570,000 acre feet; Murrumbidgee River, 2,054,000 acre feet; and Ovens River, 1,222,000 acre feet. Irrigated production in the Murray River Basin is mainly grapes for wine, dried fruits, fresh fruits, rice, vegetables, dairy produce, wool, and fat lambs.

(ii) *River Murray Waters Agreement.* 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. Under the Agreement, construction works are carried out by the States (which are also responsible for maintenance) subject to the approval and direction of the River Murray 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 maintain certain specified flows in the lower river varying from 47,000 acre feet a month in the winter months to 134,000 acre feet a month in the four summer months of maximum demand—the total amounting to 1,254,000 acre feet over twelve months. 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 Year Book No. 40, page 1065, and earlier issues.

At a conference of Ministers held in 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 440,000 acre feet per annum would be added to the Murray River (see para. 5, Snowy Mountains Hydro-electric Scheme, p. 233) and that increased storage 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 subsequently recommended to the contracting Governments that the River Murray Waters Agreement be amended to provide for enlargement of the Hume Reservoir by 500,000 acre feet to 2,500,000 acre feet. A conference of Ministers in 1954 agreed to the enlargement, and it was also agreed that the Commission should be given power to construct regulators and to carry out such other work on the Murray River 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. In view of the proposed diversions by the Snowy Mountains Authority to and from the Murray River, and for other reasons, amendments to those sections of the River Murray Waters Agreement dealing with the distribution of the waters of the Murray were considered desirable. Following ministerial conferences, amendments were ratified by the four Parliaments concerned, and came into force on 6th November, 1958.

Further amendment of the Agreement to provide for the construction of a storage of approximately 5,000,000 acre feet capacity at Chowilla in South Australia was ratified by legislation in the Commonwealth and State Parliaments and came into force on 30th April, 1964. The dam will be located some six miles downstream from the border between Victoria and South Australia, and will consist of concrete outlet structures and a bank forty-one feet high across the flood plain. The overall length of the dam will be three and one-third miles, and the lake formed behind it will extend to Wentworth Weir, a distance of about one hundred and twenty miles by river.

The quantity (in acre feet) of water diverted during 1963-64 from the Murray and its tributaries for irrigation and other purposes was as follows:—New South Wales, 1,908,000; Victoria, 2,765,000; South Australia, 269,000; a total of 4,942,000 acre feet.

(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 56,000 acres. The design comprises a mass concrete spillway and outlet works extending for 1,000 feet, and an earthen embankment 142 feet high extending for 4,000 feet across the river flats, the length of the total structure being approximately one mile. Work on the enlargement of the reservoir to its approved capacity of 2,500,000 acre feet was completed in 1961.

The Yarrawonga Diversion Weir, which was completed in 1939, raised 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 a second, to 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 a second, to serve 270,000 acres. Only a portion of each area will be irrigated.

Adjoining the river in New South Wales, and 35 miles from the Murray-Darling junction, Lake Victoria storage, with a surface area of 27,670 acres, was completed in 1928. The water released from Lake Victoria is used by the South Australian settlements. The inlet channel to Lake Victoria was enlarged in 1957 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 main storages are: New South Wales—Menindee Lakes Storage (Darling), Burrinjuck (Murrumbidgee), Keepit (Namoi), Burrendong (Macquarie) and Wyangala (Lachlan); Victoria—Eildon (Goulburn), Waranga (Goulburn), Cairn Curran (Loddon) and Eppalock (Campaspe). 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 at present, but the construction of a large storage at Chowilla is proposed (*see sub-para. (ii) above*).

4. **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 those sections 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 on the Macintyre River at Goondiwindi and the existing weir on the Barwon River at Mungindi. The cost of these works and of administration are to be borne by the States in equal shares. The agreement further provides that the water discharge 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. Following exploratory drilling of the tributary sites, a report dealing with alternative storage proposals and possible amendments to the existing Agreement was submitted to the participating States. This report is at present under consideration.

The Irrigation and Water Supply Commission of Queensland is the constructing authority for the new weirs and regulators. Bonshaw and Cunningham Weirs on the Dumaresq River were completed in 1953 and 1954 respectively.

A weir and regulator have been constructed on the Barwon River at the offtake of the Boomi River. A low level weir to establish a pumping pool at Glenarban on the Dumaresq River was also constructed. 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 from April to October it is necessary to supplement rainfall 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.

5. **Snowy Mountains Hydro-electric Scheme.***—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 passed the *Snowy Mountains Hydro-electric Power Act 1949* 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.

* See also Chapter VII. Electric Power Generation and Distribution, p. 204. 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 Year Book No. 42.

The Scheme involves two main diversions, that of the Eucumbene, a tributary of the Snowy, to the Upper Tumut River and that of the main stream of the Snowy River at Island Bend and Jindabyne to the Swampy Plain River. In addition, works required to make use of the waters of the Upper Murrumbidgee, the Upper Tumut, the Upper Tooma and the Geehi Rivers for power generation also provide additional regulation of these streams, and this makes more water available for irrigation. Details of the two trans-mountain diversions and the associated power works together with details of progress and construction are given in Chapter VII. Electric Power Generation, and Distribution (see pp. 204-6).

An additional 500,000 acre feet of water per annum is now available for irrigation in the Murrumbidgee Valley. When all works are completed, it is estimated that the total gain to the Murrumbidgee by diversion and regulation will amount to 1,120,000 acre feet per annum and the total gain to the Murray will be 800,000 acre feet per annum. This additional water should be sufficient to provide irrigation for approximately 1,000 square miles of land which is expected to result in a substantial increase in annual primary production.

§ 5. International Aspects

Australia maintains contact with international developments in water conservation and irrigation through its membership, since 1952, of the International Commission on Irrigation and Drainage. This Commission was set up in India in 1950 in order that the technical experience of all countries might be pooled for the benefit of all, and to promote the development and application of the science and technique of irrigation and drainage in the engineering, economic and social aspects. The Commission is constituted of National Committees of participating countries, and fifty-four countries, including Australia, have already been admitted to membership.

The Central Office of the International Commission is situated in New Delhi, India. Congresses, which are held every three years, have taken place in India, Algeria, the United States of America, Spain and Japan, in that order. The sixth Congress will be held in India in January, 1966.

An Australian National Committee was established following a meeting of representatives of Australian authorities held in Melbourne in 1953. At that meeting it was decided, *inter alia*, "that a National Committee should be formed and that the National Committee would consist of representatives of Government Departments, Statutory Authorities, firms and individuals actively interested in irrigation and drainage". The Committee meets annually.

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 international, national and interstate projects. The following survey covers 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 relates almost exclusively to hydro-electric generation. The Northern Territory is concerned primarily with stock supplies and the safeguarding of long stock routes.

§ 2. New South Wales

1. **General.**—(i) *Rainfall and History.* On page 1110 of Year Book No. 37, information is given on the pattern of rainfall and the history of irrigation in New South Wales. (See also Chapter II. Physiography, p. 29, of this issue.)

(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, the 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, 1912–1955, 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 233 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, Lake Cargelligo and Lake Brewster on the Lachlan (a tributary of the Murrumbidgee), by Glenbawn Dam on the Hunter River, by Keepit Dam on the Namoi River, and by the Menindee Lakes Storage on the Darling River. 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 a head storage on the Macquarie River is nearing completion. In addition, 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 nine irrigation areas, although two of these, Yanco and Mirrool, are generally described under the one heading, namely, the Murrumbidgee Irrigation Areas. The Areas are:—The Murrumbidgee Irrigation Areas, consisting of 451,263 acres served with water through a channel system stemming from the river at Berembled Weir; the Coomealla Irrigation Area of 34,672 acres, served by pumping from the Murray; the Curlwaa Irrigation Area of 10,393 acres, supplied from the Murray by pumping; the Hay Irrigation Area of 6,850 acres, supplied with water pumped from the Murrumbidgee; the Tullakool Irrigation Area of 18,006 acres, supplied from the Edward River by diversion at Stevens Weir; the Buronga (8,693 acres) and Mallee Cliffs (1,900 acres) Irrigation Areas, served by pumping from the Murray; and the Coleambally Irrigation Area (125,886 acres), served by diversion from the Murrumbidgee River. 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:—

Darling—Menindee Lakes Storages (2,000,000);

Murray—Half share of Hume Reservoir, weirs and locks to Wentworth (1,361,420); Stevens Weir, Edward River (7,165);

Murrumbidgee—Burrinjuck Dam (837,000); Berembled Weir (10,000); Redbank Weir (7,360); Maude Weir (6,740);

Namoi—Keepit Dam (345,000);

Lachlan—Wyangala Dam (temporary reduced level 245,000); Lake Brewster (123,900); Lake Cargelligo (29,435); Jemalong Weir (2,200); and

Hunter—Glenbawn Dam (185,000 acre feet irrigation storage; 108,000 acre feet flood mitigation storage).

The total length of supply channels, drains, escape channels and pipe lines constructed by the Water Conservation and Irrigation Commission in New South Wales is 4,833 miles. This comprises 3,397 miles of supply channels (including main canals), 1,367 miles of drains and escape channels, and 69 miles of pipe lines.

(iii) *Extent of Systems and Nature of Irrigated Culture.* The following table shows the areas of the various irrigation systems in 1963-64 and particulars of the areas under irrigated culture in New South Wales during the seasons 1959-60 to 1963-64.

AREAS OF SYSTEMS AND OF LAND IRRIGATED: NEW SOUTH WALES

(Source: Water Conservation and Irrigation Commission)

(Acres)

Season and system	Total area	Area irrigated(a)										Total
		Rice	Other cereals grown for grain	Fodder crops		Pastures		Vineyards	Orchards (b)	Vegetables	Fallow land and miscellaneous	
				Lucerne	Other	Sown	Natural					
1959-60	6,781,246	48,972	79,147	31,513	12,463	464,421	4,763	12,365	17,761	4,048	47,215	c 889,441
1960-61	6,901,105	46,116	33,436	34,950	10,490	458,360	5,412	12,388	17,962	3,362	36,195	c 837,191
1961-62	6,952,579	50,223	57,779	40,273	14,024	522,748	5,097	11,515	18,080	2,784	50,443	c 964,748
1962-63	6,972,239	53,578	85,459	42,814	18,296	509,927	10,240	13,086	21,559	4,033	72,179	c 1,036,846
1963-64—												
Irrigation Areas—												
Murrumbidgee (with- in the Areas) ..	451,263	30,122	22,556	6,651	2,626	88,020	4,793	5,161	20,566	2,429	34,563	217,487
Lands adjacent supplied under agreement ..	n.a.	..	..	362	326	1,136	..	..	96	..	..	1,920
Coomealla	34,672	..	..	..	7	..	..	4,610	1,580	..	..	6,197
Curlew	10,393	..	..	..	39	..	..	373	1,215	..	..	1,627
Hay	6,850	..	..	163	520	1,989	96	..	..	..	..	(d) 2,768
Tullakool	18,006	1,039	250	35	80	6,065	..	..	..	..	300	7,769
Buronga	8,693	..	..	..	1	..	..	199	525	..	..	725
Mallee Cliffs ..	1,900	..	..	..	16	..	..	113	124	..	..	253
Coleambally ..	125,886	9,162	7,009	200	175	4,655	..	40	46	77	25,472	46,836
Total	e 657,663	40,323	29,815	7,411	3,790	101,865	4,889	10,496	24,152	2,506	60,335	285,582
Irrigation Districts—												
Benerambah	112,818	5,141	9,120	1,785	1,391	32,378	1,570	..	..	50	10,062	61,497
Tabbita	32,330	358	1,035	334	50	4,867	150	..	..	..	1,015	7,809
Wah Wah	575,716	..	7,120	1,295	273	9,300	..	..	..	..	4,600	22,588
Berriquin	803,737	..	20,484	18,589	2,869	236,028	680	..	..	125	3,729	282,504
Wakool	503,322	7,034	5,440	1,856	1,560	63,119	..	..	..	..	1,020	80,029
Denimein	147,005	2,535	1,362	879	235	14,416	..	..	12	12	330	19,781
Jemalong and Wylde's Plains	224,556	..	5,788	11,411	618	12,532	1,100	..	..	..	440	31,889
Gumly	353	..	37	55	..	18	..	..	20	..	56	186
Deniboota	339,610	3,940	2,175	2,208	1,060	22,264	..	..	..	60	515	32,222
Total	2,739,447	19,008	52,561	38,412	8,056	394,922	3,500	..	32	303	21,711	538,505
Flood Control Districts—												
Lowbidgee	399,707	..	..	..	..	..	..	..	..	..	..	n.a.
Medgun	272,800	..	..	..	..	..	..	..	..	..	..	n.a.
Total	672,507	..	..	..	..	..	..	..	..	..	..	n.a.
Irrigation Trusts—												
Pomona	1,580	..	..	..	..	..	..	760	130	..	..	890
Goodnight	1,104	..	..	..	..	..	..	574	44	10	..	628
Bungunyah-Koraleigh	1,810	..	..	..	..	..	..	980	93	40	..	1,113
Glenview	661	..	..	..	..	..	..	..	..	..	..	..
Bringan	4,933	..	..	..	..	..	..	..	..	..	..	n.a.
Bama	3,446	..	..	..	..	..	..	..	..	..	..	..
Total	13,534	..	..	..	..	..	..	e 2,314	(e) 267	(e) 50	..	(e) 2,631
Water Trusts—Domes- tic and Stock Supplies Licensed Diversions ..	2,829,791	..	..	..	..	..	..	..	..	..	..	f 233,761
Total, 1963-64 ..	6,912,942	59,331	82,376	45,823	11,846	496,787	8,389	12,810	24,451	2,859	82,046	1,060,479

(a) Excludes Flood Control Districts and some Irrigation Trusts, particulars for which are not available. (b) Citrus and deciduous; in 1963-64, deciduous amounted to 10,260 acres, of which 9,983 acres were in the Murrumbidgee Irrigation Areas. (c) Includes total area irrigated by Licensed Diversions, but details for individual crops, etc., are not available. (d) Includes lands outside irrigation areas supplied under special agreement. (e) Incomplete. (f) Details for individual crops, etc., are not available.

3. **Irrigation Areas.**—(i) *Murrumbidgee.* (a) *Description.* These areas, together with adjacent lands supplied under agreement, received 376,824 acre feet, or nearly a quarter of the total water (1,711,180 acre feet) allocated within the State for stock, domestic supply and irrigation. They are served by the Burrinjuck Dam on the Murrumbidgee, 40 miles north-west of Canberra. The catchment above the dam is about 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 areas and districts is supplemented by unregulated flow from the Tumut River below the dam. 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 to 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, fed by melting snows and spring freshets, and is released during the September-May 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 a second. The main canal has been completed to beyond Griffith, 106 miles from the off-take. Reticulation channels aggregate approximately 900 miles and drainage channels 880 miles. In addition, approximately 440 miles of supply channels run through irrigation districts adjacent to the Murrumbidgee Areas in which the water supply is operated and maintained by the Water Conservation and Irrigation Commission.

The land on which the Murrumbidgee Irrigation Areas and associated districts are situated originally comprised large sheep stations and was sparsely populated, but at 30th June, 1964, its population was approximately 27,500, that of Leeton Shire being 10,500 and that of Wade Shire 17,000.

(b) *Administration.* The Water Conservation and Irrigation Commission controls land transactions and water supplies for the Murrumbidgee Irrigation Areas only, and has no jurisdiction over land transactions in the adjacent irrigation districts, although it is responsible for the operation and maintenance of the water supply in these areas. Other local government services, including electricity and town water supply, are provided by Councils. Land is disposed of by the Commission by purchase or under perpetual lease tenure or leased for short terms for grazing or cultivation. The area under occupation at 30th June, 1964, was 413,714 acres, including 37,278 acres held for short lease grazing, agriculture, etc.

(c) *Production.* The principal products of the Murrumbidgee Irrigation Areas are wool, livestock for slaughtering, rice, citrus fruits, peaches and nectarines, grapes, tomatoes, peas, beans and root vegetables. Rice growing was initiated on the Areas in 1924 and has since become the most important crop. In a normal season, the water supplied for rice represents about half the total delivered to the Areas.

(ii) *Other Irrigation Areas.* The Coomealla, Tullakool, Buronga, Mallee Cliffs, Hay, Curlwaa and Coleambally 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 is responsible also for the operation and maintenance of works to supply water.

4. **Irrigation Districts.**—These Districts are set up under the Water Act, 1912–1955 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.

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, Deniboota and Denimein Districts is diverted through a main canal which is approximately 100 miles long. Water for the Wakool Irrigation District and the Tullakool Irrigation Area is diverted from the Edward River at Stevens Weir, and a supplementary supply is also obtainable from Mulwala canal. At 30th June, 1964, the total

length of completed canals and channels in Berriquin District was 994 miles, comprising Mulwala canal 75 miles, Berrigan channel 22 miles, subsidiary channels 783 miles, escape channels 104 miles and cross drainage channels 10 miles. Off-take capacity of the Mulwala canal is 5,000 acre feet a day.

Wakool, with 387 miles of channel, contains 313 holdings, and the area developed by irrigation includes about one acre in six of the total area. 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. Sheep (including fat lambs), dairying and wheat growing are the main industries.

5. Water Trust Districts, Irrigation Trusts and Flood Control and Irrigation Districts.—The Water Act, 1912–1955 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 are the water trusts, other than irrigation, as at present constituted (the area in acres of each district being shown in parenthesis)—*Murray River*—Little Merran Creek (157,440), Bullatale Creek (68,320), Poon Boon (34,300), Minnie Bend Flood Prevention (2,190); *Murrumbidgee River*—Yanco, Colombo and Billabong Creeks (1,007,780); *Lachlan River*—Marrowie Creek (292,640), Torrigan, Muggabah and Merrimajeel Creeks (170,240), Ulonga (64,960), Micabil Weir (11,500), Condobolin West Weir (4,480); *Miscellaneous*—Great Anabranche of Darling River (959,184), Nidgerly Weir (46,880), Algdudgerie Creek (9,760), Collarenebri town water supply (117)—making in all a total area of 2,829,791 acres. Twelve 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 Lowbidgee Provisional Flood Control and Irrigation District, 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. Another district, Medgun, near Moree in the north-west, is also in operation.

6. 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 dry months. There has also been a considerable increase along the Murrumbidgee and Lachlan.

Under the Farm Water Supplies Act, 1946, technical advice and assistance, and also financial assistance, are made available to help 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, flood and spray irrigation systems.

7. Underground Water.—Extensive use is made of artesian, sub-artesian, and shallow underground water. The Great Artesian Basin underlies an area of some 81,250 square miles in north-western New South Wales. Eighty-seven Bore Water Trusts and 12 Artesian Wells Districts have been constituted. Bore Trusts are administered in the same way as Water Trusts, but in Artesian Wells Districts the settlers maintain the drains. Bore Trusts and Artesian Districts cover 5,597,202 acres and distribute water through 3,652 miles of open earth drains.

As at 30th June, 1964, 1,123 artesian bores had been constructed in the New South Wales section of the Basin. At that date, 650 bores were flowing and were capable of producing about 65,000,000 gallons per day. Conservation measures control this to about 50,000,000 gallons per day. The total length of bore drains, including those for Trusts and Districts, is approximately 8,000 miles.

Of other structural basins of sedimentary rocks, e.g., Murray, Sydney, Oxley and Clarence Basins, the Murray is the largest and also the most important in that it affords stock water supplies over an extensive area of the south-western section of the State. Only a few of these bores flow, the remainder being sub-artesian. Good supplies for stock and,

in some instances, small scale irrigation, are obtained from porous sandstone in the Moss Vale-Picton area, but the remainder has limited potential. Stock supplies are obtained from bores in the fringe zones of the Oxley Basin, but the centre of this basin lies under the Liverpool range. The Clarence Basin is relatively unimportant from a groundwater viewpoint, but stock supplies are obtained from some sections.

In other parts of the State, the largest and best quality groundwater supplies are obtained from sands and gravels in the alluvium of the major rivers and their tributaries, particularly the western-flowing rivers, e.g. Lachlan, Macquarie and Namoi. Supplies of up to 80,000 gallons an hour are obtained from wells and screened bores in these areas and are used for irrigation and town water supply. The Government is carrying out investigations to determine the ground-water potential of the alluvium of such valleys, particularly with regard to irrigation use, and a test-boring programme is in progress in the Lachlan Valley. Coastal river systems have a much more limited potential in this regard, the main exception being the Hunter.

Old sand dune areas along the coast provide large supplies of good quality water. However, since the soils of these areas are not suited to agricultural pursuits, exploitation has been largely confined to the Sydney and Newcastle areas. Initially a source of Sydney's water supply, the Botany sands are now utilized mainly by industry. The Tomago sands provide a considerable proportion of the Newcastle water supply.

The older rocks, which are mostly folded and jointed, are very variable in their ground-water potential and only rarely do they yield supplies sufficient and suitable for limited irrigation. Where suitable conditions obtain, they yield useful stock supplies, mostly at depths between 50 and 250 feet.

It is necessary under the Water Act, 1912-1955 that all wells and bores be licensed, and details of over 20,500 bores and wells in the State are recorded. When assessed in relation to the geologic and topographic conditions of any particular area, such records provide valuable evidence of the groundwater potential and are thus of considerable benefit to landholders.

8. Future Programme.—The programme of development in hand includes the provision of additional dams and storages, diversion weirs, and flood mitigation and river protection works in various parts of the State. Construction of Burrendong Dam on the Macquarie River is nearing completion, and work has commenced on a dam at Blowering on the Tumut River. Legislation has been passed authorizing the construction of a flood control and irrigation dam at Warkworth in the Hunter Valley. The Hunter River development, of which Glenbawn Dam is an integral part, 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. At Wyangala Dam, on the Lachlan River, the fixed crest of the dam spillway has been lowered temporarily to enlarge the spillway for passage of greater floods. Construction has commenced on a new earth and rock-fill dam which will be built behind the present dam to give a storage of 1,000,000 acre feet. Within the new Coleambally Irrigation Area further development of farms has been carried out and water is being supplied by the new diversion weir at Gogeldrie. At 30th June, 1964, 183 large area farms and 8 horticultural farms had been allotted south of the Murrumbidgee River, whilst 47 large area farms had been allotted north of the river and now form part of the Murrumbidgee Irrigation Areas.

9. Hydro-electricity.—A survey of the use of water for power generation in New South Wales may be found in the previous chapter (*see p. 211*).

§ 3. Victoria

1. General.—(i) *Rainfall.* Particulars of the rainfall pattern of Victoria were given on page 1117 of Year Book No. 37. (*See also* Chapter II. Physiography, p. 29, of this issue.)

(ii) *Administration.* The passing of the *Irrigation Act* 1886 put the control of surface waters under the Crown, provided for the establishment of Irrigation Trusts and marked the beginning of irrigation development. The *Water Act* 1905 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, the waterworks trusts and local governing bodies administering town water supplies, the river improvement and drainage trusts and the various sewerage authorities which control sewerage undertakings in country towns are also subject to general supervision by the Commission.

2. Works Summarized.—In 1902, a great drought emphasized the need for a concerted attack on water problems. Subsequent to the establishment of the State Rivers and Water Supply Commission, the total capacity of storages controlled by that Commission has increased from 172,000 acre feet in 1906 to 4,528,318 acre feet at 30th June, 1964. In addition, Murray River storages with a combined capacity of 2,722,840 acre feet are shared equally by New South Wales and Victoria under the River Murray Waters Agreement, subject to certain obligations to South Australia. The total storage capacity available to Victoria is thus some 5,889,738 acre feet. Most of the water from these storages is used for irrigation. The area actually irrigated has risen from 105,000 acres in 1906 to 1,137,241 acres in 1963-64, to which 1,701,468 acre feet of water were delivered. The Commission estimated the value of irrigated production in 1962-63 at £64,950,000, representing about one-fifth of the value of Victoria's total rural production.

Besides supplying water to its own irrigation districts, the Commission supervises the diversion of water for irrigation by private persons by means of licences and permits. In the last ten years, the area so licensed has doubled, and private diverters now provide a fifth of total irrigation production.

3. Storages.—The capacities of the main storages in the various systems (in acre feet) at 30th June, 1964, were as follows:—

Goulburn System:—Eildon Reservoir, 2,750,000; Waranga Reservoir, 333,400; Total, 3,104,100; *Murray-Loddon System*:—Half share of Murray River storages, 1,361,420; Cairn Curran, 120,600; Tullaroop, 60,000; Total, 1,690,230; *Campaspe River*:—Eppalock Reservoir, 252,860; *Wimmera-Mallee*:—Rocklands, 272,000; Total, 563,800; *Gippsland*:—Glenmaggie, 154,300; Total 154,340; *Coliban*:—62,730; *Werribee-Bacchus Marsh*:—34,900; *Mornington Peninsula*:—17,640; *Orway*:—1,080; *Miscellaneous*:—8,058; *Grand Total*:—5,889,738.

4. Extent of Systems and Nature of Irrigated Culture.—The following table shows the areas of the various irrigation systems in 1963-64, and the areas under irrigated culture during the seasons 1959-60 to 1963-64.

AREAS OF SYSTEMS AND OF LAND IRRIGATED: VICTORIA

(Source: State Rivers and Water Supply Commission)

(Acres)

Season and system	Total area (a)	Area irrigated									Total
		Cereals	Fodder crops		Pastures		Vineyards	Orchards	Market gardens	Fallow and miscellaneous	
			Lucerne	Other	Sown	Natural					
1959-60	2,115,542	26,426	41,698	13,883	774,268	73,340	43,778	39,612	20,628	19,149	1052782
1960-61	2,188,136	7,940	39,872	10,239	754,323	67,014	44,817	40,274	21,735	20,966	1007180
1961-62	2,151,976	27,586	41,253	16,468	830,925	69,505	44,563	42,671	22,197	22,732	1117900
1962-63	2,236,747	26,113	43,180	22,820	858,385	61,317	45,757	43,059	22,634	28,290	1151555
1963-64—											
Goulburn - Campaspe - Loddon	1,349,100	8,862	20,581	11,985	407,744	17,496	409	23,727	3,115	6,883	500,802
Murray—											
Torrumbarry	359,865	4,948	4,320	4,874	209,714	16,790	4,339	1,691	730	3,962	251,368
Murray Valley Irrigation Area	302,041	200	6,841	1,053	96,400	908	42	5,814	287	340	111,885
Pumping(b)	80,764	10	547	136	601	302	36,976	3,373	171	1,471	43,587
Total	742,670	5,158	11,708	6,063	306,715	18,000	41,357	10,878	1,188	5,773	406,840
Other northern systems	n.a.	63	1,316	..	11,296	651	..	3,447	462	77	17,312
Southern systems	146,942	156	1,181	422	61,137	2,753	..	609	5,451	383	72,092
Private diversions(c)	n.a.	639	8,092	2,561	94,254	2,460	3,491	5,230	14,206	9,262	140,195
Total, 1963-64	2,238,712	14,878	42,878	21,031	881,146	41,360	45,257	43,891	24,422	22,378	1137241

(a) Excludes Other northern systems and Private diversions.

(b) Includes First Mildura Irrigation Trust.

(c) Excludes private diverters in the Torrumbarry System, but includes all other private diverters along the Murray River.

5. **Irrigation Systems.**—(i) *Goulburn.* The storage capacity for this system is provided principally by Eildon Reservoir, the enlargement of which was completed in 1956. Large-scale works have been in progress for several years to distribute the extra water available from this and other major storages.

Water from Eildon Reservoir flows down the Goulburn River to the Goulburn Weir, located near Nagambie. This raises the summer level of the river about 45 feet for the purpose of diversion. From this weir, water is diverted via the East Goulburn Main Channel direct to the irrigation areas around Shepparton. The western main channels from the weir convey water to the Waranga Reservoir near Murchison in addition to supplying part of the large Rodney area directly.

Two main outlet channels issue from Waranga Reservoir. One serves the western section of Rodney area, while the other serves irrigation areas as far west as Boort.

Water is also supplied to part of the Goulburn-Loddon system from Cairn Curran Reservoir on the Loddon River, and from Tullaroop Reservoir on one of its tributaries, together with the new Eppalock Reservoir on the Campaspe River. Eildon itself may be used to supplement supply to the districts along the Murray River.

The main products of the Goulburn system are dairy produce, fruit, wool and fat lambs. Annual production of deciduous canning fruits in the area is about two-thirds of Australia's total.

(ii) *Murray River System.* The waters of the Murray River are used to supply the area between Yarrowonga and Merbein. The districts between Yarrowonga and Swan Hill, except Tresco near Swan Hill, are supplied by gravitation and those west of Swan Hill by pumping.

The main items produced in the Murray Valley Irrigation Area, which is served from Yarrowonga Weir, are dairy products, fat lambs and canning fruit.

The gravitation system based on Torrumbarry Weir (52 miles downstream from Echuca) serves the area around Cohuna, Kerang, Koondrook and Swan Hill. (Also included in the Torrumbarry System is the Tresco District supplied by pumping from Lake Boga.) Dairying and fat lamb raising are the major industries. Vine and orchard fruits and vegetables are grown extensively around Swan Hill.

West of Swan Hill lie four Commission districts with a pumped supply—Nyah, Robinvale, Red Cliffs and Merbein. These contain about 1,500 holdings devoted mainly to dried vine fruit, although citrus fruit and table and wine grapes are of some importance. The area around Mildura is controlled by the First Mildura Irrigation Trust, the only irrigation trust operating in Victoria. It serves an irrigated area about half the combined size of the four Commission districts and has similar major products.

(iii) *Southern Systems.* The most important southern system is the area around Maffra and Sale, devoted mainly to dairying. This is supplied from Glenmaggie Reservoir on the Macalister River and from the natural flow of the Thomson River when the flow is adequate. Other important irrigation districts, located quite close to Melbourne around Werribee and Bacchus Marsh, are intensively developed for dairying and vegetable growing. An additional storage, Devilbend Reservoir (to serve the Mornington Peninsula system), was completed in 1964.

6. **Wimmera-Mallee Domestic and Stock Supply System.**—This system serves an area of 11,000 square miles or about one-eighth of the State. Without the artificial supply of water, development in this area would be meagre and hazardous owing to the constant threat of drought. The main supply is drawn from the Grampians storages and can be supplemented by surplus water drawn from the Goulburn and Loddon Rivers, via the Waranga Western Channel referred to previously. In addition, some 300 farmers in the north of the system are provided with a domestic and stock supply direct from pumps on or near the Murray River.

As far as possible, water is distributed in the winter and spring to reduce evaporation losses in 6,500 miles of Commission channels and 3,000 miles of farm channels. It is the responsibility of the 7,000 farmers served to provide sufficient storage capacity on their farms to meet their domestic and stock needs for the year. In addition to meeting rural and domestic demand, together with stock requirements, the Grampians storages provide a water supply for more than 40,000 people in 47 towns, and are used to irrigate a small area near Horsham.

7. **Town Water Supplies and Sewerage.**—Details of the operations of the State Rivers and Water Supply Commission with respect to water supplies and sewerage for country towns and local government authorities are given in Chapter XX. Local Government, of this Year Book.

8. *Drainage, Flood Protection and River Improvement.*—The largest work in this category undertaken by the State Rivers and Water Supply Commission is the 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 several million pounds each year.

By the *River Improvement Act* 1948, the formation of local river improvement and drainage trusts under the supervision of the Commission has been greatly facilitated and, since 1950, 24 such trusts have been formed. The importance of river improvement work is expected to continue to grow.

9. *Finance.*—The net capital liability of the Commission at 30th June, 1964 for works under its direct control was £119 million. Of this amount, nearly £81 million were expended on irrigation and £9.5 million on domestic and stock supply systems. Both these amounts were financed entirely by the State. The total liability for urban supply was £18.5 million, which was shared almost equally between the State and the districts concerned. The remaining £10 million were due for expenditure on flood protection and drainage (£2 million) and items such as loan flotation expenses, surveys and investigations, and buildings, plant and stores (£8 million).

10. *Underground Resources.*—A survey of these resources is being carried out by the Victorian Department of Mines. Their deep drilling plant has located water suitable for town supplies at Portland, Heywood, Port Fairy, Timboon and Petersborough during exploration to 5,500 feet in the Western District basin. Other drilling plants are engaged in other parts of the State, and up to date over 100 wells have been successfully completed.

The Murray Artesian Basin underlies an area of 109,000 square miles, of which 27,000 square miles are in Victoria, 28,000 square miles in South Australia and 54,000 square miles in New South Wales. The quality of the water varies, and is suitable for domestic purposes in much of the south-western part of the basin in Victoria, but elsewhere is suitable only for limited stock use. Maximum depth of development of underground water in Victoria is approximately 4,500 feet. Some individual bores can yield up to 2,000,000 gallons a day. In the last few years the Department of Mines has considerably expanded the work of exploration for underground water.

11. *Future Programme.*—In July, 1963, the Government announced plans for a long-term storage programme to cost a total of £37.5 million between 1963-64 and 1973-74. Three storages, namely Chowilla Reservoir (a River Murray Commission Storage), Buffalo Reservoir, and Winton Reservoir, appear in the list of dams and reservoirs projected in the table on page 225.

Other works are:—

- (a) Bellfield Reservoir on Fyans Creek (Grampians Mountains) to supplement the supply to the Wimmera-Mallee system (*see* paragraph 6, p. 241);
- (b) An extensive channel enlargement and remodelling project in the Goulburn system (*see* paragraph 5 (i), p. 241);
- (c) Tarago Reservoir on the Tarago River to supplement supply to the Mornington Peninsula area;
- (d) Nillahcootie Reservoir on the Broken River below Mansfield, to be used for irrigation;
- (e) Lerderderg Reservoir on Coimadai Creek, to be filled mainly from the Lerderderg River and Goodmans Creek, and used to supplement irrigation water supplies at Werribee and Bacchus Marsh; and
- (f) Corop Lakes, two natural lakes near Rochester to be used as an adjunct to Waranga Basin for off-river storages for irrigation.

§ 4. Queensland

1. *General.*—(i) *Rainfall.* Particulars of the rainfall pattern of Queensland are given in Year Book No. 37, page 1122. (*See also* Chapter II. *Physiography*, page 29, of this issue.)

(ii) *Administration.* In Queensland, the right to the use and flow of non-tidal surface water contained in, or flowing through or past, the land of two or more occupiers, and all artesian and sub-artesian water vests in the Crown. Subject to certain reservations for local authority and other purposes, such water is controlled by a Commissioner of Irrigation and Water Supply.

For a description of the development of the present administration *see* Year Book No. 42 and earlier issues.

(iii) *Water Utilization.* In Queensland, private diversions from watercourses, artesian wells and, in certain declared areas, sub-artesian wells, are subject to licence by the Commissioner. Dams and weirs are constructed by the Commissioner to safeguard supplies in streams from which private pumping for irrigation takes place, and also to provide water for irrigation areas established by the Commissioner.

2. *Irrigation.*—(i) *General.* Irrigation as a means of stabilizing and increasing agricultural production continues to receive attention in Queensland. As a large portion of Queensland is tropical, the State's crops differ considerably from those of other States. Sugar cane is the greatest individual crop, representing in value nearly half of the total agricultural production. In 1963-64, 19 per cent. of the sugar cane acreage was irrigated. This represented 39 per cent. of the total irrigated area in the State. Queensland is also Australia's major tobacco-producing State, and in recent years annual production of this crop has been greatly increased by means of development under irrigation. The area of tobacco irrigated during 1963-64 represented 96 per cent. of the total plantings of this crop in the State.

Most irrigation in Queensland is undertaken by private farmers operating under licence to obtain water by pumping from streams or from natural underground storages. During recent years there has been considerable development of individual water conservation projects (water harvesting) to provide storage for irrigation of pastures, fodder crops and small crops, and orchards. Where available, electricity is the most popular source of power for pumping, and the principal areas supplied with electricity are the Burdekin Delta, the Lockyer Valley, and the Darling Downs.

It has been estimated that about two-thirds of the total area irrigated in Queensland is supplied from underground water. The main areas where these supplies have been developed extensively are the Burdekin Delta (Ayr-Home Hill area), the Pioneer Valley, Callide Valley, Lower Burnett (Bundaberg area), Lockyer Valley and Redland Bay. Similar development is taking place in other areas such as parts of the Darling Downs.

Furrow irrigation is used for cotton, sugar cane, some tobacco, and miscellaneous row crops. Spray irrigation is used widely on fruit, vegetables, fodder crops, and the major part of the tobacco crop. Spraying is well suited for the application of water on deep soils by small pumping plants, particularly when the quantity of water available is limited. Use of the border check method in the irrigation of pasture and fodder crops has proved successful.

The following table shows the number of irrigators and the areas irrigated for the years ended 31st March, 1960 to 1964, and for each division for the year ended 31st March, 1964.

AREA OF LAND IRRIGATED: QUEENSLAND

Season and division	No. of irrigators	Area irrigated (acres)							Total
		Vegetables	Fruit and vineyards	Sugar cane	Tobacco	Cotton	Other crops	Pastures	
1959-60	6,889	27,207	5,212	62,346	9,256	2,579	36,115	9,421	152,136
1960-61	7,932	29,698	5,758	68,987	13,789	2,675	50,139	15,651	186,697
1961-62	8,433	32,139	6,537	74,541	13,671	2,040	59,947	20,544	209,419
1962-63	8,562	34,258	7,020	81,506	15,801	2,206	58,029	22,341	221,161
1963-64									
Southern Queensland ..	6,292	29,833	6,014	29,896	3,098	860	50,997	19,813	140,511
Central Queensland ..	635	1,280	385	80	15	1,781	9,588	4,053	17,182
Northern Queensland ..	1,988	5,216	916	68,228	11,253	76	4,493	3,494	93,676
Total, 1963-64 ..	8,915	36,329	7,315	98,204	14,366	2,717	65,078	27,360	251,369

The pattern of irrigation in Queensland is unlike that in southern States. The spring to autumn "irrigation season" of the temperate southern irrigated lands is not applicable, as 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.

Two of the more important areas of development by irrigation by private pumping are the Lockyer Valley and Burdekin River Delta.

(a) *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 of some 60,000 acres of land highly suitable for irrigation only about a third is under irrigation. Most 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 1,340 acre feet. These also tend to augment and conserve underground supplies. The Irrigation Research Station established at Gatton has been converted to a Regional Experimental Farm under the control of the Department of Primary Industry.

The Lockyer Valley produces a substantial proportion of Queensland's onions, potatoes, pumpkins, lucerne, hay, green fodder, maize and dairy products.

(b) *Burdekin River Delta.* 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. On the other hand, the fertile delta area, with its groundwater supplies at shallow depth, has contributed greatly to the agricultural prosperity of north Queensland. 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 groundwater resources of the delta to obtain supplies in the dry periods. Sugar is the main crop irrigated, together with citrus fruits, pineapples, vegetables, and tobacco. The irrigated area is in excess of 56,000 acres.

In 1940 the Burdekin River Trust was formed to safeguard the sugar areas of the delta from erosion and floods. An irrigation research station studies the development of pastures and irrigated crops under local conditions.

(ii) *Government Projects.* The Irrigation and Water Supply Commission has constructed and operates three dams and forty-two weirs with a storage capacity of 491,826 acre feet. Water from these storages supplies four irrigation areas operated by the Commission and supplements numerous streams from which pumping for private irrigation takes place.

(a) *Mareeba-Dimbulah Irrigation Area.* The large areas of sandy soils in the valleys of the Walsh and Barron Rivers in the neighbourhood of Mareeba and Dimbulah are suitable for tobacco production, and in 1952 an irrigation undertaking was established.

Construction of Tinaroo Falls Dam on the Barron River has been completed, and construction of irrigation works which will serve a total of 78,000 acres is proceeding. Of this area, 49,000 acres will be irrigated. It is expected that 910 tobacco farms and 180 mixed

farms will be served. While tobacco will be the basic crop, peanuts, vegetables, maize, seed production, and stock fattening also appear suitable. One hundred and sixty-five miles of channels have been constructed, and irrigation water from Tinaroo Falls Dam is available to 549 farms.

In 1963-64 the value of tobacco leaf sold was £6.9 million from 518 farms.

(b) *Burdekin River Irrigation Area.* While construction of the major part of the Burdekin River Irrigation, Hydro-electric and Flood Mitigation Project has been deferred indefinitely, three sections associated with the Project have been completed. These are the Clare, Millaroo and Dalbeg sections, all of which were originally developed for tobacco production. However, following the recent expansion in the sugar industry, 132 of the 149 existing farms were granted cane assignments and it is expected that sugar production will be predominant in future years. Located from 25 to 65 miles upstream from the mouth of the Burdekin, these areas comprise 18,862 acres, and obtain irrigation waters from central pumping stations drawing on the flow of the Burdekin. Two storages of 7,670 acre feet and 2,550 acre feet capacity have been constructed, about 79 miles and 72 miles respectively upstream from the mouth of the Burdekin, to augment supplies. At 30th June, 1964, 149 farms were occupied, but with the changeover to sugar production only 90 farms produced limited crops valued at £182,000.

(c) *Dawson Valley Irrigation Area.* A scheme for the development of the Dawson Valley providing for the irrigation of 70,000 acres was inaugurated in 1923. Much investigation and survey work on the scheme was carried out, but the general financial depression and limited loan funds brought about the cessation of the work. However, the initial step in construction was 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 10,280 acre feet and covering some 61 farms in production, returning an estimated £328,000. Pasture, vegetables, cotton, wheat, sorghum and dairy products are the principal produce. Recently, further attention has been given to the former plans for the valley, and earlier work has been under close scrutiny as a prelude to future development.

(d) *St. George Irrigation Area.* The St. George irrigation area comprises 19 farms. Water supply for the area is obtained by pumping from the combined weir and road bridge on the Balonne River at St. George. A cotton crop yielding 3,100 lb. of seed cotton per acre during the year 1963-64 has paved the way for increased plantings in future years. Fat lambs, wool, and fodder crops were the main production and total returns were £91,600.

(e) *Warrill Valley Project.* Moogerah Dam on Reynolds Creek (a tributary of Warrill Creek) is of double curvature thin arch construction 105 feet high to spillway crest level, and will serve some 11,000 acres of the Valley by private diversion of water released from its 73,000 acre feet storage into Reynolds and Warrill Creeks.

(f) *Mary Valley Project.* Borumba Dam on Yabba Creek was recently completed. This is a rock-fill structure with an upstream impermeable concrete membrane 144 feet high above stream bed. In its initial stage, storage capacity is 34,500 acre feet with provision for later increase to 80,000 acre feet. In this first stage, water released from the dam is available to maintain the town water supply for Gympie, and will allow extension of the area irrigated by private diversion from the Mary River to some 18,000 acres.

(g) *Upper Condamine Project.* Work is continuing on the construction of Leslie Dam on Sandy Creek, a tributary of the Condamine River. This will be a mass concrete gravity dam 95 feet above foundation level. In its initial stage, storage capacity will be 38,500 acre feet with provision for later increase to 87,000 acre feet. Water released from the dam will be available for irrigation of sections of the Darling Downs downstream the Condamine River as far as Cecil Plains. In addition, the city of Warwick will be supplied by pipeline from Leslie Dam.

(h) *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 233.

(i) *Macintyre Brook Project.* Construction of an earth and rock-fill dam at Codmunda on Macintyre Brook commenced in 1964. The dam will have a capacity of 61,000 acre feet and will allow irrigation of up to 8,000 acres.

(f) *Upper Burnett Project.* Approval has recently been given to the construction of a 120 feet high mass concrete gravity dam on the Nogo River to regulate water supplies available in the Upper Burnett River. This structure, to be known as Wuruma Dam, will have a storage capacity of 150,000 acre feet and will provide an assured supply for 11,000 acres of irrigation along 100 miles of the Burnett River.

3. *Underground Water.*—(i) *General.* The use of underground water supplies has been a very important factor in agricultural and pastoral development in Queensland. Detailed information is given below concerning the Great Artesian Basin, which is the major source of stock water supplies over more than half of the State. Elsewhere, supplies obtained at shallower depths, in porous, fractured or fissured rocks, are extensively used for domestic and stock purposes. Underground water also supports more than half the irrigated area in the State, supplies being obtained chiefly from alluvial formations along river valleys, and from river deltas, the most conspicuous example of which is the Burdekin River Delta. Reference has been made to these areas in para. 2, page 244.

(ii) *Great Artesian Basin.* (a) *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 421,000 square miles or nearly two-thirds of the total State area of 667,000 square miles.

(b) *Artesian Water.* Although 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 a day. A report on the nature and structure of the Great Artesian Basin, presented in 1954, indicated that the output would continue its decline during the next sixty years, at which stage the flow from the remaining flowing bores would be of the order of 110 million gallons a day. The discharge from windmills, springs and other leakages, together with the underflow past the Queensland borders, would then be about 20 million gallons a day. It was further expected that the total discharge, of the order of 130 million gallons a day, would be in equilibrium with the recharge of the basin. It was anticipated that numbers of bores on higher ground would cease to flow during the next sixty years and the area served by the flowing bores would contract by perhaps twenty per cent.

Up to 30th June, 1964, 2,856 artesian bores had been drilled, of which 1,836 were still flowing. The total depth drilled amounted to 4,001,249 feet and the estimated daily flow was 196 million gallons. Although very few bores exceed 2,000 feet in depth (the average depth is 1,404 feet) and a new bore greater than 3,000 feet deep is exceptional, the deepest bore recorded was sunk to 7,009 feet. Some bores which had been classified as "ceased" have been inspected and found to be still flowing, while other ceased bores have responded to deepening and have recommenced flowing. Both the pressure and flow of artesian bores are steadily diminishing, the rate of decrease varying widely throughout the basin. Present average rates of diminution are:—pressure, 1–2 feet of head; total flow, 2–3 per cent. per annum. The greater part of the artesian discharge is distributed by some 15,500 miles of open earth channels, from which a large proportion of water is lost by soakage and evaporation, less than 10 per cent. being actually used by stock.

Although artesian beds underlie a large area of the State, only 79,000 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 do not provide economical watering facilities because of depth, limited area to be watered, and difficult terrain for distribution of water by drains. The quality of artesian water from the greater part of the basin is not suited for prolonged use for irrigation on most soils, nor are the supplies 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.

Shallower supplies, which come from beds unconnected with artesian beds, are of variable quality and volume. These supplies are available at depths of less than 1,000 feet over a large area of the basin. Some 11,299 sub-artesian bores within the Great Artesian Basin have been registered in Queensland. An important practical consideration is that the main artesian beds are continuous and the sub-artesian beds are not continuous.

(c) *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 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 1963-64 are:—areas constituted, 74; administered by the Commissioner, 56; administered by local boards, 6; number abolished, 12; area benefited, 4,193,237 acres; average rate per acre, 1.29d.; number of flowing bores, 56; total flow, 25,411,000 gallons a day; drains served, 2,541 miles.

(iii) *Other Sources.* Outside the Great Artesian Basin, ground water supplies can conveniently be divided into two broad groupings, (a) those obtained in porous, weathered, fissured or fractured rocks, and (b) those obtained in unconsolidated sediments of Cainozoic age.

In the first group, supplies, often within short distances, are widely variable both in quantity and quality, but are normally sufficient only for stock-watering purposes. Because storage is generally small, seasonal fluctuation of water level tends to be high, and this can have a significant effect on the supply available during dry seasons.

Small to moderate irrigation supplies (up to a few thousand gallons an hour) are sometimes obtained and, in exceptional cases, particularly with basalts and limestones, supplies may be as much as 10,000 gallons an hour.

The second group comprises the main irrigation supplies and, although it is common to find a wide range in the supply normally available from individual bores in any area, pumping rates as high as 10,000 gallons an hour are not uncommon. The availability of underground water has been investigated in a considerable number of alluvial valleys in south eastern Queensland and in a number of coastal areas, particularly in the vicinity of the estuaries of the Burnett, Pioneer and Burdekin Rivers, where underground water is the main source for irrigation of sugar cane.

Reference has already been made to the importance of underground water for irrigation in the Lockyer Valley (see para. 2 (i) (a) p. 244), and other areas in which irrigation supplies from alluvial formations have been extensively utilized include the Callide Valley, the Monto area, parts of Barker and Barambah Creeks, Warrill Creek, Cressbrook Creek, the Upper Logan River, and parts of the Upper Condamine River and its tributaries.

Government authorities do not normally undertake private drilling for landholders, but, as discussed below, assistance is given in the location and development of ground water supplies through the provisions of "The Farm Water Supplies Assistance Act of 1958". This assistance has considerably accelerated the use of underground water for irrigation, and there is no doubt that there are many areas with a large potential for future expansion.

4. *Stock Watering.*—(i) *General.* A predominant interest in the field of water conservation has been the provision of stock and domestic water supplies in Queensland's great pastoral areas, which contain more than a third of the Commonwealth's cattle and about a seventh of the sheep. In addition to the stabilization of water supplies in the pastoral areas, the provision of water along stock routes for travelling stock has received much attention in recent years.

(ii) *Main Stock Routes.* The Queensland Irrigation and Water Supply Commission acts as consultant and constructing authority to the Stock Routes Co-ordinating Board for watering facilities on stock routes. On completion, facilities are vested in local authorities for control and maintenance. From 1935, when the scheme was inaugurated, to 30th June, 1964, 615 facilities had been completed, and at 30th June, 1964, 31 facilities were under construction or investigation. A State-wide investigation is being carried out by the two authorities mentioned above to ascertain the general movement of stock, determine primary and secondary routes, register existing water facilities, and formulate a co-ordinated plan in regard to the provision of new watering facilities.

(iii) *Channel Country Stock Routes.* Under the *State Grants (Encouragement of Meat Production) Act 1949-1954*, the Commonwealth Government agreed to meet half the cost of providing additional watering facilities in stock routes leading into, along, and out of, the Channel country and on the route from Camooweal to Mount Isa. These routes connect with the main far-western route included in the State scheme inaugurated in 1935.

This scheme was completed during 1962-63. The total number of watering facilities constructed since the commencement of the scheme was 37, at a total cost of £299,592.

5. **Technical and Financial Assistance to Farmers.**—“*The Farm Water Supply Assistance Acts, 1958 to 1963*” are designed to improve the standard of water supply installations on individual holdings, encourage greater development of individual irrigation schemes, and provide greater stability of production and avoid losses in time of drought together with generally increasing production.

To achieve this purpose, the Acts authorize the provision of technical and financial assistance to landowners for the investigation, design and installation of approved works of farm water supply. All projects for which finance is provided under the Acts are carried out under Commission supervision, and for the payment of a small charge the Commission will supervise the construction of works designed by its staff, but for which the landowners do not require financial assistance under the Acts.

During 1963-64, 907 requests (636 for technical assistance only, and 271 for technical and financial assistance) were dealt with in addition to advice on a further 498 requests on groundwater supplies. An amount of £458,507 was approved for advances under the Acts in 1963-64, and the amount advanced was £311,678.

§ 5. South Australia

1. **General.**—(i) *Rainfall.* Brief particulars of the climatic conditions in South Australia are given on page 1129 of Year Book No. 37. (See also Chapter II. Physiography, page 29, of this issue.)

(ii) *Administration.* Water supplies, other than irrigation works, are under the control of the Engineering and Water Supply Department, which administers the Waterworks Act, 1886 governing the supply of water through mains in water districts for townships and farm lands. The Water Conservation Act, 1886 provides for the construction of storages in non-reticulated areas, and authorizes the Minister concerned 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 in the history of the State, the rights to all running streams, springs and soaks were vested in the Crown. The Water Conservation Act was passed in 1886 and, up to 30th June, 1964, more than 550 dams, tanks and rainsheds, together with 460 wells and 340 bores, had been built or acquired by the State at a total cost of £1,860,746. The rainsheds are timber frameworks roofed with galvanized iron to collect rainfall, which is delivered to storage tanks and is available for surrounding settlers and travellers. Rainshed catchments vary from a few hundred square feet to four acres in extent. Over most of the State, extraordinary precautions are taken to counteract evaporation, and pipelines in preference to open channels and covered storages are used for this purpose. Meters are attached to practically all services to check usage by individual consumers.

2. **Irrigation.**—Australian irrigation originated in the upper Murray of South Australia and the Mildura area of Victoria. 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. 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 onto the land or gravitated from the river.

The two major authorities administering irrigation areas are the Department of Lands and the Renmark Irrigation Trust. The Trust is controlled 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 and is self-contained and self-controlled. Every settler is entitled to vote for the election of Trust members. The Trust maintains 100 miles of reticulation channels.

The following table shows particulars of the areas of crops and pastures irrigated in South Australia during the seasons 1959-60 to 1963-64.

AREA OF LAND IRRIGATED: SOUTH AUSTRALIA
(Acres)

Season and authority	Vine fruits	Tree fruits	Citrus fruits	Other crops(a)	Pastures	Total
1959-60	26,014	22,315		33,183	19,387	100,899
1960-61	26,071	22,706		34,198	19,048	102,023
1961-62	27,167	25,236		36,653	19,344	108,400
1962-63	27,384	26,876		36,745	21,808	112,813
1963-64—						
Department of Lands Irrigation Areas—						
Orchard land—						
Berri	4,722	1,193	1,486	..	..	7,401
Cadell	509	221	190	..	..	920
Waikerie	1,710	787	1,437	..	..	3,934
Cobdogla	4,324	249	347	..	..	4,920
Moorook	351	164	258	..	..	773
Kingston	178	77	298	..	..	553
Mypolonga .. .. .	..	270	527	..	..	797
Chaffey-Ral Ral Division	744	69	8	..	..	821
Cooltong Division	3	45	2	..	..	50
War service land settlement—						
Chaffey-Cooltong Division	379	189	555	..	..	1,123
Loxton	3,240	955	2,188	..	..	6,383
Cobdogla-Loveday Division	255	29	43	..	..	327
Reclaimed swamp land—						
Monteith .. .. .	..	..	..	..	992	992
Mypolonga .. .. .	..	..	..	..	1,306	1,306
Wall .. .. .	..	..	..	..	517	517
Murray Bridge-Burdett Division .. .. .	..	..	..	..	106	106
Mobilong Division .. .. .	..	..	..	..	429	429
Long Flat .. .. .	..	..	..	..	338	338
Neeta .. .. .	..	..	..	..	561	561
Pompoota .. .. .	..	..	..	..	425	425
Cowirra .. .. .	..	..	..	..	571	571
Jerovis .. .. .	..	..	..	..	3,635	3,635
Total	16,415	4,248	7,339	..	8,880	36,882
Renmark Irrigation Trust	5,366	2,477	1,000	457	..	9,300
Private landowners	6,173	13,723		37,736	14,056	71,688
Total, 1963-64	27,954	28,787		38,193	22,936	117,870

(a) Includes fodder and fallow land.

3. Water Supply Schemes.—(i) *Adelaide Metropolitan Water Supply.* Adelaide derives its water from six reservoirs in the nearby Mount Lofty Ranges, and by means of pumping stations and a pipeline from the Murray River at Mannum. The reservoirs have a storage capacity of 87,400 acre feet and the pipeline has a capacity of 65,000 acre feet a year.

To the north, the new city of Elizabeth receives water from South Para Reservoir in the Barossa system and from the metropolitan storages. The consumption for the whole area for the year 1963-64 was 96,900 acre feet, equivalent to a consumption of 105 imperial gallons per head per day. The capital cost to 30th June, 1964 was £45,497,320.

(ii) *Country Reticulated Supplies.* Areas extending to a distance of 90 miles north of Adelaide are supplied from the Warren, Barossa, and South Para Reservoirs (50,350 acre feet) in the Barossa Ranges. Agricultural towns and areas further north are supplied from Beetaloo, Bundaleer and Baroota Reservoirs, and the Morgan-Whyalla Pipeline. There is a supplementary supply from the Mannum-Adelaide pipeline through the Warren Reservoir. The 223-mile pipeline from Morgan to Whyalla can carry up to 10,000 acre feet of water a year from the Murray River. Work is commencing on a second main of more than double that capacity. A large part of Eyre Peninsula is supplied through the 240-mile Tod River Main and the 104-mile East Coast Main with water from the Tod River reservoir (9,160 acre feet), the sand beds of the Uley-Wanilla Basin, the Lincoln Basin, and the newly developed Polda Basin. Along the Murray River, all towns are supplied from the river. Water from the river is also reticulated through adjacent farmlands for up to 30 miles. Surface and underground resources have been developed to supply most rural centres not covered by the larger schemes.

Water conservation and distribution works in country districts to 30th June, 1964, have cost £48,436,965 (exclusive of river control and irrigation works on the Murray River) and contain 7,630 miles of water mains.

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 in which groundwater occurs, notably in the south-east of the State where, in the Keppoch district, supplies exceeding 100,000 gallons an hour are not uncommon. Quality varies widely, but a great deal is at least useful for watering stock, and this is 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 high in proportion to the carrying capacity of the arid land. Deep boreholes have been drilled by the Government to provide watering places along stock routes, and pressure waters have been developed around the basin margin. These waters occur at comparatively shallow depth, as at Marree township, where the deepest flowing bore is 575 feet. In addition to the pressure waters, the non-pressure aquifers of the subsidiary basins provide pastoralists with stock water supplies which can be readily and economically developed.

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 and township supplies. Mount Gambier draws its water from Blue Lake, which is fed from the Basin. Bores supply a number of towns in this Basin, the deepest bore being 1,805 feet.

On Eyre Peninsula, the Uley-Wanilla Basin has been in use since 1949, the Lincoln Basin since 1960, and the Polda Basin since 1962, to supplement surface water supplies. Investigations are being made in another basin south-west of the Uley-Wanilla Basin.

The Lincoln Basin is now fully developed and is yielding up to 20 million gallons a week which provide a water supply for the town of Port Lincoln on Eyre Peninsula.

The Polda Basin near the township of Lock was brought into operation late in 1962. The present pumping plant has a capacity of 7 million gallons a week. The water is reticulated to townships and farming properties on the upper Eyre Peninsula. Investigations are currently proceeding for the further development of this basin.

Pastoralists, farmers, market gardeners and others have been assisted with expert advice on drilling, and the Government maintains and operates 25 drilling plants which to date have developed an underground water supply potential in excess of 150 million gallons of water a day throughout the State. 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 and Yorke Peninsula have been found to have usable water and are now being opened up.

Groundwater resources surveys are undertaken continually by geologists of the Department of Mines, the results being published in various bulletins and reports issued from time to time. The *Groundwater Handbook* published in 1959 by the Department provides a comprehensive detailed review of the State's groundwater resources.

5. Farm Water Schemes.—The Department of Mines gives assistance to individual farmers in the provision of supplies from underground sources, and the Department of Agriculture provides an advisory service on water conservation and irrigation designs, on farms, and on the use and suitability of underground water for irrigation and stock purposes. In addition, a great part of the farming areas is supplied with water under pressure from the extensive distribution systems connected to various reservoirs or the Murray River.

6. South-Eastern Drainage.—In the south-east of South Australia it has been necessary to construct costly drainage schemes to dispose of surplus water from areas where a series of valleys or flats is separated by low ranges, parallel to the coastline, which prevent natural drainage.

The Millicent Drainage System, completed in 1885, reclaimed 100,000 acres. The South-Eastern Drainage Area System, which is controlled by the South-Eastern Drainage Board, comprises drains constructed by the Government at national cost, plus those undertaken by the Government in co-operation with the landholders. The area is bounded on the east by the State boundary, and on the west by the sea coast. It extends from about 55 miles north of Kingston southerly to near Millicent and Kalangadoo. Up to 1948 about 430 miles of drains had been provided at a cost of £720,876. These were of a developmental nature intended more to promote the rapid removal of floodwaters than to provide a complete system of drainage. Since 1948 the complete drainage of the Biscuit, Reedy Creek, and Avenue Flats in the Western Division has been in progress. The southern section of 260,000 acres, which involved the excavation of 8,100,000 cubic yards and the provision of 343 miles of new or enlarged drains, has been completed. Work is in progress on the northern section of 140,000 acres, where 56 miles of drains, involving the excavation of 2,878,770 cubic yards of material, have been completed. In addition, work is in hand for the drainage of 727,000 acres of land in the Eastern Division of the south-east, situated east of Bakers Range, and extending from near Kalangadoo to north of Naracoorte. As part of the first stage of the work (which involves the construction of a main diversion drain from Beachport to Struan), an existing drain from Beachport to Legges Lane (a distance of over 24 miles) has been enlarged, and work is proceeding between Legges Lane and Struan (a distance of 33 miles). A total of 5,133,726 cubic yards of material has been excavated.

The capital cost of drainage in the South-Eastern Drainage Area System to 30th June, 1964, was £7,585,000, and the length of drains constructed was 763 miles.

An extensive system of private drains (many of which are connected to the drains constructed under Government authority) also exists in the south-east of the State.

§ 6. Western Australia

1. General.—(i) *Rainfall.* Brief particulars of the climatic conditions in Western Australia are given on page 1133 of Year Book No. 37. (See also Chapter II. Physiography, p. 29, of this issue.)

(ii) *Administration.* The Minister for Water Supply, Sewerage and Drainage administers the Departmental irrigation schemes under the *Rights in Water and Irrigation Act, 1914-1954*; he is advised by an Irrigation Commission representing the local irrigationists and governmental, technical and financial branches. The Minister for Works administers, under the *Country Areas Water Supply Act, 1947-1960*, the water supplies to about 190 towns and 4,200,000 acres of reticulated farmland, and also controls minor non-revenue producing supplies to stock routes and a few mines and agricultural areas with their associated communities. Five town supplies are administered by local boards under the *Water Boards Act, 1904-1954* which provides a large degree of autonomy with ultimate Ministerial control.

2. Irrigation.—The main irrigation areas are situated in the south of the State along the South-Western Railway between the towns of Waroona (70 miles from Perth) and Dardanup (116 miles from Perth).

The Public Works Department controls three irrigation districts in the south-west of the State, Waroona, Harvey and Collie River, the total area irrigated in these districts during 1963-64 being 29,708 acres and the total water used 106,010 acre feet. Investigations are being carried out with a view to irrigating a further 30,000 acres south of the Collie River Irrigation District.

The Waroona Irrigation District (3,511 acres) is supplied from Samson Brook Dam (7,437 acre feet capacity) and Drakes Brook Dam (1,855 acre feet); the Harvey Irrigation District (13,821 acres) from Stirling Dam (46,191 acre feet), Logue Brook Dam (19,717 acre feet) and the Harvey Weir (8,372 acre feet); and the Collie River Irrigation District (12,376 acres) from the Wellington Dam (150,107 acre feet).

There are also three Irrigation Districts in the north of the State, Ord River, Camballin and Carnarvon.

The Ord District is served by the Bandicoot Bar Diversion Dam (80,000 acre feet capacity) completed in 1963. The principal crops are cotton, rice and safflower. Construction of channels and drains to serve 30,000 acres is proceeding. The Western Australian Government is considering a proposal to build a dam on the Ord River equipped with a hydro-electric plant, to conserve 3½ million acre feet of water, which will supply water for an area of some 200,000 acres agriculturally and topographically suitable for irrigation. Investigations show that the climate and soil conditions are suitable for the cultivation of sugar cane, rice, cotton, safflower and various oil seeds. The economic production of these and other crops, as well as the possible use of such irrigation areas for fattening cattle, is being examined at the Kimberley Research Station on the Ord River.

The Camballin District is situated adjacent to the Fitzroy River and is served by the Fitzroy Weir which diverts the wet season flow of this river. Total storage behind this weir, and a further small storage known as the 17-mile dam, is 5,700 acre feet. Rice and *sorghum alnum* are grown by a company which is carrying out land development under an agreement with the Government.

At Carnarvon approximately 1,600 acres are under irrigated cultivation, water being pumped from shallow aquifers located principally in the sand bed of the Gascoyne River, which is dry for most of the year. The growers' activities are controlled by the Public Works Department to prevent the drawing in of the saline groundwaters which surround the area. A total of 3,100 acre feet was pumped by the growers during 1963-64. A pilot irrigation scheme serving 20 growers by pumping from aquifers located 5 miles from the plantation area has been in operation since 1963.

Particulars of the areas of crops and pastures irrigated in Western Australia in the seasons 1959-60 to 1963-64 are given in the table below.

AREA OF LAND IRRIGATED: WESTERN AUSTRALIA
(Acres)

Season	Vegetables	Fruit	Vineyards	Cotton	Other crops (a)	Pastures	Total
1959-60 ..	8,447	7,642	705	(b)	3,668	25,427	45,889
1960-61 ..	9,076	8,335	897	(b)	5,591	24,652	48,551
1961-62 ..	9,596	8,840	972	(b)	4,235	25,036	48,679
1962-63 ..	9,375	9,588	924	(b)	4,447	27,167	51,501
1963-64 ..	9,166	10,425	966	1,546	6,153	26,958	55,214

(a) Includes fodder and fallow land.

(b) Not available for publication, included with Other crops.

3. Water Supply Schemes.—(i) *Metropolitan*. Particulars relating to the Metropolitan Water Supply are given in Chapter XX. Local Government.

(ii) *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 Year Book No. 37. 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 62,435 acre feet and a catchment of 569 square miles. The water passes through 346 miles of main pipeline, mostly steel and 30 inches in diameter, equipped with eight pumping stations.

Maximum pumping capacity from Mundaring Pumping Station is 13.75 million gallons a day with provision to increase this to 18.5 million gallons a day. The total capacity of all receiving, regulating, standby and service tanks along the main pipeline is 154 million gallons and includes three standby reservoirs at Kalgoorlie having a combined capacity of 60 million gallons.

Hundreds of miles of branch pipelines have been laid to mining areas, agricultural areas and country towns, a notable one being the Norseman extension of 103 miles. The system serves some 88 towns, and water is reticulated to 4,200,000 acres of mixed farming lands. The total length of pipelines is 3,919 miles and the number of services is 24,114. The total quantity of water pumped from Mundaring Reservoir in 1963-64 was 3,315 million gallons. The total cost of the scheme to the end of 1963-64 was £19,425,091, of which the Commonwealth Government contributed £3,609,278 under the terms of the Comprehensive Water Supply Scheme.

(iii) *Comprehensive Water Supply Scheme.* A programme consisting of enlargements of and extensions to the existing Goldfields and Agricultural Water Supply, and the creation of a new system now known as the Great Southern Towns Water Supply, was agreed to in 1947 as a work to be financed jointly by the Commonwealth and State Governments. This so called Comprehensive Water Supply programme was completed in 1961. The Great Southern Towns Water Supply originates at Wellington Dam (built as an irrigation dam on the Collic River). Water is pumped thence through a system of three pumping stations and 87 miles of 30-inch pipes to Narrogin, thence north to Brookton and south to Katanning, thus serving all towns between these points on the Great Southern Railway. The raising of Wellington Dam to increase its capacity to about 150,100 acre feet was completed in 1960. Expenditure on the Scheme to 30th June, 1964 amounted to £10,257,902. Subsequent to the completion of the Commonwealth and State Governments' agreement referred to above, the State Government has financed and built an extension westwards from Katanning to Kojonup and has currently under construction extensions from Katanning south-eastwards to Gnowangerup and from a point north of Narrogin north-eastwards to Wickiepin.

Further extensions, covering an additional area of approximately 3.7 million acres, are planned. The cost will be in the region of £10,500,000 and the Commonwealth has agreed to assist the development by the provision of an interest-bearing loan up to a maximum of £5,250,000 over a period of 7 years, the first advances to be made during 1965-66.

(iv) *Local Water Supplies.* Local schemes other than as above comprise those in the remaining agricultural and mining areas, including the North-west and Kimberley Divisions. Ninety-five separate reticulated water supplies serve country towns and districts. Of these, 86 are controlled by the Water Supply, Sewerage and Drainage Department and the remainder by local authorities.

(v) *Commonwealth and State Government Railways.* Railways of the Commonwealth and State Governments make independent provision for supplies of water for their own purposes, although considerable additional quantities are consumed by the Railways from other sources, e.g., Public Works and Metropolitan Water Supply Departments.

(vi) *Catchments.* The water supplies to these country schemes come from stream flow, dams, tanks, wells and bores.

There are 85 discharge measuring stations operating in the South-west, North-west, and Kimberley Divisions. Three types of catchment peculiar to this State developed in connexion with local water supplies and deserving special mention are:—rock catchments, which consist mainly of 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.*—Considerable use is made of underground water by individual farmers, pastoralists, market gardeners, etc., and it is estimated that over 50,000 bores are in use in the State. The quality of the water varies from place to place and much of the water is suitable only for stock. However, artesian aquifers are tapped to supply or augment the town supplies of Perth, Bunbury, Busselton, Eaton and Denham, and non-pressure water is used in the public supplies of thirty-five other towns.

Considerable advances in the knowledge of aquifers and quality of water in the main sedimentary basins has been made as a result of extensive geological surveys by oil exploration companies in recent years. The Hydrology Division of the Geological Surveys of Western Australia is investigating and assessing the underground water resources of the State. A detailed survey of the Perth Basin, including systematic exploratory drilling, is in progress. The Geological Survey undertakes geological investigations in connexion with new town water supplies or extensions of existing town water supplies, and arranges for the drilling of

recommended exploratory bores. Projects are in progress, or have recently been completed, for the towns of Northampton, Geraldton, Morawa, Lancelin, Mandurah, Albany, Halls Creek and Gingin. The Geological Survey advises local government authorities, private industry and individuals on underground water problems, and supervises departmental exploratory drilling.

§ 7. Tasmania

1. **General.**—(i) *Rainfall.* Brief particulars of the rainfall pattern in Tasmania are given on page 1136 of Year Book No. 37. (*See also* Chapter II. Physiography, page 29 of this issue.)

(ii) *Main Purposes of Conservation and Utilization.* Bureau of the generally more adequate rainfall in Tasmania scarcity of water is not such a problem as it is in most mainland areas, though not all streams are by any means permanently flowing. The only large scale conservation by reservoirs is for hydro-electric power generation, but there are some moderately sized dams built by mining and industrial interests, and by municipal authorities for town water supplies.

Until a few years ago irrigated areas were negligible except for long-established hop fields, but there is a rapidly extending use of spray irrigation on orchards and pastures, and to some extent on potatoes and beans. Up to the present there has been almost complete dependence on natural stream flows, but the need for some regulating storages is now apparent. A few farmers are constructing storages of their own, and the extension of this practice is foreseen as the logical solution in most areas, as valleys are narrow and steep sided. Single large reservoirs cannot economically serve large areas of suitable land, as nearly every valley is separated from others by pronounced hills, prohibiting the construction of cross-country channels.

Underground water suitable for stock, minor irrigation works and for limited domestic use is exploited in the south-east, the midlands and north-western Tasmania. Supplies are mainly derived from fractured rocks by means of shallow bores which yield between 200 and 400 gallons an hour. On King and Flinders Islands water of variable quality suitable for stock and limited domestic use is obtained from aeolian sands. The township of Currie on King Island obtains up to 200,000 gallons a day for domestic use from this source. Underground water investigations, and almost all of the water boring in Tasmania, is carried out by the Mines Department.

(iii) *Administration.* In 1962 a new authority, the Metropolitan Water Board, assumed overall control of water supplies to the cities of Hobart and Glenorchy and the municipalities of Kingborough and Clarence, all of which, however, retain primary responsibility for reticulation. Water supplies to other areas are primarily the responsibility of local councils, subject to approval of plans and finance by the Rivers and Water Supply Commission.

While the Commission does not own the waters of streams and lakes, it is empowered to take them, or issue licences, subject to pre-existing statute and common law rights. These include water reserved for specific industries, municipal requirements, and ordinary riparian rights. The Commission is also concerned with drainage trusts' operations, river improvement, including repairs after flood damage, and stream gauging.

2. **Hydro-electricity.***—With the exception of a small diesel plant on King Island, electricity generation in Tasmania has resulted entirely from the development of its plentiful waters, and on a world basis this State ranks second to Norway in electricity consumption per head of population. 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.

3. **Regional Water Schemes.**—Three regional water schemes are in operation. The first draws water from the east bank of the River Derwent at Lawitta to provide domestic and industrial supplies in five southern municipalities, and the second, which increases existing supplies to Hobart, pumps water from the west bank of the River Derwent at Lawitta. These two schemes are controlled by the Metropolitan Water Board. In addition, the State government has constructed a regional water scheme to serve the aluminium refinery at Bell Bay on the River Tamar and to supply several municipalities with bulk water for domestic and industrial purposes.

* See also Chapter VII. Electric Power Generation and Distribution, pp. 219-20.

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 half of the watersheds is not regarded as practicable.

4. **Industrial.**—Three principal industrial schemes have been installed privately. About 10 million gallons of water a day are being pumped from the Derwent River at Lawitta for use in a nearby paper mill. Another paper mill at Burnie uses several million gallons of water a day from the Emu River, and a factory at Heybridge reticulates water from Chasm Creek.

The State Government has constructed some water schemes for use primarily for industrial purposes. The scheme serving the aluminium refinery at Bell Bay is referred to in para. 3, p. 254. A new wood-pulping plant near Geeveston uses several million gallons of water a day and, in order to supplement the summer flows of the Kermadie River for use by the industry, the State Government in 1962, through the Hydro-Electric Commission, constructed a storage on Riley's Creek by means of a 37-foot high rock-fill dam. The Prosser River Scheme, now nearing completion, is designed to supply water to a sodium alginate industry at Louisville near Orford and to supplement the water supply of the township of Orford.

5. **Irrigation.**—There are no State irrigation projects at present, but the Rivers and Water Supply Commission is investigating the possibility of establishing a scheme near Cressy. The *Water Act* 1957 provides for irrigation works to be undertaken by municipalities and by trusts constituted for the purpose, but no such works have been undertaken to date. 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 pumping systems.

Details of the areas of crops and pastures irrigated in Tasmania in the seasons 1959–60 to 1963–64 are shown in the following table.

AREA OF LAND IRRIGATED: TASMANIA

(Acres)

Season	Vegetables	Fruit	Hops	Other crops (a)	Pastures	Total
1959–60.. ..	1,235	2,350	1,311	1,873	11,339	18,108
1960–61.. ..	2,103	3,311	1,364	1,787	10,369	18,934
1961–62.. ..	3,388	3,930	1,447	2,711	11,713	23,189
1962–63.. ..	4,100	4,446	1,465	2,839	11,435	24,285
1963–64.. ..	6,319	5,933	1,463	4,162	15,693	33,570

(a) Includes fodder and fallow land.

§ 8. Northern Territory

1. **Climate and Topography.**—Some particulars of the climate and main topographical features of the Northern Territory are given on page 1138 of 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* 1938–1962 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 prescribed conditions. There is a Water Resources Branch of 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, and flood prevention and control.

Under the *Water Supplies Development Ordinance 1960-1963* the Water Resources Branch gives financial assistance to landholders for the development and improvement of water supplies on agricultural and pastoral leases. Another function of the branch, which is increasing in importance as it builds up a body of technical data and information about the Territory's water resources, is the dissemination of this knowledge by the provision of advice and technical assistance to professional drillers and to landholders.

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 a large proportion of the Territory's income. The inadequacy of surface water during the dry season emphasizes the importance of underground water supplies in the Territory, where most of the cattle numbers are dependent on underground supplies for three to five months each year.

Rainfall is one of the factors controlling cattle numbers, but geological features, controlling both soils and the storage of underground water, are equally important. In the northern-most portion of the Territory, which receives from 25 to 60 inches of seasonal rainfall a year, surface water supplies are, in general, adequate for the pastoral industry. Despite this, however, the 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 winter, despite dry conditions.

South from this well-watered northern-most portion, the Territory becomes progressively drier, with an average annual rainfall of only 5 inches at the margins of the Simpson Desert in the south-east corner. In the lower rainfall areas the search for potable underground water becomes exacting, but in the Ord-Victoria region and the Barkly Tablelands the best pastures are generally in areas where sub-surface conditions are suitable for the storage of underground water.

In the Ord-Victoria region the best grass lands overlie volcanic rocks and extend over some 10,000 square miles. Outcrops of sandstone, limestone and shale also occur in this area and underlie the volcanic rocks in most places. In general, these sedimentary rocks dip gently to the east, and sub-artesian conditions prevail. Underground water in this region is obtained from sandstone aquifers which yield supplies ranging up to 4,000 gallons an hour. Most of the bores are required in areas where the sediments are overlain by basalts; selection of bore sites is usually difficult. Supplies of shallow groundwater from joints, cracks and faults in the basalt are insignificant and virtually all the bores obtain water from the sub-basalt sandstone aquifers. Successful bores in this area have ranged in depth from 200 feet to more than 600 feet. There are also small basins of younger sedimentary rocks 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.

In the Alice Springs district, valuable pastures occur on a great variety of rock types, and from some of these very little underground water is available. Many shallow bores obtain water from alluvium near stream channels. There are also many successful bores in porous sands and limestone in Mesozoic and Cainozoic sedimentary basins and in some Upper Proterozoic and Palaeozoic limestones and sandstones. Small supplies of underground water are obtained from bores intersecting joint zones in metamorphic rocks and granite of archaean age. However, except in areas close to recharge, the water quality varies from moderate to poor.

The Water Resources Branch of the Northern Territory Administration has intensified research aimed at increasing the water supplies for Alice Springs and Darwin. Bores into the Palaeozoic Mereenie sandstone, 12 miles South of Alice Springs, have intersected sub-artesian aquifers at depths between 500 and 1,000 feet, and water from these bores is now used to supplement the existing town supply from alluvial basins. High-yielding dolomite aquifers of Lower Proterozoic age in the area 16 miles south of Darwin are being developed to augment the Darwin water supply. Tennant Creek now has a water supply pumped from Cabbage Gum Basin, a small basin of alluvium and deeply weathered Precambrian rocks, 15 miles south of the town. A continuous check on the hydrological results of such pumping is maintained in order to adjust future yields from the basin.

Up to 30th June, 1964, 5,533 bores and wells were registered in the Territory. Of these 3,158 were for pastoral use, 246 for agricultural use, 258 served town and domestic water supplies, 19 were in use on mining fields, 252 were investigation bores, 386 were Government established stock route bores, and 114 were classified under other uses.

Registered bores which have been abandoned total 1,100. These include successful bores which have collapsed, and bores which were unsuccessful owing to drilling difficulties, insufficient quantity or poor quality of underground water.

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. Some water is drawn from the rising main between the Manton Dam and Darwin for irrigation purposes, but the trend is for properties in this area to develop their own water supplies, either by boring or by pumping from watercourses or lakes. Investigations for a further dam site to augment Darwin's water supply and to provide reticulated water to properties without natural waters have commenced in the Berry Springs area.

Hydrological investigations are being carried out by the Administration to determine the supply of water and the best methods of control and use in the potential rice-growing areas of the Territory. At 30th June, 1964, 187 gauging stations were in operation in the Territory, under the control of the Administration's Water Resources Branch. Of these, 155 measure the volume of discharge from rivers and streams, 21 measure the level of flooding of the north sub-coastal plains, 7 record tide levels (one of these being the Darwin Harbour Tide gauge, which is operated on behalf of the Harbour and Marine Branch) and the remaining 4 measure storage water levels.

Agricultural activity in the Territory is not extensive, being confined to the Darwin, Adelaide River, Coomalie Creek, Daly River, Katherine River and Alice Springs areas, with only small acreages being utilized. In these areas, a total of 320 acres on 49 farms is under irrigation. Purposes for which irrigation water is used include the growing of fruit, vegetables, crops and pastures, and for dairying and mixed farming.

The Katherine River appears to offer irrigation potentialities on the level soil below the township. Approximately 14 properties in and around Katherine are at present drawing water from the Katherine River for irrigation purposes, vegetables and pastures being the usual crops grown. The Katherine River passes through a gorge upstream of the town under conditions which appear suitable for dam construction. The Administration and the Commonwealth Scientific and Industrial Research Organization are investigating the potentialities of the Katherine area for agricultural production.

The possibility of using the Daly and Adelaide Rivers for irrigation is also being investigated. The Commonwealth Government recently approved the establishment of three pilot farms on the Marrakai Land System along the Adelaide River to ascertain whether rice and fodder crops could be grown on a commercial scale in this area.

§ 9. Papua and New Guinea

1. **Rainfall.**—Rainfall in Papua and New Guinea varies considerably from approximately 250 inches near Lindenhafen (New Britain) and 230 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, pages 118–19, 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 (700 miles long, situated in the western division of Papua), 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

POPULATION

Statistics in this chapter cover, in the main, the year 1963. More detailed figures will be found in the annual bulletin, *Demography*, and current statistics are published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, and the mimeographed series *Australian Demographic Review* and *Oversea Arrivals and Departures*.

All statistics in this chapter, except for those in § 14. The Aboriginal Population of Australia, are exclusive of particulars of full-blood Aboriginals.

§ 1. Population Statistics

Population statistics for Australia or the component States and Territories 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. These estimates represent the population ascertained at the census, plus natural increase and recorded net migration since the census. As complete records of interstate migration are not available, the estimated State or Territory populations so derived are approximate, and are subject to revision when the actual population of each State or Territory is ascertained at the next census. For some States, such revisions are substantial.

(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 and thus effect adjustment for unrecorded movement of population in the intercensal period. 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, p. 269. As populations at specific dates are used in these calculations, consequential revisions are made to 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 Year Book for dates up to 30th June, 1961, and all mean populations for calendar years up to 1960 and financial years up to 1960-61, are final. Population statistics for dates or years subsequent to these will be revised in accordance with the results of the next census.

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 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 post-censal revisions were made to these figures. With the improvement of records of oversea migration, however, such post-censal revision of the records of oversea migration was not found necessary after the 1933 census. The same level of improvement has not been achieved in respect of records of interstate movement, which cover travel by sea, air, rail and some 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 *Census and Statistics Act 1905* which provided 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, the fifth in 1954, and the sixth in 1961.

The Australian census is on the *de facto* basis, i.e., it records the population actually resident at a specific date, and not according to place of usual residence (the *de iure* basis).

2. *Population recorded at Censuses*.—State and Territorial populations recorded at the Australia-wide censuses taken over the period 1881 to 1961 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 the 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, § 3 and § 4. The total populations recorded at the censuses taken in the Colonies from 1828 to 1881 were shown in Year Book No. 40, page 326.

POPULATION: AUSTRALIAN CENSUSES

Census	Population enumerated								
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aust.
MALES									
3rd April, 1881 ..	410,211	451,623	125,325	146,183	17,062	61,162	3,347	..	1,214,913
5th April, 1891 ..	609,666	598,222	223,779	162,241	29,807	77,560	4,560	..	1,705,835
31st March, 1901 ..	710,005	603,720	277,003	180,485	112,875	89,624	4,216	..	1,977,928
3rd April, 1911 ..	857,698	655,591	329,506	207,358	161,565	97,591	2,734	992	2,313,035
4th April, 1921 ..	1,071,501	754,724	398,969	248,267	177,278	107,743	2,821	1,567	2,762,870
30th June, 1933 ..	1,318,471	903,244	497,217	290,962	233,937	115,097	3,378	4,805	3,367,111
30th June, 1947 ..	1,492,211	1,013,867	567,471	320,031	258,076	129,244	7,378	9,092	3,797,370
30th June, 1954 ..	1,720,860	1,231,099	676,252	403,903	330,358	157,129	10,288	16,229	4,546,118
30th June, 1961 ..	1,972,909	1,474,395	774,579	490,225	375,452	177,628	16,206	30,858	5,312,252
FEMALES									
3rd April, 1881 ..	339,614	409,943	88,200	130,231	12,646	54,543	104	..	1,035,281
5th April, 1891 ..	517,471	541,866	169,939	153,292	19,975	69,107	338	..	1,471,988
31st March, 1901 ..	644,841	597,350	221,126	177,861	71,249	82,851	595	..	1,795,873
3rd April, 1911 ..	789,036	659,960	276,307	201,200	120,549	93,620	576	722	2,141,970
4th April, 1921 ..	1,028,870	776,556	357,003	246,893	155,454	106,037	1,046	1,005	2,672,864
30th June, 1933 ..	1,282,376	917,017	450,317	289,987	204,915	112,502	1,472	4,142	3,262,728
30th June, 1947 ..	1,492,627	1,040,834	538,944	326,042	244,404	127,834	3,490	7,813	3,781,988
30th June, 1954 ..	1,702,669	1,221,242	642,007	393,191	309,413	151,623	6,181	14,086	4,440,412
30th June, 1961 ..	1,944,104	1,455,718	744,249	479,115	361,177	172,712	10,889	27,970	5,195,934

(a) Part of New South Wales prior to 1911.

POPULATION: AUSTRALIAN CENSUSES—continued

Census	Population enumerated								
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Aust.
PERSONS									
3rd April, 1881 ..	749,825	861,566	213,525	276,414	29,708	115,705	3,451	..	2,250,194
5th April, 1891 ..	1,127,137	1,140,088	393,711	315,535	49,782	146,667	4,891	..	3,177,823
31st March, 1901 ..	1,354,846	1,201,070	498,129	358,346	184,124	172,475	4,811	..	3,773,801
3rd April, 1911 ..	1,646,734	1,315,551	605,813	408,555	282,114	191,211	3,310	1,714	4,455,005
4th April, 1921 ..	2,100,371	1,531,280	755,972	495,160	332,732	213,780	3,867	2,572	5,435,734
30th June, 1933 ..	2,600,847	1,820,261	947,534	580,949	438,852	227,599	4,850	8,947	6,629,839
30th June, 1947 ..	2,984,838	2,054,701	1,106,415	646,073	502,480	257,078	10,868	16,905	7,579,358
30th June, 1954 ..	3,423,529	2,452,341	1,318,259	797,094	639,771	308,752	16,469	30,315	8,986,530
30th June, 1961 ..	3,917,013	2,930,113	1,518,828	969,340	736,629	350,340	27,095	58,828	10,508,186

(a) Part of New South Wales prior to 1911.

3. Increase since 1891 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

State or Territory	1891-1901 (10 years)	1901-1911 (10 years)	1911-1921 (10 years)	1921-1933 (12½ years)	1933-1947 (14 years)	1947-1954 (7 years)	1954-1961 (7 years)
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NUMERICAL INCREASE

New South Wales(a)	227,709	293,602	453,637	500,476	383,991	438,691	493,484
Victoria ..	60,982	114,481	215,729	288,981	234,440	397,640	477,772
Queensland ..	104,411	107,684	150,159	191,562	158,831	211,844	200,569
South Australia ..	42,813	50,212	86,602	85,789	65,134	151,021	172,246
Western Australia ..	134,342	97,990	50,618	106,120	61,628	137,291	96,858
Tasmania ..	25,808	18,736	22,569	13,819	29,479	51,674	41,588
Northern Territory	-87	-1,501	557	983	6,018	13,610	10,626
Aust. Cap. Terr.(b)	..	..	858	6,375	7,958	5,401	28,513
Australia ..	595,978	681,204	980,729	1,194,105	949,519	1,407,172	1,521,656

PROPORTIONAL INCREASE—PER CENT.

New South Wales(a)	20.20	21.67	27.55	23.83	14.76	14.70	14.41
Victoria ..	5.35	9.53	16.40	18.87	12.88	19.35	19.48
Queensland ..	26.52	21.62	24.79	25.34	16.77	19.15	15.21
South Australia ..	13.57	14.01	21.20	17.33	11.21	23.38	21.61
Western Australia ..	269.86	53.22	17.94	31.89	14.50	27.32	15.14
Tasmania ..	17.60	10.86	11.80	6.46	12.95	20.10	13.47
Northern Territory	-1.78	-31.20	16.83	25.42	124.08	51.54	64.52
Aust. Cap. Terr.(b)	..	..	50.06	247.86	88.95	79.33	94.06
Australia ..	18.75	18.05	22.01	21.97	14.32	18.57	16.93

AVERAGE ANNUAL RATE OF INCREASE—PER CENT.

New South Wales(a)	1.85	1.97	2.46	1.76	0.99	1.98	1.94
Victoria ..	0.52	0.91	1.53	1.42	0.87	2.56	2.58
Queensland ..	2.38	1.98	2.24	1.86	1.11	2.53	2.04
South Australia ..	1.28	1.32	1.94	1.31	0.76	3.05	2.83
Western Australia ..	13.97	4.36	1.66	2.29	0.97	3.51	2.03
Tasmania ..	1.63	1.04	1.12	0.51	0.87	2.65	1.82
Northern Territory	-0.18	-3.67	1.57	1.87	5.93	6.12	7.37
Aust. Cap. Terr.(b)	..	..	4.14	10.71	4.65	8.70	9.93
Australia ..	1.73	1.67	2.01	1.63	0.96	2.46	2.26

(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 1900 and thereafter at decennial intervals to 1960, and for each year from 1960 to 1964.

ESTIMATED POPULATION

At 31st Dec.—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T. (a)	Australia
MALES									
1900	716,047	601,773	274,684	180,349	110,088	89,763	4,288	..	1,976,992
1910	858,181	646,482	325,513	206,557	157,971	98,866	2,738	..	2,296,308
1920	1,067,945	753,803	396,555	245,300	176,895	107,259	2,911	1,062	2,751,730
1930	1,294,419	892,422	481,559	288,618	232,868	113,505	3,599	4,732	3,311,722
1940b	1,402,297	947,037	536,712	297,885	248,734	123,650	6,337	7,856	3,570,508
1950	1,627,618	1,114,497	620,329	364,705	294,758	147,103	9,414	13,021	4,191,445
1960	1,951,907	r1,453,815	766,448	483,802	372,665	r180,511	14,785	29,140	5,253,073
1961	1,983,891	1,483,176	778,282	495,778	379,947	185,661	15,236	32,588	5,354,559
1962	2,015,081	1,514,612	789,664	504,571	389,304	187,833	15,798	36,048	5,452,911
1963	2,052,339	1,546,890	798,224	514,458	398,091	189,515	17,042	40,495	5,557,054
1964	2,088,806	1,587,986	809,494	526,847	405,771	189,974	18,092	43,958	5,670,928
FEMALES									
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
1940b	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
1960	1,925,354	r1,434,475	735,838	473,220	358,368	r175,458	10,002	26,132	5,138,847
1961	1,965,529	1,467,614	746,996	484,977	366,258	178,473	10,022	29,503	5,249,372
1962	2,001,554	1,498,835	760,706	495,122	376,411	181,570	10,486	32,776	5,357,460
1963	2,033,954	1,533,325	773,758	505,716	386,016	184,125	11,780	37,083	5,465,757
1964	2,070,120	1,573,551	785,563	517,815	393,855	185,294	12,854	40,728	5,579,780
PERSONS									
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
1940b	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
1960	3,877,261	2,888,290	1,502,286	957,022	731,033	355,969	24,787	55,272	10,391,920
1961	3,949,420	2,950,790	1,525,278	980,755	746,205	364,134	25,258	62,091	10,603,931
1962	4,016,635	3,013,447	1,550,370	999,693	765,715	369,403	26,284	68,824	10,810,371
1963	4,086,293	3,080,215	1,571,982	1,020,174	784,107	373,640	28,822	77,578	11,022,811
1964	4,158,926	3,161,537	1,595,057	1,044,662	799,626	375,268	30,946	84,686	11,250,708

(a) Part of New South Wales prior to 1911. (b) Includes all defence personnel enlisted in Australia irrespective of movements subsequent to enlistment.

Estimates of population for intercensal years are obtained in the manner outlined in § 1, p. 259.

The estimated population at 31st December each year from 1788 to 1946 was shown in *Demography*, Bulletin No. 67, 1949, and for the period 1886 to 1963 in *Demography*, Bulletin No. 81, 1963. A graph illustrating the growth of the population of Australia and of each State and Territory appears on page 275.

2. **Proportion of Area and Population, Density and Masculinity.**—The previous table shows the estimated number of persons in each of the States and Territories at 31st December, 1964. 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, 1964

State or Territory	Proportion of total area (per cent.)	Proportion of estimated population, 31st December, 1964 (per cent.)			Density (a)	Masculinity (b)
		Males	Females	Persons		
New South Wales	10.43	36.83	37.10	36.96	13.44	100.90
Victoria	2.96	28.00	28.20	28.10	35.97	100.92
Queensland	22.47	14.27	14.08	14.18	2.39	103.05
South Australia	12.81	9.29	9.28	9.28	2.75	101.74
Western Australia	32.88	7.16	7.06	7.11	0.82	103.03
Tasmania	0.89	3.35	3.32	3.34	14.22	102.53
Northern Territory	17.53	0.32	0.23	0.28	0.06	140.75
Australian Capital Territory	0.03	0.78	0.73	0.75	90.19	107.93
Australia	100.00	100.00	100.00	100.00	3.79	101.63

(a) Number of persons per square mile.

(b) Number of males per 100 females.

Additional information regarding density and masculinity of population appears in later sections of this chapter.

3. **Urban and Rural Distribution.**—The table on pages 264–5 shows the distribution of the population among metropolitan, other urban and rural areas in each State and Territory at the 1954 and 1961 censuses. Corresponding details for previous censuses were shown in earlier issues of the Year Book.

Metropolitan Urban divisions comprise the capital cities of the States and the City of Canberra, the National Capital, and include, together with the cities proper, a number of adjacent municipalities and shires. The boundaries of the Metropolitan Urban divisions are determined for census purposes by the Statisticians of the States in collaboration with the Commonwealth Statistician, and 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 1961, to the boundaries of the Metropolitan Urban divisions of Victoria, Queensland and Tasmania.

Other Urban divisions comprise (i) all separately incorporated municipalities (or cities, towns or boroughs) outside the Metropolitan Urban division (including Darwin, the capital city of the Northern Territory) except for any municipality or part of a municipality which was specifically regarded as rural for census purposes; and (ii) towns, not separately incorporated, with a population of 1,000 persons or more (750 persons or more in Tasmania).

Rural divisions comprise the remaining portions of each State and Territory.

The term "Migratory" used in the following tables refers to persons not elsewhere enumerated who at midnight between 29th and 30th June, 1961, were on ships in Australian waters or were travelling on long-distance trains, motor coaches or aircraft.

Before comparisons are made between the populations of the Metropolitan Urban, Other Urban, and Rural divisions at various censuses, consideration must be given to the changes which have taken place in the composition of these divisions from census to census. In the following table the comparative figures for 1954 have been adjusted to the boundaries used in 1961.

URBAN AND RURAL POPULATION(a): CENSUS, 30th JUNE, 1961

Division	1961 Census			Proportion of total population of State (per cent.)		Percentage increase since the 1954 census
	Males	Females	Persons	1954 census	1961 census	
NEW SOUTH WALES						
Urban—						
Metropolitan ..	1,077,978	1,105,410	2,183,388	54.42	55.74	17.19
Other ..	577,925	573,974	1,151,899	28.68	29.41	17.32
Rural ..	308,511	262,624	571,135	16.70	14.58	— 0.09
Migratory ..	8,495	2,096	10,591	0.20	0.27	54.16
<i>Total</i> ..	<i>1,972,909</i>	<i>1,944,104</i>	<i>3,917,013</i>	<i>100.00</i>	<i>100.00</i>	<i>14.41</i>
VICTORIA						
Urban—						
Metropolitan ..	949,719	962,176	1,911,895	62.48	65.25	24.79
Other ..	286,196	287,734	573,930	19.86	19.59	17.83
Rural ..	234,720	204,959	439,679	17.33	15.00	3.43
Migratory ..	3,760	849	4,609	0.33	0.16	—42.68
<i>Total</i> ..	<i>1,474,395</i>	<i>1,455,718</i>	<i>2,930,113</i>	<i>100.00</i>	<i>100.00</i>	<i>19.48</i>
QUEENSLAND						
Urban—						
Metropolitan ..	304,871	316,679	621,550	39.45	40.92	19.52
Other ..	269,062	267,834	536,896	34.23	35.35	18.99
Rural ..	199,026	159,368	358,394	26.10	23.60	4.18
Migratory ..	1,620	368	1,988	0.22	0.13	—33.09
<i>Total</i> ..	<i>774,579</i>	<i>744,249</i>	<i>1,518,828</i>	<i>100.00</i>	<i>100.00</i>	<i>15.21</i>
SOUTH AUSTRALIA						
Urban—						
Metropolitan ..	289,467	298,490	587,957	60.66	60.66	21.60
Other ..	91,240	86,140	177,380	15.24	18.30	46.07
Rural ..	106,315	93,750	200,065	23.81	20.64	5.41
Migratory ..	3,203	735	3,938	0.29	0.40	67.86
<i>Total</i> ..	<i>490,225</i>	<i>479,115</i>	<i>969,340</i>	<i>100.00</i>	<i>100.00</i>	<i>21.61</i>
WESTERN AUSTRALIA						
Urban—						
Metropolitan ..	205,107	215,026	420,133	54.50	57.03	20.50
Other ..	63,893	61,841	125,734	16.97	17.07	15.82
Rural ..	103,923	83,822	187,745	28.18	25.49	4.13
Migratory ..	2,529	488	3,017	0.35	0.41	33.08
<i>Total</i> ..	<i>375,452</i>	<i>361,177</i>	<i>736,629</i>	<i>100.00</i>	<i>100.00</i>	<i>15.14</i>

(a) See footnote on following page.

NOTE.—Minus sign (—) denotes decrease.

URBAN AND RURAL POPULATION(a): CENSUS, 30TH JUNE, 1961—continued

Division	1961 census			Proportion of total population of State (per cent.)		Percentage increase since the 1954 census
	Males	Females	Persons	1954 census	1961 census	
TASMANIA						
Urban—						
Metropolitan ..	57,337	58,595	115,932	30.91	33.09	21.49
Other ..	64,986	65,617	130,603	36.03	37.28	17.38
Rural ..	54,547	48,379	102,926	32.85	29.38	1.49
Migratory ..	758	121	879	0.21	0.25	35.23
Total ..	177,628	172,712	350,340	100.00	100.00	13.47
NORTHERN TERRITORY						
Urban—						
Metropolitan ..	..	..	..	..	..	..
Other ..	9,464	7,510	16,974	58.11	62.65	77.37
Rural ..	6,507	3,350	9,857	40.53	36.38	47.67
Migratory ..	235	29	264	1.36	0.97	17.86
Total ..	16,206	10,889	27,095	100.00	100.00	64.52
AUSTRALIAN CAPITAL TERRITORY						
Urban—						
Metropolitan ..	29,463	26,986	56,449	93.28	95.96	99.63
Other ..	..	..	..	..	..	..
Rural ..	1,395	984	2,379	6.72	4.04	16.73
Migratory ..	..	..	..	..	..	..
Total ..	30,858	27,970	58,828	100.00	100.00	94.06
AUSTRALIA						
Urban—						
Metropolitan ..	2,913,942	2,983,362	5,897,304	54.21	56.12	21.06
Other ..	1,362,766	1,350,650	2,713,416	25.27	25.82	19.48
Rural ..	1,014,944	857,236	1,872,180	20.26	17.82	2.81
Migratory ..	20,600	4,686	25,286	0.26	0.24	8.20
Total ..	5,312,252	5,195,934	10,508,186	100.00	100.00	16.93

(a) See letterpress preceding this table for definitions of urban, rural, etc., and for reference to the adjustments to 1954 census figures in order to provide approximate comparisons on the 1961 census basis.

NOTE.—Minus sign (—) denotes decrease.

A feature of the metropolitan population is its relatively higher femininity, but this has become less marked over the last 20 years owing to the excess of males in the high annual number of births and in the oversea migration flow in that period. In 1933 the masculinity ratio of metropolitan population was only 90.35 males per 100 females, but in succeeding censuses the ratios have been: 1947, 92.76; 1954, 96.04; and 1961, 97.67. There is little difference in the ratios between the several metropolitan areas, the ratio of males per 100 females ranging from 95.39 in Perth (Western Australia) to 98.71 in Melbourne (Victoria).

4. Principal Urban Areas.—The following table shows the population of the principal cities and towns (population 6,000 or more) in each State and Territory of Australia at 30th June, 1964, or at 30th June, 1961, where later figures are not available.

ESTIMATED POPULATION OF PRINCIPAL CITIES AND TOWNS: AUSTRALIA
30th JUNE, 1964

City or town	Popu- lation	City or town	Popu- lation	City or town	Popu- lation
New South Wales		Victoria			
Sydney and Suburbs(a) ..	2,300,100	Melbourne and Sub- urbs(a) ..	2,061,300	Gladstone	7,200
Newcastle and Suburbs(b)	219,300	Geelong and Suburbs(b)	98,290	Innisfail(c)	(d) 6,917
Greater Wollongong ..	145,720	Ballarat and Suburbs(b)	57,290	South Australia	
Perth	42,940	Bendigo and Suburbs(b)	42,110	Adelaide and Suburbs(a)	607,800
Greater Cessnock ..	34,700	Warrnambool ..	17,110	Elizabeth(f)	35,200
Broken Hill	29,810	Morwell(c)	16,740	Whyalla	17,650
Blue Mountains ..	29,650	Moe	16,670	Mount Gambier ..	16,450
Maitland	28,100	Shepparton	15,690	Port Pirie	13,750
Campbelltown ..	24,400	Wangaratta	14,810	Port Augusta ..	10,150
Albury	23,950	Traralgon	13,630	Salisbury(c)	(d) 9,349
Wagga Wagga ..	23,300	Mildura	13,020	Port Lincoln ..	7,800
Goulburn	20,610	Colac	9,920	Renmark	6,150
Tamworth	20,530	Hamilton	9,880	Western Australia	
Orange	19,550	Horsham	9,510	Perth and Suburbs(a) ..	457,000
Lismore	19,110	Benalla	8,740	Kalgoorlie and Sub- urbs(b)	21,520
Shellharbour ..	18,470	Sale	8,570	Bunbury	14,800
Bathurst	17,330	Ararat	8,210	Geraldton	12,100
Grafton	15,730	Wodonga(c)	(d) 7,998	Albany	11,500
Dubbo	15,103	Bairnsdale(c) ..	(d) 7,427	Collie(c)	8,180
Armidale	13,840	Maryborough ..	7,290	Northam	7,500
Lithgow	13,820	Castlemaine ..	7,280	Tasmania	
Windsor	13,300	Echuca	7,000	Hobart and Suburbs(a) ..	122,949
Woy Woy-Ettalong(c) ..	(d) 12,206	Swan Hill	6,750	Launceston and Sub- urbs(b)	59,190
Queanbeyan	10,780	Portland	6,540	Burnie	14,820
Taree	10,470	Warragul(c) ..	(d) 6,405	Devonport	13,890
Cooma	9,300	Queensland		Ulverstone	6,360
Parke	8,530	Brisbane and Suburbs(a)	663,500	Northern Territory	
Toronto(c)	(d) 8,515	Townsville	55,200	Darwin	(e) 15,218
Inverell	8,450	Toowoomba	52,900	Australian Capital Territory	
Casino	8,120	Ipswich	52,000	Canberra(a)	(e) 77,644
Kempsey	8,060	Rockhampton ..	45,000		
Griffith(c)	(d) 7,696	Gold Coast	37,700		
Moree	7,360	Cairns	26,200		
Camden	7,350	Bundaberg	23,750		
Gosford(c)	(d) 7,318	Maryborough ..	19,450		
Coff's Harbour(c) ..	(d) 7,188	Mackay	17,400		
Murwillumbah(c) ..	(d) 7,151	Mount Isa(c) ..	(d) 13,358		
Gunnedah	7,150	Gympie	11,400		
Forbes	7,070	Warwick	10,050		
Port Macquarie ..	6,590	Ayr(c)	(d) 8,010		
Cowra	6,550	Darby	7,950		
Nowra(c)	(d) 6,221	Charters Towers ..	7,800		
Cootamundra ..	6,060				
The Entrance-Long Jetty(c)	(d) 6,006				

(a) Metropolitan area. (b) Entire urban area. (c) Non-municipal town, i.e., a town not separately incorporated for purpose of local government. (d) 30th June, 1961. (e) Population count, 30th June, 1964. (f) As defined by South Australian Housing Trust.

5. **Urban Population Outside Metropolitan Areas.**—The aggregate urban population at the 1961 census of all cities and towns outside the metropolitan area of each State with 2,000 or more and 3,000 or more urban inhabitants, irrespective of whether such centres were incorporated separately or not, together with the proportion of the aggregate urban population of these cities and towns to the total population of the State, is shown in the following table.

AGGREGATE URBAN POPULATION OF NON-METROPOLITAN CITIES AND TOWNS OF SPECIFIED SIZE: CENSUS, 30th JUNE, 1961

State or Territory	Cities and towns outside metropolitan area with urban population of—					
	2,000 and over			3,000 and over		
	Number	Population	Proportion of total population	Number	Population	Proportion of total population
			%			%
New South Wales ..	101	1,074,922	27.44	71	1,002,344	25.59
Victoria	60	518,730	17.70	42	474,584	16.20
Queensland	53	498,871	32.85	33	451,148	29.70
South Australia ..	21	142,669	14.72	15	128,927	13.30
Western Australia ..	16	102,145	13.87	12	92,443	12.55
Tasmania	11	112,821	32.20	7	103,119	29.43
Northern Territory ..	2	16,974	62.65	2	16,974	62.65
Australian Capital Territory(a) .. ..	..	..	..	..	..	..
Total	264	2,467,132	23.48	182	2,269,539	21.60

(a) 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, Geelong, Latrobe Valley (Urban); in Western Australia, Kalgoorlie; and in Tasmania, Launceston. With the exception of Latrobe Valley (Urban), the areas in each instance are composed of the nucleus town and neighbouring local government areas, either in whole or in part, to form one continuous built-up area. In Latrobe Valley (Urban) there is no nucleus town, but all urban localities are closely associated with the development of the Latrobe Valley brown coal deposits.

A table showing similar data for the 1954 census was given in Year Book No. 47, page 295 and one for the 1947 census in Year Book No. 40, page 334. Comparisons between these various tables can be made only if allowance is made for changes in the status and structure of local government areas and for changes in the manner of determining urban population at each census.

6. **Principal Cities of the World.**—The following table shows the population of the world's largest cities at the latest available date. Since the way in which cities are delimited differs from country to country, the table shows data for the urban agglomeration, if such exists, as well as data for the so-called city proper. The urban agglomeration is defined in the United Nations *Demographic Yearbook* 1963 (page 35), from which most of the figures in the table have been taken, as the suburban fringe or thickly settled territory lying outside of, but adjacent to, city boundaries. (See also the Technical Notes on Statistical Tables and footnotes to the table in the *Demographic Yearbook*.)

POPULATION OF THE WORLD'S LARGEST CITIES

(Details for Commonwealth countries are printed in italics)

City	Country	Year	Population ('000)	
			City proper	Urban agglomeration
New York	U.S.A.	1960	7,782	(a) 14,115
Tokyo	Japan	1962	8,613	10,177
<i>London</i>	<i>England</i>	1962	3,180	8,177
Paris	France	1962	2,790	7,369
Buenos Aires	Argentina	1960	2,967	7,000
Shanghai	China	1957	6,900	..
Los Angeles	U.S.A.	1960	2,479	6,489
Moscow	U.S.S.R.	1963	6,317	6,354
Chicago	U.S.A.	1960	3,550	5,959
<i>Calcutta</i>	<i>India</i>	1963	2,981	4,519
<i>Bombay</i>	<i>India</i>	1963	4,422	..
Peking	China	1957	4,010	..
Philadelphia	U.S.A.	1960	2,003	3,635
Leningrad	U.S.S.R.	1963	3,180	3,552
Detroit	U.S.A.	1960	1,670	3,538
Cairo	United Arab Republic	1961	3,418	..
Rio de Janeiro	Brazil	1960	3,223	..
Tientsin	China	1957	3,220	..
Sao Paulo	Brazil	1960	3,165	..
Osaka	Japan	1962	3,151	..
Mexico City	Mexico	1963	3,051	..
Seoul	Korea	1962	2,983	..
Djakarta	Indonesia	1961	2,907	..
<i>Delhi</i>	<i>India</i>	1963	2,227	2,549
Madrid	Spain	1963	..	2,443
<i>Manchester</i>	<i>England</i>	1962	659	2,442
San Francisco	U.S.A.	1960	740	2,431
Boston	U.S.A.	1960	697	2,413
Shenyang(b)	China	1957	2,411	..
<i>Birmingham</i>	<i>England</i>	1962	1,115	2,377
<i>Sydney</i>	<i>Australia</i>	1964	168	2,300
Rome	Italy	1962	..	2,279
West Berlin(c)	Germany	1963	2,177	..
<i>Montreal</i>	<i>Canada</i>	1962	..	2,156
Wuhan	China	1957	2,146	..
Chungking	China	1957	2,121	..
<i>Melbourne</i>	<i>Australia</i>	1964	..	2,061
<i>Karachi</i>	<i>Pakistan</i>	1961	1,913	2,060
Santiago	Chile	1960	..	1,900
Budapest	Hungary	1962	1,888	..
<i>Toronto</i>	<i>Canada</i>	1962	..	1,869
Manila	Philippines	1960	1,139	(d) 1,865
Athens	Greece	1961	628	1,853
Hamburg	Germany	1962	1,843	..
Canton	China	1957	1,840	..
Teheran	Iran	1960	1,839	..
Washington	U.S.A.	1962	784	(e) 1,808
Pittsburgh	U.S.A.	1960	604	1,804
<i>Madras</i>	<i>India</i>	1963	1,802	..
<i>Glasgow</i>	<i>Scotland</i>	1962	1,049	(f) 1,802
Cleveland	U.S.A.	1960	876	1,785
<i>Singapore</i>	<i>Singapore</i>	1963	1,775	..
<i>Leeds</i>	<i>England</i>	1962	515	1,717

(a) New York-Northeastern New Jersey urbanized area, which includes Elizabeth, Jersey City, Newark, Paterson and Yonkers. (b) Formerly Mukden. (c) East Berlin, year 1962, population of city proper, 1,061,218. (d) 1957. (e) 1960. (f) 1961.

§ 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.

From 1901 onwards, the mean population for any year has been calculated by the formula:—

$$\text{Mean Population} = \frac{a + 4b + 2c + 4d + e}{12}$$

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*, and *e*.

2. *Results.*—(i) *Calendar Years.* The following table shows the mean population of each State and Territory for the calendar years 1955 to 1964.

MEAN POPULATION: CALENDAR YEARS

Year ended 31st Dec.—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1955 ..	3,492,799	2,520,481	1,344,445	820,161	657,323	315,565	17,670	32,738	9,201,182
1956 ..	3,556,672	2,592,670	1,377,393	848,563	674,459	321,039	19,155	35,352	9,425,303
1957 ..	3,624,311	2,656,363	1,408,732	874,201	687,448	328,435	20,620	37,999	9,638,109
1958 ..	3,696,049	2,717,371	1,436,156	896,987	699,915	335,382	21,746	41,110	9,844,716
1959 ..	3,762,339	2,783,951	1,464,469	921,106	711,737	341,423	23,623	46,618	10,055,266
1960 ..	3,834,085	2,857,032	1,491,114	944,861	722,900	346,913	25,107	52,562	10,274,574
1961 ..	3,914,718	2,927,526	1,515,516	969,630	737,386	353,613	26,243	58,792	10,503,424
1962 ..	3,980,675	2,990,041	1,539,076	989,385	755,259	359,408	26,973	65,699	10,706,516
1963 ..	4,050,987	3,055,162	1,562,456	1,008,862	773,235	364,280	28,668	73,348	10,916,998
1964 ..	4,121,601	3,128,888	1,585,036	1,032,021	790,224	367,359	31,388	80,735	11,137,252

(ii) *Financial Years.* The following table shows the mean population of each State and Territory for the years ended 30th June, 1955 to 1964.

MEAN POPULATION: FINANCIAL YEARS

Year ended 30th June—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1955 ..	3,459,755	2,485,222	1,328,064	807,510	648,222	312,694	16,853	31,411	9,089,731
1956 ..	3,524,991	2,556,148	1,360,801	834,489	666,898	318,309	18,419	34,132	9,314,187
1957 ..	3,589,128	2,625,609	1,394,088	861,410	680,949	324,666	19,915	36,749	9,532,514
1958 ..	3,660,738	2,687,115	1,422,349	886,021	693,568	332,046	21,239	39,283	9,742,359
1959 ..	3,729,030	2,749,994	1,450,535	908,354	705,869	338,628	22,507	43,429	9,948,346
1960 ..	3,796,452	2,819,650	1,478,129	933,619	717,316	344,111	24,573	50,013	10,163,863
1961 ..	3,875,921	2,893,417	1,503,703	957,136	729,770	350,077	25,673	55,232	10,390,929
1962 ..	3,948,380	2,959,167	1,526,959	980,108	745,805	356,686	26,566	62,433	10,606,104
1963 ..	4,015,463	3,021,792	1,551,304	998,971	764,426	362,111	27,604	69,217	10,810,888
1964 ..	4,086,489	3,090,956	1,573,410	1,020,098	782,203	366,187	30,061	77,229	11,026,633

§ 5. Elements of Increase

1. *General.*—The two factors which contribute to the growth of a population are "natural increase", i.e., the excess of births over deaths, and "net migration", i.e., the excess of arrivals over departures. The "total increase" of the population is obtained by combining natural increase with the increase by net migration. However, comparison of the total increase so obtained with that derived by subtracting the population recorded at one census from that recorded at the next census reveals differences which can be attributed partly to differences in the coverage of the census enumerations, and partly to deficiencies in the records of the elements of increase.

2. Elements of Increase, 1936-1964, Australia.—In the following table, particulars are given of the elements of increase for each five-year period from 1936 to 1960 and for each of the years 1960 to 1964. The numbers of males, females and persons are shown separately.

POPULATION: ELEMENTS OF INCREASE, AUSTRALIA

Period	Natural increase(a)	Net migration(b)	Intercensal adjustment(c)	Total increase
MALES				
1936-40	123,262	20,873	3,335	147,470
1941-45	142,605	5,325	3,428	151,358
1946-50	255,335	217,728	-3,484	469,579
1951-55	287,685	240,481	-5,794	522,372
1956-60	328,616	214,210	-3,570	539,256
1960.. .. .	68,786	52,722	- 798	120,710
1961.. .. .	72,864	29,055	- 433	101,486
1962.. .. .	69,732	28,620	(d)	98,352
1963.. .. .	67,924	36,219	(d)	104,143
1964.. .. .	61,816	52,058	(d)	113,874
FEMALES				
1936-40	148,995	22,255	3,204	174,454
1941-45	195,073	2,484	3,696	201,253
1946-50	274,112	135,356	-1 763	407,705
1951-55	312,017	173,343	-3,388	481,972
1956-60	351,241	190,812	-1,214	540,839
1960.. .. .	73,076	37,413	- 247	110,242
1961.. .. .	78,161	32,468	- 104	110,525
1962.. .. .	74,186	33,902	(d)	108,088
1963.. .. .	72,871	35,426	(d)	108,297
1964.. .. .	66,739	47,284	(d)	114,023
PERSONS				
1936-40	272,257	43,128	6,539	321,924
1941-45	337,678	7,809	7,124	352,611
1946-50	529,447	353,084	-5,247	877,284
1951-55	599,702	413,824	-9,182	1,004,344
1956-60	679,857	405,022	-4,784	1,080,095
1960.. .. .	141,862	90,135	-1,045	230,952
1961.. .. .	151,025	61,523	- 537	212,011
1962.. .. .	143,918	62,522	(d)	206,440
1963.. .. .	140,795	71,645	(d)	212,440
1964.. .. .	128,555	99,342	(d)	227,897

(a) Excess of births over deaths. For the period September, 1939, to June, 1947, deaths of defence personnel, whether overseas or in Australia, have been included. (b) Excess of arrivals over departures. Excludes troop movements for the period September, 1939, to June, 1947. (c) Adjustment of population on the basis of the final results of the 1947, 1954 and 1961 censuses. (d) For periods subsequent to the census of 30th June, 1961, the intercensal adjustment will not be known until after the next census has been taken.

3. Analysis of Intercensal Increase, 30th June, 1954, to 30th June, 1961.—In the following table, particulars are given for States and Territories of the recorded elements of increase and the intercensal adjustment for the whole of the seven-year intercensal period from 30th June, 1954, to 30th June, 1961.

As stated in § 1. of this chapter (*see* p. 259), complete records of interstate migration are not available. For this reason the differences between the estimated populations and those recorded at the census of 30th June, 1961, i.e. the intercensal adjustments, were substantial for some States.

POPULATION: ANALYSIS OF INTERCENSAL INCREASE, 30th JUNE, 1954, TO 30th JUNE, 1961

State or Territory	Population at 30th June, 1954(a)	Natural increase(b)	Net migration (c)	Total recorded increase	Intercensal adjustment (d)	Population at 30th June, 1961(a)
MALES						
New South Wales ..	1,720,860	150,250	86,499	236,749	15,300	1,972,909
Victoria ..	1,231,099	127,005	135,628	262,633	-19,337	1,474,395
Queensland ..	676,252	73,227	8,072	81,299	17,028	774,579
South Australia ..	403,903	41,607	46,432	88,039	-1,717	490,225
Western Australia ..	330,358	38,000	14,723	52,723	-7,629	375,452
Tasmania ..	157,129	19,946	13,120	33,066	-12,567	177,628
Northern Territory ..	10,288	1,753	463	2,216	3,702	16,206
Aust. Capital Territory..	16,229	3,732	10,792	14,524	105	30,858
<i>Australia</i> ..	<i>4,546,118</i>	<i>455,520</i>	<i>315,729</i>	<i>771,249</i>	<i>- 5,115</i>	<i>5,312,252</i>
FEMALES						
New South Wales ..	1,702,669	165,876	86,193	252,069	-10,634	1,944,104
Victoria ..	1,221,242	129,415	126,020	255,435	-20,959	1,455,718
Queensland ..	642,007	80,840	342	81,182	21,060	744,249
South Australia ..	393,191	44,156	39,892	84,048	1,876	479,115
Western Australia ..	309,413	41,432	12,615	54,047	-2,283	361,177
Tasmania ..	151,623	20,705	- 8,077	12,628	8,461	172,712
Northern Territory ..	6,181	2,118	1,941	4,059	649	10,889
Aust. Capital Territory..	14,086	3,627	10,099	13,726	158	27,970
<i>Australia</i> ..	<i>4,440,412</i>	<i>488,169</i>	<i>269,025</i>	<i>757,194</i>	<i>- 1,672</i>	<i>5,195,934</i>
PERSONS						
New South Wales ..	3,423,529	316,126	172,692	488,818	4,666	3,917,013
Victoria ..	2,452,341	256,420	261,648	518,068	-40,296	2,930,113
Queensland ..	1,318,259	154,067	8,414	162,481	38,088	1,518,828
South Australia ..	797,094	85,763	86,324	172,087	159	969,340
Western Australia ..	639,771	79,432	27,338	106,770	- 9,912	736,629
Tasmania ..	308,752	40,651	5,043	45,694	- 4,106	350,340
Northern Territory ..	16,469	3,871	2,404	6,275	4,351	27,095
Aust. Capital Territory..	30,315	7,359	20,891	28,250	263	58,828
<i>Australia</i> ..	<i>8,986,530</i>	<i>943,689</i>	<i>584,754</i>	<i>1,528,443</i>	<i>- 6,787</i>	<i>10,508,186</i>

(a) Census. (b) Excess of births over deaths. (c) Excess of arrivals over departures for recorded interstate and overseas migration. (d) Adjustment of population on the basis of the census of 30th June, 1961.

4. Rate of Population Growth.—In the following two tables natural increase refers to the excess of births over deaths (including deaths of Australian defence personnel), net migration refers to excess of overseas arrivals over departures excluding overseas movement of defence personnel for the period September, 1939 to June, 1947, and total increase is the sum of natural increase and net migration together with differences disclosed by results of population censuses up to 30th June, 1961.

Annual rates of natural increase, net migration and total increase, for single years, represent the increase during the year expressed as a proportion (per cent.) of the population at the beginning of the year. These rates are slightly higher than those calculated as a proportion (per cent.) of the mean population for the year.

Average annual rates of increase for periods greater than one year have been calculated in the following manner.

The average annual rate of total increase is computed by the formula—

$$P_t = P_0 (1+r)^t$$

where P_0 and P_t are the populations at the beginning and end of a t -year period, respectively and r is the average annual rate of growth.

The average annual rate of natural increase and net migration is computed by dividing the average annual rate of total increase between its components in proportion to the fraction of total increase due to each component during the period. Differences between the sum of the rates of natural increase and of net migration and the rate of total increase are due to the intercensal adjustment.

POPULATION: RATE OF GROWTH, AUSTRALIA
(Per cent.)

Period	Annual rate of population growth		
	Natural increase	Net migration	Total increase
AVERAGE ANNUAL RATE			
1936-40	0.79	0.13	0.94
1941-45	0.94	0.02	0.98
1946-50	1.36	0.91	2.26
1951-55	1.38	0.95	2.31
1956-60	1.40	0.83	2.22
ANNUAL RATE			
1960.. .. .	1.39	0.89	2.27
1961.. .. .	1.45	0.59	2.04
1962.. .. .	1.36	0.59	1.95
1963.. .. .	1.30	0.67	1.97
1964.. .. .	1.17	0.90	2.07

The average annual rate of population growth during the present century has been 1.72 per cent., but the results from year to year have deviated widely from this figure. In the following table, the period 1st January, 1901, to 31st December, 1964, 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: AUSTRALIA

Period	Interval (years)	Total increase ('000)	Average annual numerical increase ('000)	Average annual rate of population growth (per cent.)		
				Natural increase	Net migration	Total
1901 to 1913	13	1,128	87	1.55	0.49	2.04
1914 to 1923	10	862	86	1.49	0.15	1.64
1924 to 1929	6	680	113	1.26	0.62	1.88
1930 to 1939	10	569	57	0.82	0.02	0.85
1940 to 1946	7	513	73	0.98	0.01	1.01
1947 to 1952	6	1,222	204	1.37	1.19	2.54
1953 to 1964	12	2,511	209	1.37	0.77	2.13

Rates of population growth from 1886 are shown for each State and Territory of Australia in the annual bulletin, *Demography*.

Estimated rates of growth of the population of Australia in comparison with those for other countries of the world for the years 1958-1962 are shown in the table in § 15. International Statistics of Population.

§ 6. Density

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 2,967,909 square miles and an estimated population at 31st December, 1964, of 11,250,708, excluding full-blood Aborigines, has a density of only 3.79 persons to the square mile, and is, therefore, one of the most sparsely populated countries of the world. For other continents and sub-continent, the densities in 1962 were approximately as follows:—Europe (excluding U.S.S.R.), 227; Asia (excluding U.S.S.R.), 166; U.S.S.R., 26; Africa, 23; Northern and Middle America, 30; and South America, 22. The population density of Australia in 1962 was 3.64; about one-sixth of that of South America and of Africa; about one-seventh of that of U.S.S.R.; about one-eighth of that of Northern and Middle America; about one-forty-sixth of that of Asia (excluding U.S.S.R.); and about one sixty-second of that of Europe (excluding U.S.S.R.).

Because 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 3.79 in 1964. The rise in density from 1901 to 1964 in each State and Territory was:—New South Wales 4.45 to 13.44, Victoria 13.77 to 35.97, Queensland 0.76 to 2.39, South Australia 0.95 to 2.75, Western Australia 0.20 to 0.82, Tasmania 6.68 to 14.22, Northern Territory 0.01 to 0.06, and Australian Capital Territory 2.05 (in 1911) to 90.19. 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 39 per cent.; 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.

The number and density of population of the principal countries and continental groups of the world are shown in the table in § 15. International Statistics of Population.

§ 7. General Characteristics

NOTE.—Particulars of the characteristics of the population of Australia at the 1961 census compared with the 1954 census are shown in this section, and for the individual States and Territories at the 1961 census in Year Book No. 49 (*see pp. 317-35*). Information concerning the industry, occupational status and occupations of the population as recorded at the 1961 census is given in Chapter XII. Employment and Unemployment, and on dwellings and householders in Chapter XI. Housing and Building.

1. **Sex Distribution.**—The number of males to each hundred females has been adopted as a measure of the "masculinity" of the population. The masculinity of the population of each of the States may be obtained for each year from 1796 to 1907 from the table on pages 163-5 of Year Book No. 2 and for the years 1900 to 1910 from the table on page 123 of Year Book No. 5.

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 during the following decade there was an increase in masculinity owing to the greater number of males as compared with females in net oversea migration, and the recovery of the birth rate in the post-war period from the low levels of the 1930s.

The following table shows the masculinity of the population at ten-year intervals from 1900 to 1960 and for each of the years 1960 to 1964.

POPULATION: MASCULINITY
(NUMBER OF MALES PER 100 FEMALES)

At 31st December—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1900	111.14	101.23	125.33	101.95	157.54	107.97	753.60	(a)	110.55
1910	109.23	98.71	119.02	103.12	132.90	104.14	486.32	(a)	107.87
1920	104.31	97.38	112.00	99.83	114.55	101.67	270.04	116.70	103.47
1930	103.39	99.14	110.66	100.97	117.17	101.53	263.66	118.69	103.85
1940	100.98	97.85	108.48	98.91	110.38	102.74	240.31	124.62	101.81
1950	100.88	99.27	106.02	101.83	106.07	102.70	188.05	123.33	101.83
1960	101.38	101.35	104.16	102.24	103.99	102.88	147.82	111.51	102.22
1961	100.93	101.06	104.19	102.23	103.74	104.03	152.03	110.46	102.00
1962	100.68	101.05	103.81	101.91	103.42	103.45	150.66	109.98	101.78
1963	100.90	100.88	103.16	101.73	103.13	102.93	144.67	109.20	101.67
1964	100.90	100.92	103.05	101.74	103.03	102.53	140.75	107.93	101.63

(a) Part of New South Wales prior to 1911.

The masculinity of the population in the principal countries of the world is shown in the table in § 15. International Statistics of Population.

2. Age Distribution.—(i) 1954 and 1961 censuses. The following table shows the variation which took place in the age distribution of the population during the seven years following the 1954 census.

POPULATION: AGE DISTRIBUTION(a), AUSTRALIA

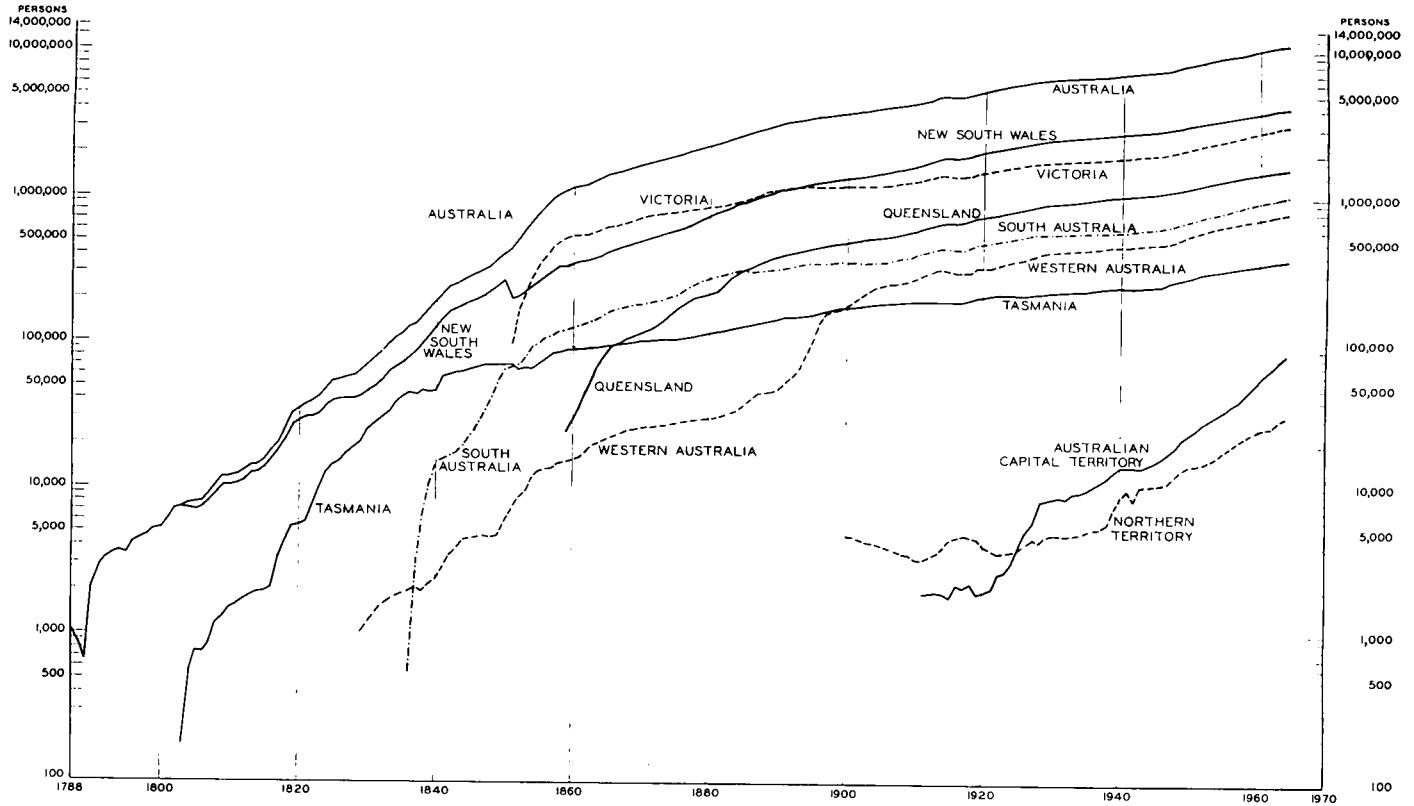
Age last birthday (years)	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
0-4	493,682	472,735	966,417	567,742	541,751	1,109,493	143,076
5-9	461,903	440,834	902,737	536,046	511,475	1,047,521	144,784
10-14	354,075	340,105	694,180	522,407	497,577	1,019,984	325,804
15-19	302,287	289,484	591,771	414,788	394,145	808,933	217,162
20-24	311,979	288,187	600,166	361,531	335,907	697,438	97,272
25-29	368,639	336,178	704,817	342,443	313,628	656,071	-48,746
30-34	364,238	343,605	707,843	386,175	351,793	737,968	30,125
35-39	325,768	317,355	643,123	395,247	372,669	767,916	124,793
40-44	323,418	305,010	628,428	343,973	334,554	678,527	50,099
45-49	286,705	260,224	546,929	335,890	321,941	657,831	110,902
50-54	246,061	233,140	479,201	293,004	275,023	568,027	88,826
55-59	193,148	204,122	397,270	238,051	225,330	463,381	66,111
60-64	178,947	198,695	377,642	190,805	210,048	400,853	23,211
65-69	143,140	160,172	303,312	149,130	184,654	333,784	30,472
70-74	94,961	115,429	210,390	116,939	148,048	264,987	54,597
75-79	55,104	72,738	127,842	69,223	95,724	164,947	37,105
80-84	27,972	40,470	68,442	33,069	52,627	85,696	17,254
85-89	11,025	16,618	27,643	12,216	21,736	33,952	6,309
90-94	2,726	4,613	7,339	3,087	6,114	9,201	1,862
95 and over ..	340	698	1,038	486	1,190	1,676	638
Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656
Under 21 years ..	1,668,770	1,596,959	3,265,729	2,115,005	2,014,083	4,129,088	863,359
21 years and over ..	2,877,348	2,843,453	5,720,801	3,197,247	3,181,851	6,379,098	658,297
Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) At the 1954 and 1961 censuses unspecified ages were distributed over all ages prior to tabulation.

NOTE.—Minus sign (-) denotes decrease.

POPULATION OF AUSTRALIA, 1788 TO 1964

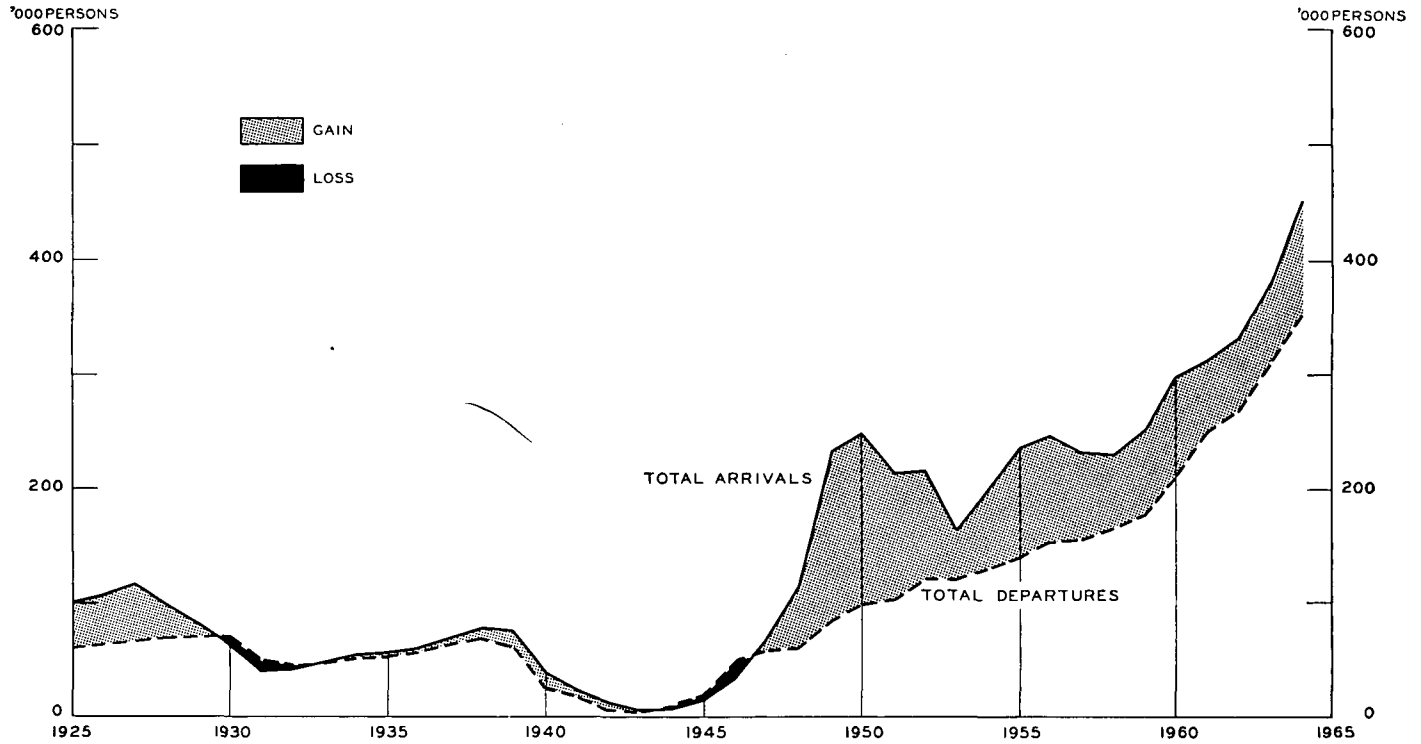
RATIO GRAPH



NOTE:- THE VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO THE RATE OF INCREASE OR DECREASE; ACTUAL NUMBERS ARE INDICATED BY THE SCALE.

OVERSEA ARRIVALS AND DEPARTURES

AUSTRALIA, 1925 TO 1964



Of the 10,508,186 persons enumerated at the 1961 census, 39.3 per cent. were under 21 years of age; 52.2 per cent. were 21 to 64 years; and 8.5 per cent. were aged 65 years and over. At the 1954 census, 36.3 per cent. were under 21 years of age; 55.4 per cent. were 21 to 64 years; and 8.3 per cent. were aged 65 years and over.

(ii) *Proportional Distribution, Censuses, 1871 to 1961.* The next table shows the changes which have taken place in the age distribution of the population of Australia since 1871.

POPULATION: PROPORTIONAL AGE DISTRIBUTION, AUSTRALIA
(Per cent.)

Census	Males				Females				Persons			
	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total	Under 15 years	15 years and under 65	65 years and over	Total
1871..	38.84	59.11	2.05	100	46.02	52.60	1.38	100	42.09	56.17	1.74	100
1881..	36.36	60.81	2.83	100	41.86	56.03	2.11	100	38.89	58.61	2.50	100
1891..	34.80	62.01	3.19	100	39.38	58.09	2.53	100	36.92	60.19	2.89	100
1901..	33.89	61.80	4.31	100	36.51	59.88	3.61	100	35.14	60.88	3.98	100
1911..	30.84	64.82	4.34	100	32.52	63.28	4.20	100	31.65	64.08	4.27	100
1921..	31.64	63.88	4.48	100	31.79	63.83	4.38	100	31.71	63.86	4.43	100
1933..	27.53	66.09	6.38	100	27.42	65.99	6.59	100	27.48	66.04	6.48	100
1947..	25.49	67.08	7.43	100	24.62	66.71	8.67	100	25.06	66.89	8.05	100
1954..	28.81	63.82	7.37	100	28.23	62.52	9.25	100	28.52	63.18	8.30	100
1961..	30.61	62.16	7.23	100	29.85	60.33	9.82	100	30.23	61.26	8.51	100

(iii) *Estimated Age Distribution, 30th June, 1964.* Estimates, based on the census distribution of ages and records of births, ages at death, and ages of migrants, are made for intercensal years. The following table shows the estimated age distributions of the Australian population at 30th June, 1963 and 1964.

POPULATION: ESTIMATED AGE DISTRIBUTION(a), AUSTRALIA

Age last birthday (years)	30th June, 1963			30th June, 1964		
	Males	Females	Persons	Males	Females	Persons
0-4	585,805	558,439	1,144,244	590,513	561,299	1,151,812
5-9	553,627	527,596	1,081,223	567,793	541,501	1,109,294
10-14	528,450	504,714	1,033,164	536,587	512,470	1,049,057
15-19	480,709	456,139	936,848	502,242	476,150	978,392
20-24	379,196	359,370	738,566	398,801	377,460	776,261
25-29	350,476	328,502	678,978	360,541	340,489	701,030
30-34	371,086	340,649	711,735	364,549	336,017	700,566
35-39	396,193	369,057	765,250	398,627	369,365	767,992
40-44	372,550	359,433	731,983	384,966	368,638	753,604
45-49	331,267	323,628	654,895	328,073	323,257	651,330
50-54	309,618	294,112	603,730	317,691	304,285	621,976
55-59	252,388	240,147	492,535	260,358	249,628	509,986
60-64	202,895	214,244	417,139	209,305	216,891	426,196
65-69	148,063	185,912	333,975	148,487	185,965	334,452
70-74	118,447	154,598	273,045	117,171	156,685	273,856
75-79	74,549	105,459	180,008	77,291	110,441	187,732
80-84	34,707	56,325	91,032	35,517	57,759	93,276
85 and over ..	16,440	31,459	47,899	16,508	32,189	48,697
Total	5,506,466	5,409,783	10,916,249	5,615,020	5,520,489	11,135,509

(a) Based on the age distribution at the census of 30th June, 1961, and on subsequent births, recorded ages at death and recorded ages of migrants.

3. Conjugal Condition.—Of the total population of Australia at the 1961 census, 48.0 per cent. were never married, 46.2 per cent. were married (including 1.4 per cent. married but permanently separated), 5.0 per cent. were widowed, and 0.8 per cent. were divorced. Between 1954 and 1961 the number never married increased by 19.8 per cent., those married (including permanently separated) by 14.8 per cent., the widowed by 13.0 per cent., and the divorced by 18.7 per cent.

The ratio of widowed females to widowed males increased from 311 : 100 in 1954 to 352 : 100 in 1961. This disparity between the number of widowed males and widowed females 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 remarry.

The ratio of males to females in the never married group "15 years of age and over" increased from 141 : 100 in 1954 to 143 : 100 in 1961.

The numbers of males, females and persons recorded at the censuses of 30th June, 1954 and 1961, are shown in the following table according to their conjugal condition.

POPULATION: CONJUGAL CONDITION, AUSTRALIA

Conjugal condition	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
Never married—							
Under 15 years of age ..	1,309,660	1,253,674	2,563,334	1,626,195	1,550,803	3,176,998	613,664
15 years of age and over ..	962,491	684,154	1,646,645	1,098,450	770,048	1,868,498	221,853
<i>Total</i>	<i>2,272,151</i>	<i>1,937,828</i>	<i>4,209,979</i>	<i>2,724,645</i>	<i>2,320,851</i>	<i>5,045,496</i>	<i>835,517</i>
Married	2,062,122	2,043,651	4,105,773	2,364,710	2,344,754	4,709,464	603,691
Married but permanently separated	57,371	66,228	123,599	68,172	78,367	146,539	22,940
Widowed	113,064	351,102	464,166	116,085	408,623	524,708	60,542
Divorced	32,389	36,650	69,039	38,640	43,339	81,979	12,940
Not stated	9,021	4,953	13,974	(a)	(a)	(a)	-13,974
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) In processing the 1961 census data a conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

NOTE.—Minus sign (-) denotes decrease.

4. Countries of Birth.—At 30th June, 1961, the Australian-born element of the population of Australia represented 83.1 per cent. as compared with 85.7 per cent. at the 1954 census. The number of Australian-born increased by 1,029,342 or 13.4 per cent. between 1954 and 1961, while the over-sea-born population increased by 492,314 or 38.3 per cent. The latter resulted mainly from the increase of 441,148 in the number of persons of European birthplace between 1954 and 1961—principally persons born in Italy (an increase of 108,399); United Kingdom and Republic of Ireland (91,197); Greece (51,471); and the Netherlands (50,048).

Of persons born outside Australia, 55.5 per cent. were males and 44.5 per cent. females.

The following table shows the countries of birth of the population recorded at the census of 30th June, 1961, as compared with the census of 30th June, 1954. There have been minor revisions to the figures for 1961 in respect of males born outside Australia, with consequent revision of relevant totals.

POPULATION: COUNTRY OF BIRTH, AUSTRALIA

Country of birth	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
<i>Australia</i>	<i>3,812,435</i>	<i>3,887,629</i>	<i>7,700,064</i>	<i>4,325,005</i>	<i>4,404,401</i>	<i>8,729,406</i>	<i>1,029,342</i>
<i>New Zealand</i>	<i>21,723</i>	<i>21,627</i>	<i>43,350</i>	<i>23,377</i>	<i>23,634</i>	<i>47,011</i>	<i>3,661</i>
Europe—							
United Kingdom and Republic of Ireland ..	359,010	305,195	664,205	400,491	354,911	755,402	91,197
Germany	33,663	31,759	65,422	57,579	51,736	109,315	43,893
Greece	16,794	9,068	25,862	43,593	33,740	77,333	51,471
Italy	80,279	39,618	119,897	134,624	93,672	228,296	108,399
Malta	12,411	7,577	19,988	22,628	16,709	39,337	19,349
Netherlands	30,046	21,989	52,035	56,811	45,272	102,083	50,048
Poland	35,652	20,942	56,594	36,395	23,654	60,049	3,455
Other	91,848	59,213	151,061	134,185	90,212	224,397	73,336
Total, Europe	659,703	495,361	1,155,064	886,306	709,906	1,596,212	441,148
Other countries	52,257	35,795	88,052	77,564	57,993	135,557	47,505
<i>Total born outside Australia</i>	<i>733,683</i>	<i>552,783</i>	<i>1,286,466</i>	<i>987,247</i>	<i>791,533</i>	<i>1,778,780</i>	<i>492,314</i>
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

5. **Period of Residence in Australia.**—The post-war migration flow into Australia is shown in the following table, which classifies the oversea-born population of Australia according to period of residence in Australia.

PERIOD OF RESIDENCE IN AUSTRALIA OF PERSONS BORN OUTSIDE AUSTRALIA

Period of residence (years)	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
Under 1	47,430	34,841	82,271	72,162	51,169	123,331	41,060
1 and under 2	32,228	27,096	59,324	48,600	38,366	86,966	27,642
2 " " 3	65,374	39,354	104,728	47,126	42,901	90,027	-14,701
3 " " 4	71,183	50,367	121,550	37,736	41,254	78,990	-42,560
4 " " 5	87,636	62,200	149,836	42,600	41,284	83,884	-65,952
5 " " 6	64,618	45,416	110,034	54,091	42,064	96,155	-13,879
6 " " 7	21,522	15,424	36,946	51,816	40,202	92,018	55,072
7 " " 14	331,417	268,228	599,645	345,666	254,983	600,649	490,716
14 " " 21				22,386	17,795	40,181	
21 and over	12,275	9,857	22,132	244,002	205,529	449,531	14,916
Not stated				21,062	15,986	37,048	
Total	733,683	552,783	1,286,466	987,247	791,533	1,778,780	492,314

NOTE.—Minus sign (—) denotes decrease.

6. **Nationality.**—At 30th June, 1961, 9,984,709 persons, or 95.0 per cent. of the Australian population, were of British nationality (consisting of 83.1 per cent. born in Australia and 11.9 per cent. born outside), compared with 95.5 per cent. in 1954 (85.7 per cent. born in Australia and 9.8 per cent. born outside). Of the oversea-born population in 1961, 70.6 per cent. were British subjects, compared with 68.6 per cent. in 1954.

The following table shows the numbers of males, females and persons at the 1954 and 1961 censuses classified by nationality (i.e. allegiance). The figures for nationals of foreign countries have had a few minor revisions made since the previous issue.

POPULATION: NATIONALITY (i.e., ALLEGIANCE), AUSTRALIA

Nationality	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
British(a)—							
Born in Australia ..	3,812,435	3,887,629	7,700,064	4,325,005	4,404,401	8,729,406	1,029,342
Born outside Australia ..	485,601	397,473	883,074	686,611	568,692	1,255,303	372,229
Total, British	4,298,036	4,285,102	8,583,138	5,011,616	4,973,093	9,984,709	1,401,571
Foreign—							
Dutch	30,518	22,940	53,458	41,216	34,601	75,817	22,359
German	17,262	14,186	31,448	34,317	26,172	60,489	29,041
Greek	11,415	6,428	17,843	32,763	28,238	61,001	43,158
Hungarian	5,910	3,746	9,656	8,210	5,816	14,026	4,370
Italian	61,673	28,345	90,018	86,941	67,068	154,009	63,991
Latvian, Lithuanian and Estonian	16,735	13,893	30,628	4,176	2,936	7,112	-23,516
Polish	29,524	20,222	49,746	12,939	9,474	22,413	-27,333
Ukrainian	9,871	7,368	17,239	2,926	2,109	5,035	-12,204
Yugoslavian	11,633	6,491	18,124	17,745	9,637	27,382	9,258
Other (incl. Stateless) ..	53,541	31,691	85,232	59,402	36,790	96,193	10,961
Total, Foreign	248,052	155,310	403,362	307,636	222,841	523,477	120,085
Grand Total	4,546,118	4,440,412	8,986,530	5,319,252	5,195,934	10,508,186	1,521,656

(a) All persons of individual citizenship status who, by virtue of the *Nationality and Citizenship Act 1948*, are deemed to be British subjects. Includes naturalized British. For purposes of this table Irish nationality is included with British.

NOTE.—Minus sign (—) denotes decrease.

7. Religion.—At the 1921 census, 92,258 persons, or 1.7 per cent. of the Australian population gave no reply to this question, but at the censuses of 1933, 1947, 1954 and 1961, when the public was informed that there was no legal obligation to answer the question, 848,948 persons (12.8 per cent.), 824,824 (10.9 per cent.), 855,819 (9.5 per cent.) and 1,102,929 (10.5 per cent.) respectively, gave no reply. Of males, 11.2 per cent., and of females 9.8 per cent., did not state their religion in 1961.

Among the denominations with the larger numbers of adherents, the greatest proportional increase since 1954 was recorded by Roman Catholic and Catholic combined, 27.1 per cent.; then Presbyterian, 12.2 per cent.; Methodist, 10.1 per cent.; Church of England, 7.6 per cent. The largest proportional increase was that of the Greek Orthodox denomination, 107.3 per cent.

At the 1961 census, as at earlier censuses, 99 per cent. of those who stated their religion professed the Christian faith. Between 1954 and 1961 the number who stated they were of non-Christian religion increased by 26 per cent., while those specifically stating they had no religion increased by 59 per cent.

The following table shows the number of adherents of the various religions as recorded at the censuses of 30th June, 1954, and 30th June, 1961.

POPULATION: RELIGION, AUSTRALIA

Religion	Census, 30th June, 1954			Census, 30th June, 1961			Increase, 1954-61
	Males	Females	Persons	Males	Females	Persons	
Christian—							
Baptist	60,048	67,396	127,444	70,990	78,638	149,628	22,184
Brethren	7,511	8,893	16,404	7,265	8,228	15,493	- 911
Catholic, Roman(a)	413,719	347,383	761,102	602,763	536,886	1,139,649	378,547
Catholic(a)	635,398	664,486	1,299,884	730,093	750,242	1,480,335	180,451
Churches of Christ	37,880	42,484	80,364	45,115	50,518	95,633	15,269
Church of England	1,709,197	1,699,653	3,408,850	1,834,732	1,834,208	3,668,940	260,090
Congregational	32,508	36,944	69,452	34,679	38,847	73,526	4,074
Greek Orthodox	44,382	30,363	74,745	84,965	69,959	154,924	80,179
Lutheran	60,306	55,872	116,178	82,453	77,729	160,182	44,004
Methodist	478,605	499,328	977,933	528,003	548,392	1,076,395	98,462
Presbyterian	430,798	439,444	870,242	482,503	494,218	976,721	106,479
Protestant (undefined)	48,539	46,877	95,416	50,515	48,048	98,563	3,147
Salvation Army	20,304	22,534	42,838	24,379	26,735	51,114	8,276
Seventh-day Adventist	11,166	14,163	25,329	14,313	17,320	31,633	6,304
Other (including Christian undefined)	31,957	35,616	67,573	48,626	52,779	101,405	33,832
Total, Christian	4,022,318	4,011,436	8,033,754	4,641,394	4,632,747	9,274,141	1,240,387
Non-Christian—							
Hebrew	24,548	23,888	48,436	29,571	29,758	59,329	10,893
Other	4,910	1,471	6,381	6,547	2,928	9,475	3,094
Total, Non-Christian	29,458	25,359	54,817	36,118	32,686	68,804	13,987
Indefinite	10,038	8,418	18,456	13,495	11,267	24,762	6,306
No religion	16,652	7,032	23,684	25,206	12,344	37,550	13,866
No reply	467,652	388,167	855,819	596,039	506,890	1,102,929	247,110
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) So described in individual census schedules.

NOTE.—Minus sign (—) denotes decrease.

8. Race.—The following table shows the numbers of males, females and persons at the 1954 and 1961 Censuses classified by race (i.e. ethnic origin).

POPULATION: RACE, AUSTRALIA

Race	Census, 30th June, 1954			Census, 30th June, 1961		
	Males	Females	Persons	Males	Females	Persons
<i>European</i>	4,508,795	4,412,896	8,921,691	5,260,853	5,157,908	10,418,761
Non-European—						
Afghan	73	25	98	63	36	99
African, n.e.i.	52	5	57	65	19	84
Arab, Persian	201	70	271	333	222	555
Asiatic Jew	42	27	69	53	48	101
Asiatic, n.e.i.	733	169	902	793	325	1,118
Chinese	9,150	3,728	12,878	14,237	6,145	20,382
Cingalese, Burgher, Tamil	196	72	268	384	279	663
Egyptian	30	31	61	42	34	76
Fijian	51	13	64	100	38	138
Filipino	127	100	227	169	128	297
Indian, Pakistani	1,892	317	2,209	2,937	595	3,532
Indonesian, Javanese, Timorese, etc.	312	36	348	449	90	539
Japanese	247	292	539	949	769	1,718
Malay	534	251	785	717	346	1,063
Maori	57	29	86	102	92	194
Negro	56	13	69	106	26	132
Pacific Islander, n.e.i. (a)	934	764	1,698	1,158	1,028	2,186
Papuan, New Guinean	28	8	36	72	58	130
Siamese, Thaiander	163	60	223	180	60	240
Syrian, Lebanese	1,374	916	2,290	1,834	1,407	3,241
Torres Strait Islander	2,043	2,210	4,253	2,446	2,526	4,972
Other and indefinite	37	18	55	77	43	120
Total Non-European	18,332	9,154	27,486	27,266	14,314	41,580
European and (b)—						
Afghan	69	47	116	56	62	118
African, n.e.i.	11	4	15	8	13	21
Arab, Persian	18	12	30	23	18	41
Asiatic Jew	11	3	14	4	9	13
Asiatic, n.e.i.	60	52	112	111	117	228
Australian Aboriginal	15,849	15,510	31,359	19,713	19,459	39,172
Chinese	1,404	1,276	2,680	1,648	1,538	3,186
Cingalese, Burgher, Tamil	58	65	123	124	104	228
Egyptian	4	7	11	11	16	27
Fijian	15	20	35	21	22	43
Filipino	101	100	201	176	220	396
Indian, Pakistani	259	179	438	293	240	533
Indonesian, Javanese, Timorese, etc.	12	21	33	71	68	139
Japanese	114	132	246	497	456	953
Malay	214	235	449	313	329	642
Maori	89	82	171	126	129	255
Negro	77	58	135	60	59	119
Pacific Islander, n.e.i. (a)	257	257	514	367	362	729
Papuan, New Guinean	10	7	17	33	43	76
Siamese, Thaiander	25	18	43	17	19	36
Syrian, Lebanese	103	96	199	108	108	216
Torres Strait Islander	60	49	109	134	111	245
Other and indefinite	171	132	303	219	210	429
Total European/Other Races (b)	18,991	18,362	37,353	24,133	23,712	47,845
Total Non-European and European/Other Races	37,323	27,516	64,839	51,399	38,026	89,425
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186

(a) Includes Pacific Islander, Polynesian and South Sea Islander, so described. (b) This category covers persons with European blood to the extent of one-half and blood of a Non-European race to the extent of one-half.

§ 8. Oversea Arrivals and Departures

NOTE.—More detailed statistics of overseas arrivals and departures, covering country of residence, country of embarkation/intended disembarkation, mode of travel, month of arrival or departure, etc., are shown in the tables of Section II., Oversea Arrivals and Departures, of the annual bulletin, *Demography*.

1. Oversea Arrivals and Departures since 1936.—Earlier issues of the 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 from 1881 is published in the annual bulletin, *Demography*. The following table shows, for Australia, arrivals and departures since 1936, and refers to total movement irrespective of length of stay. Air crews and ships' crews and persons passing through Australia on board the same ship or aircraft are excluded from Australian statistics of overseas arrivals and departures. A graph showing arrivals and departures from 1925 to 1964 appears on page 276.

OVERSEA ARRIVALS AND DEPARTURES: AUSTRALIA

Period	Total arrivals			Total departures			Excess of arrivals over departures		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
1936-40(a) ..	161,774	159,538	321,312	140,901	137,283	278,184	20,873	22,255	43,128
1941-45(a) ..	35,422	28,503	63,925	30,097	26,019	56,116	5,325	2,484	7,809
1946-50(a) ..	398,507	303,413	701,920	180,779	168,057	348,836	217,728	135,356	353,084
1951-55 ..	581,300	446,566	1,027,866	340,819	273,223	614,042	240,481	173,343	413,824
1956-60 ..	695,445	568,652	1,264,097	481,235	377,840	859,075	214,210	190,812	405,022
1960 ..	169,579	129,582	299,161	116,857	92,169	209,026	52,722	37,413	90,135
1961 ..	170,404	142,686	313,090	141,349	110,218	251,567	29,055	32,468	61,523
1962 ..	180,732	151,592	332,324	152,112	117,690	269,802	28,620	33,902	62,522
1963 ..	211,430	169,297	380,727	175,211	133,871	309,082	36,219	35,426	71,645
1964 ..	252,669	199,688	452,357	200,611	152,404	353,015	52,058	47,284	99,342

(a) Excludes movements of defence personnel from September, 1939, to June, 1947.

2. Excess of Arrivals over Departures.—(i) *General*. The excess of total overseas arrivals over total departures is one of the elements of population increase taken into account in preparing the estimated population for other than census dates (see § 5 of this chapter, pp. 269-73). It is necessary to use statistics of total overseas arrivals and departures for this purpose, because Australian population statistics relate to the total population present in Australia at the date of the census or estimate, and not the population normally resident in Australia (which would include those temporarily overseas and exclude those temporarily visiting Australia). In the following paragraphs are set out particulars of the net gain or loss of population due to overseas migration, according to age and conjugal condition and country of birth.

(ii) *Age Distribution and Conjugal Condition*. The net gain to the population of Australia due to total migration movement for the years 1962 and 1963 according to age and conjugal condition, was as follows.

EXCESS OF ARRIVALS OVER DEPARTURES: AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA

Particulars	1962			1963		
	Males	Females	Persons	Males	Females	Persons
AGE DISTRIBUTION						
Years—						
0-4	3,262	2,760	6,022	4,081	3,842	7,923
5-14	6,101	5,601	11,702	7,402	6,880	14,282
15-24	7,294	9,613	16,907	10,572	8,973	19,545
25-44	8,734	11,234	19,968	11,499	11,310	22,809
45-64	2,298	3,574	5,872	2,140	3,220	5,360
65 and over	931	1,120	2,051	525	1,201	1,726
Total	28,620	33,902	62,522	36,219	35,426	71,645

EXCESS OF ARRIVALS OVER DEPARTURES: AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA—*continued*

Particulars	1962			1963		
	Males	Females	Persons	Males	Females	Persons
CONJUGAL CONDITION						
Never married—						
Under 15 years of age ..	9,363	8,361	17,724	11,483	10,721	22,204
15 years of age and over ..	7,805	11,450	19,255	10,811	8,360	19,171
Married	11,207	12,913	24,120	13,686	15,290	28,976
Widowed	128	982	1,110	103	841	944
Divorced	117	196	313	136	214	350
Total	28,620	33,902	62,522	36,219	35,426	71,645

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

(iii) *Country of Birth.* The net gain due to total migration movement during the years 1962, 1963 and 1964, according to country of birth, was as follows.

EXCESS OF ARRIVALS OVER DEPARTURES: COUNTRY OF BIRTH, AUSTRALIA

Country of birth	1962			1963			1964		
	Males	Females	Persons	Males	Females	Persons	Males	Females	Persons
Africa—									
Commonwealth countries ..	383	336	719	399	351	750	501	478	979
South Africa	309	347	656	188	237	425	256	301	557
Other	378	341	719	984	950	1,934	1,010	867	1,877
America—									
Canada	356	253	609	202	206	408	402	287	689
Other Commonwealth countries ..	25	12	37	16	5	21	48	43	91
United States of America ..	728	660	1,388	485	431	916	832	701	1,533
Other	55	54	109	67	66	133	146	129	275
Asia—									
Ceylon, India, Pakistan ..	496	480	976	565	506	1,071	578	598	1,176
Malaysia	258	262	520	363	424	787	392	354	746
Other Commonwealth countries ..	441	442	883	232	285	517	376	368	744
China	871	671	1,542	134	237	371	250	148	398
Other	523	703	1,226	677	738	1,415	1,038	955	1,993
Europe—									
Malta	958	886	1,844	2,190	1,833	4,023	3,218	2,164	5,3
United Kingdom and Ireland ..	12,215	11,557	23,772	21,760	20,287	42,047	29,313	26,213	55,526
Other Commonwealth countries ..	48	42	90	32	32	64	65	56	121
Austria	-247	-36	-283	-81	39	-42	228	131	359
Germany	-607	202	-405	-474	257	-217	824	613	1,437
Greece	4,158	7,161	11,319	4,969	4,919	9,888	8,897	8,238	17,135
Italy	4,509	7,197	11,706	3,181	4,194	7,375	2,311	4,579	6,890
Netherlands	-310	-37	-347	-475	-517	-992	183	116	299
Poland	390	502	892	315	429	744	352	399	751
Spain	1,983	1,855	3,838	977	902	1,879	82	120	202
Yugoslavia	2,204	1,593	3,797	2,656	1,956	4,612	3,009	1,959	4,968
Other	-41	569	528	162	428	590	636	998	1,634
Oceania—									
Australia	-2,724	-3,239	-5,963	-5,347	-5,844	-11,191	-6,018	-5,907	-11,925
New Zealand	570	321	891	1,196	1,331	2,527	2,033	1,529	3,562
Papua and New Guinea ..	251	222	473	226	182	408	472	300	772
Other Commonwealth countries ..	150	162	312	27	45	72	151	139	290
Other	23	59	82	19	46	65	-6	-15	-21
At sea, and not stated ..	267	325	592	574	471	1,045	479	423	902
Grand Total	28,620	33,902	62,522	36,219	35,426	71,645	52,058	47,284	99,342

NOTE.—Minus sign (—) indicates excess of departures over arrivals.

3. **Stated Purpose of Travel.**—Since 1st July, 1924, oversea travellers have been classified according to declared intention in regard to residence into two principal categories, distinguishing movements for short terms from movements for longer periods (including permanently). Prior to 1957, these categories were *temporary* and *permanent*. Thereafter the categories were entitled *short-term* and *permanent and long-term*, but the basis of classification was not changed and the figures are directly comparable for the whole period. For short-term movements, oversea visitors and Australian residents have been identified separately.

Revised questions for travellers were introduced in mid-1958, and these enabled the separation, from 1st January, 1959, of permanent from other long-term movements and also the identification of former settlers departing among the permanent departures.

The principal categories of travellers according to stated purpose of travel are as follows:—

Permanent movement—consisting of persons arriving with stated intent to settle permanently in Australia, and Australian residents departing with stated intent to reside permanently abroad;

Long-term movement—consisting of the arrival of visitors and the departure of residents with stated intent to stay (in Australia or in a country abroad respectively) for twelve months or more; and the departure of visitors and the return of residents who have stayed (in Australia or in a country abroad respectively) for twelve months or more;

Short-term movement—consisting of all other movements, including the movement of Australian troops irrespective of period of stay;

Settlers—persons who, on arrival in Australia, indicated that they came intending to settle;*

Former Settlers—persons who, on departure from Australia, stated that they had come to Australia intending to settle, had stayed for a period of twelve months or more and were now departing permanently.*

* Included in *Permanent movement*.

This classification is based on the purpose of travel stated by travellers on arrival in, or departure from, Australia. These statements represent the traveller's intention at that time. Many travellers subsequently change their intentions, and this must be borne in mind in interpreting the statistics.

The numbers so classified since 1st January, 1936, on the basis of declared intention as to residence, and since 1st January, 1959, on this basis supplemented by additional particulars as to stated purpose of travel, are as follows.

OVERSEA ARRIVALS AND DEPARTURES, BY STATED PURPOSE OF TRAVEL: AUSTRALIA

(Persons)

ARRIVALS

Period	Permanent and long-term movement				Short-term movement			Total arrivals	
	Permanent Settlers arriving	Long-term		Total permanent and long-term arrivals	Residents returning	Oversea visitors arriving			
		Residents returning	Oversea visitors arriving			In transit	Other		Total
1936-40	n.a.	n.a.	n.a.	88,712	104,870	n.a.	n.a.	127,730	321,312
1941-45	n.a.	n.a.	n.a.	32,624	11,150	n.a.	n.a.	20,151	63,925
1946-50	n.a.	n.a.	n.a.	457,988	108,736	n.a.	n.a.	135,196	701,920
1951-55	n.a.	n.a.	n.a.	570,090	216,949	77,825	163,002	240,827	1,027,866
1956-60	n.a.	n.a.	n.a.	615,767	309,611	84,206	254,513	338,719	1,264,097
1960 ..	110,079	16,495	12,797	139,371	75,167	20,919	63,704	84,623	299,161
1961 ..	95,407	18,602	13,577	127,586	86,208	24,945	74,351	99,296	313,090
1962 ..	90,464	20,580	13,941	124,985	95,915	25,477	85,947	111,424	332,324
1963 ..	108,150	22,205	13,813	144,168	111,182	27,348	98,029	125,377	380,727
1964 ..	134,464	23,641	15,020	173,125	131,354	31,583	116,295	147,878	452,357

OVERSEA ARRIVALS AND DEPARTURES, BY STATED PURPOSE OF TRAVEL: AUSTRALIA—*continued*(Persons)
DEPARTURES

Period	Permanent and long-term movement						Short-term movement		Total departures
	Permanent			Long-term		Total permanent and long-term departures	Residents departing	Overseas visitors departing	
	Former settlers departing	Other residents departing	Total permanent	Residents departing	Overseas visitors departing				
1936-40	n.a.	n.a.	n.a.	n.a.	n.a.	51,006	94,650	132,528	278,184
1941-45	n.a.	n.a.	n.a.	n.a.	n.a.	22,399	9,163	24,554	56,116
1946-50	n.a.	n.a.	n.a.	n.a.	n.a.	105,968	101,787	141,081	348,836
1951-55	n.a.	n.a.	n.a.	n.a.	n.a.	155,509	212,978	245,555	614,042
1956-60	n.a.	n.a.	n.a.	n.a.	n.a.	210,807	306,118	342,150	859,075
1960 ..	5,551	5,302	10,853	25,331	10,411	46,595	77,761	84,670	209,026
1961 ..	8,240	6,537	14,777	32,157	12,213	59,147	89,880	102,540	251,567
1962 ..	8,518	6,911	15,429	31,781	13,137	60,347	95,872	113,583	269,802
1963 ..	9,102	7,176	16,278	38,317	12,729	67,324	112,427	129,331	309,082
1964 ..	7,828	7,255	15,083	40,958	13,085	69,126	133,248	150,641	353,015

4. Permanent Movement.—(i) *General*. In the following paragraphs, particulars are given of the persons who on arrival in Australia stated that they came intending to settle, and of Australian residents who on departure from Australia stated their intent to reside permanently abroad.

(ii) *Country of Birth*. The principal countries of birth of permanent arrivals (assisted arrivals and others) and departures during the years 1963 and 1964 were as follows.

OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:
COUNTRY OF BIRTH, AUSTRALIA
(Persons)

Country of birth	1963				1964			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Others	Total		Assisted (a)	Others	Total	
Africa—								
Commonwealth countries ..	367	359	726	37	409	603	1,012	62
South Africa ..	300	327	627	74	34	409	752	96
Other ..	170	1,757	1,927	26	219	1,818	2,037	51
America—								
Commonwealth countries ..	125	508	633	162	152	656	808	197
United States of America ..	568	625	1,193	382	781	724	1,505	423
Other ..	47	87	134	13	98	149	247	13
Asia—								
Ceylon, India, Pakistan ..	248	868	1,116	105	340	974	1,314	94
Other Commonwealth countries ..	93	1,034	1,127	137	150	901	1,051	154
Other ..	106	1,783	1,889	241	154	2,259	2,413	279
Europe—								
Malta ..	2,079	2,218	4,297	54	3,668	2,118	5,786	38
United Kingdom and Ireland ..	45,867	5,722	51,589	5,424	59,336	6,983	66,319	4,865
Other Commonwealth countries ..	59	20	79	12	109	17	126	13
Austria ..	488	185	673	206	744	187	931	162
Belgium ..	390	34	424	57	218	42	260	70
Germany ..	2,486	619	3,105	897	2,939	706	3,645	667
Greece ..	2,299	8,511	10,810	128	3,217	14,850	18,067	110
Italy ..	233	12,582	12,815	416	224	11,640	11,864	298
Netherlands ..	1,262	579	1,841	1,003	1,421	771	2,192	665
Poland ..	106	930	1,036	109	126	990	1,116	135
Spain ..	1,785	328	2,113	49	147	555	702	61
Yugoslavia ..	2,023	3,002	5,025	155	2,071	3,444	5,515	159
Other ..	995	1,080	2,075	671	1,522	1,366	2,888	559
Oceania—								
Australia ..	621	261	882	5,252	782	312	1,094	5,186
New Zealand ..	52	1,446	1,498	534	50	1,864	1,914	592
Other Commonwealth countries ..	8	184	192	88	14	238	252	87
Other ..	20	20	40	10	1	13	14	3
At sea, and not stated ..	137	167	304	36	369	271	640	44
Total ..	62,914	45,236	108,150	16,278	79,604	54,860	134,464	15,083

(a) For details of assisted passage schemes, see § 9, pp. 289-93.

(iii) *Nationality.* The principal nationalities of permanent arrivals (assisted arrivals and others) and departures during the years 1963 and 1964 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:
NATIONALITY, AUSTRALIA
(Persons)**

Nationality	1963				1964			
	Arrivals			Departures	Arrivals			Departures
	Assisted (a)	Others	Total		Assisted (a)	Others	Total	
British—								
Country of citizenship—								
Australia	537	1,042	1,579	4,913	732	930	1,662	5,118
Canada	66	602	668	183	50	703	753	245
Ireland(b)	641	130	771	190	918	175	1,093	200
India, Pakistan and Ceylon	4	600	604	40	5	687	692	41
New Zealand	19	1,508	1,527	487	30	1,900	1,930	515
South Africa(b)	165	228	393	45	218	203	421	75
United Kingdom and colonies(c)	41,943	5,693	47,636	4,482	58,603	7,969	66,572	4,557
Other countries	52	709	761	88	52	916	968	129
Citizenship not stated	7,004	2,974	9,978	1,634	5,715	2,203	7,918	829
<i>Total, British</i>	<i>50,431</i>	<i>13,486</i>	<i>63,917</i>	<i>12,062</i>	<i>66,323</i>	<i>15,686</i>	<i>82,009</i>	<i>11,709</i>
American (U.S.)	585	671	1,256	464	822	756	1,578	565
Austrian	476	168	644	212	736	171	907	154
Belgian	392	27	419	61	216	36	252	78
Dutch	1,342	667	2,009	1,086	1,521	848	2,369	701
German	2,382	572	2,954	900	2,806	665	3,471	623
Greek	2,306	9,269	11,575	114	3,248	15,747	18,995	98
Italian	179	12,735	12,914	394	194	11,846	12,040	251
Lebanese .. ..	..	576	576	8	4	838	842	7
Polish(d)	7	820	827	69	21	940	961	63
Russian(e) .. ..	..	268	268	45	3	119	122	26
Spanish	1,776	335	2,111	48	121	535	656	70
Yugoslav	1,187	2,805	3,992	95	1,570	3,190	4,760	103
Stateless(f)	867	689	1,556	57	543	902	1,445	28
Other	984	2,148	3,132	663	1,476	2,581	4,057	207
Grand Total	62,914	45,236	108,150	16,278	79,604	54,860	134,464	15,083

(a) For details of assisted passage schemes see § 9, pp. 289-93. (b) Included with "British" nationality for the purpose of this table. (c) Includes Maltese. See (ii) p. 285 for particulars of persons born in Malta. (d) Includes "Stateless" who were formerly Polish. (e) Includes "Stateless" who were formerly Russian. (f) Stateless, former nationality not stated, or other than Polish or Russian.

(iv) *Occupation.* The main occupation groupings of permanent arrivals and departures during the years 1963 and 1964 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:
OCCUPATION AND SEX, AUSTRALIA**

Occupation group(a)	1963				1964			
	Arrivals		Departures		Arrivals		Departures	
	Males	Females	Males	Females	Males	Females	Males	Females
Professional, technical and related workers ..	3,159	1,954	866	647	3,919	2,177	873	678
Administrative, executive and managerial workers ..	1,467	174	370	31	1,726	194	366	39
Clerical workers ..	1,738	3,299	411	727	2,336	4,004	416	750
Sales workers ..	1,307	710	282	137	1,595	829	253	130
Farmers, fishermen, hunters, timber getters and related workers ..	3,167	51	173	5	4,624	59	177	2
Miners, quarrymen and related workers ..	316	..	43	1	379	..	53	..
Workers in transport and communication ..	1,999	246	303	41	2,777	294	241	38
Craftsmen and production-process workers ..	14,115	1,904	2,086	217	17,300	2,303	1,678	198
Labourers ..	7,652	..	567	..	7,431	..	430	..
Service (protective and other), sport and recreation workers ..	1,371	6,264	293	212	1,603	6,938	301	204
Occupation inadequately described or not stated	2,064	738	151	18	3,532	800	115	29
Persons not in work force—								
Children and students ..	17,561	16,016	2,706	2,530	22,761	20,118	2,525	2,346
Others	886	19,992	191	3,270	1,125	25,640	218	3,023
Total	56,802	51,348	8,442	7,836	71,108	63,356	7,646	7,437

(a) The classification of occupations used in compiling these figures is that used for the 1961 census and is not directly comparable with that in use prior to 1961.

(v) *Age and Conjugal Condition.* The age distribution and conjugal condition of permanent arrivals and departures during the year 1964 were as follows.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT MOVEMENT:
AGE DISTRIBUTION AND CONJUGAL CONDITION, AUSTRALIA, 1964**

Age (years)	Arrivals				Departures			
	Never married	Married	Widowed and divorced	Total	Never married	Married	Widowed and divorced	Total
MALES								
0-4	8,079	..	..	8,079	1,041	..	..	1,041
5-14	12,600	..	..	12,600	1,264	..	..	1,264
15-24	15,698	2,473	10	18,181	1,096	198	..	1,294
25-44	7,602	18,235	216	26,053	1,021	1,955	33	3,009
45-64	284	4,590	215	5,089	108	651	59	818
65 and over	49	803	254	1,106	29	135	56	220
Total	44,312	26,101	695	71,108	4,559	2,939	148	7,646

FEMALES								
0-4	7,421	..	..	7,421	1,026	..	..	1,026
5-14	11,333	..	..	11,333	1,117	..	..	1,117
15-24	10,381	5,540	31	15,952	828	645	4	1,477
25-44	3,492	17,485	350	21,327	486	1,977	93	2,556
45-64	258	3,993	1,276	5,527	91	559	226	876
65 and over	69	693	1,034	1,796	42	98	245	385
Total	32,954	27,711	2,691	63,356	3,590	3,279	568	7,437

PERSONS								
0-4	15,500	..	..	15,500	2,067	..	..	2,067
5-14	23,933	..	..	23,933	2,381	..	..	2,381
15-24	26,079	8,013	41	34,133	1,924	843	4	2,771
25-44	11,094	35,720	566	47,380	1,507	3,932	126	5,565
45-64	542	8,583	1,491	10,616	199	1,210	285	1,694
65 and over	118	1,496	1,288	2,902	71	233	301	605
Total	77,266	53,812	3,386	134,464	8,149	6,218	716	15,083

(vi) *Country of Intended Future Residence.* The principal countries of intended future residence (i.e. for a period of twelve months or more) of persons departing permanently during the years 1963 and 1964 are shown in the table following. Separate figures are given for "former settlers" departing permanently (*see* definition on p. 284) and other residents departing permanently.

**OVERSEA ARRIVALS AND DEPARTURES—PERMANENT DEPARTURES:
COUNTRY OF INTENDED FUTURE RESIDENCE(a): AUSTRALIA**

(Persons)

Country of intended future residence(a)	1963			1964		
	Former settlers departing	Other residents departing	Total	Former settlers departing	Other residents departing	Total
United Kingdom and Ireland ..	3,359	1,791	5,150	2,988	1,777	4,765
Canada	312	322	634	411	386	797
New Zealand	1,501	1,703	3,204	1,443	1,676	3,119
Papua and New Guinea ..	111	1,073	1,184	137	1,093	1,230
Other Commonwealth countries	257	352	609	246	378	624
<i>Total, Commonwealth Countries</i>	<i>5,540</i>	<i>5,241</i>	<i>10,781</i>	<i>5,225</i>	<i>5,310</i>	<i>10,535</i>
Germany	651	259	910	342	267	609
Italy	261	236	497	127	198	325
Netherlands	779	367	1,146	391	242	633
Other European countries ..	765	342	1,107	517	395	912
United States of America ..	866	544	1,410	869	544	1,413
Other countries	240	187	427	357	299	656
<i>Total, Foreign Countries</i> ..	<i>3,562</i>	<i>1,935</i>	<i>5,497</i>	<i>2,603</i>	<i>1,945</i>	<i>4,548</i>
Grand Total	9,102	7,176	16,278	7,828	7,255	15,083

(a) For a period of twelve months or more.

5. Long-term and Short-term Movement—Oversea Visitors Arriving and Residents Departing.—The number of oversea visitors arriving in Australia and the number of Australian residents departing from Australia are shown in the following table classified by mode of transport. The figures exclude persons classified to permanent movement. Visitors arriving and residents departing who are classified to short-term movement are shown according to stated purpose of travel also.

OVERSEA ARRIVALS AND DEPARTURES—LONG-TERM AND SHORT-TERM MOVEMENT: MODE OF TRANSPORT, AND STATED PURPOSE OF TRAVEL (SHORT-TERM ONLY), AUSTRALIA

(Persons)

Particulars	1962			1963			1964		
	By Sea	By Air	Total	By Sea	By Air	Total	By Sea	By Air	Total
OVERSEA VISITORS ARRIVING									
Short-term movement—									
In transit	4,285	21,192	25,477	4,336	23,012	27,348	4,897	26,686	31,583
Business	645	18,322	18,967	543	21,287	21,830	495	25,965	26,460
Holiday	12,521	41,033	53,554	11,769	49,406	61,175	11,700	60,506	72,206
Education	252	4,368	4,620	243	5,999	6,242	261	6,457	6,718
Other and not stated ..	1,462	7,344	8,806	1,175	7,607	8,782	1,563	9,348	10,911
Total	19,165	92,259	111,424	18,066	107,311	125,377	18,916	128,962	147,878
Long-term movement—									
Total	5,393	8,548	13,941	4,427	9,386	13,813	4,140	10,880	15,020

OVERSEA ARRIVALS AND DEPARTURES—LONG-TERM AND SHORT-TERM
MOVEMENT: MODE OF TRANSPORT, AND STATED PURPOSE OF TRAVEL
(SHORT-TERM ONLY), AUSTRALIA—*continued*

Particulars	1962			1963			1964		
	By Sea	By Air	Total	By Sea	By Air	Total	By Sea	By Air	Total
RESIDENTS DEPARTING									
Short-term movement—									
Business	1,665	18,864	20,529	1,453	22,248	23,701	1,405	26,253	27,658
Holiday	34,927	30,748	65,675	36,512	39,663	76,175	39,620	51,401	91,021
Education	394	987	1,381	487	1,221	1,708	479	1,688	2,167
Other and not stated	2,244	6,043	8,287	2,601	8,242	10,843	2,281	10,121	12,402
Total	39,230	56,642	95,872	41,053	71,374	112,427	43,785	89,463	133,248
Long-term movement—									
Total	24,292	7,489	31,781	27,930	10,387	38,317	28,195	12,763	40,958

§ 9. Assisted Migration into Australia

1. *General.*—Since 1945 successive Commonwealth Governments have pursued a vigorous immigration policy which has included the granting of financial assistance to selected assisted migrants from overseas countries. This assistance has in some cases been matched or partly matched by contributions from the government of the emigration country and from international funds. The basis of operation has varied from country to country—in some cases bilateral migration agreements have been negotiated, in some migration arrangements have been made through the Intergovernmental Committee for European Migration (ICEM), and in others unilateral assistance has been given by the Australian Government.

In the following table, particulars are shown of the total numbers of persons who were assisted to come to Australia by the Australian Government under all assisted passage schemes during the period 1946 to 1964.

“ ASSISTED ” MIGRATION: AUSTRALIA

Period							Nominated and selected (assisted) arrivals
1946–50	..	..	..	..	..	..	273,195
1951–55	..	..	..	..	..	..	275,241
1956–60	..	..	..	..	..	..	305,517
1959	..	..	..	..	..	..	64,146
1960	..	..	..	..	..	..	68,254
1961	..	..	..	..	..	..	55,685
1962	..	..	..	..	..	..	45,276
1963	..	..	..	..	..	..	62,914
1964	..	..	..	..	..	..	79,604

2. *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, were published in earlier issues of the 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.

3. *Migration from Britain.*—(i) *General.* At the conclusion of the 1939–45 War two migration agreements were negotiated between the Commonwealth and British Governments and signed on 5th March, 1946. These agreements came into operation on 31st March, 1947, and provided respectively for granting free passages to British ex-servicemen and their dependants and assisted passages to other residents of Britain wishing to settle permanently in Australia. The free passage agreement was terminated on 28th February, 1955, but the assisted passage agreement has continued in operation by renewal from time to time. The current assisted passage agreement came into force on 1st June, 1962, and continues until 31st March, 1967.

(ii) *Assisted Passages.* Under the present agreement, the British Government contributes £150,000 Sterling per annum towards the cost of the movement of migrants to Australia. Each migrant 19 years of age or over contributes £10 Sterling towards his passage costs. Migrants under 19 years of age make no contribution. The Commonwealth Government meets the balance of the overall transport costs.

Eligibility for consideration for assisted passages under current arrangements is confined generally to citizens of the United Kingdom and colonies, normally resident in Britain. Subject to those broad conditions of eligibility, there are six categories of applicants who may be granted assisted passages under current arrangements.

Personal nominees—persons sponsored by relatives or friends already established in Australia who provide accommodation for their nominees.

Group nominees—workers and their dependants sponsored or selected to fulfil nominations lodged by public and private employers.

Commonwealth nominees—workers and their dependants selected to meet labour requirements within industry generally in Australia.

"Bring out a Briton" nominees—migrants sponsored by special voluntary committees formed throughout Australia to stimulate the flow of British migrants through community effort.

Single men and women and married couples without children—migrants selected without specific nomination who are prepared to make their own accommodation arrangements upon arrival.

"Nest-egg families"—unnominated families having a minimum capital of £Stg.1,000 and prepared to make their own accommodation arrangements on arrival.

Hostels are provided by the Commonwealth Government for the initial accommodation of Commonwealth nominees. State Governments provide transit accommodation for certain groups of migrants.

(iii) *Number of Arrivals.* The numbers of British migrants who came to Australia under the Free and Assisted Passage Agreement during the years January, 1947, to June, 1964, are given in the following table according to the State of proposed destination.

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.	Commonwealth nominees (b)	Total
1958–59 ..	4,375	4,931	2,449	2,912	1,853	706	210	11,070	28,506
1959–60 ..	6,341	6,324	2,862	3,988	1,442	873	277	11,790	33,897
1960–61 ..	6,313	6,186	2,579	3,308	1,613	637	234	13,830	34,700
1961–62 ..	5,804	4,433	2,595	3,317	2,094	509	157	8,161	27,070
1962–63 ..	8,093	6,118	2,980	4,512	5,294	677	271	13,755	41,700
1963–64 ..	12,272	10,791	4,272	10,509	4,894	909	316	10,667	54,630
Total, January, 1947, to June, 1964 ..	108,848	115,278	53,181	51,091	45,577	14,069	4,654	131,570	524,268

(a) Includes child migrants as shown in para. 4, p. 291.

(b) See text above for explanation.

4. **Child Migration from Britain.**—The pre-war arrangements under which child migrants were brought to Australia under the sponsorship of various religious denominations and voluntary organizations were resumed in 1947. Under current arrangements these young migrants receive assisted passages and special maintenance provisions involving the British Government and the Commonwealth and State Governments.

From the beginning of 1947 to 30th June, 1964, a total of 7,108 British child and youth migrants arrived under sponsorship, 4,717 to New South Wales, 1,372 to Western Australia, 567 to Victoria and 452 to the other States. These arrivals are included in the table in para. 3 on page 290.

5. **Maltese Migration.**—The Commonwealth Government and the Government of Malta entered into an agreement on 31st May, 1948, under which financial assistance is granted jointly towards the movement to Australia of approved migrants from Malta. The agreement has been extended progressively and the current extension is effective until 30th June, 1965. ICEM (*see* para. 15) is associated with the assisted migration arrangements under this agreement.

Up to 30th June, 1964, a total of 31,609 Maltese had arrived under the assisted passage scheme.

6. **Netherlands Migration.**—On 1st April, 1951, a migration agreement between the Netherlands and Australia came into operation under which selected Dutch workers and their dependants could receive assisted passages to Australia. This superseded an earlier arrangement, made in 1946, between the Netherlands Emigration Foundation and the Commonwealth (*see* Year Book No. 39, p. 56). The 1951 agreement continued in operation under extensions until 31st March, 1964. Negotiations are well advanced for a revised agreement and, in the meantime, assisted migration has continued under the previous arrangements.

Contributions to passage costs under the agreement are made by the migrant and the Netherlands and Australian Governments. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia. ICEM (*see* para. 15) is associated with the assisted migration arrangements under this agreement.

Up to 30th June, 1964, 66,650 Dutch assisted migrants had arrived in Australia.

7. **Italian Migration.**—On 1st August, 1951, a migration agreement between Italy and Australia came into operation under which selected Italian workers and their dependants could receive assisted passages to Australia. The agreement was temporarily suspended at the end of 1952 but was resumed at the end of 1954. It continued in operation under extensions until 31st January, 1964. Negotiations are in course for a revised agreement and, in the meantime, provision has been made for assisted migration to continue under the previous arrangements.

Contributions to passage costs under the agreement are made by the migrant and the Italian and Australian Governments. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia. ICEM (*see* para. 15) is associated with the assisted migration arrangements under this agreement.

Up to 30th June, 1964, 40,870 Italian assisted migrants had settled in Australia.

8. **German Migration.**—On 29th August, 1952, a migration agreement was signed between the Federal Republic of Germany and Australia under which selected German workers and their dependants could receive assisted passages to Australia. The agreement was renewed for five years from 29th August, 1957. Negotiations are well advanced for a revised agreement and, in the meantime, assisted migration has continued under the previous arrangements.

Contributions to passage costs under the agreement are made by the migrant and the Governments of the Federal Republic of Germany and Australia. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia. ICEM (*see* para. 15) is associated with the assisted migration arrangements under this agreement.

Up to 30th June, 1964, 72,801 German assisted migrants had settled in Australia.

9. **Austrian Migration.**—Late in 1952 arrangements were made between the Austrian Government, the Australian Government and ICEM (*see* para. 15) under which selected Austrian workers and their dependants could receive assisted passages to Australia. These arrangements still apply.

The contribution formula towards passage costs has varied from time to time but at present contributions are made by the migrant and the Australian Government. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia.

Up to 30th June, 1964, 17,716 Austrian assisted migrants had settled in Australia.

10. Greek Migration.—Late in 1952 arrangements were made between the Greek Government, the Australian Government and ICEM (*see* para. 15) under which selected Greek workers and their dependants could receive assisted passages to Australia. These arrangements still apply.

Contributions to passage costs are made by the migrant, the Greek and Australian Governments and ICEM. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia.

Up to 30th June, 1964, 36,241 Greek assisted migrants had settled in Australia.

11. Spanish Migration.—In 1958 arrangements were made between the Spanish Government, the Australian Government and ICEM (*see* para. 15) under which selected Spanish workers and their dependants could receive assisted passages to Australia. At the request of the Spanish authorities, these arrangements, so far as workers are concerned, were temporarily suspended in March, 1963. Since then certain female dependants nominated by Spanish assisted migrants already in Australia have continued to arrive in Australia as assisted migrants, and negotiations are in course with a view to restoring the previous assisted passage arrangements for workers and their dependants.

Contributions to passage costs are made by the migrant, the Spanish and Australian Governments and ICEM. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia.

Up to 30th June, 1964, 7,958 Spanish assisted migrants had settled in Australia.

12. Belgian Migration.—On 1st February, 1961, arrangements were made between the Belgian Government, the Australian Government and ICEM (*see* para. 15) under which selected Belgian workers and their dependants could receive assisted passages to Australia. These arrangements still apply.

Contributions to passage costs are made by the migrant and the Belgian and Australian Governments. The Australian Government is responsible for the reception of assisted migrants and for general assistance towards their settlement in Australia.

Up to 30th June, 1964, 1,470 Belgian assisted migrants had settled in Australia.

13. Refugee Migration.—By agreement with the International Refugee Organization, Geneva, on 21st July, 1947, Australia undertook to provide resettlement opportunities for Displaced Persons. A total of 170,000 Displaced Persons arrived in Australia under this agreement in the following years.

The International Refugee Organization was terminated in 1951 and refugee problems became the responsibility of the United Nations High Commissioner for Refugees, whose office was created by the United Nations specifically for this purpose. At about the same time ICEM was established (*see* para. 15) partly to provide arrangements for the actual resettlement overseas of refugees, particularly in regard to transport.

Australia has continued to provide resettlement opportunities for refugees, European or otherwise. In the period from 1951 to 30th June, 1964, 114,885 refugees had been resettled in Australia additional to the 170,700 Displaced Persons mentioned above. Of the total number of refugees received by Australia up to 30th June, 1964, since the end of World War II, 209,656 have received financial assistance from the Australian Government towards their passage costs.

14. General Assisted Passage Scheme.—This scheme has operated since 10th September, 1954, and provides for passage assistance to be granted to selected workers and their dependants from a number of countries including the United States of America, Switzerland, the Scandinavian countries, Eire, France and the Latin American countries. It also covers certain British subjects resident outside the United Kingdom and certain European nationals outside their countries of origin.

Under the scheme Australia contributes towards passage costs an amount of £A71 8s. 6d. (U.S. \$160) per adult and proportionate amounts for children according to the fares paid. Australia provides for the reception of assisted migrants and for general assistance towards their settlement in Australia.

Up to 30th June, 1964, 23,515 assisted migrants had settled in Australia under the General Assisted Passage Scheme.

15. **The Intergovernmental Committee for European Migration (ICEM).**—This Committee, like the office of the United Nations High Commissioner for Refugees, was established to perform functions that had formerly been carried out by the International Refugee Organization. In addition to assuming responsibility for the resettlement of refugees, ICEM has been concerned also with the movements of national migrants from Europe.

Australia was one of the 16 foundation members of the Committee; there are now 29 member countries including the British Commonwealth countries of Australia, New Zealand, the United Kingdom and Malta.

The three main functions of ICEM are:

- (a) the movement of national migrants and the provision of related services;
- (b) the resettlement of refugees and the provision of related services; and
- (c) development activities and technical co-operation (this includes activities such as language teaching, vocational and orientation training and in particular measures to facilitate the acceptance of European migrants by Latin American countries).

Each member government is required to contribute an agreed percentage of the Committee's administrative expenditure. Contributions to its operational expenditure are voluntary and governments may stipulate the terms and conditions under which they are to be used.

Up to 30th June, 1964, ICEM had moved 1,319,500 persons, of whom 393,400—294,800 nationals and 98,600 refugees had departed for Australia.

16. **Summary of Arrivals of Assisted Migrants.**—The following table shows the number of assisted migrants who arrived in Australia in each of the last six financial years and since January, 1947.

ARRIVALS UNDER ASSISTED MIGRATION SCHEMES

Assisted migration scheme	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64	January, 1947, to June, 1964
Austrian	1,289	1,841	1,494	227	372	594	17,716
Belgian .. ..	..	..	232	506	414	318	1,470
General Assisted Passage(a) ..	3,275	4,176	3,527	2,234	1,874	3,327	23,515
German	6,541	9,514	10,151	2,234	1,967	2,987	72,801
Greek	2,099	2,191	2,086	2,761	2,051	2,633	36,241
Italian	3,014	3,006	3,013	1,255	227	195	40,870
Maltese	1,005	1,028	1,099	931	1,501	2,665	31,609
Netherlands ..	7,222	8,842	5,728	2,349	1,352	1,585	66,650
Refugee	4,118	3,969	3,413	946	1,375	2,040	209,656
Spanish	328	447	1,230	1,549	4,326	78	7,958
United Kingdom	28,506	33,897	34,700	27,070	41,700	54,630	524,268
Other schemes ..	623	406	323	..	..	..	28,682
Total ..	58,020	69,317	66,996	42,062	57,159	71,052	1,061,436

(a) Mostly Scandinavians, U.S. Americans, and British nationals from countries other than the United Kingdom.

NOTE.—(i) All arrivals indicated in this table have obtained some financial assistance from the Australian Government towards payment of their passage money. Transport to Australia for the migrants concerned has been arranged on (a) ships under charter to the Department of Immigration, (b) ships and aircraft under charter to the Intergovernmental Committee for European Migration, and (c) normal commercial shipping and airlines.

(ii) The arrivals under these schemes include a small number of nationals of countries other than those referred to, and stateless persons.

§ 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, emigration, aliens and the influx of criminals.

(ii) *Legislation*. Immigration into Australia is regulated by the *Migration Act 1958–1964* which came into force on 1st June, 1959, and repealed the *Immigration Act 1901–1949* and the *Aliens Deportation Act 1948*.

Any immigrant entering Australia after the commencement of the Act without having been granted an "entry permit" or who is not within an exempted class is a prohibited immigrant. Exempted persons include diplomatic, consular and trade representatives of other countries, and seamen who enter on leave while their ships are in Australian ports. For the purposes of the Migration Act an immigrant includes a person entering for temporary stay.

An entry permit is normally granted at the port of entry by means of a stamp in the traveller's passport or equivalent travel document. There is no form of application involved. Temporary entry permits are granted to persons who have been authorized to enter for a limited period only. Persons eligible to enter for indefinite residence are granted permits of unrestricted validity. A person who is refused an entry permit must be kept on board the ship on which he arrives; otherwise, the shipping company is liable to a fine of £500.

The Act abolished the "Dictation Test" as a means of excluding or deporting ineligible persons. Other deportation powers which were contained in the repealed legislation were largely re-enacted, although with some revision.

The Act revised the law relating to the emigration of Aborigines and children, repealing the *Emigration Act 1910*.

The Act does *not* affect passport or visa requirements for entry to Australia. All persons who, prior to the 1958 Act, had been required before embarkation to obtain visas or other kinds of authority to proceed to Australia, are still required to obtain them. Likewise, persons who have not had to obtain prior authority to proceed to Australia are not now required to obtain such authority solely as a result of the Act. Persons previously allowed to enter without production of passports—notably British people arriving from New Zealand—are still able to do so.

The *Aliens Act 1947–1959* provides that a register of aliens shall be maintained for every State or mainland 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 provides also that the consent of the Department must be obtained before an alien may change his surname.

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 (except for certain groups exempted) other than in 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 and mainland Territory who, as the Minister's delegates under the Act, supervise the welfare of each "immigrant child".

2. **Conditions of Immigration into Australia.**—(i) *Admission of Non-Europeans.* Australia's immigration policy is directed towards maintaining a predominantly homogeneous population. It is fundamental to this policy that people coming to Australia for permanent residence should be capable, both economically and socially, of ready integration into the community.

The Australian practice is not one of the total exclusion of persons of other than European origin. The immigration laws governing residence in Australia permit the Minister to exercise discretion. The policy so administered takes into account the qualifications of persons wishing to settle here and the merits of each case, including considerations of a humanitarian nature and broad national interest.

In addition to the indigenous people, there are in Australia some 37,300 non-Europeans. Of those 15,300 are Australian citizens (10,300 by birth and 5,000 by naturalization and registration), while 4,000 have permanent residence status but have not sought or qualified for citizenship.

The remaining 18,000 comprise 4,400 non-Europeans who have been admitted, in some instances with their families, on a temporary basis in a variety of categories, 1,200 visitors, and an Asian and other non-European student population of 12,400, including both government-sponsored and private students.

The present immigration policy provides, *inter alia*—

- (a) that non-Europeans, who are the spouses, unmarried minor children or aged parents of Australian citizens, or of British subjects permanently resident here, may be admitted for permanent residence;
- (b) that a European British subject proceeding from overseas to Australia for permanent residence may be accompanied by his non-European spouse and unmarried minor children;
- (c) that non-Europeans who have been admitted for temporary residence may qualify, on residential and other grounds, for permanent resident status and subsequently for naturalization;
- (d) that, in addition to those non-Europeans admitted for temporary residence for commerce and trade, highly qualified and distinguished people who seek to reside here (including those non-Europeans who have taken educational courses at the tertiary level in Australia, who have spent at least five years in their own countries after having completed their courses, and who have qualifications from which the Australian community would benefit) may be admitted on a selective basis for indefinite stay.

Those non-Europeans, whose continued residence in Australia was induced by political events in their own countries, have been permitted to remain here indefinitely.

(ii) *Persons of European Race.* Maltese, Cypriots and aliens of European race desiring to settle permanently in Australia are required to obtain authority for admission from the Department of Immigration or an Australian oversea post. Their admission under the present policy is subject to their compliance with the Commonwealth's requirements with 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 Directors of Migration in the capital cities of the various States;
- (b) in overseas countries—from migration officers or from Australian diplomatic posts (a complete list of these is given in Chapter XXIX. International Relations).

§ 11. Passports

Australian passports are issued, under the *Passports Act 1938–1948* and *Passport Regulations*, to Australian citizens.

Diplomatic passports are issued to persons travelling on official missions of a diplomatic character. Official passports are granted to persons travelling on the official business of the Commonwealth or a State Government.

Australian passports are obtainable on application at offices of the Commonwealth Department of Immigration in each State and internal Territory of Australia or from overseas offices of that Department, from any Australian diplomatic or consular mission abroad, or from the office of any Australian Government Trade Commissioner overseas.

Applicants for passports must furnish evidence of their identity and nationality and pay a fee of £1.

Approximately 70,000 Australian passports are issued each year in Australia and abroad.

§ 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. Australian citizenship was automatically acquired as from 26th January, 1949, by persons who were British subjects at that date and who either (a) were born in Australia or New Guinea; or (b) were naturalized in Australia; or (c) had been residing in Australia during the five years immediately preceding 26th January, 1949; or (d) were born outside Australia of fathers to whom (a) or (b) above applied (provided the persons concerned had entered Australia without being placed under any immigration restriction); or (e) were women who had been married to men who became Australian citizens under the above headings (provided that the women concerned had entered Australia without being placed under immigration restriction). For the purposes of the Act, “Australia” includes Norfolk Island and the Territory of Papua, and by an amendment of the Act in 1950 it was further provided that Nauru shall be treated in the same manner as New Guinea.

Citizenship may be acquired in the following ways:—(a) by birth in Australia; (b) by birth outside Australia, of a father who is an Australian citizen, provided that the birth is registered at an Australian Consulate; (c) by registration—Certificates of Registration as Australian citizens may be granted by the Minister to British subjects or Irish citizens who make application and satisfy the Minister that they can comply with specified requirements as to residence in Australia, good character and intention to reside permanently in Australia; (d) by naturalization—Certificates of Naturalization as Australian citizens may be granted by the Minister to aliens who make application and can comply with requirements somewhat similar to those previously required under the *Nationality Act 1920-1946*. Requirements for naturalization are—(i) as a rule five years residence in Australia is required, but residence in other British countries or service under a British government may be accepted (special concessions in the matter of residence qualifications in respect of persons who have voluntarily enlisted in the armed forces were made by an amending Act of 1952); (ii) the applicants must have an adequate knowledge of the responsibilities and privileges of citizenship; (iii) Certificates do not take effect until the applicant takes the Oath of Allegiance. The oath is now taken, and citizenship is conferred, at public ceremonies held in the locality of the applicant's place of residence, and presided over by the mayor or equivalent head of the local government authority.

The Declaration of Intention to apply for naturalization, which was introduced by the original Act of 1948, is no longer compulsory, although it can still be made if an intending applicant so desires. This change was made by the amending Acts of 1955 and 1959 under the provisions of which aliens may lodge applications on completing 4½ years residence, but may not be granted naturalization until five years residence has been completed.

Under the Act, the independence of married women in nationality matters is recognized, and British nationality is restored to those women who had lost it through marriage to aliens. Marriage does not effect a woman's nationality. Alien women who marry Australian citizens may, however, be naturalized under somewhat easier conditions than those which apply to other aliens.

2. **Naturalization Certificates Granted.**—The following tables show the number of certificates granted during 1963-64 and the number of persons affected by these certificates. The certificate covers the person being naturalized and his or her children under the *Nationality and Citizenship Act 1948-1960*.

**NATURALIZATION CERTIFICATES GRANTED AND PERSONS AFFECTED:
PREVIOUS NATIONALITIES OF RECIPIENTS, AUSTRALIA, 1963-64**

Previous nationality	No. of certificates granted	Persons affected by certificates	Previous nationality	No. of certificates granted	Persons affected by certificates	Previous nationality	No. of certificates granted	Persons affected by certificates
Albanian ..	24	26	Finnish ..	129	165	Polish ..	2,515	2,816
Argentinian ..	2	2	French ..	137	150	Portuguese ..	34	38
Australian Protected Persons	134	210	German ..	2,707	3,310	Romanian ..	93	103
Austrian ..	633	751	Greek ..	4,036	4,507	Russian ..	745	814
Belgian ..	31	36	Hungarian ..	2,038	2,312	Spanish ..	62	72
Brazilian ..	1	1	Indonesian ..	18	19	Swedish ..	25	28
British Protected Persons	12	14	Iranian ..	5	7	Swiss ..	108	118
Bulgarian ..	44	48	Israeli ..	426	552	Syrian ..	19	24
Burmese ..	4	12	Italian ..	6,994	8,206	Turkish ..	19	24
Byelorussian ..	29	33	Japanese ..	53	58	Ukrainian ..	600	633
Chilean ..	3	4	Jordanian ..	11	17	United Arab Republic	19	20
Chinese ..	355	392	Korean ..	423	443	United States ..	90	97
Czechoslovak ..	194	212	Latvian ..	284	315	American ..	4	4
Danish ..	217	271	Lithuanian ..	205	220	Venezuelan ..	2,419	2,774
Dutch ..	3,923	4,933	Luxembourgish ..	1	1	Yugoslav ..	318	367
Estonian ..	126	128	Mexican ..	54	63	Stateless ..		
Filipino ..	10	12	Norwegian ..					
			Peruvian ..		(a) 1			
						Total ..	30,324	35,353

(a) Included on certificate granted to Argentinian.

**COUNTRIES IN WHICH PERSONS GRANTED AUSTRALIAN CITIZENSHIP
ORDINARILY RESIDED IMMEDIATELY BEFORE ENTERING AUSTRALIA
OR NEW GUINEA, 1963-64**

Country of previous residence	Persons affected	Country of previous residence	Persons affected	Country of previous residence	Persons affected	Country of previous residence	Persons affected
Albania ..	5	England ..	300	Lebanon ..	323	Singapore ..	14
Algeria ..	1	Estonia ..	11	Libya ..	3	South Africa ..	22
Argentina ..	20	Ethiopia ..	1	Lithuania ..	4	Spain ..	62
Austria ..	1,954	Fiji ..	6	Luxembourg ..	1	Sweden ..	54
Bahrain ..	1	Finland ..	158	Malaya ..	14	Switzerland ..	253
Belgium ..	85	France ..	393	Mexico ..	2	Syria ..	8
Bolivia ..	1	Germany ..	6,765	Morocco ..	1	Tanganyika ..	20
Brazil ..	26	Greece ..	3,822	Netherlands West Indies ..	4,788	Territory of New Guinea ..	265
British Solomon Islands ..	9	Holland ..	154	New Caledonia ..	5	Thailand ..	6
Bulgaria ..	6	Hungary ..	1,220	New Zealand ..	41	Turkey ..	45
Burma ..	14	India ..	9	Norway ..	69	Uganda ..	2
Canada ..	24	Indonesia ..	177	Pakistan ..	4	Ukraine ..	8
Ceylon ..	3	Iran ..	11	Paraguay ..	1	United States of America ..	107
Chile ..	9	Ireland ..	6	Peru ..	6	Uruguay ..	2
China ..	932	Israel ..	606	Philippines ..	21	Venezuela ..	20
Colombia ..	1	Italy ..	8,707	Poland ..	840	Western Samoa ..	1
Cyprus ..	4	Japan ..	62	Portugal ..	32	Yugoslavia ..	1,500
Czechoslovakia ..	59	Jordan ..	10	Rhodesia ..	5		
Denmark ..	296	Korea ..	1	Romania ..	58		
Egypt ..	839	Latvia ..	13	Russia ..	24	Total ..	35,353

The numbers of persons affected by certificates granted in 1963-64 in respect of residents of the various States and Territories were as follows:—New South Wales, 10,703; Victoria, 14,367; Queensland, 1,825; South Australia, 4,066; Western Australia, 3,105; Tasmania, 423; Northern Territory, 151; Australian Capital Territory, 395; New Guinea, 318; Total, 35,353.

§ 13. Population of External Territories

Ordinances of the individual external territories under the control of Australia provide for a census of the population to be taken on the day prescribed for the taking of a census in the Commonwealth of Australia.

The following table shows the population of the Territories of Christmas Island, Cocos (Keeling) Islands, Norfolk Island, Papua, the Trust Territory of New Guinea and the Trust Territory of Nauru at the census of 30th June, 1961, and as estimated at 30th June, 1964.

POPULATION: EXTERNAL TERRITORIES

Territory	Census, 30th June, 1961			Estimate, 30th June, 1964
	Males	Females	Persons	Persons
Christmas Island ..	1,963	1,136	3,099	3,382
Cocos (Keeling) Islands ..	333	273	606	663
Norfolk Island ..	421	423	844	896
Papua ..	(a) 5,490	(a) 4,304	(a) 9,794	(b) 561,740
Trust Territory of New Guinea	(a) 9,158	(a) 6,378	(a) 15,536	(b) 1,539,076
Trust Territory of Nauru ..	3,019	1,594	4,613	4,914

(a) Non-indigenous population only. The indigenous population was estimated to be—Papua, 513,648; Trust Territory of New Guinea, 1,433,383. (b) Total population. The non-indigenous population was estimated to be—Papua, 12,888; Trust Territory of New Guinea, 16,920.

Further particulars concerning the indigenous populations of the territories are given in Chapter V. The Territories of Australia.

§ 14. The Aboriginal Population of Australia

In Year Book No. 17, pages 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 pages 914-16 of 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 pages 687-96 of Year Book No. 23.

The Aborigines are scattered over the whole of the mainland, but are mostly in the Northern Territory, Queensland, and Western Australia. Particulars of the number in each State and Territory at the census of 30th June, 1961, are shown in the following table. Half-caste Aborigines are included in the numbers of the population and are of course enumerated at the census.

ABORIGINAL POPULATION, 30th JUNE, 1961

State or Territory	Full-blood					Half-caste (enumerated at the census)			Total full-blood and half-caste
	Number enumerated at census, 30th June, 1961			Estimated number out of contact at census	Total number as recorded or estimated at 30th June, 1961	Males	Females	Persons	
	Males	Females	Persons						
New South Wales ..	791	697	1,488	..	1,488	6,703	6,525	13,228	14,716
Victoria ..	141	112	253	..	253	758	785	1,543	1,796
Queensland ..	4,686	4,000	8,686	..	8,686	5,460	5,550	11,010	19,696
South Australia ..	1,181	966	2,147	..	2,147	1,426	1,311	2,737	4,884
Western Australia ..	4,243	3,878	8,121	2,000	10,121	4,108	4,047	8,155	18,276
Tasmania ..	..	..	..	..	..	24	14	38	38
Northern Territory ..	7,857	7,585	15,442	1,944	17,386	1,156	1,162	2,318	19,704
Aust. Cap. Territory ..	..	..	..	..	..	78	65	143	143
Australia ..	18,899	17,238	36,137	3,944	40,081	19,713	19,459	39,172	79,253

Torres Strait Islanders, both full-blood and half-caste, are not included as Aborigines, but are included in the populations shown on pp. 260-81. At the 1961 census there were 4,972 full-blood and 245 half-caste Torres Strait Islanders of whom 4,970 and 237 respectively were recorded in Queensland.

For further information as to the estimated numbers of full-blood Aborigines, and the difficulty of arriving at precise figures, see Year Book No. 47, page 329.

§ 15. International Statistics of Population

1. Introduction.—In the following tables, the population, density, rate of growth, natural increase and masculinity are shown in respect of all countries which had an estimated population of at least one million persons in 1962, plus Papua. The source of these figures is the 1963 *Demographic Yearbook* which is prepared and published by the Statistical Office of the United Nations. The tables include figures varying in reliability and accuracy, there being considerable variation in the quality of demographic statistics as between countries, but this information has been shown to provide some form of guide as to the magnitude and trend of population movements in oversea countries.

Where the information available to the Statistical Office of the United Nations relates to only part of the population of a country, the population characteristic (e.g., rate of growth), or vital statistics rate (e. g., marriages), has been omitted from the tables, and this is indicated by a footnote.

For fuller particulars of the differences in the quality of the statistics and their reliability and for other qualifications, reference should be made to the detailed explanations contained in the *Demographic Yearbook* of the Statistical Office of the United Nations (see particularly Technical Notes on Statistical Tables and footnotes to the tables).

2. **Population, Rate of Growth and Density: World, Continents and Regions.**—The following table shows for the World, Continents, and Regions, estimated population from 1930 to 1950 at ten year intervals, and for 1958 and 1962. The annual rate of increase (per cent.), together with the average annual increase, during the period 1958–62, is also shown. It should be noted that the population figures have been adjusted for underenumeration and errors in estimation. In preparing these figures, the Population Branch of the United Nations revises, from time to time, the estimates for previous years as new data become available, for example, from a census. The figures are estimates only, and as such are subject to a substantial margin of error.

POPULATION, DENSITY AND RATE OF INCREASE FOR THE WORLD AND CONTINENTS—SELECTED YEARS

(Source: United Nations *Demographic Yearbook*, 1963)

Continent and region	Population					Annual rate of increase 1958–62 (per cent.)	Average annual increase 1958–62 (millions)	Density (persons per square mile)
	Adjusted estimates of mid-year population (millions)							
	1930	1940	1950	1958	1962			
World Total	2,015	2,249	2,509	2,893	3,135	2.0	60.5	60
<i>Africa</i>	157	176	207	245	269	2.3	6.0	23
Northern Africa	53	61	71	84	92	2.3	2.0	23
Tropical and Southern Africa	104	115	136	161	177	2.3	4.0	23
<i>America</i>	244	277	329	394	430	2.3	9.0	26
Northern America	135	146	167	193	206	1.7	3.2	25
Middle America	34	41	51	64	71	2.9	1.8	67
South America	75	90	111	137	153	2.8	4.0	22
<i>Asia</i>	1,072	1,212	1,384	1,611	1,764	2.3	38.2	166
South West Asia	47	53	60	73	80	2.3	1.8	33
South Central Asia	362	410	471	537	586	2.2	12.2	296
South East Asia	128	155	174	207	230	2.6	5.7	133
East Asia	535	594	679	794	868	2.3	18.5	192
<i>Europe</i>	356	381	395	420	434	0.9	3.5	227
Northern and Western Europe	122	128	133	140	145	0.9	1.3	167
Central Europe	120	127	128	136	141	0.9	1.2	360
Southern Europe	114	126	134	144	148	0.8	1.0	227
<i>Oceania</i>	10.4	11.3	13.0	15.8	17.2	2.2	0.3	5
<i>Union of Soviet Socialist Republics</i>	176	192	181	207	221	1.7	3.5	26

3. **Population, Density, Rate of Growth, Natural Increase and Masculinity of Selected Countries.**—Certain details of the population of the more populous countries within continental groups are shown in the following table. As explained above, reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1963, regarding geographical units used, boundaries of areas, reliability of estimates, etc.

POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE
AND MASCULINITY—SELECTED COUNTRIES

(Source: United Nations Demographic Yearbook, 1963)

Country	Population mid-year 1962 (thous- ands)	Density 1962 (persons per square mile)	Annual rate of increase 1958-62 (per cent.)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand popula- tion)	Year	Rate (number of males per 100 females)
Africa—							
Nigeria	36,475	102	1.9	..	(a)	1963	(a)
United Arab Republic—							
Egypt	27,285	71	2.6	..	(a)	1960	101.1
Ethiopia	21,000	46	1.6	..	(a)	..	(a)
South Africa	16,640	35	2.6	..	(a)	1960	101.1
Congo (Leopoldville)	14,797	16	2.4	1955-57	23	1955-57	94.4
Sudan	12,470	13	2.8	1955	33.2	1956	102.2
Morocco	12,360	72	2.0	1962	27.4	1960	100.1
Algeria	11,300	12	2.1	..	(a)	1960	(a)
Tanganyika	9,607	27	1.9	1957	22	1957	92.9
Kenya	8,595	38	2.9	..	(a)	1962	98.1
Ghana	7,148	78	(a)	..	(a)	1960	102.2
Uganda	7,016	76	2.5	1959	22	1959	100.9
Mozambique	6,750	22	2.0	..	(a)	1960	92.0
Madagascar	5,730	25	2.8	..	(a)	1956	(a)
Angola	4,936	10	2.1	..	(a)	1960	104.3
Upper Volta	4,500	43	(a)	1960-61	18.6	1960-61	100.8
Cameroun	4,326	24	1.9	..	(a)	1953	(a)
Mali	4,305	9	3.9	1960	33	1960-61	(a)
Tunisia	4,290	89	1.4	1962	33.0	1956	107.2
Northern Rhodesia	3,880	26	3.3	1954	30.4	1962	106.2
Northern Rhodesia	3,400	12	2.8	1950	24.6	1963	98.4
Ivory Coast	3,375	27	2.2	1961	22.8	1957-58	(a)
Senegal	3,280	43	(a)	1960-61	26.6	1960-61	97.1
Guinea	3,259	34	3.0	1955	22	1955	90.8
Niger	2,995	61	3.0	1959-60	29	1960	94.3
Nyasaland	2,950	64	2.1	..	(a)	1961	(a)
Rwanda	2,780	273	2.6	1957	38.3	1952	(a)
Chad	2,720	5	1.1	..	(a)	1956	(a)
Burundi	2,600	242	4.9	1957	29.2	1952	(a)
Somalia	2,250	9	3.2	..	(a)	1931	(a)
Dahomey	(b) 2,200	49	(a)	1961	28	1961	98.0
Sierra Leone	2,170	78	0.5	..	(a)	1963	(a)
Togo	1,523	70	(a)	1961	26	1958-60	91.9
Central African Republic	(b) 1,250	5	1.9	1959-60	18	..	(a)
North America—							
United States of America	186,656	52	1.6	1963	12.0	1960	97.1
Mexico	37,233	49	3.1	1963	34.6	1960	99.5
Canada	18,600	5	2.1	1963	17.0	1961	102.8
Cuba	7,068	160	2.0	1953-57	20-21	1953	105.0
Haiti	4,346	406	2.2	1963	22.0	1950	94.5
Guatemala	4,017	96	3.2	1962	30.4	1950	102.2
Dominican Republic	3,220	171	3.6	1953-57	25-32	1960	102.0
El Salvador	2,627	318	(a)	1963	37.9	1961	97.0
Puerto Rico	2,460	716	1.7	1963	24.0	1960	98.0
Honduras	1,950	451	3.0	1953-57	25-32	1961	99.2
Jamaica	1,641	372	1.5	1963	30.5	1960	92.3
Nicaragua	1,578	28	3.5	1953-57	28-35	1963	(a)
Costa Rica	1,274	65	4.3	1963	41.4	1963	100.7
South America—							
Brazil	75,271	23	3.4	1953-57	24-28	1960	(a)
Argentina	21,418	20	1.6	1963	13.9	1960	100.6
Colombia	14,769	34	2.2	1953-57	28-29	1951	90.9
Peru	11,511	23	(a)	1953-57	22-30	1961	99.1
Chile	8,029	28	2.4	1962	22.5	1960	96.2
Venezuela	7,872	22	3.4	1953-57	25-32	1961	102.7
Ecuador	4,596	44	3.2	1953-57	28-32	1962	100.0
Bolivia	3,549	8	1.4	1953-57	18-25	1950	96.2
Uruguay	2,914	40	1.4	..	(a)	1963	98.7
Paraguay	1,857	12	2.4	1953-57	30-35	1962	97.2
Asia—							
China (mainland)	c 646,530	175	(a)	1957	23	1953	107.6
India	449,381	382	2.3	1951-61	18.9	1961	100.3
Indonesia	97,765	170	2.2	1962	22	1961	97.3
Pakistan	96,558	264	2.1	1962	26-30	1961	111.0

NOTE.—See next page for footnotes.

POPULATION, DENSITY, RATE OF INCREASE, NATURAL INCREASE
AND MASCULINITY—SELECTED COUNTRIES—*continued*

Country	Population mid-year 1962 (thousands)	Density (persons per square mile)	Annual rate of increase 1958-62 (per cent.)	Natural increase		Masculinity at latest census	
				Year	Rate (per thousand population)	Year	Rate (number of males per 100 females)
<i>Asia—continued</i>							
Japan	94,930	672	0.9	1963	10.2	1960	96.5
Philippines	29,257	253	3.2	..	(a)	1960	(a)
Thailand	27,995	141	3.0	1956	22	1960	(a)
Turkey (in Asia)	26,660	91	2.6	..	(a)	1960	103.1
Korea, Republic of	26,520	698	3.3	1963	28.4	1960	(a)
Burma	23,183	89	(a)	1955	15	1941	104.0
Iran	21,227	33	1.9	1963	25-28	1956	103.6
Vietnam, North	17,200	281	3.4	..	(a)	1960	93.4
Vietnam, Republic of	14,929	226	3.7	..	(a)	..	(a)
Afghanistan	14,684	58	3.1	..	(a)	..	(a)
China (Taiwan)	11,327	816	3.6	1962	31.0	1956	103.8
Korea (North)	10,500	23	2.3	..	(a)	..	(a)
Ceylon	10,442	412	2.7	..	(a)	1963	(a)
Nepal	9,550	176	(a)	1955-60	13.2	1961	97.3
Federation of Malaya	6,732	145	3.2	1962	31.0	1957	106.5
Iraq	6,732	39	1.6	..	(a)	1957	100.7
Saudi Arabia	6,400	7	1.6	..	(a)	..	(a)
Cambodia	5,740	82	(a)	1959	21.7	1962	100.9
Syria	5,067	71	(a)	..	(a)	1960	105.6
Yemen	5,000	66	3.2	..	(a)	..	(a)
Hong Kong	3,410	8,568	4.5	1963	26.6	1961	105.8
Israel (Jewish population)	2,292	287	3.5	1962	16.0	1961	103.0
Laos	1,882	21	2.5	..	(a)	..	(a)
Lebanon	1,760	438	2.9	..	(a)	..	(a)
Singapore	1,733	7,737	3.4	1962	29.2	1957	111.7
Jordan	1,727	46	2.3	..	(a)	1961	103.5
<i>Europe—</i>							
<i>Germany—</i>							
Federal Republic of	54,061	564	1.3	1963	7.1	1961	89.4
Eastern Germany	16,044	385	-0.3	1961	4.9	1950	80.2
West Berlin	2,180	11,720	-0.5	1963	-5.9	1961	73.2
East Berlin	1,058	6,782	-1.0	1961	-1.1	1950	74.2
United Kingdom	53,441	567	0.8	1962	6.4	1961	93.7
Italy	50,170	431	0.6	1963	8.9	1961	96.1
France	46,998	223	1.2	1963	6.5	1962	94.6
Spain	30,817	158	0.8	1963	12.5	1960	94.2
Poland	30,324	252	1.3	1963	11.5	1960	93.6
Yugoslavia	18,837	191	1.1	1963	12.5	1961	94.9
Romania	18,681	204	0.9	1963	7.4	1956	94.6
Czechoslovakia	13,856	281	0.7	1963	7.4	1961	95.2
Netherlands	11,797	909	1.3	1963	12.9	1960	99.3
Hungary	10,061	280	0.4	1963	3.2	1960	93.3
Belgium	9,221	783	0.5	1963	4.4	1961	95.8
Portugal	8,971	253	0.7	1963	12.7	1960	92.7
Greece	8,451	166	0.8	..	(a)	1961	95.7
Bulgaria	8,013	188	0.9	1963	8.2	1956	95.6
Sweden	7,562	44	0.5	1963	4.7	1960	99.5
Austria	7,128	220	(a)	1963	6.0	1961	88.1
Switzerland	5,660	355	2.1	1963	9.3	1960	96.9
Denmark	4,654	280	0.8	1962	6.9	1960	98.3
Finland	4,505	35	0.8	1963	8.8	1960	93.0
Norway	3,639	29	0.8	1963	7.5	1960	99.3
Ireland	2,824	104	-0.3	1963	10.4	1961	101.1
Turkey (in Europe)	2,399	263	2.4	..	(a)	1960	117.0
Albania	1,711	154	3.2	1962	28.6	1960	105.5
<i>Oceania—</i>							
Australia	10,705	4	2.1	1963	12.9	1961	102.2
New Zealand	2,485	24	2.2	1963	16.7	1961	101.0
New Guinea (Aust. Admin.)	1,485	16	2.6	..	(a)	1961	d 143.6
Papua	540	6	2.6	..	(a)	1961	d 127.6
Union of Soviet Socialist Republics	221,465	26	1.7	1962	14.9	1959	81.9

(a) Not available or available information relates to a segment of population only.
population. (c) 1957.

(b) Indigenous

(d) Non-indigenous population.

CHAPTER X

VITAL STATISTICS

NOTE.—The tables in this chapter are confined to the principal characteristics of vital statistics for Australia, and relate, in the main, to the year 1963, except for the totals of marriages, births, deaths and infant deaths, for which it has been possible to include figures for 1964. Comparisons have been restricted, in general, to the individual years 1960 to 1964 and the five-year periods 1926–30 to 1956–60, while age data have been shown in five-year groups. Comparisons over longer periods, together with more detailed figures such as single age particulars and cross-classifications of various characteristics, will be found in the annual bulletin, *Demography*. For 1963 and following years a separate bulletin *Causes of Death* is being published. This will contain the detailed tables based on the International Statistical Classification of Diseases, Injuries and Causes of Death which were formerly published in *Demography*. Current information is published in the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics* and the *Australian Demographic Review* (a mimeographed series issued at intervals throughout the year on population and vital statistics).

Figures of births and deaths for Australia are exclusive throughout of full-blood Aborigines.

Vital statistics for the principal countries of the world are set out in § 7. International Vital Statistics.

§ 1. Provisions for Registration and Compilation of Statistics

In Australia vital statistics are compiled from information supplied for the registration 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 having been taken over in respect of the Northern Territory 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 (the Government Statist in Victoria) or the Principal Registrar.

Information concerning a birth is required to be supplied within 28 days in the Australian Capital Territory and the Northern Territory, 42 days in South Australia, and 60 days in other States. For the registration of a death the period allowed is 8 days in Tasmania, 10 days in South Australia, 14 days in Western Australia, Australian Capital Territory and Northern Territory, 21 days in Victoria, and 30 days in New South Wales and Queensland.

The *Marriage Act* 1961 came into operation on 1st September, 1963, placing the marriage laws of all States, the mainland Territories and Norfolk Island on a uniform basis. Provision is made for the celebration of marriage by ministers of religion registered with the Registrar of Ministers of Religion appointed in each State and Territory by the Attorney-General, and by certain civil officers. In all cases, the authorized celebrant is required to register particulars of the parties married with the appropriate registering authority in each State or Territory. The celebrant is requested to register a marriage as soon as practicable and in any case not later than fourteen days after the marriage.

The registration of stillbirths is compulsory in all the States and Territories except Tasmania. Western Australia in 1908 was the first State to introduce compulsory registration, followed by the Australian Capital Territory in 1930, New South Wales in 1935, South Australia in 1937, the Northern Territory in 1949, Victoria in 1953, and Queensland in 1959.

Stillbirths are entered in both the birth and death registers in New South Wales and Western Australia, in the birth register in the Australian Capital Territory and the Northern Territory, and in separate stillbirth registers in Victoria, South Australia and Tasmania. Stillbirths are not entered in a register in Queensland but the papers are kept for a period of at least ten years. Though registration is not compulsory in Tasmania it is believed that for various reasons nearly all stillbirths are notified voluntarily. In this chapter stillbirths have been excluded from all tables of births and deaths and are shown only in those specially relating to stillbirths.

The data for the compilation of vital statistics are obtained from registry records and dispatched, through the Statistical Office in each State and Territory, to the Commonwealth Statistician. The compilation and publication of vital statistics for Australia is one of the functions of the Commonwealth Statistician. The Deputy Commonwealth Statisticians compile and publish statistics relating to their respective States.

§ 2. Marriages

1. **Number of Marriages.**—The numbers of marriages registered in each State and Territory in five-year periods from 1926–30 to 1956–60, and for each of the years 1960 to 1964, are shown in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 575. A graph showing the number of marriages in each year from 1870 to 1964 appears on page 309 of this issue.

MARRIAGES

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926–30 ..	19,253	12,955	6,279	4,036	3,167	1,506	23	30	47,249
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
1956–60 ..	28,432	20,422	10,254	6,517	5,145	2,573	190	321	73,854

ANNUAL TOTALS

1960 ..	29,328	20,627	10,227	6,607	5,323	2,713	208	395	75,428
1961 ..	29,773	21,264	10,392	6,804	5,150	2,677	207	419	76,686
1962 ..	30,360	22,393	10,642	7,021	5,466	2,485	243	480	79,090
1963 ..	30,999	22,061	11,431	7,302	5,755	2,579	260	529	80,916
1964 ..	32,633	24,169	11,752	7,765	6,023	2,869	233	569	86,013

2. **Crude Marriage Rates.**—The crude marriage rates for each State and Territory from 1926–30 to 1956–60, and for each of the years 1960 to 1964, are given hereunder.

CRUDE MARRIAGE RATES(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926–30 ..	7.86	7.42	7.10	7.12	7.80	6.97	5.11	3.86	7.52
1931–35 ..	7.20	7.02	7.35	6.83	7.58	7.19	5.92	5.74	7.16
1936–40 ..	9.29	9.52	8.80	9.65	9.49	9.25	13.28	7.22	9.35
1941–45 ..	9.97	9.86	10.61	10.61	9.74	8.61	7.18	7.57	9.94
1946–50 ..	9.90	9.72	9.41	9.87	10.01	9.56	9.39	9.36	9.77
1951–55 ..	8.41	8.34	7.91	8.11	8.44	8.35	9.13	8.20	8.29
1956–60 ..	7.70	7.50	7.14	7.26	7.36	7.69	8.63	7.51	7.50

(a) Number of marriages per 1,000 of mean population.

CRUDE MARRIAGE RATES(a)—continued

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL RATES									
1960 ..	7.65	7.22	6.86	6.99	7.36	7.82	8.28	7.51	7.34
1961 ..	7.61	7.26	6.86	7.02	6.98	7.57	7.89	7.13	7.30
1962 ..	7.63	7.49	6.91	7.10	7.24	6.91	9.01	7.31	7.39
1963 ..	7.65	7.22	7.32	7.24	7.44	7.08	9.07	7.21	7.41
1964 ..	7.92	7.72	7.41	7.52	7.62	7.81	7.42	7.05	7.72

(a) Number of marriages per 1,000 of mean population.

The crude marriage rates for Australia and the more populous countries of the world are shown for the latest available year in § 7. International Vital Statistics, pp. 344-6.

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 nine census periods to 1960-62. 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	Rate(a)
1880-82	48.63	1932-34	42.88
1890-92	44.04	1946-48	71.24
1900-02	42.14	1953-55	65.32
1910-12	50.12	1960-62	62.27
1920-22	55.97		

(a) Average annual number of persons who married per 1,000 unmarried persons, including widowed and divorced, aged 15 years and over.

4. **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 1963 are given hereunder. There were 9,712 males under 21 years of age married during 1963, while the corresponding number of females was 32,844. At the other extreme there were 1,047 bridegrooms and 468 brides in the age group 65 years and over.

AGE AND CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES:
AUSTRALIA, 1963

Age at marriage (years)	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
Under 20 ..	5,036	..	..	5,036	23,033	5	7	23,045
20-24 ..	37,793	16	46	37,855	37,631	78	298	38,007
25-29 ..	19,137	73	470	19,680	7,479	160	865	8,504
30-34 ..	6,298	131	786	7,215	2,207	208	1,014	3,429
35-39 ..	2,626	200	902	3,728	1,066	325	979	2,370
40-44 ..	1,077	261	772	2,110	571	406	699	1,676
45-49 ..	597	327	601	1,525	347	483	526	1,356
50-54 ..	322	388	481	1,191	222	403	309	934
55-59 ..	175	422	284	881	133	355	154	642
60-64 ..	100	401	147	648	86	328	71	485
65 and over ..	96	831	120	1,047	58	367	43	468
Total ..	73,257	3,050	4,609	80,916	72,833	3,118	4,965	80,916

(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 1926-30 to 1956-60 and for each of the years 1959 to 1963.

CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: PROPORTIONAL DISTRIBUTION, AUSTRALIA

(Per cent.)

Period	Bridegrooms				Brides			
	Bachelors	Widowers	Divorced	Total	Spinsters	Widows	Divorced	Total
1926-30 ..	92.31	5.93	1.76	100.00	93.46	4.55	1.99	100.00
1931-35 ..	92.63	5.39	1.98	100.00	94.37	3.53	2.10	100.00
1936-40 ..	92.59	4.82	2.59	100.00	93.94	3.38	2.68	100.00
1941-45 ..	91.44	4.77	3.79	100.00	92.11	3.93	3.96	100.00
1946-50 ..	88.82	4.74	6.44	100.00	88.71	4.74	6.55	100.00
1951-55 ..	88.77	4.63	6.60	100.00	88.04	4.81	7.15	100.00
1956-60 ..	89.86	4.18	5.96	100.00	88.80	4.47	6.73	100.00
1959 ..	89.66	4.21	6.13	100.00	88.62	4.44	6.94	100.00
1960 ..	90.04	4.00	5.96	100.00	88.93	4.43	6.64	100.00
1961 ..	90.13	3.95	5.92	100.00	89.47	4.30	6.23	100.00
1962 ..	90.18	3.87	5.95	100.00	89.58	4.04	6.38	100.00
1963 ..	90.53	3.77	5.70	100.00	90.01	3.85	6.14	100.00

(iii) *Relative Ages of Bridegrooms and Brides.* The relative ages of bridegrooms and brides in 1963 are shown below in age groups of five years.

RELATIVE AGES OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1963

Age of bridegroom (years)	Total bridegrooms	Age of bride (years)							
		Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over
Under 20 ..	5,036	32	4,282	697	25	..	..	..	..
20-24 ..	37,855	18	14,631	21,635	1,393	142	27	6	3
25-29 ..	19,680	5	3,389	11,898	3,560	619	158	38	13
30-34 ..	7,215	1	539	2,823	2,142	1,113	431	116	50
35-39 ..	3,728	..	105	688	938	860	671	329	137
40-44 ..	2,110	..	26	180	303	389	500	407	305
45-49 ..	1,525	..	14	60	91	186	316	349	509
50-54 ..	1,191	..	3	18	31	77	156	227	679
55-59 ..	881	..	..	7	10	23	62	113	666
60-64 ..	648	..	..	..	6	15	31	60	536
65 and over ..	1,047	..	..	1	5	5	18	31	987
Total Brides	80,916	56	22,989	38,007	8,504	3,429	2,370	1,676	3,885

(iv) *Average Ages of Bridegrooms and Brides.* The average age at marriage of brides and bridegrooms has declined during recent years. The average ages, in years, of brides for each of the five years to 1963 were:—1959, 25.01; 1960, 24.84; 1961, 24.73; 1962, 24.68; and 1963, 24.42. The average ages, in years, of bridegrooms were:—1959, 28.39; 1960, 28.15; 1961, 28.07; 1962, 28.03; and 1963, 27.76. The difference in the average age at marriage between brides and bridegrooms is generally just over three years, the difference in 1963 being 3.34 years.

5. Previous Conjugal Condition.—The following table shows the relative conjugal condition of bridegrooms and brides in 1963.

CONJUGAL CONDITION OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1963

Conjugal condition of bridegrooms	Total bridegrooms	Conjugal condition of brides		
		Spinsters	Widows	Divorced
Bachelors	73,257	69,391	1,123	2,743
Widowers	3,050	1,020	1,361	669
Divorced	4,609	2,422	634	1,553
Total Brides	80,916	72,833	3,118	4,965

6. Countries of Birth of Persons Marrying.—The following table shows the relative countries of birth of bridegrooms and brides married in 1963.

RELATIVE COUNTRIES OF BIRTH OF BRIDEGROOMS AND BRIDES: AUSTRALIA, 1963

Country of birth of bridegroom	Country of birth of bride											Total bridegrooms
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Netherlands	Poland	Yugoslavia	Other European	Other and unspecified	
Australia	55,718	188	2,804	353	46	99	381	41	30	379	444	60,483
New Zealand	424	47	40	5	..	1	6	..	..	3	10	536
United Kingdom and Ireland	3,762	58	1,083	56	5	11	50	8	2	82	99	5,216
Germany	559	6	91	337	6	12	47	21	18	80	34	1,211
Greece	148	2	18	8	2,604	6	3	5	7	11	58	2,870
Italy	734	8	62	38	11	2,560	27	6	34	79	47	3,606
Netherlands	717	5	76	31	4	4	356	3	1	35	37	1,265
Poland	120	2	17	33	5	8	4	188	10	43	16	446
Yugoslavia	266	4	44	81	56	63	24	13	477	57	25	1,110
Other European	917	15	133	149	42	33	33	53	48	951	70	2,444
Other and unspecified	882	15	107	28	81	22	29	6	7	45	507	1,729
Total Brides	64,247	350	4,475	1,119	2,860	2,819	960	344	634	1,765	1,343	80,916

7. Occupation of Bridegrooms.—The distribution of the 80,916 bridegrooms for 1963 amongst classes of occupations was as follows:—craftsmen, 27,480; administrative and clerical workers, 10,229; labourers, 9,634; rural and mining workers, 8,018; professional and technical workers, 7,595; workers in transport and communication, 5,924; service, sport, and other workers, 5,502; sales workers, 5,240; persons not in the work force, 1,294.

8. Celebration of Marriages.—Under the provisions of the *Marriage Act* 1961 marriages may be celebrated either by ministers of religion who are registered for that purpose with the Registrar of Ministers of Religion in each State or Territory, or by certain civil officers, in most cases district registrars. Most of the marriages are celebrated by ministers of religion. The registered ministers in 1963 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 1963 are shown in the following table.

MARRIAGES IN EACH DENOMINATION, 1963

Denomination	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia	
									No.	Proportion of total
Church of England ..	9,645	4,988	3,095	1,436	1,702	918	53	127	21,964	27.14
Roman Catholic ..	8,612	6,279	3,068	1,520	1,503	522	66	193	21,763	26.90
Methodist ..	2,701	2,658	1,710	1,798	689	400	13	32	10,001	12.36
Presbyterian ..	3,011	3,314	1,866	291	405	115	23	30	9,055	11.19
Orthodox(Greek, Russian, etc.)	1,021	1,154	127	247	53	17	15	9	2,643	3.27
Baptist ..	488	338	217	176	83	84	2	16	1,404	1.73
Lutheran ..	175	264	323	389	17	11	2	13	1,194	1.48
Churches of Christ ..	135	448	77	242	106	23	..	6	1,037	1.28
Congregational ..	244	253	114	238	133	46	4	..	1,032	1.28
Salvation Army ..	156	98	103	55	32	21	2	5	472	0.58
Seventh-day Adventist ..	90	50	43	25	27	6	..	..	241	0.30
United Church..	..	..	..	1	..	..	28	..	29	0.04
Unitarian ..	2	23	..	2	..	..	..	..	27	0.03
Other Christian ..	212	142	174	67	147	44	1	1	788	0.97
Hebrew ..	100	151	4	3	10	..	..	..	268	0.33
Other Non-Christian ..	..	..	..	2	..	..	..	..	2	0.00
Total ..	26,592	20,160	10,921	6,492	4,907	2,207	209	432	71,920	88.88
Civil Officers ..	4,407	1,901	510	810	848	372	51	97	8,996	11.12
Grand Total	30,999	22,061	11,431	7,302	5,755	2,579	260	529	80,916	100.00

PROPORTION OF TOTAL

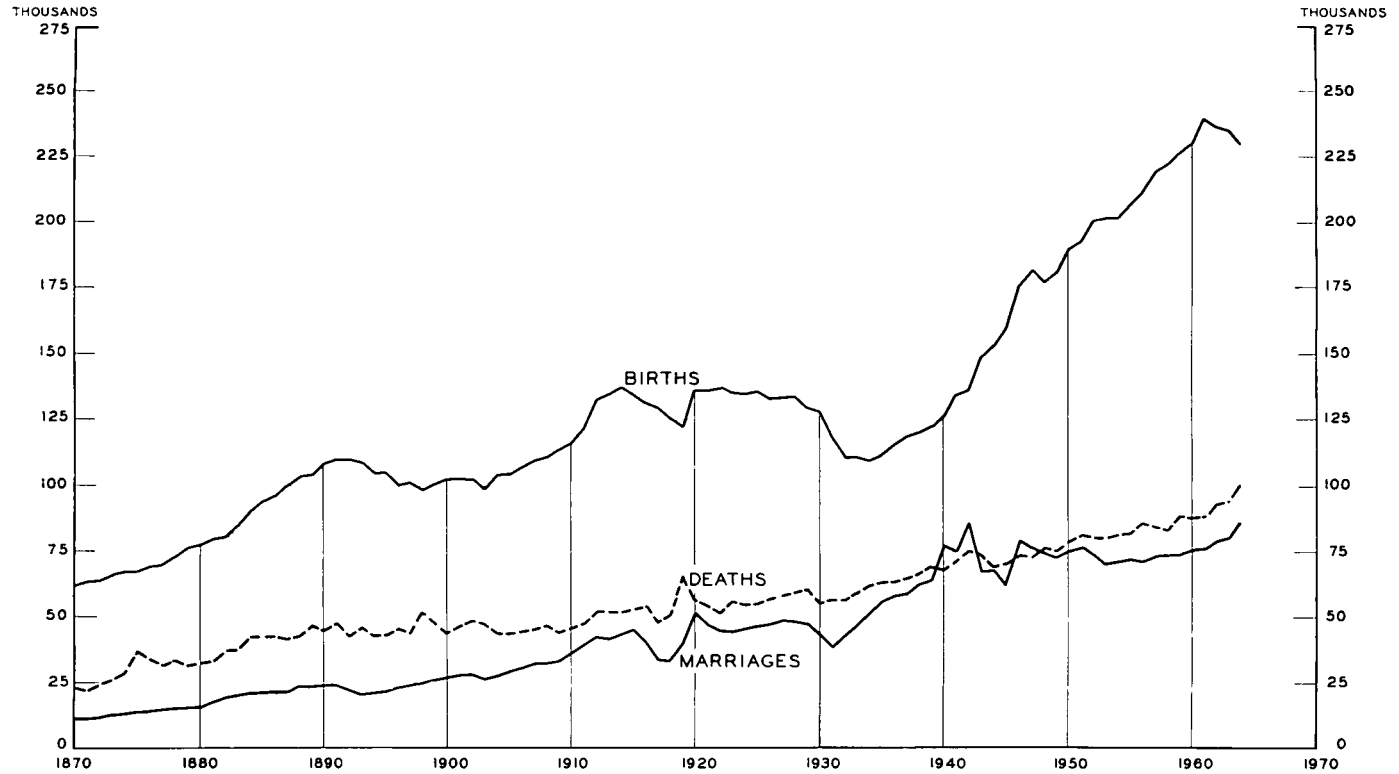
(Per cent.)

Denominational ..	85.78	91.38	95.54	88.91	85.26	85.58	80.38	81.66	88.88
Civil ..	14.22	8.62	4.46	11.09	14.74	14.42	19.62	18.34	11.12

§ 3. Divorce

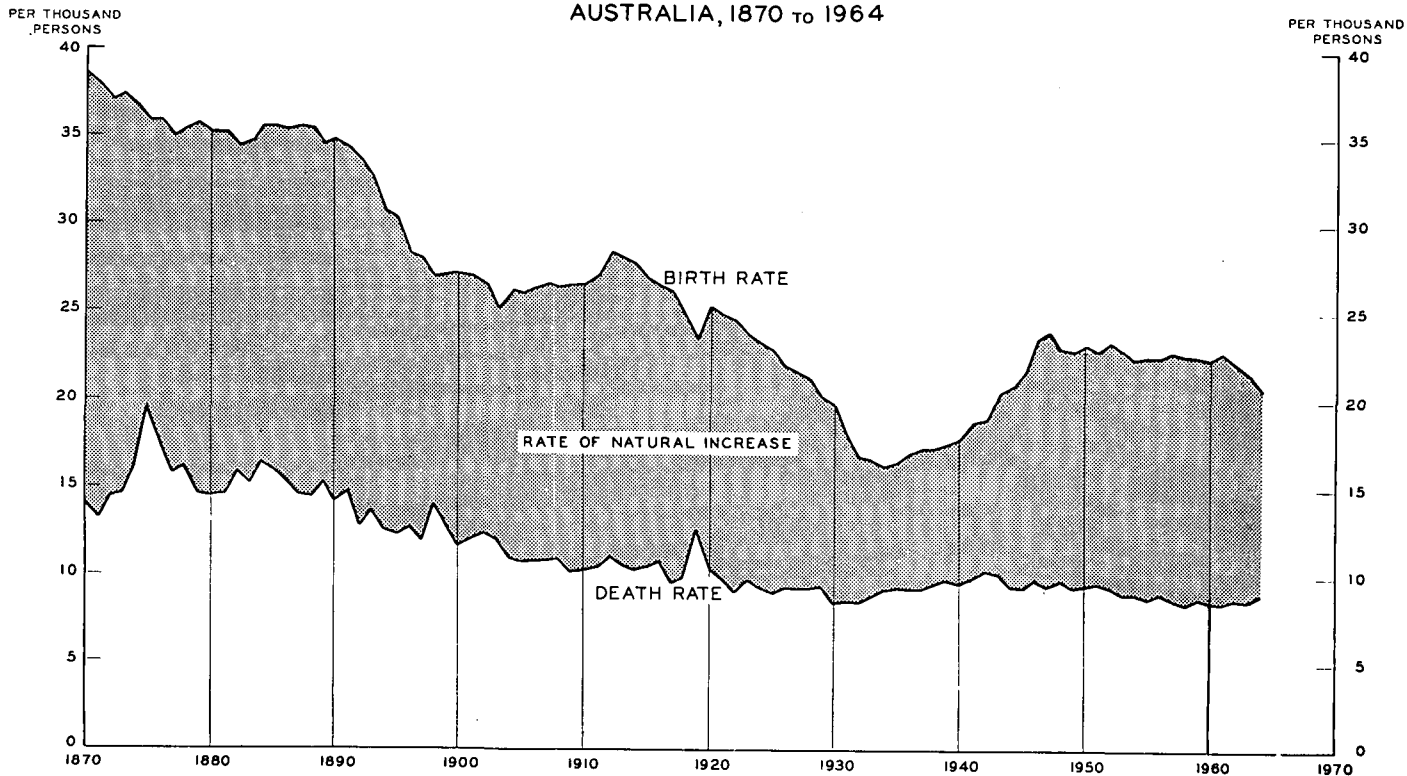
The number of dissolutions of marriage, nullities of marriage and judicial separations was 7,446 in 1963 and 7,799 in 1964. Further information may be found in Chapter XVII. Public Justice.

BIRTHS, DEATHS, AND MARRIAGES : AUSTRALIA, 1870 to 1964

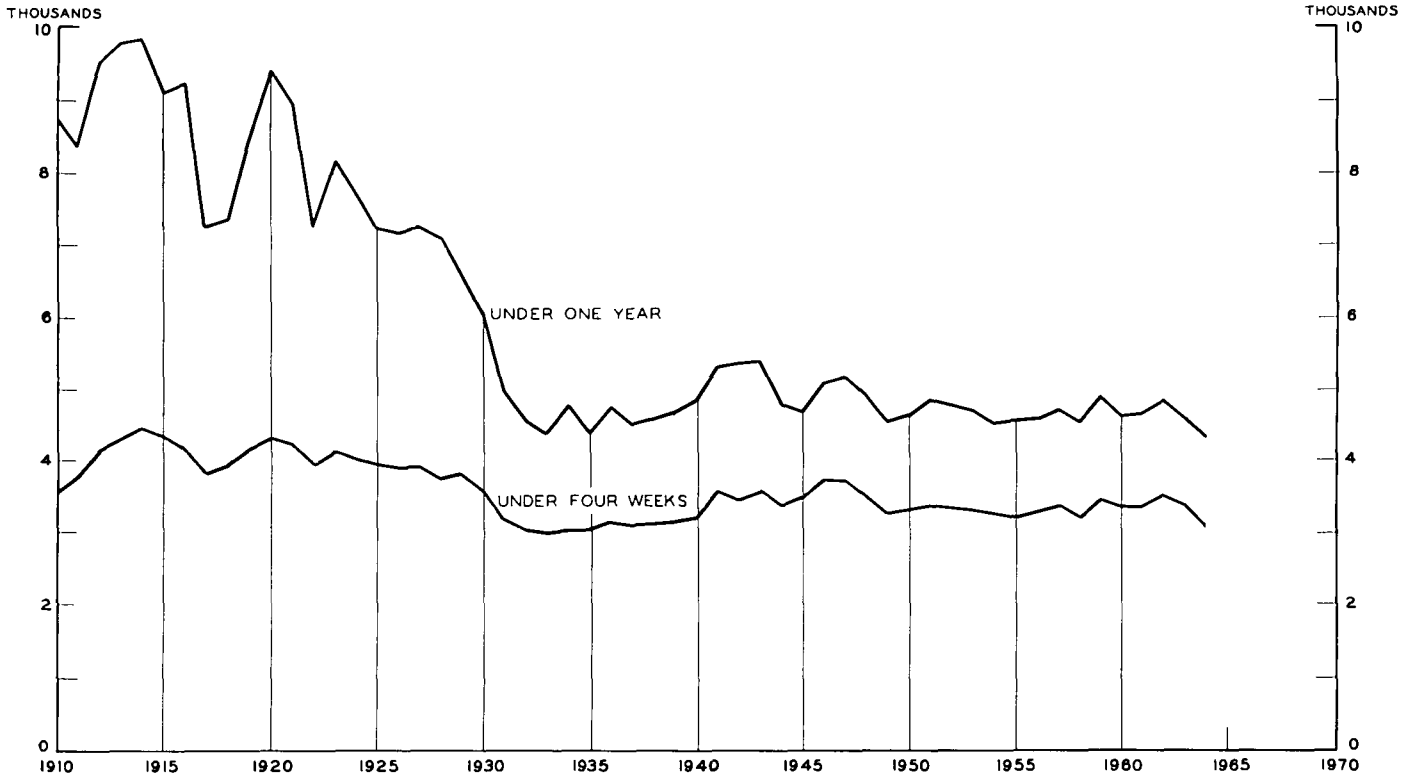


RATES OF BIRTHS, DEATHS, AND NATURAL INCREASE

AUSTRALIA, 1870 TO 1964

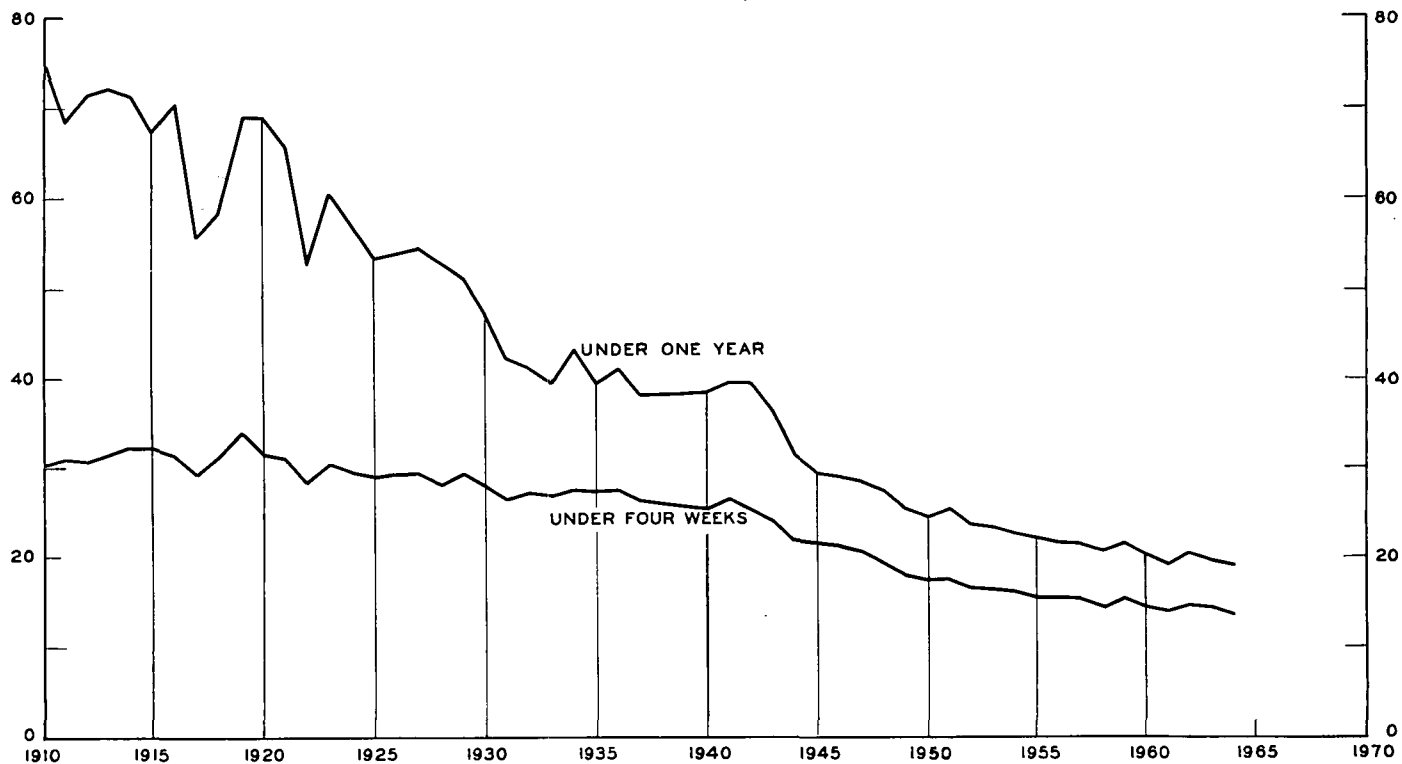


INFANT DEATHS: AUSTRALIA, 1910 to 1964



INFANT MORTALITY RATES: AUSTRALIA, 1910 to 1964

(INFANT DEATHS PER 1,000 LIVE BIRTHS)



§ 4. Fertility and Reproduction

1. **Introduction.**—Natural increase has been a significant element of increase in the population of Australia for many years. 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 1963.* There are various methods of measuring the fertility of the population by relating the number of births to the numbers of the population. In each, the basic data are, of course, the numbers of live births.

The number of live births registered in Australia during 1963 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, 1963

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W.A.	Tas.	N.T.	A.C.T.	Aust.
LIVE BIRTHS									
Single births ^a	82,235	64,101	35,184	20,914	16,956	8,361	848	1,953	230,552
Twins ..	1,801	1,530	739	453	332	169	11	42	5,077
Triplets ..	29	18	11	..	2	..	..	..	60
Quadruplets ..	..	..	..	..	..	..	..	..	..
Males ..	43,059	33,988	18,316	11,006	8,869	4,428	459	1,011	121,136
Females ..	41,006	31,661	17,618	10,361	8,421	4,102	400	984	114,553
<i>Total</i> ..	<i>84,065</i>	<i>65,649</i>	<i>35,934</i>	<i>21,367</i>	<i>17,290</i>	<i>8,530</i>	<i>859</i>	<i>1,995</i>	<i>235,689</i>

STILLBIRTHS ASSOCIATED WITH MULTIPLE BIRTHS INCLUDED ABOVE

Twins ..	37	22	17	5	8	1	1	..	91
Triplets ..	1	..	1	..	1	..	..	..	3

CONFINEMENTS RESULTING IN BIRTHS SHOWN ABOVE

Nuptial ..	78,391	61,846	32,934	20,090	15,907	7,987	752	1,936	219,843
Ex-nuptial ..	4,773	3,037	2,632	1,053	1,220	459	102	38	13,314
<i>Total</i> ..	<i>83,164</i>	<i>64,883</i>	<i>35,566</i>	<i>21,143</i>	<i>17,127</i>	<i>8,446</i>	<i>854</i>	<i>1,974</i>	<i>233,157</i>

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 was live-born, the confinement has been treated as a single birth. However, the numbers of multiple births are not significantly affected. See also para. 12, p. 319.

(ii) *Live Births, Years 1926 to 1964.* The average annual number of live births in each State and Territory for each five-year period from 1926 to 1960 and the total number of live births for each year from 1960 to 1964 are given in the following table. Corresponding figures for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 583.

LIVE BIRTHS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	53,308	34,333	19,361	11,006	8,748	4,819	70	118	131,763
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
1956-60 ..	79,613	61,279	34,171	19,977	16,922	8,517	694	1,286	222,459
ANNUAL TOTALS									
1960 ..	81,983	64,025	35,213	20,966	16,926	8,853	777	1,583	230,326
1961 ..	86,392	65,886	36,637	22,399	17,078	8,982	878	1,734	239,986
1962 ..	85,439	65,890	35,690	21,361	17,064	8,894	924	1,819	237,081
1963 ..	84,065	65,649	35,934	21,367	17,290	8,530	859	1,995	235,689
1964 ..	80,518	64,990	34,972	20,866	16,685	8,252	911	1,955	229,149

A graph showing the number of births in each year from 1870 to 1964 will be found on page 309.

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 pages 315-17.

Crude birth rates for each five-year period from 1926 to 1960 and for each year from 1960 to 1964 for each State and Territory are set out below.

CRUDE BIRTH RATES(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	21.76	19.65	21.90	19.41	21.54	22.29	15.60	14.96	20.98
1931-35 ..	17.28	15.60	18.48	14.89	18.36	19.95	15.99	15.77	16.94
1936-40 ..	17.51	16.20	19.48	15.82	19.16	20.58	19.96	18.68	17.52
1941-45 ..	19.79	19.27	22.28	20.43	21.72	22.23	11.40	26.82	20.28
1946-50 ..	22.60	22.51	24.69	24.41	25.24	26.71	23.77	37.92	23.39
1951-55 ..	21.78	22.42	24.11	23.25	25.37	25.58	29.37	32.22	22.86
1956-60 ..	21.55	22.52	23.80	22.27	24.20	25.45	31.49	30.10	22.59
ANNUAL RATES									
1960 ..	21.38	22.41	23.62	22.19	23.41	25.52	30.95	30.12	22.42
1961 ..	22.07	22.51	24.17	23.10	23.16	25.40	33.46	29.49	22.85
1962 ..	21.46	22.04	23.19	21.59	22.59	24.75	34.26	27.69	22.14
1963 ..	20.75	21.49	23.00	21.18	22.36	23.42	29.96	27.20	21.59
1964 ..	19.54	20.77	22.06	20.22	21.11	22.46	29.02	24.22	20.58

(a) Number of births per 1,000 of mean population.

NOTE.—The birth rates in the table above are based on *live births registered in the respective States and Territories*. Some confinements, however, take place in States other than the State in which the mother usually resides, particularly in areas near State borders.

The variations thus caused in the birth rates for the States and Territories by referring the birth registrations to the mother's usual residence are shown by the following corrected rates for 1964—New South Wales, 19.59; Victoria, 20.76; Queensland, 21.96; South Australia, 20.12; Western Australia, 21.14; Tasmania, 22.51; Northern Territory, 30.20; and Australian Capital Territory, 24.18.

See Year Book No. 47 (p. 339) for the effect of the variations in the availability of hospital facilities on the birth rate in the Australian Capital Territory and in the neighbouring town of Queanbeyan in New South Wales.

A graph showing the birth rate for each year from 1870 to 1964 will be found on page 310.

The crude birth rates of Australia and the more populous countries of the world for the latest available year are shown in § 7. International Vital Statistics on pages 344-6.

4. **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.

CRUDE BIRTH RATES AND FERTILITY RATES: AUSTRALIA

Period	Average annual rates			Index nos. (Base: 1880-82 = 100)		
	Crude birth rate(a)	Fertility rates		Crude birth rate(a)	Fertility rates	
		Births per 1,000 women aged 15-44 years	Nuptial births per 1,000 married women aged 15-44 years		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
1960-62.. ..	22.5	112	154	64	66	48

(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.

5. **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. 6, are shown in five-year age groups for Australia for the period 1926 to 1963.

AGE-SPECIFIC FERTILITY RATES(a): AUSTRALIA

Age group (years)	1926	1931	1936	1941	1946	1951	1956	1961	1963
15-19..	14.02	13.08	12.18	11.90	12.63	18.59	20.84	22.87	22.22
20-24..	60.23	53.08	50.33	59.42	73.52	85.84	101.46	110.01	100.74
25-29..	76.82	62.47	62.02	70.78	89.51	90.24	98.11	107.73	102.27
30-34..	61.90	51.25	46.33	49.72	65.03	59.16	59.65	63.62	60.11
35-39..	43.55	33.23	28.89	28.69	37.43	32.29	31.32	30.53	29.03
40-44..	17.63	13.61	10.19	9.52	11.87	9.97	9.48	9.36	9.07
45-49..	1.90	1.45	1.11	0.80	1.03	0.80	0.76	0.70	0.53

(a) Number of female births per 1,000 women in each age group.

6. 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 an 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 measure of this nature is obtained by multiplying the specific fertility rates by the number of females in 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 8, page 317.

GROSS AND NET REPRODUCTION RATES: AUSTRALIA

Year	Gross reproduction rate	Net reproduction rate	Year	Gross reproduction rate	Net reproduction rate
1881(a) ..	2.65	(b) 1.88	1947 ..	1.493	(g) 1.416
1891(a) ..	2.30	(b) 1.73	1954 ..	1.558	(h) 1.497
1901(a) ..	1.74	(c) 1.39	1959 ..	1.678	(h) 1.614
1911 ..	1.705	(d) 1.421	1960 ..	1.677	(h) 1.613
1921 ..	1.511	(e) 1.313	1961 ..	1.724	(h) 1.658
1931 ..	1.141	(f) 1.039	1962 ..	1.659	(h) 1.596
1941 ..	1.154	(f) 1.053	1963 ..	1.620	(h) 1.558

(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. (h) 1953-1955 mortality experience used.

NOTE.—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 experience. 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.

7. Gross and Net Reproduction Rates, Various Countries.—In the following table a comparison is given of the gross and net reproduction rates recorded for various countries in the period 1954 to 1963. These represent the latest available international comparisons.

GROSS AND NET REPRODUCTION RATES: VARIOUS COUNTRIES

Country	Period	Reproduction rate		Country	Period	Reproduction rate	
		Gross	Net			Gross	Net
Thailand ..	1954	2.26	1.70	Yugoslavia ..	1960	1.36	1.12
New Zealand(a) ..	1962	1.97	1.91	England and Wales	1961	1.35	1.30
Canada ..	1962	1.84	1.77	Finland ..	1961	1.32	1.30
United States of America(b) ..	1961	1.70	1.65	Belgium ..	1961	1.29	1.24
Australia(c) ..	1963	1.62	1.56	Denmark ..	1960	1.24	n.a.
Ireland, Republic of	1955	1.59	1.45	Czechoslovakia ..	1961	1.16	1.12
Netherlands ..	1962	1.55	1.50	Germany—			
Scotland ..	1963	1.47	1.42	Federal Rep. ..	1960	1.16	1.11
Portugal ..	1958	1.47	1.26	Democratic Rep.	1955	1.13	n.a.
Norway ..	1961	1.39	1.34	Switzerland ..	1959	1.15	1.09
Austria ..	1962	1.38	1.28	Sweden ..	1961	1.07	1.05
France ..	1961	1.37	1.32	Japan ..	1961	0.95	0.90
				Hungary ..	1962	0.87	0.81

(a) Excludes Maoris.

(b) White population only.

(c) Excludes full-blood Aborigines.

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, as well as the stationary or life table population used.

8. **Fertility of Marriages.**—More satisfactory estimates of the fertility of marriages may be made 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.

FERTILITY OF MARRIAGES: AUSTRALIA

Year	Nuptial confinements per marriage	Year	Nuptial confinements per marriage	Year	Nuptial confinements per marriage
1949 ..	2.45	1954 ..	2.66	1959 ..	2.93
1950 ..	2.56	1955 ..	2.71	1960 ..	2.96
1951 ..	2.55	1956 ..	2.76	1961 ..	3.05
1952 ..	2.63	1957 ..	2.87	1962 ..	2.98
1953 ..	2.66	1958 ..	2.88	1963 ..	2.92

NOTE.—See NOTE to table on p. 316.

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. 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 consequently are 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.

9. **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, totals for smaller States) considerable variation is shown. The averages for the ten years 1951–60 were as follows:—New South Wales, 105.38; Victoria, 105.50; Queensland, 105.80; South Australia, 104.89; Western Australia, 105.25; Tasmania, 104.96; Northern Territory, 107.16; Australian Capital Territory, 108.77; Australia, 105.43. The following table shows the figures for Australia for each ten-year period from 1901 to 1960 and for each of the years 1962 to 1964.

MASCULINITY^(a) OF LIVE BIRTHS REGISTERED: AUSTRALIA

Particulars	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60	1962	1963	1964
Total births ..	105.22	105.27	105.55	105.12	105.38	105.43	106.21	105.75	106.28
Ex-nuptial births	104.08	105.25	105.16	105.36	105.34	103.99	106.23	106.76	106.00

(a) Number of males born for every 100 female births.

10. Ex-nuptial Live Births.—(i) *General*. The variations in the proportions of ex-nuptial live births as between the individual States and Territories for 1964 are shown below.

EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, 1964

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number ..	5,427	3,402	2,898	1,239	1,311	502	103	43	14,925
Proportion of total births %	6.74	5.23	8.29	5.94	7.86	6.08	11.31	2.20	6.51

The number and proportion of ex-nuptial births at intervals from 1901 to 1964 are as follows.

EX-NUPTIAL LIVE BIRTHS: NUMBER AND PROPORTION, AUSTRALIA

Particulars	Annual average						1960	1961	1962	1963	1964
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60					
Number ..	6,498	6,836	6,238	5,133	6,780	9,013	10,987	12,269	12,813	13,454	14,925
Proportion of total births %	6.05	5.22	4.66	4.40	4.13	4.25	4.77	5.11	5.40	5.71	6.51

(ii) *Rate of Ex-nuptiality*. A further measure of ex-nuptiality 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; 1953-55, 14.45; and 1960-62, 18.49. 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 shows the relative ratios of ex-nuptial and nuptial births to the total population for periods from 1901.

CRUDE EX-NUPTIAL, NUPTIAL, AND TOTAL BIRTH RATES (a): AUSTRALIA

Birth rate	Annual average						1962	1963	1964
	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60			
Ex-nuptial ..	1.60	1.39	1.04	0.76	0.90	0.97	1.19	1.23	1.34
Nuptial ..	24.91	25.18	21.40	16.47	20.99	21.75	20.95	20.36	19.24
Total ..	26.51	26.57	22.44	17.23	21.89	22.72	22.14	21.59	20.58

(a) Number of births per 1,000 of mean population.

11. **Legitimations.**—Under the provisions of the Commonwealth *Marriage Act* 1961, which came into operation on 1st September, 1963, a child whose parents were not married to each other at the time of its birth becomes legitimized on the subsequent marriage of its parents. The legitimation takes place whether or not there was a legal impediment to the marriage of the parents at the time of the child's birth and whether or not the child was still living at the time of the marriage, or in the case of a child born before 1st September, 1963, at that date. Prior to the introduction of this Act, legitimations took place under Acts 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 came within the scope of their purposes, born before or after the passing thereof, was deemed to be legitimate from birth by the post-natal union of its parents, and entitled to the status of offspring born in wedlock. The number of children legitimized in Australia during 1963 was 2,436.

12. **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.

Multiple births recorded on this basis during 1963 comprised 2,584 cases of twins and 21 cases of triplets, the resultant numbers of live-born and still-born children being respectively 5,077 and 91 for twins, 60 and 3 for triplets. This represents an average of 11.08 recorded cases of twins and 0.09 recorded cases of triplets per 1,000 confinements or, alternatively, mothers of twins represented 1 in every 90 mothers and mothers of triplets 1 in every 11,103. Total cases of multiple births represented 11.17 per 1,000 confinements or 1 in every 90 mothers.

The proportion of mothers of multiple births to total mothers does not vary greatly from year to year.

13. **Ages of Parents.**—The relative ages of the parents of children whose births were registered in 1963 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. 81. In the following table the relative ages of parents are shown in five-year groups.

CONFINEMENTS: RELATIVE AGES OF PARENTS, AUSTRALIA, 1963

Age of father (years) and type of birth	Total	Age of mother (years)								
		Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated
Under 20	3,030	9	2,537	474	9	..	1	..	..	..
20-24	38,672	7	10,605	25,522	2,371	142	22	3	..	..
25-29	68,282	4	2,633	33,031	29,561	2,758	262	32	1	..
30-34	55,442	..	483	8,566	25,777	18,097	2,325	189	5	..
35-39	33,362	..	103	1,757	6,999	14,093	9,485	915	10	..
40-44	14,189	..	21	336	1,265	3,730	6,113	2,670	54	..
45-49	4,844	..	11	83	324	809	1,827	1,632	158	..
50-54	1,452	..	6	35	84	238	499	512	78	..
55-59	408	..	1	7	31	58	141	146	24	..
60-64	126	..	2	6	6	21	42	45	4	..
65 and over(a) ..	36	..	..	1	5	6	14	9	1	..
Mothers of nuptial children	217,378	20	16,293	69,165	65,704	39,384	20,417	6,062	333	..
{ Single	2,446	..	109	650	720	565	310	90	2	..
{ Triplets	19	..	..	3	8	3	4	1	..	..
{ Total	219,843	20	16,402	69,818	66,432	39,952	20,731	6,153	335	..
Mothers of ex-nuptial children	13,174	67	4,343	3,865	2,072	1,440	1,001	362	22	2
{ Single	138	..	33	39	24	17	18	7	..	..
{ Triplets	2	..	..	1	1	..	..	..	..	..
{ Total	13,314	67	4,376	3,905	2,097	1,457	1,019	369	22	2
Total mothers	230,552	87	20,636	73,030	67,776	40,824	21,418	6,424	355	2
{ Single	2,584	..	142	689	744	582	328	97	2	..
{ Triplets	21	..	..	4	9	3	4	1	..	..
{ Total	233,157	87	20,778	73,723	68,529	41,409	21,750	6,522	357	2

(a) Includes one father age "Not stated."

14. **Countries of Birth of Parents.**—The following table shows the countries of birth of parents of children whose births from nuptial confinements were registered during 1963.

**NUPTIAL CONFINEMENTS: RELATIVE COUNTRIES OF BIRTH OF PARENTS,
AUSTRALIA, 1963**

Country of birth of father	Country of birth of mother										Total fathers	
	Australia	New Zealand	United Kingdom and Ireland	Germany	Greece	Italy	Netherlands	Poland	Yugoslavia	Other European		Other and unspecified
Australia ..	160,064	545	5,319	417	92	231	647	81	73	518	1,033	169,020
New Zealand ..	629	141	50	2	1	1	8	1	..	1	15	849
United Kingdom and Ireland ..	7,277	75	5,646	75	3	22	73	14	12	124	232	13,553
Germany ..	835	13	99	1,197	10	12	49	29	22	134	51	2,451
Greece ..	332	1	21	8	4,363	11	5	4	9	29	55	4,838
Italy ..	1,779	11	111	51	37	9,076	55	9	90	124	80	11,423
Netherlands ..	1,291	8	142	48	3	6	2,266	6	5	48	109	3,932
Poland ..	333	3	51	98	7	11	10	577	10	117	20	1,237
Yugoslavia ..	420	5	56	116	56	112	26	36	1,269	100	22	2,218
Other European ..	1,807	29	266	273	74	60	81	92	81	3,213	157	6,133
Other and unspecified ..	1,615	24	218	47	148	52	97	18	17	93	1,860	4,189
Total Mothers ..	176,382	855	11,979	2,332	4,794	9,594	3,317	867	1,588	4,501	3,634	219,843

15. **Occupation of Fathers.**—In the 219,843 cases where nuptial confinements resulted in one or more live births, the classes of occupations of the fathers were distributed as follows:—craftsmen, 69,751; rural and mining workers, 28,919; administrative and clerical workers, 28,806; labourers, 23,462; workers in transport and communication, 19,885; professional and technical workers, 19,546; sales workers, 14,403; service, sport and other workers, 14,380; persons not in the work force, 691.

16. **Age, Duration of Marriage and Issue of Mothers.**—(i) *General.* The total number of nuptial confinements resulting in live births in 1963 was 219,843, comprising 217,378 single births, 2,446 cases of twins and 19 cases of triplets. The following tables relating to previous issue exclude the issue of former marriages and still-born children. On the other hand, they include in some States 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 1963 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 1963 was 2.60, compared with 2.61 in 1962, 2.60 in 1961, 2.59 in 1960, and 2.58 in 1959.

**NUPTIAL CONFINEMENTS: DURATION OF MARRIAGE AND ISSUE OF
MOTHERS, AUSTRALIA, 1963**

Duration of marriage	Total married mothers	Total issue	Average issue	Duration of marriage	Total married mothers	Total issue	Average issue
Under 1 year	31,513	32,170	1.02	15 years ..	2,910	14,711	5.06
1 year ..	24,720	32,127	1.30	16 " ..	2,436	12,761	5.24
2 years ..	25,274	44,692	1.77	17 " ..	1,852	10,105	5.46
3 " ..	22,712	48,019	2.11	18 " ..	1,191	6,822	5.73
4 " ..	18,886	46,197	2.45	19 " ..	877	5,205	5.94
5 " ..	16,292	44,963	2.76	20 " ..	733	4,512	6.16
6 " ..	13,777	41,636	3.02	21 " ..	618	3,865	6.26
7 " ..	11,751	38,989	3.32	22 " ..	384	2,545	6.63
8 " ..	9,666	34,467	3.57	23 " ..	240	1,730	7.21
9 " ..	8,207	31,143	3.79	24 " ..	130	946	7.28
10 " ..	6,734	26,987	4.01	25 years and over ..	152	1,303	8.57
11 " ..	5,981	25,392	4.25				
12 " ..	5,166	23,104	4.47				
13 " ..	4,309	20,125	4.67				
14 " ..	3,332	16,096	4.83				
				Total ..	219,843	570,612	2.60

(iii) *Age and Average Issue of Mothers.* The following table shows the average number of children born to mothers of different ages.

NUPTIAL CONFINEMENTS: AVERAGE ISSUE OF MOTHERS, BY AGE, AUSTRALIA

Period	Average issue of mothers aged—							
	Under 20 years	20-24 years	25-29 years	30-34 years	35-39 years	40-44 years	45 years 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
1951-60 ..	1.23	1.71	2.42	3.12	3.84	4.63	5.57	2.51
1963 ..	1.25	1.78	2.59	3.42	4.12	4.84	5.65	2.60

(iv) *Previous Issue of Mothers, Various Ages.* A classification of mothers by age and previous issue is given for 1963 in the following table.

NUPTIAL CONFINEMENTS: AGE OF MOTHER AND PREVIOUS ISSUE, AUSTRALIA, 1963

Previous issue	Age of mother (years)							Total married mothers
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	
0 ..	12,934	33,329	14,999	5,190	2,104	546	28	69,130
1 ..	3,087	23,536	20,421	7,813	2,858	624	22	58,361
2 ..	366	9,369	17,032	10,117	4,065	935	38	41,922
3 ..	33	2,741	8,596	7,836	4,038	1,040	41	24,325
4 ..	2	674	3,424	4,454	3,070	913	50	12,587
5 ..	..	149	1,286	2,313	1,937	691	41	6,417
6 ..	..	19	467	1,145	1,122	452	39	3,244
7 ..	..	1	145	596	681	349	31	1,803
8 ..	..	..	45	267	385	222	10	929
9 ..	..	..	13	144	217	157	8	539
10 and over ..	..	..	4	77	254	224	27	586
Total Married Mothers ..	16,422	69,818	66,432	39,952	20,731	6,153	335	219,843

(v) *Multiple Births—Previous Issue of Mothers.* Figures regarding the previous issue of married mothers of twins in 1963 show that 634 mothers had no previous issue either living or deceased, 606 had one child previously, 529 had two previous issue, 295 three, 170 four, 98 five, 52 six, 20 seven, 21 eight, 12 nine, 4 ten, 2 eleven, 2 twelve, and 1 fifteen.

Of the 19 cases of nuptial triplets registered during 1963, 3 mothers had no previous issue, 4 had one, 4 had two, 2 had three, 2 had four, 1 had five, 1 had six, 1 had seven, and 1 had nine previous issue.

17. *Nuptial First Births.*—(i) *Duration of Marriage.* The following table shows the interval between marriage and first birth for periods since 1911. In cases of multiple births, the first live-born child only is enumerated.

NUPTIAL FIRST BIRTHS: DURATION OF MARRIAGE, AUSTRALIA

Duration of marriage	Annual average					1962	1963
	1911-20	1921-30	1931-40	1941-50	1951-60		
NUMBER OF NUPTIAL FIRST BIRTHS							
Under 8 months	9,312	10,351	10,677	8,822	11,796	16,198	17,621
8 months	1,562	1,530	1,417	2,104	2,144	2,180	2,205
9	3,517	3,253	2,668	4,298	4,673	4,808	4,594
10	2,877	2,907	2,202	3,447	3,947	3,847	3,749
11	2,018	2,152	1,836	2,896	3,287	3,256	3,074
<i>Total under 1 year</i>	<i>19,286</i>	<i>20,193</i>	<i>18,800</i>	<i>21,567</i>	<i>25,847</i>	<i>30,289</i>	<i>31,243</i>
1 year and under 2 years	8,563	10,133	10,595	17,762	18,463	18,167	17,751
2 years " " 3	2,626	3,369	4,319	8,028	7,937	7,625	7,852
3	1,230	1,743	2,214	4,361	4,373	4,213	4,313
4	700	941	1,205	2,569	2,632	2,585	2,582
5	980	1,446	1,766	3,936	4,262	4,380	4,343
10	168	240	289	501	721	848	817
15 years and over	42	55	55	94	144	203	229
Total	33,595	38,120	39,243	58,818	64,379	68,310	69,130

PROPORTION OF TOTAL NUPTIAL FIRST BIRTHS
(Per cent.)

Under 8 months	27.72	27.15	27.21	15.00	18.32	23.71	25.49
8 months	4.65	4.01	3.61	3.58	3.33	3.19	3.19
9	10.47	8.53	6.80	7.31	7.26	7.04	6.64
10	8.56	7.63	5.61	5.86	6.13	5.63	5.42
11	6.01	5.65	4.68	4.92	5.11	4.77	4.45
<i>Total under 1 year</i>	<i>57.41</i>	<i>52.97</i>	<i>47.91</i>	<i>36.67</i>	<i>40.15</i>	<i>44.34</i>	<i>45.19</i>
1 year and under 2 years	25.49	26.58	27.00	30.20	28.68	26.60	25.68
2 years " " 3	7.82	8.84	11.01	13.65	12.33	11.16	11.36
3	3.66	4.57	5.64	7.41	6.79	6.17	6.24
4	2.08	2.47	3.07	4.37	4.09	3.78	3.74
5	2.92	3.79	4.50	6.69	6.62	6.41	6.28
10	0.50	0.63	0.73	0.85	1.12	1.24	1.18
15 years and over	0.12	0.15	0.14	0.16	0.22	0.30	0.33
Total	100.00	100.00	100.00	100.00	100.00	100.00	100.00

In 1963, the masculinity of nuptial first births was 105.99 and of total births 105.75.

(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.

NUPTIAL FIRST BIRTHS: AGE OF MOTHER AND DURATION OF MARRIAGE, AUSTRALIA, 1963

Duration of marriage	Age of mother (years)								Total
	Under 20	20-24	25-29	30-34	35-39	40-44	45 and over	Not stated	
NUMBER OF NUPTIAL FIRST BIRTHS									
Under 8 months	9,077	6,787	1,125	374	192	65	1	..	17,621
8 months	440	1,204	371	130	50	8	2	..	2,205
9	620	2,749	828	297	82	18	..	..	4,594
10	481	2,305	645	219	85	12	2	..	3,749
11	389	1,873	575	167	61	9	..	..	3,074
<i>Total under 1 year</i>	<i>11,007</i>	<i>14,918</i>	<i>3,544</i>	<i>1,187</i>	<i>470</i>	<i>112</i>	<i>5</i>	<i>..</i>	<i>31,243</i>
1 year and under 2 years	1,655	10,909	3,590	1,075	404	116	2	..	17,751
2 years " " 3	213	4,550	2,266	546	207	66	4	..	7,852
3	48	1,870	1,770	423	149	51	2	..	4,313
4	9	729	1,407	308	96	31	2	..	2,582
5	2	350	2,363	1,185	361	76	6	..	4,343
10 .. ..	..	3	59	443	266	43	3	..	817
15 years and over .. ..	..	..	..	23	151	51	4	..	229
Total	12,934	33,329	14,999	5,190	2,104	546	28	..	69,130

(iii) *Nuptial 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

Period	Nuptial confinements			Proportion of first to total nuptial confinements (Per cent.)
	First births	Other births	Total	
ANNUAL 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	58,818	96,994	155,812	37.75
1951-60	64,379	136,264	200,643	32.09
ANNUAL TOTALS				
1959	66,717	147,145	213,862	31.20
1960	66,890	150,073	216,963	30.83
1961	70,177	155,105	225,282	31.15
1962	68,310	153,547	221,857	30.79
1963	69,130	150,713	219,843	31.45

18. *Stillbirths.*—Interstate comparisons of the figures and rates in the following tables are affected by the differences in the definitions of stillbirths adopted by the various States, and only the trends in the rates for the States should be compared.

For various reasons, the registration of stillbirths is not as complete as for live births and deaths. Particulars for the Territories and smaller States are more affected on this account than are those for the larger States.

The number of stillbirths recorded in each State and Territory since 1936 is shown in the following table.

STILLBIRTHS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
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	16	3,393
1956-60 ..	1,253	839	558	274	235	109	6	19	3,293
ANNUAL TOTALS									
1959 ..	1,241	799	553	281	225	109	5	18	3,231
1960 ..	1,261	850	551	280	226	106	13	22	3,309
1961 ..	1,306	885	553	272	240	111	17	19	3,403
1962 ..	1,099	775	520	278	203	102	9	20	3,006
1963 ..	1,163	792	476	262	178	63	30	14	2,978

(a) Not available. (b) Three years 1938-40. (c) Four years 1942-45. (d) Excludes Queensland for 1941. (e) Excludes Northern Territory.

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)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL 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	ef25.25
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	17.05	16.57
1956-60 ..	15.49	13.50	16.07	13.55	13.70	12.64	8.57	14.26	14.59
ANNUAL RATES									
1959 ..	15.11	12.67	15.30	13.61	12.98	12.48	6.24	13.04	14.04
1960 ..	15.15	13.10	15.41	13.18	13.18	11.83	16.46	13.71	14.16
1961 ..	14.89	13.25	14.87	12.00	13.86	12.21	18.99	10.84	13.98
1962 ..	12.70	11.63	14.36	12.85	11.76	11.34	9.65	10.88	12.52
1963 ..	13.65	11.92	13.07	12.11	10.19	7.33	33.75	6.97	12.48

(a) Numbers 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 Northern Territory.

NOTE.—Because of the smallness of the numbers of stillbirths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. the number per thousand live births and stillbirths) are subject to considerable fluctuation.

§ 5. Mortality

1. Number of Deaths.—(i) Year 1964. The following table shows the number of deaths, male and female, registered in each State and Territory during the year. Stillbirths, although registered as both births and deaths in some States, are excluded from the death statistics published herein.

DEATHS, 1964

Sex	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Males ..	21,899	14,992	8,480	5,008	3,738	1,797	117	215	56,246
Females ..	17,588	12,556	6,043	3,898	2,691	1,377	47	148	44,348
Persons ..	39,487	27,548	14,523	8,906	6,429	3,174	164	363	100,594

(ii) Years 1926 to 1964. A summary of the number of deaths in each State and Territory from 1926 to 1964 is given in the following table. Annual averages for each five-year period from 1861 to 1950 were published in Year Book No. 39, page 597.

DEATHS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	22,677	16,698	8,007	5,008	3,617	2,040	71	42	58,160
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
1956-60 ..	34,002	24,254	12,008	7,732	5,523	2,668	117	184	86,488
ANNUAL TOTALS									
1960 ..	35,030	24,547	12,370	7,804	5,697	2,670	134	212	88,464
1961 ..	35,048	24,500	12,756	7,815	5,729	2,789	128	196	88,961
1962 ..	36,861	25,847	13,182	8,232	5,810	2,870	144	217	93,163
1963 ..	37,226	26,920	13,275	8,201	5,976	2,818	161	317	94,894
1964 ..	39,487	27,548	14,523	8,906	6,429	3,174	164	363	100,594

(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 1870 to 1964 will be found on page 309.

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 number per thousand of population by which the population is depleted through deaths during that period. Crude death rates for each State and Territory from 1926 to 1964 are shown in the following table.

CRUDE DEATH RATES(a)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	9.26	9.56	9.06	8.83	8.91	9.44	15.83	5.36	9.26
1931-35 ..	8.68	9.72	8.62	8.72	8.83	9.63	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
1941-45(b) ..	9.73	10.63	9.24	10.26	9.86	10.21	6.43	4.98	9.96
1946-50(b) ..	9.70	10.37	9.13	9.76	9.23	9.30	6.27	5.31	9.74
1951-55 ..	9.49	9.55	8.71	9.25	8.49	8.48	6.86	4.58	9.25
1956-60 ..	9.20	8.91	8.36	8.62	7.90	7.97	5.32	4.31	8.78
ANNUAL RATES									
1960 ..	9.14	8.59	8.30	8.26	7.88	7.70	5.34	4.03	8.61
1961 ..	8.95	8.37	8.42	8.06	7.77	7.89	4.88	3.33	8.47
1962 ..	9.26	8.64	8.56	8.32	7.69	7.99	5.34	3.30	8.70
1963 ..	9.19	8.81	8.50	8.13	7.73	7.74	5.62	4.32	8.69
1964—									
Males ..	10.58	9.54	10.54	9.62	9.32	9.67	6.39	5.12	10.02
Females ..	8.58	8.06	7.74	7.62	6.92	7.58	3.60	3.82	8.03
Persons ..	9.58	8.80	9.16	8.63	8.14	8.64	5.22	4.50	9.03

(a) Number of deaths per 1,000 of mean population. (b) Excludes deaths of defence personnel etc., from September, 1939 to June, 1947.

NOTE.—Crude death rates (i.e. the number of deaths per thousand of mean population) are affected by the particular age and sex composition of the population. In the Australian Capital Territory and the Northern Territory the population at risk in the higher ages is lower proportionately than in other States, largely as a result of the rapid increases of the population in the lower ages.

A graph showing the crude death rate for each year from 1870 to 1964 will be found on page 310.

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.

An examination of the age distribution of deaths and the resultant age-specific death rates is made in paragraph 7, pages 332-4.

(ii) *Comparison of Crude and Standardized Death Rates.* The relative incidence of mortality as between individual States and as between the years 1921, 1933, 1947, 1954 and 1961 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

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Crude death rate(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	9.20	8.63	9.01	8.38	8.67	9.10
1961	8.95	8.37	8.42	8.06	7.77	7.89	8.47
Standardized death rate(b)—							
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
1961	6.56	6.12	6.26	5.90	6.02	6.19	6.27

(a) Total deaths per 1,000 of mean population.
in para. 3 (i) p. 325.

(b) See explanation of standardized death rates

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. However, a correct measurement of the mortality of the population can be obtained 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 a stationary 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 survival 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.

COMPLETE EXPECTATION OF LIFE AT BIRTH AND TRUE DEATH RATES: AUSTRALIA

Period	Complete expectation of life at birth (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
1953-1955	67.14	72.75	14.89	13.75

(a) Number of deaths per 1,000 males in stationary population.

(b) Number of deaths per 1,000 females in stationary population.

The crude death rates and the true death rates of Australia and the more populous countries of the world for the latest available year are shown in the table in § 7. International Vital Statistics, pages 344-6.

5. Australian Life Tables.—(i) *Life Tables prior to 1954.* 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, time, and geographical distribution, and practically superseded all Life Tables prepared in Australia prior to 1911. 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 recorded census population and the deaths in the three years 1920 to 1922. In 1933 and 1947, Life Tables based on the census population and the deaths in the years 1932 to 1934 and 1946 to 1948 respectively were compiled by the Commonwealth Actuary.

(ii) *Life Tables of Census of 1954.* On the occasion of the 1954 Census, the seventh Life Tables in the series were compiled by the Commonwealth Actuary. These were based on the population recorded at the Census, adjusted to allow for variation the net movement into Australia over the years 1953 to 1955, and deaths during these years. Full particulars of the data used, the method of construction and the tabulations of these Life Tables will be found in the report of the Commonwealth Actuary, which was published by the Commonwealth Statistician in 1958. This report also appears in Volume VIII. of the detailed tables of the 1954 Census.

The main features of the tables are set out in the following summary table. Comparisons with earlier Australian tables and with the latest experience in the United Kingdom and New Zealand are provided in Year Book No. 48, pages 338-40.

LIFE TABLES, 1953-55

Age (x)	Males			Females		
	Rate of mortality (q_x)	Number of survivors (l_x)	Complete expectation of life (${}^e e_x$)	Rate of mortality (q_x)	Number of survivors (l_x)	Complete expectation of life (${}^e e_x$)
0 .. ..	.02521	100,000	67.14	.01989	100,000	72.75
10 .. ..	.00056	96,488	59.53	.00035	97,228	64.78
20 .. ..	.00186	95,460	50.10	.00064	96,774	55.06
30 .. ..	.00170	93,801	40.90	.00096	96,055	45.43
40 .. ..	.00297	91,861	31.65	.00217	94,715	36.00
50 .. ..	.00819	87,553	22.92	.00530	91,573	27.03
60 .. ..	.02221	76,256	15.47	.01203	84,665	18.78
70 .. ..	.05315	54,054	9.59	.03250	69,613	11.62
80 .. ..	.11958	23,658	5.47	.09314	39,633	6.30

q_x = probability of dying within one year at specified ages. l_x = number surviving at specified ages out of 100,000 births. ${}^e e_x$ = complete expectation of life at specified ages.

The following table shows a comparison of the complete expectation of life at selected ages for males and females as calculated from the life tables of 1920-22, 1932-34, 1946-48 and 1953-55.

COMPLETE EXPECTATION OF LIFE ($^{\circ}e_x$) AT SELECTED AGES: AUSTRALIA

Age (x)	Males				Females			
	1920-22	1932-34	1946-48	1953-55	1920-22	1932-34	1946-48	1953-55
0 ..	59.15	63.48	66.07	67.14	63.31	67.14	70.63	72.75
10 ..	56.01	58.02	59.04	59.53	59.20	61.02	63.11	64.78
20 ..	46.99	48.81	49.64	50.10	50.03	51.67	53.47	55.06
30 ..	38.44	39.90	40.40	40.90	41.48	42.77	44.08	45.43
40 ..	30.05	31.11	31.23	31.65	33.14	34.04	34.91	36.00
50 ..	22.20	22.83	22.67	22.92	24.90	25.58	26.14	27.03
60 ..	15.08	15.57	15.36	15.47	17.17	17.74	18.11	18.78
70 ..	9.26	9.60	9.55	9.59	10.41	10.98	11.14	11.62
80 ..	5.00	5.22	5.36	5.47	5.61	6.01	6.02	6.30

6. 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 1926 to 1964 were as follows.

INFANT MORTALITY: UNDER ONE YEAR

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
ANNUAL AVERAGES									
1926-30 ..	2,918	1,797	918	517	431	257	5	8	6,851
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
1956-60 ..	1,770	1,205	717	410	362	176	25	18	4,683
ANNUAL TOTALS									
1960 ..	1,735	1,182	740	397	366	169	26	28	4,643
1961 ..	1,800	1,173	733	448	336	151	21	27	4,689
1962 ..	1,825	1,219	754	409	380	184	37	32	4,840
1963 ..	1,673	1,242	722	399	353	153	27	38	4,607
1964 ..	1,634	1,098	673	397	328	166	30	41	4,367
AVERAGE ANNUAL RATES(a)									
1926-30 ..	54.74	52.34	47.41	46.95	49.27	53.37	66.09	71.31	51.99
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 ..	35.95	34.50	34.30	32.95	33.30	39.31	61.73	18.72	34.97
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
1956-60 ..	22.24	19.67	20.99	20.50	21.42	20.62	36.00	13.68	21.05
ANNUAL RATES(a)									
1960 ..	21.16	18.46	21.01	18.94	21.62	19.09	33.46	17.69	20.16
1961 ..	20.84	17.80	20.01	20.00	19.67	16.81	23.92	15.57	19.54
1962 ..	21.36	18.50	21.13	19.15	22.27	20.69	40.04	17.59	20.41
1963 ..	19.90	18.92	20.09	18.67	20.42	17.94	31.43	19.05	19.55
1964 ..	20.29	16.89	19.24	19.03	19.66	20.12	32.93	20.97	19.06

(a) Number of deaths of children aged under one year per 1,000 live births registered.

Compared with other countries, Australia occupies a favourable position in respect of infant mortality. In 1963, only a few countries recorded a lower rate than Australia. Rates for Australia and the more populous countries of the world for the latest available year are shown in the tables in § 7. International Vital Statistics, pages 344-6.

(b) *Under Four Weeks.* The following table shows infant mortality rates under four weeks of age in each State and Territory during the period 1926 to 1963.

INFANT MORTALITY RATES(a): UNDER FOUR WEEKS

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	29.63	29.75	27.66	26.84	25.10	33.12	14.37	28.86	28.96
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 ..	24.34	24.27	24.34	20.88	20.62	27.13	35.27	12.48	23.85
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
1956-60 ..	16.04	14.50	15.15	13.67	15.01	13.29	24.19	9.64	15.07
ANNUAL RATES									
1959 ..	16.37	15.22	14.61	14.03	13.79	14.84	27.63	8.81	15.31
1960 ..	15.25	15.84	13.70	13.26	15.89	11.18	27.03	12.00	14.64
1961 ..	14.86	13.46	14.80	12.99	12.76	11.91	14.81	10.96	14.01
1962 ..	15.46	14.17	15.02	13.44	14.48	14.06	19.48	11.54	14.71
1963 ..	14.10	14.88	14.80	12.92	14.87	12.08	20.95	13.54	14.32

(a) Number of deaths of children aged under four weeks per 1,000 live births registered.

NOTE.—Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

(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 1926 to 1963.

INFANT MORTALITY RATES(a): FOUR WEEKS AND UNDER ONE YEAR

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AVERAGE ANNUAL RATES									
1926-30 ..	25.11	22.59	19.75	20.11	24.17	20.25	51.72	42.45	23.03
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 ..	11.61	10.23	9.97	12.07	12.68	12.18	26.46	6.24	11.12
1946-50 ..	8.38	6.27	7.54	8.12	8.62	7.19	15.92	.09	7.64
1951-55 ..	7.77	5.52	6.49	7.60	7.14	7.33	16.65	4.12	6.89
1956-60 ..	6.19	5.17	5.85	6.84	6.41	7.33	11.81	4.04	5.98
ANNUAL RATES									
1959 ..	6.28	5.99	5.64	6.68	6.37	8.58	11.31	2.94	6.23
1960 ..	5.91	4.76	5.17	5.68	5.73	7.91	6.43	5.69	5.52
1961 ..	5.98	4.34	5.21	7.01	6.91	4.90	9.11	4.61	5.53
1962 ..	5.90	4.33	6.11	5.71	7.79	6.63	20.56	6.05	5.70
1963 ..	5.80	4.04	5.29	5.75	5.55	5.86	10.48	5.51	5.23

(a) Number of deaths of children aged four weeks and under one year per 1,000 live births registered.

NOTE.—Because of the smallness of the numbers of these deaths occurring in the Australian Capital Territory and the Northern Territory, the rates for these Territories (i.e. number of such deaths per thousand live births) are subject to considerable fluctuation.

(ii) *Australia. (a) Under One Year.* The fact that out of 601,014 male infants born from 1959 to 1963, 13,561 (22.56 per 1,000) died during the first year of life, while of 569,044 female infants only 10,107 (17.76 per 1,000) died during the first year, accords with 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. 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

Period	Number of deaths						Rates(a)					
	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
	ANNUAL AVERAGES						AVERAGE ANNUAL RATES					
1926-30 ..	2,203	1,612	1,706	1,330	3,909	2,942	32.50	25.20	25.16	20.79	57.66	45.99
1931-35 ..	1,763	1,299	886	687	2,649	1,986	30.62	23.73	15.38	12.55	46.00	36.28
1936-40 ..	1,816	1,353	863	663	2,679	2,016	29.30	22.93	13.93	11.23	43.23	34.16
1941-45 ..	2,007	1,495	914	720	2,921	2,215	26.66	20.88	12.14	10.05	38.80	30.93
1946-50 ..	2,024	1,490	784	604	2,808	2,094	21.68	16.86	8.40	6.84	30.08	23.70
1951-55 ..	1,907	1,406	776	612	2,683	2,018	18.47	14.32	7.52	6.24	25.99	20.56
1956-60 ..	1,921	1,432	741	589	2,662	2,021	16.81	13.24	6.48	5.45	23.29	18.69
	ANNUAL TOTALS						ANNUAL RATES					
1959 ..	2,017	1,458	777	637	2,794	2,095	17.35	13.17	6.69	5.75	24.04	18.92
1960 ..	1,934	1,437	717	555	2,651	1,992	16.33	12.84	6.06	4.96	22.39	17.80
1961 ..	1,951	1,410	739	589	2,690	1,999	15.85	12.06	6.00	5.04	21.85	17.10
1962 ..	2,038	1,451	752	599	2,790	2,050	16.69	12.62	6.16	5.21	22.85	17.83
1963 ..	1,946	1,429	690	542	2,636	1,971	16.06	12.48	5.70	4.73	21.76	17.21

(a) Number of deaths per 1,000 male or female live births registered.

(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 1963. 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 DEATHS AND MORTALITY RATES—UNDER FOUR WEEKS: AUSTRALIA

Period	Number of deaths						Rates(a)					
	Early neonatal				Late neonatal— one week and under four weeks		Early neonatal				Late neonatal— one week and under four weeks	
	Under one day		One day and under one week				Under one day		One day and under one week			
	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males	Males	Fe- males
ANNUAL AVERAGES						AVERAGE ANNUAL RATES						
1931-35 ..	(b)	(b)	c 1,442	c 1,066	321	233	(b)	(b)	c25.04	c19.48	5.58	4.25
1936-40 ..	(b)	(b)	c 1,496	c 1,120	320	233	(b)	(b)	c24.13	c18.99	5.17	3.94
1941-45 ..	906	674	728	541	373	280	12.03	9.42	9.67	7.55	4.96	3.91
1946-50 ..	986	731	758	539	280	220	10.56	8.28	8.12	6.09	3.00	2.49
1951-55 ..	918	713	742	508	247	185	8.88	7.26	7.19	5.17	2.40	1.89
1956-60 ..	972	765	705	490	244	177	8.50	7.07	6.17	4.53	2.13	1.64
	ANNUAL TOTALS						ANNUAL RATES					
1959 ..	1,003	784	762	497	252	177	8.63	7.08	6.55	4.49	2.17	1.60
1960 ..	967	755	715	516	252	166	8.17	6.75	6.04	4.61	2.13	1.48
1961 ..	976	744	739	490	236	176	7.93	6.36	6.00	4.19	1.92	1.51
1962 ..	1,080	733	719	548	239	170	8.84	6.38	5.89	4.76	1.96	1.48
1963 ..	1,043	765	691	509	212	155	8.61	6.68	5.70	4.44	1.75	1.36

(a) Number of deaths per 1,000 male or female live births registered.

(b) Not available.

(c) Includes under one day.

Graphs showing infant deaths and infant mortality rates for each year from 1910 to 1964 will be found on pages 311 and 312 respectively.

(iii) *Causes of death—Children under One Year.* (a) *Numbers.* 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.

A summary for 1963 of 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, 1963

International Statistical Classification number	Cause of death	Age at death										Total under one year	
		Days		Total under one week	Weeks			Months					
		Under 1	1-6		1	2	3	1-2 (a)	3-5	6-8	9-11		
	Causes mainly of pre-natal and natal origin—												
750-759	Congenital malformations ..	202	196	398	90	40	31	144	105	53	24	885	
760, 761	Birth injury ..	343	238	581	24	6	..	..	..	..	..	611
762	Post-natal asphyxia and atelectasis ..	358	200	558	12	1	..	2	2	2	1	578	
769	Attributed to maternal toxæmia ..	51	33	84	4	..	..	..	..	..	..	88
770	Erythroblastosis ..	89	29	118	5	..	..	1	1	..	..	125
771	Haemorrhagic disease of the newborn ..	11	45	56	7	1	..	..	..	..	..	64
773	Ill-defined diseases of early infancy ..	127	105	232	9	2	1	8	5	1	1	259	
774-776	Immaturity alone, or primary to diseases other than of early infancy ..	579	262	841	13	3	..	6	1	1	..	865	
	<i>Total</i>	1,760	1,108	2,868	164	53	32	161	114	57	26	3,475	
	Causes mainly of post-natal origin—												
571, 764	Gastro-enteritis (including diarrhoea of newborn) ..	..	1	1	2	4	1	22	29	19	18	96
(b)	Pneumonia and bronchitis ..	10	47	57	20	17	16	110	130	68	63	481	
(c)	Septicæmia, skin and subcutaneous tissue infections, sepsis of newborn ..	1	4	5	7	4	2	4	5	6	3	36	
057, 340	Meningococcal infections and non-meningococcal meningitis ..	..	3	3	2	2	2	12	7	7	3	38
(d)	Causes classified as infective or mainly infective in origin not specified above ..	1	1	2	3	4	1	19	21	14	14	78	
E921-E925	Accidental mechanical suffocation from vomit, food, foreign body or in cot ..	..	1	1	2	5	2	23	29	7	12	81
E926, E980-E985	Lack of care, neglect, infanticide ..	7	1	8	..	..	..	1	2	..	1	12
(e)	Other accidents, poisonings and violence ..	..	1	1	..	..	..	8	11	8	18	46
	<i>Total</i>	19	59	78	36	36	24	199	234	129	132	868	
140-239	Neoplasms ..	2	..	2	1	..	..	2	4	2	6	17
Residual	Other causes remaining ..	27	33	60	10	6	5	53	61	31	21	247	
	<i>All Causes</i>	1,808	1,200	3,008	211	95	61	415	413	219	185	4,607	

(a) Age four weeks and under three months. (b) 490-493, 500-502, 763. (c) 053, 690-698, 765-768. (d) 001-052, 054-056, 058-138, 391-393, 470-483, 518, 519. (e) E800-E920, E927-E979, E990-E999.

(b) *Proportions.* The following table summarizes the detail contained in the previous table, and, in addition, shows the proportions of deaths from the various causes in each of the periods—under one week, one week and under one month, one month and under one year, and total under one year.

CAUSES OF DEATH: CHILDREN UNDER ONE YEAR OF AGE—NUMBERS AND PROPORTIONS, AUSTRALIA, 1963

International Statistical Classification number	Cause of death	Age at death						Total under one year	
		Under one week		One week and under one month		One month and under one year		Number	Per cent.
		Number	Per cent.	Number	Per cent.	Number	Per cent.		
	Causes mainly of pre-natal and natal origin—								
750-759	Congenital malformations ..	398	13.2	161	43.9	326	26.5	885	19.2
760, 761	Birth injury ..	581	19.3	30	8.2	..	..	611	13.3
762	Post-natal asphyxia and atelectasis ..	558	18.5	13	3.5	7	0.6	578	12.5
769	Attributed to maternal toxæmia ..	84	2.8	4	1.1	..	..	88	1.9
770	Erythroblastosis ..	118	3.9	5	1.4	2	0.2	125	2.7
771	Haemorrhagic disease of the newborn ..	56	1.9	8	2.2	..	..	64	1.4
773	Ill-defined diseases of early infancy ..	232	7.7	12	3.3	15	1.2	259	5.6
774-776	Immaturity alone, or primary to diseases other than of early infancy ..	841	28.0	16	4.3	8	0.6	865	18.8
	<i>Total</i>	2,868	95.3	249	67.9	358	29.1	3,475	75.4
	Causes mainly of post-natal origin—								
571, 764	Gastro-enteritis (including diarrhoea of newborn) ..	1	..	7	1.9	88	7.1	96	2.1
(a)	Pneumonia and bronchitis ..	57	1.9	53	14.4	371	30.1	481	10.4
	Other	20	0.7	36	9.8	235	19.1	291	6.3
	<i>Total</i>	78	2.6	96	26.1	694	56.3	868	18.8
140-239, residual	Neoplasms and other causes remaining	62	2.1	22	6.0	180	14.6	264	5.8
	All Causes	3,008 (65.3 %)	100.0	367 (8.0 %)	100.0	1,232 (26.7 %)	100.0	4,607 (100.0 %)	100.0

(a) 490-493, 500-502, 763.

7. *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 year 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 the year 1963 is given for Australia in the following table.

AGE AT DEATH: AUSTRALIA, 1963

Age at death	Males	Fe- males	Per- sons	Age at death			
				Males	Fe- males	Per- sons	
Under 1 week	1,734	1,274	3,008	5-9 years	276	190	466
1 week and under 2 weeks ..	126	85	211	10-14 "	265	133	398
2 weeks and under 3 weeks ..	56	39	95	15-19 "	562	219	781
3 weeks and under 4 weeks ..	30	31	61	20-24 "	618	224	842
				25-29 "	511	240	751
<i>Total under 4 weeks ..</i>	<i>1,946</i>	<i>1,429</i>	<i>3,375</i>	30-34 "	613	333	946
				35-39 "	921	569	1,490
4 weeks and under 3 months	239	176	415	40-44 "	1,312	849	2,161
3 months and under 6 months	233	180	413	45-49 "	2,106	1,190	3,296
6 months and under 12 months	218	186	404	50-54 "	3,132	1,639	4,771
				55-59 "	4,197	2,039	6,236
<i>Total under 1 year ..</i>	<i>2,636</i>	<i>1,971</i>	<i>4,607</i>	60-64 "	5,479	2,962	8,441
				65-69 "	6,420	3,978	10,398
1 year	189	178	367	70-74 "	7,495	5,747	13,242
2 years	111	94	205	75-79 "	7,219	6,572	13,791
3 "	87	66	153	80-84 "	5,013	6,066	11,079
4 "	80	70	150	85-89 "	2,765	4,073	6,838
				90-94 "	972	1,796	2,768
				95-99 "	212	434	646
				100 years and over	14	49	63
				Age not stated ..	7	1	8
<i>Total under 5 years ..</i>	<i>3,103</i>	<i>2,379</i>	<i>5,482</i>	Total, All Ages ..	53,212	41,682	94,894

There are different mortality rates at various stages of life, and the actual number of deaths in any period is related to the numbers living at the respective stages. Changes in the number of deaths from one period to another are associated with changes in the rate of mortality in the various age groups and by the changed proportions of persons living in the different groups.

The combined effect of various influences, i.e., the steady decline in the rate of mortality, the long-term decline in the birth-rate, and the effects of past and present migration on the age distribution of the population, is shown in the following table, which shows the proportion of deaths in various age groups in ten-year periods from 1901 to 1960 and for the year 1963.

PROPORTION OF DEATHS IN EACH AGE GROUP: AUSTRALIA

(Per cent.)

Period	Age at death (years)								Total
	Under 1	1-4	5-19	20-39	40-59	60-64	65 and over	Unspeci- fied	
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
1951-60 ..	5.59	1.33	1.80	4.90	17.27	9.18	59.90	0.03	100.00
1963—									
Males ..	4.95	0.88	2.07	5.00	20.20	10.30	56.59	0.01	100.00
Females ..	4.73	0.98	1.30	3.28	13.71	7.11	68.89	0.00	100.00
Persons ..	4.85	0.92	1.73	4.25	17.35	8.90	61.99	0.01	100.00

A table showing these proportions for males and females separately for the period 1901 to 1950 was published in Year Book No. 39, page 614.

(ii) *Age-specific Death Rates.* In previous issues of the Year Book, average annual age-specific death rates were given for each State and Australia for the periods 1932-34, 1946-48 and 1953-55 (see Year Books, No. 37, pp. 778-9, No. 39, pp. 615-6 and No. 44, pp. 640-1). These rates were based on the age distribution of the population at the relevant censuses.

Intercensal estimates of the age distribution of the population are available for Australia and for the larger States. The following table shows age-specific death rates for Australia for the year 1963, for males, females and persons.

AGE-SPECIFIC DEATH RATES(a): AUSTRALIA, 1963

Age group (years)	Males	Females	Persons	Age group (years)	Males	Females	Persons
Under 1(b) ..	21.8	17.2	19.5	45-49 ..	6.4	3.7	5.0
1-4 ..	1.0	0.9	1.0	50-54 ..	10.1	5.6	7.9
5-9 ..	0.5	0.4	0.4	55-59 ..	16.6	8.5	12.7
10-14 ..	0.5	0.3	0.4	60-64 ..	27.0	13.8	20.2
15-19 ..	1.2	0.5	0.8	65-69 ..	43.4	21.4	31.1
20-24 ..	1.6	0.6	1.1	70-74 ..	63.3	37.2	48.5
25-29 ..	1.5	0.7	1.1	75-79 ..	96.8	62.3	76.6
30-34 ..	1.7	1.0	1.3	80-84 ..	144.4	107.7	121.7
35-39 ..	2.3	1.5	1.9	85 and over	241.1	201.9	215.3
40-44 ..	3.5	2.4	3.0				

(a) Average number of deaths per 1,000 of mid-year population in each age group estimated in respect of 30th June, 1963. (b) Infant deaths per 1,000 live births registered.

8. *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), 1948 (Sixth), and 1955 (Seventh), were successively adapted for use in Australian statistics.

The Sixth Revision of the International Statistical Classification of Diseases, Injuries and Causes of Death was used in Australia for deaths registered in 1950 to 1957. The Seventh Revision has been used for deaths registered in 1958 and subsequent years. The Sixth Revision, for the first time in connexion with the International Classification, laid down rules for a uniform method of selecting the main cause to be tabulated if more than one cause is stated on the death certificate. These rules were maintained in the Seventh Revision, which was concerned mainly with certain essential changes and amendment of errors and inconsistencies in the previous classification. 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 to successive revisions of the International List.

The adoption of the new method introduced with the Sixth Revision and maintained in the Seventh marked a fundamental change in Australian cause of death statistics, emphasis now being placed on the underlying cause of death as indicated by the certifying practitioner. This change in principle affects the comparability of the statistics for 1950 and subsequent years with those for earlier years. A complete detailed classification of causes of death for Australia for 1950 according to both the Fifth and Sixth Revisions was shown in *Demography*, Bulletin No. 68, 1950.

In order to facilitate the concise 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 as the base of the cause of death tabulations for 1963 which follow. Some categories have been sub-divided to show additional particulars of interest in Australian statistics. Tables A and B show deaths of males and females, respectively, in age groups, and Table C shows the total numbers of males and females who died, the death rates per million of mean population, and the percentage of total deaths.

A.—CAUSES OF DEATH: MALES, AUSTRALIA, 1963

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)

Cause of death(a)	Detailed list numbers	Age groups (years)									Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over	
B 1 Tuberculosis of respiratory system	001-008	1	1	..	..	3	17	55	76	175	328
B 2 Tuberculosis, other forms	010-019	..	1	..	..	3	..	4	3	7	18
B 3 Syphilis and its sequelae	020-029	..	..	..	..	..	2	..	13	34	56
B 6 Dysentery, all forms	045-048	1	2	..	..	..	3	..	..	1	7
B 7 Scarlet fever and streptococcal sore throat	050, 051	..	2	..	..	..	..	..	..	..	2
B 8 Diphtheria	055	..	..	1	..	..	..	..	..	..	1
B 9 Whooping cough	056	2	..	..	..	..	..	..	..	..	2
B10 Meningococcal infections	057	2	4	2	..	..	..	1	..	..	9
B12 Acute poliomyelitis	080	..	..	1	..	1	..	..	..	..	2
B14 Measles	085	3	6	1	..	..	..	..	..	..	10
B17 All other diseases classified as infective and parasitic	(b)	18	9	14	12	12	12	25	17	29	148
Malignant neoplasms of:—											
Digestive organs and peritoneum	150-159	..	1	3	6	30	107	316	647	d 1,774	2,884
Lung	162, 163	..	..	1	3	9	57	251	614	924	1,859
Breast	170	..	..	..	..	..	..	2	6	4	12
Genital Organs	171-179	..	1	..	11	15	6	16	75	717	841
Urinary organs	180, 181	..	1	2	1	..	9	41	108	310	472
Leukaemia and aleukæmia	204	3	27	34	20	15	20	37	49	116	321
Other malignant and lymphatic neoplasms	(c)	4	21	38	44	62	130	260	371	649	1,579
B19 Benign neoplasms and neoplasms of unspecified nature	210-239	2	1	6	1	5	8	21	21	31	96
B20 Diabetes mellitus	260	..	1	..	..	10	16	40	121	357	545
B21 Anaemias	290-293	..	3	4	2	4	3	8	9	79	112
B22 Vascular lesions affecting central nervous system	330-334	4	1	2	13	27	114	342	796	d 4,084	5,383
B23 Non-meningococcal meningitis	340	18	12	4	..	..	..	2	4	7	47
B24 Rheumatic fever	400-402	..	1	4	4	1	..	1	..	1	12
B25 Chronic rheumatic heart disease	410-416	..	..	1	14	14	39	69	65	111	313
B26 { Arteriosclerotic heart disease	420	..	..	..	3	41	478	1,960	3,945	d 9,551	15,978
{ Degenerative heart disease	421, 422	1	1	..	6	11	44	107	239	d 1,764	2,173
B27 Other diseases of heart	430-434	3	3	9	7	10	27	79	164	1,249	1,551
B28 Hypertension with heart disease	440-443	..	..	..	..	..	16	50	98	432	596
B29 Hypertension without mention of heart	444-447	..	..	..	1	8	33	45	57	236	380
B30 Influenza	480-483	3	..	1	..	..	2	3	5	18	32
B31 Pneumonia	490-493	205	50	12	12	13	46	101	174	1,135	1,748
B32 Bronchitis	500-502	16	9	2	1	3	19	65	324	1,176	1,615
B33 Ulcer of stomach and duodenum	540, 541	..	..	2	2	6	21	43	88	235	397
B34 Appendicitis	550-553	..	4	9	4	3	4	4	16	29	73
B35 Intestinal obstruction and hernia	, 561, 570	31	2	2	3	4	7	12	28	139	228

For footnotes see following page.

A.—CAUSES OF DEATH: MALES, AUSTRALIA, 1963—*continued*ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)—*continued*

Cause of death(a)	Detailed list numbers	Age groups (years)										Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over		
B36 Gastritis, duodenitis, enteritis, and colitis, except diarrhoea of the newborn	543, 571, 572	50	27	3	1	2	4	15	14	88	204	
B37 Cirrhosis of liver	581	2	3	1	6	5	29	83	117	120	363	
B38 Nephritis and nephrosis	590-594	2	3	7	15	32	43	76	102	235	515	
B39 Hyperplasia of prostate	610	..	..	..	..	..	..	1	25	385	411
B41 Congenital malformations	750-759	486	47	37	26	6	12	21	11	10	656	
B42 Birth injuries, postnatal asphyxia and atelectasis	760-762	715	..	..	..	..	..	..	..	..	715
B43 Infections of the newborn	763-768	69	..	..	..	..	..	..	..	..	69
B44 Other diseases peculiar to early infancy, and immaturity unqualified	769-776	809	..	..	..	..	..	..	..	..	809
B45 Senility without mention of psychosis, ill-defined and unknown causes	780-795	8	4	1	1	7	9	13	24	254	321	
General arteriosclerosis	450	..	..	..	..	..	2	9	46	1,059	1,116
Other diseases of circulatory system	451-468	..	..	2	2	8	16	57	124	395	604
B46 Other diseases of respiratory system	470-475, 510-527	34	15	4	2	8	14	32	107	375	591	
All other diseases	Residual	62	41	58	60	61	129	226	358	988	1,983	
BE47 Motor vehicle accidents	E810-E835	7	48	118	569	267	245	255	230	(d) 297	2,036	
BE48 All other accidents	E800-E802, E840-E962	71	115	145	211	209	235	217	196	352	1,751	
BE49 Suicide and self-inflicted injury	E963, E970 E979	..	..	4	108	197	233	258	179	(e) 164	1,143
BE50 Homicide and operations of war	E964, E965, E980-E999	3	3	6	9	12	22	9	10	21	95	
All Causes	..	2,636	467	541	1,180	1,124	2,233	5,238	9,676	30,117	53,212	

(a) No male deaths were recorded in the following categories in 1963: B4, Typhoid Fever (040); B5, Cholera (043); B11, Plague (058); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108); B16, Malaria (110-117); (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138. (c) All causes, 140-205, not shown above. (d) Includes 1, age "not stated". (e) Includes 2, age "not stated". (f) Includes 7, age "not stated".

B.—CAUSES OF DEATH: FEMALES, AUSTRALIA, 1963

ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE INTERNATIONAL LIST)

Cause of death(a)	Detailed list numbers	Age groups (years)										Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over		
B 1 Tuberculosis of respiratory system	001-008	..	..	..	..	2	11	17	12	40	82
B 2 Tuberculosis, other forms	010-019	..	1	1	..	..	1	1	3	5	12
B 3 Syphilis and its sequelae	020-029	1	..	..	..	..	..	3	4	12	20
B 6 Dysentery, all forms	045-048	1	..	1	..	..	..	..	1	1	4
B 8 Diphtheria	055	1	1	2	..	..	..	..	..	4	4
B 9 Whooping Cough	056	1	..	..	..	..	..	..	..	1	1
B10 Meningococcal infections	057	6	..	..	..	..	..	2	..	8	8
B14 Measles	085	3	11	1	..	..	..	..	..	1	16
B17 All other diseases classified as infective and parasitic	(b)	24	8	4	12	10	11	11	13	29	122	

For footnotes see following page.

B.—CAUSES OF DEATH: FEMALES, AUSTRALIA, 1963—*continued*
 ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE
 INTERNATIONAL LIST)—*continued*

Cause of death(a)	Detailed list numbers	Age groups (years)									Total
		0	1-4	5-14	15-24	25-34	35-44	45-54	55-64	65 and over	
B18 { Malignant neoplasms of Digestive organs and peritoneum ..	150-159	..	..	..	5	26	100	214	440	1,743	2,528
	Lung ..	162, 163	..	..	1	3	11	41	61	145	262
	Breast ..	170	..	..	..	15	132	290	276	565	1,278
	Genital organs ..	171-179	..	1	..	11	20	107	211	275	483
	Urinary organs ..	180, 181	..	1	2	..	1	7	15	37	140
Leukaemia and aleuk- aemia	204	1	16	30	19	15	14	25	31	100	251
Other malignant and lymphatic neoplasms ..	(c)	3	12	22	41	48	99	177	249	527	1,178
19 Benign neoplasms and neo- plasms of unspecified nature ..	210-239	4	2	4	3	6	14	18	21	30	102
B20 Diabetes mellitus ..	260	..	..	4	1	9	13	26	121	625	797
B21 Anaemias ..	290-293	1	4	5	4	4	9	8	11	104	150
B22 Vascular lesions affecting central nervous system	330-334	2	1	4	8	21	136	363	699	5,962	7,196
BB23 Non-meningococcal men- ingitis ..	340	12	10	7	1	1	2	1	3	10	47
B24 Rheumatic fever ..	400-402	..	..	2	1	2	..	2	..	2	9
B25 Chronic rheumatic heart disease	410-416	..	..	1	7	15	43	68	81	214	429
B26 { Arteriosclerotic heart disease ..	420	..	..	..	2	14	84	358	1,335	7,355	9,148
{ Degenerative heart dis- ease ..	421, 422	..	..	..	1	5	28	70	128	2,274	2,506
B27 Other diseases of heart ..	430-434	5	6	3	9	10	21	34	105	1,352	1,545
B28 Hypertension with heart disease	440-443	..	..	..	..	5	12	23	76	743	859
B29 Hypertension without men- tion of heart ..	444-447	..	..	..	..	3	20	39	41	300	403
B30 Influenza ..	480-483	1	2	1	..	1	1	3	5	21	35
B31 Pneumonia ..	490-493	140	57	20	15	18	27	40	67	1,026	1,410
B32 Bronchitis ..	500-502	11	10	7	2	1	7	21	33	223	315
B33 Ulcer of stomach and duo- denum ..	540, 541	..	..	1	2	5	16	16	22	112	174
B34 Appendicitis ..	550-553	..	3	7	2	1	2	2	6	12	35
B35 Intestinal obstruction and hernia	560, 561, 570	24	1	..	2	2	7	9	19	152	216
B36 Gastritis, duodenitis, en- teritis and colitis, except diarrhoea of the newborn	543, 571, 572	38	20	4	1	1	3	10	19	129	225
B37 Cirrhosis of liver ..	581	1	1	1	3	4	13	46	51	52	172
B38 Nephritis and nephrosis ..	590-594	2	5	4	11	17	45	69	75	221	449
B40 Complications of preg- nancy, childbirth and the puerperium ..	{ 640-652, 670-689 }	..	..	..	19	25	19	1	..	..	64
B41 Congenital malformations	750-759	399	43	26	13	17	4	9	9	8	528
B42 Birth injuries, post-natal asphyxia and atelectasis	760-762	474	..	..	..	..	..	..	..	..	474
B43 Infections of the newborn	763-768	66	..	..	..	..	..	..	..	..	66
B44 Other diseases peculiar to early infancy, and immat- urity unqualified	769-776	615	..	..	..	..	..	..	..	..	615
B45 Senility without mention of psychosis, ill-defined and unknown causes ..	780-795	7	3	1	3	1	4	7	7	347	380
{ General arteriosclerosis	450	..	..	..	..	..	1	3	28	1,238	1,270
{ Other diseases of circula- tory system ..	451-468	2	1	3	8	11	16	30	49	257	377
{ Other diseases of respira- tory system ..	{ 470-475, 510-527 }	20	11	9	4	3	9	16	26	186	284
{ All other diseases ..	Residual	48	40	40	42	69	130	241	317	1,192	2,119
BE47 Motor vehicle accidents ..	E810-E835	5	45	47	121	47	61	60	72	176	634
BE48 All other accidents	E800-E802 E840-E962	51	88	51	28	21	39	76	58	520	932
BE49 Suicide and self-inflicted injury ..	E963, E970- E979	..	..	..	29	81	130	148	111	(d) 76	575
BE50 Homicide and opera- tions of war ..	E964, E965, E980-E999	2	4	10	12	13	9	5	4	6	65
All Causes ..	..	1,971	408	323	443	573	1,418	2,829	5,001	28,716 (d)	41,682 (d)

(a) No female deaths were recorded in the following categories in 1963: B4, Typhoid fever (040); B5, Cholera (043); B7, Scarlet fever and streptococcal sore throat (050, 051); B11, Plague (058); B12, Acute poliomyelitis (080); B13, Smallpox (084); B15, Typhus and other rickettsial diseases (100-108); B16, Malaria (110-117). (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096 120-138. (c) All causes, 140-205, not shown above. (d) Includes 1, age "not stated".

C.—CAUSES OF DEATH: AUSTRALIA, 1963
ABBREVIATED LIST OF 50 CAUSES (BASED ON THE SEVENTH REVISION OF THE
INTERNATIONAL LIST)

Cause of death	Detailed list numbers	Number of deaths			Rate per 1,000,000 of mean population	Percentage of total deaths
		Males	Females	Persons		
B 1 Tuberculosis of respiratory system ..	001-008	328	82	410	38	0.43
B 2 Tuberculosis, other forms ..	010-019	18	12	30	3	0.03
B 3 Syphilis and its sequelae ..	020-029	56	20	76	7	0.08
B 4 Typhoid fever ..	040	..	..	..	..	..
B 5 Cholera ..	043	..	..	..	..	..
B 6 Dysentery, all forms ..	045-048	7	4	11	1	0.01
B 7 Scarlet fever and streptococcal sore throat ..	050-051	2	..	2	(a)	0.00
B 8 Diphtheria ..	055	1	4	5	(a)	0.00
B 9 Whooping cough ..	056	2	1	3	(a)	0.00
B10 Meningococcal infections ..	057	9	8	17	1	0.02
B11 Plague ..	058	..	..	..	..	..
B12 Acute poliomyelitis ..	080	2	..	2	(a)	0.00
B13 Smallpox ..	084	..	..	..	..	..
B14 Measles ..	085	10	16	26	2	0.03
B15 Typhus and other rickettsial diseases ..	100-108	..	..	..	..	..
B16 Malaria ..	110-117	..	..	..	..	..
B17 All other diseases classified as infective and parasitic ..	(b)	148	122	270	25	0.29
Malignant neoplasms of—						
Digestive organs and peritoneum ..	150-159	2,884	2,528	5,412	496	5.70
Lung ..	162, 163	1,859	262	2,121	194	2.24
Breast ..	170	12	1,278	1,290	118	1.36
Genital organs ..	171-179	841	1,108	1,949	179	2.05
Urinary organs ..	180, 181	472	203	675	62	0.71
Leukemia and aleukemia ..	204	321	251	572	52	0.60
Other malignant and lymphatic neoplasms ..	(c)	1,579	1,178	2,757	253	2.91
B19 Benign and unspecified neoplasms ..	210-239	96	102	198	18	0.21
B20 Diabetes mellitus ..	260	545	797	1,342	123	1.42
B21 Anaemias ..	290-293	112	150	262	24	0.28
B22 Vascular lesions affecting central nervous system ..	330-334	5,383	7,196	12,579	1,152	13.26
B23 Non-meningococcal meningitis ..	340	47	47	94	9	0.10
B24 Rheumatic fever ..	400-402	12	9	21	2	0.02
B25 Chronic rheumatic heart disease ..	410-416	313	429	742	68	0.78
B26 Arteriosclerotic heart disease ..	420	15,978	9,148	25,126	2,302	26.48
Degenerative heart disease ..	421-422	2,173	2,506	4,679	429	4.93
B27 Other diseases of heart ..	430-434	1,551	1,545	3,096	284	3.26
B28 Hypertension with heart disease ..	440-443	596	859	1,455	133	1.53
B29 Hypertension without mention of heart ..	444-447	380	403	783	72	0.83
B30 Influenza ..	480-483	32	35	67	6	0.07
B31 Pneumonia ..	490-493	1,748	1,410	3,158	289	3.33
B32 Bronchitis ..	500-502	1,615	315	1,930	177	2.03
B33 Ulcer of stomach and duodenum ..	540-541	397	174	571	52	0.60
B34 Appendicitis ..	550-553	73	35	108	10	0.12
B35 Intestinal obstruction and hernia ..	560, 561, 570	228	216	444	41	0.47
B36 Gastritis, duodenitis, enteritis and colitis, except diarrhoea of the newborn ..	543, 571, 572	204	225	429	39	0.45
B37 Cirrhosis of liver ..	581	363	172	535	49	0.56
B38 Nephritis and nephrosis ..	590-594	515	449	964	88	1.02
B39 Hyperplasia of prostate ..	610	411	..	411	38	0.43
B40 Complications of pregnancy, child birth and the puerperium ..	{ 640-652 } { 670-689 }	..	64	64	6	0.07
B41 Congenital malformations ..	750-759	656	528	1,184	108	1.25
B42 Birth injuries, post-natal asphyxia and atelectasis ..	760-762	715	474	1,189	109	1.25
B43 Infections of the newborn ..	763-768	69	66	135	12	0.14
B44 Other diseases peculiar to early infancy, and immaturity unqualified ..	769-776	809	615	1,424	130	1.50
B45 Senility without mention of psychosis, ill-defined and unknown causes ..	780-795	321	380	701	64	0.74
General arteriosclerosis ..	450	1,116	1,270	2,386	218	2.52
Other diseases of circulatory system ..	451-468	604	377	981	90	1.03
B46 Other diseases of respiratory system ..	{ 470-475 } { 510-527 }	591	284	875	80	0.92
All other diseases ..	Residual	1,983	2,119	4,102	376	4.32
BE47 Motor vehicle accidents ..	E810-E835	2,036	634	2,670	245	2.81
BE48 All other accidents ..	E800-E802 E840-E962	1,751	932	2,683	246	2.83
BE49 Suicide and self-inflicted injury ..	E963 E970-E979	1,143	575	1,718	157	1.81
BE50 Homicide and operations of war ..	E964, E965 E980-E999	95	65	160	15	0.17
All Causes ..		53,212	41,682	94,894	8,692	100.0

(a) Less than 0.5. (b) 030-039, 041, 042, 044, 049, 052-054, 059-074, 081-083, 086-096, 120-138. (c) 140-18, 160, 161, 164, 165, 190-203, 205.

9. 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 Seventh Revision of the International List. Certain important causes are treated in detail hereunder. The Abbreviated Classification numbers used in tables A to C (pp. 335-8) 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 1963 was 440, consisting of 346 males and 94 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 Year Book No. 39, page 626.

(b) *Age at Death*. The following table shows the age groups of males and females who were classified as dying from tuberculosis in 1963, together with figures for 1931, 1941, 1951, and 1961.

TUBERCULOSIS (ALL FORMS): DEATHS IN AGE GROUPS, AUSTRALIA

Age group (years)	Males					Females				
	1931	1941	1951	1961	1963	1931	1941	1951	1961	1963
0-14	90	63	23	5	3	81	54	35	1	2
15-29	294	162	46	2	3	487	275	68	..	1
30-44	585	428	135	25	20	422	319	142	20	13
45-64	674	793	570	128	138	252	251	126	41	33
65 and over ..	193	279	306	175	182	89	110	86	50	45
Not stated ..	..	..	..	..	..	..	..	1	..	..
Total ..	1,836	1,725	1,080	335	346	1,331	1,009	458	112	94

(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 49 per 100,000 of mean population in 1931 to 18 in 1951, and to 4 in 1963. The reductions in the younger age groups are much greater, as can be seen from the table above. In making these comparisons, consideration of the effect of the change in basis from the Fifth to the Sixth Revision of the International List (*see* ii (a) above) is particularly important.

Of the more populous countries, those with lowest death rates from tuberculosis per 100,000 of population are: Netherlands, 2.5; Israel (Jewish population), 3.3; Denmark, 3.8; Australia, 4.0; Canada, 4.2; United States of America, 5.1; and New Zealand, 5.2.

Rates for selected countries in each continent are:

Africa—South Africa (white population), 7.1; United Arab Republic, 21.6.

North America—Dominican Republic, 15.5; Mexico, 27.3; Guatemala, 31.4.

South America—Argentina, 19.9; Peru, 56.4. Brazil, 82.3;

Asia—Japan, 29.2; India, 82.7; Philippines, 87.1.

Europe—England and Wales, 6.6; Scotland, 8.4; Italy, 16.3; France, 19.2; Poland, 39.9.

(iii) *Malignant Neoplasms, including Neoplasms of Lymphatic and Haematopoietic Tissues (B18)*. (a) *General*. Deaths classified under this heading according to the Sixth and Seventh Revisions of the International List (used in Australia for deaths registered since 1950) are not directly comparable in total with those on the Fifth Revision basis (*see* Year Book No. 39, p. 628). This should be kept in mind in considering the comparisons shown in the following pages.

(b) *Seat of Disease*. Tables showing the seat of disease in conjunction with age and conjugal condition of the persons dying from malignant neoplasms in 1963 are included in *Causes of Death*, Bulletin No. 1. A summary regarding seat of disease for 1963 is given on page 340.

DEATHS FROM MALIGNANT NEOPLASMS AND NEOPLASMS OF LYMPHATIC AND HAEMATOPOIETIC TISSUES: AUSTRALIA, 1963.

Seat of disease	Males	Females	Persons
Malignant neoplasms—			
Buccal cavity and pharynx	202	80	282
Digestive organs and peritoneum—			
Oesophagus	195	85	280
Stomach	992	677	1,669
Small intestine	24	16	40
Large intestine	728	931	1,659
Other	945	819	1,764
Respiratory system	1,999	304	2,303
Breast	12	1,278	1,290
Uterus .. .. .	..	610	610
Other female genital organs .. .. .	..	498	498
Male genital organs	841	..	841
Urinary organs	472	203	675
Skin	264	194	458
Other and unspecified organs	582	560	1,142
<i>Total, Malignant Neoplasms</i>	7,256	6,255	13,511
Neoplasms of lymphatic and haematopoietic tissues—			
Lymphosarcoma and reticulosarcoma	193	156	349
Hodgkin's disease	83	64	147
Other forms of lymphoma (reticulosis)	41	23	64
Multiple myeloma (plasmocytoma)	72	57	129
Leukaemia and aleukaemia	321	251	572
Mycosis fungoides	2	2	4
<i>Total, Neoplasms of Lymphatic and Haematopoietic Tissues</i>	712	553	1,265
Grand Total	7,968	6,808	14,776

(c) *Age at Death.* The ages of males and females who died from malignant neoplasms in 1963 are given below, together with figures for 1931, 1941, 1951, and 1961. The increase in the number of deaths from malignant neoplasms in the years since 1931 is due principally to the increase in the number of people in the higher age groups, at which ages the risks of cancer are much greater. While the total population increased by about 67 per cent. between 1931 and 1963, the number of people aged 55 years and over increased by about 109 per cent. The increase in the number of deaths in the lower age groups from 1951 is due partly to the inclusion of neoplasms of lymphatic and haematopoietic tissues, and it is probable also that part 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 (years)	Males					Females				
	1931	1941	1951 (a)	1961 (a)	1963 (a)	1931	1941	1951 (a)	1961 (a)	1963 (a)
Under 15	25	21	91	130	136	23	25	71	114	88
15-29	43	49	103	109	134	38	45	76	84	127
30-44	196	176	275	380	411	326	344	387	481	548
45-54	410	465	584	823	923	548	685	692	847	973
55-64	868	983	1,334	1,699	1,870	744	926	1,180	1,207	1,369
65 and over	1,942	2,561	3,128	4,239	4,493	1,426	2,198	2,698	3,575	3,703
Not stated .. .. .	..	..	..	..	1	..	..	..	1	..
Total	3,484	4,255	5,515	7,380	7,968	3,105	4,223	5,104	6,309	6,808

(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 they reflect the increasing age of the population rather than the true change in mortality from malignant neoplasms (see previous paragraph). In 1931, the rate for Australia was 101 (males, 105; females, 97); in 1941 it was 119 (males, 119; females, 120); and in 1951 it had risen to 126 (males, 130; females, 122). Figures for 1961 gave a rate of 130 (males, 139; females, 121), and for 1963 a rate of 135 (males, 148; females 126).

Death rates from malignant neoplasms per 100,000 of mean population for Australia and for various other countries are as follows:—Brazil, 94; Poland, 97; Japan, 103; Israel Jewish population, 110; South Africa (white population), 111; Canada, 132; Australia, 135; United States of America, 149; Italy, 150; Netherlands, 172; France, 200; England and Wales, 218; Scotland, 221. 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 1963 was 35,098 (20,611 males and 14,487 females). This class is the largest among causes of death, the rate having increased from 112 per 100,000 of mean population in 1911–15 to 321 in 1963. 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 1931 were as follows:—1931, 159 (males, 178; females, 142); 1941, 269 (males, 306; females, 231); 1951, 314 (males, 367; females, 259); 1961, 304 (males, 356; females, 250); and 1963, 321 (males, 374; females, 268). Deaths from heart diseases in 1963 represented 37 per cent. of the total deaths.

(v) *Puerperal Causes (B40).* It was shown in Year Book No. 39, page 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 Seventh Revision, introduced in 1958, did not affect comparability. The death rate from these causes has fallen rapidly during recent years and in 1963 the rate was 0.3 per 1,000 live births, compared with a rate of 6 per 1,000 in 1936. The 64 deaths in 1963 correspond to a death rate of 1.18 per 100,000 females. The death rate may be expressed in other terms by stating that for every 3,683 babies born alive in 1963 one woman died from puerperal causes.

The death rate per 1,000 live births from puerperal causes in various countries for the latest available year is as follows:—Denmark and Sweden, 0.2; Australia, Netherlands, Norway and New Zealand, 0.3; United States of America, United Kingdom, Canada and France, 0.4; Finland and Switzerland, 0.5; and Italy, Japan and Venezuela, 1.1.

Tables showing ages at marriage and at death, duration of marriage, and issue for 1963 are given in *Demography*, Bulletin No. 81.

(vi) *Causes of Infant Mortality.* See paragraph devoted to causes of infant deaths on pages 331–2.

(vii) *Accidents, Poisonings and Violence (BE47 to BE50).* (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 delayed 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 between two and three times as great for males as for females. It can be seen also that in 1963 the proportion of deaths caused by violence was 7.62 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), AUSTRALIA

Period	Death rate from—												All violence, proportion per 10,000 deaths		
	Accidents(b)			Suicide			Homicide(c)			Total violence					
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
1931-35..	71	22	47	19	5	12	2	1	2	92	28	61	929	353	676
1936-40..	86	28	58	17	5	11	2	1	1	105	34	70	979	399	724
1941-45..	67	26	46	11	4	8	1	1	1	79	31	55	730	348	558
1946-50..	76	27	51	14	5	10	1	1	1	91	33	62	844	383	640
1951-55..	82	31	57	15	5	10	2	1	1	99	37	68	964	453	740
1956-60..	75	32	53	16	6	11	2	1	2	93	39	66	957	495	754
1959 ..	74	31	53	16	6	11	2	1	1	92	38	65	931	484	736
1960 ..	72	33	52	15	6	11	2	1	2	89	40	65	934	518	751
1961 ..	72	30	52	17	7	12	2	1	1	91	38	65	966	514	769
1962 ..	71	33	52	19	9	14	2	1	2	92	43	68	952	559	780
1963 ..	69	29	49	21	11	16	2	1	1	92	41	66	944	529	762

(a) Number of deaths per 100,000 of mean population.

(b) Includes "open verdict".

(c) Includes late effects of injuries due to operations of war.

(b) *Accidents (BE47, BE48)*. In 1963, the total number of deaths from accidental causes was 5,353 (3,787 males and 1,566 females). Over 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, 2,611 (48.78 per cent.); motor vehicle non-traffic accidents, 59 (1.10 per cent.); other road vehicle accidents, 48 (0.90 per cent.); railway accidents, 96 (1.79 per cent.); water transport accidents, 88 (1.65 per cent.); aircraft accidents, 27 (0.50 per cent.); a total of 2,929 (54.72 per cent.). Other important causes were accidental falls, 864 (16.14 per cent.); accidental drowning, 384 (7.17 per cent.); and accidents caused by fire and explosion of combustible material, 199 (3.72 per cent.).

(c) *Suicide (BE49). Modes Adopted*. Deaths from suicide in 1963 numbered 1,718 (males, 1,143; females, 575). Poisoning, other than by gases, was used in 724 cases (42.14 per cent. of total deaths by suicide). Other important modes adopted, together with the numbers and relevant percentages, were as follows:—firearms and explosives, 336 (19.56 per cent.); poisoning by gases, 323 (18.80 per cent.); hanging or strangulation, 157 (9.14 per cent.); submersion (drowning), 81 (4.71 per cent.); other and unspecified modes, 97 (5.65 per cent.).

Of the 1,143 males who committed suicide, 312 (27.30 per cent.) used firearms or explosives. For females the most common mode was poisoning (other than by gases). This was used in 340 cases (59.13 per cent.).

Age at Death. The following table shows the age of persons who committed suicide in 1963.

AGE OF PERSONS WHO COMMITTED SUICIDE: AUSTRALIA, 1963

Age group (years)	Males	Females	Persons	Age group (years)	Males	Females	Persons
10-14	4	..	4	60-64	84	55	139
15-19	36	8	44	65-69	67	30	97
20-24	72	21	93	70-74	42	26	68
25-29	93	35	128	75-79	27	9	36
30-34	104	46	150	80-84	21	10	31
35-39	121	66	187	85 and over ..	5	..	5
40-44	112	64	176	Not Stated ..	2	1	3
45-49	138	63	201				
50-54	120	85	205				
55-59	95	56	151				
				Total Deaths ..	1,143	575	1,718

(d) *Homicide and Operations of War (BE50)*. Of the 160 deaths recorded in 1963, there were 148 deaths from homicide and injury purposely inflicted by other persons (not in war), of which assault by firearms and explosives caused 61, assault by cutting and piercing instruments 23, and assault by other means 64. Deaths from injury resulting from the operations of war numbered 12, but all were deaths from late effects of such injuries.

10. **Age at Death and Average Issue of Deceased Married Males and Females.**—*Demography*, Bulletin No. 81, 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 1963. Deaths of married males in 1963 numbered 41,397, and those of married females, 33,659. The tables which follow deal, however, with only 40,811 males and 33,423 females, the information regarding issue in the remaining 822 cases being incomplete. The total number of children in the families of the 40,811 males was 118,562 and of the 33,423 females, 105,179. 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

Age at death (years)	Average issue									
	Males					Females				
	1931	1941	1951	1961	1963	1931	1941	1951	1961	1963
Under 20 ..	0.75	..	0.43	0.33	..	0.66	0.79	0.83	0.75	0.67
20-24 ..	0.81	0.73	0.96	0.93	0.97	1.13	0.95	0.86	1.12	1.11
25-29 ..	1.33	1.12	1.29	1.56	1.70	1.81	1.45	1.61	2.00	1.83
30-34 ..	1.79	1.76	1.79	2.23	2.16	2.34	1.91	1.98	2.37	2.36
35-39 ..	2.13	2.11	2.12	2.37	2.56	2.89	2.30	2.49	2.47	2.58
40-44 ..	2.77	2.49	2.30	2.44	2.57	3.29	2.77	2.39	2.44	2.59
45-49 ..	3.10	2.68	2.51	2.49	2.50	3.55	2.93	2.59	2.38	2.40
50-54 ..	3.46	2.96	2.56	2.46	2.50	3.60	3.29	2.76	2.43	2.40
55-59 ..	3.69	3.28	2.71	2.45	2.53	4.01	3.55	3.03	2.50	2.52
60-64 ..	4.02	3.55	3.07	2.58	2.53	4.21	3.79	3.29	2.69	2.72
65-69 ..	4.41	3.73	3.25	2.77	2.70	4.82	4.01	3.63	3.04	2.90
70-74 ..	5.06	4.17	3.58	3.00	2.92	5.41	4.29	3.64	3.30	3.06
75-79 ..	5.65	4.56	3.83	3.31	3.19	6.02	4.85	3.96	3.44	3.41
80-84 ..	6.17	4.93	4.30	3.62	3.41	6.26	5.39	4.19	3.58	3.48
85-89 ..	6.59	5.70	4.63	3.94	3.73	6.57	5.85	4.68	3.78	3.72
90-94 ..	6.94	6.57	5.06	4.39	3.93	6.73	6.11	5.08	3.99	3.91
95-99 ..	6.69	7.04	5.78	4.76	4.65	7.10	6.34	5.76	4.51	4.19
100 and over ..	7.00	8.69	5.71	5.38	4.62	8.20	6.73	7.72	4.63	4.79
Age not stated ..	5.00	..	8.00	..	..	5.00	..	5.50	5.00	..
All Ages ..	4.44	3.91	3.39	2.98	2.91	4.72	4.22	3.68	3.22	3.15

(a) Includes widowed or divorced.

11. **Age at Marriage of Deceased Males and Females, and Issue.**—The following table shows the average issue of males and females according to the age at marriage of the deceased parent.

**AGE AT MARRIAGE AND AVERAGE ISSUE OF DECEASED MALES
AND FEMALES: AUSTRALIA**

Age at marriage (years)(a)	Average issue									
	Males					Females				
	1931	1941	1951	1961	1963	1931	1941	1951	1961	1963
Under 15 ..	..	..	..	..	..	6.36	7.80	4.88	4.45	5.39
15-19..	6.15	5.40	4.63	4.11	4.26	6.79	6.10	5.41	4.74	4.64
20-24..	5.56	4.89	4.23	3.65	3.59	5.23	4.80	4.28	3.77	3.64
25-29..	4.70	4.21	3.65	3.16	3.04	3.79	3.51	3.14	2.85	2.74
30-34..	3.96	3.41	3.00	2.64	2.55	2.42	2.35	2.23	1.98	1.99
35-39..	3.14	2.80	2.45	2.11	2.06	1.40	1.26	1.16	1.14	1.02
40-44..	2.36	2.01	1.69	1.49	1.41	0.39	0.35	0.36	0.31	0.28
45-49..	1.96	1.52	1.33	1.11	0.99	0.12	0.01	0.07	0.06	0.02
50-54..	1.60	1.05	0.80	0.71	0.48	..	..	..	..	..
55-59..	0.95	0.79	0.49	0.25	0.35	..	..	..	..	..
60-64..	0.63	0.29	0.24	0.25	0.34	..	..	..	..	..
65 and over ..	0.18	0.01	0.29	0.24	..	..	..	..	..	..
Age not stated ..	3.64	2.95	2.81	2.40	2.34	3.96	2.45	3.17	2.44	2.46
All Ages ..	4.44	3.91	3.39	2.98	2.91	4.72	4.22	3.68	3.22	3.15

(a) In cases where the deceased was married more than once this represents age at first marriage.

§ 6. Vital Statistics of External Territories

The following table shows, for the year 1963, the number of marriages, births and deaths registered in the external territories under the control of Australia. More detailed information will be found in a series of tables in *Demography*, Bulletin No. 81.

EXTERNAL TERRITORIES: VITAL STATISTICS, 1963

Territory	Marriages	Births	Deaths
Christmas Island(a) ..	4	91	9
Cocos (Keeling) Islands(a) ..	2	19	3
Norfolk Island(a) ..	4	8	13
Papua(b) ..	99	311	32
Trust Territory of New Guinea(b) ..	119	518	62
Trust Territory of Nauru(b) ..	5	10	2

(a) Total population.

(b) Non-indigenous population only.

§ 7. International Vital Statistics

Vital Statistics Rates—Selected Countries.—In the following table, vital statistics rates for selected countries are shown. Crude marriage, birth, and death rates represent the number of "events" reported for the year stated per 1,000 of the population. Infant mortality rates

are the number of deaths which occurred under one year of age per 1,000 live births. The true death rates (reciprocals of the expectation of life at birth) have been computed from the life tables for the respective countries as published in the United Nations *Demographic Yearbook*, 1963 (see explanation of true death rates, para. 4, p. 326).

In many instances the rates shown in the following table are estimates and the results of sample surveys only. Reference should be made to the detailed comments contained in the United Nations *Demographic Yearbook*, 1963 (see particularly Technical Notes on Statistical Tables and footnotes to the tables). The countries are arranged in the same order as in the table on page 301-2 of the Population chapter.

VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE YEAR

(Source: United Nations *Demographic Yearbook*, 1963)

Country	Year	Rates(a)				Year	True death rates (b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
Africa—								
South Africa—								
White population ..	1963	(c) 8.9	23.9	9.1	29.0	1950-52	15.5	14.3
Coloured population ..	1963	(c) 6.2	46.3	15.3	126.9	1950-52	22.3	20.9
Asian population ..	1962	(c) 7.4	38.6	7.4	53.7	1950-52	17.9	18.3
Congo (Leopoldville)(j)	1955-57	(d)	43	20	104	1950-52	26.6	25.0
Morocco ..	1962	(d)	46.1	18.7	149	1960	20.2	
Upper Volta ..	1960-61	(d)	49.1	30.5	174.3	1960-61	31.2	32.2
Southern Rhodesia(j)	1954	(d)	44.8	14.4	122	1953-55	20.8	20.4
Northern Rhodesia(j)	1950	(d)	56.8	32.2	259	1950	27.0	
Ivory Coast ..	1961	(d)	56.1	33.3	(e)138	1956-58	28.6	
Senegal ..	1960-61	(d)	43.3	16.7	92.9	1957	27.0	
Guinea ..	1954	(d)	62	40	220	1954-55	{ 27.9 (Urban)	
Dahomey ..	1961	(d)	54	26	110	1961	{ 32.8 (Rural)	
Central African Republic	1959	(d)	48	30	200	1959-60	27.0	28.6
North America—								
United States of America	1963	8.7	21.6	9.6	25.2	1962	15.0	13.6
Mexico ..	1963	6.4	45.0	10.4	(f) 69.5	1956	18.1	17.3
Canada ..	1963	6.9	24.8	7.8	(f) 27.6	1955-57	14.8	13.7
Haiti ..	1963	(d)	43.6	21.6	180.4	1950	30.7	
Guatemala ..	1962	3.6	47.7	17.3	91.3	1949-51	22.8	23.0
El Salvador ..	1963	3.7	48.8	10.9	67.9	1960-61	17.7	16.6
Puerto Rico ..	1963	9.3	30.9	6.9	42.5	1960	14.9	13.9
Jamaica ..	1963	4.7	39.6	9.1	49.2	1950-52	17.9	17.0
Costa Rica ..	1963	5.8	49.9	8.5	(f)76.7	1949-51	18.3	17.5
South America—								
Brazil(k)	1953-57	(d)	42-45	16-19	170	1949-50	25.4	22.0
Argentina ..	1963	6.5	21.8	7.9	59.6	1947	17.6	16.3
Colombia(k)	1953-57	(f) 5.8	44-45	15-17	(f) 89.6	1950-52	22.6	21.8
Peru(k)	1953-57	(c) 2.9	42-48	15-22	(c) 97.2		(d)	(d)
Chile ..	1962	(g) 6.9	34.4	11.9	(c)116.6	1952	20.1	18.6
Venezuela (k)	1953-57	(f) 5.0	44-47	12-15	(f) 45.7		(d)	(d)
Bolivia(k)	1953-57	(c) 4.9	41-45	18-25	(h) 86.0	1949-51	20.1	
Asia—								
China (mainland)	1957	(d)	34	11	(d)		(d)	(d)
India(i)	1951-61	(d)	40.9	22.0	145.9	1957-58	22.1	21.5
Indonesia ..	1962	10.6	43	21.4	125		(d)	(d)
Pakistan ..	1962	(d)	43-46	16-17	(d)		(d)	(d)
Japan ..	1963	9.8	17.2	7.0	(f) 26.5	1962	15.1	14.1
Philippines(i)	1962	5.4	(i) 50	7.3	67.7	1946-49	20.5	18.7
Thailand ..	1956	(f) 2.1	(i) 42	(i) 20	(c) 50.1	1947-48	20.5	19.3
Turkey (in Asia)	1960	7.6	(i) 43	10.9	(f) 165	1950-51	21.7	19.8
Korea, Republic of	1963	(c) 8.9	40.6	12.2	32.6	1955-60	19.6	18.6
Burma ..	1955	(d)	50	35	(d)	1954	24.5	22.8
China (Taiwan)	1962	7.8	37.4	6.4	29.1	1959-60	16.3	15.2
Federation of Malaya	1962	(c) 1.0	40.3	9.3	(c) 59.7	1956-58	17.9	17.2
Cambodia ..	1959	(d)	41.4	19.7	127.0	1958-59	22.6	23.1
Hong Kong ..	1963	(d)	32.1	5.5	33.0	1961	15.7	14.2
Israel ..	1963	7.5	24.6	6.2	28.3	1962 m	14.1	13.7

See footnotes on following page.

VITAL STATISTICS RATES: SELECTED COUNTRIES—LATEST AVAILABLE
YEAR—continued

Country	Year	Rates(a)				Year	True death rates (b)	
		Marriage	Birth	Death	Infant mortality		Male	Female
Europe—								
Germany, Federal Republic of ..	1963	8.8	18.5	11.4	26.9	1959-60	15.0	13.9
United Kingdom of Great Britain and Northern Ireland ..	1962	(c) 7.5	18.3	11.9	22.4		(d)	(d)
England and Wales ..	1963	(c) 7.5	18.2	12.2	20.9	1960-62	14.7	13.5
Northern Ireland ..	1962	6.9	22.7	10.6	26.5	1960-62	14.8	13.8
Scotland ..	1963	7.6	19.7	12.6	(f) 26.5	1960-62	15.1	13.9
Italy ..	1963	8.4	19.1	10.2	39.5	1954-57	15.2	14.3
France ..	1963	7.1	18.2	11.7	25.5	1962	14.9	13.5
Spain ..	1963	7.6	21.5	9.0	40.7	1960	14.9	13.9
Poland ..	1963	7.2	19.0	7.5	49.1	1960-61	15.4	14.2
Yugoslavia ..	1963	8.3	21.4	8.9	77.5	1958-59	16.2	15.5
Romania ..	1963	9.3	15.7	8.3	55.3	1961	15.6	14.8
Czechoslovakia ..	1963	7.9	16.9	9.5	22.0	1960-61	14.8	13.7
Netherlands ..	1963	8.0	20.9	8.0	15.8	1959-60	14.0	13.4
Hungary ..	1963	8.4	13.1	9.9	42.6	1959-60	15.3	14.4
Belgium ..	1963	6.8	17.1	12.7	28.3	1946-49	16.1	14.9
Portugal ..	1963	7.8	23.4	10.7	(f) 78.6	1957-58	16.7	15.4
Bulgaria ..	1963	8.2	16.4	8.2	35.3	1956-57	15.6	14.8
Sweden ..	1963	6.9	14.8	10.1	15.0	1961	14.0	13.3
Austria ..	1963	8.1	18.7	12.7	31.5	1960	15.4	14.1
Switzerland ..	1963	7.5	18.9	9.6	(f) 21.2	1959-61	14.4	13.4
Denmark ..	1962	8.1	16.7	9.8	20.1	1959-60	14.2	13.6
Finland ..	1963	7.4	18.1	9.3	18.0	1956-60	15.4	14.0
Norway ..	1963	6.5	17.5	10.0	(f) 17.7	1951-55	14.1	13.4
Ireland ..	1963	5.4	22.2	11.8	26.7	1950-52	15.5	14.9
Oceania—								
Australia ..	1963	7.4	21.6	8.7	20.0	1953-55	14.9	13.7
New Zealand ..	1963	7.8	25.5	8.8	19.6	1955-57	14.7	13.7
U.S.S.R.—								
Union of Soviet Socialist Republics ..	1962	10	22.4	7.5	32	1960-61	15.4	13.7

(a) Crude marriage, birth and death rates, i.e. number of marriages, births and deaths per 1,000 of population. Infant mortality—number of deaths of children under one year of age per 1,000 live births. (b) Number of deaths per 1,000 males and 1,000 females respectively in stationary population (see explanation on p. 326). (c) 1961. (d) Not available, or available information relates to a segment of population only. (e) 1957. (f) 1962. (g) 1963. (h) 1958. (i) Derived from census results by United Nations Statistical Office using reverse survival methods. (j) African population. (k) Estimates specially prepared and published by U.N. Economic Commission for Latin America. (l) 1950-55. (m) Jewish population.

CHAPTER XI

HOUSING AND BUILDING

NOTE.—In § 1 of this chapter details are given of the characteristics of dwellings as obtained from censuses, § 2 provides a summary of building activities, § 3 outlines government activities in the field of housing, and § 4 relates to financial arrangements associated with the erection or purchase of homes.

For further information on dwellings as obtained from censuses reference should be made to the results published in the detailed tables of the 1961 census and earlier censuses and in the mimeographed statements of the 1961 census (*see* Chapter XXX. Miscellaneous).

More detailed information on building activity may be found in the annual bulletin *Secondary Industries, Part I. Factory Operations and Building* and in the *Quarterly Bulletin of Building Statistics*, and current information is obtainable also in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and in the mimeographed statements *Building Statistics: Number of New Houses and Flats* (quarterly), and *Building Approvals* (monthly). Details for particular States are available from publications issued regularly by the Deputy Commonwealth Statisticians.

Commonwealth Government activities relate in the main to the provision of moneys to State Governments under Commonwealth-State Housing Agreements, to the assistance of ex-service personnel in the erection and purchase of homes, and to the provision of homes in the Territories. Further details of activities of the Commonwealth and State Housing Authorities are shown in the reports issued by these authorities.

§ 1. Census Dwellings

1. General.—At each census of the population, in addition to the questions relating to personal particulars, there have been a number of questions relating to dwellings. A "dwelling" is 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, 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.

All statistics in this section are exclusive of particulars of dwellings occupied solely by full-blood Aborigines.

2. Number of Dwellings.—(i) *Censuses, 1911 to 1961.* The following table shows the number of occupied and unoccupied dwellings in Australia at each census from 1911 to 1961. Occupied dwellings are classified into "private" and "other than private" dwellings (*see* para. 3, p. 349, for definitions of "private" and "other than private" dwellings).

DWELLINGS: AUSTRALIA, CENSUSES

Census	Occupied			Unoccupied (a)
	Private	Other than private	Total	
1911	894,389	29,070	923,459	33,473
1921	1,107,010	46,275	1,153,285	51,163
1933	1,509,671	37,705	1,547,376	68,772
1947	1,873,623	34,272	1,907,895	47,041
1954	2,343,421	36,932	2,380,353	112,594
1961	2,781,945	35,325	2,817,270	194,114

(a) *See* text on p. 357 for explanation of the term "unoccupied".

(ii) *Census, 1961.* 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, 1961. (For definitions of "urban" and "rural" see Chapter IX. Population, para. 3, p. 263). The boundaries of the metropolitan urban and other divisions of States differ from census to census, and consequently accurate comparison cannot be made between figures for corresponding divisions.

DWELLINGS: AUSTRALIA, CENSUS, 30th JUNE, 1961

Division	Occupied				Unoccupied(a)	
	Private	Other than private	Total		Number	Proportion of total
			Number	Proportion of total		
				Per cent.		Per cent.
Urban—						
Metropolitan ..	1,607,392	18,304	1,625,696	57.70	59,096	30.44
Other ..	706,535	9,208	715,743	25.41	58,577	30.18
Rural ..	468,018	7,813	475,831	16.89	76,441	39.38
Total ..	2,781,945	35,325	2,817,270	100.00	194,114	100.00

(a) See text on p. 357 for explanation of the term "unoccupied".

(iii) *Censuses, 1954 and 1961.* The total numbers of occupied and unoccupied dwellings in each State and Territory at the censuses of 1954 and 1961 were as follows.

DWELLINGS: STATES AND TERRITORIES

State or Territory	Census, 30th June, 1954		Census, 30th June, 1961	
	Occupied	Unoccupied (a)	Occupied	Unoccupied (a)
New South Wales	912,877	42,831	1,061,609	72,432
Victoria	660,690	27,491	790,529	47,389
Queensland	339,328	21,473	398,233	33,969
South Australia	215,301	8,524	261,908	17,061
Western Australia	162,823	6,614	194,317	13,705
Tasmania	78,789	5,288	91,258	8,582
Northern Territory	3,427	47	5,479	179
Australian Capital Territory	7,118	326	13,937	797
Australia	2,380,353	112,594	2,817,270	194,114

(a) See text on p. 357 for explanation of the term "unoccupied".

3. *Class of Dwelling.*—The following table shows the numbers of the various classes of occupied dwellings in the metropolitan urban, other urban, and rural areas of Australia at the censuses of 1954 and 1961.

Private dwellings are classified into the following four categories:—

Private House—includes houses, sheds, huts, garages, etc., used for dwelling purposes, and shared private houses for which only one householder's schedule was received;

Share of Private House—portion of a shared private house which is occupied separately and for which portion a separate householder's schedule was received;

Flat—part of a house or other building which can be completely closed off and which has its own cooking and bathing facilities;

Other Private Dwelling—includes private dwellings such as rooms, apartments, etc., which are parts of buildings but are not self-contained units.

Other than Private dwellings include hotels; motels; boarding houses, lodging houses and hostels; educational, religious and charitable institutions; hospitals; defence and penal establishments; police and fire stations; clubs; staff barracks and quarters, etc.

OCCUPIED DWELLINGS, BY CLASS: AUSTRALIA

Class of occupied dwelling	Census, 30th June, 1954				Census, 30th June, 1961				Increase, 1954-61
	Urban(a)		Rural (a)	Total, Australia	Urban(a)		Rural (a)	Total, Australia	
	Metropolitan	Other			Metropolitan	Other			
<i>Private house(b)</i> —									
House	1,067,674	506,128	433,069	2,006,871	1,324,627	630,072	438,470	2,393,169	386,298
Shed, hut, etc. . .	14,259	12,276	22,613	49,148	10,740	11,338	19,919	41,997	-7,151
Total	1,081,933	518,404	455,682	2,056,019	1,335,367	641,410	458,389	2,435,166	379,147
<i>Share of private house(c)</i> ..	77,344	22,747	7,125	107,216	59,727	15,248	4,575	79,550	-27,666
Flat(d)	104,603	20,784	2,033	127,420	169,934	43,134	4,518	217,586	90,166
Other	45,308	6,744	714	52,766	42,364	6,743	536	49,643	-3,123
<i>Total Private Dwellings</i> ..	1,309,188	568,679	465,554	2,343,421	1,607,392	706,535	468,018	2,781,945	438,524
Caretaker's quarters ..	998	264	194	1,456	(e)	(e)	(e)	(e)	-1,456
Licensed hotel	1,720	2,457	2,015	6,192	1,759	2,447	1,877	6,083	-109
Motel					61	301	137	499	
Boarding house, etc. }	14,110	4,120	1,041	19,271	13,572	4,094	826	18,492	-280
Educational institution(f) }	523	488	251	1,262	308	275	102	685	-577
Religious institution (non-educational)(f) ..	142	31	24	197	559	422	201	1,182	985
Hospital	559	517	353	1,429	638	488	318	1,444	15
Charitable institution (other than hospital) ..	299	107	104	510	317	117	78	512	2
Other	852	1,091	4,672	6,615	1,090	1,064	4,274	6,428	-187
<i>Total Dwellings Other than Private</i> ..	19,203	9,075	8,654	36,932	18,304	9,208	7,813	35,325	-1,607
<i>Total Occupied Dwellings</i> ..	1,328,391	577,754	474,208	2,380,353	1,625,696	715,743	475,831	2,817,270	436,917
<i>Total Occupied Dwellings per Square Mile</i> ..	592.77	123.32	0.16	0.80	661.12	173.77	0.16	0.95	0.15
Wagon, van, etc. (including campers-out) ..	2,693	3,605	5,383	11,681	470	2,332	3,653	6,455	-5,226

(a) See text on p. 263 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. (d) Prior to 1961 single self-contained dwellings attached to, or situated above, offices, shops, etc., were classified as private houses irrespective of the description stated in the householder's schedule. In 1961 such dwellings, if described as self-contained flats, were classified as flats. (e) Included with private dwellings. (f) Certain institutions previously classified as "Educational" were in 1961 classified as "Religious".

NOTE.—Minus sign (—) denotes decrease.

4. **Population According to Class of Dwelling, etc.**—The following table shows the number of the various classes of occupied dwellings at the censuses of 1954 and 1961, together with the number of inmates therein.

OCCUPIED DWELLINGS, ETC., AND INMATES: AUSTRALIA

Particulars	Census, 30th June, 1954			Census, 30th June, 1961		
	Number of dwellings	Inmates		Number of dwellings	Inmates	
		Number	Proportion of total		Number	Proportion of total
			%			%
Private house(a)—						
House	2,006,871	7,448,978	82.89	2,393,169	8,881,128	84.51
Shed, hut, etc.	49,148	134,187	1.49	41,997	116,458	1.11
Total	2,056,019	7,583,165	84.38	2,435,166	8,997,586	85.62
Share of private house(b)	107,216	290,579	3.23	79,550	224,066	2.13
Flat(c)	127,420	329,265	3.67	217,586	552,596	5.26
Other	52,766	111,353	1.24	49,643	96,246	0.92
Total, Private Dwellings(d)	2,343,421	8,314,362	92.52	2,781,945	9,870,494	93.93
Dwellings Other than Private(d)	36,932	618,743	6.89	35,325	596,412	5.68
Total, Occupied Dwellings	2,380,353	8,933,105	99.41	2,817,270	10,466,906	99.61
Wagon, van, etc.	11,681	30,056	0.33	6,455	15,994	0.15
Migratory(e) .. .. .	..	23,369	0.26	..	25,286	0.24
Total Population .. .. .	..	8,986,530	100.00	..	10,508,186	100.00

(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) See footnote (d) to table on p. 349. (d) See footnote (e) to table on p. 349. (e) Shipping, railway and air travellers.

5. **Occupied Private Dwellings.**—(j) *Material of Outer Walls.* In the following table, occupied private dwellings are classified according to the material of the outer walls.

Wood has been the most extensively used material in the construction of the outer walls, followed by brick and fibro-cement, and for Australia at 30th June, 1961, the respective proportions for which material of outer walls was specified, were 41.5 per cent., 34.3 per cent., and 16.3 per cent. Fibro-cement dwellings have increased from 1933, when the proportion was 1.6 per cent. (23,696 dwellings), to 6.3 per cent. in 1947 (117,631 dwellings), to 12.7 per cent. in 1954 (296,553 dwellings), and to 16.3 per cent. in 1961 (452,270 dwellings). The proportions of both brick and wooden dwellings have shown small decreases since 1954. The numbers of dwellings of all other materials except fibro-cement and concrete have decreased. Brick dwellings in 1961 represented 50.3 per cent. of all occupied private dwellings in the metropolitan urban division, while in the other urban and rural divisions wooden dwellings predominated, the percentages of such dwellings being 54.8 per cent. and 55.3 per cent. respectively.

OCUPIED PRIVATE DWELLINGS, BY MATERIAL OF OUTER WALLS:
AUSTRALIA

Material of outer walls	Census, 30th June, 1954				Census, 30th June, 1961				Increase, 1954-61
	Urban(a)		Rural (a)	Total, Australia	Urban(a)		Rural (a)	Total, Australia	
	Metro-politan	Other			Metro-politan	Other			
Brick ..	674,165	86,254	25,089	785,508	807,311	113,392	32,291	952,994	167,486
Stone ..	35,907	18,049	33,604	87,560	32,828	19,919	30,325	83,072	-4,488
Concrete ..	24,299	13,497	13,639	51,435	40,779	19,111	15,455	75,345	23,910
Wood ..	422,010	341,145	276,584	1,039,739	507,775	386,555	258,257	1,152,587	112,848
Iron, tin ..	7,387	19,652	31,177	58,216	4,556	17,235	24,870	46,661	-11,553
Fibro-cement ..	140,542	84,835	71,176	296,553	208,271	146,003	97,996	452,270	155,717
Calico, canvas, hessian ..	426	1,843	5,446	7,715	105	585	1,918	2,608	-5,107
Other ..	3,644	2,686	7,750	14,080	4,328	2,958	5,841	13,127	-953
Not stated ..	808	718	1,089	2,615	1,439	777	1,065	3,281	666
Total ..	1,309,188	568,679	465,554	2,343,421	1,607,392	706,535	468,018	2,781,945	438,524

(a) See text on p. 263 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.

Excluding houses with rooms unspecified, private houses of four, five and six rooms represented 80.2 per cent. of the total number of private houses in Australia at 30th June, 1961, compared with 78.3 per cent. in 1954; 90.2 per cent. of the total increase in the number of private houses since 1954 consisted of houses containing these numbers of rooms.

The following table gives particulars of occupied private dwellings by number of rooms. For a dissection of these figures into metropolitan urban, other urban, and rural areas see page 359 of Year Book No. 50.

OCUPIED PRIVATE DWELLINGS, BY NUMBER OF ROOMS: AUSTRALIA

Number of rooms(a) per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total private dwellings
1 ..	24,052	12,129	769	16,336	53,286	17,303	6,941	2,282	13,306	39,832
2 ..	45,117	23,761	7,333	18,675	94,886	28,607	17,606	20,635	19,644	86,492
3 ..	87,137	25,716	27,270	9,955	150,078	70,945	21,280	53,585	9,732	155,542
4 ..	380,138	19,284	49,548	4,250	453,220	387,737	16,524	77,531	3,536	485,328
5 ..	692,044	12,728	27,701	1,520	733,993	903,227	11,906	39,914	1,224	956,271
6 ..	534,420	7,663	10,752	687	553,522	656,348	2,168	15,723	245	674,484
7 ..	181,312	2,788	2,525	218	186,843	231,841	609	4,471	97	237,018
8 ..	64,092	1,130	806	100	66,128	80,911	230	1,674	45	82,860
9 ..	22,430	341	244	47	23,062	28,070	70	572	28	28,740
10 and over ..	20,808	163	98	18	21,087	24,196	97	160	38	24,491
Not stated ..	4,469	1,513	374	960	7,316	5,981	2,119	1,039	1,748	10,887
Total Private Dwellings ..	2,056,019	107,216	127,420	52,766	2,343,421	2,435,166	79,550	217,586	49,643	2,781,945
Average number of rooms(a) per private dwelling ..	5.26	3.38	4.14	2.22	5.04	5.39	3.26	3.97	2.20	5.16

(a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse.

(b) Includes houses, sheds, butts, 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 footnote (d) to table on p. 349.

(iii) *Number of Inmates.* A classification of occupied private dwellings according to the number of inmates is shown in the following table. Particulars for metropolitan urban, other urban, and rural areas were included in earlier issues of the Year Book (*see* p. 361 of No. 50) but are not repeated in this issue.

For Australia as a whole, at the 1961 census, private houses with two inmates were most numerous, followed by those with four and three inmates in that order.

An increase of 21 per cent (93,420 houses) in the number of private houses occupied by two inmates brought this group from second position in 1954, to first position in 1961. Houses with two inmates in 1961 constituted 22 per cent. of the total number of occupied private houses in Australia, while private houses with four and three inmates constituted 21 per cent. and 19 per cent., respectively.

The greatest proportional increase since 1954 in the number of occupied private dwellings occurred in those with one inmate, the growth of 33.9 per cent. being due mainly to an increase of 34.5 per cent. in the number of private houses with one inmate and an increase of 108.3 per cent. in the number of flats with one inmate. The number of flats with two, three and four inmates showed increases of 66.7 per cent., 46.7 per cent. and 61.8 per cent. respectively since 1954. However, the comparison of figures for flats between 1954 and 1961 is affected by the classification as flats in 1961 of dwellings previously classified as private houses (*see* footnote (d) to table on p. 349).

At 30th June, 1961, dwellings with less than 6 inmates represented 86.4 per cent. of total occupied private dwellings compared with 87.2 per cent. in 1954.

OCCUPIED PRIVATE DWELLINGS, BY NUMBER OF INMATES: AUSTRALIA

Number of inmates per dwelling	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
1	147,308	22,082	22,507	21,191	213,088	198,150	17,215	46,890	23,105	285,360
2	444,179	35,626	49,303	16,678	545,786	537,599	23,572	82,104	15,128	658,493
3	435,679	22,920	29,351	7,904	495,854	465,895	16,176	43,051	6,267	531,389
4	446,687	14,258	16,468	4,185	481,598	512,229	11,371	26,638	3,053	553,291
5	291,706	6,673	6,335	1,578	306,292	356,874	5,801	11,571	1,264	375,510
6	154,691	3,171	2,263	654	160,779	196,328	2,940	4,476	499	204,243
7	72,955	1,429	796	294	75,474	91,405	1,367	1,779	180	94,731
8	35,243	704	256	160	36,363	44,096	765	683	91	45,635
9	14,268	207	92	67	14,634	17,279	204	173	30	17,686
10 and over ..	13,303	146	49	55	13,553	15,311	139	131	26	15,607
Total Private Dwellings ..	2,056,019	107,216	127,420	52,766	2,343,421	2,435,166	79,550	217,586	49,643	2,781,945
Total Inmates	7,583,165	290,579	329,265	111,353	8,314,362	8,997,586	224,066	552,596	96,246	9,870,494
Average number of inmates per private dwelling ..	3.69	2.71	2.58	2.11	3.55	3.69	2.82	2.54	1.94	3.55

(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* footnote (d) to table on p. 349.

(iv) *Nature of Occupancy.* At the 1961 census 52.0 per cent. of occupied private houses in Australia for which particulars were supplied were occupied by owners, 25.1 per cent. by purchasers by instalments, 20.7 per cent. by tenants, and 2.2 per cent. by others. The corresponding percentages in 1954 were—owners, 52.5 per cent.; purchasers by instalments, 16.8 per cent.; tenants, 28.1 per cent.; and others, 2.6 per cent. Owner-occupied houses in Australia increased by 17.3 per cent. between 1954 and 1961, and those being purchased by instalments by 76.8 per cent., the increase in these two groups combined being nearly 32 per cent., while tenant-occupied houses decreased by 12.4 per cent.

In the metropolitan areas 80.6 per cent. of all occupied private houses were either owner-occupied or being purchased by instalments, as compared with 74.6 per cent. in the other urban areas and 70.2 per cent. in the rural areas.

Tenants occupied by far the greater proportion of flats and other private dwellings.

Particulars of the nature of occupancy of occupied private dwellings are shown for Australia in the following table. For similar particulars for metropolitan urban, other urban and rural areas, *see* Year Book No. 50, page 363.

**OCCUPIED PRIVATE DWELLINGS, BY NATURE OF OCCUPANCY:
AUSTRALIA**

Nature of occupancy	Census, 30th June, 1954					Census, 30th June, 1961				
	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings	Private house (a)	Share of private house (b)	Flat (c)	Other	Total private dwellings
Owner	1,074,696	28,772	15,974	2,372	1,121,814	1,260,221	22,572	35,998	2,817	1,321,608
Purchaser by instalments	343,625	7,099	1,816	553	353,093	607,444	8,175	7,529	866	624,014
Tenant (Governmental housing)(d)	91,968	560	4,935	1,913	99,376	102,087	488	13,925	579	117,079
Tenant	481,813	67,964	103,142	46,935	699,854	400,489	45,943	155,110	44,195	645,737
Caretaker	25,307	772	888	460	27,427	25,982	659	2,813	468	29,922
Other methods of occupancy	27,285	869	435	241	28,830	27,327	675	1,523	244	29,769
Not stated	11,325	1,180	230	292	13,027	11,616	1,038	688	474	13,816
Total Private Dwellings	2,056,019	107,216	127,420	52,766	2,343,421	2,435,166	79,550	217,586	49,643	2,781,945

(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 footnote (d) to table on p. 349.

(d) At the 1954 Census, 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)'". At the 1961 Census, householders were instructed on the schedule to write "Tenant (G)" if they paid rent to the Governmental Housing Authority in their State or Territory.

(v) *Weekly Rent—Tenanted Private Dwellings.* The following table shows tenanted private dwellings in Australia classified according to weekly rent (unfurnished). For similar particulars for metropolitan urban, other urban, and rural areas *see* Year Book No. 50, page 365.

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" *excludes particulars of dwellings occupied by "Tenants (Governmental Housing)" in each State*, i.e. those householders who at the 1954 Census furnished answers in response to the instruction on the census householder's schedule "Tenant paying rent to a Government Authority to write 'Tenant (G)'" and those householders who at the 1961 Census furnished answers in response to the instruction on the census householder's schedule "Tenant paying rent to the Governmental Housing Authority in their State to write 'Tenant (G)'" . *For the Australian Capital Territory and the Northern Territory particulars of all tenanted private dwellings are included.*

**TENANTED PRIVATE DWELLINGS, BY WEEKLY RENT (UNFURNISHED):
AUSTRALIA**

Weekly rent (unfurnished)	Census, 30th June, 1954(a)					Census, 30th June, 1961(a)				
	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings	Private house (b)	Share of private house (c)	Flat (d)	Other	Total tenanted private dwellings
Under 20s. ..	71,092	4,960	1,191	1,573	78,816	24,925	665	1,043	426	27,059
20s. and under 30s. ..	116,836	9,155	6,559	3,019	135,569	41,731	1,649	2,798	860	47,038
30s. " " 40s. ..	94,619	8,971	17,187	2,955	123,732	41,920	1,942	5,424	1,268	50,554
40s. " " 50s. ..	50,869	5,827	18,180	1,815	76,691	44,659	2,662	9,482	1,431	58,234
50s. " " 60s. ..	22,487	2,963	11,874	1,061	38,385	32,137	2,011	10,598	1,068	45,814
60s. " " 70s. ..	14,770	1,830	6,980	686	24,266	31,174	2,776	10,239	1,158	45,347
70s. " " 80s. ..	6,584	685	3,561	324	11,154	18,189	1,787	7,147	810	27,933
80s. " " 90s. ..	3,751	481	2,370	182	6,784	15,590	1,824	6,669	718	24,801
90s. " " 100s. ..	1,279	137	1,352	70	2,838	7,469	915	4,205	433	13,022
100s. and over ..	3,636	316	3,523	177	7,652	43,482	4,050	38,306	1,596	87,434
Not stated(e) ..	100,253	32,756	30,607	35,087	198,703	106,808	25,791	60,608	34,439	227,646
Total Tenanted Pri- vate Dwellings ..	486,176	68,081	103,384	46,949	704,590	408,084	46,072	156,519	44,207	654,882
Average weekly rent (unfurnished) per private dwelling ..	s. d. 32 2	s. d. 34 2	s. d. 50 6	s. d. 36 2	s. d. 35 0	s. d. 57 8	s. d. 66 3	s. d. 94 8	s. d. 62 6	s. d. 66 6

(a) These figures 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) See footnote (d) to table on p. 349. (e) Includes tenanted dwellings which were rent-free, those rented on a furnished basis, and those for which the rents were not applicable (e.g., for shop and dwelling combined).

At the 1954 census nearly 55 per cent. of the tenanted private houses in Australia for which unfurnished rents were stated had weekly rentals of between 20s. and 40s.; at the 1961 census, only 28 per cent. were within these limits. In 1954, 18 per cent. had rentals below 20s. and 27 per cent. above 40s. In 1961, 8 per cent. had rentals below 20s. and 64 per cent. above 40s. At the 1961 census 31 per cent. of the flats in Australia had rentals of between

40s. and 70s., 10 per cent. were below this range, and 59 per cent. above it. At the 1954 census the corresponding proportions were:—51 per cent., 34 per cent. and 15 per cent. In 1961, 14 per cent. of tenanted private houses and 40 per cent. of tenanted flats were in the rental range 100s. and over. 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 1961 census were 90 per cent. higher than in 1954 (79 per cent. higher for houses and 88 per cent. higher for flats). Metropolitan rentals in 1961 were higher by 106 per cent., 98 per cent. and 93 per cent., respectively, than in 1954.

**AVERAGE WEEKLY RENT PER ROOM(a) OF TENANTED PRIVATE HOUSES,(b)
THREE TO SIX ROOMS, WITH WALLS OF WOOD, BRICK OR STONE:
AUSTRALIA**

Particulars	Census, 30th June, 1954				Census, 30th June, 1961				In-crease, Aus-tralia, 1954-61
	Urban(c)		Rural (c)	Total, Aus-tralia	Urban(c)		Rural (c)	Total, Aus-tralia	
	Metro-politan	Other			Metro-politan	Other			
Private houses (a) with walls of—	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Wood—									
3 rooms	7 3	7 11	5 10	7 1	16 11	13 2	8 8	13 2	6 1
4 "	6 9	7 0	4 10	6 4	15 2	11 9	7 5	11 7	5 3
5 "	6 8	6 4	4 6	6 1	14 1	10 9	6 11	10 9	4 8
6 "	5 10	5 5	3 11	5 3	12 6	9 6	6 0	9 5	4 2
3 to 6 rooms ..	6 6	6 3	4 6	5 11	14 0	10 7	6 10	10 7	4 8
Brick or stone—									
3 rooms	8 3	9 4	6 8	8 3	16 7	15 11	10 7	16 3	8 0
4 "	7 10	7 2	5 1	7 8	15 2	12 2	7 11	14 6	6 10
5 "	7 2	6 8	4 9	7 0	13 11	11 1	7 7	13 1	6 1
6 "	6 9	6 1	4 3	6 6	12 5	10 2	6 8	11 7	5 1
3 to 6 rooms ..	7 3	6 8	4 9	7 1	13 10	11 0	7 4	13 0	5 11
Wood, brick or stone—									
3 rooms	7 11	8 4	6 0	7 9	16 8	13 10	8 11	14 9	7 0
4 "	7 6	7 1	4 11	7 1	15 2	11 10	7 6	13 0	5 11
5 "	7 0	6 5	4 6	6 7	14 0	10 10	7 0	11 10	5 3
6 "	6 5	5 7	4 0	5 11	12 5	9 9	6 1	10 6	4 7
3 to 6 rooms ..	7 0	6 5	4 7	6 7	13 11	10 9	6 11	11 9	5 2

(a) Includes kitchen and permanently enclosed sleep-out but does not include bathroom, pantry, laundry or storehouse. (b) These figures exclude tenanted private houses occupied by "Tenants (Governmental Housing)" in 1954, and those occupied by "Tenants (State Governmental Housing Authority)" in 1961. However, the data used for the Australian Capital Territory and Northern Territory include particulars of such dwellings. (c) See text on p. 263 regarding comparability as between censuses.

(vi) *Date of Building.* The numbers of occupied private dwellings in Australia at the census of 30th June, 1961, classified according to date of building from replies given to the relevant question at the 1961 census, are shown below.

**OCCUPIED PRIVATE DWELLINGS, BY DATE OF BUILDING: AUSTRALIA,
CENSUS, 30TH JUNE, 1961**

Date of building	Class of dwelling				Division			Total, Australia
	Private house (a)	Share of private house	Flat	Other	Urban		Rural	
					Metro-politan	Other		
<i>Before 1st July, 1954</i> ..	1,861,262	68,823	168,615	44,358	1,231,462	537,953	373,643	2,143,058
<i>After 30th June, 1954—</i>								
1954 (July–Dec.) ..	30,398	397	1,121	94	19,116	8,375	4,519	32,010
1955 ..	80,293	975	3,375	194	49,571	22,374	12,892	84,837
1956 ..	73,095	999	3,937	213	46,215	20,398	11,631	78,244
1957 ..	68,340	939	3,596	351	43,353	18,953	10,920	73,226
1958 ..	78,573	1,143	5,603	381	51,970	22,203	11,527	85,700
1959 ..	81,110	1,220	7,657	366	54,747	24,002	11,604	90,353
1960 ..	82,968	1,231	11,117	234	57,188	25,705	12,657	95,550
1961 (Jan.–June) ..	30,618	367	4,124	130	19,943	9,466	5,830	35,239
Not stated(b) ..	18,131	730	2,841	491	12,484	6,085	3,624	22,193
<i>Total, after 30th June, 1954</i> ..	543,526	8,001	43,371	2,454	354,587	157,561	85,204	597,352
Other not stated ..	30,378	2,726	5,600	2,831	21,343	11,021	9,171	41,535
Grand Total ..	2,435,166	79,550	217,586	49,643	1,607,392	706,535	468,018	2,781,945

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one householder's schedule was received. (b) After 30th June, 1954, but year not stated.

NOTE.—The information above was derived from replies of occupants of dwellings at 30th June, 1961. For a number of reasons, the figures shown on the first line of the table do not agree with the number of dwellings by class recorded at the Census of 30th June, 1954, e.g., demolitions, conversion from one class of dwelling to another and errors of memory regarding date of building. Also, the figures are not precisely comparable with 1954 data because of changes in classification of dwellings adopted at the 1961 Census, as indicated in footnotes (d) and (e) to table on p. 349.

Of those occupied private dwellings in Australia where date of building was stated, 21.8 per cent. were built after 30th June, 1954. In the metropolitan urban division, 22.4 per cent. were built after 30th June, 1954, while in the other urban and rural divisions, the proportions were 22.7 per cent. and 18.6 per cent. respectively.

(vii) *Facilities, etc.* At the 1961 census a question was asked regarding the facilities gas, electricity and television. Of those persons who answered the question on gas and electricity 51.4 per cent. had electricity but not gas, and 45.2 per cent. had both electricity and gas, making a combined total of 96.6 per cent. with electricity. Occupied private dwellings with gas but not electricity constituted 0.2 per cent. In the metropolitan urban division 99.7 per cent. of occupied private dwellings had electricity, while in the other urban and rural divisions the proportions with electricity were 98.7 per cent. and 82.5 per cent. respectively. The proportion of private dwellings with both electricity and gas was 65.6 per cent. in metropolitan urban, 25.3 per cent. in other urban and 4.4 per cent. in rural.

Of the occupied private dwellings in Australia stated as having a television set 81.2 per cent. were in the metropolitan urban division. In this division 64.6 per cent. of occupied private dwellings were stated as having a television set.

Similar information was not compiled for the 1954 census, but a summary of information obtained at the 1947 census was published on page 571 of Year Book No. 38.

**OCCUPIED PRIVATE DWELLINGS, BY FACILITIES: AUSTRALIA,
CENSUS, 30th JUNE, 1961**

Facilities	Class of dwelling				Division			Total, Australia
	Private house (a)	Share of private house	Flat	Other	Urban		Rural	
					Metro-politan	Other		
Gas or electricity—								
With gas only ..	5,386	105	171	103	1,578	614	3,573	5,765
With electricity only ..	1,322,300	28 580	63,378	9,565	546,588	517,038	360,197	1,423,823
With gas and electricity	1,008,763	49,769	153,231	39,428	1,052,980	177,974	20,237	1,251,191
Without gas or electricity ..	87,839	773	277	163	3,239	8,665	77,148	89,052
Not stated ..	10,878	323	529	384	3,007	2,244	6,863	12,114
Total ..	2,435,166	79,550	217,586	49,643	1,607,392	706,535	468,018	2,781,945
With television set(b) ..	1,139,578	30,126	97,226	11,732	1,038,837	168,875	70,950	1,278,662

(a) Includes houses, sheds, huts, etc., and shared private houses for which only one household's schedule was received. (b) So stated in census schedules.

6. Unoccupied Dwellings.—The following table classifies unoccupied dwellings according to the reasons given by census collectors as to why the dwellings were unoccupied at the census date. Unoccupied dwellings include vacant dwellings available for sale or renting; dwellings such as "week-ender", "holiday home", "second home", "seasonal workers' quarters", which were not occupied on the night of the census; dwellings normally occupied, but whose usual occupants were temporarily absent on the night of the census; newly completed dwellings whose owners or tenants had not entered into occupation on the night of the census; dwellings described as "to be demolished", "condemned", "deceased estate", "exhibition home", etc.; and buildings constructed as dwellings, but used for non-dwelling purposes on the night of the census. The total number of unoccupied dwellings shown for any area must not, therefore, be read as representing the number of vacant houses and flats available for sale or renting.

**UNOCCUPIED DWELLINGS, BY REASON FOR BEING UNOCCUPIED:
AUSTRALIA, CENSUS, 30th JUNE, 1961**

Reason for being unoccupied	Urban		Rural	Total, Australia	
	Metro-politan	Other		Number	Per cent.
For sale or for renting	16,159	10,920	7,189	34,268	17.65
Holiday home, week-ender, seasonal workers' quarters	5,814	20,975	36,567	63,356	32.64
Occupants temporarily absent	22,896	16,196	14,984	54,076	27.86
To be demolished, condemned	1,828	912	1,800	4,540	2.34
Other and not stated	12,399	9,574	15,901	37,874	19.51
Total ..	59,096	58,577	76,441	194,114	100.00

§ 2. Building

1. **General.**—(i) *Statistics of Building Approved.* Statistics of building approvals have been compiled from (a) permits issued by local government authorities in the areas subject to building control by these authorities, and (b) contracts let or work commenced and day labour projects authorized by governmental authorities. *They relate only to approvals for buildings as distinct from the construction of roads, railways, bridges, earthworks, water storage, etc.* Values shown represent the estimated cost when completed (excluding cost of land) of new buildings and alterations and additions to existing buildings. Additions of £5,000 and over are included with new buildings in all States except New South Wales, where they are included in “alterations and additions”.

These statistics are available from the year 1953–54.

(ii) *Statistics of Building Commenced, Completed and Under Construction.* These relate to building by private contractors, government authorities and owner-builders.

The following outlines the scope of the statistics: (a) *only the erection of new buildings as distinct from the construction of roads, railways, bridges, earthworks, water storage, etc., is covered;* (b) major new additions to existing buildings are included as new buildings (for New South Wales, major alterations also are included as new building); (c) minor additions, alterations, renovations and repairs are excluded because of the difficulty of obtaining details of this work; (d) temporary dwellings, sheds, huts, etc., are excluded; (e) figures for houses exclude flats and dwellings attached to other new buildings (the value of dwellings attached to other new buildings is included with the value of buildings to which they are attached); figures for flats include “home units”; (f) imported prefabricated houses are included; (g) details obtained from government authorities and building contractors refer to all areas whereas details for owner-builders cover only areas subject to building control by local government authorities.

The following definitions of terms used in this section are necessary for interpretation of the data presented.

Private or Government ownership. A building is classified as “private” or “government” according to ownership at date of commencement. Thus “government” includes buildings erected for Commonwealth and State Governments, semi-governmental and local government authorities, either by contractor or by day-labour, whether these buildings are for their own use or for rental or sale after completion. Houses erected for *particular persons* under government sponsored home building schemes or with government financial assistance are classified as “private”.

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, classifications made by informants may not be 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 is regarded as being under construction if it has been commenced but not completed, whether or not work on the building is actively proceeding.

Values. All values shown exclude the value of land and represent the estimated value of buildings on completion.

Type of building. Classification is according to the function a building is intended to serve. A building which is ancillary to other buildings or forms part of a group of related buildings is classified according to the function of the group as a whole.

Employment. Figures relate to persons 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 working on alterations, additions, repairs and maintenance when these jobs are undertaken by such contractors and instrumentalities.

Contractors are asked to give details of all persons working on their jobs on a specified day, including working principals, men working as or for sub-contractors and men temporarily laid off on account of weather. Because of the intermittent employment of various types of sub-contractors on any particular job, it is sometimes difficult for contractors and authorities to provide precise particulars of the number of sub-contractors and the number of employees of sub-contractors working on their jobs on the specified day. This factor may cause some estimation by persons completing returns and some degree of understatement in figures shown in tables. On the other hand, because of frequent movement between jobs of some types of tradesmen (such as electricians) who may work on several jobs on the one day, a small element of duplication may occur.

The figures exclude persons working on owner-built houses, and employees of builders who undertake only alterations, additions, repairs and maintenance.

2. **New Houses.**—(i) *Approved, Commenced, Completed and Under Construction, 1963–64.* The next table provides a summary of the number of new houses approved, commenced, completed and under construction in each State and Territory.

A graph showing the number of new houses commenced, completed and under construction for the period 1953–54 to 1963–64, will be found on page 377.

NEW HOUSES: NUMBER, 1963–64

(INCLUDING OWNER-BUILT HOUSES)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	30,169	24,718	10,976	12,110	7,447	2,648	463	1,564	90,095
Commenced ..	27,937	23,648	10,181	11,564	7,320	2,550	430	1,624	85,274
Completed ..	25,954	22,799	10,012	10,488	7,276	2,511	310	1,764	81,114
Under construction at end of year ..	12,991	12,912	2,916	5,639	2,923	1,633	359	922	40,295

(ii) *Approved, Private and Government, 1959–60 to 1963–64.* The following table shows the number of new houses approved in each State or Territory, according to private and government ownership.

NEW HOUSES APPROVED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
PRIVATE									
1959–60 ..	29,365	22,033	9,645	6,234	4,853	2,094	259	526	75,009
1960–61 ..	24,410	16,509	8,776	5,614	4,421	1,860	174	639	62,403
1961–62 ..	22,558	16,829	8,630	6,373	4,424	1,910	175	842	61,741
1962–63 ..	23,412	19,894	8,347	7,438	4,738	1,921	156	943	66,849
1963–64 ..	24,926	22,417	9,333	8,025	5,571	2,064	130	995	73,461
GOVERNMENT									
1959–60 ..	2,873	2,552	983	2,103	1,229	452	181	862	11,235
1960–61 ..	3,844	1,923	1,583	4,332	1,264	413	216	878	14,453
1961–62 ..	4,335	1,285	1,302	1,603	1,867	617	229	590	11,828
1962–63 ..	3,980	1,925	1,197	2,537	1,655	550	240	741	12,825
1963–64 ..	5,243	2,301	1,643	4,085	1,876	584	333	569	16,634
TOTAL									
1959–60 ..	32,238	24,585	10,628	8,337	6,082	2,546	440	1,388	86,244
1960–61 ..	28,254	18,432	10,359	9,946	5,685	2,273	390	1,517	76,856
1961–62 ..	26,893	18,114	9,932	7,976	6,291	2,527	404	1,432	73,569
1962–63 ..	27,392	21,819	9,544	9,975	6,393	2,471	396	1,684	79,674
1963–64 ..	30,169	24,718	10,976	12,110	7,447	2,648	463	1,564	90,095

(a) Includes flats for 1959–60 and 1960–61.

(iii) *Commenced, 1959-60 to 1963-64.* The number of new houses commenced in each State and Territory by contractors and owner-builders is shown in the following table.

NEW HOUSES COMMENCED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
CONTRACT-BUILT(b)									
1959-60 ..	19,784	19,372	7,349	8,032	5,067	1,491	321	1,286	62,702
1960-61 ..	19,950	15,261	7,364	8,448	4,902	1,405	321	962	58,613
1961-62 ..	18,764	15,292	7,715	8,136	5,491	1,643	369	1,388	58,798
1962-63 ..	20,667	17,632	7,949	9,130	5,443	1,641	326	1,461	64,249
1963-64 ..	23,545	20,873	8,917	11,014	6,448	1,756	395	1,532	74,480
OWNER-BUILT									
1959-60 ..	8,283	3,829	1,610	877	879	866	105	139	16,588
1960-61 ..	7,704	3,256	1,834	820	791	843	94	215	15,557
1961-62 ..	6,594	3,247	1,451	593	825	832	58	202	13,802
1962-63 ..	4,478	3,179	1,078	480	779	801	42	131	10,968
1963-64 ..	4,412	2,775	1,264	550	872	794	35	92	10,794
TOTAL									
1959-60 ..	28,067	23,201	8,959	8,909	5,946	2,357	426	1,425	79,290
1960-61 ..	27,654	18,517	9,198	9,268	5,693	2,248	415	1,177	74,170
1961-62 ..	25,358	18,539	9,166	8,729	6,316	2,475	427	1,590	72,600
1962-63 ..	25,145	20,811	9,027	9,610	6,222	2,442	368	1,592	75,217
1963-64 ..	27,957	23,648	10,181	11,564	7,320	2,550	430	1,624	85,274

(a) Includes flats for 1959-60 and 1960-61.

(b) Includes operations of government authorities.

(iv) *Completed.* (a) *Contract-built and Owner-built, 1959-60 to 1963-64.* The following table shows the number of new houses completed in each State and Territory by contractors and owner-builders.

NEW HOUSES COMPLETED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
CONTRACT-BUILT(b)									
1959-60 ..	20,104	18,200	7,339	7,714	4,765	1,473	262	974	60,831
1960-61 ..	20,099	17,276	7,564	8,309	4,997	1,520	286	1,123	61,174
1961-62 ..	18,593	14,982	7,648	8,302	5,009	1,574	335	1,298	57,741
1962-63 ..	19,939	16,355	7,827	9,059	5,661	1,649	381	1,508	62,379
1963-64 ..	21,638	19,358	8,681	9,884	6,342	1,615	262	1,601	69,401
OWNER-BUILT									
1959-60 ..	9,434	5,957	1,662	1,262	1,232	1,002	79	171	20,799
1960-61 ..	9,679	4,818	1,827	1,067	976	967	117	150	19,601
1961-62 ..	7,818	3,987	1,492	834	1,073	823	59	217	16,303
1962-63 ..	5,652	3,973	1,192	587	932	855	51	175	13,417
1963-64 ..	4,296	3,441	1,331	604	934	896	48	163	11,713
TOTAL									
1959-60 ..	29,538	24,157	9,001	8,976	5,997	2,475	341	1,145	81,630
1960-61 ..	29,778	22,094	9,391	9,376	5,973	2,487	403	1,273	80,775
1961-62 ..	26,411	18,969	9,140	9,136	6,082	2,397	394	1,515	74,044
1962-63 ..	25,591	20,328	9,019	9,646	6,593	2,504	432	1,683	75,796
1963-64 ..	25,954	22,799	10,012	10,488	7,276	2,511	310	1,764	81,114

(a) Includes flats for 1959-60 and 1960-61.

(b) Includes operations of government authorities.

(b) *Private and Government, 1959-60 to 1963-64.* The number of new houses completed in each State and Territory according to private and government ownership is shown in the following table.

NEW HOUSES COMPLETED: NUMBER

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
PRIVATE									
1959-60 ..	25,994	22,076	7,663	6,108	4,885	2,032	195	443	69,396
1960-61 ..	26,540	20,384	7,694	6,374	4,701	2,014	225	544	68,476
1961-62 ..	22,241	17,066	7,393	6,013	4,678	1,850	142	703	60,086
1962-63 ..	21,727	19,125	7,962	6,921	4,843	1,941	133	962	63,614
1963-64 ..	22,174	21,129	8,375	7,795	5,330	1,957	129	1,028	67,917
GOVERNMENT									
1959-60 ..	3,544	2,081	1,338	2,868	1,112	443	146	702	12,234
1960-61 ..	3,238	1,710	1,697	3,002	1,272	473	178	729	12,299
1961-62 ..	4,170	1,903	1,747	3,123	1,404	547	252	812	13,958
1962-63 ..	3,864	1,203	1,057	2,725	1,750	563	299	721	12,182
1963-64 ..	3,780	1,670	1,637	2,693	1,946	554	181	736	13,197
TOTAL									
1959-60 ..	29,538	24,157	9,001	8,976	5,997	2,475	341	1,145	81,630
1960-61 ..	29,778	22,094	9,391	9,376	5,973	2,487	403	1,273	80,775
1961-62 ..	26,411	18,969	9,140	9,136	6,082	2,397	394	1,515	74,044
1962-63 ..	25,591	20,328	9,019	9,646	6,593	2,504	432	1,683	75,796
1963-64 ..	25,954	22,799	10,012	10,488	7,276	2,511	310	1,764	81,114

(a) Includes flats for 1959-60 and 1960-61.

(c) *Material of Outer Walls, 1963-64.* The following table shows the number of new houses completed in each State and Territory during 1963-64, classified according to the material of their outer walls.

NEW HOUSES COMPLETED: NUMBER, BY MATERIAL OF OUTER WALLS, 1963-64

(INCLUDING OWNER-BUILT HOUSES)

Material of outer walls	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Brick, brick veneer, concrete and stone ..	9,941	16,927	2,350	9,829	5,739	1,098	132	1,738	47,754
Wood (weatherboard, etc.) ..	5,486	4,020	5,735	45	34	1,337	..	21	16,678
Fibro-cement ..	10,464	1,728	1,837	607	1,463	76	178	5	16,358
Other ..	63	124	90	7	40	..	..	..	324
Total ..	25,954	22,799	10,012	10,488	7,276	2,511	310	1,764	81,114

(d) *Material of Outer Walls, 1959-60 to 1963-64.* The following table shows the number of new houses completed in Australia, classified according to the material of their outer walls.

NEW HOUSES(a) COMPLETED: NUMBER, BY MATERIAL OF OUTER WALLS, AUSTRALIA

(INCLUDING OWNER-BUILT HOUSES)

Material of outer walls	1959-60	1960-61	1961-62	1962-63	1963-64
Brick, brick veneer, concrete and stone	33,003	35,786	34,990	40,194	47,754
Wood (weatherboard, etc.)	26,857	24,764	20,896	19,212	16,678
Fibro-cement	21,314	19,830	17,776	16,083	16,358
Other	456	395	382	307	324
Total	81,630	80,775	74,044	75,796	81,114

(a) Includes Northern Territory flats for 1959-60 and 1960-61.

(v) *Under Construction, 1959-60 to 1963-64.* The number of new houses under construction at the end of each year 1959-60 to 1963-64 in each State and Territory is shown in the following table.

NEW HOUSES UNDER CONSTRUCTION: NUMBER

(INCLUDING OWNER-BUILT HOUSES)

At end of year—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. (a)	A.C.T.	Aust.
1959-60 ..	14,611	15,587	2,906	5,114	3,296	1,817	262	1,174	44,767
1960-61 ..	12,487	12,010	2,713	5,006	3,016	1,578	274	1,078	38,162
1961-62 ..	11,434	11,580	2,739	4,599	3,250	1,656	303	1,153	36,714
1962-63 ..	10,988	12,063	2,747	4,563	2,879	1,594	239	1,062	36,135
1963-64 ..	12,991	12,912	2,916	5,639	2,923	1,633	359	922	40,295

(a) Includes flats for 1959-60 and 1960-61.

3. *New Flats.*—The figures in the foregoing tables, except those for the Northern Territory for periods prior to 1961-62, do not include particulars of new flats. It should be noted: (a) that the figures hereunder are additional to the numbers of houses shown in other tables, (b) that each flat is counted as a separate unit, and the numbers shown therefore relate to individual flats, (c) that new flats only are included, i.e., conversions of old buildings into flats are omitted, and (d) "home units" are included as flats.

A graph showing the number of new flats commenced, completed and under construction for the period 1953-54 to 1963-64 will be found on page 378.

(i) *Approved, Commenced, Completed and Under Construction, 1963-64.* The summary below shows the number of new flats approved, commenced, completed and under construction for the year 1963-64.

NEW FLATS: NUMBER, 1963-64

(Individual living units)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	13,315	7,324	1,607	1,634	1,830	165	149	305	26,329
Commenced ..	10,210	7,089	1,311	1,386	1,743	120	128	290	22,277
Completed ..	7,776	4,270	949	989	1,295	164	26	150	15,619
Under construction at end of year ..	7,249	4,951	692	725	1,061	90	121	264	15,153

(ii) *Approved, Private and Government, 1959-60 to 1963-64.* The following table shows the number of new flats approved in each State or Territory, according to private and government ownership.

NEW FLATS APPROVED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
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PRIVATE

1959-60	..	8,973	4,028	1,733	739	365	146	(a)	47	16,031
1960-61	..	7,773	4,700	1,454	526	370	128	(a)	..	14,951
1961-62	..	4,418	2,447	793	479	592	117	43	..	8,889
1962-63	..	6,511	3,269	785	787	999	145	27	102	12,625
1963-64	..	12,210	6,446	1,539	1,634	1,830	163	65	177	24,064

GOVERNMENT

1959-60	..	600	452	111	252	..	40	(a)	107	1,562
1960-61	..	674	456	100	230	63	24	(a)	262	1,809
1961-62	..	1,329	844	27	81	..	24	..	28	2,333
1962-63	..	797	934	99	14	74	28	..	144	2,090
1963-64	..	1,105	878	68	..	..	2	84	128	2,265

TOTAL

1959-60	..	9,573	4,480	1,844	991	365	186	(a)	154	17,593
1960-61	..	8,447	5,156	1,554	756	433	152	(a)	262	16,760
1961-62	..	5,747	3,291	820	560	592	117	67	28	11,222
1962-63	..	7,308	4,203	884	801	1,073	173	27	246	14,715
1963-64	..	13,315	7,324	1,607	1,634	1,830	165	149	305	26,329

(a) Included with houses for 1959-60 and 1960-61.

(iii) *Commenced, 1959-60 to 1963-64.* The number of new flats commenced in each State or Territory is shown in the following table.

NEW FLATS COMMENCED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
1959-60	..	5,744	3,521	1,319	816	316	184	(a)	154	12,054
1960-61	..	7,578	4,672	1,153	571	358	129	(a)	258	14,719
1961-62	..	4,927	3,001	588	605	493	166	62	28	9,870
1962-63	..	6,730	3,662	699	683	876	125	14	263	13,052
1963-64	..	10,210	7,089	1,311	1,386	1,743	120	128	290	22,277

(a) Included with houses for 1959-60 and 1960-61.

(iv) *Completed, 1959-60 to 1963-64.* The following table shows the number of new flats completed in each State and Territory according to private and government ownership.

NEW FLATS COMPLETED: NUMBER

(Individual living units)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
PRIVATE									
1959-60 ..	3,425	1,430	920	451	250	115	(a)	..	6,591
1960-61 ..	6,244	3,575	1,198	590	401	123	(a)	35	12,166
1961-62 ..	4,750	3,450	829	473	241	138	2	13	9,896
1962-63 ..	5,037	2,864	684	545	642	91	33	33	9,929
1963-64 ..	6,894	3,515	920	907	1,221	156	26	114	13,753
GOVERNMENT									
1959-60 ..	445	632	2	152	13	82	(a)	474	1,800
1960-61 ..	375	608	14	297	39	52	(a)	139	1,524
1961-62 ..	1,188	620	99	120	24	16	..	256	2,323
1962-63 ..	716	908	96	141	..	6	26	129	2,022
1963-64 ..	882	755	29	82	74	8	..	36	1,866
TOTAL									
1959-60 ..	3,870	2,062	922	603	263	197	(a)	474	8,391
1960-61 ..	6,619	4,183	1,212	887	440	175	(a)	174	13,690
1961-62 ..	5,938	4,070	928	593	265	154	2	269	12,219
1962-63 ..	5,753	3,772	780	686	642	97	59	162	11,951
1963-64 ..	7,776	4,270	949	989	1,295	164	26	150	15,619

(a) Included with houses for 1959-60 and 1960-61.

(v) *Under Construction, 1959-60 to 1963-64.* The number of new flats under construction at the end of each year 1959-60 to 1963-64 in each State and Territory is shown in the table below.

NEW FLATS UNDER CONSTRUCTION: NUMBER

(Individual living units)

At end of year—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1959-60 ..	3,890	2,822	810	635	233	140	(a)	180	8,710
1960-61 ..	4,849	3,311	751	319	151	94	(a)	264	9,739
1961-62 ..	3,838	2,242	411	331	379	106	64	23	7,394
1962-63 ..	4,815	2,132	330	328	613	134	19	124	8,495
1963-64 ..	7,249	4,951	692	725	1,061	90	121	264	15,153

(a) Included with houses for 1959-60 and 1960-61.

4. *Value of New Buildings.*—(i) *Approved, Commenced, Completed and Under Construction, 1959-60 to 1963-64.* The following table summarizes the values of all new buildings approved, commenced, completed and under construction in each State and Territory. All values shown exclude the value of land and represent the estimated value of buildings on completion.

NEW BUILDINGS: VALUE
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)
(£'000)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
APPROVED									
1959-60	192,802	160,644	55,112	46,734	31,766	18,700	3,641	13,031	522,430
1960-61	185,016	147,692	64,294	60,709	32,957	14,284	2,878	15,912	523,742
1961-62	185,848	139,311	56,188	49,760	36,411	17,932	3,729	18,684	507,863
1962-63	201,617	164,171	64,344	57,562	39,058	17,876	4,627	22,792	572,047
1963-64	234,972	196,464	83,621	77,687	57,860	16,269	5,494	21,688	694,055
COMMENCED									
1959-60	202,250	153,604	50,560	49,468	31,716	18,243	2,778	15,292	523,911
1960-61	213,737	155,376	57,820	57,923	33,282	14,140	4,434	15,307	552,019
1961-62	209,598	152,093	52,917	51,746	36,762	17,693	3,982	19,035	543,826
1962-63	218,334	158,241	62,326	55,858	40,959	17,306	4,123	20,310	577,457
1963-64	257,027	197,349	75,178	74,888	59,278	17,332	5,082	21,200	707,334
COMPLETED									
1959-60	177,745	148,162	50,205	47,640	30,120	15,803	2,561	14,909	487,145
1960-61	209,186	163,152	59,304	53,866	36,025	17,014	3,118	13,155	554,820
1961-62	208,043	148,175	55,054	52,315	34,036	16,727	3,503	15,758	533,611
1962-63	205,763	166,784	56,347	60,560	43,214	17,064	4,436	19,062	573,230
1963-64	235,840	167,415	66,509	59,151	46,434	16,988	3,981	20,082	616,400
UNDER CONSTRUCTION AT END OF YEAR									
1959-60	146,819	127,773	30,620	36,822	23,331	15,591	1,998	15,502	398,456
1960-61	157,932	122,187	29,961	41,727	20,922	12,964	3,410	18,080	407,183
1961-62	167,408	128,296	28,448	41,508	24,503	13,888	3,928	21,825	429,804
1962-63	182,638	121,955	34,997	37,866	22,686	14,206	3,677	24,381	442,406
1963-64	206,601	153,139	43,944	55,757	35,924	14,547	4,885	26,024	540,821

(ii) *Completed.* (a) *Type of Building, 1963-64.* The following table shows the value of all new buildings completed in each State and Territory during 1963-64, according to the type of building.

NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING, 1963-64
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)
(£'000)

Type of building	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Houses—									
Brick, brick veneer, concrete and stone ..	48,813	69,842	10,129	34,739	21,358	4,558	664	9,229	199,332
Wood (weatherboard, etc.) ..	19,052	12,886	19,339	170	81	3,978	..	95	55,601
Fibro-cement ..	28,397	4,753	4,895	1,666	4,409	130	891	24	45,165
Other ..	261	442	277	12	39	..	..	..	1,031
Total, Houses ..	96,523	87,923	34,640	36,587	25,887	8,666	1,555	9,348	301,129
Flats ..	21,638	11,867	2,195	2,422	2,798	369	91	400	41,780
Total, Houses and Flats ..	118,161	99,790	36,835	39,009	28,685	9,035	1,646	9,748	342,909
Hotels, hostels, etc. ..	6,987	1,377	3,036	800	925	185	131	468	13,909
Shops ..	13,726	4,728	2,621	3,123	774	472	99	202	25,745
Factories ..	22,807	23,106	4,023	5,321	2,692	1,422	733	4,109	64,213
Business premises—									
Office ..	26,861	9,021	2,775	1,660	2,998	1,105	148	470	45,038
Other ..	9,941	6,162	4,572	2,588	1,832	933	221	753	27,002
Education ..	14,052	10,698	4,533	3,399	3,113	1,727	243	2,521	40,286
Religious ..	2,934	1,766	816	648	592	119	20	104	6,999
Health ..	7,264	5,027	2,487	756	1,639	1,030	196	902	19,301
Entertainment and recreation ..	8,180	2,310	586	505	1,022	443	94	163	13,303
Miscellaneous ..	4,927	3,430	4,225	1,342	2,162	517	450	642	17,695
Total, Other Buildings	117,679	67,625	29,674	20,142	17,749	7,953	2,335	10,334	273,491
Total, New Buildings	235,840	167,415	66,509	59,151	46,434	16,988	3,981	20,082	616,400

(b) *Type of Building, 1959-60 to 1963-64.* The following table shows the value of all new buildings completed in Australia.

NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING, AUSTRALIA

(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)
(£'000)

Type of building	1959-60	1960-61	1961-62	1962-63	1963-64
Houses—					
Brick, brick veneer, concrete and stone ..	127,580	143,756	143,741	165,024	199,332
Wood (weatherboard, etc.)	80,851	77,771	66,648	62,091	55,601
Fibro-cement	52,694	50,624	46,466	42,126	45,165
Other	1,430	1,243	1,054	1,034	1,031
Total, Houses	262,555	273,394	257,909	270,275	301,129
Flats(a)	22,930	40,322	38,676	34,833	41,780
Total, Houses and Flats	285,485	313,716	296,585	305,108	342,909
Hotels, hostels, etc.	8,525	14,580	15,064	18,534	13,909
Shops	16,326	23,145	23,670	24,556	25,745
Factories	49,476	64,788	51,034	57,911	64,213
Business premises—					
Office	24,767	32,344	31,057	35,898	45,038
Other	28,126	23,453	21,605	21,896	27,002
Education	32,227	35,318	41,343	42,777	40,286
Religious	6,458	7,159	7,260	8,452	6,999
Health	11,216	14,072	17,703	22,486	19,301
Entertainment and recreation	8,622	9,749	11,622	16,891	13,303
Miscellaneous	15,917	16,496	16,668	18,721	17,695
Total, Other Buildings	201,660	241,104	237,026	268,122	273,491
Total, New Buildings	487,145	554,820	533,611	573,230	616,400

(a) Prior to 1961-62, the value of Northern Territory flats was included with houses.

(c) *Type of Building, Private and Government Ownership, 1961-62 to 1963-64.* The following table shows the value of all new buildings completed in Australia, classified by private and government ownership.

NEW BUILDINGS COMPLETED: VALUE, BY TYPE OF BUILDING AND OWNERSHIP, AUSTRALIA

(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)
(£'000)

Type of building	Private			Government		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Houses—						
Brick, brick veneer, concrete and stone ..	123,021	145,123	177,682	20,720	19,901	21,649
Wood (weatherboard, etc.) ..	59,319	56,823	49,443	7,329	5,268	6,159
Fibro-cement	34,045	32,339	34,248	12,421	9,787	10,917
Other	979	1,005	974	75	29	57
Total, Houses	217,364	235,290	262,347	40,545	34,985	38,782
Flats(a)	31,580	29,164	36,481	7,096	5,669	5,299
Total, Houses and Flats	248,944	264,454	298,828	47,641	40,654	44,081
Hotels, hostels, etc.	14,660	17,801	13,314	404	733	595
Shops	22,654	24,167	25,038	1,016	389	707
Factories	44,331	52,273	56,068	6,703	5,638	8,145
Business premises—						
Office	19,982	25,905	30,706	11,075	9,993	14,332
Other	13,741	16,007	20,608	7,864	5,889	6,394
Education	7,721	8,181	9,615	33,622	34,596	30,671
Religious	7,260	8,452	6,999	..	..	..
Health	3,241	1,870	2,217	14,462	20,616	17,084
Entertainment and recreation ..	9,407	11,163	10,937	2,215	5,728	2,366
Miscellaneous	6,329	5,973	6,625	10,339	12,748	11,070
Total, Other Buildings	149,326	171,792	182,127	87,700	95,330	91,364
Total, New Buildings	398,270	436,246	480,955	135,341	136,984	135,445

(a) Prior to 1961-62, the value of Northern Territory flats was included with houses.

5. **Value of Building Approved.**—The following table shows the values of approvals for houses and flats, other new buildings, and alterations and additions in Australia for the years 1959–60 to 1963–64. Additions of £5,000 and over are included with new buildings in all States except New South Wales, where they are included in alterations and additions.

BUILDING APPROVED: VALUE, AUSTRALIA
(£'000)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Houses and flats	319,341	300,393	279,292	316,366	397,257
Other new buildings	203,089	223,349	228,571	255,681	296,798
<i>Total, New Buildings</i>	<i>522,430</i>	<i>523,742</i>	<i>507,863</i>	<i>572,047</i>	<i>694,055</i>
Alterations and additions	81,284	78,400	78,105	86,128	92,071
Total, Building	603,714	602,142	585,968	658,175	786,126
Private	487,914	468,279	445,225	502,155	580,782
Government	115,800	133,863	140,743	156,020	205,344

6. **Persons Working on Jobs Carried out by Builders of New Buildings.**—(i) *At 30th June, 1964.* The following table shows the number of contractors, sub-contractors and wage earners working on jobs *carried out by builders of new buildings* at 30th June, 1964. It also shows the numbers of these persons classified according to their main building occupations and the type of building on which they were working.

PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS, 30th JUNE, 1964

(INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS BUT 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.
Contractors	3,914	3,239	2,184	713	568	561	81	231	11,491
Sub-contractors	9,071	8,122	2,491	3,460	2,377	727	154	710	27,112
Wage earners	35,863	28,336	15,869	10,359	8,608	3,910	667	3,545	107,157
<i>Total</i>	<i>48,848</i>	<i>39,697</i>	<i>20,544</i>	<i>14,532</i>	<i>11,553</i>	<i>5,198</i>	<i>902</i>	<i>4,486</i>	<i>145,760</i>
Carpenters	17,198	14,784	9,533	3,789	3,433	2,305	257	1,252	52,551
Bricklayers	5,504	4,892	1,481	2,547	1,522	473	143	449	17,011
Painters	3,982	3,666	1,666	1,414	1,078	463	72	422	12,763
Electricians	2,761	2,103	987	745	821	249	72	298	8,036
Plumbers	4,404	3,541	1,590	1,363	984	341	79	354	12,656
Builders' labourers	7,536	4,590	3,173	1,889	1,876	756	197	784	20,801
Other	7,463	6,121	2,114	2,785	1,839	611	82	927	21,942
<i>Total</i>	<i>48,848</i>	<i>39,697</i>	<i>20,544</i>	<i>14,532</i>	<i>11,553</i>	<i>5,198</i>	<i>902</i>	<i>4,486</i>	<i>145,760</i>
New houses and flats	22,241	21,071	8,313	8,243	5,365	2,295	389	1,920	69,837
Other new building(a)	23,227	17,021	10,907	5,992	5,051	2,390	512	2,314	67,414
Repairs and maintenance(b)	3,380	1,605	1,324	297	1,137	513	1	252	8,509
<i>Total</i>	<i>48,848</i>	<i>39,697</i>	<i>20,544</i>	<i>14,532</i>	<i>11,553</i>	<i>5,198</i>	<i>902</i>	<i>4,486</i>	<i>145,760</i>

(a) Includes persons working on alterations and additions carried out by builders of new buildings.

(b) Carried out by builders of new buildings.

(ii) *Summary, 1960 to 1964.* The number of persons in each State and Territory working on jobs carried out by builders of new buildings is shown in the following table.

PERSONS WORKING ON JOBS CARRIED OUT BY BUILDERS OF NEW BUILDINGS

(INCLUDING CONTRACTOR AND SUB-CONTRACTOR PRINCIPALS ACTUALLY WORKING ON JOBS BUT EXCLUDING PERSONS WORKING ON OWNER-BUILT HOUSES)

At—	N.S.W. (a)	Vic. (a)	Q'land	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Aust. (a)
30th June, 1960	41,102	37,533	22,199	13,306	9,195	5,432	405	3,456	132,628
30th " 1961	39,981	32,195	18,192	12,416	8,456	4,793	608	2,973	119,614
29th " 1962	42,420	35,188	19,407	12,346	10,250	5,402	667	3,932	129,612
28th " 1963	44,693	37,878	19,923	12,948	9,964	5,312	578	4,397	135,693
30th " 1964	48,848	39,697	20,544	14,532	11,553	5,198	902	4,486	145,760

(a) Prior to 29th June, 1962, excludes the number of persons working on certain private buildings, other than houses, which were erected without the services of a contractor responsible for the whole job.

§ 3. Government Activities in the Housing Field

1. **Housing Agreements between Commonwealth and State Governments.**—Under the Commonwealth-State Housing Agreements the Commonwealth Government makes substantial loans to the States for the provision of housing.

(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.

Between 1945–46 and 1955–56, under this Agreement, the Commonwealth Government advanced £88,849,000 to New South Wales; £85,781,000 to Victoria; £24,344,000 to Queensland; £11,700,000 to South Australia; £27,050,000 to Western Australia; and £2,835,000 to Tasmania. When Tasmania withdrew from the Agreement, it repaid all advances made to it.

For information on the conditions of sale, etc., under the 1945 Agreement see Year Book No. 48, page 367. In 1961 the 1945 Agreement was amended to allow sales of dwellings on terms decided by the States, but tenants eligible under the *War Service Homes Act 1918–1962* are entitled to purchase dwellings built under the 1945 Agreement on the terms provided in the Act.

(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. The Commonwealth Government provided finance to the States over a period of five years ending 30th June, 1961, for the erection of housing projects. For the first two years of the agreement 20 per cent. of the money allocated to each State (and 30 per cent. for the next three years) was advanced to building societies and other approved institutions for lending to private house builders. The remaining allocation to each State was used by the States for the erection of houses for either rental or sale. The States determined the type of houses to be erected, their location and the selection of tenants, and also fixed the terms of selling.

The Commonwealth was entitled to specify that a portion of the moneys be set aside for the erection of houses for serving members of the defence forces nominated by the Commonwealth. The Commonwealth provided supplementary advances to the States equal to the amounts set aside by them for this purpose.

For other features of the 1956 Commonwealth and State Housing Agreement see Year Book No. 48, page 368.

(iii) *The 1961 Agreement.* The period during which Commonwealth advances to the States could be made under the 1956 Agreement terminated on 30th June, 1961. A new Agreement was entered into which extended for a further five years the period during which advances could be made and also amended the 1956 Agreement in certain respects.

The main effects of the amendments were to:

- (a) allow the Commonwealth and/or a State to contribute funds for the erection of dwellings for rental to servicemen in excess of the previous maximum of five per cent. of the allocation to the State housing authorities plus matching funds from the Commonwealth;
- (b) provide for a rate of interest on the Commonwealth advances equal to the long-term Commonwealth bond rate at the time the advances were made, less one per cent. per annum.

The interest rates under the Agreement have been: from 1st July, 1961 to 6th February, 1962, 4½ per cent. per annum; 7th February, 1962 to 22nd July, 1963, 4 per cent. per annum; 23rd July, 1963 to 13th May, 1964, 3½ per cent. per annum; 14th May, 1964 to 12th August, 1964, 3¾ per cent. per annum; and since 13th August, 1964, 4 per cent. per annum.

(iv) *Operations in 1963-64.* The following table shows operations under the various Housing Agreements during 1963-64.

COMMONWEALTH AND STATE HOUSING AGREEMENTS, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Total
ADVANCES TO STATES (£'000)							
Advances to States(a), 1956 and 1961 Agreements	17,082	13,814	5,010	9,700	3,526	3,000	52,132
State Housing Programme (70 per cent. maximum) .. .	11,550	9,275	3,010	4,600	2,380	2,100	32,915
Home Builders' Account (30 per cent. minimum)—							
Advances	4,950	3,975	1,290	5,100	1,020	900	17,235
Amount drawn by institutions	5,953	5,301	1,544	5,417	1,081	938	20,234
Service Housing Funds allocated by—							
Commonwealth	582	564	710	..	126	..	1,982
States	577	464	207	..	88	..	1,336

NUMBER OF DWELLINGS

State Housing Programme—							
Commenced	4,133	3,016	(b) 789	1,625	855	566	(b) 10,984
Completed	3,738	2,324	(b) 918	1,552	1,066	555	(b) 10,153
Under construction at 30th June, 1964	2,819	1,860	(b) 355	1,416	225	242	(b) 6,917
Home Builders' Account—							
Purchased—New	712	367	206	656	102	56	2,099
Other	44	304	..	..	..	4	352
New construction—							
Approved	1,134	1,237	327	1,288	286	256	4,528
Commenced	1,063	1,237	316	1,215	269	250	4,350
Completed	1,059	927	311	1,221	292	209	4,019
Service Housing—							
Agreed programme	372	306	259	..	(c) 73	..	(c) 1,010
Completed(d)	379	220	203	5	46	..	853
Sold under—							
1945 Agreement	529	627	119	3	57	(e)	(e) 1,335
1956 and 1961 Agreements	992	1,172	(b) 263	454	153	431	(b) 3,465

(a) Includes supplementary advances for Service Housing. (b) These figures include estimates supplied by the Queensland Housing Commission. During 1958-59 and subsequent years the Queensland State Housing programme was financed from a Trust Fund which included Housing Agreement moneys, together with moneys from other sources. (c) Includes flats requiring additional finance during 1964-1965. (d) Also included in State Housing Programme above. (e) Tasmania did not operate under the 1945 Agreement after August, 1950.

(v) *Advances, 1954-55 to 1963-64.* Advances made by the Commonwealth Government to the States, under the Agreements, in each year since 1954-55, are shown in the following table. For earlier years see Year Book No. 50, page 382.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: ADVANCES
TO STATES(a)**
(£'000)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.(b)	Total
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
1956-57	11,232	10,400	2,860	3,711	3,111	2,025	33,339
1957-58	11,440	10,400	3,286	4,160	3,015	2,034	34,335
1958-59	12,420	10,660	3,426	5,175	3,103	2,220	37,004
1959-60	12,782	10,660	3,602	5,092	3,049	1,957	37,142
1960-61	13,455	10,660	3,208	5,829	3,056	2,002	38,210
1961-62	17,633	14,001	4,397	9,063	3,721	2,928	51,743
1962-63	16,900	13,300	4,251	9,506	3,505	2,600	50,062
1963-64	17,082	13,814	5,010	9,700	3,526	3,000	52,132
Total since 1945-46 ..	201,793	179,676	54,384	63,936	53,136	21,601	574,526

(a) Includes supplementary advances (Service housing) under the 1956 and 1961 Agreements.
(b) Tasmania withdrew from the 1945 Agreement in August, 1950, and repaid all advances made to it.

(vi) *Dwellings Provided, 1954-55 to 1963-64.* The following table shows the number of dwellings provided under the Agreements in each year since 1954-55. For earlier years see Year Book No. 50, page 382.

**COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF
DWELLINGS PROVIDED(a)**

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.(b)	Total
1954-55	4,932	3,960	1,382	2,013	2,031	..	14,318
1955-56	3,529	4,200	797	1,885	1,539	..	11,950
1956-57	3,602	3,038	1,369	1,997	958	525	11,489
1957-58	4,494	3,369	1,113	1,959	1,472	566	12,973
1958-59	4,440	3,673	(c)1,368	2,023	1,225	594	(c)13,323
1959-60	4,736	3,924	(c)1,173	2,318	1,009	688	(c)13,848
1960-61	4,309	3,447	(c)1,247	2,457	1,056	666	(c)13,182
1961-62	6,163	4,569	(c)1,419	3,101	1,242	706	(c)17,200
1962-63	5,654	3,921	(c)1,239	3,560	1,519	804	(c)16,697
1963-64	5,553	3,922	(c)1,435	3,429	1,460	824	(c)16,623
Total since 1945-46(d) ..	76,669	60,788	c 20,020	25,748	22,015	6,503	c 211,743

(a) The total number of houses and flats completed under State Housing Programmes plus, since 30th June, 1956, the numbers completed and purchased under the Home Builders' Account. (b) Tasmania withdrew from the 1945 Agreement in August, 1950, and repaid all advances made to it.
(c) The figure for the number of dwellings completed from Housing Agreement moneys under the State Housing programme of Queensland is an estimate only, supplied by the Queensland Housing Commission (see footnote (b) to table on p. 369). (d) Includes some dwellings erected before 1945-46 to which the 1945 Agreement applied.

(vii) *Houses sold, 1954-55 to 1963-64.* The table below shows the number of houses sold under the Commonwealth and State Housing Agreements in each year since 1954-55. For earlier years see Year Book No. 50, page 383.

COMMONWEALTH AND STATE HOUSING AGREEMENTS: NUMBER OF HOUSES SOLD

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Total
1954-55	165	..	26	7	96	..	294
1955-56	733	1,289	121	275	177	..	2,595
1956-57	3,197	1,732	466	231	294	207	6,127
1957-58	3,679	1,336	672	259	737	398	7,081
1958-59	2,507	2,506	(a) 628	252	222	247	(a)6,362
1959-60	2,701	2,672	(a) 566	140	324	311	(a)6,714
1960-61	2,004	2,704	(a) 551	88	572	329	(a)6,248
1961-62	2,303	2,125	(a) 476	33	555	354	(a)5,846
1962-63	2,598	1,791	(a) 255	96	590	311	(a)5,641
1963-64	1,521	1,799	(a) 382	457	210	431	(a)4,800
Total since 1948-49	22,912	18,044	(a)4,377	1,839	5,283	2,588	a 55,043

(a) Estimates supplied by the Queensland Housing Commission (see footnote (b) to table on p. 369).

2. **War Service Homes.**—(i) *General.* The provision of War Service Homes is a function of the War Service Homes Division of the Department of Housing, and the administration of the War Service Homes Act is under the control of the Director of War Service Homes. The War Service Homes Division was formerly a Division of the Department of National Development but was transferred to the Department of Housing in December, 1963.

The *War Service Homes Act* 1918-1962 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 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 joint tenants, but the War Service Homes Division does not provide homes for occupation purely on a tenancy basis.

(ii) *Operations, 1963-64.* The following table gives details of the operations of the War Service Homes Division in the year 1963-64 and also since the inception of the scheme on 6th March, 1919. The figures shown include operations in the Territories of Papua, New Guinea and Norfolk Island.

WAR SERVICE HOMES DIVISION: OPERATIONS, AUSTRALIA, 1963-64, AND TO 30TH JUNE, 1964

Particulars	1963-64			From inception to 30th June, 1964		
	Eligibility established from service in—		Total	Eligibility established from service in—		Total
	1914-18 War	1939-45 War, Korea or Malaya		1914-18 War	1939-45 War, Korea or Malaya	
Applications received No.	808	13,004	13,812	115,530	358,912	474,442
Applications approved ..	445	9,412	9,857	55,922	204,580	260,502
Homes purchased ..	344	5,862	6,206	18,536	100,112	118,648
Homes built, or assistance given to build them .. No.	8	1,776	1,784	23,886	64,114	88,000
Mortgages discharged ..	52	1,584	1,636	4,057	26,229	30,286
Total homes provided ..	404	9,222	9,626	46,479	190,455	236,934
Transfers or resales ..	58	803	861	9,311	11,653	20,964
Total capital expenditure £'000	n.a.	n.a.	35,008	n.a.	n.a.	507,651
Total receipts ..	n.a.	n.a.	27,583	n.a.	n.a.	253,128

(iii) *Operations, 1954-55 to 1963-64.* The table below gives details of certain activities of the War Service Homes Division each year from 1954-55 to 1963-64, and covers eligibility established from service in the 1914-18 War, 1939-45 War, Korea or Malaya.

WAR SERVICE HOMES DIVISION: ANNUAL OPERATIONS, AUSTRALIA

Year	Number of—					Total capital expenditure	Total receipts
	Applications received	Homes provided					
		Homes purchased (a)	Homes built (b)	Mortgages dis-charged	Total		
1954-55	28,931	5,662	5,628	1,498	12,788	£'000 30,086	£'000 10,779
1955-56	20,968	4,802	5,777	1,224	11,803	30,067	11,961
1956-57	20,553	5,813	4,187	1,227	11,227	30,171	12,690
1957-58	22,081	6,150	5,524	1,584	13,258	35,182	14,652
1958-59	21,935	6,660	5,254	1,497	13,411	35,159	16,769
1959-60	20,661	8,437	3,169	1,411	13,017	35,068	19,836
1960-61	15,888	8,005	2,791	2,211	13,007	35,042	21,014
1961-62	16,925	7,708	2,572	2,137	12,417	35,025	21,503
1962-63	16,015	6,855	1,944	1,857	10,656	37,510	24,125
1963-64	13,812	6,206	1,784	1,636	9,626	35,008	27,583

(a) Homes purchased with the assistance of War Service Homes Division.

(b) Or assistance given to build a home.

(iv) *Homes Provided, 1954-55 to 1963-64.* The following table gives details of the number of homes provided by the War Service Homes Division in each State and Territory of Australia and the Territories of Papua, New Guinea and Norfolk Island each year from 1954-55 to 1963-64.

WAR SERVICE HOMES DIVISION: NUMBER OF HOMES PROVIDED

Year	N.S.W. (a)	Vic.	Q'land (b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1954-55	4,256	4,007	1,648	885	1,561	332	10	89	12,788
1955-56	4,652	3,347	1,099	797	1,522	294	8	84	11,803
1956-57	4,316	3,666	883	859	1,157	259	2	85	11,227
1957-58	5,236	4,132	855	1,079	1,588	297	3	68	13,258
1958-59	6,176	3,939	994	889	1,002	349	8	54	13,411
1959-60	5,698	3,908	1,112	853	1,096	277	7	66	13,017
1960-61	6,101	3,308	1,145	876	1,288	233	9	47	13,007
1961-62	4,871	3,534	1,525	912	1,243	239	6	87	12,417
1962-63	4,037	2,841	1,394	889	1,139	229	5	122	10,656
1963-64	3,747	2,787	1,140	695	939	222	3	93	9,626

(a) Includes Norfolk Island.

(b) Includes Territories of Papua and New Guinea.

In addition to the homes provided under the War Service Homes Act and shown in the table above, 2,162 homes, which had been provided originally under the Housing Agreements with the States, have been taken over in accordance with those Agreements, 86 being taken over during 1963-64.

3. **State Housing Authorities.**—The following paragraphs describe briefly the organization of the various State Housing Authorities and their activities in the fields of home construction and provision of homes on a rental basis (see § 4 for their financial advances to persons wishing to purchase or build a home). For summarized figures of total government construction of houses and flats, see pages 361 and 363.

(i) *New South Wales—The Housing Commission of New South Wales.* (a) *General.* The Housing Commission of New South Wales was constituted in 1942, with a full-time salaried chairman and four other members remunerated by fees. The principal function of the Commission is the provision of low-cost housing for rental or sale to persons in the lower or moderate income groups. The Commission is also empowered to make surveys of housing conditions, recommend local government building ordinances, provide assistance to private home builders, and undertake the manufacture, purchase, and supply of building materials.

Most of the permanent dwellings provided by the Commission have been erected under the Commonwealth-State Housing Agreements. In 1963, 4,173 houses and flats valued at £9,422,149 were completed for the Housing Commission by private builders on contract to the Commission.

(b) *Capital, Income and Expenditure.* Advances from the Commonwealth have provided most of the Housing Commission's capital funds. Of the £195,114,717 total capital funds available to the Commission from its inception to 30th June, 1964, £171,287,655 (or 87.7 per cent.) came from Commonwealth advances, £4,932,024 (2.5 per cent.) from Consolidated Revenue, £6,202,677 (3.2 per cent.) from General Loans Account and £5,291,050 (2.6 per cent.) from other State funds, and £7,401,311 (4.0 per cent.) from the Commission's own funds.

During the year 1963–64, the Housing Commission's income and expenditure (other than capital transactions) was—total income, £11,753,483 (consisting of rent £8,055,853, interest £2,648,222, other £1,049,408); and total expenditure £10,235,871.

(c) *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. In addition, the Commission erects (with State funds) dwellings for employees of industries connected with decentralization and development. The number of rental houses erected (other than under the Housing Agreements) is 1,178.

Specially designed units are erected by the Housing Commission to provide dwellings for elderly persons at rentals within their means. The rents of these units are £1 per week for elderly single persons and £1 10s. per week for elderly couples, and 1,394 units had been completed at 30th June, 1964.

(d) *Sales Schemes.* Applicants for Commission housing may, when their priority has been reached, elect either to purchase or to rent the dwelling allocated to them. Should they decide to purchase, terms of sale provide for a minimum deposit of £50 with repayments spread over a maximum period of forty-five years, with interest currently at the rate of 4½ per cent. There is no limit on the amount of outstanding indebtedness. Further, those tenants who originally elect to rent may subsequently purchase the dwellings occupied by them on similar terms.

Applicants who have established eligibility for Housing Commission accommodation may apply to have a standard type of dwelling erected on their own block of land. At 30th June, 1964, 316 dwellings had been completed under this scheme.

During the years 1954 and 1955, the Housing Commission completed 100 houses for sale which were sold through the Rural Bank on the basis of 10 per cent. deposit with repayment of the balance over a maximum period of 40 years. This scheme was limited to 100 houses.

(ii) *Victoria—Housing Commission, Victoria.* (a) *General.* A preliminary investigation into housing conditions in Victoria was begun in July, 1936, when a board for the purpose was appointed by the Government. As a result of their report, the *Housing Act 1937* was passed by Parliament which provided for the appointment of a Housing Commission of four members to be the central housing authority of the State. The Housing Commission of Victoria was appointed on 1st March, 1938.

The objects of the Commission as now laid down are the improvement of existing housing conditions; the provision of suitable rental housing for persons displaced by slum reclamation or living under unsatisfactory conditions, and for other eligible persons; the sale of houses to eligible persons and making of advances to such persons to enable them to own their homes; the development of land for housing and related purposes; and the responsibility of maintaining housing standards. Until the 1945 Commonwealth-State Housing Agreement was entered into, with its retrospective application to all estates or projects completed after 3rd December, 1943, the construction of dwellings by the Commission was financed by loan funds provided by the State and by three specific debenture issues raised by the Commission. Since the signing of the 1945 Commonwealth-State Housing Agreement the construction of dwellings has been financed by the Commonwealth Government.

(b) *Dwellings Provided.* At 30th June, 1964, the Housing Commission had completed 1,328 dwelling units under the State Housing Scheme, and 49,988 dwelling units under Commonwealth-State Agreements. An additional 2,478 units were either under construction or let to contract at this date.

(c) *Dwellings for Elderly Persons.* Specially designed dwelling units are erected by the Commission to provide dwellings for elderly persons at rentals within their means. To 30th June, 1964, 2,231 units had been completed.

(d) *Housing of Aborigines.* Under the *Aborigines Act* 1958, as amended by the *Aborigines (Houses) Act* 1959, the Aborigines Welfare Board is empowered to buy houses, or land on which to erect houses for occupation as dwellings by Aborigines. To 30th June, 1964, 46 units had been completed.

(e) *Rental Housing (other than Housing Agreements).* State Government Authorities, such as the Public Works Department, State Electricity Commission, Victorian Railways, State Rivers and Water Supply Commission, etc., provide, from time to time, the necessary land and finance for the erection of dwellings for employees of those departments. Rentals charged are fixed by the Government Authorities in accordance with the salaries of officers occupying the dwellings. The dwellings erected by these State Government Authorities do not come under the control of the Victorian Housing Commission.

(f) *Rural Housing.* Prior to the end of the Second World War the Commonwealth Government and various State Governments made arrangements for the settlement of discharged soldiers on the land as part of a general scheme of rehabilitation of ex-members of the Services. In 1945 the Victorian Government completed an Agreement with the Commonwealth Government, and legislation was passed constituting the Soldier Settlement Commission. On 17th March, 1962, the Rural Finance and Settlement Commission came into being, constituted by an Act passed in December, 1961. Activities under the *Soldiers Settlement Act* 1958 and the *Land Settlement Act* 1959, previously administered by the Soldiers Settlement Commission, are now carried out by the Settlement Branch of the new Commission. At 30th June, 1964, a total of 3,113 houses had been erected and 55 were still under construction.

(iii) *Queensland—The Queensland Housing Commission.* (a) *General.* The Queensland Housing Commission was established in 1945 to assist in meeting the housing shortage. It took over the operations of the State Advances Corporation which was established in 1916 to make advances to home builders under "The State Advances Act of 1916" (State Housing in Queensland originally began in 1910 under the Workers' Dwelling Board). In addition, the Commission was empowered to build houses itself, either for sale or for rental.

(b) *House Units Completed.* During 1963-64 the Commission completed 1,876 house units, bringing the total completions under all schemes since the revival of housing construction in 1944-45 to 29,800. Of this number, 17,716 houses, or 59.4 per cent., were for home ownership, and 12,084, or 40.6 per cent., were for rental.

(c) *Finance.* The Housing Commission finances its operations through two Treasury Trust Funds—the Queensland Housing Commission Fund and the Commonwealth-State Housing Fund. In addition, a Home Builders' Deposit Trust Fund is available to assist eligible persons to accumulate money to acquire land and erect a Commission dwelling

thereon, or to purchase a dwelling under contract of sale conditions. Total disbursements by the Commission for the year 1963-64 amounted to £13,214,366, representing £4,038,710 from the Queensland Housing Commission Fund and £9,175,656 from the Commonwealth-State Housing Fund, while the Home Builders' Deposit Fund had a balance of £4,933 at 30th June, 1964.

(d) *Rental Schemes.* In the field of rental housing the Commission administers and acts as the constructing authority for the Commonwealth-State Housing Agreements of 1945, 1956, and 1961. These agreements have made possible large-scale home building programmes during the post-war years, the houses so built being mainly for rental, although subsequently they may be sold.

Until 28th March, 1961, when " *The Workers' Homes Acts, 1919 to 1957* " were repealed, the Commission administered the Workers' Homes scheme, which was described in Year Book No. 48, page 371.

(e) *Sales Schemes.* Operating under the provisions of " *The State Housing Acts, 1945 to 1962* " the Commission, through its scheme of workers' dwellings, makes advances for the construction of dwellings to eligible persons who own a suitable building site. To be eligible to qualify for any of its home-ownership schemes, a person must not own, nor must his wife or her husband own, a house in Queensland or elsewhere. The number of workers' dwellings completed during 1963-64 amounted to 373, making a total of 28,991 completions since the inception of the scheme. The Commission also has power to make advances, secured by mortgage, to firms for housing of employees.

Home ownership is further assisted through the Commission's power to sell houses under contract of sale conditions. It may sell houses already erected to eligible applicants, or it will erect a dwelling to the intending purchaser's own design, on Commission land, for subsequent sale to him. Tenants of rental houses may also purchase, under contract of sale conditions, the houses they are occupying. Contract of sale agreements were made to purchase 861 of the Commission's houses during 1963-64.

The Commission is also authorized, under " *The State Housing Acts Amendment Act of 1961* ", to sell freehold land, or lease vacant Crown land which has been set apart for the purposes of the State Housing Acts, to an eligible person for the erection of a dwelling, subject to the condition that within 18 months from the date of contract he will execute a building agreement for the erection of a dwelling thereon for his occupation.

(iv) *South Australia—The South Australian Housing Trust.* (a) *General.* The South Australian Housing Trust was constituted in 1937 under the South Australian Housing Trust Act, 1936-1937, for the purpose of providing comfortable homes for workers in regular employment on the lower ranges of income and for tenants in serious financial straits. 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, 1964, 49,792 houses were erected by the Trust in both city and country areas.

(b) *Rental Houses.* Rents charged for Trust accommodation are generally based on the overall cost of construction, and vary not only according to the size of the dwelling but also according to date of erection. As at 1st January, 1965, the rents of five-roomed houses (i.e., three bedrooms) ranged from £1 17s. 6d. a week for houses of an older type to £3 12s. 6d. a week for houses then being completed in the Metropolitan Area. 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. Two and three storey groups of flats with weekly rentals ranging from £3 7s. 6d. to £6 12s. 6d. per flat have been built in the Metropolitan Area and at Elizabeth. At 1st January, 1965, 1,101 of these flats had been completed in the Metropolitan Area and 220 at Elizabeth. In 1953 the Trust began building cottage or pensioner flats for elderly people. At 30th June, 1964, it had built 697 cottage flats for its own scheme and an additional 318 for, and at the expense of, charitable organizations.

In 1958 the State Government instituted the rental-grant scheme for the purpose of providing houses in the country towns for people who cannot afford to pay an economic rent, and to 30th June, 1964, 181 houses had been built.

(c) *Sales Scheme.* Houses built under this scheme, which was inaugurated in 1946, are of solid or timber-frame construction. More than 23,700 have been completed in both metropolitan and country areas since the scheme began. The Trust may receive cash payment for the house and land. More usually, the purchaser pays a deposit (which varies according to the type of house and locality—at present £170 for a timber-frame house and £200 for a five-roomed brick house—and the purchaser's ability to pay) and raises the balance by way of mortgage. 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 1964 ranged from £3,800 for a two-bedroom brick house to £6,000 for a five-roomed house. During 1962-63 the Trust commenced construction of rental-purchase houses. The aim of this scheme is to provide less expensive houses for the lower-middle income group, and it is expected that such houses will, as far as possible, replace the demand for the double-unit type rental houses. By 1st January, 1965, approximately 1,000 rental-purchase houses had been built.

Upon request by State Government Departments the Trust will erect houses for purchase by those Departments for the accommodation of their employees. During 1963-64 98 houses were built for Education, Police, Highways, Aboriginal Affairs, and Woods and Forests Departments, etc. Rents for the houses are determined by the Public Service Board.

(d) *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 30th June, 1964, prices for three bedroom asbestos cement sheeted timber houses erected on a level site within 100 miles of Adelaide ranged from £3,300 upwards.

(v) *Western Australia—State Housing Commission of Western Australia.* (a) *General.* The State Housing Commission was established in January, 1947, under the *State Housing Act, 1946* to replace the Workers' Homes Board which had been created in 1912 to "erect and dispose of workers' dwellings and to make advances to people of limited means to provide homes for themselves". The *State Housing Act, 1946-1961* has as its objects "the improvement of existing housing conditions" and "the provision of adequate and suitable housing accommodation for persons of limited means and certain other persons not adequately housed". The legislation is comprehensive in scope, providing for the erection of homes for workers, the making of advances to workers for the purchase of homes, the erection of homes for letting on a weekly rental basis, the acquisition and development of land, the clearing of slums, the erection of hostels and the planning of community facilities. The Commission, consisting of seven members, builds houses for letting or sale and lends money for home building. The houses are built by private contract on land provided by the applicant or the Commission. In addition to its operations under the *State Housing Act*, the administration in Western Australia of the *Commonwealth and State Housing Agreements* and the *War Service Homes Act* is included in the functions of the Commission.

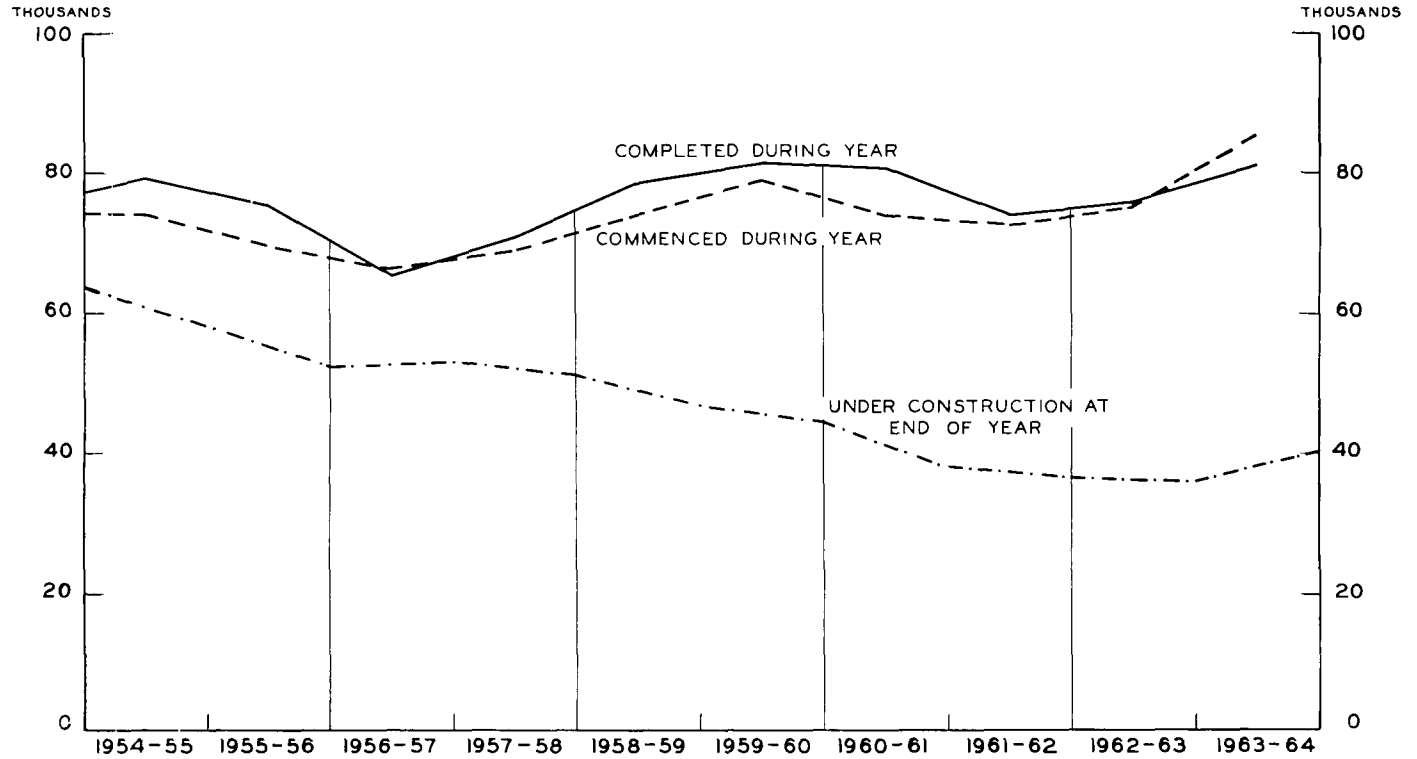
(b) *Operations.* The number of houses completed under the *State Housing Act* up to 30th June, 1964, was:—freehold—2,992; leasehold—3,086; assistance by second mortgage—1,269.

Various forms of assistance have been granted by the Commission to encourage home ownership, including schemes for arranging purchase by means of loans secured by mortgage, advances made under contract of sale, advances for securing homes under leasehold conditions, second mortgage loans and loans for the completion of partly built dwellings. Under the leasehold scheme a purchaser can convert, from perpetual Crown lease or a lease for a term of years, to freehold conditions upon having a 10 per cent. equity in the improvements and by agreeing to purchase the land at the valuation determined at the date of commencement of the lease.

The Commission also conducts certain other housing schemes and has completed, or is currently engaged in, other specific projects. Among the more important of these were the building of 653 homes at Medina and Calista between 1952-53 and 1955-56 in terms of the agreement contained in the *Oil Refinery Industry (Anglo-Iranian Oil Company Limited)*

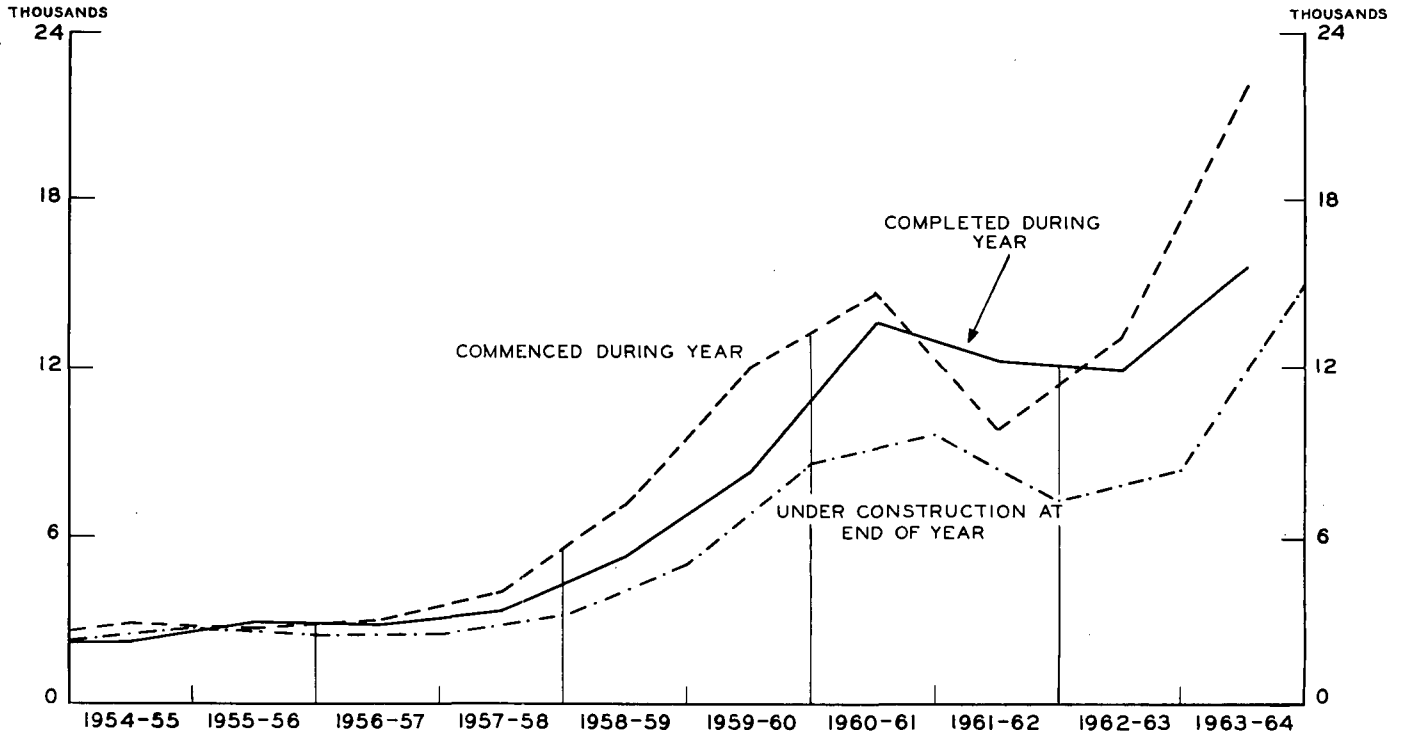
NEW HOUSES: AUSTRALIA

1954-55 TO 1963-64



NEW FLATS: AUSTRALIA

1954-55 TO 1963-64



Act, 1952; the Government Employees' Housing Scheme, which commenced in 1958-59 and, up to 30th June, 1964, had provided 107 houses in country areas for certain government employees; the construction of 100 houses to be built under the provisions of the *Laporte Industrial Factory Agreement Act, 1961*; the construction of 40 homes at Esperance to aid the development of the fertilizer industry; the building of up to 30 homes a year until 1969-70 as part of the Broken Hill Proprietary Company's Agreement with the State to establish an integrated steel industry; and the management, free of charge, of the McNess Housing Trust, a private endowment, the income from which, together with State Government allocation and Lotteries Commission donations, is used to provide homes for aged and infirm persons not able to acquire a home from their own resources. In recent years two three-storey blocks of flats have been completed and accommodate 117 elderly lady pensioners. The Commission also undertakes the construction of houses for other State Government Departments and semi-governmental authorities. To assist further religious and charitable organizations eligible under the Commonwealth Aged Persons Homes Act, full architectural services of the Commission, which include plans, specifications, arranging of contracts and the carrying out of supervision during construction, have been provided free of cost. Up to the 30th June, 1964, 327 units have been completed.

The Commission administers the Building Society legislation in Western Australia. Amendments to the Act in 1959 brought it into line with modern practices. The Commission also administers the *Housing Loan Guarantee Act, 1957-1962*, under which the Government guarantees lenders of funds to Building Societies and other approved financial organizations making advances to families interested in owning their own home on low deposits and at an interest rate not exceeding 6½ per cent. per annum reducible.

(vi) *Tasmania—The Housing Department.* (a) *General.* The Housing Department was established in July, 1953, as a separate identity, and is responsible for administering that portion of the *Homes Act 1935* which relates to the acquisition and development of land for housing purposes and the erection of homes for rental and ultimate sale, and the *Homes (Old Age Pensioners') Act 1940*. Housing Department construction utilizes both day labour and private contractors to build houses on land developed by the Department. On-site construction is supported by the Department's factory which incorporates joinery works, timber mill, plumbing and electrical workshops, material stores, and garage. Most of the dwellings constructed by the Department are three-bedroom timber dwellings. Roofing is usually corrugated iron, but some coloured asbestos cement sheeting is used. Flats for elderly persons and multi-unit flats have also been constructed.

(b) *Construction of Dwellings.* During 1963-64 555 dwellings were completed. Construction since 1944 is summarized in the following table.

Type of dwelling	One-bedroom	Two-bedroom	Three-bedroom	Total
Single unit—Timber .. .. .	..	510	6,511	7,021
Other material .. .. .	..	..	929	929
Elderly persons' flatettes	50	118	..	168
Maisonettes .. .. .	..	12	10	22
Multi-unit flats	125	157	14	296
Total Dwelling Units	175	797	7,464	8,436

(c) *Dwellings for Rental.* Flats, maisonettes and elderly persons' homes are for rental only. With regard to single unit dwellings, allottees are encouraged to acquire properties on purchase contract where this procedure is deemed to be for their benefit, and a majority take advantage of this opportunity. Some of these dwellings, however, are occupied on a rental basis. The rental of a newly erected three-bedroom timber house in the Hobart metropolitan area approximated £5 11s. in the June quarter of 1964. In certain necessitous cases rental rebates are allowed and the Department is reimbursed by the State Treasury. Rebates on rentals of elderly persons' flatettes are graduated according to the incomes of the occupiers. Under the current rental rebate formula, a married couple whose only income is the age pension pays £1 18s., while a single person solely dependent on the pension pays £1 a week.

(d) *Dwellings for Sale.* Allotments are made on a no-deposit purchase contract basis with repayments over a maximum term of 53 years, but allottees are encouraged to pay a deposit if they are in a position to do so. Purchase contracts are sometimes surrendered to

the Department. Net of surrenders, 5,206 purchase contracts had been entered into by June, 1964. The sale price, excluding land, of a new three-bedroom house in the Hobart metropolitan area was approximately £3,335 in the June quarter of 1964. Prices in the north and north-western areas were slightly lower.

The weekly repayment instalment on a purchase contract is less than the weekly rent of a similar dwelling, as the latter includes a charge for maintenance whereas a person on purchase contract is responsible for maintenance of the property.

4. 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 to officers and employees of the Commonwealth. The Northern Territory Housing Commission provides rental housing for persons of limited means who are not adequately housed and who are not officers of either the Commonwealth or the Northern Territory Public Service. The Commission was established in 1959 and operates under authority of the *Housing Ordinance 1959-1963*; to 30th June, 1964, a total of 424 houses and flats had been completed and a further 193 houses and 73 flats were under construction.

(ii) *Australian Capital Territory.* The Commonwealth Government provides houses and flats for rental to persons employed in the Australian Capital Territory. At 30th June, 1964, the Department of the Interior controlled 7,342 houses and 1,801 flats for rental purposes.

Government rental houses may be purchased by tenants. From 1st July, 1950, to 30th June, 1964, 3,766 houses had been sold to tenants.

(iii) *Papua and New Guinea.* In 1960 the Administration, through the Commissioner for Housing, commenced a scheme for providing low-cost houses for rental and eventual sale where possible to indigenes, mixed race peoples and Asians. To 30th June, 1964, 218 houses had been completed.

5. Summary of Rental Activities of Government Authorities.—(i) *Revenue from Rentals.* The following table shows the revenue from rentals for dwellings under control of Government Housing Authorities each year from 1959-60 to 1963-64.

GOVERNMENT HOUSING AUTHORITIES: REVENUE FROM RENTALS

(£'000)

Year	N.S.W.	Vic.	Q'land (a)	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
1959-60 ..	6,094	5,562	1,599	2,687	1,914	454	138	1,045	19,493
1960-61 ..	6,272	5,537	1,642	2,993	1,983	498	170	1,188	20,283
1961-62 ..	6,575	5,549	1,791	3,397	2,076	545	200	1,598	21,731
1962-63 ..	7,116	5,705	1,983	3,752	2,192	561	244	1,761	23,314
1963-64 ..	8,056	6,012	2,186	4,394	2,396	617	274	1,856	25,791

(a) Excludes rentals in respect of tenanted temporary dwellings.

(b) Excludes rentals in respect of temporary and emergency dwellings.

(ii) *Number of Tenants Paying Rent.* The following table shows the number of tenants paying rent for dwellings under control of Government Housing Authorities at the end of each year from 1959-60 to 1963-64.

GOVERNMENT HOUSING AUTHORITIES: NUMBER OF TENANTS PAYING RENT

Year	N.S.W.	Vic.	Q'land (a)	S.A. (b)	W.A.	Tas.	N.T.	A.C.T. (c)	Aust.
1959-60 ..	38,673	32,386	10,345	19,300	12,853	2,755	1,095	7,723	125,139
1960-61 ..	38,756	31,894	10,629	21,114	13,041	2,803	1,210	8,349	127,796
1961-62 ..	40,796	32,146	11,079	22,983	13,338	2,935	1,366	8,832	133,475
1962-63 ..	41,207	32,371	11,575	24,632	13,848	3,144	1,678	9,073	137,528
1963-64 ..	43,007	32,870	12,084	26,024	14,875	3,230	1,752	9,143	142,985

(a) Excludes tenanted temporary dwellings.

(b) Excludes temporary and emergency dwellings.

At 30th June, 1963, these numbered 2,549.

(c) Number of occupied dwellings at 30th June.

§ 4. Advances to Home Purchasers

Many prospective home purchasers wish to borrow for the purpose of constructing or purchasing their own homes. Usually the loan is covered by way of mortgage of the home to be constructed or bought. Such loans are provided from a number of private sources and from agencies owned or guaranteed by the State or Commonwealth Governments. The information in this section concerns the direct loans made to home purchasers by the more important institutional lenders. Loans to institutions which in turn lend moneys to home purchasers and loans to contract builders, etc., are excluded as far as possible. The loans may be for the construction of new dwellings, the purchase of existing dwellings, for additions, renovations, etc., as first or subsequent mortgages, overdrafts and so on.

While figures of all loans to home purchasers are not available, the institutions mentioned below account for a significant proportion of total loans. Details of the terms and conditions of lending are given, together with available information on the number and value of loans made.

1. *State Authorities and Agencies.*—(i) *New South Wales.* (a) *Rural Bank of New South Wales—Sale of Homes Agency.* A Sale of Homes Agency was established in 1954 within the Rural Bank's Government Agency Department to arrange for the sale on terms of houses erected by the Housing Commission of New South Wales.

The Agency's operations began with the sale to selected purchasers of 100 houses made available by the Commission during 1954–55 and 1955–56. The sales were made on the basis of 10 per cent. deposit and repayment of the balance over a maximum period of 40 years, with interest at 4½ per cent. per annum. Total advances under that scheme amounted to £323,324; at 30th June, 1964, the advances outstanding amounted to £224,568 in respect of 87 houses.

Since 1956, the Sale of Homes Agency has acted as the agent of the Housing Commission in arranging the sale on terms of houses erected under the 1956 Commonwealth-State Housing Agreement. These houses are sold, in general at the Bank's valuation, to persons who have satisfied the Commission as to their housing needs and have registered as prospective purchasers. The terms of sale provide for a minimum deposit of £50 and repayment of the balance over a maximum period of 45 years, with interest rates, since the inception of the scheme, ranging from 4½ to 5½ per cent. per annum. The cash deposits and periodical instalments payable by purchasers are collected by the Agency as agent for the Commission. Particulars of the advances made by the Agency in connexion with the sale of houses erected under the 1956 Agreement are given in the following table.

RURAL BANK OF NEW SOUTH WALES—SALE OF HOMES AGENCY: ADVANCES FOR HOMES SOLD UNDER THE 1956 COMMONWEALTH—STATE HOUSING AGREEMENT

Year	Advances during year		Advances outstanding at end of year(a)	
	Number of houses	Amount	Number of houses	Amount
		£'000		£'000
1956–57	1,604	5,079	1,604	4,976
1957–58	3,012	9,983	4,612	14,715
1958–59	2,013	6,326	6,623	20,808
1959–60	2,227	7,200	8,831	27,692
1960–61	1,565	5,218	10,364	32,487
1961–62	1,826	6,537	12,129	38,508
1962–63	1,825	6,752	13,830	44,487
1963–64	957	3,681	14,568	47,089

(a) Comprises principal outstanding and loan charges due but not paid.

(b) *Rural Bank of New South Wales—Other Loans.* The Rural Bank of New South Wales provides assistance to individuals for the erection or purchase of homes and for other approved purposes associated with homes. Advances are based on the bank's official valuation of the dwelling. The rate of interest on long-term loans for housing purposes was increased from 5 per cent. to 5½ per cent. from 1st October, 1956, and to 5¾ per cent. from 15th December, 1960. The rate of interest was reduced to 5¼ per cent. per annum from 11th April, 1963.

The following table shows particulars of Rural Bank advances for homes during the last ten years.

RURAL BANK OF NEW SOUTH WALES: ADVANCES FOR HOMES

Year	Advances during year(a)		Advances outstanding at end of year(b)	
	Number of dwellings	Amount	Number of dwellings	Amount
		£'000		£'000
1954-55	2,133	3,488	19,615	16,750
1955-56	1,399	2,757	18,778	17,419
1956-57	1,372	2,851	18,098	18,171
1957-58	1,576	3,490	17,644	19,595
1958-59	1,176	2,722	16,915	20,212
1959-60	1,610	4,026	16,611	21,967
1960-61	2,032	5,400	17,096	25,282
1961-62	1,668	5,658	17,357	28,211
1962-63	2,014	6,542	18,017	31,381
1963-64	2,434	7,574	18,972	34,395

(a) The number of advances during a year represents the number of dwellings in respect of which an advance was first made in the year, but the amount of advances includes subsequent advances made in respect of the dwellings. (b) The number of advances outstanding at the end of a year represents the number of dwellings on which a debt was still outstanding. The amounts shown comprise principal outstanding and loan charges due but not paid.

(ii) *Victoria. (a) Housing Commission, Victoria.* Very few houses were sold by the Commission until 1954. The amendments to the Commonwealth-State Housing Agreement in 1955-56 have had the effect of substantially increasing the number of houses sold. Whereas between 1949 and 1954 only about 100 houses were sold, a total of 18,469 houses were sold on terms to 30th June, 1964, the total value of terms sales exceeding £67 million.

Houses are sold on a minimum deposit of £100, with a maximum repayment term of 45 years, and interest at 4½ per cent.

An inducement to tenants of the Commission to purchase their homes was the introduction of a Death Benefit Scheme, to provide for the property under purchase to pass to the estate of the purchaser free of debt in the event of his death prior to completion of purchase. If application is made for admittance to the Death Benefit Scheme, the maximum period for repayment is reduced to 30 years, the rate of interest is fixed at 5¼ per cent. and the contract must terminate before the purchaser's 70th birthday.

(b) *Home Finance Trust.* 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 houses as homes for themselves, their families and dependants. Except in special circumstances, no loan will be granted if the borrower or spouse already owns a house in Victoria at the date of the proposed mortgage.

Loans granted are on the basis of a first mortgage over the house. Loans are not to exceed 95 per cent. of the value of the security (house and land) and are not made if the value of the security exceeds £5,000. 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, 1964, 2,719 loans totalling £8,000,073 had been approved.

In 1963 the Trust was empowered to make housing loans on the security of second mortgages subject to conditions similar to those applying with respect to the first mortgage loans, excepting that the maximum term for repayment of a loan is ten years and no restriction is placed on the percentage of loan to valuation.

At 30th June, 1964, 709 second mortgage loans had been approved, the amount involved being £305,555.

The Trust was also empowered to make a loan to the trustees of a fund established to provide a home for a doctor or a dentist at a place located more than thirty miles from the City of Melbourne. There is no valuation limit or age limit of the dwelling in cases of this nature.

(See para. 3, Savings Banks, pp. 386-7, for activities of the Crédit Foncier Department of the State Savings Bank of Victoria.)

(iii) *Queensland.* (a) *The Queensland Housing Commission.* The present maximum advance allowable under the Acts is £3,500 for a timber, brick veneer, brick, or concrete building. Since 1st August, 1963, two rates of interest have applied, namely $5\frac{1}{2}$ per cent. per annum on advances existing at that time, and $4\frac{1}{2}$ per cent. on new advances. 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 to 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.

(b) *Workers' Dwellings.* From 4th October, 1962, the maximum advance under this scheme was increased to £3,500 for all types of workers' dwellings. Total advances made for dwellings since operations commenced in 1910 to 30th June, 1964, amounted to £28,669,844.

(iv) *South Australia.* (a) *The South Australian Housing Trust Sales Scheme.* A minimum deposit of £50 is required for houses under the Rental-Purchase Scheme for a maximum loan of £4,200, repayable at an interest rate of $4\frac{1}{2}$ per cent. per annum over a period not exceeding 40 years.

Prospective purchasers of Housing Trust houses (other than rental-purchase houses) can arrange or have arrangements made for a first mortgage to be granted by a lending institution of their choice. In cases where the deposit and the first mortgage so raised are insufficient, the Trust may advance the balance of the house price by way of a second mortgage, the repayment term of which is a maximum of 30 years, interest being at the rate of 6 per cent. per annum.

During 1963-64 the Trust commenced 811 second mortgages valued at £384,200. At 30th June, 1964, second mortgages totalled 7,073, and the balance outstanding at that date was £3,819,000.

(b) *State Bank of South Australia.* The State Bank, together with the Housing Trust, is the principal agent of the State Government for the distribution through the Home Builders' Fund of moneys received under the Commonwealth-State Housing Agreement.

During 1963-64 the Bank opened 1,680 new accounts worth £5,184,253 in the Home Builder's Fund. The balance of loans outstanding at 30th June, 1964, in this Fund totalled £17,741,822.

In addition, £274,584 was made available during 1963-64 by the State Government under the Advances for Homes Act, 1928-1958 which is administered by the Bank. Under this Act, 97 new accounts were opened during 1963-64, leaving a balance outstanding at 30th June, 1964, of £14,406,460.

The present maximum housing loan under either of these schemes is £3,500, repayable over a period not exceeding 50 years at a rate of interest of $5\frac{1}{2}$ to $5\frac{3}{4}$ per cent. per annum calculated on monthly balances. Persons who have received benefit under either of these schemes are ineligible for another mortgage.

(v) *Western Australia. State Housing Commission of Western Australia.* Under the State Housing Act and the Commonwealth/State Housing Agreement, the maximum loan is £3,000 by way of mortgage, while under contract of sale the maximum is £2,900 on the building plus the value of the land in the Metropolitan Area, and greater amounts in rural areas, depending on the circumstances. For houses built north of the 26th parallel the Minister may approve of a larger advance.

To proceed under the mortgage conditions, a deposit of not less than 10 per cent. is required, but under contract of sale the deposit may be as low as £100, and less when circumstances warrant. The interest rate on all advances is $5\frac{1}{2}$ per cent. per annum and the repayment period is 45 years. The income eligibility figure varies according to the movement of the basic wage, and as at the last basic wage adjustment on 26th October, 1964, an applicant in the Metropolitan Area cannot have an income exceeding £1,261 a year, plus £25 for each dependent child under 16 years of age. For the country the corresponding amount is £1,518 per annum plus £25 for each dependent child under 16 years, and north of the 26th parallel the Minister may allow families with an income of up to £2,000 to be given financial assistance.

A second-mortgage scheme exists under the State Housing Act which provides that assistance be limited to those applicants who are building or purchasing new homes, the cost of which, excluding land, does not exceed £3,500. The Commission limits the second mortgage to a maximum of £1,000.

(See para. 3, Savings Banks, p. 387, for activities of the Savings Bank Division of the Rural and Industries Bank of Western Australia.)

(vi) *Tasmania. (a) The Housing Department.* Amounts outstanding in respect of loans made by the Housing Department by way of purchase contracts were as follows for the years 1959-60 to 1963-64.

TASMANIAN HOUSING DEPARTMENT: PURCHASE CONTRACTS

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Number of loans outstanding	3,471	3,835	4,156	4,427	4,834
Amount outstanding £'000	10,112	11,317	12,601	13,612	15,110

The interest rate on contracts signed after February, 1962, was 4 per cent., immediately prior to which the rate was $4\frac{1}{2}$ per cent. To be eligible for a house on purchase contract terms, an applicant must be married or about to be married, or have dependants for whom it is necessary to provide a home. Number of dependants, income and existing accommodation are considered in determining applicants' priority.

(b) *Agricultural Bank of Tasmania.* The Agricultural Bank, as an approved institution under the Commonwealth-State Housing Agreement, receives part of those funds allocated for advances to home builders. Prior to the commencement of the agreement, the Bank borrowed from the State Loan Fund and from private institutions. To be eligible for a loan, an applicant must be married or about to be married and be over the age of 21, and when, as is usual, the advance is required to build a house, the applicant must own a block of land. The maximum amount of an advance to an applicant is £3,300 for brick or concrete block type houses in certain areas, or £3,000 for a timber dwelling, provided that the total advance does not exceed 90 per cent. of the Bank's valuation of land and dwelling. Advances to borrowers are repayable by equated instalments over 31 years. Advances made as from 1st February, 1962, were at an interest rate of $5\frac{1}{2}$ per cent., immediately prior to which the rate was $5\frac{1}{4}$ per cent. The following table shows details for recent years.

TASMANIAN AGRICULTURAL BANK: ADVANCES FOR HOUSING(a)

Particulars	1960-61	1961-62	1962-63	1963-64
Advances approved—				
Number	115	239	157	302
Value £'000	362	730	486	1,045
Advances outstanding(b) £'000	4,195	4,512	4,996	5,622

(a) Excludes advances to Building Societies.

(b) At 30th June.

Since November, 1945, a total of 2,659 loans amounting to £7,403,000 have been approved, of which 2,378 have been for erection of dwellings and 281 for the purchase of existing homes.

2. Commonwealth Authorities and Agencies.—(i) *Department of Housing.* In December, 1963, the Department of Housing was created and to it was transferred the functions and staff of the War Service Homes Division and the Housing and Building Industry Branch of the Department of National Development. Further details relating to the Department of Housing may be found on page 83 of Year Book No. 50.

(ii) *War Service Homes.* The maximum amount of loan or advance which may be granted under the *War Service Homes Act 1918-1962* is £3,500. The period of repayment may be 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 following table gives details of advances by the War Service Homes Division in each State and Territory of Australia, and the Territories of Papua, New Guinea and Norfolk Island, for the years 1954-55 to 1963-64. (See tables on pp. 371-2 for the number of homes provided.)

WAR SERVICE HOMES DIVISION: ADVANCES FOR HOUSING

Period	N.S.W. (a)	Vic.	Q'land (b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
TOTAL CAPITAL ADVANCED DURING YEAR (£'000)									
1954-55 ..	10,367	9,197	3,569	2,091	3,819	783	22	238	30,086
1955-56 ..	11,815	8,859	2,708	2,125	3,572	753	15	220	30,067
1956-57 ..	11,298	9,680	2,321	2,396	3,545	684	6	241	30,171
1957-58 ..	14,013	11,090	2,298	2,898	3,891	801	16	175	35,182
1958-59 ..	15,513	10,874	2,715	2,425	2,584	890	15	143	35,159
1959-60 ..	14,957	10,977	2,987	2,342	2,888	728	18	171	35,068
1960-61 ..	16,165	9,020	3,211	2,396	3,490	612	22	126	35,042
1961-62 ..	13,157	10,263	4,461	2,658	3,500	700	16	270	35,025
1962-63 ..	13,600	10,500	4,950	3,235	3,980	775	15	455	37,510
1963-64 ..	13,251	10,650	4,050	2,539	3,385	792	11	330	35,008

NUMBER OF SECURITIES IN FORCE

At end of June—									
1955 ..	21,868	29,618	16,103	11,860	10,453	2,317	27	326	92,572
1956 ..	25,455	31,408	16,747	11,968	11,108	2,476	31	395	99,588
1957 ..	29,312	34,461	17,332	12,527	12,634	2,703	30	457	109,456
1958 ..	34,081	37,446	17,835	13,119	13,442	2,932	32	512	119,399
1959 ..	38,512	40,181	18,369	13,522	14,090	3,116	34	548	128,372
1960 ..	43,029	42,913	18,876	13,897	14,856	3,259	41	603	137,474
1961 ..	47,713	45,275	19,572	14,371	15,886	3,364	49	640	146,870
1962 ..	51,445	47,827	20,712	14,947	16,806	3,538	53	710	156,038
1963 ..	54,409	49,740	21,644	15,481	17,551	3,676	55	817	163,373
1964 ..	56,619	51,188	22,237	15,718	18,005	3,827	57	872	168,523

VALUE OF ADVANCES OUTSTANDING (£'000)

At end of June—									
1955 ..	32,813	48,349	25,437	18,509	16,989	3,661	(c)	(d)	145,758
1956 ..	44,708	55,277	27,482	20,143	20,902	4,259	(c)	(d)	172,771
1957 ..	55,870	63,416	28,885	21,912	23,503	4,810	(c)	(d)	198,396
1958 ..	68,169	72,692	30,206	24,179	27,292	5,391	(c)	(d)	227,929
1959 ..	83,019	81,239	31,943	25,824	29,504	6,130	(c)	(d)	257,659
1960 ..	96,293	89,380	33,692	27,234	31,643	6,623	(c)	(d)	284,865
1961 ..	109,575	95,312	35,719	28,753	34,367	7,018	(c)	(d)	310,744
1962 ..	119,851	102,645	39,073	30,510	36,997	7,447	(c)	(d)	336,523
1963 ..	130,118	109,831	42,662	32,735	39,730	7,979	(c)	(d)	363,053
1964 ..	139,428	116,824	45,163	33,950	41,682	8,488	(c)	(d)	385,535

(a) Includes Norfolk Island. (b) Includes Territory of Papua and New Guinea.
 (c) Included in South Australia. (d) Included in New South Wales.

(iii) *Northern Territory. (a) Loans Scheme.* This Scheme was commenced in 1953 and is administered by the Commissioner for Housing under the *Housing Loans Ordinance 1949-1959*. Advances may be made for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. Loans are provided on a deposit of 5 per cent. of the first £2,000 and 10 per cent. of the balance of the Commissioner's valuation up to a maximum of £3,500. The rate of interest charged is 6 per cent. per annum reducible to 5 per cent. per annum if instalment payments are made by the due date. The maximum period of repayment is 45 years.

Up to 30th June, 1964, 994 loans totalling £2,715,545 had been approved. These were for:—erection, 683; purchase, 240; enlargement or completion, 22; discharge of mortgage 49.

(b) *Sales Scheme.* Tenants of government-owned houses under the control of the Administration may purchase the dwellings they occupy, either for cash or on terms requiring a minimum deposit of 5 per cent. of the first £2,000 and 10 per cent. of the balance of the purchase price with repayments over a maximum period of 45 years including interest at 4½ per cent. per annum.

(c) *Housing Commission Sales Scheme.* Since the amendment of the *Housing Ordinance 1959-1963* in November, 1963, the Housing Commission is permitted to sell its houses to tenants in occupation. The terms require a minimum cash deposit of £100 and repayment of the remainder of the loan over a period not exceeding 45 years; there is no prescribed limit to the amount of the loan and the rate of interest is to be fixed by the Commission from time to time.

(iv) *Australian Capital Territory.* Loans may be granted by the Commissioner for Housing to enable persons to purchase or build a new house in the Australian Capital Territory. Where the Commissioner's valuation 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 £3,500). Repayment may be made over a maximum period of 45 years. The current rate of interest is 4½ per cent. per annum. From 1st July, 1950, to 30th June, 1964, 2,515 loans were granted. At 30th June, 1964, 2,211 houses were under mortgage to the Commissioner.

Government rental houses may be purchased by tenants. The basis of the sale is a minimum deposit of 5 per cent. of the purchase price fixed by the Department of the Interior with no limit to the amount which may be held on mortgage from the Department. Repayment of the amount covered by mortgage may be made over a maximum period of 45 years. The interest rate is 4½ per cent. per annum. From 1st July, 1950 to 30th June, 1964, 3,766 houses had been sold to tenants.

(v) *Papua and New Guinea.* Under authority of the *Housing Loans Ordinance 1953-1963* the Commissioner for Housing may make advances to any member of the community for the erection of a house, the purchase or enlargement of an existing house, the completion of a partially erected dwelling, or the discharge of a mortgage already existing. The maximum loan is £3,500. The maximum period of repayment is 35 years for brick, stone or concrete and 25 years for all other materials. Minimum cash deposit is 5 per cent. of the first £2,000 plus 10 per cent. of the remainder of the Commissioner's valuation. The effective rate of interest is 4½ per cent. per annum. Up to 30th June, 1964, 255 loans totalling £621,340 had been approved.

3. *Savings Banks.*—All savings banks lend funds for housing to both individuals and to building societies. Separate figures of loans to individuals are not available for all savings banks. The amounts outstanding on housing loans of all savings banks (including loans to building societies) were £339 million, £397 million and £499 million at the end of June, 1962, 1963 and 1964, respectively.

Some details in respect of three savings banks are shown below.

(i) *State Savings Bank of Victoria—Crédit Foncier Department.* The State Savings Bank of Victoria grants long-term loans to depositors to enable them to build, purchase or improve homes and to purchase or improve farms. Most, but not all, of the loans are made by the Crédit Foncier Department of the Bank.

In order to encourage new building, home loans are granted only on houses up to one year old. The maximum proportion of the valuation to be granted as loan is 80 per cent. and the maximum loan is £3,500. Interest is 4½ per cent. and the term of the loan is 10 years, subject to renewal.

During 1963-64 the Cr dit Foncier Department advanced £16,152,732 to 6,947 borrowers and at the end of that year £84,735,822 was owing by 42,690 borrowers.

(ii) *Savings Bank of South Australia.* The Bank grants mortgage loans for the building or purchase of houses for personal occupation. The maximum loans available on houses of solid construction are £3,750 for new homes and £4,500 for previously occupied homes. Normally advances are made up to 85 per cent. of the Bank's valuation but, if the loan is granted under the Homes Act, 1941-1962, 95 per cent. of such valuation may be advanced (maximum loan—£3,000). The maximum loan period is 30 years at a rate of interest of 5½ per cent. per annum; this rate is subject to review after 5 years.

During 1963-64 the Bank advanced £7,380,000 by way of housing loans, the number of new loans totalling 2,433. At 30th June, 1964, there were 20,556 loans current with a balance outstanding of £40,512,000.

(iii) *The Rural and Industries Bank of Western Australia (Savings Bank Division).* The Rural and Industries Bank of Western Australia is authorized by the *Rural and Industries Bank Act, 1944-1958* to make loans from moneys in deposit with its Savings Bank Division to a person or body for the purchase or erection of a dwelling. It is the policy of the Bank to provide funds for housing primarily for occupancy by the borrower. There is no fixed limit on the amount of a loan. The average loan in the case of a brick or timber house is between £3,000 and £3,500. The rate of interest varies with the current bank rate and is usually ½ per cent. lower. The rate at 30th June, 1964, was 5½ per cent. The average term of housing loans is 22 years.

4. **Trading Banks.**—Apart from loans by certain State banks as Government agencies (see paras. 1 and 3, pp. 381-4 and 386-7), advances for housing to individuals are also provided by the trading banks.

Amounts outstanding in respect of advances to individuals for housing purposes made by the major trading banks were £95 million, £101 million and £105 million at the second Wednesday of July, 1962, 1963 and 1964, respectively.

5. **Life Insurance Companies.**—The life insurance companies are another source of funds for housing. Details of new loans made during 1963 and 1964 (particulars for earlier years are not available) are given in the following table.

LIFE INSURANCE COMPANIES: HOUSING LOANS PAID OVER DURING 1963 AND 1964

State or Territory	Amount (£'000)	
	1963	1964
New South Wales	10,286	10,541
Victoria	6,576	8,088
Queensland(a)	1,715	2,240
South Australia(b)	1,684	1,872
Western Australia	1,131	1,482
Tasmania	709	773
Australian Capital Territory	170	297
Total	22,271	25,293

(a) Includes loans made in Papua and New Guinea. (b) Includes loans made in Northern Territory.

Amounts outstanding at the end of June, 1963 and 1964, in respect of housing loans made by insurance companies were £158 million and £162 million respectively.

6. **Registered Building Societies.**—Including the Victorian Co-operative Housing Societies, there are 2,838 registered building societies in Australia, of which 115 are permanent societies and the remainder terminating societies. The permanent societies are in the main investment societies which make loans for housing purposes, usually on *crédit foncier* terms, and obtain their funds from share capital deposits and borrowings from banks and other lending institutions. The terminating societies are co-operative societies which make loans to members from funds obtained from lending institutions (usually government guaranteed), members' subscriptions, and, since 1956, from moneys provided under the Commonwealth-State Housing Agreements.

Details of new loans granted and net advances outstanding for each of the years ended June, 1959 to 1963, are given in the following table, which now includes particulars of Victorian Co-operative Housing Societies.

REGISTERED BUILDING SOCIETIES

Year	N.S.W.	Victoria		Q'land	S. Aust.	W. Aust.	Tas.	Total
		Co-operative housing societies (a)	Other building societies (b)					

LOANS GRANTED DURING YEAR (£'000)

1958-59 ..	21,038	(c)	3,884	3,320	932	2,234	1,146	(d)32,554
1959-60 ..	20,560	(c)	4,689	4,889	1,157	2,710	1,357	(d)35,362
1960-61 ..	23,702	(c)	4,637	5,418	1,212	2,863	1,310	(d)39,142
1961-62 ..	24,369	10,587	3,841	6,323	1,123	3,173	1,494	50,910
1962-63 ..	26,723	10,401	4,520	6,582	1,417	4,452	2,024	56,119

NET ADVANCES OUTSTANDING(e) AT END OF YEAR (£'000)

1958-59 ..	117,341	48,915	17,185	10,814	3,624	6,923	4,176	208,978
1959-60 ..	124,396	55,416	19,256	13,493	4,326	8,601	4,806	230,294
1960-61 ..	134,890	62,143	20,569	16,744	4,997	10,253	5,318	254,914
1961-62 ..	146,449	66,423	21,157	20,636	5,557	12,579	6,105	278,906
1962-63 ..	158,611	72,730	22,003	24,388	6,266	15,620	7,233	306,851

(a) Year ended 30th April. (b) Year ended 31st December. (c) Not available.
(d) Excludes Victorian co-operative housing societies. (e) Net of borrowing members' funds.

7. **Other Lenders.**—Little information is available on advances made by other lenders such as superannuation and other trust funds, private finance and investment companies, etc. In South Australia, advances on first mortgage made by the South Australian Superannuation Fund are granted under the Homes Act, 1941-1962, by which the State Government guarantees up to 25 per cent. of the value of the mortgage, thus raising the limit of the advance. Loans so made are limited to 95 per cent. of the Superannuation Board's valuation to a maximum of £3,000, or 85 per cent. of the Board's valuation to a maximum of £3,500. The rate of interest is 5½ per cent. per annum, calculated on quarterly balances, reducing to 5¼ per cent. when payments are made within a prescribed period of 21 days from the end of the quarter. The term of the mortgage may run for 30 years on a stone or brick home or 20 years on a timber-framed construction. Trustee mortgages may be granted as an alternative to the foregoing. A maximum of 70 per cent. of the Board's valuation may be granted for a trustee mortgage, other conditions being those applicable to mortgages granted under the Homes Act.

At 30th June, 1964, there were 5,005 loans current, the principal outstanding totalling £8,784,084. During 1963-64 the value of advances made was £1,468,468.

CHAPTER XII

EMPLOYMENT AND UNEMPLOYMENT

NOTE.—Further detail on subjects dealt with in this chapter is contained in other publications of this Bureau. For subjects relating to population censuses reference should be made to the series of mimeographed and printed publications listed in Chapter XXX. Miscellaneous of this Year Book. Detailed information on employment and unemployment and the Work Force Survey is contained in the monthly mimeographed bulletin *Employment and Unemployment*. Current information is also available in the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Quarterly Summary of Australian Statistics*, and preliminary estimates of civilian employment are issued in a monthly statement *Wage and Salary Earners in Civilian Employment*.

THE WORK FORCE

§ 1. General

The work force comprises two categories of persons: those who are employed and those who are unemployed. In the first category are included employers, self-employed persons, wage and salary earners, and unpaid helpers. Comprehensive details for each State and Territory and for Australia as a whole in respect of persons in the work force, classified according to characteristics such as age, sex, conjugal condition, industry, occupational status and occupation, are obtained only at a general census of population. Quarterly estimates of the civilian work force are derived from the results of surveys of a sample of households selected by area sampling methods. Estimates are at present available only for the six State capital cities combined. A summary of the information about the work force that was obtained at the population census of June, 1961, and earlier censuses is given in § 2. Estimates derived from the quarterly work force surveys appear in § 3.

§ 2. Population Censuses*

1. **Occupational Status.**—(i) *General.* Occupational status of persons classified as in the work force at population census dates covers two broad groups: those at work and those not at work. The first group comprises employers, self-employed persons, employees (on wage or salary) and unpaid helpers. The category "not at work" includes 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. It also includes 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. The numbers shown as "not at work" in the following two tables, therefore, do not represent the number of unemployed available for work and unable to obtain it.

(ii) *Australia, 30th June, 1954 and 1961.* The following table shows the occupational status of the population at the census of 30th June, 1961, as compared with that at the 1954 census.

At the 1961 census, 79.3 per cent. of persons in the work force were wage and salary earners classified as "at work"; 9.8 per cent. were self-employed; 6.3 per cent. were employers; and 4.1 per cent. were "not at work". Persons in the work force constituted 40.2 per cent. of the population, compared with 41.2 per cent. in 1954.

* Particulars of full-blood Aborigines are not included in the tables in this section.

OCCUPATIONAL STATUS OF THE POPULATION: AUSTRALIA

Occupational status	Census, 30th June, 1954			Census, 30th June, 1961			Increase 1954-61
	Males	Females	Persons	Males	Females	Persons	
In work force—							
At work—							
Employer	220,878	30,104	250,982	224,369	42,712	267,081	16,099
Self-employed	359,617	51,583	411,200	350,111	62,704	412,815	1,615
Employee(a)	2,216,681	739,802	2,956,483	2,449,132	901,902	3,351,034	394,551
Helper(b)	18,430	9,913	28,343	13,689	7,871	21,560	-6,783
Total at Work	2,815,606	831,402	3,647,008	3,037,301	1,015,189	4,052,490	405,482
Not at work(c)	41,014	14,000	55,014	128,626	43,980	172,606	117,592
Total in Work Force	2,856,620	845,402	3,702,022	3,165,927	1,059,169	4,225,096	523,074
Not in work force	1,689,498	3,595,010	5,284,508	2,146,325	4,136,765	6,283,090	998,582
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

(a) On wage or salary. (b) Not on wage or salary. (c) See explanation in sub-para. (i) p. 389.

NOTE.—Minus sign (—) denotes decrease.

(iii) *States and Territories, 30th June, 1961.* The following table shows particulars of the occupational status of the population of each State and Territory at the 1961 census.

OCCUPATIONAL STATUS OF THE POPULATION: CENSUS, 30th JUNE, 1961

Occupational status	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Australia
In work force—									
At work—									
Employer ..	95,651	73,103	43,469	24,213	20,521	8,221	897	1,006	267,081
Self-employed ..	138,571	120,867	67,806	40,978	29,784	13,191	723	895	412,815
Employee(a)	1,298,143	958,258	438,947	298,688	217,692	104,717	12,144	22,445	3,351,034
Helper(b) ..	6,452	5,923	4,833	1,952	1,624	699	55	22	21,560
Total at Work	1,538,817	1,158,151	555,055	365,831	269,621	126,828	13,819	24,368	4,052,490
Not at work(c)	63,699	51,912	29,941	11,730	10,163	4,090	424	647	172,606
Total in Work Force ..	1,602,516	1,210,063	584,996	377,561	279,784	130,918	14,243	25,015	4,225,096
Not in work force ..	2,314,497	1,720,050	933,832	591,779	456,845	219,422	12,852	33,813	6,283,090
Grand Total	3,917,013	2,930,113	1,518,828	969,340	736,629	350,340	27,095	58,828	10,508,186

(a) On wage or salary. (b) Not on wage or salary. (c) See explanation in sub-para. (i) p. 389.

(iv) *Persons Not at Work, classified by Cause.* The total number of persons "not at work" has been recorded only at the dates of the various censuses. Since the 1947 census, this category has included 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. The following table shows the numbers recorded as "not at work" at the censuses of 30th June, 1947, 1954 and 1961, classified according to cause. As explained in sub-para. (i), p. 389, the totals shown as "not at work" do not represent the number of unemployed available for work and unable to obtain it.

PERSONS NOT AT WORK^(a), BY CAUSE: AUSTRALIA

Census	Unable to secure employment	Temporarily laid off	Illness	Accident	Industrial dispute	Other (b)	Total
MALES							
1947 ..	17,314	12,458	14,639	2,985	475	18,743	66,614
1954 ..	9,912	4,423	11,879	2,804	344	11,652	41,014
1961 ..	85,455	12,153	13,931	6,262	547	10,278	128,626
FEMALES							
1947 ..	2,254	2,449	4,396	280	24	7,512	16,915
1954 ..	3,685	1,386	4,310	318	17	4,284	14,000
1961 ..	28,056	4,012	5,925	787	202	4,998	43,980
PERSONS							
1947 ..	19,568	14,907	19,035	3,265	499	26,255	83,529
1954 ..	13,597	5,809	16,189	3,122	361	15,936	55,014
1961 ..	113,511	16,165	19,856	7,049	749	15,276	172,606

(a) Persons in the work force who were "not at work" (see explanation p. 389) at the time of the census.

(b) The majority of these persons were resting between jobs or changing jobs.

2. Industry.—(i) *General.* For census purposes, industry may be defined as any single branch of productive activity, trade or service. All persons engaged in any such branch of economic activity are classified industrially as belonging to that particular branch, irrespective of their personal occupations within the industry. Thus a single firm may employ persons performing completely different occupations in order to make a particular product, or to render a particular service, but the industrial classification of each of these persons is determined by the nature of the product made or of the service rendered by the firm that employs him.

(ii) *Australia, 30th June, 1954 and 1961.* The following table shows the number of persons in the work force in each industry group and sub-group at the censuses of 1954 and 1961. The figures include those at work and those not at work.

At the 1961 census, 60 per cent. of males and 20 per cent. of females were in the work force. Of the males in the work force, those engaged in manufacturing constituted the largest group (28.0 per cent. of the total); followed by those in commerce, 14.3 per cent.; primary production, 13.3 per cent.; building and construction, 11.5 per cent.; and transport and storage, 7.9 per cent. The more important industry groups in which females were engaged were manufacturing, 23.9 per cent.; commerce, 22.2 per cent.; community and business services, 21.5 per cent.; and amusement, hotels, personal service, etc., 12.8 per cent.

INDUSTRY OF THE POPULATION: AUSTRALIA

Industry group and sub-group	Census, 30th June, 1954			Census, 30th June, 1961			Increase or decrease (-) 1954-61
	Males	Females	Persons	Males	Females	Persons	
Primary production—							
Fishing	8,451	115	8,566	8,124	128	8,252	-314
Hunting and trapping	1,552	11	1,563	1,361	14	1,375	-188
Rural industries	435,933	31,890	467,823	396,519	38,892	435,411	-32,412
Forestry	15,279	67	15,346	13,725	122	13,847	-1,499
Total, Primary Production ..	461,215	32,083	493,298	419,729	39,156	458,885	-34,413
Mining and quarrying—							
Mining (including open-cut mining)	55,327	909	56,236	46,220	1,174	47,394	-8,842
Quarrying	4,983	152	5,135	6,721	286	7,007	1,872
Total, Mining and Quarrying	60,310	1,061	61,371	52,941	1,460	54,401	-6,970
Manufacturing—							
Cement, bricks, glass and stone ..	40,012	3,104	43,116	44,455	3,856	48,311	5,195
Products of petroleum and coal (excluding chemical and gas works)	3,234	190	3,424	6,239	430	6,669	3,245
Founding, engineering and metal-working	229,431	32,305	261,736	286,093	45,756	331,849	70,113
Ships, vehicles, parts and accessories	132,653	6,463	139,116	132,435	8,345	140,780	1,664
Yarns, textiles and articles thereof (excluding clothing and furnishing drapery)	29,620	26,243	55,863	29,009	24,501	53,510	-2,353
Clothing and knitted goods (including needleworking)	23,144	73,367	96,511	20,285	69,382	89,667	-6,844
Boots, shoes and accessories (other than rubber)	17,123	10,228	27,351	15,252	10,011	25,263	-2,088
Food, drink and tobacco	117,088	27,927	145,015	121,983	31,911	153,894	8,879
Sawmilling and wood products (other than furniture)	53,252	2,136	55,388	49,759	2,452	52,211	-3,177
Furniture and fittings (other than metal), bedding and furnishing drapery	23,646	2,515	26,161	22,923	3,394	26,317	156
Paper and paper products, printing, bookbinding and photography	53,953	18,770	72,723	67,443	22,994	90,437	17,714
Chemicals, dyes, explosives, paints and non-mineral oils	31,046	9,423	40,469	38,571	11,955	50,526	10,057
Jewellery, watchmaking, electroplating and minting	6,491	1,275	7,766	6,098	1,163	7,261	-505
Skins and leather; goods of leather and leather substitutes (other than clothing or footwear)	9,044	2,903	11,947	6,931	2,632	9,563	-2,384
Rubber goods	14,912	3,354	18,266	18,076	3,828	21,904	3,638
Musical, surgical and scientific instruments and apparatus	4,301	1,291	5,592	5,894	2,414	8,308	2,716
Plastic products (n.e.i.)	4,211	1,842	6,053	7,072	3,443	10,515	4,462
Other	5,710	2,893	8,603	5,752	2,894	8,646	43
Undefined	1,397	834	2,231	2,857	1,847	4,704	2,473
Total, Manufacturing	800,268	227,063	1,027,331	887,127	253,208	1,140,335	113,004
Electricity, gas, water and sanitary services (production, supply and maintenance)—							
Gas and electricity	50,998	3,440	54,438	60,858	4,538	65,396	10,958
Water supply, sewerage, etc.	18,556	656	19,212	27,809	1,106	28,915	9,703
Total, Electricity, etc., Services	69,554	4,096	73,650	88,667	5,644	94,311	20,661
Building and construction—							
Construction and repair of buildings	196,205	2,452	198,657	229,280	5,237	234,517	35,860
Construction works (other than buildings)	125,624	1,341	126,965	135,812	2,002	137,814	10,849
Total, Building and Construction	321,829	3,793	325,622	365,092	7,239	372,331	46,709
Transport and storage—							
Road transport	91,515	4,349	95,864	104,948	7,166	112,114	16,250
Shipping	27,955	1,971	29,926	27,538	2,318	29,856	-70
Loading and discharging vessels	27,950	209	28,159	25,892	279	26,171	-1,988
Rail and air transport	91,691	8,031	99,722	91,166	8,349	99,515	-207
Storage	1,475	139	1,614	1,689	155	1,844	230
Total, Transport and Storage	240,586	14,699	255,285	251,233	18,267	269,500	14,215

INDUSTRY OF THE POPULATION: AUSTRALIA—*continued*

Industry group and sub-group	Census, 30th June, 1954			Census, 30th June, 1961			Increase or decrease (—) 1954-61
	Males	Females	Persons	Males	Females	Persons	
Communication	63,802	16,748	80,550	75,294	18,522	93,816	13,266
Finance and property—							
Banking	30,746	12,159	42,905	38,564	20,600	59,164	16,259
Insurance	18,078	13,066	31,144	25,422	19,807	45,229	14,085
Other finance and property	12,664	7,500	20,164	22,288	14,464	36,752	16,588
Total, Finance and Property	61,488	32,725	94,213	86,274	54,871	141,145	46,932
Commerce—							
Wholesale trade	123,107	34,594	157,701	146,362	42,614	188,976	31,275
Livestock and primary produce dealing, etc.	25,701	5,387	31,088	29,121	6,449	35,570	4,482
Retail trade	238,660	149,932	388,592	276,234	185,986	462,220	73,628
Total, Commerce	387,468	189,913	577,381	451,717	235,049	686,766	109,385
Public authority (n.e.i.) and defence services—							
Public authority activities (n.e.i.)	72,070	25,568	97,638	84,232	29,986	114,218	16,580
Defence: enlisted personnel	44,798	1,888	46,686	42,226	1,780	44,006	—2,680
Defence: civilian employees	9,972	2,215	12,187	9,361	2,168	11,529	—658
Total, Public Authority (n.e.i.), etc.	126,840	29,671	156,511	135,819	33,934	169,753	13,242
Community and business services (including professional)—							
Law, order and public safety	25,974	8,209	34,183	33,124	12,235	45,359	11,176
Religion and social welfare	12,830	9,821	22,651	15,033	12,610	27,643	4,992
Health, hospitals, etc.	35,504	75,888	111,392	43,047	106,522	149,569	38,177
Education	39,672	51,851	91,523	58,357	76,096	134,453	42,930
Other	22,532	12,556	35,088	32,665	20,444	53,109	18,021
Total, Community and Business Services	136,512	158,325	294,837	182,226	227,907	410,133	115,296
Amusement, hotels and other accommodation, cafés, personal service, etc.—							
Amusement, sport and recreation	27,525	9,697	37,222	31,309	10,851	42,160	4,938
Private domestic service	6,703	30,763	37,466	5,773	26,919	32,692	—4,774
Hotels, boarding houses, etc., and restaurants	43,525	65,087	108,612	50,824	70,561	121,385	12,773
Other personal services	21,250	19,939	41,189	24,622	27,277	51,899	10,710
Total, Amusement, Hotels, etc.	99,003	125,486	224,489	112,528	135,608	248,136	23,647
Other industries	34	22	56	69	75	144	88
Industry inadequately described or not stated	27,711	9,717	37,428	57,211	28,229	85,440	48,012
Total in Work Force	2,856,620	845,402	3,702,022	3,165,927	1,059,169	4,225,096	523,074
Not in work force	1,689,498	3,595,010	5,284,508	2,146,325	4,136,765	6,283,090	998,582
Grand Total	4,546,118	4,440,412	8,986,530	5,312,252	5,195,934	10,508,186	1,521,656

Details of individual industries within the foregoing sub-groups, by sex, are published for each State and Territory and for Australia as a whole in the mimeographed 1961 *Census Bulletin* No. 29 and in the respective parts of the Census Volumes.

3. *Industry and Occupational Status.*—Males and females in the work force at the 1961 census are classified in the following table according to industry and occupational status. Only the major industry groups are shown in this table; particulars for each sub-group are available in the mimeographed 1961 *Census Bulletin* No. 34 and in the respective parts of the Census Volumes.

PERSONS IN THE WORK FORCE, BY INDUSTRY AND OCCUPATIONAL STATUS:
AUSTRALIA, CENSUS, 30TH JUNE, 1961

Industry group	At work					Not at work (c)	Total in the work force
	Em- ployer	Self- em- ployed	Em- ployee (a)	Helper (b)	Total		
MALES							
Primary production	57,374	198,774	139,130	11,273	406,551	13,178	419,729
Mining and quarrying	566	1,441	49,214	43	51,264	1,677	52,941
Manufacturing	29,140	21,550	805,857	277	856,824	30,303	887,127
Electricity, gas, water and sanitary services	320	281	87,301	5	87,907	760	88,667
Building and construction	29,611	31,071	282,216	197	343,095	21,997	365,092
Transport and storage	10,422	23,630	210,617	136	244,805	6,428	251,233
Communication	83	261	74,407	13	74,764	530	75,294
Finance and property	3,655	3,641	78,220	59	85,575	699	86,274
Commerce	54,477	44,261	341,343	715	440,796	10,921	451,717
Public authority (n.e.i.) and defence services .. ..	..	..	135,126	..	135,126	693	135,819
Community and business services (including professional)	19,945	7,243	153,354	208	180,750	1,476	182,226
Amusement, hotels and other accommodation, cafés, personal service, etc.	18,048	16,094	73,602	490	108,234	4,294	112,528
Other industries	7	19	38	1	65	4	69
Industry inadequately described or not stated	721	1,845	18,707	272	21,545	35,666	57,211
Total Males in the Work Force	224,369	350,111	2,449,132	13,689	3,037,301	128,626	3,165,927

FEMALES

Primary production	9,552	18,599	7,650	3,023	38,824	332	39,156
Mining and quarrying	22	18	1,406	1	1,447	13	1,460
Manufacturing	4,367	3,674	233,682	359	242,082	11,126	253,208
Electricity, gas, water and sanitary services	22	3	5,598	1	5,624	20	5,644
Building and construction	958	270	5,880	32	7,140	99	7,239
Transport and storage	865	630	16,573	40	18,108	159	18,267
Communication	32	152	18,063	20	18,267	255	18,522
Finance and property	324	434	53,713	47	54,518	353	54,871
Commerce	15,097	18,106	194,517	1,901	229,621	5,428	235,049
Public authority (n.e.i.) and defence services .. ..	..	..	33,700	..	33,700	234	33,934
Community and business services (including professional)	1,989	3,616	217,954	707	224,266	3,641	227,907
Amusement, hotels and other accommodation, cafés, personal service, etc.	9,256	16,790	102,479	1,547	130,072	5,536	135,608
Other industries	12	24	33	1	70	5	75
Industry inadequately described or not stated	216	388	10,654	192	11,450	16,779	28,229
Total Females in the Work Force	42,712	62,704	901,902	7,871	1,015,189	43,980	1,059,169

(a) On wage or salary.

(b) Not on wage or salary.

(c) See explanation on p. 389.

4. Occupational Status, Age and Conjugal Condition.—Pages 407–10 of Year Book No. 50 contain tables showing males and females at the census of 30th June, 1961, classified according to occupational status in conjunction with age and conjugal condition. This information is not repeated in this issue, but may be found in Labour Report No. 50, 1962 and 1963, pages 150–3.

5. **Married Women in the Work Force.**—At the 1961 census, 444,680 married women (including 39,148 women who were married but permanently separated, legally or otherwise) were recorded as being in the work force. This represented 42 per cent. of the total number of females in the work force. At the 1954 census the corresponding percentage was 34.3.

Between 1954 and 1961, there was an increase of 154,748 or 53.4 per cent. in the number of married women in the work force, compared with an increase of 213,767 or 25.3 per cent. in total females in the work force. The largest increase (both numerical and proportional) in any age group was for married women aged 35–39 years, where the increase in the seven years 1954–1961 was almost 82 per cent. A comparison for all age groups is given below.

MARRIED WOMEN IN THE WORK FORCE ACCORDING TO AGE: AUSTRALIA

Age last birthday (years)	Married women in the work force ^(a)		Increase, 1954–61	
	Census, 30th June, 1954 ^(b)	Census, 30th June, 1961 ^(c)	Number	Per cent.
15–19	3,549	5,570	2,021	56.95
20–24	35,452	51,003	15,551	43.86
25–29	43,899	49,536	5,637	12.84
30–34	43,320	59,025	15,705	36.25
35–39	41,046	74,660	33,614	81.89
40–44	42,265	67,695	25,430	60.17
45–49	33,492	59,745	26,253	78.39
50–54	23,346	41,142	17,796	76.23
55–59	13,539	22,415	8,876	65.56
60–64	6,609	9,342	2,733	41.35
65 and over	3,415	4,547	1,132	33.15
Total	289,932	444,680	154,748	53.37

(a) Includes women married but permanently separated, legally or otherwise. (b) The figures shown for 1954 include an allowance for the number of women whose conjugal condition was not stated. (c) A conjugal condition was allocated prior to tabulation in all instances where this information was not stated.

6. **Occupation.**—(i) *General.* The working population may be classified according to distinct concepts—(i) the *occupation*, which is personal to the individual, and (ii) the *industry* in which the individual carries on his occupation. Thus the *occupation* of a person is the kind of work that he or she personally performs, while *industry* is defined as any single branch of productive activity, trade or service. Particulars of the work force classified according to industry are given in paragraphs 2 and 3 of this section; this paragraph contains particulars of the principal occupation groups (major and minor) of the work force at the census of 30th June, 1961. Details of individual categories of occupations are published in the mimeographed 1961 *Census Bulletin* No. 32 and in the respective parts of the Census Volumes.

(ii) *Australia, 30th June, 1961.* The following table shows, for Australia, the numbers of males, females and persons in the work force in each of the principal occupation groups at the 1961 census. Data of this type were last obtained at the 1947 census, but a comparison of the figures derived therefrom with those shown below is not possible because of differences in classification.

Only those persons regarded as being in the work force are classified according to occupation.

Corresponding details for persons in each State and Territory are given in *Year Book* No. 50, pages 415–16 and in *Labour Report* No. 50, 1962 and 1963, pages 158–9.

OCCUPATIONS OF THE POPULATION: AUSTRALIA, CENSUS, 30th JUNE, 1961

Occupation group	Males	Females	Persons
Professional, technical and related workers—			
Architects, engineers and surveyors	29,776	170	29,946
Chemists, physicists, geologists and other physical scientists	8,014	637	8,651
Biologists, veterinarians, agronomists and related scientists	3,955	342	4,297
Medical practitioners and dentists	13,920	1,497	15,417
Nurses	3,866	59,950	63,816
Professional medical workers, n.e.c., and medical technicians	9,705	5,128	14,833
Teachers	44,601	56,726	101,327
Clergy and related members of religious orders ..	10,925	3,124	14,049
Law professionals	6,484	260	6,744
Artists, entertainers, writers and related workers ..	15,371	6,859	22,230
Draftsmen and technicians, n.e.c.	36,230	6,360	42,590
Other professional, technical and related workers ..	24,598	5,553	30,151
Total Professional, etc., Workers	207,445	146,606	354,051
Administrative, executive and managerial workers—			
Administrators and executive officials, government, n.e.c.	11,502	252	11,754
Employers, workers on own account, directors and managers, n.e.c.	243,041	43,085	286,126
Total Administrative, etc., Workers	254,543	43,337	297,880
Clerical workers—			
Book-keepers and cashiers	23,880	20,109	43,989
Stenographers and typists .. .. .	..	125,509	125,509
Other clerical workers	217,365	161,190	378,555
Total Clerical Workers	241,245	306,808	548,053
Sales Workers—			
Insurance, real estate salesmen, saleswomen, auctioneers and valuers	11,528	697	12,225
Commercial travellers and manufacturers' agents ..	34,519	619	35,138
Proprietors and shop-keepers working on own account, n.e.c., retail and wholesale trade, salesmen, saleswomen, shop assistants and related workers	141,996	133,356	275,352
Total Sales Workers	188,043	134,672	322,715
Farmers, fishermen, hunters, timber getters and related workers—			
Farmers and farm managers	257,991	28,549	286,540
Farm workers, n.e.c.	149,723	8,227	157,950
Wool classers	2,957	..	2,957
Hunters and trappers	1,504	13	1,517
Fishermen and related workers	7,454	71	7,525
Timber getters and other forestry workers	13,666	25	13,691
Total Farmers, etc.	433,295	36,885	470,180
Miners, quarrymen and related workers—			
Miners and quarrymen	30,420	15	30,435
Well drillers and related workers	1,071	..	1,071
Mineral treaters	1,678	..	1,678
Total Miners, Quarrymen, etc.	33,169	15	33,184

OCCUPATIONS OF THE POPULATION: AUSTRALIA,
CENSUS, 30th JUNE, 1961—continued

Occupation group	Males	Females	Persons
Workers in transport and communication occupations—			
Deck officers, engineer officers and pilots, ship ..	4,274	13	4,287
Deck and engine room hands, ship; barge crews and boatmen	11,639	..	11,639
Aircraft pilots, navigators and flight engineers ..	1,754	6	1,760
Drivers and firemen, railway	14,440	..	14,440
Drivers, road transport	146,236	527	146,763
Guards and conductors, railway	4,238	..	4,238
Inspectors, supervisors, traffic controllers and despatchers, transport	20,843	899	21,742
Telephone, telegraph and related telecommunication operators	3,056	19,504	22,560
Postmasters, postmistresses, postmen and messengers	23,705	3,235	26,940
Workers in transport and communication occupations, n.e.c.	13,600	1,649	15,249
Total Workers in Transport, etc.	243,785	25,833	269,618
Craftsmen, production-process workers and labourers, n.e.c.—			
Spinners, weavers, knitters, dyers and related workers	16,534	21,209	37,743
Tailors, cutters, furriers and related workers ..	18,148	64,725	82,873
Leather cutters, lasters and sewers (except gloves and garments) and related workers	15,149	9,965	25,114
Furnacemen, rollers, drawers, moulders and related metal making and treating workers	20,811	..	20,811
Precision instrument makers, watchmakers, jewellers and related workers	11,495	767	12,262
Toolmakers, machinists, plumbers, welders, platers and related workers	319,143	5,280	324,423
Electricians and related electric and electronic workers	104,454	1,266	105,720
Metal makers, metal workers and electrical production-process workers, n.e.c.	51,299	16,657	67,956
Carpenters, joiners, cabinetmakers and related workers	137,167	1,354	138,521
Painters and decorators	46,554	393	46,947
Bricklayers, plasterers and construction workers, n.e.c.	92,187	..	92,187
Compositors, pressmen, engravers, bookbinders, and related workers	30,993	6,759	37,752
Potters, kilnmen, glass and clay formers and related workers	10,490	1,264	11,754
Millers, bakers, brewmasters and related food and beverage workers	80,744	12,653	93,397
Chemical and related process workers	16,308	3,428	19,736
Tobacco preparers and tobacco product makers ..	1,154	1,473	2,627
Craftsmen and production-process workers, n.e.c. ..	26,943	11,796	38,739
Packers, labellers and related workers	7,238	14,727	21,965
Stationary engine, excavating, lifting equipment operators and related workers	55,722	..	55,722
Waterside workers and related freight handlers ..	93,368	1,398	94,766
Labourers, n.e.c.	203,044	..	203,044
Total Craftsmen, etc.	1,358,945	175,114	1,534,059

OCCUPATIONS OF THE POPULATION: AUSTRALIA,
CENSUS, 30TH JUNE, 1961—continued

Occupation group	Males	Females	Persons
Service, sport and recreation workers—			
Fire brigade men, policemen, policewomen, protective service and related workers	31,629	531	32,160
Housekeepers, cooks, maids and related workers	17,753	87,599	105,352
Waiters, waitresses, bartenders	13,703	22,234	35,937
Building caretakers, cleaners	26,128	19,172	45,300
Barbers, hairdressers, beauticians and related workers	9,291	13,355	22,646
Launderers, dry cleaners and pressers	6,992	11,287	18,279
Athletes, sportsmen and related workers	3,215	202	3,417
Photographers and related camera operators	2,982	691	3,673
Embalmers and undertakers	735	..	735
Service, sport, recreation workers, n.e.c.	18,084	12,108	30,192
Total Service, etc., Workers	130,512	167,179	297,691
Members of armed services, enlisted personnel	42,226	1,780	44,006
Occupation inadequately described or not stated	32,719	20,940	53,659
<i>Total in Work Force</i>	<i>3,165,927</i>	<i>1,059,169</i>	<i>4,225,096</i>
Not in work force	2,146,325	4,136,765	6,283,090
Grand Total	5,312,252	5,195,934	10,508,186

n.e.c.—Not elsewhere classified.

The proportion of the work force in each major group of occupation is shown in the following table.

**PROPORTION OF THE WORK FORCE IN EACH OCCUPATION GROUP:
AUSTRALIA, CENSUS, 30th JUNE, 1961**

Major occupation group	Proportion of total (per cent.)		
	Males	Females	Persons
Professional, technical and related workers	6.6	13.8	8.4
Administrative, executive and managerial workers	8.1	4.1	7.1
Clerical workers	7.6	29.0	13.0
Sales workers	5.9	12.7	7.6
Farmers, fishermen, hunters, timber getters and related workers	13.7	3.5	11.1
Miners, quarrymen and related workers	1.1	..	0.8
Workers in transport and communication occupations	7.7	2.4	6.4
Craftsmen, production-process workers and labourers, n.e.c.	42.9	16.5	36.3
Service, sport and recreation workers	4.1	15.8	7.0
Members of armed services, enlisted personnel	1.3	0.2	1.0
Occupation inadequately described or not stated	1.0	2.0	1.3
Total in Work Force	100.0	100.0	100.0

§ 3. The Work Force Survey

1. **General.**—Estimates of the civilian work force are obtained in February, May, August and November of each year for the six State capital cities from surveys based on a sample of dwellings selected by area sampling methods. These surveys are now being extended to non-metropolitan urban and rural areas; the results from these surveys will enable quarterly estimates of the Australian work force to be published.

The survey information, which is obtained at sample dwellings by personal interview, enables the total civilian population fourteen years of age and over to be classified according to work force and demographic characteristics. The work force classification used conforms closely to that recommended by the Eighth International Conference of Labour Statisticians, Geneva, 1954. Under this classification, the category to which an individual is assigned depends on his actual activity or status (i.e. whether working, looking for work, etc.) during a specified week covered by the survey.

The principal categories in the following tables are the employed and the unemployed, which together constitute the total work force, and the remainder, comprising persons who are not in the work force. Details of these categories are as follows.

- (a) *Employed persons* comprise all those who, during the specified week, worked for pay, profit, or payment in kind, in a job or business, or on a farm, and those who had a job, business, or farm, but were temporarily absent for the whole of the specified week for reasons other than lack of work. Persons who worked as unpaid helpers in a family business, or on a farm, are included in the employed if they worked fifteen hours or more during the specified week. The category includes employees, employers and workers on own account.
- (b) *Unemployed persons* comprise all those who, during the specified week, did no work at all, did not have a job or business, and were actively looking for work. The category also includes persons absent from work for the whole of the specified week without pay because of lack of demand for their services (i.e. those laid off without pay for the whole of the specified week).
- (c) *The work force* consists of all persons who, during the specified week, were employed or unemployed in terms of the classifications given in (a) and (b) above.
- (d) *Persons not in the work force* are those who, during the specified week, were not classified as employed or unemployed in terms of the classifications given in (a) and (b) above.

Figures in the tables which follow are estimates based on a sample and are therefore subject to sampling variability, that is, variations that may occur by chance because only a sample of the population is enumerated in the surveys. For this reason, figures are rounded but not adjusted to add to totals, because such adjustments would, in some cases, exceed the sampling variability of the estimates and tend to destroy their value as indicators of movement.

2. **Occupational Status, and Work Force Participation and Unemployment Rates.**—The following table shows, for November in each of the years 1960 to 1964, the distribution, by major work force category, of the civilian population fourteen years of age and over in the six State capital cities. The table also shows changes in the work force participation rate and unemployment rate over the period. As indicated in the general notes in paragraph 1 above, the classification of the population by work force category conforms to the standard recommended by the International Conference of Labour Statisticians. This International Standard has not as yet been adopted for the population census, and consequently the figures in this table are not strictly comparable with those in the tables in the preceding section of this chapter.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS AND WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, SIX AUSTRALIAN STATE CAPITAL CITIES

November—	Occupational status				Total civilian population 14 years of age and over ('000)	Work force participation rate (b) (per cent.)	Unemployment rate (c) (per cent.)
	Civilians in the work force			Civilians not in the work force ('000)			
	Employed (a) ('000)	Unemployed ('000)	Total ('000)				
MALES							
1960 ..	1,682.4	11.5	1,693.9	358.1	2,052.0	82.6	0.7
1961 ..	1,689.0	38.2	1,727.1	385.4	2,112.5	81.8	2.2
1962 ..	1,731.5	24.2	1,755.6	396.0	2,151.7	81.6	1.4
1963 ..	1,764.2	18.6	1,782.8	414.5	2,197.3	81.1	1.0
1964 ..	1,807.8	12.9	1,820.8	429.4	2,250.2	80.9	0.7
FEMALES							
1960 ..	764.4	11.9	776.2	1,395.2	2,171.5	35.7	1.5
1961 ..	749.4	21.6	771.0	1,465.7	2,236.7	34.5	2.8
1962 ..	790.1	17.8	808.0	1,477.8	2,285.8	35.3	2.2
1963 ..	808.9	11.5	820.4	1,515.4	2,335.8	35.1	1.4
1964 ..	837.1	13.6	850.7	1,543.7	2,394.4	35.5	1.6
PERSONS							
1960 ..	2,446.8	23.4	2,470.2	1,753.3	4,223.5	58.5	0.9
1961 ..	2,438.4	59.7	2,498.1	1,851.1	4,349.3	57.4	2.4
1962 ..	2,521.6	42.0	2,563.6	1,873.8	4,437.4	57.8	1.6
1963 ..	2,573.1	30.1	2,603.2	1,929.9	4,533.1	57.4	1.2
1964 ..	2,644.9	26.5	2,671.5	1,973.1	4,644.5	57.5	1.0

(a) Includes employees, employers, self-employed persons, and unpaid helpers who worked 15 hours or more per week in a family business. (b) The civilian work force as a percentage of the civilian population 14 years of age and over. (c) The number unemployed as a percentage of the civilian work force.

3. Occupational Status and Age Distribution.—The following table shows the civilian population 14 years of age and over in the six State capital cities at November in each of the years 1960 to 1964, classified according to occupational status and age distribution.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS AND AGE DISTRIBUTION, SIX AUSTRALIAN STATE CAPITAL CITIES

('000)

Age group (years)	Occupational status of civilians in the work force						Civilians not in the work force		Total civilians 14 years of age and over	
	Employed(a)		Unemployed		Total in civilian work force					
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
NOVEMBER, 1960										
14-19 ..	148.6	152.3	*	*	151.2	154.2	128.6	124.1	279.8	278.3
20-44 ..	941.4	411.9	*	*	946.5	419.1	31.9	545.1	978.4	964.2
45-64 ..	533.4	186.2	*	*	536.7	188.8	47.6	424.0	584.2	612.8
65 and over ..	58.9	13.9	*	*	59.5	14.1	150.0	302.1	209.6	316.2
Total ..	1,682.4	764.4	11.5	11.9	1,693.9	776.2	358.1	1,395.2	2,052.0	2,171.5
NOVEMBER, 1961										
14-19 ..	148.9	148.8	7.4	7.0	156.2	155.8	132.0	131.0	288.3	286.8
20-44 ..	954.4	400.0	19.9	10.6	974.3	410.6	34.4	583.3	1,008.7	993.9
45-64 ..	539.3	187.3	9.3	*	548.6	191.1	51.2	439.3	599.8	630.4
65 and over ..	46.4	13.3	*	*	48.0	13.5	167.8	312.1	215.8	325.6
Total ..	1,689.0	749.4	38.2	21.6	1,727.1	771.0	385.4	1,465.7	2,112.5	2,236.7

NOTE.—For footnotes see next page.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: OCCUPATIONAL STATUS AND AGE DISTRIBUTION, SIX AUSTRALIAN STATE CAPITAL CITIES—continued

('000)

Age group (years)	Occupational status of civilians in the work force						Civilians not in the work force		Total civilians 14 years of age and over	
	Employed(a)		Unemployed		Total in civilian work force		Males	Females	Males	Females
	Males	Females	Males	Females	Males	Females				
NOVEMBER, 1962										
14-19 ..	144.4	154.0	7.1	6.1	151.5	160.1	141.9	133.0	293.4	293.1
20-44 ..	984.1	428.7	8.6	8.7	992.6	437.4	34.6	578.3	1,027.2	1,015.7
45-64 ..	552.9	192.1	7.7	*	560.6	195.1	50.6	449.1	611.2	644.2
65 and over ..	50.1	15.3	*	*	50.9	15.3	168.9	317.4	219.8	332.7
Total ..	1,731.5	790.1	24.2	17.8	1,755.6	808.0	396.0	1,477.8	2,151.7	2,285.8
NOVEMBER, 1963										
14-19 ..	161.7	165.5	5.0	*	166.7	169.6	149.0	144.7	315.7	314.4
20-44 ..	992.0	437.4	7.5	5.7	999.6	443.1	36.3	582.7	1,035.8	1,025.8
45-64 ..	567.0	192.3	5.2	*	572.2	194.0	51.6	461.3	623.8	655.2
65 and over ..	43.5	13.7	*	..	44.4	13.7	177.7	326.7	222.2	340.4
Total ..	1,764.2	808.9	18.6	11.5	1,782.8	820.4	414.5	1,515.4	2,197.3	2,335.8
NOVEMBER, 1964										
14-19 ..	169.8	177.8	*	*	172.9	182.2	162.4	150.9	335.3	333.1
20-44 ..	1,014.0	450.1	6.0	7.2	1,020.0	457.3	36.1	587.2	1,056.2	1,044.5
45-64 ..	574.8	197.0	*	*	578.1	198.8	57.4	470.5	635.6	669.4
65 and over ..	49.3	12.2	*	*	49.7	12.3	173.4	335.1	223.1	347.4
Total ..	1,807.8	837.1	12.9	13.6	1,820.8	850.7	429.4	1,543.7	2,250.2	2,394.4

(a) Includes employees, employers, self-employed persons, and unpaid helpers who worked 15 hours or more per week in a family business.

* Estimates of less than 5,000 are not published in the table because they would be subject to sampling variability too high for most practical purposes. Although figures for these small components can, in some cases, be derived from the tables by deduction, undue significance should not be attached to them.

4. **Work Force Participation and Unemployment Rates.**—The table below shows work force participation rates and unemployment rates by conjugal condition for the civilian population 14 years of age and over in the six State capital cities at November in each of the years 1960 to 1964.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, BY CONJUGAL CONDITION, SIX AUSTRALIAN STATE CAPITAL CITIES

(Per cent.)

November—	Work force participation rate(a)			Unemployment rate(b)		
	Married	Not married(c)	Total	Married	Not married(c)	Total
MALES						
1960	89.8	69.1	82.6	0.4	1.3	0.7
1961	88.8	68.8	81.8	1.5	3.8	2.2
1962	88.8	68.1	81.6	0.8	2.8	1.4
1963	88.4	67.5	81.1	0.6	2.0	1.0
1964	88.7	66.9	80.9	0.4	1.4	0.7

NOTE.—For footnotes see next page.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: WORK FORCE PARTICIPATION AND UNEMPLOYMENT RATES, BY CONJUGAL CONDITION, SIX AUSTRALIAN STATE CAPITAL CITIES—*continued*

(Per cent.)

November—	Work force participation rate(a)			Unemployment rate(b)		
	Married	Not married(c)	Total	Married	Not married(c)	Total
FEMALES						
1960	27.7	49.0	35.7	1.8	1.3	1.5
1961	26.9	46.8	34.5	2.8	2.8	2.8
1962	27.7	47.8	35.3	1.9	2.5	2.2
1963	27.3	47.9	35.1	1.1	1.7	1.4
1964	28.5	46.8	35.5	1.6	1.6	1.6
PERSONS						
1960	58.5	58.4	58.5	0.7	1.3	0.9
1961	57.7	57.1	57.4	1.8	3.3	2.4
1962	58.1	57.2	57.8	1.1	2.6	1.6
1963	57.7	57.0	57.4	0.7	1.9	1.2
1964	58.3	56.2	57.5	0.7	1.5	1.0

(a) The civilian work force as a percentage of the civilian population 14 years of age and over. (b) The number unemployed as a percentage of the civilian work force. (c) Includes never married, widowed and divorced.

5. **Unemployment in Industry Groups.**—(i) *Rates.* The following table shows the unemployment rate in each industry group for the six State capital cities at November in each of the years 1960 to 1964. The total work force for a particular industry group comprises persons currently employed in the industry group and those unemployed persons whose last employment was in the group. The unemployment rates given in the table are the numbers unemployed in the industry groups expressed as percentages of the total work force in those groups. Because unemployed persons with no previous employment experience are excluded from the calculations used for this table, the unemployment rate shown for "All industries combined" differs from the unemployment rate for the civilian work force as a whole. This latter rate, which is given in the tables in paragraphs 2 and 4 above, takes into account all unemployed persons, including those seeking work for the first time.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: UNEMPLOYMENT RATES(a), BY INDUSTRY GROUP, SIX AUSTRALIAN STATE CAPITAL CITIES

(Per cent.)

Industry group in which last employed	November—				
	1960	1961	1962	1963	1964
Manufacturing	0.9	2.1	1.3	0.9	0.8
Building and construction	0.8	3.9	1.1	1.2	0.5
Transport, storage and communication ..	0.6	1.4	0.9	0.8	0.5
Commerce	0.9	2.1	1.4	0.9	0.9
Public authority (n.e.i.); community and business services (including professional)	0.7	0.9	0.7	0.7	0.7
Amusement, hotels and other accommodation, cafés, etc., personal service, etc.	2.1	3.0	2.3	1.4	1.7
Other industries	0.4	2.1	1.8	1.3	1.0
All industries combined(b)	0.9	2.1	1.3	1.0	0.8

(a) The numbers unemployed in the industry groups as percentages of the total work force in those groups. (b) Excludes unemployed persons who had not previously been employed.

(ii) *Proportions.* The table below shows, for the six State capital cities at November in each of the years 1960 to 1964, the unemployed in each industry group as a percentage of the total unemployed civilians 14 years of age and over.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: DISTRIBUTION OF UNEMPLOYED BY INDUSTRY GROUP, SIX AUSTRALIAN STATE CAPITAL CITIES

(Per cent.)

Industry group in which last employed	November—				
	1960	1961	1962	1963	1964
Manufacturing	32.3	30.4	27.8	27.7	28.6
Building and construction	6.8	11.9	4.7	7.7	4.0
Transport, storage and communication	5.7	5.0	4.3	5.2	4.1
Commerce	17.0	17.5	16.4	15.3	17.1
Public authority (n.e.i.); community and business services (including professional)	10.4	5.9	7.1	9.6	11.2
Amusement, hotels and other accommodation, cafés, etc., personal service, etc.	14.8	8.6	9.5	8.6	11.0
Other industries	2.9	7.0	8.5	8.5	7.5
<i>All unemployed persons who had previous employment</i>	<i>89.9</i>	<i>86.3</i>	<i>78.3</i>	<i>82.6</i>	<i>83.5</i>
Unemployed persons who had not previously been employed(a)	10.1	13.7	21.7	17.4	16.5
Total Unemployed Persons	100.0	100.0	100.0	100.0	100.0

(a) Comprises mainly school-leavers seeking work for the first time.

6. *Duration of Unemployment.*—The following table shows, for the six State capital cities at November in each of the years 1960 to 1964, the unemployed, classified by duration of unemployment, as a percentage of the total unemployed civilians 14 years of age and over.

CIVILIAN POPULATION 14 YEARS OF AGE AND OVER: DISTRIBUTION OF UNEMPLOYED BY DURATION OF UNEMPLOYMENT, SIX AUSTRALIAN STATE CAPITAL CITIES

(Per cent.)

Period of unemployment	November—				
	1960	1961	1962	1963	1964
MALES					
Less than one month	63.8	35.2	44.5	60.6	62.0
One month and less than three months	20.8	28.4	26.0	17.9	21.2
Three months and over	15.4	36.4	29.5	21.5	16.8
Total	100.0	100.0	100.0	100.0	100.0
FEMALES					
Less than one month	65.7	44.5	42.7	55.0	56.6
One month and less than three months	16.6	19.7	26.7	21.1	27.5
Three months and over	17.7	35.8	30.6	23.9	15.9
Total	100.0	100.0	100.0	100.0	100.0
PERSONS					
Less than one month	64.8	38.6	43.7	58.5	59.3
One month and less than three months	18.7	25.2	26.3	19.1	24.4
Three months and over	16.5	36.2	30.0	22.4	16.3
Total	100.0	100.0	100.0	100.0	100.0

7. Persons Working Less than 35 Hours a week.—In the work force surveys, persons who report themselves as having worked less than 35 hours a week are further questioned to ascertain their reasons for not working longer hours. In the following table, employed civilians in the six State capital cities, 14 years of age and over, who worked less than 35 hours a week are classified according to the reasons why they did not work longer hours.

EMPLOYED CIVILIANS 14 YEARS OF AGE AND OVER WHO WORKED LESS THAN 35 HOURS PER WEEK, BY REASON: SIX AUSTRALIAN STATE CAPITAL CITIES

November—	Reason for working less than 35 hours a week								
	Persons who usually work 35 hours or more a week			Persons who usually work less than 35 hours a week			All persons who worked less than 35 hours in the survey period		
	Lack of work(a)	Other reasons (b)	Total	Lack of work(c)	Other reasons (d)	Total	Lack of work (a)(c)	Other reasons (b)(d)	Total
NUMBER ('000)									
1960 ..	13.0	165.5	178.4	11.9	185.7	197.6	24.8	351.2	376.0
1961 ..	25.4	215.5	240.9	19.8	181.9	201.6	45.1	397.3	442.5
1962 ..	14.7	228.3	243.0	12.2	197.4	209.6	26.9	425.7	452.6
1963 ..	12.4	229.9	242.2	7.6	213.1	220.7	20.0	443.0	463.0
1964 ..	10.7	226.5	237.2	7.3	230.5	237.8	18.0	457.0	475.0

PROPORTION OF THE CIVILIAN WORK FORCE OF THE SIX CAPITALS (Per cent.)

1960 ..	0.5	6.7	7.2	0.5	7.5	8.0	1.0	14.2	15.2
1961 ..	1.0	8.6	9.6	0.8	7.3	8.1	1.8	15.9	17.7
1962 ..	0.6	8.9	9.5	0.5	7.7	8.2	1.1	16.6	17.7
1963 ..	0.5	8.8	9.3	0.3	8.2	8.5	0.8	17.0	17.8
1964 ..	0.4	8.5	8.9	0.3	8.6	8.9	0.7	17.1	17.8

(a) Excludes persons laid off for whole week without pay, who are included in the unemployed. The figures comprise persons working short time, those who lost their jobs or commenced in new jobs during the specified week, and those absent from work because of plant breakdowns or bad weather. (b) Own illness or injury, leave or holiday, and industrial disputes. (c) Persons who would prefer to work 35 hours or more a week if suitable work were available. (d) Persons who prefer to work less than 35 hours a week.

WAGE AND SALARY EARNERS IN EMPLOYMENT

1. General.—The monthly estimates of the number of wage and salary earners in civilian employment (excluding employees in rural industry and private domestic service) are based on comprehensive data (referred to herein as "benchmarks") derived for the purpose from the population censuses of June, 1954, and June, 1961. Figures for periods between, and subsequent to, the two benchmark points of time are estimates obtained from three main sources, namely (a) current pay-roll tax returns, (b) current returns from government bodies, and (c) some other direct current records of employment (e.g. for hospitals). Data from these sources have been supplemented by estimates of the changes in the number of wage and salary earners not covered by the foregoing collections.

Figures for current months are subject to revision. As they become available, particulars of employment obtained from other collections, such as the annual factory census and the censuses and sample surveys of retail establishments, are used to check, and, where desirable, to revise estimates in relevant sections. The work force survey (*see p. 399*) will supply an additional check for future estimates.

The benchmark figures are derived from particulars recorded for individuals on population census schedules. The estimated monthly figures are derived mainly from reports supplied by employers relating to enterprises or establishments. These two sources differ in some cases in scope and in reporting of industry; however, the benchmark industry dissections have been adjusted, as nearly as may be, to an enterprise/establishment reporting basis. The industry classification used throughout the series is that of the population census of June, 1961.

Pay-roll tax returns are lodged at present by all employers paying more than £200 a week in wages (other than certain Commonwealth Government bodies, religious and benevolent institutions, public hospitals, and other similar organizations specifically exempted under the *Pay-roll Tax Assessment Act 1941-1962*). At June, 1954, this Act required employers paying wages of more than £80 a week to lodge returns. The exemption limit was raised to £120 a week from 1st September, 1954, and to the present level of £200 a week as from 1st September, 1957.

Employees in rural industry and in private domestic service are not included in the estimates, because of the inadequacy of current data.

The figures herein relate to "wage and salary earners" on pay-rolls or "in employment" in the latter part of each month as distinct from numbers of employees actually working on a specific date. They include some persons working part-time.

The prime purpose of this series is to measure, as nearly as may be with available data, *current monthly trends* in employment in the defined field. The estimates may be less reliable for longer-term measurement. However, as a broad measure of long-term trends, figures for periods prior to June, 1954 (since June, 1947), estimated on a basis approximately comparable with that for later periods, are to be found on page 172 of *Labour Report No. 50*, 1962 and 1963.

In the tables in this section any discrepancies between totals and sums of components are due to rounding.

2. **Total Civilian Employees and Defence Forces.**—The following table shows, for Australia, the estimated numbers of private and government civilian employees (excluding employees in rural industry and private domestic service) and the numbers in the defence forces at June of each of the years 1954 and 1960 to 1964 and at December, 1964.

WAGE AND SALARY EARNERS IN EMPLOYMENT: AUSTRALIA
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE)
(‘000)

Particulars	June, 1954	June, 1960	June, 1961	June, 1962	June, 1963	June, 1964	Dec., 1964
MALES							
Civilian employees—							
Private	1,407.5	1,605.0	1,594.6	1,626.4	1,682.0	1,766.2	1,803.8
Government(a)	596.2	651.8	669.7	681.6	695.4	707.2	708.8
Total	2,003.7	2,256.8	2,264.3	2,308.0	2,377.4	2,473.4	2,512.6
Defence forces(b)	50.4	45.3	44.3	45.8	47.2	49.6	50.0
Total	2,054.1	2,302.1	2,308.6	2,353.8	2,424.6	2,523.0	2,562.6

NOTE.—For footnotes *see next page*.

WAGE AND SALARY EARNERS IN EMPLOYMENT: AUSTRALIA—*continued*
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE)
(*000)

Particulars	June, 1954	June, 1960	June, 1961	June, 1962	June, 1963	June, 1964	Dec., 1964
FEMALES							
Civilian employees—							
Private	589.0	722.6	714.5	744.7	769.9	813.8	844.7
Government(a)	112.5	147.1	154.4	160.8	167.3	176.5	178.4
<i>Total</i>	701.5	869.7	868.9	905.5	937.2	990.3	1,023.1
Defence forces(b)	2.0	1.7	1.8	2.0	2.1	2.2	2.2
<i>Total</i>	703.5	871.4	870.7	907.5	939.3	992.5	1,025.3
PERSONS							
Civilian employees—							
Private	1,996.5	2,327.6	2,309.1	2,371.1	2,451.9	2,580.0	2,648.5
Government(a)	708.7	798.9	824.1	842.4	862.7	883.7	887.2
<i>Total</i>	2,705.2	3,126.5	3,133.2	3,213.5	3,314.6	3,463.7	3,535.7
Defence forces(b)	52.4	47.0	46.1	47.8	49.3	51.8	52.2
<i>Total</i>	2,757.6	3,173.5	3,179.3	3,261.3	3,363.9	3,515.5	3,587.9

(a) Includes employees, within Australia, of government authorities (Commonwealth, State, local and semi-government) on services such as railways, tramways, banks, post offices, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees. See para. 4, pp. 408-9. (b) Permanent defence forces in Australia and overseas.

3. Civilian Employees.—(i) *Australia—Industry Groups.* The following table shows, for Australia, the estimated number of wage and salary earners in civilian employment (excluding employees in rural industry and private domestic service) in the principal industry groups at June of each of the years 1954 and 1960 to 1964 and at December, 1964.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRY GROUPS, AUSTRALIA
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)
(*000)

Industry group	June, 1954	June, 1960	June, 1961	June, 1962	June, 1963	June, 1964	Dec., 1964
MALES							
Mining and quarrying	56.2	48.6	48.2	46.3	45.9	46.7	44.7
Manufacturing(a)	744.6	853.5	821.6	852.8	879.4	922.5	936.9
Electricity, gas, water and sanitary services	71.3	84.8	88.5	90.2	91.5	93.4	93.3
Building and construction	253.4	267.7	274.8	275.9	281.6	289.5	286.9
Transport and storage	187.5	186.1	190.4	185.1	187.1	192.0	195.7
Communication	64.1	74.6	75.2	76.0	76.8	78.3	80.3
Finance and property	57.0	75.5	80.4	82.7	86.2	92.1	93.1
Retail trade	161.7	188.4	191.3	193.6	204.6	213.4	221.1
Wholesale and other commerce	134.1	157.8	161.4	161.0	164.4	171.1	178.2
Public authority activities (n.e.i.)	83.9	92.3	95.0	97.9	101.7	105.7	107.3
Health, hospitals, etc.	25.7	30.1	31.0	32.7	33.8	35.3	35.9
Education	38.8	53.9	57.0	61.7	65.9	69.1	68.9
Amusement, hotels, personal service, etc.	61.4	67.3	70.1	70.8	74.6	78.3	83.4
Other(b)	64.0	76.2	79.4	81.3	83.9	86.0	87.0
<i>Total</i>	2,003.7	2,256.8	2,264.3	2,308.0	2,377.4	2,473.4	2,512.6

NOTE.—For footnotes see next page.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT: INDUSTRY GROUPS, AUSTRALIA—*continued*
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)
(‘000)

Industry group	June, 1954	June, 1960	June, 1961	June, 1962	June, 1963	June, 1964	Dec., 1964
FEMALES							
Mining and quarrying	1.0	1.3	1.4	1.5	1.6	1.7	1.7
Manufacturing(a)	214.9	257.2	233.5	252.9	259.7	278.2	287.8
Electricity, gas, water and sanitary services	4.5	5.9	6.2	6.3	6.4	6.5	6.7
Building and construction	2.8	4.3	4.9	5.0	5.5	5.8	6.2
Transport and storage	14.4	16.1	17.0	16.8	17.1	18.1	18.8
Communication	16.7	18.4	18.3	18.0	18.3	19.2	21.1
Finance and property	32.5	51.0	54.2	55.0	56.6	60.0	60.8
Retail trade	125.4	148.6	150.7	156.5	162.7	169.7	180.8
Wholesale and other commerce	40.4	47.9	49.2	48.6	50.0	52.1	54.1
Public authority activities (n.e.i.)	28.3	32.9	34.6	35.7	37.2	39.1	40.2
Health, hospitals, etc.	73.0	98.4	102.6	106.8	111.4	117.6	118.7
Education	49.6	70.1	73.7	79.3	82.1	86.0	83.4
Amusement, hotels, personal service, etc.	68.3	76.4	78.8	78.2	81.8	86.0	91.3
Other(b)	29.7	41.2	43.8	44.9	46.8	50.3	51.6
Total	701.5	869.7	868.9	905.5	937.2	990.3	1,023.1

PERSONS							
Mining and quarrying	57.2	49.9	49.6	47.8	47.5	48.4	46.4
Manufacturing(a)	959.5	1,110.7	1,055.1	1,105.7	1,139.1	1,200.7	1,224.7
Electricity, gas, water and sanitary services	75.8	90.7	94.7	96.5	97.9	99.9	100.0
Building and construction	256.2	272.0	279.7	280.9	287.1	295.3	293.1
Transport and storage	201.9	202.2	207.4	201.9	204.2	210.1	214.5
Communication	80.8	93.0	93.5	94.0	95.1	97.5	101.4
Finance and property	89.5	126.5	134.6	137.7	142.8	152.1	153.8
Retail trade	287.1	337.0	342.0	350.1	367.3	383.1	401.9
Wholesale and other commerce	174.5	205.7	210.6	209.6	214.4	223.2	232.3
Public authority activities (n.e.i.)	112.2	125.2	129.6	133.6	138.9	144.8	147.5
Health, hospitals, etc.	98.7	128.5	133.6	139.5	145.2	152.9	154.6
Education	88.4	124.0	130.7	141.0	148.0	155.1	152.3
Amusement, hotels, personal service, etc.	129.7	143.7	148.9	149.0	156.4	164.3	174.7
Other(b)	93.7	117.4	123.2	126.2	130.7	136.3	138.5
Total	2,705.2	3,126.5	3,133.2	3,213.5	3,314.6	3,463.7	3,535.7

(a) As well as employees engaged directly in manufacturing activity, these figures also include the employees of manufacturing enterprises or establishments who are engaged in selling and distribution, etc.
(b) Comprises forestry, fishing and trapping; law, order and public safety; religion and social welfare; and other community and business services.

(ii) *States and Territories—Totals.* Estimates of the number of wage and salary earners (excluding employees in rural industry, private domestic service and defence forces) are shown in the following table for each State and Territory at June of each of the years 1954 and 1960 to 1964 and at December, 1964.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)
(‘000)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Australia
MALES									
1954—June ..	774.8	563.4	266.4	178.6	141.2	64.8	5.0	9.5	2,003.7
1960—June ..	870.6	643.5	293.7	206.4	147.5	72.6	7.2	15.3	2,256.8
1961—June ..	876.5	643.6	291.7	207.5	148.5	73.2	7.3	16.0	2,264.3
1962—June ..	894.2	654.3	294.5	211.2	154.7	73.6	7.5	18.0	2,308.0
1963—June ..	914.9	675.4	304.8	219.6	159.4	74.9	8.0	20.4	2,377.4
1964—June ..	950.0	704.6	317.5	229.5	163.9	77.2	8.9	21.8	2,473.4
1964—December	965.9	718.5	316.8	234.2	167.7	77.6	8.9	23.0	2,512.6

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT—continued
(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)

('000)

Month	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Australia
FEMALES									
1954—June ..	275.8	216.7	85.8	55.7	43.2	20.2	1.2	2.9	701.5
1960—June ..	342.7	269.7	102.3	72.6	50.4	24.5	2.0	5.5	869.7
1961—June ..	343.6	266.2	102.1	72.3	51.2	24.9	2.3	6.3	868.9
1962—June ..	359.0	276.5	104.7	76.7	53.4	25.5	2.5	7.2	905.5
1963—June ..	369.8	285.0	108.9	80.9	55.5	25.5	2.9	8.7	937.2
1964—June ..	390.2	299.9	115.3	86.5	58.4	27.0	3.0	10.0	990.3
1964—December	404.9	307.9	118.9	90.6	59.4	27.7	3.0	10.7	1,023.1

PERSONS									
1954—June ..	1,050.6	780.1	352.2	234.3	184.4	85.0	6.2	12.4	2,705.2
1960—June ..	1,213.3	913.2	396.0	279.0	197.9	97.1	9.2	20.8	3,126.5
1961—June ..	1,220.1	909.8	393.8	279.8	199.7	98.1	9.6	22.3	3,133.2
1962—June ..	1,253.2	930.8	399.2	287.9	208.1	99.1	10.0	25.2	3,213.5
1963—June ..	1,284.7	960.4	413.7	300.5	214.9	100.4	10.9	29.1	3,314.6
1964—June ..	1,340.2	1,004.5	432.8	316.0	222.3	104.2	11.9	31.8	3,463.7
1964—December	1,370.8	1,026.4	435.7	324.8	227.1	105.3	11.9	33.7	3,535.7

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

4. **Government Employees.**—(i) *States and Territories.* The numbers of civilian employees of Commonwealth, State, local and semi-government authorities in each State and Territory at June, 1964, are shown in the following table. These include employees, within Australia, of government authorities on services such as railways, tramways, banks, post offices, air transport, education (including universities), broadcasting, television, police, public works, factories and munitions establishments, departmental hospitals and institutions, migrant hostels, etc., as well as administrative employees.

CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES, JUNE, 1964

('000)

State or Territory	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Fe-males	Persons	Males	Fe-males	Persons	Males	Fe-males	Persons	Males	Fe-males	Persons
N.S.W. ..	66.5	18.4	84.9	148.0	40.3	188.3	38.5	4.4	42.9	253.0	63.1	316.1
Vic. ..	57.3	15.6	72.9	114.4	30.5	144.9	15.4	2.0	17.4	187.1	48.1	235.2
Qld. ..	19.6	5.3	24.9	67.2	13.4	80.6	17.6	1.3	18.9	104.4	20.0	124.4
S.A. ..	20.6	4.4	25.0	42.7	15.2	57.9	4.2	0.4	4.6	67.5	20.0	87.5
W.A. ..	10.6	2.6	13.2	39.6	9.5	49.1	4.3	0.4	4.7	54.5	12.5	67.0
Tas. ..	4.7	1.3	6.0	17.1	4.5	21.6	2.1	0.2	2.3	23.9	6.0	29.9
N.T. ..	4.1	1.4	5.5	..	..	..	0.1	..	0.1	4.2	1.4	5.6
A.C.T. ..	12.6	5.4	18.0	..	..	..	..	..	..	12.6	5.4	18.0
Australia	196.0	54.4	250.4	429.0	113.4	542.4	82.2	8.7	90.9	707.2	176.5	883.7

(a) Includes semi-government authorities. See explanation above.

(ii) *Australia.* The following table shows at June in each of the years 1960 to 1964 and at December, 1964, the number of civilian employees of Commonwealth, State, local and semi-government authorities.

CIVILIAN EMPLOYEES OF GOVERNMENT AUTHORITIES: AUSTRALIA
(^{'000})

Date	Commonwealth Government(a)			State Government(a)			Local Government			Total(a)		
	Males	Fe- males	Persons	Males	Fe- males	Persons	Males	Fe- males	Persons	Males	Fe- males	Persons
June—												
1960 ..	178.5	48.5	227.0	400.6	91.3	491.9	72.7	7.3	80.0	651.8	147.1	798.9
1961 ..	182.0	49.7	231.7	411.5	96.9	508.4	76.2	7.8	84.0	669.7	154.4	824.1
1962 ..	185.3	50.0	235.3	417.2	102.8	520.0	79.1	8.0	87.1	681.6	160.8	842.4
1963 ..	189.7	51.4	241.1	424.6	107.5	532.1	81.1	8.4	89.5	695.4	167.3	862.7
1964 ..	196.0	54.4	250.4	429.0	113.4	542.4	82.2	8.7	90.9	707.2	176.5	883.7
Dec.—												
1964 ..	200.6	57.4	258.0	425.6	112.0	537.6	82.6	9.0	91.6	708.8	178.4	887.2

(a) Includes semi-government authorities. See explanation on p. 408.

COMMONWEALTH EMPLOYMENT SERVICE

1. **General.**—Statutory warrant for the Commonwealth Employment Service (C.E.S.) is to be found in the *Re-establishment and Employment Act* 1945–1959 (sections 47 and 48). In brief, the main functions of the Service are 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. conform to the provisions of the Employment Service Convention, 1948 of the International Labour Organisation, which was ratified by Australia in December, 1949. In addition, C.E.S. practices follow substantially the provisions of the I.L.O. Employment Service Recommendation, 1948.

The C.E.S. functions within the Employment and Industrial Services Division of the Department of Labour and National Service on a decentralized basis. The Central Office is in Melbourne and there is a Regional Office in the capital city of each State, with 146 District Employment Offices and Branch Offices in suburban and the larger provincial centres and 341 agents in the smaller country centres. The District Employment Offices and Branch Offices are distributed as follows: New South Wales, 54; Victoria, 37; Queensland, 24; South Australia, 12; Western Australia, 13; Tasmania, 4; Northern Territory, 1; Australian Capital Territory, 1.

The C.E.S. provides specialized facilities for young people, persons with physical and mental handicaps, ex-members of the defence forces, migrants, rural workers and persons with professional and technical qualifications. Vocational guidance is provided free of charge by a staff of qualified psychologists. It is available to any person, but is provided particularly for young people and the physically handicapped. In New South Wales, the State Department of Labour and Industry provides this service, mainly to young people leaving school.

The C.E.S. has responsibilities in the administration of the unemployment benefits provided under the *Social Services Act* 1947–1963. All applicants for benefits must register at a District Employment Office or agency of the C.E.S., which is responsible for certifying whether or not suitable employment can be offered to them.

The C.E.S. 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 December, 1964, about 230,000 British and European migrant workers had been placed in initial employment by the C.E.S. Since 1951, it has been responsible for recruiting Australian experts for

oversea service under the Colombo Plan and the United Nations Expanded Programme of Technical Assistance. 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 placement activities, regular surveys of the labour market are carried out, and detailed information is supplied to interested Commonwealth and State Government departments and instrumentalities and to the public. Employers, employees and other interested persons are advised on labour availability and employment opportunities in various occupations and areas and on other matters concerning employment.

2. Persons Registered for Employment.—The following table shows the number of persons who claimed, when registering for employment with the Commonwealth Employment Service, that they were not employed and who were recorded as unplaced. The figures include those persons who were referred to employers and those who may have obtained employment without notifying the C.E.S. They include also persons in receipt of unemployment benefit (*see* Chapter XVI. Welfare Services).

PERSONS REGISTERED FOR EMPLOYMENT WITH COMMONWEALTH EMPLOYMENT SERVICE

(Source: Department of Labour and National Service.)

Month(a)	N.S.W.(b)	Vic.	Qld	S.A.(c)	W.A.	Tas.	Aust.
1954—June ..	9 250	5 231	4 557	964	1 807	555	22 364
1960—June ..	15 848	11 333	8 587	4 547	4 694	2 204	47 213
1961—June ..	42 793	30 764	19 263	9 035	6 616	3 213	111 684
1962—June ..	34 869	26 160	16 284	6 886	5 320	3 609	93 128
1963—June ..	34 258	19 135	12 055	6 479	6 053	3 427	81 407
1964—June ..	18 400	10 137	7 558	4 339	5 141	2 968	48 543
1964—July ..	16 896	9 244	5 904	4 190	5 433	3 443	45 110
August ..	14 896	7 928	5 094	3 502	5 011	3 147	39 578
September ..	12 831	7 193	5 113	3 099	3 966	2 964	35 166
October ..	13 346	6 898	5 452	5 709	3 463	2 626	37 494
November ..	13 987	6 376	8 040	2 948	3 366	2 336	37 053
December ..	17 002	11 669	12 406	4 803	5 168	3 458	54 506
1965—January ..	20 475	13 462	14 310	5 458	6 087	3 231	63 023
February ..	17 040	9 735	11 651	4 610	5 134	2 577	50 747
March ..	14 612	8 129	9 889	3 420	3 927	1 694	41 671

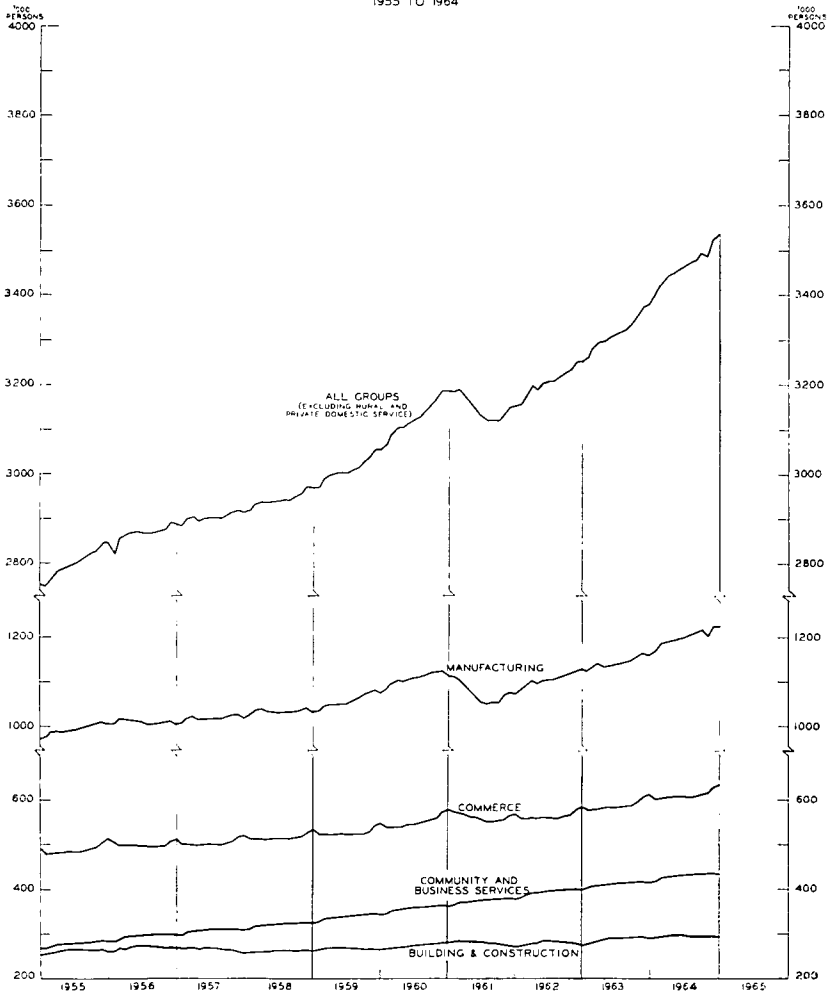
(a) Generally at Friday nearest end of month.

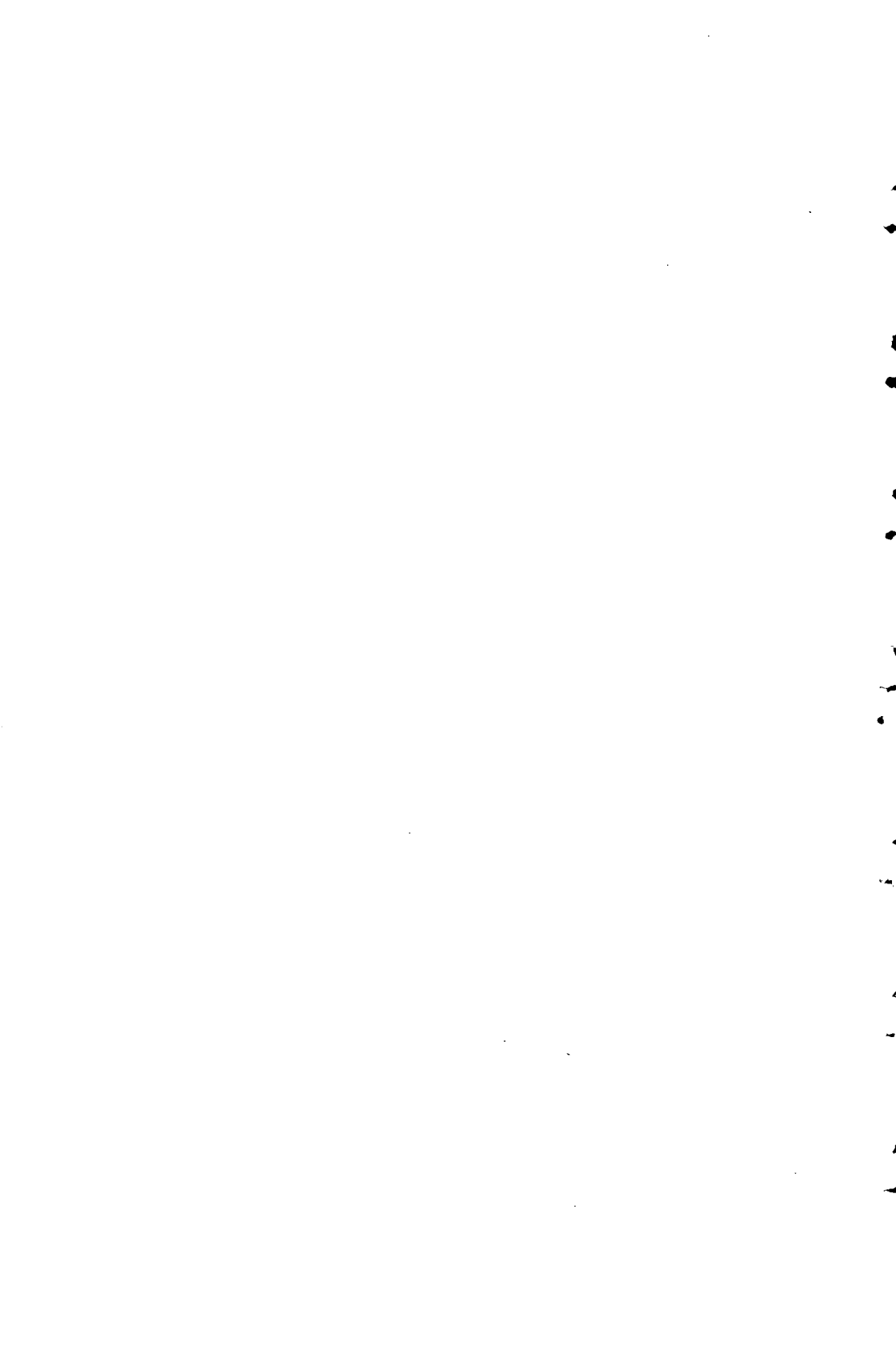
(b) Includes Australian Capital Territory.

(c) Includes Northern Territory.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT
 PRINCIPAL INDUSTRY GROUPS: AUSTRALIA

1955 TO 1964





CHAPTER XIII

LABOUR, WAGES AND PRICES

NOTE.—For particulars of the Farm Production Price Index, see Chapter XXX. Miscellaneous.

For current information on the subjects dealt with in this Chapter, see the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, and the *Quarterly Summary of Australian Statistics*, also the mimeographed statements *Wage Rates and Earnings*, *Consumer Price Index*, *Wholesale Price (Basic Materials and Foodstuffs) Index*, *Wholesale Prices—Price Index of Electrical Installation Materials*, and *Export Price Index*. For further information on these subjects, except the Export Price Index, see the *Labour Report* issued by this Bureau.

In addition, the following recent special publications were issued in mimeographed form:—*Minimum Wage Rates, January, 1960, to June, 1963* (S.B.31).

RETAIL PRICES AND PRICE INDEXES

§ 1. General

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 and comparable information was ascertained for the month of November in each year from 1914 to 1922. The range of items for which retail prices data are obtained was considerably expanded in 1948 and in later years.

Average retail prices of certain food and grocery items in current periods are published in the annual *Labour Report*.

An explanation of the nature and purposes of retail price indexes is given in the various editions of the annual *Labour Report*, together with further particulars of indexes then current. In § 2 below, previous retail price indexes for Australia are briefly outlined. The current retail price index, entitled the Consumer Price Index, was published for the first time in August, 1960. It was compiled retrospectively to 1948–49. A description of the Consumer Price Index is given in § 3 on pages 412–14.

§ 2. Previous Retail Price Indexes

1. General.—Five series of retail price indexes had been compiled at various times for Australia by the Commonwealth Statistician prior to 1960. Each of these was continued until changed conditions required the compilation of indexes more directly relevant to current conditions. The respective indexes were as follows.

- (i) *The "A" Series Index* (covering food, groceries and house rents) 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 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.
- (iii) *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. It was last issued on its original basis for December quarter, 1960. For certain transitional purposes a "C" Series Index was issued for some quarters after that. This was calculated by varying the index numbers of December quarter, 1960, in proportion to movements shown by the Consumer Price Index.

- (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.
- (v) *The Interim Index* (covering food and groceries, rent of 4 and 5 roomed houses, clothing, household drapery, household utensils, fuel, lighting, fares, smoking, certain services and some miscellaneous items) was first compiled in 1954 with the year 1952-53 as base = 100. As its title indicated, it was constructed as a transitional index. Its compilation was discontinued following its replacement by the Consumer Price Index in June quarter, 1960.

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 December quarter, 1953. These "Court" Index numbers were an arithmetical conversion of the "C" Series Retail Price Index.

§ 3. Consumer Price Index

1. **General.**—This retail price index was first compiled in 1960, retrospectively to September quarter, 1948. A full description of the index is given in *Labour Report* No. 50, 1962 and 1963.

2. **Origin.**—The list of component items and the weighting pattern of the "C" Series Retail Price Index, first adopted in 1921, were slightly revised by Conference of Statisticians in 1936, but otherwise continued almost unchanged until the index was discontinued in 1960. The reasons for this, and the circumstances which led to the present Consumer Price Index, appear from ensuing paragraphs.

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 in the pattern of expenditure. This rendered changes desirable but made 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 of household expenditure in those years.

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. This was done to facilitate review of the component items and weighting system of the "C" Series Retail Price Index, in the light of the new pattern of wage-earner expenditure and consumption that appeared to be emerging. But there supervened, in the next few years, conditions which caused wide price dispersion coupled with a very rapid rise in prices and a new sequence of changes in consumption and in the pattern of wage-earner expenditure. Under these conditions it was not possible to devise any new weighting pattern likely to be more continuously representative of conditions then current than was the existing "C" Series Retail Price Index on the 1936 revision.

A Conference of Statisticians considered the matter in June, 1953, and resolved (in part) as follows:—

- "(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."

The "C" Series Index continued to be compiled on its pre-war basis without significant change in procedures. The Interim Retail Price Index was introduced in 1954 and continued until March quarter, 1960.

The Interim Index was a transitional index designed to measure retail price variations on the "C" Series model in terms of post-war consumption weights, as emerging in the early 1950's. It embraced a wider range of commodities and services than did the "C" Series Retail Price Index, but it did not take into account successive major changes in the

pattern of expenditure and modes of living that began to occur early in 1950 and through to 1960. These changes could not, in fact, be detected and measured promptly, and incorporated into an index, concurrently with their happening. Nor was it envisaged as desirable to adopt fundamentally new procedures in price index construction until it was fully evident that far-reaching procedural changes were necessary to meet the situation that had developed between about 1950 and 1960.

In this period, home owning largely replaced house renting, the use of the motor car greatly increased and partly replaced use of public transport, and various items of electrical household equipment and television came into widespread use. The impact of these (and other) changes in usage upon the pattern of household expenditure was heightened by disparate movements in prices. Together, they rendered nugatory the attempt to meet the situation by devising a single Interim Retail Price Index. As studies progressed and new data became available, it was clear that no single list of items and no single set of fixed weights would be adequately representative as a basis for measuring retail price changes at all times throughout the post-war period. In consequence, the situation was met by compiling the Consumer Price Index constructed as a chain of linked indexes with significant changes in composition and weighting effected at short intervals during the period 1950-1960.

3. Purpose, Scope and Composition.—The Consumer Price Index is a quarterly measure of variations in retail prices for goods and services representing a high proportion of the expenditure of wage-earner households. The weighting pattern relates to estimated aggregates of wage-earner household expenditures and not to estimated expenditures of an "average" or individual household of specified size, type, or mode of living. In this way, it is possible to give appropriate representation to owner-occupied houses as well as rented houses and to include motor cars, television sets, and other major expenditures which relate to some households and not to others.

Consumer (retail) price indexes are sometimes loosely called "cost of living indexes" and are thought to measure changes in the "cost of living". Neither the Consumer Price Index, nor any other retail price index, measures those changes in the cost of living that result directly from changes in the mode or level of living. Changes of that kind are matters for consideration apart from price indexes, but the change in prices of goods and services is a very important part of the change in the cost of living and this part is measured by consumer (retail) price indexes.

The Consumer Price Index covers a wide range of commodities and services arranged in the following five major groups:—

- Food;
- Clothing and Drapery;
- Housing;
- Household Supplies and Equipment;
- Miscellaneous.

These groups do not include every item of household spending. It is both impracticable and unnecessary for them to do so. Prices are collected regularly for specified quantities and qualities of a large and representative selection of commodities and services. Movements in the prices of these items, when combined in suitable proportions, provide a representative measure of price change as affecting a high proportion of the expenditure of wage-earner households.

4. Structure—a Chain of Linked Indexes.—Substantial changes occurred in consumer usage and patterns of expenditure following the 1939-45 War. In order to keep the weighting pattern representative of current expenditures, it became necessary to construct indexes with additional items and changes in the weighting pattern at intervals, rather than on the basis of a list of items and set of weights that remained unchanged throughout the whole period covered. Five series for short periods (namely, from the September quarter of 1948 to the June quarter of 1952, from the June quarter of 1952 to the June quarter of 1956, from the June quarter of 1956 to the March quarter of 1960, from the March quarter of 1960 to the December quarter of 1963, and from the December quarter of 1963 onwards) have therefore been constructed and linked to form a continuous retail price index series known as the Consumer Price Index. During each period between links, the items and weighing remained unchanged. At times of linking, the weighting pattern was altered and new items that had become significant in household expenditure were introduced.

Under this method, in effect, average percentage price movements are assessed on one pattern up to the time of the link and on another pattern thereafter. The process of linking

ensures that the series reflects only price variations and not differences in cost of the old and new lists of items. The introduction of new items and weights by linking does not, of itself, raise or lower the level of the index.

§ 4. Tabular Statements of Retail Price Index Numbers

Consumer Price Index.—(i) *General.* The index has been compiled for each quarter from September quarter, 1948, and for each year from 1948-49. "All Groups" index numbers and "Group" index numbers for each of the five major groups are compiled and published regularly for the six State capital cities separately and combined and for Canberra. The reference base for each of these indexes is: year 1952-53 = 100 0. Figures appearing after the decimal point possess little significance for general statistical purposes. They are inserted to avoid distortions that would occur in rounding off the figures to the nearest whole number.

Index numbers for each quarter are first issued in mimeographed statistical bulletins available from the Commonwealth Statistician about three weeks after the end of the quarter. These bulletins contain comment on the index and on significant price movements in that quarter. Tables showing index numbers for preceding quarters and years are presented.

(ii) *Consumer Price Index Numbers.* The following table shows Consumer Price Index Numbers (Total All Groups), for the six State capital cities separately and combined and for Canberra, for periods from the year 1948-49.

CONSUMER PRICE INDEX: ALL GROUPS INDEX NUMBERS

SIX STATE CAPITAL CITIES AND CANBERRA.

(Base of each Index: Year 1952-53 = 100.0)

NOTE.—The separate city indexes measure price movements within each city individually. They do not compare price levels as between cities.

Period	State Capital Cities—separately and combined							Canberra (b)
	Six State Capital Cities(a)	Sydney	Mel- bourne	Bris- bane	Adel- aide	Perth	Hobart	
Year ended June—								
1949	60.9	60.5	61.0	62.1	61.6	60.6	60.7	60.4
1950	66.0	65.6	66.2	67.1	66.2	66.2	64.7	65.1
1951	74.6	74.5	74.6	75.1	74.7	74.4	73.3	74.0
1952	91.4	91.9	91.0	91.8	91.4	90.4	90.4	91.1
1953	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1954	102.0	101.6	102.0	102.0	102.3	103.0	105.0	102.9
1955	102.6	102.3	102.0	102.9	103.5	105.2	104.9	104.2
1956	106.9	105.7	108.1	106.3	106.9	107.9	110.2	107.8
1957	113.1	112.9	114.0	112.0	111.1	112.9	116.9	113.3
1958	114.2	114.5	114.4	114.4	111.9	113.6	117.0	114.0
1959	116.0	115.3	116.6	118.2	114.5	114.7	118.7	115.4
1960	118.9	117.8	120.0	121.2	118.0	116.9	120.8	117.8
1961	123.8	122.1	125.9	125.4	122.9	121.2	127.5	121.4
1962	124.3	122.6	126.3	127.3	122.5	121.6	128.1	123.1
1963	124.5	123.2	126.2	127.7	122.1	122.2	128.0	123.4
1964	125.7	124.5	127.1	129.0	123.5	123.8	129.4	124.3
Quarter—								
1962—March ..	124.1	122.4	125.9	127.7	122.1	121.5	127.5	123.3
June	124.0	122.3	125.9	127.3	121.9	121.8	127.5	123.1
September ..	124.3	122.7	126.2	127.5	121.9	122.1	127.6	123.4
December ..	124.4	123.2	126.2	127.6	121.9	121.7	128.2	123.7
1963—March ..	124.5	123.3	126.0	127.8	121.9	122.3	128.0	123.2
June	124.9	123.7	126.4	127.9	122.5	122.8	128.2	123.4
September ..	125.1	123.7	126.7	128.4	122.8	122.7	128.8	124.1
December ..	125.0	123.9	126.4	128.2	122.7	123.1	129.0	123.8
1964—March ..	125.8	124.6	127.1	129.2	123.5	124.2	129.8	124.2
June	127.0	125.8	128.3	130.2	125.1	125.3	130.1	125.1
September ..	128.5	127.3	129.6	131.9	126.9	126.6	131.7	126.6
December ..	130.0	128.4	131.8	133.4	128.6	126.6	133.4	128.0

(a) Weighted average. (b) The initial publication of index numbers and descriptive material for Canberra was made in Statistical Bulletin S.B. 29 of 4th September, 1964.

The following table shows Consumer Price Index Group Index Numbers for the six State capital cities combined for periods from the year 1948-49.

CONSUMER PRICE INDEX: GROUP INDEX NUMBERS

WEIGHTED AVERAGE OF SIX STATE CAPITAL CITIES

(Base of each Index: Year 1952-53 = 100.0)

NOTE.—The group indexes measure price movements of each group individually, and compare the degree of price change in the different groups.

Period	Food	Clothing and Drapery	Housing	Household Supplies and Equipment	Miscellaneous	All Groups
Year ended June—						
1949	54.1	58.4	72.5	67.0	66.6	60.9
1950	58.6	67.4	76.1	71.1	69.6	66.0
1951	68.6	77.8	81.0	78.1	76.3	74.6
1952	89.9	93.5	89.1	92.9	92.3	91.4
1953	100.0	100.0	100.0	100.0	100.0	100.0
1954	103.5	100.7	104.8	101.6	99.9	102.0
1955	104.3	101.0	108.4	101.4	99.9	102.6
1956	110.2	102.0	115.1	101.6	105.9	106.9
1957	115.3	103.9	122.1	105.8	118.0	113.1
1958	113.3	107.0	127.3	107.5	119.7	114.2
1959	115.4	108.2	130.6	108.7	121.2	116.0
1960	119.8	109.4	135.2	109.8	123.9	118.9
1961	127.7	111.6	144.8	111.2	127.3	123.8
1962	125.5	112.8	150.7	112.7	128.1	124.3
1963	124.3	113.2	155.0	112.4	128.8	124.5
1964	126.0	114.0	159.6	111.0	129.9	125.7
Quarter—						
1960—March ..	120.3	109.5	134.8	110.0	123.8	119.0
June ..	122.6	110.5	139.4	110.2	126.4	121.1
September	126.0	110.7	141.4	110.6	126.7	122.5
December	126.7	111.5	144.1	111.0	127.2	123.3
1961—March ..	128.6	111.7	145.7	111.3	127.5	124.2
June ..	129.4	112.4	148.0	111.9	127.7	125.0
September	128.1	112.4	148.5	112.6	127.9	124.8
December	125.3	112.9	150.5	112.7	128.3	124.3
1962—March ..	124.7	112.9	151.0	112.7	128.0	124.1
June ..	123.7	112.9	152.6	112.8	128.2	124.0
September	124.2	113.0	153.3	112.8	128.4	124.3
December	124.3	113.2	154.7	112.4	128.7	124.4
1963—March ..	124.1	113.2	155.3	112.1	129.0	124.5
June ..	124.5	113.4	156.8	112.4	129.2	124.9
September	125.0	113.7	157.9	110.6	129.7	125.1
December	124.5	113.7	159.0	110.8	129.5	125.0
1964—March ..	126.0	113.8	159.9	111.1	130.1	125.8
June ..	128.5	114.6	161.7	111.4	130.3	127.0
September	130.7	115.0	163.0	110.7	133.1	128.5
December	132.1	115.4	164.4	111.3	136.5	130.0

The following table shows Consumer Price Index Group Index Numbers for each State capital city and for Canberra for recent years and quarters.

CONSUMER PRICE INDEX: GROUP INDEX NUMBERS

(Base of each Index: Year 1952-53 = 100.0)

NOTE.—The index numbers hereunder are designed to measure movements 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.

City	Year ended June—						1964			
	1949	1953	1961	1962	1963	1964	Mar. Qtr	June Qtr	Sept. Qtr	Dec. Qtr
FOOD GROUP										
Six State Capitals(a)	54.1	100.0	127.7	125.5	124.3	126.0	126.0	128.5	130.7	132.1
Sydney ..	52.2	100.0	124.4	121.9	121.1	122.6	122.7	125.0	127.5	128.5
Melbourne ..	54.9	100.0	130.2	127.8	126.0	127.2	127.0	129.5	131.6	133.5
Brisbane ..	56.4	100.0	130.4	130.8	129.8	133.1	133.6	136.1	138.0	140.3
Adelaide ..	56.1	100.0	132.2	127.6	126.0	129.1	129.1	132.4	133.6	136.6
Perth ..	55.0	100.0	124.4	123.5	123.9	125.4	125.0	128.3	130.3	128.4
Hobart ..	56.0	100.0	132.1	129.0	127.2	128.8	129.1	129.5	131.6	134.2
Canberra(b) ..	51.9	100.0	128.5	124.6	122.3	123.2	123.2	124.8	127.2	128.7
CLOTHING AND DRAPERY GROUP										
Six State Capitals(a)	58.4	100.0	111.6	112.8	113.2	114.0	113.8	114.6	115.0	115.4
Sydney ..	58.0	100.0	110.3	111.4	111.8	112.5	112.4	113.1	113.6	113.9
Melbourne ..	58.6	100.0	112.8	114.0	114.4	115.2	115.0	115.8	116.3	116.6
Brisbane ..	59.2	100.0	115.1	116.7	117.0	117.8	117.7	118.4	118.8	119.2
Adelaide ..	58.3	100.0	109.5	111.2	111.7	112.8	112.6	113.6	113.8	114.2
Perth ..	59.6	100.0	110.8	111.7	112.0	112.8	112.8	113.2	113.6	113.9
Hobart ..	58.0	100.0	112.4	114.0	114.5	115.1	114.9	115.7	116.1	116.4
Canberra(b) ..	57.8	100.0	109.4	110.5	111.0	111.5	111.4	112.1	112.5	112.9
HOUSING GROUP										
Six State Capitals(a)	72.5	100.0	144.8	150.7	155.0	159.6	159.9	161.7	163.0	164.4
Sydney ..	74.2	100.0	140.7	147.5	153.4	160.1	160.4	163.3	165.0	166.2
Melbourne ..	76.0	100.0	151.2	157.5	161.1	164.5	164.6	166.0	166.9	167.9
Brisbane ..	67.1	100.0	137.6	140.5	144.0	145.2	145.2	145.4	147.2	148.7
Adelaide ..	68.7	100.0	148.7	153.5	154.9	158.5	158.9	160.3	161.9	164.5
Perth ..	62.7	100.0	141.7	146.4	150.9	155.9	156.8	157.8	158.1	159.9
Hobart ..	70.3	100.0	156.6	163.8	168.7	174.0	175.7	175.9	176.4	180.9
Canberra(b) ..	70.9	100.0	127.6	153.7	162.2	162.6	162.7	162.9	163.3	164.4
HOUSEHOLD SUPPLIES AND EQUIPMENT GROUP										
Six State Capitals(a)	67.0	100.0	111.2	112.7	112.4	111.0	111.1	111.4	110.7	111.3
Sydney ..	67.0	100.0	111.5	113.2	112.8	111.3	111.6	111.5	110.3	110.8
Melbourne ..	66.1	100.0	112.5	114.1	114.0	112.6	112.7	113.2	112.6	113.5
Brisbane ..	68.6	100.0	111.3	113.0	112.8	111.7	111.7	112.3	112.3	112.8
Adelaide ..	69.5	100.0	106.1	106.7	106.2	104.4	104.5	104.8	104.7	104.6
Perth ..	66.5	100.0	107.3	107.3	107.0	105.2	105.2	105.7	105.8	106.2
Hobart ..	68.1	100.0	121.1	124.3	123.8	123.8	123.8	124.1	124.4	124.3
Canberra(b) ..	69.8	100.0	116.6	114.0	113.2	112.8	112.3	113.1	113.0	113.5
MISCELLANEOUS GROUP										
Six State Capitals(a)	66.6	100.0	127.3	128.1	128.8	129.9	130.1	130.3	133.1	136.5
Sydney ..	67.7	100.0	127.1	127.9	129.3	130.0	130.1	130.4	133.1	135.5
Melbourne ..	64.4	100.0	129.2	129.3	129.7	130.8	131.0	131.2	133.5	139.4
Brisbane ..	69.2	100.0	129.5	133.3	134.4	135.2	135.4	135.3	138.6	140.7
Adelaide ..	67.2	100.0	121.4	121.9	121.6	122.3	122.4	122.9	128.0	130.0
Perth ..	67.7	100.0	125.2	125.3	125.5	128.5	130.3	129.3	131.5	133.2
Hobart ..	63.1	100.0	126.2	127.0	127.0	128.2	128.7	128.8	131.8	133.5
Canberra(b) ..	69.7	100.0	121.0	121.6	121.7	124.1	124.0	124.1	126.8	129.6

(a) Weighted average. (b) The initial publication of index numbers and descriptive material for Canberra was made in Statistical Bulletin S.B. 29 of 4th September, 1964.

§ 5. Retail Price Index Numbers, 1901 to 1964

The index numbers shown below are presented as a continuous series, but they give only a broad indication of long-term trends in retail price levels. They are derived by linking a number of indexes that differ greatly in scope. The successive indexes used are: from 1901 to 1914, the "A" Series Retail Price Index; from 1914 to 1946-47, the "C" Series Retail Price Index; from 1946-47 to 1948-49, a composite of Consumer Price Index Housing Group (partly estimated) and "C" Series Index excluding Rent; and from 1948-49 to 1964, the Consumer Price Index.

RETAIL PRICE INDEX NUMBERS, 1901 TO 1964

SIX STATE CAPITAL CITIES COMBINED

(Base: Year 1911 = 100)

Year	Index number	Year	Index number
1901	88	1933	133
1902	93	1934	136
1903	91	1935	138
1904	86	1936	141
1905	90	1937	145
1906	90	1938	149
1907	90	1939	153
1908	95	1940	159
1909	95	1941	167
1910	97	1942	181
1911	100	1943	188
1912	110	1944	187
1913	110	1945	187
1914(a)	114	1946	190
1915(a)	130	1947	198
1916(a)	132	1948	218
1917(a)	141	1949	240
1918(a)	150	1950	262
1919(a)	170	1951	313
1920(a)	193	1952	367
1921(a)	168	1953	383
1922(a)	162	1954	386
1923	166	1955	394
1924	164	1956	419
1925	165	1957	429
1926	168	1958	435
1927	166	1959	443
1928	167	1960	459
1929	171	1961	471
1930	162	1962	469
1931	145	1963	472
1932	138	1964	483

(a) November.

§ 6. International Comparisons

The following table shows index numbers of consumer (retail) prices for various countries. Except where otherwise noted, the year 1958 is taken as base (= 100). The index numbers show fluctuations in prices in each country, and do not measure relative price levels as between countries.

INDEX NUMBERS OF CONSUMER (RETAIL) PRICES IN VARIOUS COUNTRIES

(Source: Monthly Bulletin of Statistics of the Statistical Office of the United Nations)

(Base: 1958 = 100)

ALL GROUPS INDEXES

Period	Argentina (Buenos Aires)	Australia (a)	Belgium	Brazil (Sao Paulo)	Canada	France (b)	Germany, Federal Republic	India	Indonesia (Djaka- rta)	Ireland	Italy
1956 ..	60	96	96	73	94	85	96	90	..	92	96
1957 ..	76	99	99	87	97	87	98	95	..	96	97
1958 ..	100	100	100	100	100	100	100	100	(c) 100	100	100
1959 ..	214	102	101	137	101	106	101	104	126	100	100
1960 ..	-272	106	102	185	102	110	102	106	169	100	102
1961 ..	309	108	103	256	103	114	105	108	209	103	104
1962 ..	396	108	104	390	104	119	108	112	582	108	109
1963 ..	r-491	109	106	r675	106	105	111	115	1,254	110	117
1964 ..	601	111	111	1,266	108	108	114				124
1964—											
March qtr.	568	109	109	1,003	108	107	113	122	2,294	113	121
June ..	590	111	110	1,150	108	108	114	126	2,130	117	123
Sept. ..	599	112	112	1,355	109	108	114	134		118	125
Dec. ..	645	113	112	1,556	109	109	115			120	127

Period	Japan	Nether- lands	New Zea- land	Norway	Pakistan (Kara- chi)	Philip- pines (Manila)	Republic of South Africa (d)	Sweden	Switzer- land	United King- dom	United States of America
1956 ..	97	92	94	93	89	95	94	91	96	-94	94
1957 ..	100	98	96	95	97	97	97	95	98	97	97
1958 ..	100	100	100	100	100	100	-100	100	100	100	100
1959 ..	101	102	104	-102	97	99	101	101	99	101	101
1960 ..	105	102	105	102	103	103	103	105	101	102	102
1961 ..	110	105	106	105	105	105	105	107	103	105	103
1962 ..	118	108	109	111	104	111	106	112	107	-110	105
1963 ..	127	-113	111	114	105	117	107	115	111	112	106
1964 ..		119	115	120	110		110	119	114	115	107
1964—											
March qtr.	128	116	113	118	108	123	108	117	113	113	107
June ..	131	120	114	119	108	123	109	118	114	115	107
Sept. ..	132	120	116	122	111	129	111	120	115	116	108
Dec. ..		120	118	122	112		112	121	115	117	108

(a) Consumer Price Index converted to base 1958 = 100 by Commonwealth Statistician. (b) Beginning 1963, new index—base: 1962 = 100. Before 1963, index for Paris. (c) Base: Average of March–December, 1958 = 100. (d) Index for Europeans only.

NOTE.—Symbol - on each side of an index number (e.g. -95-) indicates that two series have been linked at that period. Symbol — between two index numbers indicates that it is not possible to link two series (because of change in scope, etc.) and therefore the index numbers are not comparable with each other even though they are shown on the same base period.

WHOLESALE PRICES AND PRICE INDEXES

§ 1. General

Three 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;
- (iii) Wholesale Prices—Price Index of Electrical Installation Materials.

A brief note on the Melbourne Wholesale Price Index, which is now obsolete, is given in § 3 on page 420. After reviewing the list of items and weighting of the Melbourne Wholesale Price 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, is compiled monthly and extends back to 1928. The index Wholesale Prices—Price Index of Electrical Installation Materials was first published in Statistical Bulletin 71 of 11th November, 1964.

§ 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 prices of imported goods are 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 420.

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 1963–64 contributed by each group was as follows:—Metals and coal, 16.92; oils, fats and waxes, 7.84; textiles, 3.64; chemicals, 3.36; rubber and hides, 1.29; building materials, 11.65; foodstuffs and tobacco, 55.30. Goods principally imported comprised 23.46 per cent. of the total aggregate in 1963–64, and goods principally home-produced, 76.54.

A full list of the commodities and the quantity-multipliers (weights) is published in *Labour Report* No. 50, 1962 and 1963, page 40.

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.

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 food stuffs are given in the following table. Current index numbers, on the base: Average of three years ended June, 1939 = 100 are published monthly in the mimeographed statistical bulletin *Wholesale Price (Basic Materials and Foodstuffs) Index* and in the *Monthly Review of Business Statistics*. A table showing index numbers computed to the base 1928 = 100 is published in the *Labour Report*.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS

(Base of each Index: Average of 3 years ended June, 1939 = 100)

Period	Basic Materials							Food-stuffs and Tobacco (a)	Basic Materials and Foodstuffs		
	Metals and Coal	Oils, Fats and Waxes	Textiles	Chemicals	Rubber and Hides	Building Materials	Total		Goods principally imported (b)	Goods principally home produced (a)	Total, All Groups (a)
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
1957-58	398	238	437	349	280	453	355	325	301	355	339
1958-59	392	231	362	327	293	423	340	332	283	358	336
1959-60	395	225	403	331	379	431	347	348	281	375	348
1960-61	399	222	387	331	341	439	346	372	278	394	360
1961-62	392	212	400	333	302	439	340	332	270	363	336
1962-63	388	209	432	317	262	439	336	342	272	368	340
1963-64	383	207	484	286	221	473	339	352	275	376	346
1964-65—											
July	386	205	463	285	233	496	343	367	279	389	356
August	389	206	464	285	236	498	345	367	278	390	357
September	385	206	455	285	237	498	343	366	276	389	356
October	385	206	447	285	238	501	344	361	276	385	353
November	383	207	441	285	246	505	344	361	278	382	351
December	385	207	422	285	251	505	344	359	277	383	352
January	392	207	412	285	245	505	345	p362	p278	386	p354
February	394	208	416	288	238	505	346	p360	p276	386	p353

(a) Excludes potatoes and onions from 1936-37. (b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in the prices of all imports.

§ 3. Melbourne Wholesale Price Index

An index of Melbourne wholesale prices was first compiled in 1912. It related chiefly to basic materials and foods weighted in accordance with consumption in the years immediately preceding that date. Neither the list of items nor the weighting was varied, except for some changes in the building materials group in 1949. The series has some historical significance as a measure of changes in the prices, since the year 1861, of its component items combined in the proportions in which they were in common use about the year 1910. A description of the index and a list of the commodities included in it were published in *Labour Report* No. 38, 1949, pages 43-45. Index numbers up to the year 1961, the last period for which the index was compiled, were published in *Year Book* No. 48, 1962.

EXPORT PRICES AND PRICE INDEXES

§ 1. Previous Export Price Indexes

1. **1901 to 1917.**—An annual index of export prices has been published by the 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 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 recorded value of these exports for the year concerned and the result (multiplied by 1,000) was the export price index number for that year.

2. **1918 to 1930.**—The method was changed in 1918. Weights for all principal exports were calculated, based 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. This index was published for the years 1897 to 1929-30. Particulars of this index were last published in Year Book No. 24, page 147.

3. **1928 to 1962.**—(i) *General.* After the 1914-18 War, the relative importance of different exports changed considerably, and the pattern of exports varied considerably from year to year. For these reasons, two new series of monthly export price indexes—one using fixed weights and the other using changing weights—were published in 1937, compiled back to 1928. The data on which both series were based differed from those used in the previous series of annual index numbers. The most important change was the use of actual (or calculated) export prices in place of the "unit values" declared at the Customs. Brief notes on these two indexes are given below. A full description of both indexes was last published in Year Book No. 48, 1962, pages 500-4.

(ii) *The Fixed Weights Index.* This was a weighted aggregative index of price variations. It was compiled back to 1928, with that year taken as base. In later years it was published on the base: Average of three years ended June, 1939 = 100. The original weights (used for the period 1928 to 1936) were 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 were based on average annual exports (production in the case of gold) during the three years 1933-34 to 1935-36. This index was published from 1937 until July, 1962, after which it was replaced by the current Export Price Index described in § 2 below.

(iii) *The Changing Weights Index.* This index was designed for shorter period comparisons—from one or more months of the current year to the corresponding months of the previous year. In computing these index numbers, the "quantity multipliers" were the quantities actually exported (sold, in some cases) in the months (or periods) to which the index numbers relate. This index was discontinued in 1962.

§ 2. The Current Export Price Index

1. **General.**—The current Export Price Index was first published in October, 1962, but index numbers were compiled back to July, 1959. The reference base of this index is: Year 1959-60 = 100. This index is a fixed-weights index, and its purpose (as was that of the previous fixed-weights index) is to provide comparisons monthly, over a limited number of years, of the level of export prices of the selected items, making no allowance for variations in quantities exported. The index numbers are thus measures of price change only. The price series used in the index relate to specified standards for each commodity and in most cases are combinations of prices for a number of representative grades, types, etc. For some commodities, price movements in the predominant market, or markets, are used, while for other commodities average realizations in all export markets are used. As nearly as possible, prices used are on the basis f.o.b. at the main Australian ports of export. The index is compiled by the method known as "weighted average of price relatives".

2. **Composition and Weighting.**—There are 29 items in the current index compared with 20 items in the previous index. These 29 items have constituted approximately 83 per cent. of the total value of Australian exports in recent years. (The 20 items in the previous index, which in pre-war years constituted about 85 per cent. of total exports, and for most of the post-war period averaged about 80 per cent. of total exports, constituted about 73 per cent. of total exports during the last years for which the index was compiled.) The weights for the current index are based on average annual values of exports during the five

years 1956-57 to 1960-61, whereas the weights for the previous index were based on average annual exports during the three years 1933-34 to 1935-36. A comparison of the old and new indexes, showing percentage contributions of the various items to the total index in the year 1959-60, is set out in the table below.

COMPARISON OF PREVIOUS AND CURRENT EXPORT PRICE INDEXES
PERCENTAGE CONTRIBUTION OF ITEMS TO ALL GROUPS INDEXES IN 1959-60

Item	Percentage contribution to All Groups Index	
	Previous Index	Current Index
Wool	51.24	50.73
Beef	4.68	6.71
Lamb	2.22	0.76
Mutton	0.36	0.59
Pork	0.32	(a)
Canned beef	(a)	1.65
Canned mutton	(a)	0.21
Processed milk	(a)	1.36
Butter	9.46	4.02
Cheese	(a)	0.64
Eggs	(a)	0.47
Wheat and flour	15.02	10.11
Barley	(a)	1.77
Oats	(a)	0.66
Sultanas	1.21	1.06
Raisins	0.10	(b)
Currants	0.35	0.12
Canned pineapples	(a)	0.20
Canned apricots	(a)	0.11
Canned peaches	(a)	0.37
Canned pears	(a)	0.68
Sugar	2.89	3.99
Cattle hides	0.55	0.72
Calf skins	0.09	(c)
Tallow	0.51	0.54
Coal	(a)	0.63
Iron and steel	(a)	3.48
Copper	0.27	1.57
Tin	0.27	(a)
Zinc	2.50	1.23
Lead	4.07	2.97
Silver	0.61	0.66
Gold	3.28	1.99
Total	100.00	100.00

(a) Not included. (b) Included in weight for sultanas. (c) Included in weight for cattle hides.

The following table sets out a list of the items, and groups of items, in the new index, together with the percentage contribution of each item and group to the All Groups index in the reference base year 1959-60. The weights used for some of the items are adjusted to cover some related commodities which are not priced directly. The most important instances of this are wool, which includes wool exported on sheepskins, and copper, zinc, lead and silver, which include the estimated metallic content of ores and concentrates exported. In the previous index, the weight for gold was derived from production instead of export figures. For the period 1956-57 to 1960-61, production and exports of gold were similar, and therefore in the new index the weight for gold (as for the other items) is based on average annual exports during the period.

EXPORT PRICE INDEX

LIST OF ITEMS AND PERCENTAGE CONTRIBUTION OF ITEMS AND GROUPS TO
ALL GROUPS INDEX IN 1959-60

Group and item	Percentage contribution to All Groups Index
<i>Wool</i>	50.73
Meats—	
Beef	6.71
Lamb	0.76
Mutton	0.59
Canned—Beef	1.65
Mutton	0.21
<i>Total, Meats</i>	9.92
Dairy Produce—	
Processed milk	1.36
Butter	4.02
Cheese	0.64
Eggs	0.47
<i>Total, Dairy Produce</i>	6.49
Cereals—	
Wheat and flour	10.11
Barley	1.77
Oats	0.66
<i>Total, Cereals</i>	12.54
Dried and Canned Fruits—	
Dried—Sultanas	1.06
Currants	0.12
Canned—Pineapples	0.20
Apricots	0.11
Peaches	0.37
Pears	0.68
<i>Total, Dried and Canned Fruits</i>	2.54
<i>Sugar</i>	3.99
Hides and Tallow—	
Cattle hides	0.72
Tallow	0.54
<i>Total, Hides and Tallow</i>	1.26
Metals and Coal—	
Coal	0.63
Iron and steel	3.48
Copper	1.57
Zinc	1.23
Lead	2.97
Silver	0.66
<i>Total, Metals and Coal</i>	10.54
<i>Gold</i>	1.99
Total	100.00

3. Index Numbers.—Index numbers for each of the groups and "All Groups" are shown in the table below. The yearly index numbers are simple averages of the twelve monthly index numbers in each year.

EXPORT PRICE INDEX NUMBERS

(Base of each Index: Year 1959-60 = 100)

Period	Wool	Meats	Dairy Produce	Cereals	Dried and Canned Fruits	Sugar	Hides and Tallow	Metals and Coal	Gold	All Groups
1959-60 ..	100	100	100	100	100	100	100	100	100	100
1960-61 ..	92	104	82	99	99	101	92	97	100	95
1961-62 ..	97	100	81	106	95	91	84	91	100	96
1962-63 ..	104	101	88	107	90	107	72	89	100	101
1963-64 ..	120	105	93	107	p98	175	73	101	100	p114
1961-62—										
July ..	(a) 99	101	78	100	100	110	90	93	100	98
August ..	99	101	78	101	98	102	92	93	101	98
September ..	98	100	78	101	98	94	90	91	100	96
October ..	94	103	77	102	96	90	86	90	100	94
November ..	92	100	79	102	95	87	83	91	100	93
December ..	92	99	84	105	96	89	83	91	100	94
January ..	92	101	83	107	95	87	83	90	100	94
February ..	98	101	83	108	93	82	82	91	100	97
March ..	99	97	83	107	93	84	81	91	100	97
April ..	99	97	82	111	93	90	81	90	100	98
May ..	99	97	82	112	93	85	79	90	100	98
June ..	99	97	86	112	92	87	78	90	100	98
1962-63—										
July ..	98	99	85	112	90	86	76	89	100	97
August ..	92	101	85	112	91	88	75	86	100	94
September ..	92	102	85	111	91	86	74	87	100	94
October ..	96	102	85	109	91	92	74	86	100	96
November ..	98	102	88	110	91	91	74	88	100	97
December ..	101	101	88	105	91	94	74	88	100	98
January ..	112	101	88	105	91	93	73	88	100	104
February ..	110	101	88	104	91	109	70	91	100	104
March ..	112	99	90	104	89	128	69	91	100	105
April ..	112	98	90	104	88	121	69	91	100	105
May ..	112	100	90	104	88	128	68	90	100	105
June ..	115	102	93	103	89	165	68	95	100	109
1963-64—										
July ..	114	103	94	103	92	164	67	94	100	109
August ..	110	103	94	102	94	165	66	96	100	107
September ..	112	105	94	102	97	159	64	94	100	108
October ..	117	105	94	107	98	163	68	96	100	111
November ..	128	103	94	107	99	198	74	96	100	118
December ..	126	100	94	109	100	187	74	101	100	117
January ..	128	99	92	111	100	205	73	104	100	119
February ..	130	101	91	111	100	191	73	104	100	120
March ..	130	106	91	109	98	192	74	103	100	120
April ..	121	111	92	109	99	165	78	106	100	115
May ..	110	113	92	108	p99	166	79	111	100	p110
June ..	112	110	92	108	p101	146	81	111	100	p110
1964-65—										
July ..	112	109	92	109	p101	139	81	114	100	p110
August ..	112	110	92	110	p100	122	83	117	100	p110
September ..	110	109	92	111	p100	113	85	119	101	p109
October ..	108	110	93	112	p100	104	87	123	101	p109
November ..	107	110	95	110	p100	102	89	126	101	p108
December ..	101	p111	95	104	p100	94	90	126	101	p104
January ..	98	p112	95	106	p100	p82	90	p124	101	p102
February ..	99	p111	95	104	p100	p78	93	p128	101	p103

(a) Nominal.

4. Link between Current and Previous Indexes.—In order to show approximate movements in export prices over a long period, the "All Groups" indexes of the previous and current series have been linked together at the year 1959-60, the earliest year for which the new index has been compiled. The table below shows this linked series and a long-term price index for wool, which is the most important single component in the movement of the "All Groups" index.

EXPORT PRICE INDEX NUMBERS—LINKED SERIES

(Base of each Index: Year 1959-60 = 100)

Period							Wool	All Groups
1936-37	..	..	..	..	..	..	29	30
1937-38	..	..	..	..	..	..	23	27
1938-39	..	..	..	..	..	..	19	22
1939-40	..	..	..	..	..	..	23	26
1940-41	..	..	..	..	..	..	24	28
1941-42	..	..	..	..	..	..	24	28
1942-43	..	..	..	..	..	..	28	30
1943-44	..	..	..	..	..	..	28	31
1944-45	..	..	..	..	..	..	28	34
1945-46	..	..	..	..	..	..	28	39
1946-47	..	..	..	..	..	..	41	54
1947-48	..	..	..	..	..	..	68	75
1948-49	..	..	..	..	..	..	86	88
1949-50	..	..	..	..	..	..	111	101
1950-51	..	..	..	..	..	..	235	173
1951-52	..	..	..	..	..	..	133	125
1952-53	..	..	..	..	..	..	145	128
1953-54	..	..	..	..	..	..	145	125
1954-55	..	..	..	..	..	..	127	114
1955-56	..	..	..	..	..	..	109	105
1956-57	..	..	..	..	..	..	136	117
1957-58	..	..	..	..	..	..	111	102
1958-59	..	..	..	..	..	..	85	90
1959-60	..	..	..	..	..	..	100	100
1960-61	..	..	..	..	..	..	92	95
1961-62	..	..	..	..	..	..	97	96
1962-63	..	..	..	..	..	..	104	101
1963-64	..	..	..	..	..	..	120	p114
1964-65—								
July	..	..	..	..	..	..	112	p 110
August	..	..	..	..	..	..	112	p 110
September	..	..	..	..	..	..	110	p 109
October	..	..	..	..	..	..	108	p 109
November	..	..	..	..	..	..	107	p 108
December	..	..	..	..	..	..	101	p 104
January	..	..	..	..	..	..	98	p 102
February	..	..	..	..	..	..	99	p 103

CONTROL OF PRICES DURING AND SINCE THE 1939-45 WAR

An account of the measures taken by the Commonwealth Government to control prices from September, 1939, until 29th May, 1948 (the date of the Prices Referendum), was given in Year Book No. 37, pages 458-64. Subsequent measures for price control by the States consequent upon the rejection of the proposal in the Prices Referendum of 29th May, 1948, that permanent power to control rents and prices be conferred on the Commonwealth Government, are described in issues up to No. 49. Particulars of the amounts expended by the Commonwealth Government for the purpose of stabilizing prices are given in Year Book No. 38, page 414, and in later issues.

WAGES, EARNINGS AND HOURS

§ 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 other conditions of employment were first compiled for the year 1913, and revised particulars have appeared annually in the *Labour Report* and in issues of the Year Book prior to No. 38. A summary of the Commonwealth legislation and brief particulars of Commonwealth and State industrial tribunals are given in the following paragraphs.

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 1904–1964*.

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 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 1920–1960* 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 (No. 44 of 1956) assented to on 30th June, 1956. This amendment altered the structure of the arbitration machinery by separating the judicial functions from the conciliation and arbitration functions. The Commonwealth Industrial Court was established to deal with judicial matters under the Act, and the Commonwealth Conciliation and Arbitration Commission to handle the functions of conciliation and arbitration. A summary of the provisions of the *Conciliation and Arbitration Act 1904–1964* is given in the following paragraphs.

The Commonwealth Industrial Court is at present composed of a Chief Judge and four other Judges. The jurisdiction of the 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, questions concerning eligibility of membership 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 Act 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 for the Commission to exercise the powers of the Court with regard to an application for cancellation of registration of an organization. Any such change of jurisdiction must be notified by proclamation. This provision could be used if the powers of the Court in this regard were declared, in whole or in part, to be invalid.

Special provision is 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 decisions by other Courts to the Industrial Court, on matters arising under this Act or the *Public Service Arbitration Act 1920–1960*, the parties may, if they wish and the Court grants leave, be represented by officials.

The Commonwealth Conciliation and Arbitration Commission at the end of 1964 was composed of a President, five Deputy Presidents, a Senior Commissioner, ten Commissioners and three Conciliators. The Commission is empowered to prevent or settle industrial disputes by conciliation or arbitration, and to make suggestions and to do such things as appear right and proper for (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 of 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 and shall do so if the parties so request. If an agreement is reached, a memorandum of its terms shall be made in writing, and may be certified by the Commission. A certified memorandum shall have the same effect as an award.

Only the Commission in Presidential Session, that is, the Commission constituted by at least three presidential members nominated by the President, has the power to make awards, or to certify agreements, concerning standard hours, basic wages and long-service leave.

Upon application by a party to an industrial dispute, a Commissioner shall consult with the President as to whether in the public interest any matter in dispute should be dealt with by a Commission constituted by not less than three members nominated by the President, at least one of whom shall be a presidential member and one, where practicable, the Commissioner concerned. The President may direct the Commission to hear the matter in dispute; however, after consideration, the Commission may refer the matter in 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 shall be presidential members of the Commission. However, an appeal will not be heard unless the Commission considers it is necessary as a matter of public interest. The President, after taking account of the views of the parties to a dispute, may appoint a member of the Commission to take evidence on behalf of a presidential bench of the Commission, so that it may have this evidence before it when it commences its hearing.

Full benches of the Commission not constituted by the same persons may sit in joint session at the direction of the President when he considers it desirable and has the opinion that a question is common to the matters before those benches. A joint session may be held whether the benches concerned are constituted pursuant to the Conciliation and Arbitration Act or the Public Service Arbitration Act, and whether they are constituted to hear references or appeals. However, it is left to each appropriate full bench to determine any of the matters before it.

Provision is also made in the Act for a presidential member of the Commission to handle industrial matters in connexion with the maritime industries, the Snowy Mountains Area and the stevedoring industry, except in those matters for which the Act requires that the Commission shall be constituted by more than one member.

The Commonwealth Conciliation and Arbitration Commission also deals 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 places employees of Commonwealth projects, so declared, under the jurisdiction of the Commission. The Minister has the power to exempt certain persons or classes of persons working on these projects from the jurisdiction of the Commission.

The Commission may 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 three of the *Public Service Arbitration Act* 1920-1960, not being the *Commonwealth Employees' Compensation Act* 1930-1964, the *Commonwealth Employees' Furlough Act* 1943-1959, the *Superannuation Act* 1922-1963 or any other prescribed Act.

The Act provides that where a State law, or an order, award, decision or determination of a State industrial authority is inconsistent with or deals with a matter dealt with in an award of the Commission, the latter shall prevail, and the former, to the extent of the inconsistency or in relation to the matter dealt with, shall be invalid.

For further particulars regarding Commonwealth arbitration legislation, see the annual *Labour Report*.

For information concerning the Australian Stevedoring Industry Authority and the Coal Industry Tribunal see the Transport and Communication chapter and the Mineral Industry chapter respectively of this Year Book, and for further information on the Commonwealth Public Service Arbitrator see the *Labour Report*.

3. States.—In each State, Industrial Tribunals have been established to regulate and arbitrate in industrial matters. Brief particulars are given in the following paragraphs.

(i) *New South Wales*. The controlling authority is the Industrial Commission of New South Wales, consisting of a President and seven other Judges. Subsidiary tribunals are the Conciliation Commissioners, the Apprenticeship Commissioner, Conciliation Committees and Apprenticeship Councils constituted for particular industries. Each Conciliation Committee consists of a Conciliation Commissioner as Chairman and equal numbers of representatives of employers and employees. The Apprenticeship Commissioner and the members of the Conciliation Committee for an industry constitute the Apprenticeship Council for the industry. These subsidiary tribunals may make awards binding on industries, but an appeal to the Industrial Commission may be made against any award. Special Commissioners with conciliatory powers and limited arbitration powers may be appointed. Compulsory control commenced in 1901, after the earlier Acts of 1892 and 1899 providing for voluntary submission of matters in dispute had proved abortive.

(ii) *Victoria*. The authorities are separate Wages Boards for the occupations and industries covered, each consisting of a chairman and equal numbers of representatives of employers and employees, and a Court of Industrial Appeals, the latter presided over by a Judge of the County Court. The system was instituted in the State in 1896, and represented the first example in Australia of legal regulation of wage rates.

(iii) *Queensland*. Legal control was first instituted in 1907 with the passing of the Wages Board Act. "The Industrial Conciliation and Arbitration Act of 1961" established the Industrial Conciliation and Arbitration Commission and preserved and continued in existence the Industrial Court. The Industrial Court is constituted by the President (a Judge of the Supreme Court of Queensland) sitting alone, and the Full Industrial Court by the President and two Commissioners. The Conciliation and Arbitration Commission is constituted by a Commissioner sitting alone; and the Full Bench of the Commission by at least three Commissioners. Not more than five Commissioners shall be appointed. A Commissioner shall not be capable of being a member of the Executive Council or of the Legislative Assembly, and shall not take part in the management of any business.

(iv) *South Australia*. The principal tribunal is the Industrial Court of South Australia, composed of the President (a person eligible for appointment as a Judge of the Supreme Court) who may be joined by two assessors employed in the industry concerned; Deputy Presidents may also be appointed. There are also Industrial Boards for the various industries, consisting of a chairman and equal numbers of representatives of employers and employees. Another tribunal provided for under the Industrial Code is the Board of Industry, composed of a President, who shall be the President or a Deputy President of the Industrial Court, and four Commissioners. Broadly speaking, the functions of these three tribunals are:—(i) the Industrial Court delivers awards concerning workers who do not

come under the jurisdiction of the Industrial Boards, appoints Boards of Reference and hears appeals from decisions of Industrial Boards and Boards of Reference; (ii) the determinations of the Industrial Boards apply to most industries in the metropolitan area; however, for employees of the Public Service, Railways, and councils of a municipality or district, determinations of Industrial Boards apply to the whole of the State; (iii) the Board of Industry declares, for the whole of the State, the "living wage".

(v) *Western Australia.* Legal control dates back to 1900. The present system of control comprises a four-man Western Australian Industrial Commission and an Industrial Appeal Court consisting of three Supreme Court judges who are nominated by the Chief Justice of Western Australia. A Commissioner may, in relation to any dispute or other matter, refer such matters to the Commission in Court Session. Similarly, appeals from decisions of a single Commissioner are heard by the other three Commissioners acting as the Commission in Court Session, but such hearings are restricted to the evidence and matters raised in the proceedings before the single Commissioner. The Commission in Court Session fixes and adjusts the basic wage. Appeals from the Commission to the Industrial Appeal Court are limited to matters which are erroneous in law or in excess of jurisdiction. The Court has the power to impose penalties for disobedience of orders made by the Commission.

The Western Australian Coal Industry Tribunal, established under the *Mining Act, 1904-1963*, has power to determine any industrial matter in the coal mining industry. It consists of a chairman and four other members (two representatives each of employers and employees). Boards of reference may be appointed by the Tribunal and decisions of the Tribunal may be reviewed by the Court of Arbitration on the application of a party subject to the decision.

(vi) *Tasmania.* The authority consists of Wages Boards for separate industries, comprising a Chairman (who is common to all Wages Boards), appointed by the Governor, and equal numbers of representatives of employers and employees, appointed by the Minister administering the Act. The system was instituted in 1910.

§ 2. Rates of Wage and Hours of Work

1. *General.*—This section contains indexes (with base: year 1954 = 100) of minimum weekly and hourly rates of wage and standard hours of work for adult males and adult females for Australia and each State. In the indexes there are 15 industry groups for adult males and 8 industry groups for adult females. For relevant periods, these indexes replace cognate indexes (base: year 1911 = 1,000 for males and April, 1914 = 1,000 for females) published in Year Books before No. 46, 1960. The current indexes are based on the occupation structure existing in 1954. Weights for each industry and each occupation were derived from two sample surveys made in that year. The first was the Survey of Awards in April, 1954, which showed the number of employees covered by individual awards, determinations and agreements. This provided employee weights for each industry as well as a basis for the Survey of Award Occupations made in November, 1954. This second survey showed the number of employees in each occupation within selected awards, etc., thereby providing occupation weights.

The industrial classification used in the current indexes, shown in the table on page 431, does not differ basically from the previous classification, the alterations being largely in the arrangement of classes. The former Pastoral, Agricultural, etc., group and the Domestic part of the group Amusement, Hotels, Personal Service, etc. are excluded from the current indexes because of coverage difficulties.

The minimum wage rates and standard hours of work used in the current indexes are for representative occupations within each industry. They have been derived entirely from representative awards, determinations and agreements in force at the end of each month or quarter, commencing with March, 1939, for adult males and March, 1951, for adult females. From January, 1957, particulars for adult males have been available as at the end of each month. The index for adult males includes rates and hours for 3,424 award designations. However, as some of these designations are operative within more than one industry,

or in more than one State, the total number of individual award occupations is 2,322. For adult females, the corresponding numbers are 1,103 and 518. Using the industry and occupation weights derived from the surveys described above, these rates and hours were combined to give weighted averages for each industry group for each State and Australia. Weighted averages of the components of the total minimum weekly wage rate, i.e. basic wage, margin and loading, were calculated separately for employees covered by Commonwealth awards, etc., and for those covered by State awards, etc. (see pp. 431-3).

Because the indexes are designed to measure movements in prescribed minimum rates of "wages" as distinct from "salaries", those awards, etc., which relate solely or mainly to salary earners are excluded.

A more detailed description of the current indexes of minimum rates of wage and standard hours of work is given in the *Labour Report*, which also contains an extensive tabular presentation of the minimum rates of wage for adult males and females in the principal occupations in the capital city of each State. Further particulars of weekly wage rates and index numbers will be found in the statistical bulletins S.B. 123—*Minimum Weekly Wage Rates, 1939 to 1959*, and S.B. 31—*Minimum Wage Rates, January, 1960 to June, 1963*. Current figures are published in the monthly bulletin *Wage Rates and Earnings*.

2. **Weekly Wage Rates.**—(i) *Adult Males—States.* The following table shows, for each State and Australia, the weighted average minimum weekly rates of wage payable to adult male workers for a full week's work, and index numbers at the dates specified.

WEEKLY WAGE RATES: ADULT MALES, ALL GROUPS(a)

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(c)							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
December, 1945 ..	122 6	121 1	118 1	116 0	120 4	115 7	120 7
" 1950 ..	206 2	201 9	195 2	197 11	200 7	198 0	202 0
" 1955 ..	305 3	295 7	283 6	285 0	300 1	293 7	297 0
" 1960 ..	362 10	349 11	350 8	342 2	358 1	351 6	355 0
" 1964 ..	401 6	393 8	391 11	386 4	388 1	396 3	395 7

INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

December, 1945 ..	43.4	42.9	41.8	41.1	42.6	40.9	42.7
" 1950 ..	73.0	71.4	69.1	70.1	71.0	70.1	71.5
" 1955 ..	108.1	104.7	100.4	100.9	106.3	104.0	105.2
" 1960 ..	128.5	123.9	124.2	121.2	126.8	124.5	125.7
" 1964 ..	142.2	139.4	138.8	136.8	137.4	140.3	140.1

(a) Excludes rural. (b) As prescribed in awards, determinations and agreements. (c) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(ii) *Adult Males—Industry Groups.* The following table shows for Australia the weighted average minimum weekly rates of wage and index numbers in each industry group and for all groups (excluding rural) at the dates specified.

WEEKLY WAGE RATES: ADULT MALES, INDUSTRY GROUPS, AUSTRALIA
 WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK
 (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry group	End of December—									
	1945	1950	1955	1960	1964					
RATES OF WAGE(b)										
Mining and quarrying	s. 138	d. 8	s. 259	d. 7	s. 366	d. 10	s. 414	d. 8	s. 474	d. 10
Manufacturing—										
Engineering, metals, vehicles, etc.	122	2	201	8	294	9	350	2	388	9
Textiles, clothing and footwear	115	10	197	5	285	0	340	5	378	11
Food, drink and tobacco	119	11	201	5	295	9	352	3	390	10
Sawmilling, furniture, etc.	117	11	196	0	288	10	346	2	382	2
Paper, printing, etc.	127	8	214	3	312	6	379	2	420	8
Other manufacturing	118	7	197	7	291	4	347	2	387	4
<i>All Manufacturing Groups</i>	120	8	200	10	294	1	350	6	389	4
Building and construction	119	8	198	7	295	6	357	6	400	2
Railway services	117	9	195	10	290	11	346	6	384	6
Road and air transport	121	7	197	11	294	3	352	6	390	0
Shipping and stevedoring(c)	117	7	196	7	276	11	344	7	388	3
Communication	123	9	213	4	316	6	384	11	445	10
Wholesale and retail trade	119	5	200	10	297	9	357	1	394	3
Public authority (n.e.i.) and community and business services	113	9	192	1	289	10	348	1	386	8
Amusement, hotels, personal service, etc.	115	3	192	4	283	7	337	4	373	1
<i>All Industry Groups(d)</i>	120	7	202	0	297	0	355	0	395	7

INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Mining and quarrying	49.1	91.9	129.9	146.8	168.1
Manufacturing—					
Engineering, metals, vehicles, etc.	43.3	71.4	104.4	124.0	137.6
Textiles, clothing and footwear	41.0	69.9	100.9	120.5	134.2
Food, drink and tobacco	42.5	71.3	104.7	124.7	138.4
Sawmilling, furniture, etc.	41.8	69.4	102.3	122.6	135.3
Paper, printing, etc.	45.2	75.9	110.7	134.3	149.0
Other manufacturing	42.0	70.0	103.2	122.9	137.1
<i>All Manufacturing Groups</i>	42.7	71.1	104.1	124.1	137.9
Building and construction	42.4	70.3	104.6	126.6	141.7
Railway services	41.7	69.3	103.0	122.7	136.1
Road and air transport	43.0	70.1	104.2	124.8	138.1
Shipping and stevedoring(c)	41.6	69.6	98.1	122.0	137.5
Communication	43.8	75.5	112.1	136.3	157.9
Wholesale and retail trade	42.3	71.1	105.4	126.4	139.6
Public authority (n.e.i.) and community and business services	40.3	68.0	102.6	123.2	136.9
Amusement, hotels, personal service, etc.	40.8	68.1	100.4	119.4	132.1
<i>All Industry Groups(d)</i>	42.7	71.5	105.2	125.7	140.1

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (c) Includes the value of keep, where supplied. (d) Excludes rural.

(iii) *Adult Males—Components of Total Wage Rate.* A dissection of weighted average minimum weekly wage rates for adult males into the three components of the total minimum wage, i.e. basic wage, margin and loading, is given in the following two tables, separate particulars being shown for employees covered by awards, etc., within Commonwealth and

State jurisdictions. For the purposes of the index, the Commonwealth jurisdiction embraces awards of, or agreements registered with, the Commonwealth Conciliation and Arbitration Commission, and determinations of the Commonwealth Public Service Arbitrator. State jurisdictions embrace awards or determinations of, or agreements registered with, State industrial tribunals, together with certain unregistered agreements, where these are dominant in the particular industries to which they refer.

The basic wage rates shown herein are weighted averages of the rates prescribed in awards, etc., for the occupations included in the index for each State. For industries other than mining, metropolitan basic wage rates have generally been used. However, there are a number of occupations for which basic wage rates other than the metropolitan rate are prescribed. Also, in some States at various times, State Government employees under Commonwealth awards have been paid State basic wage rates, and the basic wage rates of some employees have been subject to automatic quarterly adjustments while those of other employees within the same jurisdiction have remained unchanged. In all such cases, the basic wage rate actually paid is used in tables below. For these and other reasons, the weighted average basic wage rates differ, in the majority of cases, from the metropolitan basic wage rates shown in other sections of this chapter.

Margins are minimum amounts, in addition to the basic wage, awarded to particular classifications of employees for features attaching to their work, such as skill, experience, arduousness and other like factors.

Loadings are minimum amounts, in addition to the basic wage and margin (if any), awarded for various kinds of disabilities associated with the performance of work, or to meet particular circumstances. They include payments such as industry loadings and other general loadings prescribed in awards, etc., for the occupations included in the index.

For a more detailed description of this dissection of weekly wage rates into components and for tables for each State and Australia, according to jurisdiction, extending back to 1939, see the statistical bulletins S.B. 123—*Minimum Weekly Wage Rates, 1939 to 1959*, and S.B. 31—*Minimum Wage Rates, January, 1960 to June, 1963*.

(a) States. The following table shows the components of the total minimum weekly wage rate for each State and Australia, as at 31st December, 1964, according to jurisdiction.

WEEKLY WAGE RATES: ADULT MALES, COMPONENTS OF TOTAL WAGE RATE, 31st DECEMBER, 1964(a)
WEIGHTED AVERAGES OF MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)

Jurisdiction and components of total wage(c)	N.S.W.		Vic.		Qld		S.A.		W.A.		Tas.		Aust.	
	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.	s.	d.
Commonwealth Awards, etc.—														
Basic Wage ..	313	7	307	4	299	5	303	6	308	3	312	1	309	2
Margin ..	81	9	76	2	91	3	83	1	103	3	73	2	80	4
Loading ..	5	8	5	4	5	10	3	0	3	4	5	7	5	2
<i>Total Wage</i> ..	<i>401</i>	<i>0</i>	<i>388</i>	<i>10</i>	<i>396</i>	<i>6</i>	<i>389</i>	<i>7</i>	<i>414</i>	<i>10</i>	<i>390</i>	<i>10</i>	<i>394</i>	<i>8</i>
State Awards, etc.—														
Basic Wage ..	315	0	306	10	306	11	303	1	311	2	313	11	310	6
Margin ..	76	3	89	5	78	5	64	2	68	4	79	4	77	6
Loading ..	10	10	8	3	5	5	11	7	5	1	11	3	8	6
<i>Total Wage</i> ..	<i>402</i>	<i>1</i>	<i>404</i>	<i>6</i>	<i>390</i>	<i>9</i>	<i>378</i>	<i>10</i>	<i>384</i>	<i>7</i>	<i>404</i>	<i>6</i>	<i>396</i>	<i>6</i>
All Awards, etc.—														
Basic Wage ..	314	3	307	2	305	5	303	5	310	10	312	9	309	10
Margin ..	79	1	80	3	81	0	77	4	72	5	75	8	79	0
Loading ..	8	2	6	3	5	6	5	7	4	10	7	10	6	9
<i>Total Wage</i> ..	<i>401</i>	<i>6</i>	<i>393</i>	<i>8</i>	<i>391</i>	<i>11</i>	<i>386</i>	<i>4</i>	<i>388</i>	<i>1</i>	<i>396</i>	<i>3</i>	<i>395</i>	<i>7</i>

(a) Excludes rural. The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends. (b) As prescribed in awards, determinations and agreements. (c) For definitions, see text above.

(b) *Australia, 1939 to 1964.* The components of the total minimum weekly wage rate for Australia, according to jurisdiction, are shown in the following table.

WEEKLY WAGE RATES: ADULT MALES, COMPONENTS OF TOTAL WAGE RATE, AUSTRALIA(a)

WEIGHTED AVERAGES OF MINIMUM WEEKLY RATES(b) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME)

Jurisdiction and components of total wage(c)	End of December—					
	1939	1945	1950	1955	1960	1964
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Commonwealth Awards, etc.—						
Basic Wage	79 5	97 3	162 2	239 0	278 2	309 2
Margin	17 3	19 4	35 8	52 8	70 1	80 4
Loading	0 4	4 1	3 11	2 4	3 2	5 2
<i>Total Wage</i>	97 0	120 8	201 9	294 0	351 5	394 8
State Awards, etc.—						
Basic Wage	81 11	98 1	161 8	244 8	285 2	310 6
Margin	17 4	20 0	35 3	50 6	68 5	77 6
Loading	0 6	2 5	5 5	5 0	5 3	8 6
<i>Total Wage</i>	99 9	120 6	202 4	300 2	358 10	396 6
All Awards, etc.—						
Basic Wage	80 8	97 8	161 11	241 10	281 7	309 10
Margin	17 3	19 8	35 6	51 7	69 3	79 0
Loading	0 5	3 3	4 7	3 7	4 2	6 9
<i>Total Wage</i>	98 4	120 7	202 0	297 0	355 0	395 7

For footnotes, see p. 432.

(iv) *Adult Females—States.* The following table shows, for each State and Australia the weighted average minimum weekly rates of wage payable to adult female workers for a full week's work, and index numbers at the dates specified. This series has not been compiled for years prior to 1951.

WEEKLY WAGE RATES: ADULT FEMALES

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(b)							
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
December, 1951 ..	172 4	172 2	161 2	170 3	162 6	165 7	170 4
„ 1953 ..	200 6	201 4	188 2	199 1	190 2	197 2	198 9
„ 1955 ..	209 8	210 5	184 3	201 9	197 9	200 0	206 11
„ 1960 ..	261 3	246 7	239 4	242 11	251 2	238 10	251 8
„ 1964 ..	290 6	276 4	281 3	272 2	276 11	269 4	282 4
INDEX NUMBERS							
(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)							
December, 1951 ..	86.6	86.5	81.0	85.5	81.6	83.2	85.6
„ 1953 ..	100.7	101.1	94.5	100.0	95.5	99.0	99.8
„ 1955 ..	105.3	105.7	97.6	101.3	99.3	100.5	103.9
„ 1960 ..	131.2	123.9	120.2	122.0	126.2	120.0	126.4
„ 1964 ..	145.9	138.8	141.3	136.7	139.1	135.3	141.8

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(v) *Adult Females—Industry Groups.* The following table shows for Australia weighted average minimum weekly rates of wage and index numbers in each of the industry groups in which the number of females employed is important, and the weighted average for all groups combined, at the dates specified.

WEEKLY WAGE RATES: ADULT FEMALES, INDUSTRY GROUPS, AUSTRALIA

WEIGHTED AVERAGE MINIMUM WEEKLY RATES(a) PAYABLE FOR A FULL WEEK'S WORK (EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Industry group	End of December—					
	1951	1953	1955	1960	1964	
RATES OF WAGE(b)						
Manufacturing—	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
Engineering, metals, vehicles, etc. ..	170	11	200	7	206	6
Textiles, clothing and footwear ..	171	2	198	9	200	11
Food, drink and tobacco ..	165	9	194	6	206	10
Other manufacturing ..	168	9	197	7	203	7
<i>All Manufacturing Groups</i> ..	169	11	198	3	203	4
Transport and communication ..	177	6	206	5	213	10
Wholesale and retail trade ..	171	1	199	7	213	0
Public authority (n.e.i.) and community and business services ..	170	1	199	1	209	8
Amusement, hotels, personal service, etc. ..	166	9	194	10	201	8
<i>All Industry Groups</i> ..	170	4	198	9	206	11
	249	9	249	9	249	9
	280	8	280	8	280	8
	268	4	268	4	268	4
	275	6	275	6	275	6
	278	1	278	1	278	1
	273	7	273	7	273	7
	295	0	295	0	295	0
	295	5	295	5	295	5
	292	6	292	6	292	6
	273	0	273	0	273	0
	282	4	282	4	282	4

INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

Manufacturing—					
Engineering, metals, vehicles, etc. ..	85.9	100.8	103.7	125.5	141.0
Textiles, clothing and footwear ..	86.0	99.8	100.9	120.9	134.8
Food, drink and tobacco ..	83.3	97.7	103.9	123.7	138.4
Other manufacturing ..	84.8	99.2	102.3	124.6	139.7
<i>All Manufacturing Groups</i> ..	85.4	99.6	102.1	122.9	137.4
Transport and communication ..	89.2	103.7	107.4	130.7	148.2
Wholesale and retail trade ..	85.9	100.3	107.0	132.4	148.4
Public authority (n.e.i.) and community and business services ..	85.4	100.0	105.3	129.5	146.9
Amusement, hotels, personal service, etc. ..	83.8	97.9	101.3	123.1	137.1
<i>All Industry Groups</i> ..	85.6	99.8	103.9	126.4	141.8

(a) As prescribed in awards, determinations and agreements. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

3. **Standard Hours of Work.**—(i) *General.* In the fixation of weekly wage rates, most industrial tribunals prescribe the number of hours constituting a full week's work for the wage rates specified. The hours of work so prescribed form the basis of the compilation of the weighted averages and index numbers on pages 436-37. The main features of the reduction of hours to 44 and later to 40 per week are summarized on p. 435. In considering such changes, it must be remembered that even within individual States, the authority to alter conditions of work is divided between Commonwealth and State industrial tribunals and the various legislatures, and that the State legislation usually does not apply to employees covered by awards of the Commonwealth Conciliation and Arbitration Commission. However, it may do so in respect of matters not treated in Commonwealth awards.

(ii) *The 44-hour Week.* No permanent reduction to a 44-hour week was effected until 1925, although temporary reductions had been achieved earlier. In 1920, the New South Wales legislature granted a 44-hour week to most industries, but in the following year this provision was withdrawn. Also in 1920, the President of the Commonwealth Court of Conciliation and Arbitration (Higgins J.), after inquiry, granted a 44-hour week to the Timber Workers' Union, and in the following year extended the same privilege to the Amalgamated Society of Engineers. In 1921, however, a reconstituted Commonwealth Court of Conciliation and Arbitration unanimously rejected applications by five trade unions for the shorter standard week and re-introduced the 48-hour week in the case of the above-mentioned two unions then working 44 hours. During 1924 the Queensland Parliament passed legislation to operate from 1st July, 1925, granting the 44-hour standard week to employees whose conditions of work were regulated by awards and agreements of the Queensland State industrial authority. Similar legislative action in New South Wales led to the re-introduction of the 44-hour week in that State as from 4th January, 1926.

In 1927, after an exhaustive inquiry, the Commonwealth Court of Conciliation and Arbitration granted a 44-hour week to the Amalgamated Engineering Union and intimated that this reduction in standard hours of work would be extended to industries operating under conditions similar to those in the engineering industry. Applications for the shorter hours by other unions were, however, treated individually, the nature of the industry, the problem of production, the financial status and the amount of foreign competition being fully investigated. The economic depression delayed the extension of the standard 44-hour week until the subsequent improvement in economic conditions made possible its general extension to employees under Commonwealth awards.

In States other than New South Wales and Queensland, no legislation was passed to reduce the standard hours of work, so that, for employees not covered by Commonwealth awards, the change had to be effected by decisions of the appropriate industrial tribunals. In these cases, the date on which the reduction to 44 hours was implemented depended on the decision of the tribunals in particular industries, employees in some industries receiving the benefit of the reduced hours years ahead of those in others. In these States, the change to the shorter week extended over the years from 1926 to 1941.

(iii) *The 40-hour Week.* (a) *Standard Hours Inquiry, 1947.* Soon after the end of the 1939-45 War, applications were made to the Commonwealth Court of Conciliation and Arbitration for the introduction of a 40-hour week, and the hearing by the Court commenced in October, 1945. Before the Court gave its decision, the New South Wales Parliament passed legislation granting a 40-hour week, operative from 1st July, 1947, to industries and trades regulated by State awards and agreements, and in Queensland similar legislation was introduced in Parliament providing for the 40-hour week to operate from 1st January, 1948.

The Commonwealth Court of Conciliation and Arbitration, in its judgment on 8th September, 1947, granted the reduction to the 40-hour week from the beginning of the first pay-period commencing in January, 1948. The Queensland Act was passed, and was proclaimed on 10th October, 1947. On 27th October, 1947, the South Australian Industrial Court, after hearing applications by unions, approved the incorporation of the 40-hour standard week in awards of that State. The Court of Arbitration of Western Australia, on 6th November, 1947, approved that, on application, provision for a 40-hour week could be incorporated in awards of the Court, commencing from 1st January, 1948.

In Victoria and Tasmania, the Wages Boards met and also incorporated the shorter working week in their determinations, so that from the beginning of 1948 practically all employees in Australia whose conditions of labour were regulated by industrial authorities had the advantages of a standard working week of 40 hours or, in certain cases, less.

(b) *Basic Wage and Standard Hours Inquiry, 1952-53.* In the 1952-53 Basic Wage and Standard Hours Inquiry the employers sought an increase in the standard hours of work per week, claiming that one of the chief causes of the high costs and inflation had been the loss of production due to the introduction of the 40-hour week. This claim was rejected by the Court, as it considered that the employers had not proved that the existing economic situation called for a reduction of general standards in the matter of the ordinary working week. (*See also* § 5, para. 2 (iii) p. 452.)

(c) *Basic Wage and Standard Hours Inquiry, 1961.* In this case the employers sought an increase in the number of ordinary working hours from 40 to 42 per week, with a concomitant increase in weekly wages by an amount equal to two hours' pay at ordinary rates. This was to be a temporary measure to have effect for four years, after which time hours would revert to 40 and the increased wage would remain. The employers submitted that such a measure was called for by the balance of payments crisis, that it would lead to increased productivity at stable prices, and that work in excess of forty hours would be more evenly distributed with consequent financial relief for men not getting overtime work. The Commonwealth Conciliation and Arbitration Commission, which heard the application, was not persuaded that the anticipated consequences would follow, and the claim was rejected. (See also pp. 455-6.)

4. **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. However, the number of hours constituting a full week's work differs in some instances between various occupations in each State, and between the same occupations in the several States. For some purposes, a better comparison may be obtained by reducing the results in the preceding paragraphs to a common basis, namely, the rate of wage per hour. The particulars of weighted average minimum hourly rates of wage given in the following tables relate to all industry groups except Rural, and Shipping and Stevedoring. The Rural industry is not included in the index and Shipping and Stevedoring has been excluded because, for some of the occupations in this group, definite particulars for the computation of average working hours and hourly rates of wage are not available.

(ii) *Adult Males—States.* The following table shows the weighted average minimum hourly rates of wage payable to adult male workers, and index numbers of hourly rates in each State.

HOURLY WAGE RATES(a): ADULT MALES

WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(b) (Pence)							
December, 1945 ..	33.64	33.05	32.63	31.72	32.83	31.71	33.05
„ 1950 ..	61.96	60.58	58.60	59.44	60.35	59.42	60.70
„ 1955 ..	91.89	88.87	85.22	85.68	90.50	88.45	89.36
„ 1960 ..	109.09	105.08	105.35	102.73	107.87	105.70	106.71
„ 1964 ..	120.70	118.21	117.68	115.99	116.80	119.14	118.84

INDEX NUMBERS

(Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)

December, 1945 ..	39.6	38.9	38.4	37.4	38.7	37.3	38.9
„ 1950 ..	73.0	71.4	69.0	70.0	71.1	70.0	71.5
„ 1955 ..	108.2	104.7	100.4	100.9	106.6	104.2	105.3
„ 1960 ..	128.5	123.8	124.1	121.0	127.1	124.5	125.7
„ 1964 ..	142.2	139.2	138.6	136.6	137.6	140.3	140.0

(a) Weighted average hourly rates of wage for all industry groups except rural, and shipping and stevedoring. See para. 4 (i) above. (b) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

(iii) *Adult Females—States.* The following table shows the weighted average minimum hourly rates of wage payable to adult female workers, and index numbers of hourly rates in each State.

HOURLY WAGE RATES: ADULT FEMALES

WEIGHTED AVERAGE MINIMUM HOURLY RATES PAYABLE AND INDEX NUMBERS OF HOURLY RATES

End of—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
RATES OF WAGE(a) (Pence)							
December, 1951 ..	52.30	51.90	48.72	51.37	49.02	50.23	51.51
„ 1953 ..	60.87	60.69	56.88	60.07	57.37	59.81	60.12
„ 1955 ..	63.65	63.43	58.72	60.88	59.65	60.67	62.59
„ 1960 ..	79.31	74.33	72.34	73.30	75.77	72.45	76.13
„ 1964 ..	88.19	83.29	85.01	82.12	83.54	81.70	85.40
INDEX NUMBERS (Base: Weighted Average Hourly Wage Rate for Australia, 1954 = 100)							
December, 1951 ..	86.9	86.2	80.9	85.3	81.4	83.4	85.6
„ 1953 ..	101.1	100.8	94.5	99.8	95.3	99.3	99.9
„ 1955 ..	105.7	105.3	97.5	101.1	99.1	100.8	104.0
„ 1960 ..	131.7	123.5	120.1	121.7	125.8	120.3	126.4
„ 1964 ..	146.5	138.3	141.2	136.4	138.7	135.7	141.8

(a) The amounts shown should not be regarded as actual current averages, but as an index expressed in money terms, indicative of trends.

5. **Weighted Average Standard Weekly Hours of Work.**—The 40-hour week has operated in Australia generally from 1st January, 1948, and in New South Wales from 1st July, 1947 (see para. 3 (iii), p. 435). However, as stated in para. 4 (i) on page 436, the number of hours constituting a full week's work (excluding overtime) differs between occupations and/or between States. The weighted average standard hours of work (excluding overtime) prescribed in awards, determinations and agreements for a full working week, in respect of adult male workers in all industry groups except Rural, and Shipping and Stevedoring, at 31st December, 1964, were:—New South Wales, 39.95; Victoria, 39.97; Queensland, 39.98; South Australia, 39.96; Western Australia, 39.89; Tasmania, 39.97; Australia, 39.96. Corresponding figures for adult female workers at 31st December, 1964, were:—New South Wales, 39.53; Victoria, 39.81; Queensland, 39.70; South Australia, 39.77; Western Australia, 39.78; Tasmania, 39.56; Australia, 39.67.

§ 3. Average Weekly Earnings

1. **General.**—The figures in this section are derived from particulars of employment and of wages and salaries recorded on pay-roll tax returns, from other direct collections and from estimates of the unrecorded balance. Pay of members of the defence forces is not included.

Particulars of wages and salaries paid are not available for males and females separately from these sources; average weekly earnings have therefore been calculated in terms of male units. Male units represent total male employment plus a proportion of female employment based on the approximate ratio of female to male earnings. As it was not possible to estimate the ratio of male to female earnings in the several States the same ratio has been used in each State. Because the actual ratio may vary between States precise comparisons between average earnings in different States cannot be made on the basis of the figures shown in paragraph 2.

Quarterly figures corresponding to those shown on p. 438 are published in the monthly bulletin *Wage Rates and Earnings* and in the *Monthly Review of Business Statistics*.

2. Average Weekly Earnings.—Particulars of average weekly earnings per employed male unit are shown in the following table for each of the years 1954–55 to 1963–64.

AVERAGE WEEKLY EARNINGS PER EMPLOYED MALE UNIT(a)
(£)

Year	N.S.W. (b)	Vic.	Qld	S.A. (c)	W.A.	Tas.	Aust.
1954–55	17.69	17.65	15.59	16.89	16.15	16.60	17.17
1955–56	18.97	18.91	16.48	17.93	16.94	17.79	18.34
1956–57	19.95	19.81	17.42	18.34	17.51	18.85	19.21
1957–58	20.48	20.34	17.86	18.84	18.11	19.14	19.73
1958–59	21.14	20.98	18.62	19.29	18.31	19.62	20.34
1959–60	22.83	22.74	19.71	20.91	19.61	20.96	21.93
1960–61	24.06	23.58	20.79	21.68	20.77	21.66	22.98
1961–62	24.55	24.26	21.61	22.37	21.51	22.64	23.62
1962–63	25.08	25.05	22.18	22.89	22.12	22.95	24.22
1963–64	26.29	26.23	23.34	24.05	23.59	24.28	25.43

(a) Includes, in addition to wages at award rates, earnings of salaried employees, overtime earnings, over-award and bonus payments, payments made in advance or retrospectively during the periods specified, etc. See explanatory notes in paragraph 1. p. 439. (b) Includes Australian Capital Territory. (c) Includes Northern Territory.

3. Index Numbers.—The following table shows, for “All industries” and for “Manufacturing”, the movement in average weekly earnings from 1953–54 to the March quarter, 1965. The “All industries” index is based on pay-roll tax returns and other data. The index for manufacturing industries for the years 1953–54 to 1963–64 is based on the average earnings of male wage and salary earners employed in factories as disclosed by annual factory censuses (see Chapter VI. Manufacturing Industry, § 8, para. 2 (iii), p. 166); figures for quarters subsequent to June quarter, 1964, are preliminary estimates based on pay-roll tax returns.

The index numbers for “All industries” and “Manufacturing” show the movement in average earnings for each group 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 1953–54 = 100, and both series have been seasonally adjusted.

INDEXES OF AVERAGE WEEKLY EARNINGS(a): AUSTRALIA

SEASONALLY ADJUSTED

(Base of each Series: 1953–54 = 100)

Year	All industries(b)	Manufacturing	Quarter	All industries(b)	Manufacturing
1953–54.. ..	100.0	100.0	1962–63—December	146.9	146.3
1955–56.. ..	112.3	113.8	March	149.7	149.3
1956–57.. ..	117.7	118.3	June	151.3	148.8
1957–58.. ..	120.8	122.0	1963–64—September	150.9	151.5
1958–59.. ..	124.5	125.6	December	155.4	152.8
1959–60.. ..	134.3	135.4	March	157.8	157.0
1960–61.. ..	140.6	141.1	June	158.7	157.9
1961–62.. ..	144.7	143.4	1964–65—September	164.1	164.6
1962–63.. ..	148.3	147.7	December	164.2	
1963–64.. ..	155.7	154.8			

(a) See footnote (a) to table above. (b) Average earnings per employed male unit. See explanation in paragraph 1, p. 437.

§ 4. Surveys of Wage Rates, Earnings and Hours

1. **General.**—Towards the end of 1960, a statistical survey of the wage structure of Australia was undertaken by this Bureau. The object of the survey was to obtain information as to marginal rates of wage and actual weekly earnings of adult male employees (excluding part-time and casual employees) for the last pay-period in September, 1960. A survey as at the last pay-period in October, 1961, provided similar information as to actual weekly earnings. A survey of weekly earnings and hours, carried out in respect of the last pay-period in October, 1962, provided information about the hours of work and average earnings of male and female employees in private industry.

The surveys were based on returns from stratified random samples of private employers subject to pay-roll tax. They did not include government or semi-government employment. Because of insufficient data, employees in rural industry and private domestic service were excluded, as also were employees of religious, benevolent and other similar bodies exempt from pay-roll tax. In addition, the 1960 survey excluded the shipping and stevedoring industry, the motion picture industry, certain businesses such as those of accountants and consultant engineers, and trade associations, etc.

A brief summary of the results of the 1960 and 1961 surveys is given in paras. 2 and 3 following. Only the proportions of the total employees in the various groups are shown in this issue, but more detailed particulars, including the number of employees in each group, may be found in Year Book No. 48, 1962, pages 410–18. The preliminary results of the 1962 survey were published in Year Book No. 49, 1963, pages 482–5.

2. **Survey of Wage Rates and Earnings, September, 1960.**—(i) *General.* The sample for this survey was designed to provide accurate particulars only for Australia as a whole; hence no State details are shown in the tables below. The survey covered more than 1,100,000 adult male employees.

Definitions relevant to the survey are as follows.

- (a) *Adult Male Employees* refer to employees on the pay-roll of the last pay-day in September, 1960, and include those who, although under 21 years of age, were paid at the adult rate prescribed in the appropriate award. Part-time and casual employees and those absent in the defence forces were excluded.
- (b) The term *awards* as used herein denotes awards or determinations of, or agreements registered with, Commonwealth or State industrial tribunals. Employees whose rates of pay and working conditions were not regulated by awards, and employees covered by formal, though unregistered, agreements between employee organizations and employers, are shown as “not covered by awards”.
- (c) *Margins* are minimum amounts, in addition to the basic wage, awarded to particular classifications of employees for features attaching to their work, such as skill, experience, arduousness or other like factors. For the purposes of this survey the following were not included in margins:—special allowances prescribed in awards, such as shift, dirt, and height money, leading hand allowances, etc.; and other payments such as commission, payments above the minimum rate for contract and piece work, etc. (see sub-paras. (e) and (g) p. 440 and also § 6. Wage Margins). In the case of contract work, etc., the margin was determined by the minimum amount prescribed in the award for the class of work performed. Where the marginal rate of wage for an occupation was not specified in an award, the margin was assumed to be the difference between the total minimum prescribed rate of wage for the occupation and the appropriate Commonwealth or State basic wage. For employees not covered by awards, and whose margins were not specified in unregistered agreements, the margin was assumed to be the difference between the appropriate basic wage in the State jurisdiction and the agreed rate of pay for a standard working week (or the weekly equivalent of the agreed rate).

- (d) *Total Weekly Earnings* include ordinary time earnings at award rates (and, for employees not covered by awards, payments at agreed rates for a standard working week), overtime earnings and all other payments. Annual or other periodical bonuses were included only at the appropriate proportion for one week. For employees paid other than weekly, only the proportion of earnings equivalent to one week was included.
- (e) *Ordinary Time Earnings at Award Rates* represent the total weekly payment to adult male employees (excluding part-time and casual employees) for hours of work paid for up to the standard or award hours, calculated at award rates of pay. They include payments for sick leave, proportion of annual leave, special allowances prescribed in awards, etc. (see sub-para. (c) p. 439). For employees not covered by awards, they include payments at agreed rates for a standard working week.
- (f) *Overtime Earnings* represent the total weekly payment to adult male employees (excluding part-time and casual employees) for time worked in excess of award or agreed hours.
- (g) *Other Earnings* include all payments other than those in sub-paras. (e) and (f) above, such as commission, payments above the minimum rate for contract work, incentive scheme, piece-work, and profit-sharing scheme payments, proportion of annual or other periodical bonuses, points system payments, attendance or good time-keeping bonuses, etc. (see sub-para. (c) p. 439).

(ii) *Marginal Rates of Wage. (a) Industry Groups.* In the following table, adult male employees in each of the main industry groups are classified according to weekly margin above the basic wage.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO MARGINAL RATES OF WAGE: INDUSTRY GROUPS, AUSTRALIA, SEPTEMBER, 1960 (a)

PROPORTION OF TOTAL (PER CENT.)

Weekly margin(b)	Manufacturing			Building and construction (c)	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Other manufacturing	Total manufacturing				
Amount above basic wage—							
Less than 20s. (incl. nil) ..	2.1	2.5	2.4	1.2	1.6	3.5	2.3
20s. and less than 30s. ..	11.3	6.1	8.4	5.6	2.1	5.7	6.6
30s. " " " 40s. ..	9.1	7.4	8.2	3.5	2.6	3.7	6.0
40s. " " " 60s. ..	14.3	19.7	17.2	8.6	14.6	11.2	15.2
60s. " " " 80s. ..	13.0	15.6	14.4	15.0	22.4	12.4	15.7
80s. " " " 100s. ..	22.7	14.8	18.4	14.4	14.2	16.3	17.0
100s. " " " 120s. ..	9.3	8.5	8.9	13.0	10.6	10.3	9.7
120s. and over ..	18.2	25.4	22.1	38.7	31.9	36.9	27.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See page 439 for particulars of the coverage of the survey. (b) For definitions, see text on pp. 439-40. (c) For some employees, allowances for sick leave, public holidays, etc. have been included in the marginal rates shown.

(b) *Jurisdiction.* In the following table, adult male employees are classified according to weekly margin above the basic wage, separate particulars being shown for employees under Commonwealth or State jurisdiction and for those not covered by awards.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO MARGINAL RATES OF WAGE: JURISDICTION, AUSTRALIA, SEPTEMBER, 1960(a)

PROPORTION OF TOTAL (PER CENT.)

Weekly margin(b)	Under Commonwealth awards	Under State awards	Not covered by awards	Total
Amount above basic wage—				
Less than 20s. (incl. nil) ..	2.7	2.4	1.0	2.3
20s. and less than 30s. ..	9.3	6.2	0.5	6.6
30s. " " " 40s. ..	7.2	6.9	0.8	6.0
40s. " " " 60s. ..	16.2	19.2	1.6	15.2
60s. " " " 80s. ..	15.9	20.4	2.5	15.7
80s. " " " 100s. ..	24.4	15.1	2.6	17.0
100s. " " " 120s. ..	10.6	11.4	3.2	9.7
120s. and over ..	13.7	18.4	87.8	27.5
Total	100.0	100.0	100.0	100.0

(a) See p. 439 for particulars of the coverage of the survey.

(b) For definitions, see pp. 439-40.

(iii) *Total Weekly Earnings.* (a) *Ordinary Time, Overtime and Other Earnings.* In the following table, the total wages and salaries paid to adult male employees in each of the main industry groups are given for ordinary time earnings at award rates, overtime earnings and all other earnings.

TOTAL WAGES AND SALARIES PAID TO ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) DURING LAST PAY-WEEK IN SEPTEMBER, 1960: INDUSTRY GROUPS, AUSTRALIA(a)

Industry group	Ordinary time earnings at award rates(b)	Overtime earnings(b)	Other earnings(b)	Total
AMOUNTS (£'000)				
Manufacturing—				
Engineering, metals, vehicles, etc.	5,469	1,012	724	7,205
Other manufacturing ..	6,961	849	700	8,510
<i>All Manufacturing Groups ..</i>	<i>12,430</i>	<i>1,861</i>	<i>1,424</i>	<i>15,715</i>
Building and construction ..	1,672	263	169	2,104
Wholesale and retail trade ..	4,521	238	425	5,184
Other industries ..	3,837	380	475	4,692
All Industry Groups ..	22,460	2,742	2,493	27,695

PROPORTIONS OF TOTAL (PER CENT.)

Manufacturing—				
Engineering, metals, vehicles, etc.	75.9	14.0	10.1	100.0
Other manufacturing ..	81.8	10.0	8.2	100.0
<i>All Manufacturing Groups ..</i>	<i>79.1</i>	<i>11.8</i>	<i>9.1</i>	<i>100.0</i>
Building and construction ..	79.5	12.5	8.0	100.0
Wholesale and retail trade ..	87.2	4.6	8.2	100.0
Other industries ..	81.8	8.1	10.1	100.0
All Industry Groups ..	81.1	9.9	9.0	100.0

(a) See p. 439, for particulars of the coverage of the survey.

(b) For definitions, see pp. 439-40.

(b) *Industry Groups.* The proportion of adult male employees in each earnings group is shown for the main industry groups in the following table.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: INDUSTRY GROUPS, AUSTRALIA, SEPTEMBER, 1960(a)

PROPORTION OF TOTAL (PER CENT.)

Total weekly earnings(b)	Manufacturing			Building and construction	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Other manufacturing	Total manufacturing				
Less than £14(c)	2.3	2.1	2.2	2.2	0.8	1.1	1.7
£14 and less than £16	3.1	4.8	4.0	1.7	2.0	2.9	3.3
£16 " " " £18	8.3	12.9	10.8	6.5	17.4	9.2	11.5
£18 " " " £20	11.6	15.9	13.9	11.1	19.7	12.3	14.6
£20 " " " £22	13.2	13.8	13.5	13.6	14.9	11.6	13.5
£22 " " " £24	12.6	11.1	11.8	17.7	10.7	10.5	11.8
£24 " " " £26	10.4	9.9	10.2	9.8	8.0	10.0	9.7
£26 " " " £30	16.5	11.8	13.9	14.2	11.0	14.9	13.5
£30 " " " £35	11.9	8.3	10.0	12.0	6.7	12.4	9.9
£35 and over	10.1	9.4	9.7	11.2	8.8	15.1	10.5
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 439, for particulars of the coverage of the survey.

(b) For definitions, see pp. 439-40.

(c) Inquiry indicated that many of the adult males in this group were absent for part of the week.

3. *Survey of Weekly Earnings, October, 1961.*—(i) *General.* For this survey the sample was designed so that particulars of the distribution of earnings in each State could be obtained as well as those for Australia (see p. 443), but it was not possible, without a considerable increase in the number of returns, to obtain particulars for each industry group in each State. State details were therefore restricted to the two major groups, manufacturing and non-manufacturing; those for Australia were obtained for eight separate industry groups. Because of limitations of space, it has not been possible to include all figures in the tables herein. For further details, reference should be made to Statistical Bulletin No. 22—*Survey of Weekly Earnings, October, 1961.*

The businesses selected in the sample were allocated by States and by industry and size groups in such a way that the precision of the sample estimates for total manufacturing and total non-manufacturing, expressed as percentages of the estimates themselves, would be approximately the same in each State.

Definitions relevant to the survey are as follows.

Adult Male Employees refer to employees on the pay-roll of the last pay-period in October, 1961, and includes those who, although under 21 years of age, were paid at the adult rate prescribed for their particular occupation. Part-time and casual employees and those absent in the defence forces were excluded. Executive, clerical and sales staff were included, as were employees working short time who would normally have been full-time employees.

Total Weekly Earnings (i.e. gross earnings before taxation and other deductions) include ordinary time earnings, overtime earnings and all other payments, such as holiday and sick pay, commission, payments above the minimum rate for contract work, incentive scheme, piece-work and profit-sharing scheme payments, points system payments, attendance bonuses, etc. Annual or other periodical bonuses have been included only at the appropriate proportion for one week. For employees paid other than weekly, only the proportion of earnings equivalent to one week has been included.

(ii) *States.* (a) *All Industries.* The following table shows the proportions of adult male employees in each earnings group in each State.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS, OCTOBER, 1961(a)

PROPORTIONS OF TOTAL (PER CENT.)

Total weekly earnings(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
Less than £14(c) ..	1.1	0.9	0.8	0.8	0.3	1.2	0.9
£14 and less than £16 ..	1.0	1.7	3.6	2.1	2.9	2.1	1.7
£16 " " " £18 ..	6.6	9.1	15.3	11.2	13.9	11.7	9.3
£18 " " " £20 ..	13.3	14.5	20.0	17.6	18.7	16.1	15.2
£20 " " " £22 ..	13.4	14.9	15.3	17.0	16.1	15.1	14.6
£22 " " " £24 ..	12.5	13.4	9.3	12.6	11.4	13.1	12.4
£24 " " " £26 ..	11.7	10.8	8.2	9.6	8.6	10.5	10.6
£26 " " " £30 ..	15.2	12.7	10.3	12.2	11.2	12.0	13.3
£30 " " " £35 ..	11.4	9.9	8.1	8.9	7.6	8.9	10.1
£35 and over ..	13.8	12.1	9.1	8.0	9.3	9.3	11.9
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 442 for particulars of the coverage of the survey. (b) For definitions see p. 442.

(c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.

(b) *Manufacturing and Non-manufacturing.* The proportion of adult male employees in each earnings group is shown for manufacturing and non-manufacturing industries in the following table.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: MANUFACTURING AND NON-MANUFACTURING INDUSTRIES, OCTOBER, 1961(a)

PROPORTIONS OF TOTAL (PER CENT.)

Total weekly earnings(b)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Total
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MANUFACTURING

Less than £14(c) ..	1.2	1.0	1.3	1.1	0.4	1.5	1.1
£14 and less than £16 ..	1.2	2.1	5.3	2.2	4.2	2.0	2.1
£16 " " " £18 ..	7.8	11.0	18.3	10.6	16.8	12.3	10.5
£18 " " " £20 ..	12.6	14.6	20.6	17.5	20.2	13.8	14.8
£20 " " " £22 ..	13.9	15.5	16.8	17.2	17.6	15.5	15.2
£22 " " " £24 ..	13.7	12.8	9.2	13.1	10.5	12.6	12.8
£24 " " " £26 ..	11.5	10.6	8.0	10.0	8.2	11.4	10.6
£26 " " " £30 ..	15.5	12.5	9.4	12.3	10.0	12.8	13.4
£30 " " " £35 ..	11.0	9.6	5.8	9.0	5.9	8.9	9.6
£35 and over ..	11.6	10.3	5.3	7.0	6.2	9.2	9.9
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

NON-MANUFACTURING

Less than £14(c) ..	0.9	0.6	0.4	0.5	0.3	0.8	0.7
£14 and less than £16 ..	0.7	1.0	2.2	2.0	2.0	2.3	1.2
£16 " " " £18 ..	5.0	6.2	13.0	12.1	11.9	10.8	7.7
£18 " " " £20 ..	14.3	14.5	19.6	17.7	17.7	19.2	15.8
£20 " " " £22 ..	12.8	13.9	14.2	16.8	15.0	14.5	13.9
£22 " " " £24 ..	10.8	14.2	9.3	11.8	12.0	13.8	11.8
£24 " " " £26 ..	11.8	11.1	8.5	9.1	8.8	9.4	10.6
£26 " " " £30 ..	14.7	13.1	11.0	12.0	12.1	11.0	13.2
£30 " " " £35 ..	12.1	10.5	9.8	8.7	8.8	8.8	10.7
£35 and over ..	16.9	14.9	12.0	9.3	11.4	9.4	14.4
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 442 for particulars of the coverage of the survey. (b) For definitions, see p. 442.

(c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.

(iii) *Australia, Industry Groups.* The proportions of adult male employees in the main industry groups covered by the survey are shown in the following table according to total weekly earnings.

ADULT MALE EMPLOYEES (EXCLUDING PART-TIME AND CASUAL EMPLOYEES) CLASSIFIED ACCORDING TO TOTAL WEEKLY EARNINGS: INDUSTRY GROUPS, AUSTRALIA, OCTOBER, 1961(a)

PROPORTION OF TOTAL (PER CENT.)

Total weekly earnings(b)	Manufacturing				Building and construction	Wholesale and retail trade	Other industries	Total
	Engineering, metals, vehicles, etc.	Food, drink and tobacco	Other manufacturing	Total manufacturing				
Less than £14(c) ..	1.3	1.3	0.9	1.1	1.5	0.4	0.6	0.9
£14 and less than £16 ..	1.7	2.2	2.4	2.1	1.0	1.2	1.4	1.7
£16 " " " £18 ..	8.1	11.4	12.8	10.5	3.9	9.9	6.7	9.3
£18 " " " £20 ..	13.8	19.4	14.1	14.8	10.8	21.1	11.4	15.2
£20 " " " £22 ..	16.3	14.4	14.3	15.2	15.7	15.3	11.4	14.6
£22 " " " £24 ..	14.2	11.8	11.6	12.8	18.1	11.8	9.4	12.4
£24 " " " £26 ..	11.0	10.2	10.4	10.6	16.2	9.6	9.7	10.6
£26 " " " £30 ..	13.8	12.8	13.1	13.4	12.9	11.6	15.2	13.3
£30 " " " £35 ..	10.0	8.6	9.6	9.6	9.0	8.1	14.5	10.1
£35 and over ..	9.8	7.9	10.8	9.9	10.9	11.0	19.7	11.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) See p. 442 for particulars of the coverage of the survey. (b) For definitions, see p. 442. (c) Inquiry indicated that the majority of the adult males in this group did not work a full week because of absenteeism, changing jobs, etc. Others were working short time.

4. *Surveys of Weekly Earnings and Hours, October, 1962 and October, 1963.*—(i) *General.* Sample surveys in respect of most private employers subject to pay-roll tax (i.e. those paying more than £200 a week in wages and salaries) have been conducted as at the last pay-periods in October, 1962, and October, 1963. These surveys supply detailed data for use in the compilation of the Australian National Accounts and other statistical series as well as for general publication.

Results of the 1963 survey, with some qualified comparisons with the 1962 survey, are shown in the following tables. The figures for the 1962 survey amend those published in preliminary form in Statistical Bulletin No. 213 (20th March, 1963). The 1962 survey was the first of this type and was experimental in form.

Figures for average weekly earnings, average weekly hours paid for, and average hourly earnings as at the selected pay-periods are presented for males and females (adult and junior) separately by industry groupings (for 1963) and by States. They reflect the effects of differences (and of changes between the points of time) in amounts paid for the various occupations; in amounts paid for the same occupations; in occupational structures within industries; in industry structure; in degrees of business activity (incidence of overtime, etc.); and in incidence of incentive schemes, piece-work and profit-sharing scheme payments, etc.

(ii) *Coverage.* The results of the surveys in October, 1962, and October, 1963, were based on returns from two separate stratified random samples of private employers subject to pay-roll tax. Employees in rural industry and in private domestic service were excluded because most employers in these two industries are not subject to pay-roll tax. Also excluded from the surveys were employees of government and semi-government authorities as well as those of religious, benevolent and other similar organizations exempt from pay-roll tax. The earnings and hours of waterside workers employed on a casual basis have been excluded because they are subject to wide fluctuations for short periods such as those covered by these surveys.

For the October, 1962, survey returns were received from approximately 3,700 employers and the sample returns represented 1,302,800 male and 518,500 female wage and salary earners. There were also approximately 3,700 employers surveyed in October, 1963, and the sample represented a total of 1,338,500 male and 538,900 female employees.

The figures contained in the tables in this section are for "Employees (other than part-time) Whose Hours of Work Were Known" as defined below. Because of the heterogeneity of the data combined with high sampling variability, figures relating to other employees (part-time workers, executives, etc., and those whose hours of work were not known) are not available for publication.

(iii) *Comparability of Results.* These sample surveys are, of course, subject to sampling variability, i.e., variations which might occur by chance because only samples of employers were surveyed. In addition to affecting the results of each sample such aspects also affect comparison between each year's results.

In the table on page 448 a comparison of the results of the surveys in October, 1962, and October, 1963, is therefore shown for broad categories only. Comparison of the more detailed results for 1963 contained in this section and the preliminary results for 1962 in Statistical Bulletin No. 213 (20th March, 1963) should not be attempted. This is because figures for October, 1962 contained in S.B. 213 have been revised; the comparison other than for broad categories would be subject to sampling variability too high for most practical purposes; and there was a change in industry classification between the two surveys. From October, 1963, these surveys have been related to the industry classification adopted for the population census of June, 1961.

(iv) *Definitions.* The following definitions refer to terms used in the surveys and in the tables in this section.

- (a) *Employees* refer to male and female employees on the pay-roll for the last pay-period in October.
- (b) *Employees Whose Hours of Work Were Known* exclude (i) all managerial, executive, professional and higher supervisory staff, whether or not their hours of work were known, and (ii) any other employees whose hours of work were not known. They comprise all other employees who received pay for the last pay-period in October and whose hours of work were known (including foremen, transport supervisors, floor-walkers, other minor supervisory employees, clerical and office staff, etc.).
- (c) *Part-time Employees* refer to employees who ordinarily worked less than 30 hours a week. Employees on short-time who normally worked 30 hours or more a week were classified as "other than part-time".
- (d) *Adults* include employees who, although under 21 years of age, were paid at the adult rate for their occupation.
- (e) *Juniors* are those employees under 21 years of age who were not paid at the adult rate for their occupation.

(f) *Earnings* (i.e. gross earnings, before taxation and other deductions) include ordinary time and overtime earnings, payments for sick leave and holidays, commission, and all other payments such as incentive scheme, piecework and profit-sharing scheme payments, etc., and bonus payments of any kind. Annual or other periodical bonuses have been included only at the appropriate proportion for one week. For employees paid other than weekly, only the proportion of earnings equivalent to one week has been included.

(g) *Weekly Hours Paid for* include ordinary time and overtime hours, paid stand-by or reporting time, paid sick leave and paid holidays. For employees paid other than weekly, hours have been converted to the equivalent for one week.

(v) *Average Earnings and Hours.* (a) *Average Weekly Earnings, Average Weekly Hours Paid for and Average Hourly Earnings—Australia.* In the following table, the average weekly earnings, average weekly hours paid for and average hourly earnings at the last pay-period in October, 1963, are shown for males and females (adult and junior), other than part time, by industry groupings.

AVERAGE EARNINGS AND HOURS FOR EMPLOYEES (OTHER THAN PART-TIME) WHOSE HOURS OF WORK WERE KNOWN(a): INDUSTRY GROUPS, AUSTRALIA(b), OCTOBER, 1963(c)

Industry group	Average weekly earnings				Average weekly hours paid for				Average hourly earnings			
	Adult males	Junior males	Adult fe-males	Junior fe-males	Adult males	Junior males	Adult fe-males	Junior fe-males	Adult males	Junior males	Adult fe-males	Junior fe-males
	£	£	£	£					s. d.	s. d.	s. d.	s. d.
Manufacturing—												
Chemicals, dyes, explosives, paints, non-mineral oils . . .	25.90	12.95	15.74	10.59	41.76	40.40	39.59	38.82	12 5	6 5	7 11	5 5
Extracting, refining and founding of metals . . .	26.60	13.71	15.00	11.49	43.43	41.84	40.46	40.67	12 3	6 7	7 5	5 8
Engineering and metalworking . . .	25.69	11.36	14.86	9.84	42.78	41.15	39.73	39.52	12 0	5 6	7 6	5 0
Ships, vehicles, parts and accessories . . .	26.21	11.62	15.03	10.81	43.54	41.52	39.70	39.63	12 0	5 7	7 7	5 5
Founding, Engineering, Vehicles, etc. . .	25.98	11.78	14.90	10.16	43.08	41.33	39.77	39.64	12 1	5 8	7 6	5 1
Textiles, clothing and footwear . . .	23.82	11.51	14.50	8.68	41.86	40.71	39.35	39.10	11 5	5 8	7 4	4 5
Food, drink and tobacco . . .	24.22	12.59	14.95	9.73	42.68	41.34	39.44	38.95	11 4	6 1	7 7	5 0
Paper, printing, bookbinding and photography . . .	28.50	12.69	15.77	9.34	41.78	40.95	39.57	39.68	13 8	6 2	8 0	4 8
Other . . .	24.64	11.04	14.72	9.20	43.12	40.52	39.56	39.31	11 5	5 5	7 5	4 8
<i>All Manufacturing Groups</i> . . .	25.50	11.82	14.82	9.30	42.79	41.06	39.52	39.25	11 11	5 9	7 6	4 9
Mining and quarrying . . .	30.29	14.06	17.63	11.59	41.61	41.03	39.26	39.34	14 7	6 10	9 0	5 11
Building and construction . . .	27.84	12.74	16.80	10.10	43.04	40.37	39.37	38.64	12 11	6 4	8 6	5 3
Transport and storage . . .	27.63	11.86	16.78	10.97	44.64	40.51	39.07	39.16	12 5	5 10	8 7	5 7
Finance and property . . .	26.29	12.25	16.68	10.99	38.85	38.36	37.58	37.78	13 6	6 5	8 11	5 10
Retail trade . . .	23.32	11.04	15.32	9.09	41.20	41.04	39.54	39.69	11 4	5 5	7 9	4 7
Wholesale trade, primary produce dealing, etc. . .	24.36	11.31	16.08	10.16	40.88	39.77	38.76	38.66	11 11	5 8	8 4	5 3
Other industries . . .	24.98	12.39	15.79	10.34	41.22	38.89	39.04	38.27	12 1	6 4	8 1	5 5
All Industry Groups . . .	25.62	11.74	15.27	9.69	42.30	40.55	39.29	39.02	12 1	5 10	7 9	5 0

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff, whether or not their hours of work were known, and all other employees whose hours of work were not known. (b) Excludes Northern Territory and Australian Capital Territory. (c) Last pay-period in October, 1963. For definitions and particulars of coverage of the survey, etc., see pp. 445-6.

(b) *Average Weekly Earnings, Average Weekly Hours Paid For and Average Hourly Earnings by State.* In the following table, the average weekly earnings, average weekly hours paid for and average hourly earnings at the last pay-period in October, 1963, are shown for males and females (adult and junior), other than part-time, by industry groupings by State.

AVERAGE EARNINGS AND HOURS FOR EMPLOYEES (OTHER THAN PART-TIME) WHOSE HOURS OF WORK WERE KNOWN(a): INDUSTRY GROUPS, OCTOBER, 1963(b)

State	Average weekly earnings (£)					Average weekly hours paid for					Average hourly earnings (s. d.)				
	Manufacturing			Non-manufacturing	All industry groups	Manufacturing			Non-manufacturing	All industry groups	Manufacturing			Non-manufacturing	All industry groups
	Founding, engineering, vehicles, etc.	Other	Total			Founding, engineering, vehicles, etc.	Other	Total			Founding, engineering, vehicles, etc.	Other	Total		

ADULT MALES

New South Wales ..	26.26	25.92	26.10	26.76	26.37	42.44	42.27	42.36	41.71	42.10	12 4	12 3	12 4	12 10	12 6
Victoria ..	26.33	25.53	25.88	25.78	25.84	44.11	43.05	43.51	41.52	42.76	11 11	11 10	11 11	12 5	12 1
Queensland ..	23.93	23.48	23.62	24.86	24.27	43.44	42.91	43.08	41.32	42.15	11 0	10 11	11 0	12 0	11 6
South Australia ..	25.58	23.57	24.86	24.29	24.63	43.51	42.34	43.09	42.11	42.69	11 9	11 2	11 6	11 6	11 6
Western Australia ..	22.65	22.06	22.27	24.51	23.58	41.41	41.10	41.20	41.61	41.44	10 11	10 9	10 10	11 9	11 5
Tasmania ..	27.33	23.31	24.76	24.10	24.47	41.96	41.29	41.53	41.24	41.41	13 0	11 4	11 11	11 8	11 10
Australia(c)	25.98	25.06	25.50	25.77	25.62	43.08	42.52	42.79	41.62	42.30	12 1	11 9	11 11	12 5	12 1

JUNIOR MALES

New South Wales ..	12.43	12.41	12.42	12.11	12.28	40.97	40.62	40.81	39.92	40.40	6 1	6 1	6 1	6 1	6 1
Victoria ..	11.74	12.15	11.97	11.69	11.84	41.84	41.06	41.39	39.68	40.55	5 7	5 11	5 9	5 11	5 10
Queensland ..	10.43	11.57	11.10	11.43	11.26	42.22	41.13	41.59	39.82	40.69	4 11	5 8	5 4	5 9	5 6
South Australia ..	11.19	10.58	10.92	11.54	11.25	41.88	41.65	41.78	40.66	41.18	5 4	5 1	5 3	5 8	5 6
Western Australia ..	10.03	10.08	10.06	10.57	10.36	39.80	39.67	39.72	40.92	40.42	5 1	5 1	5 1	5 2	5 2
Tasmania ..	11.71	11.62	11.65	11.11	11.33	40.91	40.06	40.34	40.09	40.19	5 9	5 10	5 9	5 7	5 8
Australia(c)	11.78	11.86	11.82	11.66	11.74	41.33	40.80	41.06	40.03	40.55	5 8	5 10	5 9	5 10	5 10

ADULT FEMALES

New South Wales ..	*	*	15.22	16.50	15.76	*	*	39.33	38.58	39.01	*	*	7 9	8 7	8 1
Victoria ..	*	*	14.68	15.95	15.12	*	*	39.66	38.93	39.40	*	*	7 5	8 2	7 8
Queensland ..	*	*	13.99	14.93	14.63	*	*	39.67	39.45	39.52	*	*	7 1	7 7	7 5
South Australia ..	*	*	13.89	14.52	14.25	*	*	40.11	39.90	39.99	*	*	6 11	7 3	7 1
Western Australia ..	*	*	13.77	15.13	14.77	*	*	39.03	39.74	39.55	*	*	7 1	7 7	7 6
Tasmania ..	*	*	14.54	14.53	14.53	*	*	39.12	39.25	39.19	*	*	7 5	7 5	7 5
Australia(c)	14.90	14.80	14.82	15.84	15.27	39.77	39.44	39.52	38.99	39.29	7 6	7 6	7 6	8 1	7 9

JUNIOR FEMALES

New South Wales ..	*	*	9.79	10.61	10.29	*	*	39.19	38.69	38.88	*	*	5 0	5 6	5 4
Victoria ..	*	*	9.45	10.02	9.77	*	*	39.06	38.52	38.75	*	*	4 10	5 2	5 1
Queensland ..	*	*	8.23	9.24	8.93	*	*	39.50	39.14	39.25	*	*	4 2	4 9	4 7
South Australia ..	*	*	8.40	9.42	9.08	*	*	39.53	39.21	39.32	*	*	4 3	4 10	4 7
Western Australia ..	*	*	8.21	8.71	8.58	*	*	40.04	39.84	39.89	*	*	4 1	4 4	4 4
Tasmania ..	*	*	9.78	8.91	9.19	*	*	38.62	39.33	39.10	*	*	5 1	4 6	4 8
Australia(c)	10.16	9.13	9.30	9.91	9.69	39.64	39.17	39.25	38.89	39.02	5 1	4 8	4 9	5 1	5 0

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff, whether or not their hours of work were known, and all other employees whose hours of work were not known. (b) Last pay-period in October, 1963. For definitions and particulars of coverage of the survey, etc., see pp. 445-6. (c) Excludes Northern Territory and Australian Capital Territory.

* Information not available because the figures are subject to sampling variability too high for most practical uses.

(c) *Average Weekly Earnings, Average Weekly Hours Paid For and Average Hourly Earnings, by State.* In the following table, the average weekly earnings, average weekly hours paid for and average hourly earnings at the last pay-periods in October, 1962, and October, 1963, are shown for males and females (adult and junior), other than part-time, by State.

**AVERAGE EARNINGS AND HOURS FOR EMPLOYEES (OTHER THAN PART TIME)
WHOSE HOURS OF WORK WERE KNOWN(a): ALL INDUSTRY GROUPS**

State	Average weekly earnings (£)		Average weekly hours paid for		Average hourly earnings (s. d.)	
	October, 1962(b)	October, 1963(b)	October, 1962(b)	October, 1963(b)	October, 1962(b)	October, 1963(b)
ADULT MALES						
New South Wales ..	25.50	26.37	42.11	42.10	12 1	12 6
Victoria ..	24.85	25.84	42.38	42.76	11 9	12 1
Queensland ..	23.08	24.27	42.06	42.15	11 0	11 6
South Australia ..	23.52	24.63	42.26	42.69	11 2	11 6
Western Australia ..	23.85	23.58	41.74	41.44	11 5	11 5
Tasmania ..	23.75	24.47	40.56	41.41	11 9	11 10
Australia(c) ..	24.72	25.62	42.13	42.30	11 9	12 1
JUNIOR MALES						
New South Wales ..	12.08	12.28	40.18	40.40	6 0	6 1
Victoria ..	11.52	11.84	40.27	40.56	5 9	5 10
Queensland ..	10.88	11.26	40.21	40.69	5 5	5 6
South Australia ..	10.60	11.25	40.50	41.18	5 3	5 6
Western Australia ..	9.89	10.36	40.26	40.42	4 11	5 2
Tasmania ..	11.32	11.33	39.80	40.19	5 8	5 8
Australia(c) ..	11.45	11.74	40.23	40.55	5 8	5 10
ADULT FEMALES						
New South Wales ..	15.41	15.76	38.89	39.01	7 11	8 1
Victoria ..	14.82	15.12	39.10	39.40	7 7	7 8
Queensland ..	14.28	14.63	39.55	39.52	7 3	7 5
South Australia ..	14.29	14.25	39.39	39.99	7 3	7 1
Western Australia ..	14.28	14.77	39.39	39.55	7 3	7 6
Tasmania ..	14.34	14.53	39.54	39.19	7 3	7 5
Australia(c) ..	14.98	15.27	39.08	39.29	7 8	7 9
JUNIOR FEMALES						
New South Wales ..	9.98	10.29	39.20	38.88	5 1	5 4
Victoria ..	9.89	9.77	39.19	38.75	5 1	5 1
Queensland ..	8.92	8.93	39.65	39.25	4 6	4 7
South Australia ..	9.01	9.08	39.19	39.32	4 7	4 7
Western Australia ..	8.45	8.58	39.43	39.89	4 3	4 4
Tasmania ..	8.92	9.19	39.42	39.10	4 6	4 8
Australia(c) ..	9.60	9.69	39.27	39.02	4 11	5 0

(a) Private employees only. Excludes managerial, executive, professional and higher supervisory staff, whether or not their hours of work were known, and all other employees whose hours of work were not known. (b) Last pay-period in October, 1962, and October, 1963. For definitions and particulars of the coverage of the surveys, etc., see pp. 445-6. (c) Excludes Northern Territory and Australian Capital Territory.

§ 5. 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 wage should be fixed at the highest amount which the economy can sustain and that the ‘dominant factor’ is the capacity of the community to carry the resultant wage levels”.*

Under the *Commonwealth Conciliation and Arbitration Act 1904–1964* (see p. 426) 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 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 was a function of the respective State Industrial or Arbitration Courts, and (subject to State law) they took into account the 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 have determined State basic wages in accordance with the provisions of the 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, pages 460–6.

In addition to the basic wage, “secondary” wage payments, including margins for skill and various kinds of loadings peculiar to the occupation 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. (See also § 2, para. 2 (iii) *Adult Males—Components of Total Wage Rate*, pp. 431–3).

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 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”.

* *Commonwealth Arbitration Reports*, Vol. 77, p. 494.
Vol. 2, p. 3.

† *Commonwealth Arbitration Reports*,

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 Reports were presented in 1920 and 1921. 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. 41, page 102.

The system of making automatic quarterly adjustments to 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 new method would have resulted in a basic wage lower than that to which employees would have been entitled had the previous practice been continued, and in 1922* the Court added to the basic wage a general loading of 3s. (known as the "Powers 3s."), "a sum . . . which did, to the extent of 3s. per week, relieve the employees from the detrimental effect so far as they were concerned of the change which the Court was then making in its method of fixing the basic wage".† This loading continued until 1934. 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* p. 452).

For a description of the several series of retail price indexes referred to in these paragraphs, *see* pages 411-12 of this chapter.

(ii) *Basic Wage Inquiries*, 1930 to 1950. No change was made in the method of fixation and adjustment of the basic wage until the onset of the depression in 1930, when applications were made to the Court for a reduction of wages. From 1st February, 1931, the Court reduced all wages under its jurisdiction by 10 per cent. Subsequent applications in 1932 and 1933 for cancellation of this reduction were refused. In May, 1933, the Court transferred the basis of the quarterly adjustment of the basic wage from the "A" Series to the "D" Series Retail Price Index. Further particulars may be found in the *Labour Report*, Nos. 22 and 23.

The "Harvester" standard, adjusted by variations in retail price index numbers, continued to be the theoretical basis of the wage of the Commonwealth Court until the judgment of 17th April, 1934, when automatic adjustment was transferred to the "C" Series Retail Price Index, the base of the index being taken as equal to 81s. a week. The new rate for the six capital cities, £3 5s., 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. (*See Labour Report* No. 25, 1934.)

* *Commonwealth Arbitration Reports*, Vol. 16, p. 32.

† *Ibid*, p. 841.

The following were the main features of the judgment of the 1937 Inquiry. (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 (referred to as the "needs" portion of the basic wage). 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 minimum adjustment of the basic wage was fixed at 1s. a week instead of 2s. (c) 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. (d) Female and junior rates were left for adjustment by individual judges when dealing with specific awards. (See *Labour Report* No. 28, pages 77-87.)

In 1940, the combined unions applied to have the value of 1,000 (the base of the "C" Series Index upon which the "Court" Series was based) raised from 81s. to 100s. a week, and the "Prosperity" loadings incorporated in the new rate. 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 below.) In the course of the judgment, the Chief Judge suggested that the basic wage might be graded 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. (The Commonwealth *Child Endowment Act* 1941 came into operation on 1st July, 1941. For details see Chapter XVI. Welfare Services.)

In 1946, an application was made for restoration of the adjourned 1940 hearing (see above). During the protracted hearing of the Standard Hours Inquiry (see p. 435), it became apparent that reconsideration of the amount of the basic wage was, in the public interest, a matter of increasing urgency, and the unions therefore applied for an "interim" basic wage declaration. Judgment was delivered on 13th December, 1946, whereby an increase of 7s. a week was granted in the "needs" portion of the basic wage, 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.

The Basic Wage Inquiry, 1949-50, completed the case begun in 1940 and continued in 1946 (see above). The general hearing of the unions' claims was commenced on 17th May, 1949, and separate judgments were delivered on 12th October, 1950.* 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. considered that no increase in either the male or the female wage was justified. On 24th October and 17th and 23rd November, 1950, the Court made further declarations concerning the "Prosperity" and other loadings. The "Prosperity" loading of 1937 (see above), which was being paid at rates between 3s. and 6s. a week according to localities, 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 "War" loadings were declared to be not part of the basic wage, and any other loading declared to be part of the basic wage ceased to be paid as a separate entity.

The new rates operated from the beginning of the first pay-period in December, 1950, being in all cases the rate based on the Court Index (2nd Series) for the September quarter, 1950, plus a flat-rate addition of £1, together with the standardized "Prosperity" loading of 5s. The new basic wage rate for the six capital cities (weighted average) was £8 2s., comprising £6 17s. Court (2nd 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 1,572 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. Further particulars of the judgment may be found in *Labour Report* No. 39, page 81.

* *Commonwealth Arbitration Reports*, Vol. 68, p. 698.

For more detailed descriptions of the foregoing inquiries, reference should be made to earlier issues of the Year Book and the *Labour Report*.

(iii) *Basic Wage and Standard Hours Inquiry, 1952-53*. On 5th August, 1952, the Commonwealth Court of Conciliation and Arbitration began hearing claims by employers' organizations that (a) the basic wage for adult males be reduced; (b) the basic wage for adult females be reduced; (c) the standard hours of work be increased; (d) the system of adjusting the basic wages in accordance with variations occurring in retail price index numbers be abandoned; and by employees' organizations, that the basic wage for adult males be increased.

The decision of the Court, announced on 12th September, 1953*, was as follows:—the employers' applications for reduction of the basic wages for adult males and females and for an increase of the standard hours of work were refused; the employers' applications for omission or deletion of clauses or sub-clauses providing for the adjustment of basic wages were granted; and the unions' applications for increases of basic wages were refused.

The Court in the course of its judgment said that nothing had been put before it during the inquiry in support of a departure from its 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.

For further particulars of the judgment, see *Labour Report* No. 46, page 64.

(iv) *Basic Wage Inquiry, 1956*. On 14th February, 1956, the Commonwealth Court of Conciliation and Arbitration commenced hearing an application by trade unions for an increase in the basic wage to the amount it would have reached if automatic quarterly adjustments deleted in September, 1953, had remained in force, plus a further £1; for the re-introduction of automatic quarterly adjustments; and for the abolition of what was known as the 3s. country differential. This application was regarded as a general application for variation of the basic wage in all Commonwealth awards.

All the claims made by the unions were opposed by the respondent employers. The Commonwealth Government intervened in the public interest and opposed the re-introduction of automatic adjustments. The States of New South Wales, Queensland, Western Australia and Tasmania supported the unions' claims for the re-establishment of the system of automatic adjustments and the raising of the basic wage to the levels indicated by the current "C" Series Index numbers, but the State of South Australia opposed these claims. The State of Victoria neither supported nor opposed the unions' claims.

The judgment was delivered 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.

For further details, see *Labour Report* No. 46, page 67.

(v) *Basic Wage Inquiry, 1956-57*. On 13th November, 1956, the Commonwealth Conciliation and Arbitration Commission in Presidential Session commenced to hear claims by the combined unions for an increase of the basic wage to the amount it would have reached if automatic quarterly adjustments had remained in force and for the restoration of automatic quarterly adjustments.† This application was treated by the Commission as a general application for alteration of the basic wage in all Commonwealth awards.

The unions' claims were opposed by the respondent employers. Victoria and South Australia were the only States to appear before the Commission and the Commonwealth Government intervened in the public interest. Victoria neither supported nor opposed the application by the unions. South Australia opposed the unions' claims and suggested that,

* *Commonwealth Arbitration Reports*, Vol. 77, p. 477.

† 87 C.A.R., p. 439.

if an increase in the basic wage were granted, the Commission should decide on the increase to be added to the six capitals basic wage, and then apportion that increase among the six capital cities on a basis accurately reflecting the differences in their cost of living. The Commonwealth opposed the restoration of the automatic adjustment system, whatever index was used for this purpose.

Judgment was delivered on 29th April, 1957.* The Commission, having considered all aspects of the state of the economy, decided that the basic wages in Federal awards should be increased and that the increase in the six capital cities basic wage should be 10s. a week for adult males, to come into effect from the first pay-period to commence on or after 15th May, 1957. The Commission also decided that this increase would be uniform for all basic wage rates. The basic wage for adult females was increased by 7s. 6d. with proportionate increases for juniors of both sexes and for apprentices. The claim for restoration of automatic quarterly adjustments was refused. The Commission 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 considered that "it would not 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."†

A more detailed summary of the judgment may be found in *Labour Report* No. 46, pages 68-71.

(vi) *Basic Wage Inquiry*, 1958. On 18th February, 1958, the Conciliation and Arbitration Commission in Presidential Session commenced hearing an application by respondent unions for variation of the Metal Trades Award, by increasing the amounts of basic wage prescribed therein 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., 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 claims for the restoration of quarterly adjustments and for basic wage increases were opposed by private employers and by the State of South Australia, which also contended that, as the cost of living was much lower in Adelaide than in Melbourne and Sydney, greater disparities in basic wage rates than then existed should be determined if, against its submission, any general increase in the basic wage were decided upon. Tasmania, the only other State represented, made no submissions. The Commonwealth Government intervened in the public interest and leave to intervene was granted to the Professional Officers' Association of the Commonwealth Public Service, three other organizations of medical and scientific workers employed in the Commonwealth Public Service and the Australian Council of Salaried and Professional Associations.

The decisions of the Commission, delivered with its judgment on 12th May, 1958,§ were as follows—the claim for restoration of automatic quarterly adjustments and the claim of the South Australian Government for special treatment were refused; and the basic wages of adult male employees covered by Federal awards were increased by a uniform amount of 5s. a week, to operate from the beginning of the first pay-period commencing on or after 21st May, 1958. The Commission indicated that the issues involved in inter-city differential wage rates were complex and could not be decided after a brief hearing.

The basic wage for adult females was increased to 75 per cent. of the new basic wage for adult males with proportionate increases for juniors and apprentices of both sexes.

For a more detailed summary of the judgment see *Labour Report* No. 49, pages 91-93.

(vii) *Basic Wage Inquiry*, 1959. On 24th February, 1959, the Conciliation and Arbitration Commission, constituted in Presidential Session by Kirby C.J., Foster and Gallagher J.J., commenced hearing an application by respondent unions for variation of the Metal Trades Award 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.

* *Commonwealth Arbitration Reports*, Vol. 87. p. 439.
§ *Ibid.*, p. 285.

† *Ibid.*, p. 459.

‡ 89 *C.A.R.*, p. 287.

A large number of applications for similar variation of other awards were ordered to be treated as involved in the inquiry and as such to be decided upon the evidence, material and submissions made from the beginning of the hearing.

The application of the unions was opposed by private employers generally, and by the State of South Australia and two of its instrumentalities. Tasmania was the only other State represented and it appeared in support of the application of the unions in regard to the increase of the basic wage to the amount it would have reached had the adjustment system been retained and the restoration of that system. The Commonwealth Government intervened and submitted that the application for restoration of the automatic adjustment system should be refused. The Commonwealth again supplied, for the benefit of the Commission and the parties, economic and statistical information and material and, in addition, without making a particular submission as to whether there should be an increase, or its amount, made a general submission on the state of the national economy. The Australian Council of Salaried and Professional Associations was granted leave to intervene, and submissions were also presented on behalf of fixed income earners and pensioners generally.

The Graziers' Association of New South Wales and other organizations of employers in the pastoral industry asked the Commission to reduce the basic wage in the Pastoral Award, 1956, by £1 5s., being the aggregate amount of the increases granted by the Court in 1956 and the Commission in 1957 and 1958. The Commission decided to join these applications in the main hearing as a matter of procedure only and without deciding affirmatively that the Commission as constituted for that hearing had power to grant them in whole or in part. On 5th May, 1959, at the conclusion of submissions in support of these applications and without calling upon the Australian Workers Union in reply, the Commission stated that it would reject the applications for reduction of the basic wage in the Pastoral Award and again indicated that the question of jurisdiction as to whether the Commission had the power to decide a different basic wage remained "undecided and open".

On 5th June, 1959, the three Judges delivered separate judgments.* On the question of whether the system of automatic quarterly adjustments should be restored the members of the Commission were divided in opinion and therefore the question was decided in accordance with the decision of the majority, (Kirby *C.J.* and Gallagher *J.*) that the system not be restored. Foster *J.* dissented.

The members of the Commission were unanimous in the opinion that there should be an increase in the basic wage, but as to the amount of the increase they were divided in opinion. The President, Kirby *C.J.*, was of opinion that the increase should be 15s. a week, payable as from the beginning of the first pay-period commencing on or after 11th June, 1959. Foster *J.* was of opinion that the increase should be 20s. a week, payable as to 10s. as from the first pay-period in July, 1959, and as to the balance by increases of 2s. 6d. for four quarters commencing 1st January, 1960. Gallagher *J.* was of opinion that the increase should be 10s. a week, payable as from the date chosen by the President. Foster *J.*, while holding his opinion, decided to concur in the decision proposed by the President in order that the Commission might reach an effective decision.

A summary of the separate reasons for judgment was published in Year Book No. 46, pages 437-9.

(viii) *Basic Wage Inquiry*, 1960. On 16th February, 1960, the Conciliation and Arbitration Commission, constituted in Presidential Session by Kirby *C.J.* (President), Ashburner and Moore *J.J.* (Deputy Presidents), commenced hearing an application by respondent unions for the restoration to the Metal Trades Award of quarterly adjustments to the basic wage and for an increase in the amount of the basic wage. On the six capital cities rate, the amount of the increase sought was 22s. a week. This amount was composed of two parts—firstly, an addition of 5s. a week to restore to the basic wage the same real value as it had in 1953, and, secondly, a further amount of 17s. representing the unions' estimate of the minimum increase in productivity which had occurred in the period since the automatic adjustment system was abolished.

* *Commonwealth Arbitration Reports*, Vol. 91, p. 683.

The Commonwealth Government intervened in the public interest and again presented a detailed analysis of the economic situation of Australia, together with comments on fiscal and budgetary policy. It also announced its opposition to the unions' application both for restoration of automatic quarterly adjustments and for an increase in the basic wage. The State of South Australia presented material to the Commission to show the effect which wage increases would have on its finances, and opposed the unions' application. Victoria, Queensland and Western Australia presented information to show how their finances would be affected by wage increases, but neither supported nor opposed the claims of the applicants. Tasmania indicated that it supported the application for restoration of quarterly adjustments, but made no submissions.

In its judgment, delivered on 12th April, 1960, the Commission refused the unions' application.* A summary of the judgment may be found in Year Book, No. 47, pages 443-6.

(ix) *Differential Basic Wage Inquiries*, 1960. On 9th August, 1960, the Commonwealth Conciliation and Arbitration Commission commenced hearing claims by:—(a) the Federated Engine Drivers and Firemen's Association of Australia to vary the Engine Drivers and Firemen's (General) Award by eliminating country differentials from basic wages prescribed therein; (b) employers' associations in South Australia to vary the Metal Trades Award by providing that future basic wage increases for Adelaide should be 25 per cent. less than basic wage increases for Sydney until the Adelaide basic wage was 90 per cent. of the Sydney basic wage, and that the basic wage applicable in areas other than Adelaide, Whyalla and Iron Knob should be £13 8s. and should remain unchanged until the Adelaide rate reached £14.

Judgment was delivered on 14th December, 1960.† The Commission granted the application to eliminate specified country differentials from the Engine Drivers' and Firemen's (General) Award, the new basic wages to be payable from the beginning of the first pay-period commencing on or after 1st January, 1961. Other awards were adjusted similarly on application to the Commission. The employers' applications in respect of basic wages in South Australia were both rejected.

(x) *Basic Wage and Standard Hours Inquiry*, 1961. On 14th February, 1961, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby C.J. (President), Ashburner and Moore J.J. (Deputy Presidents), commenced hearing applications by employers and unions for variation of the Metal Trades Award. In the first application the employers sought to increase the number of ordinary working hours per week from 40 to 42, with a concomitant increase in weekly wages by an amount equivalent to two hours pay at ordinary rates, and to effect certain other consequential variations. In the second the unions applied for an increase in the basic wage on a six capital cities basis by the amount of 49s. (which was amended during the hearing to 52s.) and for the re-introduction of automatic quarterly adjustments based on the "C" Series Retail Price Index. The amount claimed represented 27s. (30s.) for cost of living increases since 1953 and 22s. to reflect increases in productivity since that time. The applications were heard together.

All States except New South Wales were represented at the hearing. South Australia made no submissions and called no evidence. Tasmania indicated its support for the unions' application for the restoration of automatic adjustments, plus an adjustment of the basic wage to the level indicated by the movement in the "C" Series Index, but presented no material. Victoria, Queensland and Western Australia neither supported nor opposed the application of the unions, but all presented some statistical information. Although the Commonwealth Government followed its usual practice of supplying, for the benefit of the Commission and the parties, certain economic and statistical material, it expressed no attitude other than its opposition to the re-introduction of quarterly adjustments.

In its judgment, delivered on 4th July, 1961,‡ the Commission made the following decisions.

1. The employers' claim for an increase in the standard hours of work from forty to forty-two with a concomitant increase in the weekly wage equivalent to two hours' pay at ordinary rates is refused.
2. The unions' claim for restoration of automatic quarterly adjustments is refused.
3. The basic wages of adult male employees covered by federal awards will be increased by a uniform amount of 12s. per week.

* *Commonwealth Arbitration Reports*, Vol. 94, p. 314. † 96 C.A.R., p. 573. ‡ 97 C.A.R., p. 377.

4. The new rates will come into effect from the beginning of the first pay-period commencing on or after 7th July instant subject to special cases.
5. For the specific reasons set out in the judgment we consider that in February next the only issue in regard to the basic wage should be why the money wages fixed as a result of our decision should not be adjusted in accordance with any change in the Consumer Price Index and for the purpose of deciding that issue the Order giving effect to the decisions hereby announced will also provide for the adjournment of the application of the unions for increase of the basic wages under the Metal Trades Award to Tuesday, 20th February, 1962, in Melbourne, when such submissions thereon as are desired to be made will be heard.
6. The decision regarding increases in basic wages is applicable to all the applications which have been ordered by the Commission to be joined for hearing and decision with the original application and those joined applications are stood over to a date after 20th February, 1962, to be fixed by the Commission.**

A summary of the Commission's judgment will be found in Year Book No. 50, pages 475-9.

(xi) *Basic Wage Inquiry*, 1962. In accordance with decision No. 5 in the 1961 Inquiry (see above), the adjourned hearing was held on 20th February, 1962, before Kirby C.J., and Ashburner and Moore JJ.

The unions submitted that, although the 1961 judgment represented a recognition of union claims as to the need to maintain the real value of the basic wage, it had not met in full the demands of the trade union movement. The unions intended to return to the Commission at the appropriate time to argue at length for the implementation of their policy as to the basic wage standard and the question of quarterly adjustment.

In the employers' submission, reference was made to the Commission's 1961 judgment as indicating a firm intention to confine argument in the current hearing to the quantum of any basic wage change and to exclude any re-examination of the Commission's departure from previously accepted principles. As the Consumer Price Index had shown practically no change between the March and December quarters of 1961, there could be no change in the basic wage. However, the employers' view was that in any hearing involving movement in the basic wage the parties must be free to discuss economic capacity to sustain the basic wage at any given level and the principles upon which it is computed.

The Commonwealth Government stated that at the proper time the Commonwealth would appear before the Commission to present argument as to the use of price indexes in basic wage fixation and other important issues raised by the 1961 judgment. However the matter might come before the Commission as a matter of procedure, when circumstances called for the debate of any substantive issue the Commonwealth would be in a position to make further submissions.

The Commission decided that there would be no alteration in the amounts of the existing basic wages until further order; and further adjourned the application before it until 19th February, 1963. At the adjourned hearing the issues would be: (a) the issue set out in paragraph 5 of the decisions of 4th July, 1961 (see above); (b) any issue which a party desired to raise and of which it had given notice to the Industrial Registrar, the other parties and to the Attorney-General by 31st January, 1963. The applications referred to in paragraph 6 of the decision of 4th July, 1961, were stood over to a date after 19th February, 1963, to be fixed by the Commission with liberty to any of the parties to those applications to apply in the meantime.

(xii) *Basic Wage Inquiry*, 1963. This was an adjourned inquiry which arose out of an order made by the Commission on 20th February, 1962 (see above). The hearing was held on 5th February, 1963 before Kirby C.J., Ashburner and Moore JJ.

During the proceedings the unions discussed the various methods by which changes in the rates of basic wage could be calculated by using changes in the index numbers of the Consumer Price Index and asked for a direction by the Commission as to which method should be used.

* *Commonwealth Arbitration Reports*, Vol. 97, p. 378.

In conformity with the decision in the 1962 Basic Wage Inquiry (*see* p. 456) the employers gave notice to the Commission that issues and procedures referred to in the 1961 Basic Wage Judgment that related to the fixation of wages or conditions of employment by reference to the capacity of the national economy would, of necessity, be argued at the present hearings.

The employers submitted that the following matters were essential considerations in the hearing and determining of any application seeking to alter wages and conditions of employment on a national basis.

- (a) The role of the Commission in relation to government economic or fiscal policies, inflation, etc.
- (b) The justification for adjustment of wages by reference to a price index either automatically or *prima facie*, including the relationship between movements in a price index and variations in capacity of the national economy.
- (c) The relationship between the capacity of the economy to absorb increases in wages or labour costs and the movements or likely movements in national productivity.

The unions submitted that the matters raised by the employers could be discussed only before a Presidential Bench of the Commission and that the employers could not seek the right to argue the 1961 basic wage decisions before a bench of the Commission constituted otherwise.

In the judgment given on 5th February, 1963, the Commission said:—

“ 1. There will be no alteration in the amounts of the existing basic wage until further order of the Commission.

2. The application before the Commission is further adjourned until 18th February, 1964.

3. At such adjourned hearing the issues will be:

- (a) The issue set out in paragraph (5) of the decision of 4th July, 1961 (*see* page 456), and
- (b) Any issue which a party desires to raise and of which it has given notice to the Industrial Registrar, the other parties, and the Attorney-General, by the 31st January, 1964.”

With regard to the matter of the use of statistics, which had been raised by counsel for the unions, the Commission felt that it was not the appropriate time to deal with the matter, but it would be further considered when it was appropriate.

The Commission referred to the matter raised by the employers concerning the considerations to be taken into account by the Commission when hearing applications to alter wages and conditions of employment, and ruled that it was not the appropriate time to deal with the submissions made.

If submissions were made before benches of the Commission differently constituted from the present one, then those benches were the ones to deal with their relevance, admissibility or otherwise.

The applications referred to in para. 6 of the decision of 4th July, 1961, were further stood over to a date after 18th February, 1964, to be fixed by the Commission with liberty to any of the parties to these applications to apply in the meantime.

(xiii) *Basic Wage Inquiry, 1964.* The Commonwealth Conciliation and Arbitration Commission announced on 9th June, 1964, its decision on trade union claims for an increase in basic wages for adult males covered by federal awards. The Commission was unanimous that an increase be granted, but was divided equally in opinion on the amount of the increase, the President (Kirby C.J.) and Moore J. being of the opinion that it should be 20s. and Gallagher and Nimmo JJ. that it should be 10s. The Commission being equally divided

in opinion, the matter was decided according to the opinion of the President, as provided in the Conciliation and Arbitration Act. The increase of 20s. a week would apply to adult male employees covered by federal awards and would operate from the beginning of the first pay-period commencing on or after 19th June, 1964. The Commission refused the unions' application for restoration of automatic quarterly adjustments of the basic wage. The 1s. per week disparity in the basic wage for station hands under the Pastoral Award was abolished. A summary of the reasons for these decisions will be included in the next issue of the Year Book.

(xiv) *Employers' Total Wage Case, 1964.* On 9th June, 1964, the Commonwealth Conciliation and Arbitration Commission announced its decision rejecting the application of employers for deletion from the Commission's awards, generally, of the basic wage provisions and for the insertion in those awards of a wage expressed as a total wage. A summary of the reasons for this decision will be included in the next issue of the Year Book.

(xv) *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 19th June, 1964, are as shown in the following table.

COMMONWEALTH BASIC WAGE: WEEKLY RATES^(a), 1964

City or town	Rate of wage		City or town	Rate of wage	
	Adult males	Adult females		Adult males	Adult females
	£ s. d.	£ s. d.		£ s. d.	£ s. d.
New South Wales—			Western Australia—		
Sydney ..	15 15 0	11 16 0	Perth ..	15 8 0	11 11 0
Newcastle ..	15 15 0	11 16 0	Kalgoorlie ..	15 15 0	11 16 0
Port Kembla—			Geraldton ..	16 1 0	12 0 6
Wollongong ..	15 15 0	11 16 0	Five Towns ..	15 9 0	11 11 6
Broken Hill ..	15 19 0	11 19 0	Tasmania—		
Five Towns ..	15 14 0	11 15 6	Hobart ..	15 14 0	11 15 6
Victoria—			Launceston ..	15 10 0	11 12 6
Melbourne ..	15 7 0	11 10 0	Queenstown ..	15 5 0	11 8 6
Geelong ..	15 7 0	11 10 0	Five Towns ..	15 12 0	11 14 0
Warrnambool ..	15 7 0	11 10 0	Thirty Towns ..	15 8 0	11 11 0
Mildura ..	15 7 0	11 10 0	Six Capital Cities	15 8 0	11 11 0
Yallourn ^(b) ..	15 13 6	11 15 0	Northern Territory— ^(d)		
Five Towns ..	15 7 0	11 10 0	Darwin ..	16 7 0	12 5 0
Queensland—			South of 20th Parallel ..	15 14 0	11 15 6
Brisbane ..	14 10 0	10 17 6	Australian Capital Territory—		
Five Towns ..	14 11 0	10 18 0	Canberra ..	15 10 0	11 12 6
South Australia—					
Adelaide ..	15 3 0	11 7 0			
Whyalla and Iron Knob ^(c) ..	15 8 0	11 11 0			
Five Towns ..	15 2 0	11 6 6			

(a) Operative from the beginning of the first pay-period commencing on or after 19th June, 1964; female rates are 75 per cent. of male rates. (b) Melbourne rate plus 6s. 6d. loading for males; 75 per cent. of male rate for females. (c) Adelaide rate plus 5s. for males; 75 per cent. of male rate for females. (d) Excludes special loadings—see p. 459.

The following table shows the movements of this wage in all State capital cities and the six capital cities during the period 1939 to 1964.

COMMONWEALTH BASIC WAGE: WEEKLY RATES, ADULT MALES^(a)

Date operative ^(b)	Sydney	Mel- bourne	Brisbane	Adelaide	Perth	Hobart	Six capitals
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
September, 1939 ..	81 0	81 0	76 0	78 0	77 0	77 0	79 0
November, 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 ^(c) ..	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
" 1952 ..	237 0	228 0	216 0	229 0	228 0	230 0	231 0
August, 1953 ^(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
15th May, 1957 ..	263 0	255 0	238 0	251 0	256 0	262 0	256 0
21st May, 1958 ..	268 0	260 0	243 0	256 0	261 0	267 0	261 0
11th June, 1959 ..	283 0	275 0	258 0	271 0	276 0	282 0	276 0
7th July, 1961 ..	295 0	287 0	270 0	283 0	288 0	294 0	288 0
19th June, 1964 ..	315 0	307 0	290 0	303 0	308 0	314 0	308 0

(a) Rates prescribed by the Commonwealth Conciliation and Arbitration Commission (before 30th June, 1956, the Commonwealth Court of Conciliation and Arbitration). Rates include prosperity loadings, where applicable.

(b) Rates operative from the beginning of the first pay-period commencing in the month shown or commencing on or after the date shown. (c) From December, 1950 the basic wage rates for adult females have been 75 per cent. of the rates for adult males. (d) Automatic adjustment discontinued (see p. 452).

A table showing Commonwealth basic wage rates from 1923 to 1964 was published in the Appendix to *Labour Report* No. 50.

3. **Australian Territories.**—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 19th June, 1964 were:—"Darwin" rate, adult males £16 7s., adult females £12 5s.; "Port Augusta" rate, adult males £15 14s., adult females £11 15s. 6d.

In addition to these rates, special loadings were prescribed in Northern Territory awards following the fixation of the basic wage rates operative from November, 1951.

In the Australian Capital Territory, the rates payable as from the beginning of the first pay-period commencing on or after 19th June, 1964, were £15 10s. for adult males and £11 12s. 6d. for adult females.

Further details of basic wage rates in the Northern Territory and the Australian Capital Territory may be found in *Labour Report* No. 50, pages 107-11 and in Section IX of the Appendix (p. 300).

4. **Basic Wage Rates for Females.**—Reference should be made to *Labour Report* No. 50 (page 106) 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 the 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. This percentage has continued to be prescribed in subsequent inquiries.

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, when the Court of Industrial Arbitration fixed the living wage at £2 8s. a week for adult males in the metropolitan area. 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, as from 15th April, 1926, to the Industrial Commission of New South Wales.

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. However, with the adoption in 1937 of the Commonwealth basic wage, the identification of a specified family unit with the basic wage disappeared.

A State scheme of supplementing wages by child endowment became operative in New South Wales from July, 1927, and continued until superseded by the Commonwealth Government scheme in July, 1941. A brief account of the main features of the New South Wales system was given in Year Book No. 37, pages 485–6. For particulars of the Commonwealth scheme, see Chapter XVI. of this Year Book.

Shortly after the Commonwealth Court of Conciliation and Arbitration announced its decision 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. 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 (see page 451).

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. Separate rates for Broken Hill were discontinued in 1961 (see below).

Following the decision of the Commonwealth Court of Conciliation and Arbitration in September, 1953, to discontinue the system of automatic adjustment of the basic wage in accordance with changes in the “Court” Series retail price index numbers, the New South Wales Industrial Commission deleted the automatic adjustment clause from awards, etc., within its jurisdiction. As a result, the basic wages applicable for the State and operative from the beginning of the first pay-period commencing in August, 1953, remained unchanged 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 “C” Series 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 Industrial Arbitration (Basic Wage) Amendment Act, 1961 (No. 29 of 1961) amended the Industrial Arbitration (Amendment) Act, 1961, by adopting the Consumer Price Index numbers in place of the “C” Series retail price index numbers for purposes of the automatic quarterly adjustment of the basic wage. The November, 1961, variation was the first based on the Consumer Price Index. Consumer Price Index numbers relate only to capital cities and the weighted average for the six capital cities, and as a result the Sydney basic wage rate became the rate for the whole of New South Wales, separate rates no longer being prescribed for Broken Hill and “5 Towns” after November, 1961.

The Industrial Arbitration (Female Rates) Amendment Act, 1958, which became operative on 1st January, 1959, defined the existing basic wage for adult females as being 75 per cent. of the adult male rate and made provision for equal pay for males and females in certain circumstances. Where the Industrial Commission or a Conciliation Committee is satisfied that male and female employees are performing work of the same or a like nature and of equal value, they shall prescribe the same marginal or secondary rates of wage. The basic wage for these adult females was prescribed as 80 per cent. of the appropriate basic wage for adult males as from 1st January, 1959. Thereafter, the basic wage was to be increased annually by 5 per cent., so that on 1st January, 1963, it became the same as that for adult males.

In October, 1964, the Industrial Arbitration (Amendment) Act, 1964 (No. 37 of 1964) fixed the State basic wages for adult males and adult females at the levels of the then current Commonwealth basic wages for Sydney, i.e., £15 15s. and £11 16s. per week respectively, to operate from the beginning of the first pay-period which commenced on or after 19th June, 1964. Any provisions in State awards and industrial agreements for adjustments in the basic wages, in accordance with fluctuations in the Consumer Price Index, were to be deleted. The Act provided that the Commonwealth basic wages for Sydney, as declared by the Commonwealth Conciliation and Arbitration Commission under the provisions of the Metal Trades Award, would in future apply to State awards and industrial agreements.

A table showing, for the period from 16th February, 1914, to 19th June, 1964, the basic wage rates for adult males and females payable in Sydney was published in the Appendix to *Labour Report* No. 50, 1962 and 1963.

(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 and employees, with 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.

In October, 1956, an amendment to the Labour and Industry Act (which had superseded the Factories and Shops Acts in 1954) 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, and was payable as from the beginning of the first pay-period in August, 1956. Following the judgment of the Commonwealth Conciliation and Arbitration Commission in the 1961 Basic Wage Inquiry, Wages Boards met in July and August, 1961, and varied their determinations by incorporating the new Commonwealth rates. As the 1964 Basic Wage Inquiry resulted in an increase of 20s. being made to the Commonwealth basic wage for adult males, the rates for Melbourne are £15 7s. a week for adult males and £11 10s. for adult females.

A table showing, for the period November, 1953 to June, 1964, the basic wage rates for adult males and females adopted by most Wages Boards was published in the Appendix to *Labour Report* No. 50, 1962 and 1963.

(iii) *Queensland*. "The Industrial Conciliation and Arbitration Act of 1929" established an Industrial Court, and provided that the Court could make declarations as to the basic wage and standard hours. This Act, as subsequently amended, was repealed by "The Industrial Conciliation and Arbitration Act of 1961", which established, in addition to the Industrial Court, an Industrial Conciliation and Arbitration Commission. The full bench of the Commission, consisting of not less than three Commissioners, may make declarations as to, *inter alia*, the basic wage for males and/or females and the standard hours of work. The first formal declaration of a basic wage (£4 5s. for adult males) by the Queensland Court of Industrial Arbitration operated from 1st March, 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.

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 numbers for Brisbane.

The Court granted increases of 7s. and 5s. in 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, after an inquiry, granted an increase of 15s. a week 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 and the basic wage payable to adult females became approximately 66 per cent. of the male rate.

In January, 1953, because the Court was not satisfied that the fall in the "C" Series index for Brisbane for the December quarter, 1952, was a true representation of the economic position for Queensland as a whole, it declined to make any alteration to the existing basic wage. However, quarterly adjustments were made for the next four quarters.

Following a Basic Wage Inquiry, the Court announced, on 11th June, 1954, that there would be no change in the basic wage rates declared for February, 1954. For the following four quarters, the Court also 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, the basic wage for adult males should be increased from 1st August, 1955. In this judgment, the Court emphasized that it held itself free whether or not to adjust the basic wage upwards or downwards in accordance with movements in the "C" Series retail price index numbers. The Court examined the movement in these index numbers for each subsequent quarter and announced variations in the basic wage.

On 22nd and 23rd April, 1958, the Court heard an application by combined unions for an immediate increase of £1 in the basic wage, on the ground that a state of emergency existed with regard to the cost of living. On 30th May, 1958, the Court dismissed the application.

In December, 1960, the Court determined that as from 1st May, 1961, the basic wage for adult females should be 75 per cent. of that for adult males.

In its basic wage declaration of 25th January, 1961, the Court referred to the opinion given by the Commonwealth Statistician that the "C" Series Retail Price Index had become an unreliable measure of retail price changes in recent quarters and to the fact that, for current statistical purposes, variations in retail prices were measured by the Consumer Price Index. Taking into consideration all relevant factors, including the approximate increase in price levels as disclosed by the Consumer Price Index, the Court decided to increase the basic wage for adult males by 4s. a week.

"*The Industrial Conciliation and Arbitration Act of 1961*", which came into operation as from 2nd May, 1961, provided that the full bench of the Commission, consisting of not less than three Commissioners, may make declarations as to the basic wage and standard hours of work. The Act also provided that all persons interested must be given an opportunity to be heard before any general declaration as to the basic wage can be made.

Following an inquiry, the Commission, in a decision issued on 24th May, 1961, increased the adult male basic wage by 4s. a week, which was approximately the amount of the increase indicated by the Consumer Price Index for March quarter, 1961.

In September, 1961 the Commission heard an application by employer organizations for a declaration of a general ruling that "in future the basic wage for males and/or females shall not be reviewed merely by reason of any change in the Consumer Price Index at intervals of less than twelve months". The application was opposed by the trade unions generally. In a judgment delivered on 14th November, 1961, the Commission refused the employers' application.

An inquiry held in November and December, 1962, dealt with an application by unions for increases of £1 4s. in the adult male basic wage and 18s. in the adult female basic wage. The application was opposed by employer organizations generally, by the State of Queensland and by the Queensland Commissioner for Railways. Judgment was given on 20th December, 1962, the application being refused.

A further application was made by trade unions for a declaration of a basic wage, and an inquiry was held in April, 1963. Employers generally opposed the application, and the State of Queensland, while adopting a neutral attitude, submitted information for the assistance of the Commission. In a judgment delivered on 26th April, 1963, the Commission increased the basic wage by 2s. a week for adult males and by 1s. 6d. a week for adult females from 6th May, 1963.

On 23rd June, 1964, the Commission began hearing four applications by unions to alter the basic wage. The Queensland Government and the employers agreed that there should be an upward movement in the adult male basic wage but limited to 4s., which would take into consideration movement in prices as shown by the Consumer Price Index for March quarter, 1964. This increase would bring the State basic wage for Brisbane to the same amount as the Commonwealth basic wage for Brisbane, namely £14 10s. The Commission on 7th July* unanimously increased the basic wage by 14s. to £15 a week for adult males. The increase took effect on and from 13th July, 1964.

In a declaration on 23rd September, 1964,† the Commission after an inquiry refused to increase the basic wage, despite movement in the Consumer Price Index for the June quarter, 1964, which would have justified an increase of 2s., on grounds that such an increase would constitute a very ineffective addition to the wages of employees.

On 30th November, 1964, the Commission began hearing applications filed by unions and employer associations. The unions claimed increases of 6s. and 4s. 6d. a week for adult males and adult females respectively on the basis of movements in the Consumer Price Index for the June and September quarters, 1964. The employer associations sought that the Commission re-affirm its decision of 7th July, 1964 (see above) and that it declare as a matter of policy that it would not review the basic wage until the Commonwealth Conciliation and Arbitration Commission decided to alter the existing Commonwealth basic wage. The Commission, in its decision of 3rd December,‡ granted the increases claimed by the unions. Commenting on the employer associations' claims, the Commission stated that, although the Commonwealth basic wage determined the State basic wage in all States except Queensland and Western Australia, the Commission had never fixed the State basic wage only in relation to the basic wage in other States or the Commonwealth basic wage and could therefore see no reason why a decision should be made at this time to withhold a hearing for review pending the review of the Commonwealth basic wage.

The rates payable in the Southern Division (Eastern District) from 29th March, 1965, were £15 9s. for adult males and £11 12s. for adult females.

In addition to the basic wage for the Southern Division (Eastern District), which includes Brisbane, adult males in other areas receive district allowances. As from 2nd February, 1959, the allowances have been:—Southern Division (Western District) 10s. 6d., Mackay Division 9s., Northern Division (Eastern District) 10s. 6d., Northern Division (Western District) £1 12s. 6d. The allowances for adult females are not less than 75 per cent. of those for adult males.

In the Appendix to *Labour Report* No. 50, a table was published showing adult male and adult female basic wage rates payable in the Southern Division (Eastern District) from 1st March, 1921, to 13th July, 1964.

(iv) *South Australia.* The Industrial Code, 1920–1963 provides that the Board of Industry shall after public inquiry declare the "living wages" to be paid to adult male and adult 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 was to be declared was a man with a wife and three children. However, the concept of a family unit disappeared with the adoption of basic wage rates declared by the Commonwealth Conciliation and Arbitration Commission (see p. 464).

The first declaration by the Board of Industry became operative from 4th August, 1921, when the living wage for adult male employees in the metropolitan area was determined at £3 19s. 6d. a week.

* Queensland Government Industrial Gazette, No. 34, pages 311–312.
p. 170.

† Q.G.I.G., No. 57, p. 376.

‡ Q.G.I.G. No. 29.

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 unable 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 55 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 it has remained the same as the Commonwealth basic wage for Adelaide. Following the Commonwealth basic wage inquiries in 1956 and subsequent years, increases were made to the South Australian living wages by proclamation. The rates operative from 22nd June, 1964, were £15 3s. for adult males and £11 7s. for adult females.

A table showing adult male and adult female basic wage rates for the whole State (with the exception of Whyalla and nearby area) from 1921 to June, 1964, will be found in Section XI of the Appendix to *Labour Report* No. 50.

(v) *Western Australia.* Prior to the amendment made in 1963, the *Industrial Arbitration Act, 1912-1961* provided that the Court of Arbitration could 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" was 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 had to take into account not only the "needs of an average worker", but also the "economic capacity of industry" and any other matters it deems relevant.

The Act provided that the Court of Arbitration could make adjustments to the basic wage each quarter, if the statement supplied by the State Government Statistician showing retail price index numbers and monetary equivalents in terms of the State basic wages indicated that there had been a variation of 1s. or more a week compared with the previous quarter. These adjustments generally applied 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, operated from 1st July, 1926. The family unit was 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.

Following the judgment of the Commonwealth Court of Conciliation and Arbitration in the 1949-50 Basic Wage Inquiry, the Western Australian Court of Arbitration 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 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 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 to September quarter, 1961, the Court varied the State basic wages after considering the official statement supplied by the State Government Statistician, except in February, 1959, and February, 1960, when no change was made. Basic wage rates remained unchanged from 30th October, 1961, to 22nd April, 1963.

In a decision issued on 30th January, 1960, the Court, acting in recognition of an agreement between representatives of unions and employers, increased the basic wage for adult females from 65 per cent. to 75 per cent. of the adult male rate. The increased rates were payable from the beginning of the first pay-period commencing on or after this date. As in December, 1951, female margins were to be reduced or deleted to offset the increase in the female basic wage.

Amendments to the Industrial Arbitration Act passed in 1963 became effective on 1st February, 1964. The Act provided that the fixation and adjustment of the basic wage would now be dealt with by the Commission in Court Session (three Commissioners) instead of the former Court of Arbitration.

In April, 1964, the Commission, in exercising the same discretionary powers held by the former Court of Arbitration, unanimously increased the basic wage for adult males by 2s. 8d. a week for the metropolitan area and the rest of the South-West land division and 2s. 7d. a week for the Goldfields area and all other parts of the State.

The Commission on 22nd July, 1964, began a General Inquiry following union submissions for an increase of £2 12s. in the basic wage for adult males. On 22nd September, the Commission announced its decision that the basic wage for the whole of the State would be £15 8s. for adult males with appropriate rates for females, juniors and apprentices. This decision abolished the differential rates applying to different areas of the State which had operated since 1931. Subsequently the Commission reduced the industry allowance in the goldmining industry awards from 30s. to 22s. 6d. a week.

The basic wage for the whole of the State was further increased by 3s. 2d. a week, for adult males and 2s. 5d. a week for adult females in October, 1964, following the Commission's examination of the movement in the Consumer Price Index for the September quarter, 1964.

The rates payable in the metropolitan area as from 26th October, 1964, were £15 11s. 2d. for adult males and £11 13s. 5d. for adult females.

A table showing the West Australian State basic wage for the Perth Metropolitan Area, from 1926 to 22nd September, 1964, will be found in Section XI of the Appendix to *Labour Report* No. 50.

(vi) *Tasmania*. A State basic wage is not declared in Tasmania. Under the *Wages Board Act* 1920 as amended (to 1964), Wages Boards are constituted for a number of industries from representatives of employers and employees with an independent chairman (who is common to all Wages Boards), with power to determine the minimum rates of wage payable in each industry. Until February, 1956, these Boards generally adopted the basic wages of the Commonwealth Court of Conciliation and Arbitration in determining the rates of wage to be paid.

Wages Boards have power to adjust their wage rates in accordance with variations in the 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 re-introduced by Wages Boards in February, 1956, and restored the basic wage to the level it would have reached if quarterly adjustments had not been discontinued in 1953. A further basic wage increase was payable from the first pay-period in May, 1956.

Upon application by the Employers' Federation of Tasmania, a compulsory conference of employer and employee representatives was held on 22nd and 25th June, 1956, to consider the adoption of Commonwealth basic wages and the deletion of automatic quarterly adjustment provisions. 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. However, he pointed out that any Wages Board was competent to adopt, by agreement between the representatives of employers and employees or majority decision, the Commonwealth Court's basic wage or any other method of fixing the basic wage.

The majority of Wages Boards suspended automatic quarterly adjustments after the August, 1956, adjustment, and wage rates remained unchanged until July, 1959, when the Commonwealth rates were adopted. Following the decision of the Commonwealth Conciliation and Arbitration Commission in July, 1961, to increase the basic wage, Wages Boards met during July, and incorporated the new Commonwealth rates in their determinations. These rates operated until June, 1964, when, following the increase of 20s. in the Commonwealth basic wage for adult males, the rates became £15 14s. and £11 15s. 6d., respectively. During January, 1961, Wages Boards adopted the basic wage for Hobart as the uniform rate applicable throughout the State.

During 1962, a number of Wages Boards met and varied determinations by making provision for the automatic adjustment of the basic wage to conform to any change in the basic wage determined from time to time in awards of the Commonwealth Conciliation and Arbitration Commission.

A table was published in the Appendix to *Labour Report* No. 50, 1962 and 1963, showing basic wage rates for adult males and females generally adopted in Hobart for the period February, 1956, to June, 1964.

(vii) *State Basic Wage Rates.* The "basic" wage rates of State industrial tribunals operative from September, 1964, are summarized in the following table. State basic wage rates for adult males and adult females for a long period of years are shown in the Appendix to *Labour Report* No. 50, 1962 and 1963. Current figures are published in the monthly bulletin *Wage Rates and Earnings*.

Since June, 1964, the New South Wales basic wage has been the same as the Commonwealth basic wage for Sydney. Prior to this, the State basic wage was automatically adjusted each quarter in accordance with variations in the Consumer Price Index. State basic wages are not declared in Victoria and Tasmania, but Wages Boards, which determine minimum rates to be paid in various industry groups or callings, now generally adopt Commonwealth rates. In Queensland, the industrial authority may declare a basic wage only after an inquiry. In South Australia, the rates have been the same as Commonwealth rates since 1950. The Industrial Authority in Western Australia determines the basic wage each quarter after considering retail price index numbers. In all States, since May, 1961, the basic wage for adult females has been 75 per cent. of the adult male rate.

STATE BASIC WAGES: WEEKLY RATES

State and locality	Date of operation	Males		Females	
		s.	d.	s.	d.
New South Wales	19.6.64	315	0	236	0
Victoria	June/July, 1964	307	0	230	0
Queensland—					
Southern Division—					
Eastern District, including Brisbane ..	29.3.65	309	0	232	0
Western District	29.3.65	319	6	240	0
Mackay Division	29.3.65	318	0	238	9
Northern Division—					
Eastern District	29.3.65	319	6	240	0
Western District	29.3.65	341	6	256	6
South Australia	22.6.64	303	0	227	0
Western Australia(a)—					
Metropolitan Area	} 26.10.64	311	2	233	5
S.W. Land Division					
Goldfields and other areas					
Tasmania	19.6.64	314	0	235	6

(a) Differential rates abolished as from 22nd September, 1964.

§ 6. Wage Margins

1. **General.**—Wage margins have been defined as “ 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 ”.*

Marginal rates of wage are determined by Commonwealth and State industrial tribunals. In the Commonwealth jurisdiction, prior to 1954, the Commonwealth Court of Conciliation and Arbitration had not made any general determination in respect of wage margins, but general principles of marginal rate fixation had 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. Major determinations affecting margins were made in 1954, 1959 and 1963. The decisions of the Commonwealth Court and later the Commonwealth Conciliation and Arbitration Commission have generally been followed by State industrial tribunals in the determination of margins in State awards.

A summary of the 1954, 1959 and 1963 Margins Cases is given in the following paragraphs.

2. **Metal Trades Case, 1954.**—Employee organizations 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 J. M. Galvin C.C., 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 other applications for increased margins.

Employer organizations respondent to the Metal Trades Award 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 J.J.) 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 the 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 margins 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 occupations under the Metal Trades Award. The new rates operated from the beginning of the first pay-period commencing on or after 13th December, 1954.

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

* *Commonwealth Arbitration Reports*, Vol. 80, p. 24.

† *Ibid.*, p. 3.

which provided for tribunals having power to make references, 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 ". Further details were published in *Labour Report* No. 46, 1958, pages 101-8.

3. *Margins Cases, 1959.*—On 25th August, 1959, the Commonwealth Conciliation and Arbitration Commission began considering a number of applications for changes in margins referred to it from the appropriate Commissioner. Applications had been made by various employee organizations for increased margins in Parts I. and II. of the Metal Trades Award, Part II. of the Aircraft Industry Award, the Bank Officials' Award and the Gold and Metalliferous Mining Award. An application by employers sought to reduce marginal rates in the Metal Trades Award. The Commission decided to hear all these matters together, permitting the applicant unions in respect of Part II. of the Metal Trades and Aircraft Industry Awards and the Bank Officials' Award to ask first for an interim increase. A summary of the principal decisions of the Commission is given in the following paragraphs. Further details, including extracts from the judgment, were published in Year Book No. 47, pages 455-9.

Metal Trades Award, Part I. The employee organizations claimed an increase in the margin for the fitter, as set out in the Metal Trades Award, 1952 (i.e. the award as it existed prior to the Metal Trades Case, 1954—see para. 2, p. 467), from 52s. to 134s. a week and an increase of 157 per cent. in the margins for other classifications. The employers counter-claimed for a reduction in margins of 15s. a week.

The Commonwealth Government intervened, and not only submitted statistical material and an analysis of the economic situation, but also assisted the Commission with an exposition of various factors proper to be taken into account in the fixation of margins. In particular, the Commonwealth emphasized the desirability of flexibility in the workings of the arbitration system.

In its judgment, delivered on 27th November, 1959,* the Commission rejected the employers' application to reduce margins, and made an order re-assessing the marginal structure in the Metal Trades Award by increasing the existing margins by 28 per cent., the amount of the increase being taken to the nearest 6d. The new margins applied from the beginning of the first full pay-period commencing in December, 1959. The effect of this decision was to increase the margin of the fitter from 75s. to 96s. a week and that for the process worker from 22s. to 28s.

The Commission stated that, not having before it the question of work values, and having decided not to alter the 1954 relativities, the increases had been expressed as a percentage of current margins, but this was not to be taken as an endorsement of that method of fixing margins.

The Commission went on to say:—" This decision is based on the material placed before us and our general industrial knowledge which, in view of our functions under the Act, we think it proper to use. Both that material and that knowledge relate to the Metal Trades industry and to the economy generally. Our decision, however, relates only to the Metal Trades Award. We realize that on occasions in the past, margins fixed in the Metal Trades Award, and in particular the margin of the fitter, have been used as standards for other awards. The use of the increases which we have granted as a guide in other disputes will be a matter for the parties as far as conciliation is concerned and, if arbitration is necessary, for this Commission however constituted."†

Gold and Metalliferous Mining Award. Judgment was also delivered on 27th November, 1959, in connexion with the application for variation of margins in this award.‡ The margin for the miner was increased from 30s. to 42s. 6d. a week from the beginning of the first full pay-period commencing in December, 1959. Marginal claims for other classifications were referred back to the appropriate Commissioner for consideration. Subsequently, the parties to the award agreed that margins for all other classifications should be increased in the same proportion as the margin for the miner (i.e. 41.7 per cent.). The Commissioner varied the award accordingly.

Metal Trades Award, Part II., and Aircraft Industry Award, Part II. On 11th December, 1959,‡ the Commission delivered a judgment granting a 20 per cent. interim increase in margins to graduate and diplomate engineers and scientists, payable as from the beginning of the first full pay-period commencing in December, 1959.

* *Commonwealth Arbitration Reports*, Vol. 92, p. 798.

† *Ibid.*, p. 799.

‡ 93 C.A.R., p. 63.

Bank Officials' Award. On 11th December, 1959,* a 20 per cent. interim increase in margins was granted to officers in the 10th to 18th year of service inclusive and to accountants and managers, payable retrospectively as from 11th June, 1959. Interim increases were not awarded to more junior officers, nor to females. Subsequently the parties to the Bank Officials' Award met before a single Commissioner, and a consent award was made giving final marginal increases to adult males and adult females and making adjustments to junior rates of pay.

4. *Margins Case, 1963.*—Following the conclusion of the 1963 Basic Wage Case, two benches of the Commonwealth Conciliation and Arbitration Commission commenced, on 5th February, 1963, to hear applications by metal trades unions for increased margins and for three weeks annual leave (see pp. 472-3). The two benches sat jointly for the convenience of the parties involved and were constituted as follows:—margins case—Kirby C.J. (President), Moore and Ashburner J.J. and Commissioner Apsey; three weeks' annual leave case—Kirby C.J. (President), Moore J. (Deputy President) and Commissioner Apsey. In their application, the claimant unions were supported by the Australian Workers Union, the High Council of Commonwealth Public Service Organizations, the Australian Council of Salaried and Professional Associations and certain affiliated organizations. The claim was opposed by the respondent employers, who were supported in their opposition by the banks, respondents to the Bank Officials Award, and by members of the Australian Wool Growers and Graziers Council.

The unions' claim on margins was that the Commission restore, on an assessed basic wage, the relativities within the Metal Trades Award established in 1947 by what is known as the second Mooney formula. Taking £15 7s. as the assessed basic wage (calculated as the 1947 basic wage adjusted to price changes since 1947) and applying the percentage 48.6, which the fitter's margin was of the 1947 basic wage, the union arrived at a new marginal rate of £7 9s. for a fitter, an increase of £2 13s. on the current margin. This claim of £7 9s. was 2.86 times the 1947 fitter's margin, and hence the unions sought to have all 1947 margins multiplied by 2.86. This claim was opposed by the employers who asked that any consideration of marginal increases be deferred for an unspecified time.

The Commonwealth Government intervened in the public interest and made submissions as to the approach to be adopted to marginal fixation generally, and to marginal fixation in the metal trades industry, as well as supplying information to the Commission about the economic situation and the Government's assessment of it. The Commonwealth Government neither opposed nor supported the claim. The South Australian Government neither opposed nor supported the claim for marginal increases, but did oppose any change in present relativities. The Queensland Government neither opposed nor supported the application for increases in margins, but submitted certain information regarding possible effects in Queensland. The Commission declined to allow submissions aimed at showing what might happen in State awards if State industrial tribunals followed their past practices with respect to the Commission's decisions.

The unions' case in outline comprised—firstly, a critical analysis of major decisions of the Court and of the Commission extending back to the Harvester decision of 1907; secondly, a demonstration from those decisions of the basic criteria used in the fixation of margins, in particular the market value of the work of the various classifications at the time of fixation and the inter-related consideration of economic capacity; thirdly, evidence to demonstrate what is the current market value; and, finally, material concerning economic capacity to pay the rates being claimed.

Referring to past decisions and the problem of marginal fixation, the Commission stated that "the assessment of particular margins at particular times must be an act of judgment by the person or persons making the assessment in the light of current knowledge and practice both of which are themselves susceptible of change We hold the view that whatever may have been the practice in the past there is no reason why any margin should, after a period of time, necessarily be restored to any earlier relativity which it may have had with any earlier basic wage Margins are awarded for skill and other factors which are not included in the assessment of the basic wage. The value from time to time of skill and other factors relevant only to margins may change independently of changes in the basic wage. We are not prepared to assume that because in 1947 the fitter's margin represented 48.6 per cent. of the basic wage that it should now represent the same percentage of the current basic wage." The Commission emphasised the need to have before it all information essential for a complete assessment of margins, some of which must relate to the work actually being done, and pointed out that margins in the Metal Trades Award cannot be properly assessed either absolutely or relatively until the Commission in one form or another has before it an application which will enable it to deal with all aspects of marginal fixation.

* *Commonwealth Arbitration Reports*, Vol. 93, p. 63.

In the absence of any evidence or material on work value, the Commission said it accepted the margins then current in the metal trades award as a starting point. Since last fixing margins in 1959, the Consumer Price Index had risen 6.05 per cent. and the Commission stated that it was prepared to assume that this showed a movement in purchasing power of money with sufficient accuracy to enable this to be taken into account in fixing margins, and believing that a compensating increase in within capacity it considered it would be inequitable not to award it. But as this would only restore margins to the real value of the 1959 margins, it was necessary to consider whether there was any ground for an increase in real margins. To do this, and in the absence of any material related to the work itself, the Commission said it could only consider the question of economic capacity in the metal trades and in industry generally.

The Commission repeated what had been said in the 1961 Basic Wage Case, namely, that productivity figures could be used only to demonstrate a trend and that productivity can only be approximately measured. The unions put forward the view that both past and future increases in productivity should be noted, while the employers said that the proper approach was to ignore the past except to the extent to which it indicated the future, and to adjust wages in a ratio slightly less than any expected future increase in productivity. The employers argued that if overall the level of wages increases at a faster rate than the increase in national productivity then there will be an increase in prices or a shift in income to the wages sector. The Commission made the following observations on this proposition— firstly, that productivity can only be imperfectly calculated and that such productivity figures as are now available can only be properly used to demonstrate a trend; secondly, that the case for marginal increase relates to the metal trades industry only; thirdly, that, if current margins are inadequate, it should be a matter of equity to award margins which are adequate even if such increase raises wages by a percentage greater than the estimated immediate future increase in national productivity; and, finally, that it was an oversimplification to relate the movement in prices to general economic considerations only. The Commission then considered figures from 1949–50 of the movement in national productivity based on gross national product per person employed at 1952–53 prices, and pointed out that, since the 1959 assessment of margins to 1961–62, national productivity measured in this way had increased by 5.1 per cent.

On economic capacity the Commission came to the conclusion that after a period of slowing down, the economy had recovered some of its impetus and that this recovery was likely to continue in the immediate future at a somewhat higher rate than that of the past year. After considering material related to the metal trades industry, namely, over-award payments, average hours of overtime and average weekly hours for adult males, and keeping in mind that employers did not suggest that the economic capacity of the metal trades industry was less than industry generally or that increases in productivity in that industry had been or would be less than increases in national productivity, the Commission was prepared to assume in the unions' favour that by and large the economic capacity of the metal trades industry was certainly not less than, and probably more than, that of industry generally.

Summing up, the Commission said: "In our judgment of national economic capacity, including productivity, the likely future trends in that capacity and the relationship between the capacity of the Metal Trades industry and national capacity we consider that we should as a matter of equity increase the real value of margins under this award. Having regard to this decision and the decreased purchasing power of money since the last assessment we consider that it would be fair to increase margins under this award by ten per cent. We have reached this conclusion in the knowledge that today employees under this award have been awarded an extra week's annual leave. We emphasise again that no information about work values has been placed before us which would enable us to make a more accurate and from our point of view a more satisfactory assessment."

The Commission then considered in detail the capacity of the economy as shown by the following economic indicators:—rural industry, balance of payments, competitive position of secondary industries, investment, employment, company income, money and banking and retail trade, and general. Under company income, the Commission dealt with a submission of the employers that because wages had gone up as a result of the 1961 Basic Wage decision in a period of comparatively low activity in the economy and because the price level had not risen as a result of that decision, there had been a movement in income from the company sector to the wage sector. Any further increase in wages, the employers submitted, would be likely to cause a further drift in company income, followed by a further dampening down of investment and a consequent deleterious effect on activity in the economy and a worsening of the economic position of wage earners. The Commission referred to figures

of gross national product, company income and wages and salaries which indicated that movements in company income were not directly related to movements in wages and salaries, but stated that the fact that company incomes had been lower in the past two years indicated the necessity for caution in awarding marginal increases.

The Commission concluded its consideration of the indicators with these words ". . . . our own investigation of the economy (is) that both from a long term point of view and also from a short term point of view the prospects for the economy may be reasonably regarded with optimism. On a consideration of the whole of the indicators, we conclude that national capacity has increased and that it is likely to continue to increase in the foreseeable future. In these circumstances we are confident that the economy is able to sustain the increase of ten per cent. in margins in this award which we consider is otherwise justified."

At the request of the parties the Commission took the unusual course of making a pronouncement early in the proceedings as to the extent to which the decision in the metal trades case should be used in other industries. The Commission re-affirmed what was said in the 1959 metal trades judgment that the decision would relate to the Metal Trades Award only, although they realized that the margin of the fitter had been used as a standard for other awards. In the present case the Commission stated it was not intended that the decision should be applied automatically outside the metal trades.

The order of the Commission was that the margins for adult males in the Metal Trades Award be increased by ten per cent., the increase to be calculated to the nearest shilling and to operate from the beginning of the first pay-period to commence on and after 22nd April, 1963.

§ 7. Annual Leave

1. **General.**—The judgment delivered by the Commonwealth Court of Conciliation and Arbitration, in the Commercial Printing Case of 1936, granting one week's annual leave with full pay to employees in the industry, has usually been regarded as the first statement in the Commonwealth jurisdiction of the principles involved in deciding whether or not annual leave should be awarded. Over a period of time annual leave was introduced industry by industry when and if the Judge responsible for the industry considered it proper.

In 1945, the question of annual leave was before the Court* and the Court in its judgment set out what it considered to be the principles to be applied in all applications for an extension of the annual leave period to fourteen days. Alteration of particular awards was left to the discretion of the single judge who heard the application.

Further inquiries into annual leave have been conducted and a summary of the most recent inquiries is given on pages 472-3.

Annual leave for employees under the jurisdiction of State awards, etc. is subject to separate determination and a brief summary is given in paragraphs 6 to 11, pages 473-7.

At present the majority of employees in Australia receive three weeks' annual leave at least.

2. **Commonwealth.**—Since 1960, three inquiries have been held following union claims to increase paid annual leave from two to three weeks in Commonwealth Awards. A report on these cases is given below.

3. **Three Weeks' Annual Leave Inquiry, 1960.**—Unions respondent to the Metal Trades Award applied to the Commonwealth Conciliation and Arbitration Commission on 18th July, 1960, to vary the Award to provide three weeks' paid annual leave instead of two weeks.

The application was opposed by employers, the State of Victoria and the Electricity Trust of South Australia. The State of Tasmania supported the application. The Commonwealth Government and the State of Queensland neither supported nor opposed the application, although the Commonwealth tendered statistical and economic information for the benefit of the Commission and the parties.

* *Commonwealth Arbitration Reports*, Vol. 55, p. 595.

In its judgment of the 14th December, 1960, the Commission summarized the submissions made by the unions and the employers, and stated that the two economic factors considered most important were the export-import position and the state of employment. The Commission stated that it had decided to reject the application, but emphasized that its decision was not intended to apply to a situation where, for special reasons related to a particular industry, it may consider an amount of annual leave greater than two weeks to be justified.

Part of the conclusion of the Commission stated.—“ We accordingly dismiss this application because of the present economic situation. In doing so we would again repeat what we have said earlier in this judgment that we do not consider that employees under Federal awards have yet achieved all the leisure which they should achieve. We have done no more than decide that the present is not an appropriate time in which to award an extra week's paid leave.”*

For further particulars *see* Year Book No. 49, pages 511–513.

4. Three Weeks' Annual Leave Inquiry, 1962.—On 10th April, 1962, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby *C.J.* (President), Moore *J.* (Deputy President) and D. G. Apsey (Commissioner) commenced hearing an application by unions respondent to the Metal Trades Award for variation of the award to provide three weeks' paid annual leave instead of two weeks.

Although the application was made in respect of the Metal Trades Award only, the unions made it clear that they wished the claim to be regarded as a test case which, if granted, would involve the inclusion in federal awards generally of the basic standard of three weeks' annual leave. The application was opposed by employers, the Victorian Government and the Electricity Trust of South Australia. New South Wales and Tasmanian Governments supported the application. The Commonwealth Government and the Queensland Government neither supported nor opposed the application, although the Commonwealth intervened in the public interest and made submissions on the state of the economy, as well as providing economic and statistical information for the benefit of the Commission and the parties.

The hearing was concluded on 2nd May, 1962, and on 30th May the Commission made the following announcement.

“ We have given careful consideration to the submissions which have been made to us in this case. The applicant unions have asked that we consider the claim a general one, the result to be applied to Federal awards generally. This must result in greater caution on our part in deciding whether or not the application should succeed. Our present intention is that an increase to three weeks' annual leave generally in secondary industry, subject to special cases, should be granted as soon as we are satisfied that the economy is in a position to cope with the effects of such an increase. However, there are two aspects of the economic arguments about which we are troubled and about which we consider it too early to make any firm decision. These are, firstly, whether our internal economy has sufficiently recovered from the recession of late 1961 and, if so, what is the likely rate of its recovery in the future and, secondly, the effect on Australia of success or failure of the application of the United Kingdom to enter the European Common Market. There have been developments in relation to the latter question since the hearing which both emphasise its importance and the lack of accurate information as to what is going to happen and the short and long term effect on Australia's economy.

So that we may be able better to assess these matters we have decided to adjourn these proceedings until a date in February or March next which will be announced later when the parties and interveners will be able to make such further submissions on these two matters as they may desire.”

Further details were published in Year Book No. 50, page 496.

5. Three Weeks Annual Leave Inquiry, 1963.—On 5th February, 1963, the Commonwealth Conciliation and Arbitration Commission, constituted by Kirby *C.J.* (President), Moore *J.* (Deputy President) and Commissioner Apsey, commenced hearing the application, which had been adjourned from May, 1962, to vary the Metal Trades Award to provide three weeks' paid annual leave, instead of two (*see* para. 4 above).

* *Commonwealth Arbitration Reports*, Vol. 96, p. 217.

The hearing was continued during March and April, 1963, jointly with the Metal Trades Margins case hearing (see pp. 469-71), and in its judgment on 18th April, 1963, the Commission referred to the announcement it had made on 30th May, 1962, as to the Commission's intention to grant a period of three weeks' annual leave, when it was satisfied that the economy was in a position to cope with the effects of such an increase. "In our view the Australian economy has recovered sufficiently from the recession of 1961 and its likely rate of recovery in the future is such as to enable us to grant three weeks' annual leave. The second aspect of the economic arguments about which we were troubled has for the purposes of this decision been changed in a manner in which the problem has become no longer relevant. Therefore we see no reason why we should not implement our express intention of May last year to increase annual leave to three weeks generally in secondary industry, subject to special cases."

The Commission then announced that the Metal Trades Award would be varied to produce the following result. "A period of 21 consecutive days' leave shall be allowed to employees who have completed twelve months continuous service by or after 30th November, 1963."

Provision for proportionate leave for periods of employment of one month and over was made in respect of employment after 1st June, 1963.

It was stated that the application of the new standard of annual leave for secondary industry in other Federal awards would be a matter for individual Commissioners upon proper application being made for variation.

In a decision given on 22nd October, 1963, the Commission, comprising Wright J. (Acting President), Moore J. (Deputy President) and Commissioner Winter, unanimously rejected an application by the Metal Trades Employers Association and other employers' organizations firstly for permission, at the employers' discretion, to require employees to take their annual leave in two periods of seven and fourteen days respectively, and secondly that the time after accrual, within which leave must be taken, should be extended to nine months when leave is taken in one period and twelve months when leave is taken in more than one period.

6. New South Wales.—Employees in New South Wales in private industry, other than those covered by Federal awards, were granted three weeks' annual leave by an amendment to the Annual Holidays Act, passed in 1958. In February, 1964, the State Government indicated that it would grant its employees four weeks' annual leave effective from 1st January, 1964. From 29th September, 1964, annual holiday pay, for employees covered by provisions of the Annual Holidays Act, would be calculated on the basis of the employee's current weekly earnings instead of current award rates.

7. Victoria.—Following the decision of the Commonwealth Conciliation and Arbitration Commission in May, 1963, individual Wages Boards commenced to alter provisions of their determinations to grant employees an extra week's leave. By September, 1963, the majority of Boards had included three weeks' annual leave in their determinations.

In December, 1963, the Industrial Appeals Court upheld an appeal by employees against the determination of the Photographic Goods Board which stated that an employer may direct the workers or group of workers to take their annual leave in two periods of two consecutive weeks and one week, respectively. The President of the Court pointed out that the Commonwealth Conciliation and Arbitration Commission contemplated that employers might need to plan properly and far enough in advance to enable the appropriate adjustments to the new standard of leave to be made. The Court considered that it had been demonstrated during the year that the employer would be able to make these adjustments without the kind of hardship which the Commonwealth Commission contemplated would warrant exemption from the obligation to give three consecutive weeks' leave.

8. Queensland.—In June, 1963*, the Full Bench of the Industrial Conciliation and Arbitration Commission granted an extra week's annual leave to employees with twelve months' continuous service on or after 30th November, 1963. This move implemented a previous decision of the Commission in which it was decided, as a matter of policy, to grant increased leave to persons already enjoying two weeks' leave.

* Queensland Government Industrial Gazette, Vol. 53, p. 473.

The decision applied to day workers and non-continuous shift workers receiving two weeks' leave; continuous shift workers receiving three weeks' leave; and day workers and shift workers receiving additional leave in lieu of extra payment for working on statutory holidays. The order became effective as from 1st June, 1963.

The terms of the decision of the Commonwealth Conciliation and Arbitration Commission, as handed down in April, 1963 (*see* page 473) were to apply to awards of the Industrial Conciliation and Arbitration Commission of Queensland with the exception that, in the State awards, pro-rata payment for leave not taken at the termination of employment was to be expressed at hours per month. The Commission added that those industries or employers who felt that the condition of an industry warranted exemption or exclusion from such additional leave, should make an application showing justification for the exemption or exclusion as the onus rested upon that industry or employer to do so.

The decision did not apply to employees in primary industry—apart from the sugar industry—or those in western areas. Extra leave for these employees was subject to separate applications.

9. South Australia.—The Full Bench of the South Australian Industrial Court in May, 1963, announced an increased standard of annual leave in the State, adopting the standard fixed by the Commonwealth Conciliation and Arbitration Commission (*see* page 473).

The Court pointed out that it had embraced three weeks as the general standard for annual leave for the time being. There would not be any automatic extension as the court would decide the application for each industry as it arose to ensure that comparable industrial justice would be applied to the various groups of employees in the State. The Court felt that the Commonwealth Commission's forecast regarding the future of the economy was not based entirely upon established facts but partly on a predicted economic trend for the near future. If that trend is not maintained the Court would, if application were made, be prepared in a proper case to review the new standard of annual leave.

The Court, as a general indication as to its attitude, expressed the view that annual leave should be taken at a time fixed either by agreement or, if this is not possible, at a time fixed by the employer. The leave should be allowed in two parts and one part must be of at least two weeks' duration. These, however, were factors which could vary from award to award and their determination would depend on the needs of the particular industry.

10. Western Australia.—Following a general inquiry concerning Annual Leave and Public Holidays, the Court of Arbitration in June, 1963*, adopted three weeks as the new standard for the normal period of annual leave in State awards, with four weeks for seven-day shift workers. The date of operation was the same as that decided by the Commonwealth Conciliation and Arbitration Commission (*see* page 473).

Existing awards and agreements which already provided annual leave in excess of the Court's standard were to be examined separately to ascertain whether special circumstances existed to justify leave greater than the normal standard.

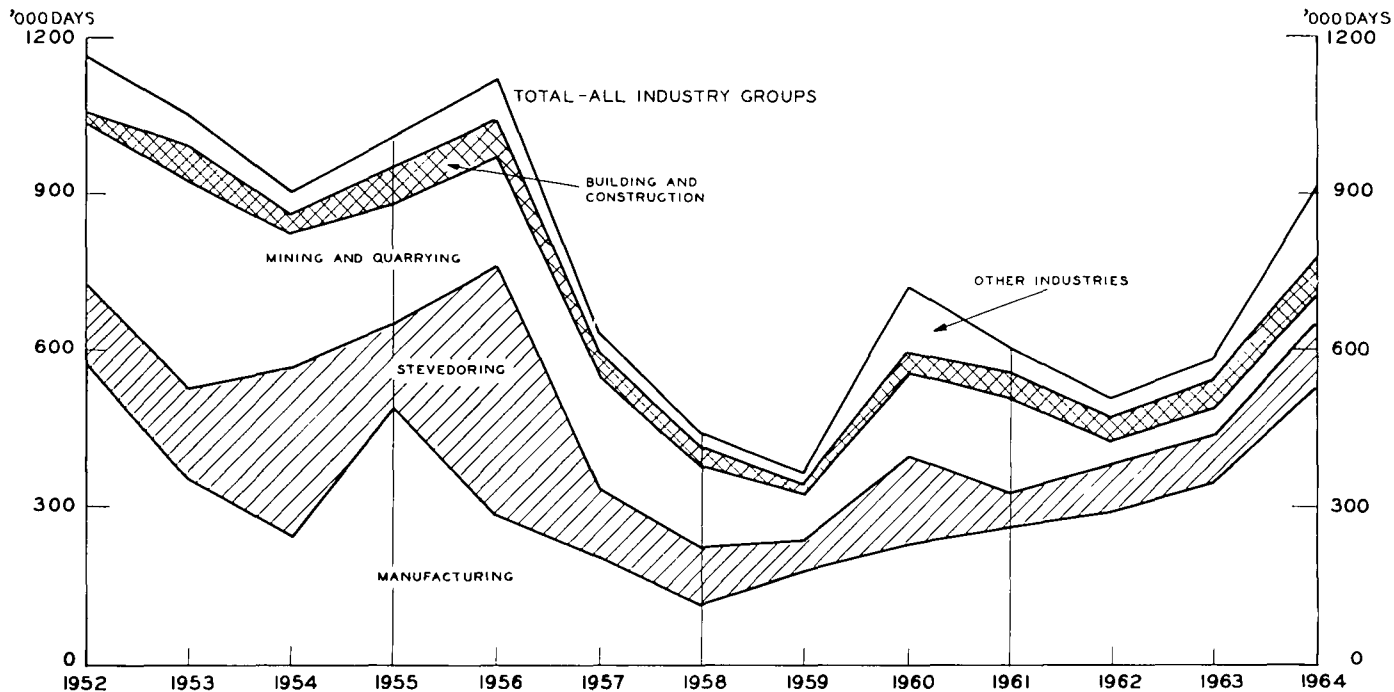
The President of the Court in the reasons for his decision said that he was not convinced that the economic capacity of the State, and its economic capacity for the future, was less than that of the country as a whole.

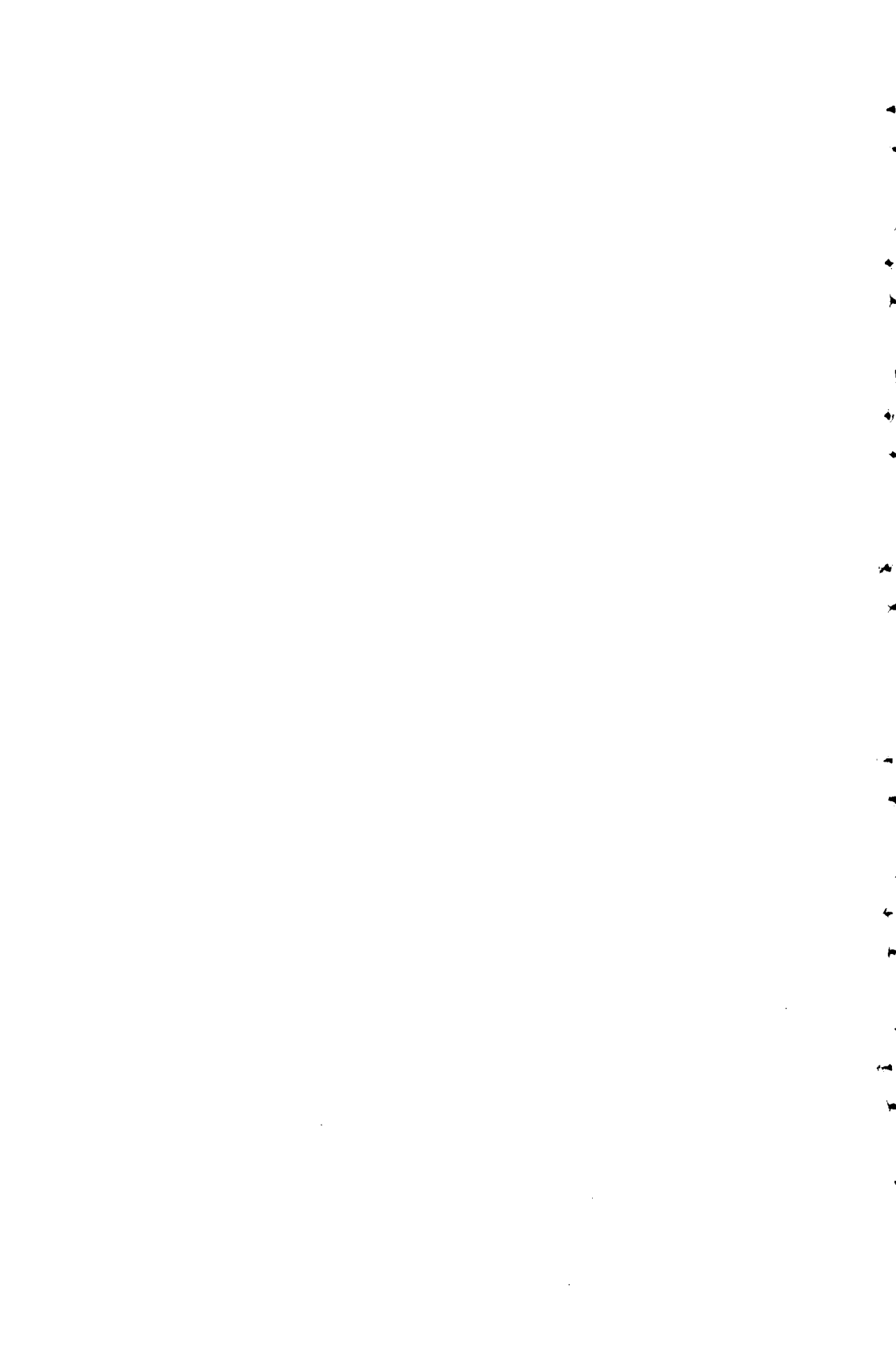
In the inquiry the Government sought a reduction in the number of public holidays and a review of other conditions where these were more favourable than the Court's standard. Private employers opposed any increase in annual leave but, alternatively, submitted that, if there was to be an increase, then the new standard should be two weeks and four days per annum or the number of public holidays in each year should be reduced by one. Both these submissions were rejected and the standard number of public holidays was retained at ten with the provision that where an award provided for more than ten public holidays a year, that award, unless the union consented to a reduction to ten, would be excluded from the above order amending the annual leave provisions until it was established that special circumstances justified the continuance of the greater number of holidays.

* *Western Australian Industrial Gazette*, Vol. 43 p. 392.

INDUSTRIAL DISPUTES, AUSTRALIA, 1952 TO 1964

WORKING DAYS LOST - INDUSTRY GROUPS





In November, 1963*, the Court refused an application by employers for the right to split the annual leave into two parts since it decided to follow the decision of most other State tribunals and allow the additional leave in conformity with conditions similar to those prescribed by the Commonwealth Conciliation and Arbitration Commission. The right to split the leave would only be allowed by the Court in exceptional circumstances, unless all the parties concerned agreed to the inclusion of such a provision.

11. *Tasmania*.—Following an amendment to the Wages Board Act in 1961, Wages Boards were permitted to grant employees up to three weeks' paid recreational leave. In June, 1962, the determination of the Ironmongers' Wages Board provided that the entitlement to annual leave, on and from 1st January, 1963, where the year of employment ended after 31st December, 1962, would be fourteen consecutive days, together with a period during working hours equal to 3½ hours for each completed month of employment after 31st December, 1962. Employees whose year of employment commenced after 31st December, 1963, would be eligible for three weeks' annual leave.

By the end of 1962 the determination of 72 Wages Boards had been amended to include these entitlements for extra leave. The remaining three Boards incorporated the entitlements in early 1963.

Generally, most Wages Boards adopted provisions to enable leave to be taken in one consecutive period within six months from the end of the preceding year of employment or, if the employer and employee agree, in two separate periods, the lesser of which shall be of not less than seven consecutive days.

§ 8. Long Service Leave

1. *General*.—Paid long service leave, i.e., leave granted to workers who remain with the one employer over an extended period of time, has been included in the provisions of industrial legislation in the several States and a brief summary is given in the following paragraphs. The position in regard to Commonwealth award employees is also summarized. In all cases the transfer of ownership of a business does not constitute a break in continuity of service with the same employer.

2. *Commonwealth*.—(i) *General*. Until May, 1964, the Commonwealth Conciliation and Arbitration Commission had not included provision for long service leave in its awards, and had refrained from determining disputes relating to this subject except in the case of the Northern Territory and the Australian Capital Territory (*see* p. 478). Consequently till then, the provisions of the various State Acts relating to long service leave applied to workers covered by awards of the Commonwealth. The applicability of long service leave provisions under State law to workers under Commonwealth awards had been tested before the High Court and the Privy Council, and such provisions had been held to be valid.

The Commission's position was set out in its decision, issued on 16th September, 1959, regarding disputes on the inclusion, in the Graphic Arts (Interim) Award, 1957, of provisions for long service leave. It stated that it should refrain, until further order, from determining the disputes so far as they concerned long service leave and that if, in future, the Commission decided that long service leave on a national basis was desirable, it was open to proceed to the making of an award on the matter.

Following the hearing of claims for long service leave provisions by employers in the graphic arts and metal trades industries in August, 1963, the Full Bench of the Commonwealth Conciliation and Arbitration Commission, on 11th May, 1964, announced its decision that long service leave entitlement would be calculated on the basis of thirteen weeks for twenty years of unbroken employment, in respect of employment before 11th May, 1964 (or, in New South Wales, 1st April, 1963), and at the rate of thirteen weeks for fifteen years in respect of service after 11th May, 1964 (or, in New South Wales, 1st April, 1963). After further periods of ten years, employees would be entitled to an additional pro-rata period of leave calculated on the same basis. Those employees who completed an unbroken contract of employment of ten years but less than fifteen years, and whose employment was terminated by death or by the employer for any cause other than serious and wilful misconduct, or by the employee on account of illness, incapacity or domestic or other pressing necessity, would be entitled to pro-rata payment. The rate of payment while on leave would be current award rates which would be subject to basic wage changes and marginal adjustments which occurred during the leave period.

Following applications by employers in the metal trades and printing industries, the Full Bench of the Commission in a judgment delivered on 23rd December, 1964, extended the provisions of the awards to cover non-unionist employees. The decision rejected the unions' argument that the Commission had no jurisdiction to make long service leave awards

* *Western Australian Industrial Gazette*, Vol. 43, p. 1459.

binding in respect of non-unionists. The Commission, in a separate decision, varied the provisions of the awards so that an employer would not be required to grant an employee long service leave until the entitlement equalled thirteen weeks for the first period of entitlement and eight and two-thirds weeks in respect of any subsequent period of entitlement. These variations would be effective on and from 1st December, 1964.

(ii) *Australian Territories*. Long service leave codes for employees covered by Northern Territory and Australian Capital Territory awards were originally prescribed on 4th December, 1961, by the Commonwealth Conciliation and Arbitration Commission in Presidential Session. The Commission decided that employees should be granted three months' long service leave after twenty years' service with one employer, even if part of this service was outside the Territory. In addition, the Australian Capital Territory code prescribed that employees presently employed might "go back for a period of 25 years in regard to the calculation of their present or future entitlement of long service leave". In December, 1964, the Commission amended the majority of awards covering employees in the Northern Territory and the Australian Capital Territory by granting long service leave on the basis of thirteen weeks after fifteen years service.

(iii) *Stevedoring Industry*. The *Stevedoring Industry Act 1962* which came into force on 19th November, 1962, amended the *Stevedoring Industry Act 1956-1961* by extending the eligibility and qualifying periods of the long service leave provisions of the Act. No changes were made to the entitlement for long service leave which remained at thirteen weeks after twenty years' qualifying service and six and a half weeks for each subsequent ten years' qualifying service.

3. *New South Wales*.—Long service leave was first introduced for the majority of workers by the Industrial Arbitration Act, 1951, which provided such leave for workers under State awards. This Act was replaced by the Long Service Leave Act, 1955, which extended the benefits to any worker within the State. An amendment to the Act in April, 1963, provided for three months' long service leave for fifteen years' continuous service with the same employer and proportionate amounts on this basis after a minimum of five years' service. The Long Service Leave (Metalliferous Mining Industry) Act, 1963, conferred on certain workers in the metalliferous mining industry the right to three months long service leave after ten years' service. This act operated from 1st January, 1964.

4. *Victoria*.—The *Factories and Shops (Long Service Leave) Act 1953* first provided for long service leave for workers in Victoria, the provisions of this Act being subsequently incorporated in the Labour and Industry Act. Leave provided for was thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes were to be taken into consideration in dealing with exemptions from the Act.

An amendment to the Labour and Industry Act in December, 1964, granted employees, from 1st January, 1965, thirteen weeks leave after fifteen years continuous service. Workers who terminated their employment after ten years but less than the qualifying fifteen years would be able to obtain a pro-rata entitlement subject to the existing special conditions of the Act. Following amendment to the Public Service Act, public servants became entitled to four and a half months leave after fifteen years' service instead of six months after twenty years.

5. *Queensland*.—In 1952 The Industrial Conciliation and Arbitration Acts were amended to include long service leave provisions for employees within the jurisdiction of the Industrial Court, and the Acts were amended again in 1955 to extend these provisions to any employee in respect of whose employment there was not in force an award or industrial agreement under the Act and to seasonal workers in sugar mills and meat works. Leave provided for was thirteen weeks for twenty years' continuous service with the same employer.

An amendment to The Industrial Conciliation and Arbitration Acts was passed and assented to in December, 1964, granting employees long service leave of thirteen weeks after fifteen years' continuous service. The amendment retained pro-rata leave entitlement after ten years' service and operated on and from 11th May, 1964.

6. *South Australia*.—The Long Service Leave Act, passed in 1957, exempts a large number of industrial agreements, with wide industrial coverage from specifying long service leave for employees. For those covered by the Act, leave provided for is seven days in the eighth and in each subsequent year of continuous service. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions under the Act.

On 24th December, 1964, long service leave of thirteen weeks after fifteen years' continuous service in respect of employment on and from 11th May, 1964, was granted to shop assistants by agreement between employers and employees.

7. **Western Australia.**—The Long Service Leave Act was passed in 1958, but it did not apply to employees whose conditions of work were regulated under the Western Australian Industrial Arbitration Act. The Court of Arbitration of Western Australia, in an order dated 1st April, 1958, incorporated, in most of the awards and agreements within its jurisdiction, provisions similar to those in the Long Service Leave Act. Leave provided for was thirteen weeks for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes can be taken into consideration in dealing with exemptions from the Act.

In September, 1964, the Industrial Commission began to amend the long service leave provisions of its awards and industrial agreements to provide for thirteen weeks' leave after fifteen years service on or from 1st October, 1964. Pro-rata entitlement would accrue after ten years' service. The *Long Service Leave Amendment Act (No. 2), 1964*, introduced in October, 1964, was in the same terms as the amendments made by the Commission to the various awards and agreements (*see above*).

8. **Tasmania.**—The Long Service Leave Act, which was passed in 1956, provided for thirteen weeks' leave for twenty years' continuous service with the same employer. Contributions by employers to retirement schemes could be taken into consideration in dealing with exemptions from the Act. An amendment to the Long Service Leave Act, assented to on 17th December, 1964, reduced the qualifying period to fifteen years. The amendment operated on and from 11th May, 1964.

INDUSTRIAL DISPUTES

1. **General.**—Detailed information regarding industrial disputes involving stoppage of work is given in the *Labour Report*. A table showing statistics of industrial disputes for each year from 1913 is contained in the Appendix to *Labour Report* No. 50, 1962 and 1963.

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 any year, and were still in progress during the following year, are included in the figures for both years.

2. **Industry Groups.**—The following table gives, for Australia as a whole, particulars of industrial disputes which were in progress during 1964, classified according to industry groups.

INDUSTRIAL DISPUTES(a): INDUSTRY GROUPS, AUSTRALIA, 1964

Industry group	Number	Workers involved			Working days lost	Estimated loss in wages (£'000)
		Directly	Indirectly (b)	Total		
Agriculture, grazing, etc.	223	35,314	..	35,314	34,261	167.1
Coal mining	7	5,443	3,641	9,084	31,066	201.6
Other mining and quarrying	373	149,431	6,048	155,479	376,564	1,795.9
Engineering, metals, vehicles, etc. ..	4	2,227	..	2,227	7,977	31.9
Textiles, clothing and footwear	94	23,387	6,069	29,456	92,950	378.4
Food, drink and tobacco	1	258	..	258	60	0.2
Sawmilling, furniture, etc.	9	1,064	19	1,083	2,088	9.2
Paper, printing, etc.	96	29,689	286	29,975	49,271	228.4
Building and construction	140	41,152	241	41,393	68,882	326.6
Railway and tramway services	20	55,630	12	55,642	63,195	250.9
Road and air transport	24	22,065	495	22,560	54,073	256.0
Shipping .. .. .	..	..	..	..	..	..
Stevedoring	317	149,483	..	149,483	113,556	564.7
Amusement, hotels, personal service, etc. .	8	545	..	545	843	4.0
Other industries(c)	18	13,129	..	13,129	16,572	65.5
Total	1,334	528,817	16,811	545,628	911,358	4,280.4

(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. (c) Includes Communication; Finance and Property; Wholesale and Retail Trade; Public Authority (n.e.i.); and Community and Business Services.

A graph showing, for the years 1952 to 1964, the working days lost as a result of industrial disputes in the main industry groups is shown on page 475.

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 1960 to 1964.

INDUSTRIAL DISPUTES(a): STATES AND TERRITORIES

State or Territory	Year	Number	Workers involved			Working days lost	Estimated loss in wages (£'000)
			Directly	Indirectly (b)	Total		
New South Wales ..	1960	736	289,266	7,646	296,912	416,762	1,731.9
	1961	529	131,661	5,295	136,956	318,629	1,316.0
	1962	752	195,344	13,623	208,967	303,400	1,285.9
	1963	817	214,643	4,333	218,976	307,440	1,314.7
	1964	828	221,510	7,566	229,076	320,568	1,498.1
Victoria ..	1960	98	86,002	2	86,004	102,805	397.1
	1961	91	51,447	1,300	52,747	72,471	304.8
	1962	166	72,525	720	73,245	100,606	418.6
	1963	180	85,757	2,221	87,978	172,963	755.0
	1964	206	188,836	1,239	190,075	359,567	1,714.0
Queensland ..	1960	173	155,073	3,566	158,639	153,061	594.7
	1961	123	73,442	4,798	78,240	168,958	914.6
	1962	175	33,445	8,321	41,766	75,951	299.4
	1963	160	37,047	7,266	44,313	54,861	234.0
	1964	198	84,951	7,745	92,696	157,571	726.7
South Australia ..	1960	42	25,735	12	25,747	16,568	61.8
	1961	26	17,012	321	17,333	17,256	66.8
	1962	31	11,748	100	11,848	14,599	59.4
	1963	35	11,938	107	12,045	8,957	41.0
	1964	55	22,851	189	23,040	63,785	292.6
Western Australia ..	1960	43	25,684	..	25,684	27,342	106.6
	1961	22	9,588	99	9,687	23,233	94.5
	1962	28	8,280	83	8,363	6,300	25.0
	1963	28	42,390	194	42,584	31,969	126.2
	1964	26	6,093	72	6,165	7,148	31.3
Tasmania ..	1960	40	9,142	..	9,142	6,991	27.6
	1961	14	4,645	16	4,661	4,622	19.1
	1962	18	5,048	78	5,126	3,993	17.5
	1963	11	5,019	..	5,019	2,933	13.5
	1964	8	1,898	..	1,898	1,939	9.0
Northern Territory ..	1960	9	942	..	942	1,226	5.3
	1961	4	456	..	456	709	4.0
	1962	6	428	..	428	298	1.3
	1963	8	915	..	915	968	4.7
	1964	6	602	..	602	437	2.1
Australian Capital Territory	1960	4	209	..	209	352	1.8
	1961	6	275	2	277	933	4.0
	1962	7	4,005	105	4,110	3,608	15.0
	1963	11	858	20	878	1,477	6.6
	1964	7	2,076	..	2,076	1,343	6.6
Australia ..	1960	1,145	592,053	11,226	603,279	725,107	2,926.8
	1961	815	288,526	11,831	300,357	606,811	2,723.8
	1962	1,183	330,823	23,030	353,853	508,755	2,122.1
	1963	1,250	398,567	14,141	412,708	581,568	2,495.7
	1964	1,334	528,817	16,811	545,628	911,358	4,280.4

(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.

4. Duration.—(i) *General*. The duration of each industrial dispute involving a loss of work, i.e. the time between the cessation and resumption of work, has been calculated in working days, exclusive of Saturdays, Sundays and holidays, except where the establishment involved carries on a continuous process (e.g. metal smelting and cement manufacture).

(ii) *Industry Groups, 1964*. The following table shows, for the year 1964, industrial disputes in coal mining, stevedoring and other industries classified according to duration.

DURATION OF INDUSTRIAL DISPUTES(a): AUSTRALIA, 1964

Duration (working days)	Number	Workers involved(b)		Working days lost		Estimated loss in wages (£'000)
		Number	Proportion of total (per cent.)	Number	Proportion of total (per cent.)	
COAL MINING						
1 day and less	166	23,590	66.8	11,598	33.9	57.4
2 days and more than 1 day ..	29	8,367	23.7	11,615	33.9	57.4
3 days and more than 2 days ..	13	1,743	4.9	4,601	13.4	21.7
Over 3 days and less than 5 days ..	13	1,426	4.1	5,041	14.7	23.9
5 days and less than 10 days ..	2	188	0.5	1,406	4.1	6.7
10 days and less than 20 days ..	..	..	..	..	..	..
20 days and less than 40 days ..	..	..	..	..	..	..
40 days and over .. .. .	..	..	..	..	..	..
<i>Total</i>	<i>223</i>	<i>35,314</i>	<i>100.0</i>	<i>34,261</i>	<i>100.0</i>	<i>167.1</i>
STEVEDORING						
1 day and less	229	119,849	80.2	66,615	58.7	330.2
2 days and more than 1 day ..	61	28,047	18.7	42,411	37.3	212.2
3 days and more than 2 days ..	18	1,160	0.8	2,881	2.5	14.5
Over 3 days and less than 5 days ..	9	427	0.3	1,649	1.5	7.8
5 days and less than 10 days ..	..	..	..	..	..	..
10 days and less than 20 days ..	..	..	..	..	..	..
20 days and less than 40 days ..	..	..	..	..	..	..
40 days and over .. .. .	..	..	..	..	..	..
<i>Total</i>	<i>317</i>	<i>149,483</i>	<i>100.0</i>	<i>113,556</i>	<i>100.0</i>	<i>564.7</i>
OTHER INDUSTRIES						
1 day and less	360	247,304	68.6	199,327	26.1	839.9
2 days and more than 1 day ..	143	40,499	11.2	62,783	8.2	272.5
3 days and more than 2 days ..	109	23,083	6.4	58,400	7.7	258.0
Over 3 days and less than 5 days ..	73	22,543	6.3	77,483	10.1	374.8
5 days and less than 10 days ..	74	11,627	3.2	75,691	9.9	350.2
10 days and less than 20 days ..	26	7,005	1.9	92,796	12.2	474.8
20 days and less than 40 days ..	7	8,663	2.4	191,790	25.1	953.8
40 days and over	2	107	(c)	5,271	0.7	24.6
<i>Total</i>	<i>794</i>	<i>360,831</i>	<i>100.0</i>	<i>763,541</i>	<i>100.0</i>	<i>3,548.6</i>
ALL INDUSTRIES						
1 day and less	755	390,743	71.6	277,540	30.5	1,227.5
2 days and more than 1 day ..	233	76,913	14.1	116,809	12.8	542.1
3 days and more than 2 days ..	140	25,986	4.8	65,882	7.2	294.2
Over 3 days and less than 5 days ..	95	24,396	4.5	84,173	9.2	406.5
5 days and less than 10 days ..	76	11,815	2.1	77,097	8.5	356.9
10 days and less than 20 days ..	26	7,005	1.3	92,796	10.2	474.8
20 days and less than 40 days ..	7	8,663	1.6	191,790	21.0	953.8
40 days and over	2	107	(c)	5,271	0.6	24.6
<i>Grand Total</i>	<i>1,334</i>	<i>545,628</i>	<i>100.0</i>	<i>911,358</i>	<i>100.0</i>	<i>4,280.4</i>

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See footnote (b) to table on page 480. (c) Less than 0.05 per cent.

5. Causes.—(i) *General*. Stoppages are analysed in three separate groups, "Coal Mining", "Stevedoring", and "Other Industries". Causes have been 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, including 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 (occurring mainly in the coal mining industry) where the cause of the stoppage is not officially made known to the management.

(ii) *Industry Groups.* The following table shows particulars of industrial disputes for 1964, classified according to cause, in three industry groups.

CAUSES OF INDUSTRIAL DISPUTES(a): AUSTRALIA, 1964

Cause of dispute	Coal mining	Stevedoring	Other industries	All industries
NUMBER OF DISPUTES				
Wages, hours and leave	7	28	285	320
Physical working conditions and managerial policy	114	258	386	758
Trade unionism	28	16	92	136
Other	74	15	31	120
Total	223	317	794	1,334
WORKERS INVOLVED(b)				
Wages, hours and leave	907	19,907	215,032	235,846
Physical working conditions and managerial policy	14,133	91,159	86,062	191,354
Trade unionism	4,670	5,210	21,790	31,670
Other	15,604	33,207	37,947	86,758
Total	35,314	149,483	360,831	545,628
WORKING DAYS LOST				
Wages, hours and leave	1,133	8,628	547,187	556,948
Physical working conditions and managerial policy	17,643	69,677	169,742	257,062
Trade unionism	5,701	2,631	25,060	33,392
Other	9,784	32,620	21,552	63,956
Total	34,261	113,556	763,541	911,358

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 480.

(iii) *Summary, 1960 to 1964.* The following table gives particulars of industrial disputes according to cause for the years 1960 to 1964.

CAUSES OF INDUSTRIAL DISPUTES(a): AUSTRALIA

Cause of dispute	1960	1961	1962	1963	1964
NUMBER OF DISPUTES					
Wages, hours and leave	213	123	290	279	320
Physical working conditions and managerial policy	648	525	707	748	758
Trade unionism	127	66	92	115	136
Other	157	101	94	108	120
Total	1,145	815	1,183	1,250	1,334
WORKERS INVOLVED(b)					
Wages, hours and leave	228,695	114,125	133,312	171,551	235,846
Physical working conditions and managerial policy	154,401	102,125	179,321	142,998	191,354
Trade unionism	43,321	13,797	15,243	22,251	31,670
Other	176,862	70,310	25,977	75,908	86,758
Total	603,279	300,357	353,853	412,708	545,628
WORKING DAYS LOST					
Wages, hours and leave	254,926	248,864	194,427	274,901	556,948
Physical working conditions and managerial policy	277,755	261,454	274,091	233,502	257,062
Trade unionism	64,617	34,021	22,418	23,268	33,392
Other	127,809	62,472	17,819	49,897	63,956
Total	725,107	606,811	508,755	581,568	911,358

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 480.

6. Methods of Settlement.—The following table shows particulars of industrial disputes for 1964, classified according to method of settlement, in three industry groups.

INDUSTRIAL DISPUTES(a): METHODS OF SETTLEMENT, AUSTRALIA, 1964

Method of settlement	Coal mining	Stevedoring	Other industries	All industries
NUMBER OF DISPUTES				
By private negotiation	34	8	207	249
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	..	2	113	115
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	..	3	107	110
Coal Industry Acts	14	..	..	14
Stevedoring Industry Act .. .. .	..	11	..	11
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials	1	156	..	157
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation	174	137	366	677
By other methods .. .. .	..	..	..	..
Total	223	317	(c) 793	(c) 1,333

WORKERS INVOLVED(b)				
By private negotiation	2,860	728	45,220	48,808
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	..	43	36,898	36,941
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	..	190	15,510	15,700
Coal Industry Acts	1,214	..	..	1,214
Stevedoring Industry Act .. .. .	..	1,511	..	1,511
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials	23	18,576	..	18,599
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation	31,217	128,435	261,429	421,081
By other methods .. .. .	..	..	..	..
Total	35,314	149,483	(c) 359,057	(c) 543,854

WORKING DAYS LOST				
By private negotiation	4,787	272	288,591	293,650
By mediation not based on legislation .. .. .	..	..	..	..
State legislation—				
Under State Conciliation, etc., legislation .. .. .	..	57	104,733	104,790
By reference to State Government officials .. .. .	..	..	..	..
Commonwealth and Commonwealth-State legislation—				
Industrial Tribunals under—				
Conciliation and Arbitration Act .. .. .	..	583	58,590	59,173
Coal Industry Acts	4,061	..	..	4,061
Stevedoring Industry Act .. .. .	..	1,329	..	1,329
Other Acts .. .. .	..	..	..	..
By reference to Commonwealth Government officials	42	15,294	..	15,336
By filling places of workers on strike or locked out .. .. .	..	..	..	..
By closing down establishment permanently .. .. .	..	..	..	..
By resumption without negotiation	25,371	96,021	291,651	413,043
By other methods .. .. .	..	..	..	..
Total	34,261	113,556	(c) 743,565	(c) 891,382

(a) Refers only to disputes involving a stoppage of work of 10 man-days or more. (b) Includes workers indirectly involved. See note (b) to table on p. 480. (c) Differences between these figures and corresponding figures in tables on pages 479-82 are due to disputes which were incomplete at the end of the year.

WORKERS' COMPENSATION LEGISLATION

A conspectus of the principal provisions of Workers' Compensation Acts in force in Australia at 31st December, 1963, will be found in *Labour Report* No. 50, pages 195-203.

LABOUR ORGANIZATIONS

§ 1. Labour Organizations in Australia

1. **General.**—The figures shown in this section are prepared from a special collection of membership of labour organizations at 31st December each year. The affairs of single unions 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. More detailed statistics appear in the annual *Labour Report*.

2. **Trade Unions.**—(i) *General.* 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:—(a) the local independent; (b) the State; (c) the interstate; and (d) 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 of two specified purposes. Statistics relating to interstate or federated trade unions are contained in tables on page 486.

(ii) *Number and Membership.* Returns showing membership by States and Territories at 31st December each year are obtained for all trade unions and employee organizations. The following table shows the position at the end of each of the years 1962 to 1964.

TRADE UNIONS: NUMBER AND MEMBERSHIP

State or Territory	Number of separate unions			Number of members ('000)			Percentage increase in membership(a)		
	1962	1963	1964	1962	1963	1964	1962	1963	1964
New South Wales ..	222	227	223	765.5	782.7	795.1	2.9	2.2	1.6
Victoria ..	155	154	157	498.0	514.9	525.8	2.3	3.4	2.1
Queensland ..	135	137	141	334.0	339.4	350.6	1.3	1.6	3.3
South Australia ..	133	134	137	160.4	161.1	166.9	5.9	0.4	3.6
Western Australia..	152	154	154	121.0	129.0	135.1	5.3	6.5	4.7
Tasmania ..	103	103	111	57.3	57.4	59.9	0.7	0.4	4.2
Northern Territory(b)	23	30	30	3.3	3.3	3.4	(b)	(b)	(b)
Australian Capital Territory(b)	38	54	59	11.0	15.7	18.0	(b)	(b)	(b)
Australia ..	(c)347	(c)347	(c)340	1,950.5	2,003.5	2,054.8	2.9	2.7	2.6

(a) On preceding year. (b) In some cases, union members in the Territories associated with State organizations are reported under the heading of that State. The annual figures reflect, in part, progressive improvements to more accurate reporting, and the comparability of totals for the Territories is affected by this aspect. (c) Without interstate duplication. See below.

In the preceding table, under the heading "Number of separate unions", a union reporting members in a State or Territory is counted as one union within that State or Territory. The figures do not add to the Australian total (shown in the last line) because a union represented in more than one State or Territory is included in the figure for each State or Territory in which it is represented, but is counted only once in the Australian total.

A table showing the number and membership of trade unions in Australia for the years 1912 to 1963 will be found in the Appendix to *Labour Report* No. 50.

(iii) *Classification in Industry Groups.* The following table shows the number of unions and members thereof in Australia at the end of each of the years 1962 to 1964.

TRADE UNIONS: INDUSTRY GROUPS, AUSTRALIA

Industry Group	1962		1963		1964	
	No. of unions (a)	No. of members	No. of unions (a)	No. of members	No. of unions (a)	No. of members
		'000		'000		'000
Agriculture, grazing, etc.	3	60.7	3	60.8	3	63.3
Mining and quarrying	12	35.4	12	35.0	12	35.2
Manufacturing—						
Engineering, metals, vehicles, etc. ..	12	294.6	12	301.5	12	312.8
Textiles, clothing and footwear	7	105.4	7	107.7	6	109.9
Food, drink and tobacco	34	130.4	34	136.7	33	130.9
Sawmilling, furniture, etc.	6	39.1	6	39.7	6	39.5
Paper, printing, etc.	6	52.1	6	53.4	6	53.2
Other manufacturing	31	87.1	31	90.8	29	95.0
<i>Total Manufacturing</i>	96	708.7	96	729.8	92	741.3
Building and construction	28	145.5	25	144.9	24	146.9
Railway and tramway services	25	134.7	25	133.8	24	131.2
Road and air transport	11	63.7	10	66.2	11	68.0
Shipping and stevedoring	14	34.0	14	33.3	14	35.1
Banking, insurance and clerical	19	121.2	19	126.4	17	132.8
Wholesale and retail trade	11	79.7	12	84.2	12	86.3
Public administration ^(b)	70	354.0	70	374.0	72	389.2
Amusement, hotels, personal service, etc. ..	22	54.5	23	54.1	22	54.8
Other industries ^(c)	36	158.4	38	161.0	37	170.6
Total	347	1,950.5	347	2,003.5	340	2,054.8

(a) Without interstate duplication. See para. (ii) p.484.
municipal, etc. (c) Includes community and business services.

(b) Includes communication.

(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 estimates of wage and salary earners in employment do not include employees engaged in rural industry or 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 in private domestic service recorded at the nearest available population census. 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	Number of members (^{'000})			Proportion of total wage and salary earners ^(a) (Per cent.)		
	Males	Females	Persons	Males	Females	Persons
1954	1,448.2	339.3	1,787.5	66	45	61
1961	1,521.9	372.7	1,894.6	63	41	57
1962	1,561.9	388.6	1,950.5	64	41	57
1963	1,588.5	415.0	2,003.5	62	42	57
1964	1,624.0	430.8	2,054.8	62	41	56

(a) See text above.

(v) *Interstate or Federated Trade Unions.* The following table gives particulars of the number and membership of interstate or federated trade unions in 1964.

INTERSTATE OR FEDERATED TRADE UNIONS(a): AUSTRALIA, 1964

Particulars	Unions operating in—					Total
	2 States	3 States	4 States	5 States	6 States	
Number of unions ..	9	4	22	37	71	143
„ „ members ('000)	17.9	25.3	170.9	455.4	1,180.9	1,850.3

(a) Certain unions in this group have, in addition to branches in the States, branches in the Northern Territory or the Australian Capital Territory or both.

3. Organizations Registered under the (Commonwealth) Conciliation and Arbitration Act.—Under Part VIII. of the *Conciliation and Arbitration Act* 1904–1961, any association of employers in an 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, and any association of not less than 100 employees in any industry, may be registered. However, the Public Service Arbitration Act provides that an association of less than 100 employees may be registered as an organization under the Conciliation and Arbitration Act, if its members comprise at least three-fifths of all persons engaged in that industry in the Public Service. Such organizations are included in the figures shown below. Registered unions include both interstate associations and associations operating within one State only. Registration under Commonwealth legislation began in 1906. At the end of 1964 the number of employers' organizations registered under the provisions of the Act was 66. The number of unions registered at the end of 1964 was 156, with membership of 1,710,000, representing 83 per cent. of the total membership of all trade unions in Australia. Lists of organizations of employees and of employers registered under this Act are contained in the *Industrial Information Bulletin*, Vol. 20, No. 1, January, 1965, published by the Department of Labour and National Service.

4. Central Labour Organizations.—(i) *Trades and Labour Councils*. Delegate organizations, usually known as Trades Hall Councils or Labour Councils and consisting of representatives of a number of trade unions have been established in the capital cities and in a number of other centres in each State. In the centres where these councils exist most unions or local branches operating in the district are affiliated. The district councils obtain their finance by means of a *per capita* tax on members of affiliated unions. In States other than Western Australia the district councils are generally independent bodies, although provision usually exists in the rules of the central council in the capital city for the organization of district councils, or for their representation on the central council. In Western Australia, until 1962, there was a unified system or organization with a central council and district councils within the framework of the Australian Labour Party. In 1962 this organization was abolished and a separate Trades and Labour Council with provincial councils was to be established outside the political organization. At the end of 1963 only the central council (the Trades and Labour Council of Western Australia) was operating. A number of provincial councils were established during 1964.

The following table shows, for each State and Territory, the number of trades and labour councils and the number of affiliated unions, or branches of unions, at the end of 1964. The figures for 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.

CENTRAL LABOUR ORGANIZATIONS: NUMBER, AND UNIONS AND BRANCH UNIONS AFFILIATED, 1964

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A. (a)	Tas.	N.T.	A.C.T.	Total
Number of councils ..	12	9	13	5	3	5	..	1	48
Number of unions and branch unions affiliated	342	291	187	151	126	130	..	29	1,256

(a) See explanation in text above.

As well as trades and labour councils there are councils organized on trade lines and composed of delegates from separate unions whose members' interests are closely connected by reason of their occupations. Delegate councils of bakers, bread carters and mill employees, or of unions connected directly or indirectly with the metal trades, or with the building trades, are examples of such organizations.

(ii) *Australian Council of Trade Unions.* 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 A.C.T.U. 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 A.C.T.U. and it 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:—Building, Food and distributive services, Manufacturing, Metal, Services, and Transport. To this executive are added the four officers, namely, President, two Vice-Presidents, and Secretary, who are elected by and from the Australian Congress of Trade Unions.

The ordinary meetings of Congress are held in alternate years. The 1963 Biennial Congress was held in September, 1963, and attended by 517 delegates from affiliated organizations, State branches of the A.C.T.U., and provincial councils. Special meetings of Congress are held whenever deemed advisable by decision of the executive, as approved by the majority of its branches, or by resolution of unions representing one-third of the total membership of the A.C.T.U.

The objectives of the A.C.T.U. 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 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; and political action to secure satisfactory working-class legislation.

The A.C.T.U. was 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.

All the major unions are affiliated with the A.C.T.U., with the exception of the largest, the Australian Workers' Union, which is itself virtually a central organization of branches catering in the main for employees in rural and construction industries.

§ 2. International Labour Organisation

The International Labour Organisation (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 three times each year; and the International Labour Office, which provides the secretariat of the Organisation. The Conference is composed of delegations from the Member States of the Organisation. At the end of 1964, there were 111 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. Each delegate speaks and votes independently, so that all points of view in each country are fully expressed. The Governing Body consists of the representatives of twenty-four governments and twelve employers' and twelve workers' representatives. Of the twenty-four government representatives, ten are from the ten countries of major industrial importance and fourteen are elected by the remaining governments. These latter fourteen government representatives and the twelve employers' and twelve workers' titular delegates and the deputy members of the three groups are elected by their groups at the Conference every three years. Particulars are given in *Labour Report* No. 50 of the proceedings of International Labour Conferences up to the 47th Session, held in Geneva in June, 1963. For details of I.L.O. conventions ratified by Australia, see *Labour Report* No. 50, pages 215-17.

CHAPTER XIV

OVERSEA TRADE

NOTE.—Because of the limitations of space, the statistics in this chapter are, in the main, restricted to summarized form. For details of imports and exports reference should be made to the annual bulletins on *Oversea Trade* (preliminary and final), *Australian Exports*, and *Imports Cleared for Home Consumption*. Current information on oversea trade is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, the *Monthly Bulletin of Oversea Trade Statistics*, and a preliminary monthly statement on *Australian Oversea Trade—Merchandise*. The *Australian Balance of Payments* (mimeographed statement) contains detailed information on this subject, and there are also the following additional mimeographed statements:—*Exports of Wool* (monthly), *Oversea Trade with Major Groups of Countries* (quarterly), *Trade of Australia with the United Kingdom* (half-yearly) and *Trade of Australia with Eastern Countries* (annually).

§ 1. Legislation affecting Oversea Trade

1. **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.**—The Commonwealth legislation affecting oversea trade includes: the Customs Act; the Customs Tariff and various Preference Tariffs; the Customs Tariff (Dumping and Subsidies) Act; Trading with the Enemy Act. 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.

3. **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 Australian Customs Tariff has been developed in conformity with the policy of protecting economic and efficient Australian industries and of granting preferential treatment to certain imports from certain countries of the Commonwealth of Nations. 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 in force at the time 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* 1901-1963 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; or
 - (iii) imported manufactured raw materials as determined by the Minister.
- (b) Goods of the factory or works cost of which not less than 75 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 25 per cent. (or 50 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.

The British Preferential Tariff also applies to the Republic of Ireland and, with the exception of a relatively small number of commodities which carry special rates of duty, to Canada, New Zealand (except Cook Islands) and 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 certain goods, the British Preferential Tariff also applies to specified countries of the Commonwealth of Nations 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 Ministerial order.

(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.

4. *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. Other goods are exempt from primage duty. Goods the produce or manufacture of New Zealand, Norfolk Island, Fiji, Cocos Islands, Christmas Island and the Territory of Papua and New Guinea are exempt from primage duty.

5. **Tariff Board.**—The *Tariff Board Act 1921–1962* provides for the appointment of a Tariff Board consisting of eight members. Of these, two must, and three may, be members of the Commonwealth Public Service at the time of their appointment (or first appointments in the case of re-appointments). Members of the Board are appointed for terms of not less than one year and not more than five years. The purpose of the Tariff Board is to advise the Government on matters relating to the protection and encouragement of Australian industry.

The Minister of State for Trade and Industry is required to refer to the Board for inquiry and report the following matters:—the necessity for new, increased, or reduced duties; the necessity for granting bounties and the effect of existing bounties; and any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods by charging unnecessarily high prices for his goods or acting in restraint of trade. In addition, the Minister may refer the following matters to the Tariff Board for inquiry and report:—the general effect of the working of the Customs Tariff and the Excise Tariff; the fiscal and industrial effects of the Customs laws on the Commonwealth; the incidence between the rates of duty on raw materials and on finished or partly finished products; and other matters affecting the encouragement of primary and secondary industries in relation to the Tariff. The Minister of State for Customs and Excise may refer to the Tariff Board for inquiry and report the following matters:—the classification of goods in the Customs Tariff or Excise Tariff and matters in connexion with the interpretation of these Tariffs; the question of the value for duty of goods; whether goods not prescribed in departmental by-laws should be so prescribed; and any matters in respect of which action may be taken under the *Customs Tariff (Dumping and Subsidies) Act 1961*.

Where a matter of the necessity for new or increased duties on any goods has been referred to the Board for inquiry and report, the Board may, in its report, recommend the restriction of the importation of those goods for such period as is specified in the report.

Inquiries conducted by the Board relating to a revision of the Tariff, a proposal for a bounty, a question under the Customs Tariff (Dumping and Subsidies) Act, or any complaint that a manufacturer is taking undue advantage of the protection afforded him by the Tariff or by the restriction of the importation of any goods, are held in public, and evidence in such inquiries is taken in public on oath, unless the Board accepts evidence as confidential or in the form of a written statement by a witness on oath. The Board is required to make available to the public the contents of any such written statement except any matter which it accepts as confidential.

6. **Special Advisory Authority.**—The Minister for Trade and Industry may also request a Special Advisory Authority to inquire into cases where urgent action appears necessary to protect an Australian industry against import competition pending receipt and consideration of a full report by the Tariff Board. The Special Advisory Authority's report must be submitted to the Minister within thirty days of the making of the request. Temporary protection recommended by a Special Advisory Authority may be imposed, but may only operate for a period of up to three months after the date of receipt of the final report by the Tariff Board on the goods concerned.

7. **Anti-dumping Legislation.**—The *Customs Tariff (Dumping and Subsidies) Act 1961* provides protection for Australian industry against various forms of unfair trading. Under this Act dumping duty may be imposed on goods that are sold to Australia at an export price which is less than the normal value of the goods, where this causes or threatens material injury to an Australian industry.

“Normal value” under the Act means:—

- (a) fair market value in the country of export;
- (b) price in the country of export to a third country;
- (c) fair market value in a third country; or
- (d) cost of production, plus f.o.b. charges, plus selling costs and profit.

Countervailing duty may be levied on goods in respect of which any subsidy, bounty, reduction, or remission of freight or other financial assistance has been, or is being, paid or granted directly or indirectly upon the production, manufacture, carriage or export of those goods. The amount of the countervailing duty in respect of any goods is a sum equal to the amount of the subsidy, bounty, reduction or remission of freight or other financial assistance.

Special duties may be collected also if dumped or subsidized goods are imported to the detriment of the trade of a third country in the Australian market.

Dumping and countervailing duties may be imposed to protect an Australian industry only after inquiry and report by the Tariff Board.

8. 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 Australia. 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.

9. Import Controls.—*Customs (Import Licensing) Regulations*. A comprehensive system of import licensing was introduced in Australia at the beginning of the second World War under the authority of the *Customs (Import Licensing) Regulations*.

With the end of the War it was possible to relax the restrictions progressively. However, because of a serious deterioration in Australia's external financial position, import licensing controls were reimposed on 8th March, 1952, on imports from all sources except for goods originating in Papua, New Guinea and Norfolk Island.

The object of import licensing was to limit the value of imports to an annual rate determined by the Government in order that payments for imports would not involve an excessive drawing on Australia's overseas exchange reserves. Imports were divided into a number of categories to which different licensing treatment was accorded (largely by the establishment of quotas for individual importers within each category). In general, the nature of goods and their relative importance to the Australian economy were taken into account in determining the licensing rate for particular goods.

Between March, 1952, and February, 1960, import restrictions were relaxed and intensified broadly in line with changes in Australia's balance of payments position.

The import controls were administered without discrimination as to country of origin, with the exception of those relating to imports from Japan and the dollar area. The special restrictions against Japanese imports were removed in July, 1957, and from October, 1955, Australia progressively removed discrimination against imports from the dollar area.

In accordance with the principle of relaxing and removing controls in the light of developments in Australia's balance of payments position, large-scale licensing changes involving the almost complete abolition of controls were made as from 23rd February, 1960. As a result of these changes, some 90 per cent. of total imports were exempted from control. The remaining import licensing controls were removed on 18th October, 1962, with the exception of some goods retained under control for reasons associated with the protection of the Australian industries concerned. The goods falling within this latter category at 31st December, 1964, are broadly described as:—aluminium and aluminium alloy, ingot and preliminary shapes, and waste and scrap; and used, secondhand or disposal earthmoving and construction equipment.

The administration of the import controls is the responsibility of the Department of Trade and Industry, although the issue of import licences is a function of the Department of Customs and Excise at the various ports of the Commonwealth.

10. Export Controls.—(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) *Exchange Control—Banking Act 1959*. 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 Reserve Bank of

Australia. This action is complementary to that taken under other parts of the Banking (Foreign Exchange) Regulations and under Part IV. of the *Banking Act 1959* to control the movement out of Australia of capital in the form of securities, currency and gold.

Export licences are issued subject to terms and conditions specified in the Banking (Foreign Exchange) Regulations, and may be subject to such further terms and conditions as are determined, or may be free from terms and conditions. On the receipt in Australia by the Reserve Bank, or by a bank acting as agent for that Bank, of advice that the foreign currency has been paid to the Reserve 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 involving exports, movements of personal effects are also 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 £A.125, or where jewellery and other articles of high intrinsic worth either exceed £A.1,000 in value or have not been the personal property of the passenger for at least twelve months.

11. **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 assumed 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, came into effect on 9th November, 1956. Briefly, this agreement preserves security for Australian exports in the United Kingdom market, but lowers the obligatory margins of preference which Australia extends to the United Kingdom (see also pp. 495–6).

(ii) *Canada.* The existing agreement between Australia and Canada came into force on 30th June, 1960, replacing an agreement signed on 3rd August, 1931. The agreement provides for Australian goods to receive British Preferential Tariff rates, or better, upon entry into Canada, and for Canada to maintain margins of preference in favour of Australia on a range of commodities. The agreement specifies that Canadian goods, with some exceptions, shall receive the benefit of the British Preferential Tariff upon importation into Australia and that Australia shall maintain margins of preference in favour of Canada on a range of commodities. The agreement continues subject to six months notice.

(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.

(iv) *Southern Rhodesia, Zambia and Malawi.* A trade agreement was negotiated with the Federation of Rhodesia and Nyasaland in June, 1955. Australia's principal undertaking was to grant an exclusive tariff preference to the Federation on unmanufactured tobacco. The Federation accorded preferential tariff treatment on a wide range of Australian export products. Following the dissolution of the Federation in December, 1963, the agreement has been applied on a provisional basis to each of the three constituent countries—Southern Rhodesia, Zambia and Malawi.

(v) *Malaysia.* A trade agreement was signed with the former Federation of Malaya on 26th August, 1958. By common consent, the agreement continues in force, applying only to that part of Malaysia which formerly comprised the Federation of Malaya. (For administrative purposes this area is now known as the States of Malaya.) The trade agreement provides for concessional rates of duty on a limited number of items on both sides, and includes anti-dumping clauses to protect Malayan rubber and tin and Australian wheat and flour. The Agreement continues in force indefinitely, subject to six months notice of termination by either party. A review of the operation of the agreement is due every two years.

(vi) *Japan.* An Agreement on Commerce between the Commonwealth of Australia and Japan was signed on 6th July, 1957, and formally ratified on 4th December, 1957. It was provided that the Agreement would remain in force until 5th July, 1960, and thereafter

unless prior notice of termination should be 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 is not entitled to claim the benefit of preferences accorded by Australia to Commonwealth countries and dependent territories. Japan also gave certain specific commitments on some important Australian export commodities.

Following a review of the agreement, a Protocol of Amendment was signed on 5th August, 1963, and formally ratified on 27th May, 1964. Under the Protocol, Australia agreed to withdraw action against Japan under Article XXXV of the General Agreement on Tariffs and Trade, and thus a full G.A.T.T. relationship was established between the two countries.

The specific undertakings agreed in 1957 have now lapsed and the following commitments entered into.

Japan has—

- (a) undertaken not to accord less favourable import treatment (apart from tariff) for raw wool than for raw cotton,
- (b) stated that it has no present intention of imposing a duty on wool,
- (c) undertaken to continue imports of Australian soft wheat at a stabilized level, and to purchase Australian hard wheat when necessary requirements are met,^a
- (d) stated that it will endeavour to expand opportunities for imports into Japan of Australian sugar, canned meat, leather, motor vehicles, butter and cheese.

Australia has—

- (a) undertaken to consult Japan on temporary protection cases affecting Japanese products (in such consultations Japan will consider whether the need for temporary protection can be obviated by measures taken in Japan),
- (b) stated that equal opportunities of fair and equal competition are accorded to Japanese products in Australian Government purchases overseas.

The new agreement will be effective for three years from the date of ratification and thereafter subject to three months' notice of termination by either Government. There is provision for consultations to take place at least annually.

(vii) *Federal Republic of Germany.* An agreement signed in October, 1959, provided for annual import quotas for Australian wheat, coarse grains, frozen mutton and lamb, canned meat, fruits preserved in sugar, canned tropical fruit and wine. The agreement also provided for Australia to be included in all global tenders for whole and skim milk powder, butter, cheese, frozen beef, apples, pears, canned fruits, jam and casein.

The agreement operated until December, 1962. Since that time, for each succeeding year, the Federal Republic has agreed to accord similar treatment, except for those products which have become subject to the common agricultural policy of the European Economic Community.

(viii) *Indonesia.* This agreement came into operation on 1st July, 1959. It records the desirability of expanding trade between Australia and Indonesia. It also gives special recognition to the importance of the flour trade from Australia to Indonesia. Australia recognizes the importance to Indonesia of its traditional export items to Australia. The agreement is subject to review and renewal annually.

(ix) *Other Countries.* Australia has entered into bilateral agreements with South Africa, Brazil, Czechoslovakia, 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 treatment to imports from the other. A similar agreement with Iceland was concluded in 1952.

(x) *The General Agreement on Tariffs and Trade (G.A.T.T.).* The General Agreement on Tariffs and Trade, of which Australia is an original member, is an international trade agreement which has been in operation since 1st January, 1948. Some of the provisions of the Agreement were revised in 1954 and 1955.

* "Soft" wheat is fair average quality wheat; "hard" wheat is premium grade wheat similar to that grown in North America.

The objectives of the G.A.T.T. include the expansion of world trade and the raising of living standards throughout the world. Its members work towards these objectives by the reduction of tariffs and other barriers to trade, and by reduction of discrimination between countries through negotiations on a reciprocal and mutually advantageous basis. The essential features of the G.A.T.T. are the schedules of tariff concessions which its members have agreed to apply consequent to tariff negotiations with each other, the application of most-favoured-nation treatment among its members, the avoidance of trade discrimination, and a code of agreed commercial policy rules for fair international trading.

Five series of tariff negotiations have been completed under the provisions of the General Agreement. As a result of these negotiations, Australia has obtained tariff concessions on a number of products of which it is an actual or potential exporter to the individual countries concerned. These concessions were a result both of direct negotiation by Australia and of negotiations by other countries—in the latter case, benefits occur through the operation under the Agreement of the most-favoured-nation principle.

In 1958 a Committee was set up to examine problems of expansion of trade in agricultural products and obstacles to the expansion of trade of under-developed countries, and in 1962 groups were set up to study the problems of trade in cereals and meat. Little progress has been made, however, in resolving the problems of expanding trade in agricultural products.

In May, 1963, a Ministerial meeting of Contracting Parties was convened principally to make arrangements for a new round of trade negotiations commencing in 1964—the "Kennedy Round". The chief characteristics of the present proposals for Kennedy Round negotiations is that they contemplate a linear or "across the board" cut in tariffs of a suggested depth of 50 per cent. (whereas previous rounds were confined to negotiation of tariff cuts on an item-by-item basis) and are expected to embrace non-tariff barriers. The negotiations are intended to cover agricultural as well as other products.

There are at present (January, 1965) 64 Contracting Parties to the Agreement, comprising most of the world's larger trading nations, and further countries are seeking accession or have some provisional association with the G.A.T.T. The Contracting Parties periodically hold plenary sessions to deal with the questions arising out of the administration of the Agreement. The 21st Session was held in February/March, 1964 and the 22nd Session was held in March, 1965. A permanent Council has been set up to deal with urgent business arising between sessions and gives preliminary consideration to work arising at the sessions.

§ 2. 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 Year Book No. 43, page 328. Further details were published in Year Book No. 48, page 474.

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 Year Book No. 43, page 329.

The major provisions of the current agreement (operative since 9th November, 1956) 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):—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 (5s. 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 agreement shall be the subject of re-negotiation between the two Governments during the fifth year of its operation. (By agreement between the two Governments this re-negotiation has been postponed.)

§ 3. Trade Commissioner Service

The stimulation of interest abroad in Australia's exports is an important government activity in which the Australian Trade Commissioner Service plays a prominent part. The origin of official Australian trade representation abroad dates back to 1921, when the first Trade Commissioner was appointed to Shanghai. In the following year, a second Commissioner was appointed to Singapore. These appointments, however, were terminated shortly afterwards.

In 1929, a Trade Commissioner post was opened at Toronto. Wellington was opened five years later. The *Trade Commissioners Act 1933* provided for the establishment of an Australian Government Trade Commissioner Service. In 1935, official trade representation was established at Batavia (now Djakarta), Shanghai and Tokyo. Cairo, New York and Calcutta posts were opened between 1937 and 1939 and the Singapore post was established in 1941.

After the War, the service increased steadily to take care of Australia's expanding export interests and the growing diversity of our export commodities. By December, 1964, there were 41 Trade Commissioner posts in 30 countries. In 1964 new posts were opened in The Hague, the Netherlands; Vienna, Austria; Hamburg, West Germany; and Brussels, Belgium.

In 1957 Australia's official commercial representation overseas was extended by the introduction of a system of government Trade Correspondents. These men, who as a rule already reside in particular centres overseas, are engaged on a part-time basis to carry out market research, arrange introductions between buyer and seller, and generally promote Australia's trade interests in the same way as Trade Commissioners. Each Trade Correspondent operates under the general direction of the nearest Trade Commissioner.

The first two Australian Trade Correspondents were appointed in 1957 at Montevideo, Uruguay, and Nairobi, Kenya (since replaced by a Trade Commissioner). In 1958, four more were appointed at Suva, Honolulu (discontinued in 1963), Mauritius and Mexico City. Appointments have since been made at Taiwan, Malta, Istanbul and Madrid.

Trade Commissioners and, to a lesser extent, Trade Correspondents, are responsible for commercial intelligence in their territories. Particular facilities provided for Australian exporters and export organizations include—

- (a) surveys of market prospects;
- (b) advice on selling and advertising methods;
- (c) arranging introductions with buyers and agents;
- (d) providing reports on the standing of oversea firms;
- (e) advice and assistance to business visitors;
- (f) helping to organize and carry through trade missions, trade displays, newspaper supplements and other promotion and publicity media;
- (g) providing information on import duties, import licensing, economic conditions, quarantine and sanitary requirements, and other factors affecting the entry and sale of goods;
- (h) helping to attract desirable investment.

In some countries, Trade Commissioners also participate in inter-governmental negotiations in the economic and commercial fields. In certain countries where there is no diplomatic or consular mission he is called upon to act as the Australian representative.

Trade Commissioners usually enter the Service from either private enterprise or the public service, and applications for entry into the Service are called for periodically by public advertisement. In the more important posts the Trade Commissioner is supported by an Assistant Trade Commissioner, who normally qualifies at a later stage for appointment as a Trade Commissioner.

The Trade Commissioner Service is administered by the Commonwealth Department of Trade and Industry (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 XXIX. International Relations.

§ 4. Australian Trade Missions

During the last ten years the Australian Government has sent a number of Trade Missions abroad as part of the campaign to increase exports.

Experience in this field has indicated the need to vary the technique to suit particular products or markets.

At present the following two trade mission techniques are in use.

- (a) *Survey Mission.* This is organized to obtain precise knowledge about trade potential for specific products in an oversea market. This method is adopted for new or developing areas where commercial intelligence is not readily available or where a complex industry is involved and requires technical knowledge. Seven such missions have been organized to date.
- (b) *Specialized Selling Mission.* The approach is to organize a specific industry or group of industries to participate in a planned selling campaign in oversea markets with known sales potential. The group visits the market, exhibits and publicizes its products and negotiates sales. Two specialized selling missions have been organized in recent years.

Survey and selling missions have developed from the general trade missions of the past which comprised members with a wide variety of interests and objectives. In addition to the missions mentioned above, Australia has sent overseas since 1954, 15 general trade missions and four trade ships.

Further details on Trade Missions are included in Year Book No. 49, page 544.

§ 5. Export Payments Insurance Corporation

The *Export Payments Insurance Corporation Act 1956* established the Corporation with the objective of protecting Australian exporters against risks of loss arising from non-payment of their overseas accounts.

The Corporation is charged to be self-supporting and operates on principles similar to those of any other form of insurance. There is no overlap with normal insurance facilities, since the Corporation does not cover risks which can normally be insured with commercial insurers.

The main risks of loss against which the Corporation insures are the "commercial" risks of the insolvency or protracted default of the buyer, and "political" risks. The cover for "commercial" risks is a maximum of 85 per cent., and the cover on "political" risks a maximum of 90 per cent. for the amount of loss in the pre-shipment period and a maximum of 95 per cent. in the post-shipment period.

The initial capital of the Corporation was £500,000 and the maximum contingent liability limit for contracts of insurance issued to exporters, £25,000,000. In April, 1959, these limits were increased to £1,000,000 and £50,000,000 respectively, to meet the then existing demands of the Australian exporter for this facility. In November, 1964, it was found necessary to increase the maximum contingent liability figure again to £75,000,000; the capital remained unchanged.

Further information on the Corporation is contained in Year Book No. 49, page 544. For particulars of its operations, see Chapter XXI. Private Finance.

§ 6. Method of Recording Imports and Exports

1. **Source of Statistics.**—Overseas trade statistics are compiled from documents obtained under the *Customs Act 1901–1963* and supplied to the Commonwealth Bureau of Census and Statistics by the Department of Customs and Excise. Certain items are excluded for which customs entries are not required. See sub-para. (viii) Balance of Payments, page 500.

2. **Customs Area.**—The area to which all overseas 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 overseas 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 overseas trade statistics, namely (a) special trade and (b) general trade. 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.

“*System of Trade.* Two systems of recording trade are in common use, differing mainly in the way warehoused and re-exported goods are recorded.

(a) *Special Trade.* Special imports are the combined total of imports directly for domestic consumption (including transformation and repair) and withdrawals from bonded warehouses or free zones for domestic consumption. 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 without transformation.)

(b) *General Trade.* General imports are the combined total of imports directly for domestic consumption and imports into bonded warehouse or free zone. General exports are the combined total of national exports and re-exports. *Re-exports*, in the general trade system, consist of the outward movement of nationalized goods plus goods which, after importation, move outward from bonded warehouse or free zone without having been transformed.

Direct transit trade, i.e., goods merely being transhipped or moving through the country for purposes of transport only, is excluded from the statistics of both special and general trade."

The tables which follow refer to general trade, except for those appearing in § 17, para. 2, which refer to imports cleared for home consumption.

4. **Statistical Classification of Imports and Exports.**—Statistics of overseas 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 1963–64 provided for over 3,700 import items and over 1,300 export items.

5. **The Trade Year.**—From 1st July, 1914, the statistics relating to overseas 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 § 18 showing the total value of imports and exports in the calendar years 1960 to 1964 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*.

Section 154 (1) of the *Customs Act* 1901–1963 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". *The recorded values of Australia's imports, as shown throughout this and other chapters of this issue of the Official Year Book, are therefore "transaction value (f.o.b.)" or "domestic value (f.o.b.)", whichever is the higher. These values are f.o.b. port of shipment 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 overseas buyers before export—the Australian 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 overseas 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 Year Book No. 39.

7. **Inclusions and Exclusions.**—(i) *Stores.* Prior to 1906 goods shipped in Australian ports on oversea vessels as ships' stores were included as exports. From 1906 ships', and subsequently aircraft, stores have been specially recorded as such, and omitted from the tabulation of exports. A table showing the value of these stores shipped each year since 1959-60 is shown on page 523.

(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 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) *Migrants' Effects.* Migrants' effects are included in imports and exports.

(vii) *Direct Transit Trade.* Particulars of direct transit trade through Australia are not recorded.

(viii) *Balance of Payments.* Statistics relating to oversea trade do not measure Australia's total balance of payments during the period shown. Particulars of other transactions entering into the balance of payments, for example, freight charges and oversea travel, payment of dividends, profits and interest, and government expenditure overseas, are provided in the statistical bulletin *Balance of Payments: Quarterly Summary* issued by the Commonwealth Statistician (see also § 20, p. 529). For items such as naval ships, merchant vessels trading overseas, aircraft for use on oversea routes, uranium and certain materials for inter-governmental defence projects, no customs entries are recorded, but these items are taken into account in estimates of the balance of payments.

8. **Countries.**—(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. "Country of origin" referred to in import tables should be taken to mean the country of production.

(ii) *Exports.* In the export sections of tables in this chapter, "country" refers to the country to which the goods were consigned so far as this can be determined at the time of export.

9. **Quantities.**—Where quantities are shown, they are generally, but not invariably, expressed in terms of the normal trade unit. Where "cental" is used, the unit is equivalent to 100 lb. avoirdupois. Quantities are not tabulated in respect of items for which there is no appropriate unit of quantity (e.g. an item which covers a number of commodities and cannot be recorded under a uniform unit of quantity).

10. *Pre-federation Records.*—In the years preceding Federation each State recorded its trade independently, and in so doing did not distinguish the other Australian States from foreign countries. 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, but the results obtained may be subject to error, since 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 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.

§ 7. Total Oversea Trade

1. *Including Gold.*—The following table shows the total trade (including gold) of Australia with overseas countries from 1901 to 1963–64. The period 1901 to 1955–56 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 earlier issues, but figures for imports in issues prior to No. 37 were expressed in British currency.

VALUE OF OVERSEA TRADE: AUSTRALIA

(INCLUDING GOLD)

(£A. f.o.b.)

Period	Imports	Exports	Total	Excess of exports (+) or imports (-)	Value per head of population		
					Imports	Exports	Total
Annual Average—	£'000	£'000	£'000	£'000	£	£	£
1901 to 1905 ..	35,689	51,237	86,926	+ 15,548	9.1	13.1	22.2
1906 to 1910 ..	46,825	a 69,336	116,161	+ 22,511	11.0	16.3	27.3
1911 to 1915–16 ..	66,737	74,504	141,241	+ 7,767	13.8	15.4	29.2
1916–17 to 1920–21	91,577	115,066	206,643	+ 23,489	17.4	21.9	39.3
1921–22 to 1925–26	124,404	134,545	258,949	+ 10,141	21.1	22.9	44.0
1926–27 to 1930–31	119,337	131,382	250,719	+ 12,045	18.6	20.5	39.1
1931–32 to 1935–36	73,798	120,958	194,756	+ 47,160	11.1	18.1	29.2
1936–37 to 1940–41	123,553	157,610	281,163	+ 34,057	17.8	22.7	40.5
1941–42 to 1945–46	211,514	163,955	375,469	– 47,559	29.1	22.4	51.5
1946–47 to 1950–51	449,273	571,430	1,020,703	+ 122,157	57.2	72.7	129.9
1951–52 to 1955–56	782,794	786,128	1,568,922	+ 3,334	87.8	88.2	176.0
Year—							
1954–55 ..	843,742	774,164	1,617,906	– 69,578	92.8	85.2	178.0
1955–56 ..	821,088	781,864	1,602,952	– 39,224	88.1	83.9	172.0
1956–57 ..	718,991	992,906	1,711,897	+ 273,915	75.4	104.2	179.6
1957–58 ..	791,940	817,946	1,609,886	+ 26,006	81.3	83.9	165.2
1958–59 ..	796,599	811,463	1,608,062	+ 14,864	80.0	81.5	161.5
1959–60 ..	927,091	937,682	1,864,773	+ 10,591	91.1	92.2	183.3
1960–61 ..	1,087,577	968,843	2,056,420	– 118,734	104.6	93.2	197.8
1961–62 ..	884,746	1,077,284	1,962,030	+ 192,538	83.4	101.6	185.0
1962–63 ..	1,081,335	1,075,906	2,157,241	– 5,429	100.0	99.5	199.5
1963–64 ..	1,186,329	1,391,230	2,577,559	+ 204,901	107.6	126.2	233.8

(a) Prior to 1906, ships' stores were included in exports. For the value of such goods shipped on overseas vessels and aircraft during each of the years 1959–60 to 1963–64, see table in § 13 on p. 523.

A graph showing the overseas trade of Australia from 1945–46 to 1963–64 appears on page 509.

2. Excluding Gold.—The following table shows particulars of merchandise trade (including silver and bronze as merchandise), from which all gold movements have been excluded.

VALUE OF OVERSEA TRADE: AUSTRALIA
(EXCLUDING GOLD)
(£A. f.o.b.)

Year	Imports	Exports	Total	Value per head of population		
				Imports	Exports	Total
				£	£	£
1959-60 ..	£'000 924,568	£'000 927,471	£'000 1,852,039	91.0	91.2	182.2
1960-61 ..	1,085,374	928,884	2,014,258	104.5	89.4	193.9
1961-62 ..	882,598	1,068,307	1,950,905	83.2	100.7	183.9
1962-63 ..	1,078,860	1,069,436	2,148,296	99.8	98.9	198.7
1963-64 ..	1,184,031	1,384,085	2,568,116	107.4	125.5	232.9

§ 8. 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 1961-62 to 1963-64 according to country of origin and consignment respectively.

VALUES OF AUSTRALIAN IMPORTS AND EXPORTS: COUNTRIES OF ORIGIN OR CONSIGNMENT
(EXCLUDING GOLD)
(£A. '000 f.o.b.)

Country	Imports			Exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Commonwealth countries—						
United Kingdom	265,917	329,192	329,534	205,876	200,777	255,988
Australian Territories	10,912	10,988	13,037	19,487	22,065	28,025
Canada	34,158	45,911	47,936	17,524	19,051	25,195
Ceylon	9,821	8,534	8,579	8,947	6,455	7,157
Hong Kong	6,418	7,627	9,413	14,015	13,957	18,082
India	16,083	18,073	17,305	25,296	18,610	17,717
Malaya	11,098	13,638	12,641	11,560	13,262	14,418
New Zealand	13,237	17,474	22,358	58,648	65,566	83,060
Singapore	2,489	3,418	3,415	15,987	16,847	18,498
Other Commonwealth countries	32,010	30,391	35,867	29,835	35,520	39,340
<i>Total, Commonwealth Countries</i>	<i>402,143</i>	<i>485,246</i>	<i>500,085</i>	<i>407,175</i>	<i>412,110</i>	<i>507,480</i>
Foreign countries—						
Arabian States	29,272	43,806	44,080	3,527	5,709	6,268
Belgium-Luxembourg	6,810	6,998	8,377	22,981	23,186	29,888
China (Mainland)	3,811	5,628	8,178	65,956	64,644	84,095
France	11,085	17,778	20,029	50,485	52,985	68,785
Germany, Federal Republic of	51,832	58,660	65,383	40,834	34,184	45,923
Indonesia	26,510	29,013	27,719	3,548	2,616	4,824
Iran	20,944	19,232	18,852	1,473	1,907	2,514
Italy	14,028	19,532	20,079	52,180	44,028	54,312
Japan	49,495	64,689	81,234	186,905	173,083	243,905
Netherlands	13,142	13,736	15,565	9,652	7,170	7,927
Sweden	16,655	17,912	22,809	2,124	3,267	2,683
United States of America	174,080	230,046	271,245	108,991	132,898	140,394
U.S.S.R.	850	528	925	11,767	14,616	57,066
Other foreign countries	61,036	64,993	77,588	93,967	89,337	118,627
<i>Total, Foreign Countries</i>	<i>479,550</i>	<i>592,551</i>	<i>682,063</i>	<i>654</i>	<i>649,630</i>	<i>867,211</i>
Country unknown	905	1,063	1,883	6,742	7,696	9,394
Total	882,598	1,078,860	1,184,031	1,068,307	1,069,436	1,384,085

2. According to Major Groups of Countries.—(i) *Countries included in Major Groups.* The following table shows the major groups of countries referred to in the tables on pages 504-5 and 533-4.

COUNTRIES INCLUDED IN MAJOR GROUPS

Sterling area	Non-sterling countries	
United Kingdom	North America—	Eastern Europe, China
British East Africa, British Pacific Islands, British West Africa, West Indies, Hong Kong and other British colonies and dependencies (excluding New Hebrides)	Canada	(Mainland), etc.—
	United States of America and dependencies	<i>continued</i>
	European Economic Community(a)—	Poland
	Belgium-Luxembourg	Romania
	France	Union of Soviet Socialist Republics
	Germany, Federal Republic of	China (Mainland)
	Greece	Korea (North)
	Italy	Vietnam (North)
Australia and Territories (including Papua and New Guinea)	Netherlands (excluding dependencies)	Principal other countries—
Ceylon	European Free Trade Association (other than the United Kingdom)(a)—	Argentina
Ghana	Austria	Brazil
India	Denmark	China, Republic of (Formosa)
Malaysia, Federation of (Malaya, Sabah, Sarawak and Singapore)	Finland	Indonesia
New Zealand and dependencies	Norway	Iran
Pakistan	Portugal	Iraq
Rhodesia and Malawi	Sweden	Japan
Other Commonwealth countries	Switzerland	Korea, Republic of
Arabian States of Bahrain, Kuwait, Qatar, and Trucial States	Eastern Europe, China (Mainland), etc.—	Mexico
Burma	Albania	Netherlands dependencies
Iceland	Bulgaria	Peru
Ireland	Czechoslovakia	Philippines
Jordan	Germany (East)	Spain
Libya	Hungary	Saudi Arabia
South Africa		Thailand
		Turkey
		United Arab Republic
		Venezuela
		Yugoslavia

(a) Includes dependent territories, associated communities, etc., unless otherwise stated.

(ii) *Trade with Major Groups.* The following table shows the trade of Australia with the major groups of countries shown above during the years 1962-63 and 1963-64. Particulars of Australia's balance of payments with countries in these groups are shown on pages 533-4.

VALUE OF TRADE OF AUSTRALIA: MAJOR GROUPS OF COUNTRIES
(INCLUDING GOLD)
(£A. '000 f.o.b.)

Major groups of countries	1962-63	1963-64
STERLING AREA		
Imports—		
From—United Kingdom	329,231	329,534
Other countries	144,517	157,694
Total	473,748	487,228
Exports—		
To—United Kingdom	200,814	255,994
Other countries	214,080	248,703
Total	414,894	504,697
Excess of Exports (+) or Imports (—)	-58,854	+17,469

VALUE OF TRADE OF AUSTRALIA: MAJOR GROUPS OF COUNTRIES—*continued*
(INCLUDING GOLD)
(£A.'000 f.o.b.)

Major groups of countries	1962-63	1963-64
NON-STERLING COUNTRIES—NORTH AMERICA		
Imports—		
From—Canada	45,916	47,936
United States of America(a)	230,086	271,263
Total	276,002	319,199
Exports—		
To—Canada	19,051	25,195
United States of America(a)	134,391	142,577
Total	153,442	167,772
Excess of Exports (+) or Imports (—)	—122,560	—151,427
OTHER NON-STERLING COUNTRIES		
Imports—		
From—European Economic Community	118,643	131,402
European Free Trade Association(b)	49,663	57,452
Other countries—		
Eastern Europe, China (Mainland), etc.	11,173	15,044
Other	152,106	176,004
Total	331,585	379,902
Exports—		
To—European Economic Community	166,879	213,794
European Free Trade Association(b)	11,638	14,358
Other countries—		
Eastern Europe, China (Mainland), etc.	93,094	161,176
Other	235,959	329,433
Total	507,570	718,761
Excess of Exports (+) or Imports (—)	+175,985	+338,859
ALL GROUPS		
Total Imports	1,081,335	1,186,329
Total Exports	1,075,906	1,391,230
Excess of Exports (+) or Imports (—)	—5,429	+204,901

(a) Includes Alaska and Hawaiian Islands.

(b) Other than United Kingdom.

§ 9. 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 1961–62 to 1963–64.

VALUE OF TRADE OF AUSTRALIA WITH UNITED KINGDOM: CLASSES
(£A.'000 f.o.b.)

Class	Imports			Exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
I. Foodstuffs of animal origin, etc.	1,932	2,188	2,954	50,413	44,443	50,204
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	1,193	871	906	68,100	60,618	77,614
III. Alcoholic liquors, etc.	4,018	3,222	3,893	850	811	843
IV. Tobacco, etc.	395	490	509	..	..	..
V. Live animals and birds	110	174	246	..	..	..
VI. Animal substances, etc.	755	1,107	1,168	55,628	59,381	80,357
VII. Vegetable substances, etc.	2,480	2,458	2,700	441	508	360
VIII. Apparel, textiles, etc.	28,043	28,944	27,157	247	257	413
IX. Oils, fats and waxes	2,388	2,484	1,647	1,610	1,980	2,469
X. Pigments, paints and varnishes	2,903	3,713	2,845	..	..	..
XI. Rocks, minerals, etc.	759	800	841	5,298	5,739	7,536
XII. Metals, metal manufactures and machinery	139,823	190,286	188,731	13,227	17,828	25,388
XIII. Rubber and leather, etc.	4,368	5,341	5,767	2,709	2,486	2,583
XIV. Wood and wicker, etc.	305	372	400	1,081	896	344
XV. Earthenware, etc.	7,708	8,938	8,298	..	..	..
XVI. Paper and stationery	17,832	20,137	17,803	410	317	416
XVII. Jewellery, etc.	3,135	3,405	3,643	..	..	..
XVIII. Optical, surgical and scientific instruments	5,731	6,094	6,543	782	890	1,173
XIX. Chemicals, medicinal products, essential oils, fertilizers	21,003	21,599	22,834	589	688	1,042
XX. Miscellaneous	(a)21,035	(a)26,568	(a)30,647	4,324	3,800	4,467
XXI. Gold and silver; bronze specie	1	40	2	665	172	785
Total	265,917	329,231	329,534	206,374	200,814	255,994

(a) Includes outside packages.

2. 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 1961-62 to 1963-64.

VALUE OF IMPORTS OF PRINCIPAL ARTICLES OF UNITED KINGDOM ORIGIN:
AUSTRALIA
(£A.'000 f.o.b.)

Article	1961-62	1962-63	1963-64	Article	1961-62	1962-63	1963-64
Aircraft and parts	3,199	3,224	2,462	Optical, surgical and scientific instruments	4,177	4,444	4,531
Arms and ammunition, military, naval and air force stores	3,621	2,410	3,712	Paper, printing	2,120	2,491	1,873
Aluminium—				Paper, wrapping	2,118	1,997	71
Plates, sheets, strips	559	922	487	Piece-goods—			
Leaf and foil	649	1,000	756	Cotton and linen	3,907	4,328	3,976
Apparel	2,684	2,852	3,030	Silk and rayon(a)	824	814	1,126
Books, magazines, etc.	8,250	9,333	9,516	All other piece-goods	3,845	3,527	3,400
Carpets	3,367	3,615	2,846	Plastics materials	3,210	7,152	8,845
Chemicals, medicinal products, essential oils and fertilizers	21,003	21,599	22,834	Rubber and rubber manufactures	3,417	4,466	4,805
Crockery	1,850	1,906	1,762	Sewing and other cottons, threads, etc.	1,968	2,053	2,241
Dyes	1,353	1,871	1,777	Stationery and paper manufactures	11,060	12,295	13,033
Electrical machinery and appliances	23,861	27,936	23,504	Tools of trade	1,869	2,043	1,967
Glass and glassware	2,952	3,975	3,438	Vehicles, parts and accessories	29,851	56,738	56,239
Iron and steel—				Vessels (ships) including parts	215	854	768
Plate and sheet	3,093	3,491	3,527	Whisky	3,761	2,992	3,623
Other	5,691	5,858	6,420	Yarns—			
Linoleums	2,274	1,894	1,697	Cotton	1,568	1,491	864
Machines and machinery (except dynamo, electrical)				Rayon	3,743	4,243	4,128
Agricultural	1,081	928	1,062	Other	651	748	714
Metal-working	4,586	6,190	5,894	All other articles(b)	47,401	51,862	53,437
Motive-power	16,690	25,202	29,534				
Other	33,449	40,487	39,635	Total Imports	265,917	329,231	329,534

(a) Includes tyre cord fabric.

(b) Includes outside packages.

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 1961–62 to 1963–64.

PRINCIPAL ARTICLES EXPORTED TO THE UNITED KINGDOM: AUSTRALIA
(Australian Produce)

Article	Quantity			Value (£A.'000 f.o.b.)		
	1961–62	1962–63	1963–64	1961–62	1962–63	1963–64
Butter tons	68,031	65,094	74,361	19,950	19,326	22,338
Cheese "	17,427	13,632	13,059	3,427	2,683	2,618
Eggs .. .. . "	..	..	..	3,253	1,536	858
Fruit, dried tons	34,542	29,943	28,206	5,251	4,398	4,842
" fresh '000 bus.	5,411	4,407	5,050	7,517	7,048	7,491
" preserved in airtight containers tons	77,384	65,834	106,861	10,723	9,043	14,296
Gold .. .. . "	..	..	..	498	37	6
Grains and cereals—						
Barley tons	213,685	66,232	112,467	4,636	1,463	2,462
Flour (wheaten), plain white tons(a)	66,560	66,641	48,743	1,943	1,470	1,444
Wheat tons	623,622	437,073	753,923	16,438	11,803	20,188
Other .. .. . "	..	..	..	1,986	2,212	1,155
Hides and skins .. .. . "	..	..	..	1,998	2,021	3,166
Lead bullion tons	37,861	59,645	60,715	3,527	4,979	6,726
" pig "	65,897	80,228	76,631	4,615	5,092	6,679
Leather .. .. . "	..	..	..	2,643	2,328	2,315
Meats preserved by cold process—						
Beef and veal tons	34,833	26,695	36,961	7,633	5,900	10,430
Lamb "	11,414	16,655	13,005	1,614	2,965	2,491
Mutton "	7,074	6,852	5,350	920	1,238	818
Rabbit and hare .. .. . "	..	..	..	1,985	1,558	1,602
Meats, tinned tons	22,753	10,461	10,119	6,859	3,069	2,667
Milk and cream '000 lb.	5,583	6,640	8,691	305	422	601
Silver bullion '000 fine oz.	375	231	1,336	161	128	770
Sugar (cane) tons	375,538	437,769	422,058	18,599	22,103	24,748
Tallow, inedible "	19,409	10,006	10,568	597	512	614
Timber, undressed(b) '000 super. ft.	2,923	1,912	950	221	137	68
Wine, fermented '000 gals.	1,161	1,104	1,054	817	781	805
Wool '000 lb.	223,562	222,585	247,586	53,289	57,002	76,764
Zinc bars, etc. tons	15,563	22,193	21,750	1,424	1,735	2,244
All other articles .. .. . "	..	..	..	18,715	24,409	30,778
Total Exports (Australian Produce)	..	..	..	201,544	197,398	251,984

(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 pages 495–6 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 following table.

The imports into Australia have been classified under nine headings, and the trade of the United Kingdom therein is compared with that of France, the Federal Republic of 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 1961–62 to 1963–64 are shown in the following table.

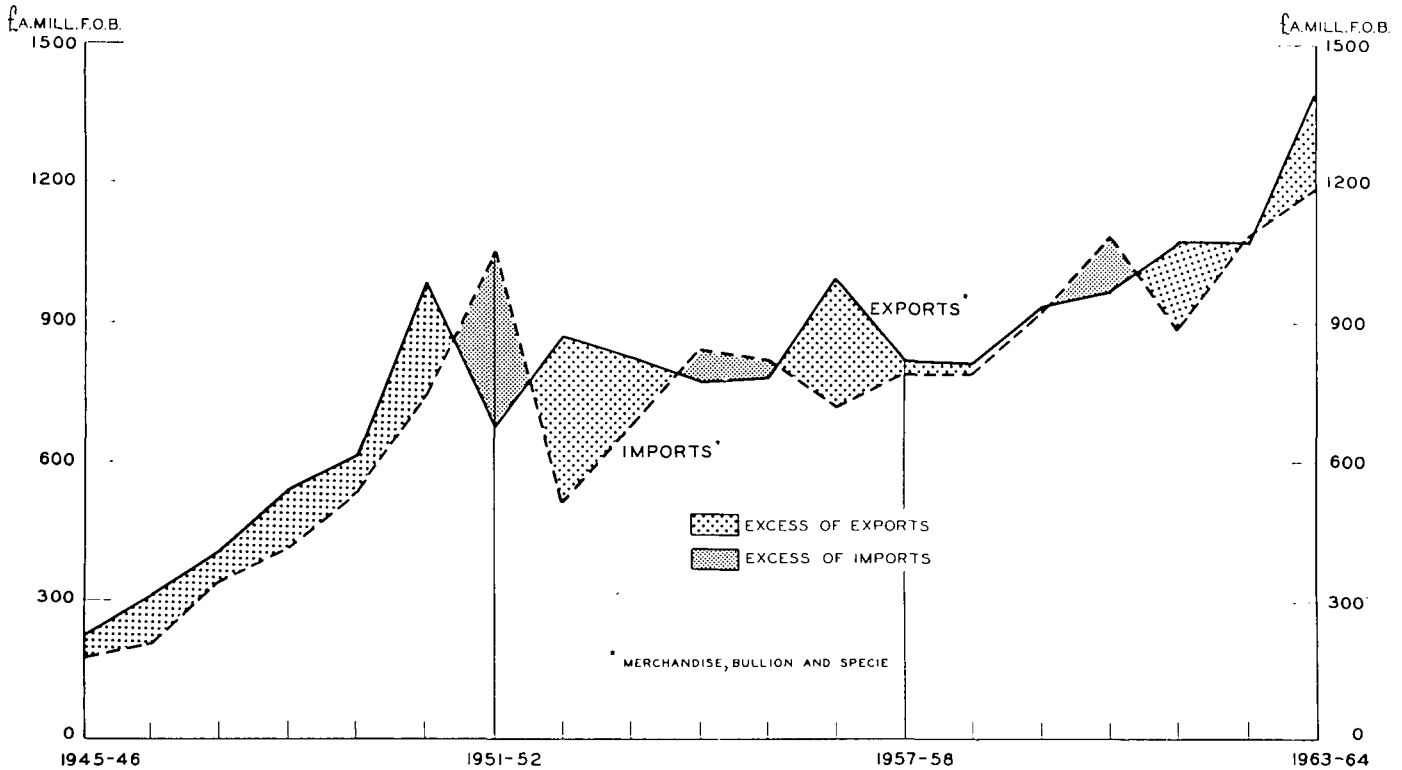
VALUE OF IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS: AUSTRALIA

(\$A.'000 f.o.b.)

Nature of imports	Year	United Kingdom	France	Federal Republic of Germany	Japan	United States of America	All countries
Foodstuffs of animal origin	1961-62	1,932	11	315	2,504	1,037	11,271
	1962-63	2,188	12	294	2,187	908	12,341
	1963-64	2,954	..	451	2,390	740	14,849
Yarns and manufactured fibres, textiles and apparel	1961-62	28,043	2,192	2,927	24,322	9,417	104,204
	1962-63	28,944	2,239	2,973	28,119	12,347	116,650
	1963-64	27,157	2,051	2,803	28,608	10,821	116,998
Metals, metal manufactures and machinery	1961-62	139,823	4,071	29,631	7,599	84,612	315,209
	1962-63	190,286	9,458	33,494	14,929	119,636	425,061
	1963-64	188,731	11,096	37,349	24,564	147,693	473,654
Rubber and leather and manufactures thereof, and substitutes therefor	1961-62	4,368	394	378	502	4,520	19,450
	1962-63	5,341	552	525	931	4,960	23,335
	1963-64	5,767	1,073	403	..	5,525	25,580
Earthenware, cement, china, glass and stoneware	1961-62	7,708	684	1,078	2,372	1,596	17,957
	1962-63	8,938	789	933	3,247	2,498	20,219
	1963-64	8,298	674	1,014	3,695	2,986	20,359
Pulp, paper and board; paper manufactures and stationery	1961-62	17,832	333	1,123	1,506	10,039	54,793
	1962-63	20,137	461	1,313	1,757	13,356	66,733
	1963-64	17,803	367	1,525	1,815	12,258	70,832
Sporting material, toys, fancy goods, jewellery and time-pieces	1961-62	3,135	191	1,351	2,122	978	12,515
	1962-63	3,405	240	1,394	2,301	948	14,154
	1963-64	3,643	236	1,288	2,417	892	14,995
Optical, surgical and scientific instruments, etc.; photographic goods, n.e.i.	1961-62	5,731	139	2,415	1,749	4,885	16,860
	1962-63	6,094	188	2,801	2,049	5,377	18,713
	1963-64	6,543	228	2,955	2,261	6,809	21,640
Chemical, medicinal and pharmaceutical products, essential oils and fertilizers	1961-62	21,003	1,467	6,455	1,547	13,474	59,544
	1962-63	21,599	1,816	7,292	2,171	20,617	71,231
	1963-64	22,834	1,814	8,013	4,855	25,113	81,687
<i>Total Competitive Imports</i>	1961-62	229,575	9,482	45,673	44,223	130,558	611,803
	1962-63	286,932	15,755	51,019	57,691	180,647	768,437
	1963-64	283,730	17,539	55,801	70,605	212,837	840,594
Total Imports (less Bullion and Specie) (a)	1961-62	265,917	11,085	51,832	49,495	174,077	882,546
	1962-63	329,191	17,778	58,660	64,689	230,026	1,078,777
	1963-64	329,531	19,941	65,383	81,234	271,233	1,183,937

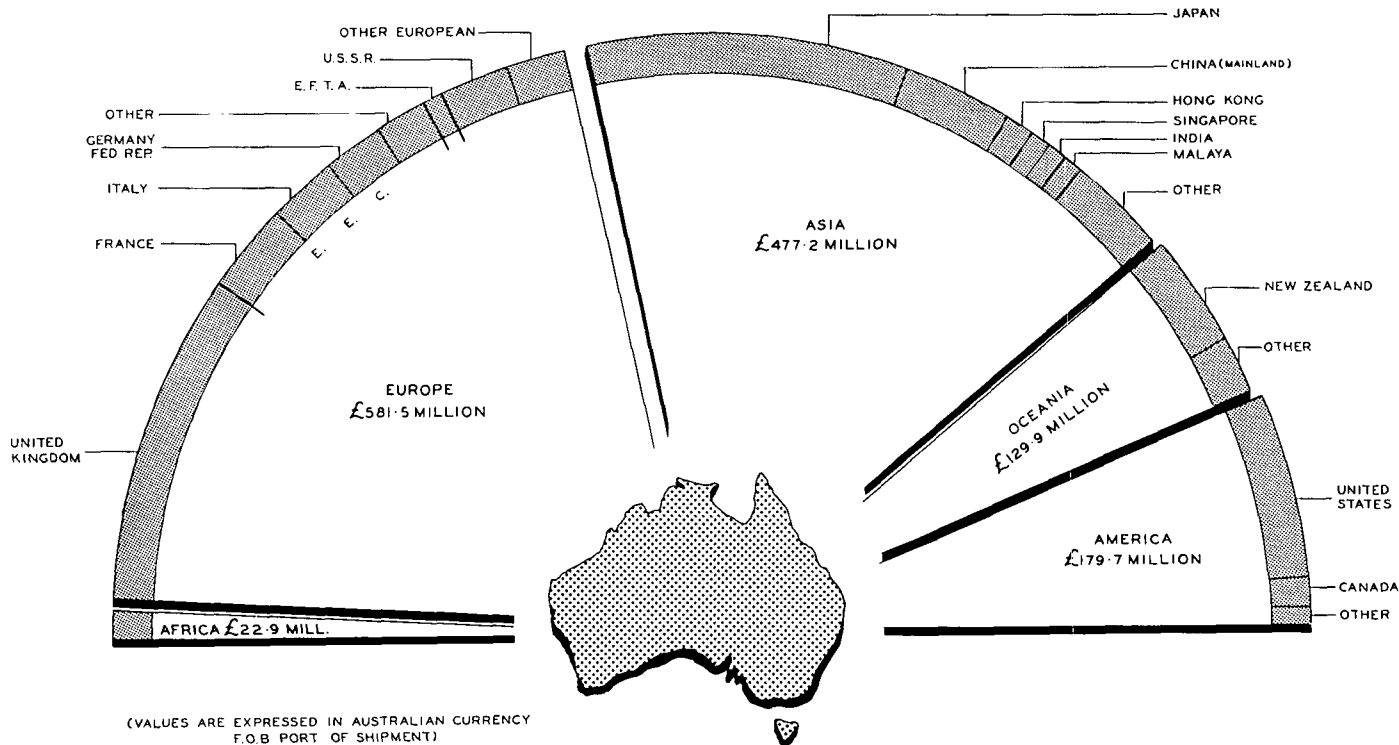
(a) Includes outside packages.

OVERSEA TRADE: AUSTRALIA, 1945-46 TO 1963-64



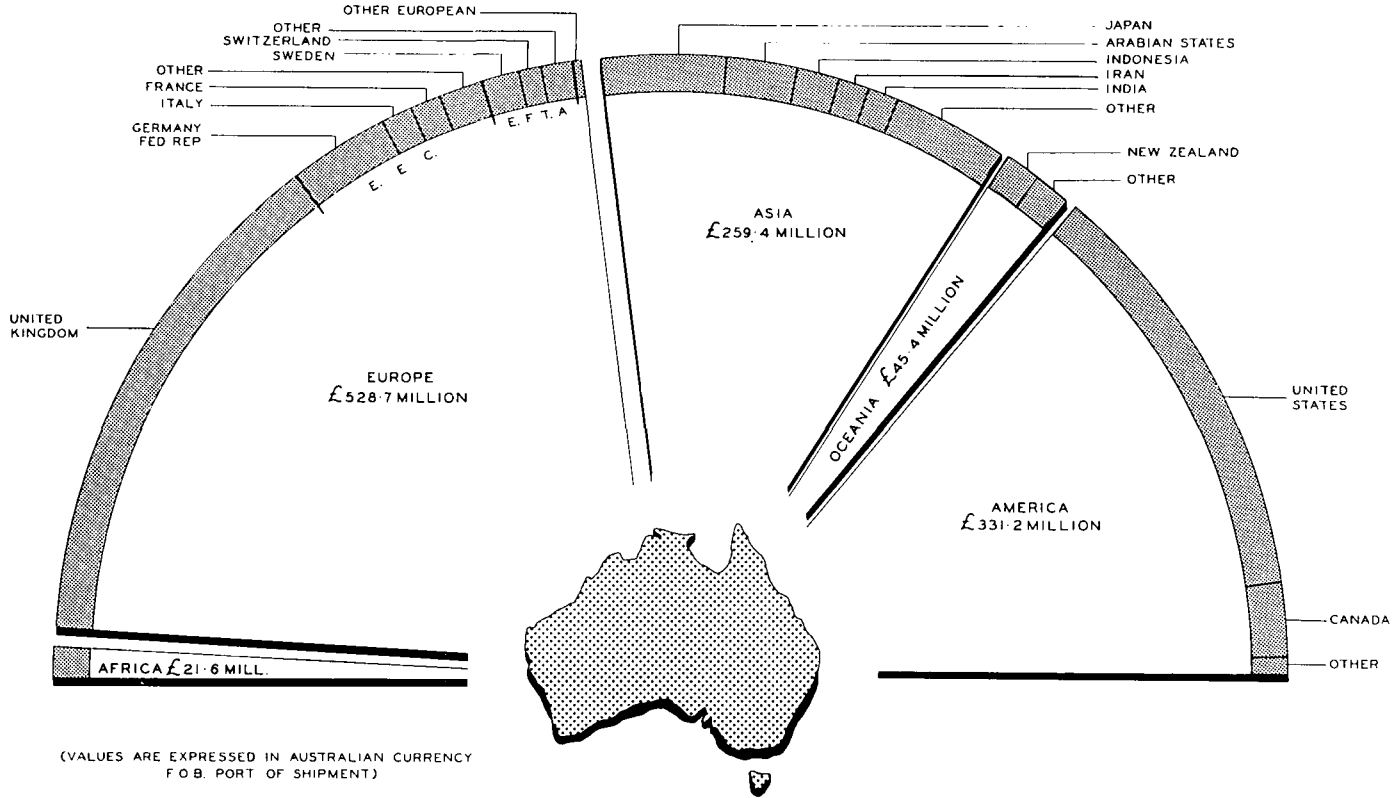
EXPORTS FROM AUSTRALIA, 1963-64

TOTAL EXPORTS - £1,391.2 MILLION



IMPORTS INTO AUSTRALIA, 1963-64

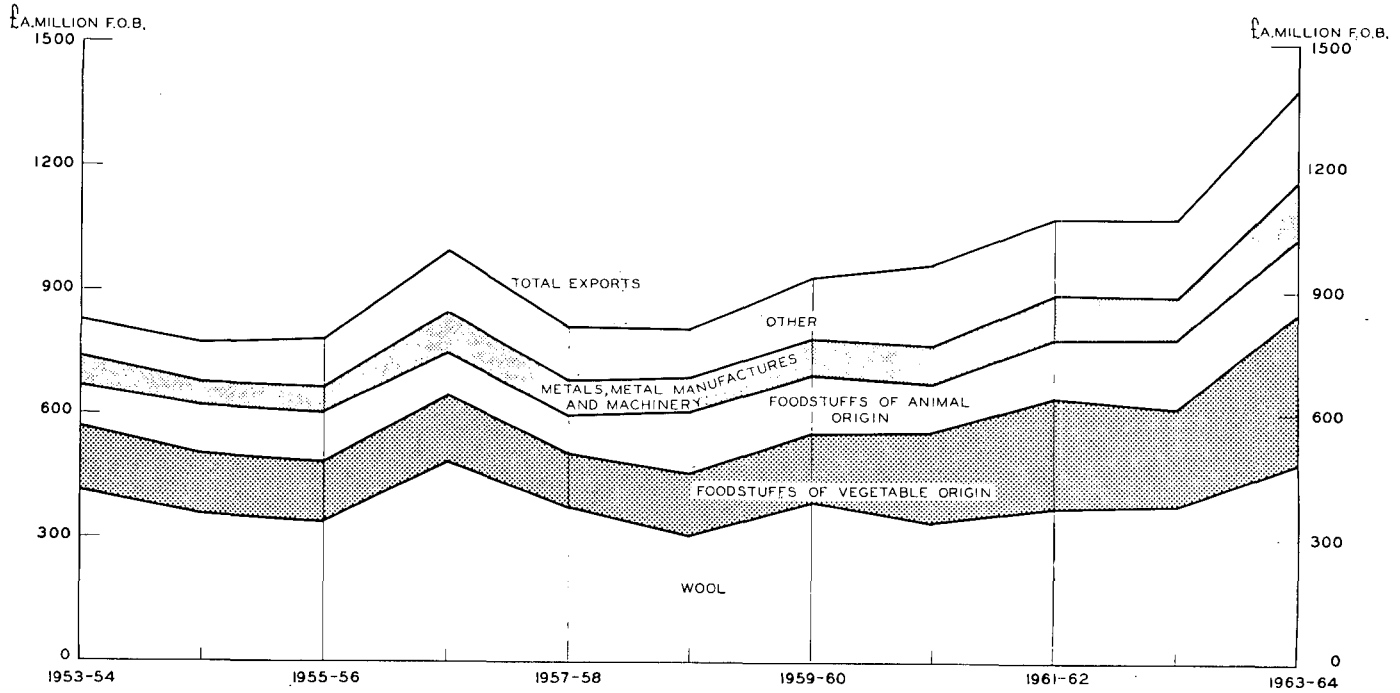
TOTAL IMPORTS - £1,186.3 MILLION



EXPORTS OF PRINCIPAL COMMODITIES

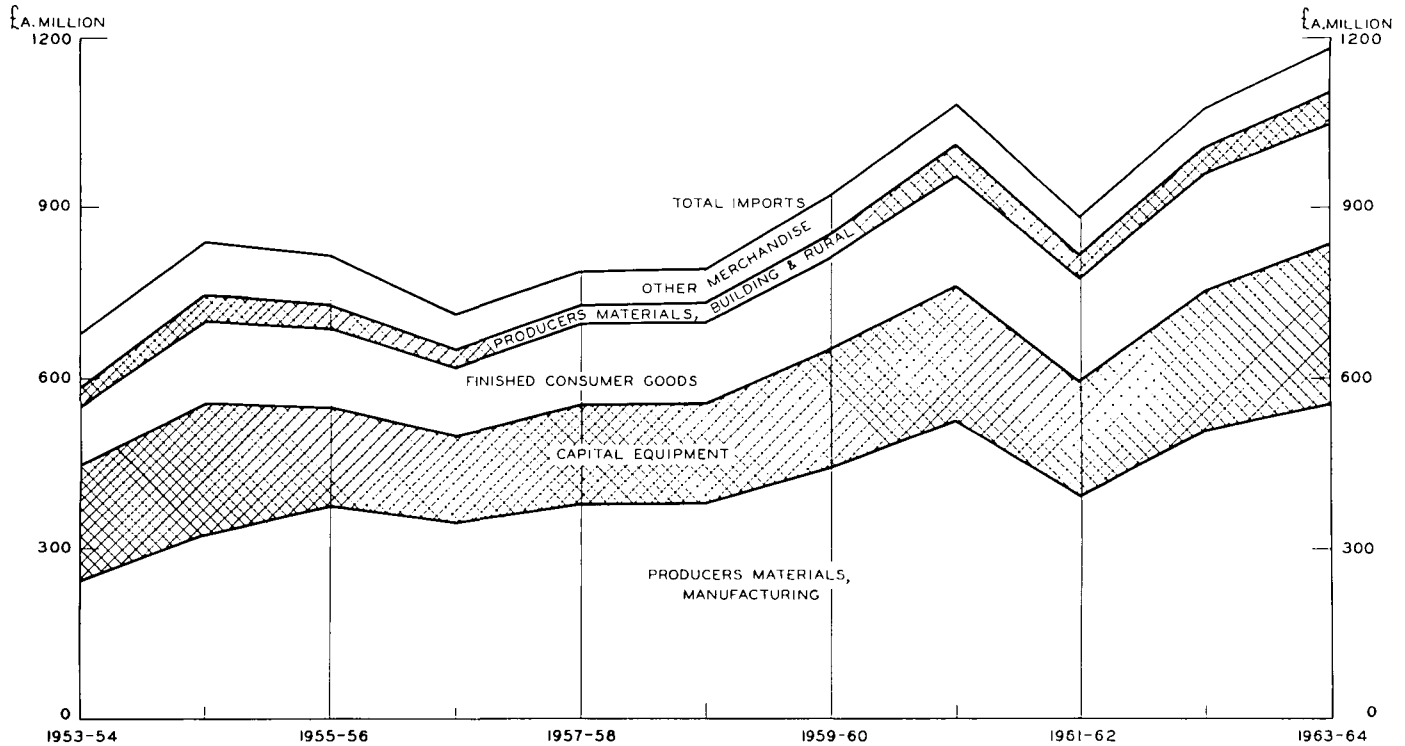
AUSTRALIA

1953-54 TO 1963-64

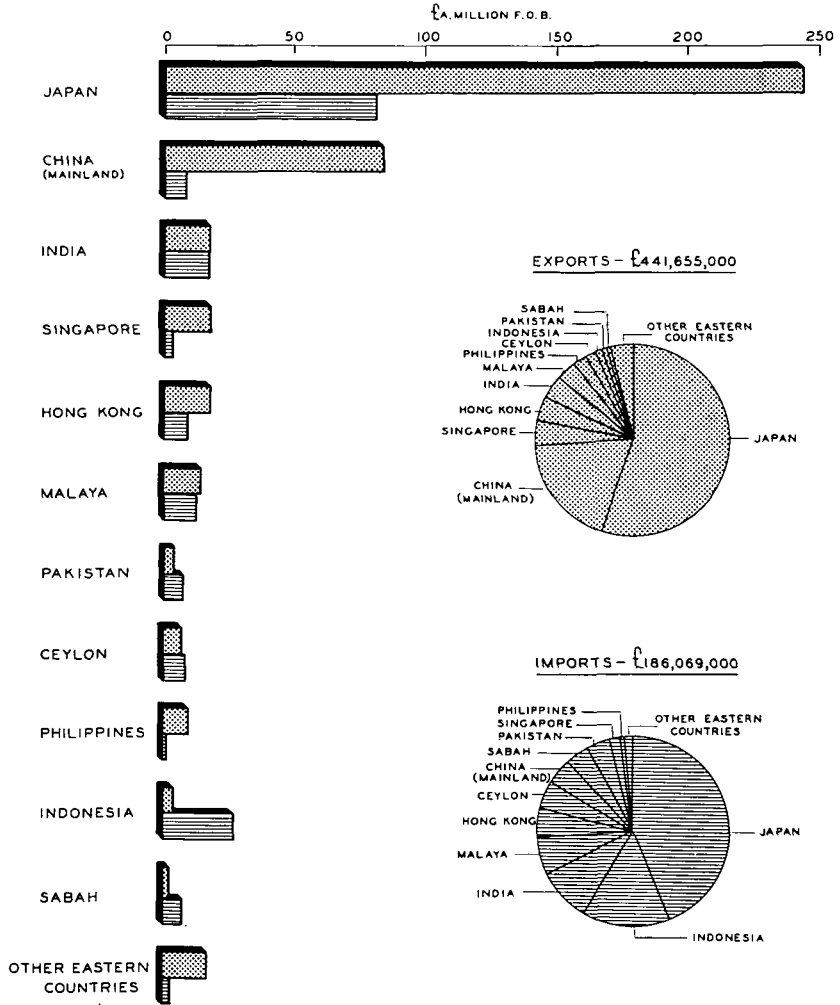


IMPORTS BY ECONOMIC CLASS: AUSTRALIA

1953-54 TO 1963-64



TRADE WITH EASTERN COUNTRIES AUSTRALIA 1963-64



The following table shows the proportions of the several classes of goods shown in the previous table imported from each country during the year 1963-64.

VALUE OF IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS: PROPORTIONS, AUSTRALIA, 1963-64

(Per cent.)

Nature of imports	United Kingdom	France	Federal Republic of Germany	Japan	United States of America	Other countries	All countries
Foodstuffs of animal origin	19.9	..	3.0	16.1	5.0	56.0	100.0
Yarns and manufactured fibres, textiles and apparel ..	23.2	1.8	2.4	24.5	9.2	38.9	100.0
Metals, metal manufactures and machinery ..	39.8	2.3	7.9	5.2	31.2	13.6	100.0
Rubber and leather and manufactures thereof, and substitutes therefor ..	22.5	4.2	1.6	..	21.6	50.1	100.0
Earthenware, cement, china, glass and stoneware ..	40.8	3.3	5.0	18.1	14.7	18.1	100.0
Pulp, paper and board; paper manufactures and stationery ..	25.1	0.5	2.2	2.6	17.3	52.3	100.0
Sporting material, toys, fancy goods, jewellery and time-pieces ..	24.3	1.6	8.6	16.1	5.9	43.5	100.0
Optical, surgical and scientific instruments, etc.; photographic goods, n.e.i. ..	30.2	1.1	13.7	10.4	31.5	13.1	100.0
Chemical, medicinal and pharmaceutical products, essential oils and fertilizers ..	28.0	2.2	9.8	5.9	30.7	23.4	100.0
<i>Total Competitive Imports</i> ..	<i>33.8</i>	<i>2.1</i>	<i>6.6</i>	<i>8.4</i>	<i>25.3</i>	<i>23.8</i>	<i>100.0</i>
Total Imports (less Bullion and Specie) (a)	27.8	1.7	5.5	6.9	22.9	35.2	100.0

(a) Includes outside packages.

The following table shows comparisons of the proportions of the several countries for competitive imports and for total imports for each of the years 1961-62 to 1962-63.

VALUE OF IMPORTS FROM THE UNITED KINGDOM AND ITS MAIN COMPETITORS: PROPORTIONS, AUSTRALIA
(Per cent.)

Nature of imports	Year	United Kingdom	France	Federal Republic of Germany	Japan	United States of America	Other countries	All countries
Total Competitive Imports	1961-62	37.4	1.5	7.4	7.2	21.3	25.2	100.0
	1962-63	37.3	2.1	6.6	7.5	23.5	23.0	100.0
	1963-64	33.8	2.1	6.6	8.4	25.3	23.8	100.0
Total Imports (less Bullion and Specie)(a)	1961-62	30.1	1.3	5.9	5.6	19.7	37.4	100.0
	1962-63	30.5	1.6	5.4	6.0	21.3	35.2	100.0
	1963-64	27.8	1.7	5.5	6.9	22.9	35.2	100.0

(a) Includes outside packages.

§ 10. Trade with Eastern Countries

1. Merchandise Trade According to Countries.—The values of imports from, and exports to, eastern countries during the years 1961-62 to 1963-64 are shown in the following table.

VALUE OF MERCHANDISE TRADE OF AUSTRALIA WITH EASTERN COUNTRIES: COUNTRIES OF ORIGIN OR CONSIGNMENT
(£A.'000 f.o.b.)

Country	Imports(a)			Exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Commonwealth countries—						
Ceylon	9,821	8,534	8,579	8,947	6,455	7,157
Hong Kong	6,418	7,627	9,413	14,015	13,957	18,082
India	16,083	18,073	17,305	25,296	18,610	17,717
Malaya	11,098	13,638	12,641	11,560	13,262	14,418
Pakistan	5,663	5,714	6,980	3,329	7,058	4,014
Sabah(b)	12,883	8,766	7,014	1,463	1,688	1,697
Singapore	2,489	3,418	3,415	15,987	16,847	18,498
Foreign countries—						
Burma	11	64	77	2,782	3,235	2,791
Cambodia	4	3	3	108	57	42
China, Republic of (Formosa)	388	574	1,434	1,976	2,028	3,626
China (Mainland)	3,811	5,628	8,178	65,956	64,644	84,095
Indonesia	26,510	29,013	27,719	3,548	2,616	4,824
Japan	49,495	64,689	81,234	186,905	173,083	243,905
Korea, Republic of	115	206	399	1,684	3,182	3,225
Korea (North)	1	7	48	854	1,190	1,149
Laos .. .. .	..	..	..	28	17	25
Nepal .. .. .	..	17	4	..	..	1
Philippines	510	759	1,070	4,669	6,243	10,367
Portuguese Dependencies—						
Macao	20	16	40	2	8	5
Timor	1	20	2	98	56	142
Other	13	..	..	74	(c)	(c)
Thailand	334	434	493	3,311	3,704	5,122
Vietnam, Republic of	7	17	21	522	1,205	744
Vietnam (North) .. .. .	..	..	..	22	164	9
Total	145,675	167,217	186,069	353,136	339,309	441,655

(a) Includes outside packages. separately.

(b) Includes Brunei and Sarawak.

(c) Not recorded

Graphs showing trade between Australia and eastern countries during 1963-64 are shown on page 514.

2. Merchandise Trade—Principal Articles.—(i) Totals, 1961-62 to 1963-64. The following table shows the value of merchandise trade between Australia and eastern countries for each of the years 1961-62 to 1963-64. The countries concerned in this trade are listed in the previous table.

VALUE OF MERCHANDISE TRADE OF AUSTRALIA WITH EASTERN COUNTRIES:
PRINCIPAL ARTICLES
(£A.'000 f.o.b.)

Article	Imports			Article	Exports		
	1961-62	1962-63	1963-64		1961-62	1962-63	1963-64
Apparel and attire ..	2,777	3,070	3,978	Animal (except marine) oils and fats ..	2,925	3,154	3,790
Bags and sacks ..	10,330	8,615	8,635	Army stores ..	1,267	1,563	1,129
Crude and crepe rubber and latex ..	6,223	8,068	7,472	Butter ..	1,782	2,022	2,537
Fibres, vegetable origin ..	1,597	2,724	2,708	Cheese ..	766	1,066	1,432
Hides and skins ..	185	199	407	Fodders ..	1,380	1,305	1,809
Nuts, edible ..	1,026	1,437	1,615	Fruit, fresh or preserved ..	1,706	1,824	2,251
Outside packages ..	1,865	2,112	2,439	Grains and cereals—			
Petroleum oils—				Wheat ..	78,616	75,515	91,134
Kerosene ..	2,377	2,806	1,924	Flour (wheaten), plain white ..	11,312	9,402	10,343
Petroleum, crude ..	29,846	28,891	27,002	Other ..	7,906	5,136	12,247
Petroleum, spirit ..	3,665	3,035	3,351	Infants' and invalids' foods ..	2,638	2,704	2,461
Other ..	866	855	714	Leather ..	750	653	749
Piece-goods—				Machines and machinery ..	4,213	6,433	7,930
Cotton and linen ..	20,857	24,106	24,396	Meats, all kinds ..	4,017	4,470	8,036
Hessian and other jute ..	3,210	3,758	3,831	Metals and metal manufactures except zinc bars, etc.	31,141	17,116	25,196
Pulp, paper and board ..	994	1,359	1,556	Milk and cream ..	5,661	7,230	6,495
Tea ..	12,718	12,115	11,221	Petroleum oils ..	6,733	7,647	4,030
Timber ..	3,870	4,524	4,910	Sugar—from cane (raw) ..	4,076	9,255	27,924
Vegetable oils and fats, n.e.i.	878	1,994	2,933	Wool ..	137,139	134,380	172,555
All other articles ..	42,391	57,549	76,977	Zinc bars, blocks, etc. ..	3,428	3,463	4,269
				All other articles ..	45,680	44,971	55,338
Total ..	145,675	167,217	186,069	Total ..	353,136	339,309	441,655

(ii) *Individual Countries, 1963-64.* The following tables show the imports and exports of principal articles from and to individual countries in this trade.

VALUE OF IMPORTS OF PRINCIPAL ARTICLES OF MERCHANDISE FROM
INDIVIDUAL EASTERN COUNTRIES, 1963-64
(£A.'000 f.o.b.)

Article	Ceylon	Hong Kong	India	Malaya	Pakistan	Sabah (a)	China (Mainland)	Indonesia	Japan
Apparel and attire ..	..	1,785	35	..	3	..	551	15	1,523
Bags and sacks ..	..	95	3,609	..	4,699	68	77	..	85
Crude and crepe rubber and latex ..	38	..	7	6,716	..	..	..	..	..
Fibres, vegetable origin ..	250	6	479	24	722	6	58	77	912
Nuts, edible ..	266	3	819	4	..	..	143	..	3
Outside packages ..	210	163	272	36	38	2	156	142	1,362
Petroleum oils—									
Kerosene ..	..	..	..	..	..	..	..	1,063	1
Petroleum, crude ..	..	..	..	..	..	4,820	163	21,730	..
Petroleum, spirit ..	..	..	277	..	187	..	..	1,325	561
Other ..	..	..	..	..	..	..	..	478	116
Piece-goods—									
Cotton and linen ..	..	2,969	2,663	13	43	..	2,330	..	15,106
Hessian and other jute ..	..	..	3,564	..	251	..	7	..	4
Pulp, paper and board ..	..	7	22	..	..	..	391	..	1,110
Tea ..	7,718	3	1,755	9	..	..	143	1,482	1
Timber ..	..	70	2	2,448	1	1,853	..	23	47
Vegetable oils and fats, n.e.i.	19	6	1,509	383	..	..	28	675	269
All other articles ..	78	4,306	2,292	3,008	1,036	265	4,131	709	60,134
Total ..	8,579	9,413	17,305	12,641	6,980	7,014	8,178	27,719	81,234

(a) Includes Brunei and Sarawak. (b) Includes metals, metal manufactures and machinery, £24,564,000; textiles other than piece goods shown above, £3,079,000; tinned fish, £2,219,000; earthenware, china-ware, etc., £3,695,000; sporting material, toys, jewellery, etc., £2,417,000; chemical and medical supplies, etc., £4,855,000; optical, surgical, etc., supplies, £2,261,000.

VALUE OF EXPORTS OF PRINCIPAL ARTICLES OF MERCHANDISE TO
INDIVIDUAL EASTERN COUNTRIES, 1963-64
(£A.'000 f.o.b.)

Article	Ceylon	Hong Kong	India	Malaya	Pakistan	Singapore	China (Mainland)	Indonesia	Japan
Animal (except marine)									
oils and fats	241	70	208	499	129	70	617	71	1,421
Army stores		5	1	924		194		2	1
Butter	504	541	3	379		642		67	14
Cheese	76	91	20	40		80		49	615
Fodders	11	536		242		876		14	92
Fruit, fresh or preserved	1	590	1	253		1,165	5	40	14
Grains and cereals—									
Wheat	9	1,496	5,543	118	1,455	1,196	64,077		13,781
Flour (wheaten), plain									
white	3,536	110	1	2,824	2	1,498		167	
Other	36	296	32	898		2,024	2,598	21	4,948
Infants' and invalids' foods	156	265	5	469		471		46	
Leather	15	482	19	74		90	25		23
Machines and machinery	227	541	508	1,129	364	1,282	1	331	454
Meats, all kinds	153	608	20	314	1	1,529	2	259	4,264
Metals and metal manufactures except zinc bars, etc.	134	2,026	1,942	1,239	113	1,166	868	422	13,656
Milk and cream	352	127	418	2,086	9	547	4	341	74
Petroleum oils	150		65	1		2,359		2	1,450
Sugar—from cane (raw)		701						76	26,841
Wool		5,596	6,207		949		15,481	70	141,075
Zinc bars, blocks, etc. . . .	1	483	1,328	173	13	99	27	6	481
All other articles	1,555	3,518	1,396	2,756	979	3,210	390	2,840	34,701
Total	7,157	18,082	17,717	14,418	4,014	18,498	84,095	4,824	243,905

(a) Includes coal, £15,194,000; copper ores and concentrates, £3,046,000; other ores and concentrates, £4,888,000.

§ 11. 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 1963-64, and the totals for each State and Territory.

VALUE OF OVERSEA TRADE: PRINCIPAL PORTS, 1963-64
(£A.'000 f.o.b.)

Port	Imports	Exports	Port	Imports	Exports
NEW SOUTH WALES			SOUTH AUSTRALIA		
Sydney, including Botany Bay	497,485	314,190	Port Adelaide, including Adelaide and Port Stanvac	85,686	96,703
Newcastle, including Port Stephens	10,650	60,956	Port Lincoln	615	12,482
Port Kembla	9,674	25,114	Port Pirie	653	32,182
Other		297	Walleroo	388	8,195
Total	517,809	400,557	Whyalla	2,482	374
			Other	1	11,144
			Total	89,825	161,080
VICTORIA			WESTERN AUSTRALIA		
Melbourne	387,905	312,848	Fremantle, including Perth and Kwinana	58,814	114,081
Geelong	28,912	52,174	Albany	608	12,424
Portland	106	8,298	Bunbury	845	6,686
Total	416,923	373,320	Geraldton	506	7,378
			Other	66	2,788
			Total	60,839	143,357
QUEENSLAND			TASMANIA		
Brisbane	73,931	149,477	Hobart	8,596	23,403
Bowen	1	2,771	Burnie	2,210	5,794
Cairns	1,788	9,650	Devonport	382	1,247
Gladstone	183	7,956	Launceston	6,569	8,715
Mackay	764	27,621	Total	17,757	39,159
Maryborough	94				
Rockhampton	337	5,920	NORTHERN TERRITORY		
Townsville	3,016	43,522	Darwin	1,469	1,237
Other	727	(a) 25,602	AUSTRALIAN CAPITAL TERRITORY		
Total	80,841	272,519	Canberra	866	1
			Grand Total	1,186,329	1,391,230

(a) Includes Mourilyan Harbour, £20,607,000.

§ 12. 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 1961-62 to 1963-64.

VALUE OF OVERSEA TRADE OF AUSTRALIA: CLASSES
(£A.'000 f.o.b.)

Class	Imports			Exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
I. Foodstuffs of animal origin, etc.	11,271	12,341	14,849	141,311	167,141	181,382
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	28,140	27,761	30,786	268,153	235,552	362,523
III. Alcoholic liquors, etc.	4,528	3,799	4,573	2,369	2,536	2,768
IV. Tobacco, etc.	9,744	12,136	13,440	564	802	890
V. Live animals and birds	575	667	964	1,470	1,653	2,409
VI. Animal substances, etc.	4,349	6,227	7,033	405,886	417,548	527,807
VII. Vegetable substances, etc.	19,625	24,409	28,786	1,761	1,957	1,930
VIII. Apparel, textiles, etc.	104,204	116,650	116,998	3,763	4,589	7,334
IX. Oils, fats and waxes	109,913	123,141	125,730	29,552	31,720	28,985
X. Pigments, paints and varnishes	4,197	5,674	5,807	960	1,183	1,331
XI. Rocks, minerals, etc.	7,567	9,645	11,805	40,350	35,253	46,553
XII. Metals, metal manufactures and machinery	315,209	425,061	473,654	110,960	103,943	140,270
XIII. Rubber and leather, etc.	19,450	23,335	25,580	4,855	4,709	5,390
XIV. Wood and wicker, etc.	15,260	17,262	20,571	3,621	3,068	3,083
XV. Earthenware, etc.	17,957	20,219	20,359	984	1,128	1,695
XVI. Paper and stationery	54,793	66,733	70,832	3,869	4,482	6,493
XVII. Jewellery, etc.	12,515	14,154	14,995	2,839	4,184	5,320
XVIII. Optical, surgical and scientific instruments	16,860	18,713	21,640	3,031	3,136	3,687
XIX. Chemicals, medicinal products, essential oils, fertilizers	59,544	71,231	81,687	9,205	10,831	13,308
XX. Miscellaneous	(a)66,845	(a)79,620	(a)93,848	32,382	33,611	37,999
XXI. Gold and silver; bronze specie	2,200	2,557	2,392	9,399	6,880	10,073
Total	884,746	1,081,335	1,186,329	1,077,284	1,075,906	1,391,230

(a) Includes outside packages.

(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 1961-62 to 1963-64.

VALUE OF EXPORTS FROM AUSTRALIA: AUSTRALIAN PRODUCE AND RE-EXPORTS
(£A.'000 f.o.b.)

Class	Australian produce			Re-exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
I. Foodstuffs of animal origin, etc.	141,145	167,090	181,296	166	51	86
II. Foodstuffs of vegetable origin; non-alcoholic beverages, etc.	267,646	235,090	361,958	507	462	565
III. Alcoholic liquors, etc.	2,350	2,519	2,711	19	17	57
IV. Tobacco, etc.	520	609	761	44	193	129
V. Live animals and birds	1,377	1,552	2,301	93	101	108
VI. Animal substances, etc.	405,750	417,401	527,484	136	147	323
VII. Vegetable substances, etc.	1,684	1,893	1,840	77	64	90
VIII. Apparel, textiles, etc.	3,239	4,110	6,602	524	479	732
IX. Oils, fats and waxes	28,712	30,785	27,053	840	935	1,932
X. Pigments, paints and varnishes	879	1,104	1,260	81	79	71
XI. Rocks, minerals, etc.	40,145	35,112	46,493	205	141	60
XII. Metals, metal manufactures and machinery	104,263	98,277	132,889	6,697	5,666	7,381
XIII. Rubber and leather, etc.	4,787	4,601	5,277	68	108	113
XIV. Wood and wicker, etc.	3,525	2,949	2,919	96	119	164
XV. Earthenware, etc.	917	1,040	1,577	67	88	118
XVI. Paper and stationery	3,619	4,127	5,860	250	355	633
XVII. Jewellery, etc.	2,482	3,823	4,950	357	361	370
XVIII. Optical, surgical and scientific instruments	2,424	2,523	2,896	607	613	791
XIX. Chemicals, medicinal products, essential oils, fertilizers	8,775	10,040	12,484	430	791	824
XX. Miscellaneous	17,099	21,409	24,787	15,283	12,202	13,212
XXI. Gold and silver; bronze specie	9,386	6,855	10,059	13	25	14
Total	1,050,724	1,052,909	1,363,457	26,560	22,997	27,773

2. Imports of Principal Articles.—The following table shows the quantity, where available, and the value of the principal articles imported into Australia during each of the years 1961-62 to 1963-64.

IMPORTS OF PRINCIPAL ARTICLES: AUSTRALIA

Article	Quantity			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Aircraft and parts				12,174	13,488	19,585
Aluminium manufacture	408,335	683,765	147,931	5,348	8,627	2,014
Leaf and foil '000 lb.	5,960	6,299	4,488	1,730	1,929	1,487
Apparel—						
Blouses, skirts, costumes, etc.				1,204	1,463	1,876
Gloves doz. prs.	390,282	456,462	530,402	1,098	1,222	1,347
Headwear				1,237	1,108	1,301
Men's and boys' outer clothing				480	460	498
Socks and stockings				523	551	457
Trimmings and ornaments				1,337	1,271	1,294
Other apparel and attire				2,908	3,539	4,238
Arms, explosives, military stores, etc.				8,140	6,846	9,132
Bags and sacks				10,380	8,691	8,666
Carpets and carpeting				4,532	5,301	4,725
Chemicals, drugs, fertilizers				59,544	71,231	81,687
Cocoa and chocolate '000 lb.	32,465	31,488	42,061	3,787	3,504	5,320
Cotton, raw " "	37,735	42,543	56,663	5,272	5,786	7,797
Crockery, etc.				3,295	3,704	3,629
Electrical machinery and appliances				47,862	59,270	58,996
Fibres (excl. Cotton, raw)				7,617	11,155	12,209
Fish—						
Fresh or preserved by cold process '000 lb.	32,290	33,630	40,177	3,561	3,822	5,192
Preserved in airtight containers	22,021	21,529	25,087	4,086	4,039	4,684
Glass and glassware				7,928	9,543	9,515
Iron and steel—						
Pipes, tubes and fittings cwt.	428,223	659,296	576,837	3,527	4,066	3,961
Plate and sheet	1,179,620	1,585,840	2,052,360	6,710	7,746	9,666
Other				10,166	11,348	16,229
Machines and machinery (except dynamo electrical)—						
Agricultural				2,463	3,757	6,094
Metal-working				11,678	18,676	17,767
Mining and metallurgical				7,685	7,669	6,587
Motive power—						
Diesel engines				3,011	4,382	4,269
Steam engines, turbines and parts				2,389	3,200	5,645
Tractors and parts				15,494	22,430	36,985
Other				16,684	17,120	17,488
Office and accounting				11,712	14,817	18,287
Textile working				7,015	7,888	6,651
Other				59,707	69,550	76,458
Motor vehicles, chassis, bodies and parts				47,202	98,106	108,094
Musical instruments				996	1,247	1,295
Oils—						
Linseed '000 gals.	1,903	872	37	1,108	431	19
Olive " "	1,466	1,206	1,040	1,461	1,573	1,142
Petroleum and shale—						
Crude(a) mill. gals.	2,871	3,237	3,160	65,302	71,861	72,374
Kerosene '000 gals.	97,413	98,074	72,357	5,020	5,242	3,911
Lubricating (mineral)	46,179	59,104	48,213	6,453	8,113	6,608
Petroleum and shale spirit	182,389	246,626	265,652	9,941	14,901	14,607
Residual and solar	67,828	88,694	125,408	2,757	2,918	3,644
Paper, printing '000 cwt.	483	365	318	16,815	19,869	22,704
wrapping				2,621	2,157	1,800
Piece-goods—						
Cotton				35,518	37,923	36,026
Silk and man-made fibre-yarn				7,239	9,468	12,206
Woolen and containing wool				1,455	1,926	1,825
All other piece-goods				10,304	11,979	12,854
Plastics materials				16,767	21,972	24,610
Rubber and rubber manufactures				17,772	21,330	23,225
Stationery and paper manufactures				20,166	23,723	24,217
Tea '000 lb.	63,866	64,369	61,749	12,914	12,529	11,810
Timber, undressed, including logs(b) '000 sup. ft.	264,171	320,148	371,373	12,238	14,059	17,257
Tobacco '000 lb.	24,510	28,513	30,940	8,483	10,346	11,298
Yarns—						
Cotton	5,410	4,771	2,829	2,198	1,906	1,185
Man-made fibres	13,817	21,322	18,584	7,290	11,605	9,846
Woolen	982	1,094	714	600	734	636
Other	2,036	3,046	3,398	327	547	744
All other articles				219,515	255,671	290,656
Total Imports				884,746	1,081,335	1,186,329

(a) Includes once-run distillate.
in super. feet.

(b) Excludes dunnage and undressed timber not measured

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 1961-62 to 1963-64.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE

Article	Quantity			Value (£A.'000. f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Butter tons	78,005	77,410	87,751	23,537	23,593	27,357
Cheese "	22,377	25,938	27,827	5,203	6,094	6,759
Chemicals, drugs, fertilizers .. .. . "	..	..	..	8,776	10,040	12,484
Coal tons	3,469,552	2,676,522	3,805,747	13,611	11,171	16,231
Copper "	31,075	38,843	50,475	8,254	10,423	13,755
Fruit—						
Dried "	67,394	63,856	66,748	10,357	9,552	10,523
Fresh, including frozen .. '000 bus.	9,515	9,224	10,953	13,363	14,984	16,578
Preserved in airtight containers .. tons	84,261	76,830	126,786	11,919	10,633	17,118
Gold .. .. . "	..	..	..	8,977	6,470	7,145
Grains and cereals—						
Barley tons	701,681	230,411	396,335	14,954	5,229	9,149
Flour (wheaten), plain white .. tons(a)	579,274	523,862	684,628	17,397	15,695	21,119
Wheat tons	5,441,667	4,070,653	6,796,194	142,446	108,452	181,009
Other .. .. . "	..	..	..	16,777	17,622	17,346
Hides and skins .. .. . "	..	..	..	32,044	36,710	45,590
Iron and steel .. .. . "	..	..	..	43,055	25,765	33,278
Lead, bullion tons	46,461	78,076	83,332	4,183	6,197	8,789
Lead, pig "	199,943	169,262	169,035	14,253	11,097	15,286
Machines and machinery (except dynamo, electrical) .. .. . "	..	..	..	10,316	13,560	17,504
Meats preserved by cold process—						
Beef and veal tons	200,435	259,636	281,286	58,700	79,018	88,261
Lamb "	16,696	25,274	18,574	2,624	5,181	3,859
Mutton "	48,711	61,045	66,927	8,156	11,652	12,376
Other .. .. . "	..	..	..	6,760	6,954	7,503
Meats, tinned tons	33,388	22,220	23,973	10,516	6,521	6,294
Milk and cream '000 lb.	95,691	134,874	142,236	7,130	9,112	9,850
Ores and concentrates tons	1,114,813	1,087,992	1,369,176	24,560	22,400	28,725
Petroleum and shale oils .. .. . "	..	..	..	21,535	23,421	19,312
Sugar (cane) tons	843,537	1,145,966	1,116,190	33,895	45,521	78,256
Wool '000 lb.	1,459,568	1,413,619	1,508,242	372,526	379,356	480,440
All other articles .. .. . "	..	..	..	104,900	120,486	151,561
Total Exports (Australian Produce) ..	..	..	..	1,050,724	1,052,909	1,363,457

(a) 2,000 lb.

A graph showing exports in principal commodity groups in each of the years 1953-54 to 1963-64 will be found on page 512.

4. Imports of Merchandise and Bullion and Specie.—The table hereunder shows the value of imports into Australia during each of the years 1959-60 to 1963-64, grouped under the headings—Merchandise, and Bullion and specie. The imports of merchandise are shown under the sub-headings of "free" and "dutiable" goods.

**VALUE OF IMPORTS OF MERCHANDISE, AND BULLION AND SPECIE:
AUSTRALIA
(£A.'000 f.o.b.)**

Year	Merchandise			Bullion and specie	Total imports
	Free goods	Dutiable goods	Total		
1959-60 ..	525,736	398,792	924,528	2,563	927,091
1960-61 ..	594,543	490,788	1,085,331	2,246	1,087,577
1961-62 ..	496,798	385,748	882,546	2,200	884,746
1962-63 ..	601,766	477,011	1,078,777	2,558	1,081,335
1963-64 ..	662,069	521,868	1,183,937	2,392	1,186,329

5. Exports of Merchandise, and Bullion and Specie.—The next table shows the value of exports from Australia during each of the years 1959-60 to 1963-64, grouped under the headings—Merchandise, and Bullion and specie. The exports of Australian produce and re-exports are shown separately.

**VALUE OF EXPORTS OF MERCHANDISE, AND BULLION AND SPECIE:
AUSTRALIA
(£A.'000 f.o.b.)**

Year	Merchandise			Bullion and specie			Total exports
	Australian produce	Re-exports	Total	Australian produce	Re-exports	Total	
1959-60 ..	907,971	17,988	925,959	11,716	7	11,723	937,682
1960-61 ..	901,809	26,232	928,041	40,797	5	40,802	968,843
1961-62 ..	1,041,339	26,546	1,067,885	9,385	14	9,399	1,077,284
1962-63 ..	1,046,054	22,972	1,069,026	6,855	25	6,880	1,075,906
1963-64 ..	1,353,398	27,759	1,381,157	10,059	14	10,073	1,391,230

6. Ratios of Net Customs Revenue to Values of Merchandise Imported.—The following table shows the ratios of net customs revenue collected, including and excluding net primage, to values of merchandise imported during the years 1959-60 to 1963-64. 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. For particulars of customs revenue collections see Chapter XXII. Public Finance.

**RATIOS OF NET CUSTOMS REVENUE COLLECTED TO VALUES OF
MERCHANDISE IMPORTED: AUSTRALIA
(Per cent.)**

Ratio of—	1959-60	1960-61	1961-62	1962-63	1963-64
Net customs revenue collected (excluding net primage) to value of all merchandise imported	8.9	9.2	9.4	9.5	9.6
Net customs revenue collected plus net primage to value of all merchandise imported	9.1	9.4	9.6	9.7	9.8
Net customs revenue collected (excluding net primage) to value of dutiable goods only	19.9	19.5	21.5	20.8	21.8

§ 13. Ships' and Aircraft Stores

The value of ships' and aircraft stores, which are excluded from the export figures, is shown in the following table for each of the years 1959-60 to 1963-64, with separate figures for oils.

**VALUE OF STORES LOADED ON OVERSEA SHIPS AND AIRCRAFT:
AUSTRALIA
(£A. '000 f.o.b.)**

Item	1959-60	1960-61	1961-62	1962-63	1963-64
Oils	7,817	8,937	7,819	6,869	9,131
All stores (including oils) ..	12,413	14,205	13,324	12,937	14,935

In addition to oils, the principal items supplied to oversea ships and aircraft in 1963-64 were:—meats, £1,313,054; fruit and vegetables, £383,174; eggs, £188,596; butter, £131,121; sea food, £189,197; flour, £49,937; rice, £33,961; milk and cream, £31,519; ale, beer, wine, spirits, etc., £594,463; tobacco and cigarettes, £280,974.

§ 14. 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 1961-62 to 1963-64.

**VALUE OF OVERSEA TRADE OF AUSTRALIA IN BULLION AND SPECIE
(£A. f.o.b.)**

Item	Imports			Exports		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Gold—Bullion ..	2,148,395	2,430,793	2,290,705	8,976,094	6,432,988	7,144,690
Specie ..	..	43,771	7,624	732	37,125	..
<i>Total</i> ..	<i>2,148,395</i>	<i>2,474,564</i>	<i>2,298,329</i>	<i>8,976,826</i>	<i>6,470,113</i>	<i>7,144,690</i>
Silver—Bullion ..	41,663	60,057	72,308	313,159	134,742	2,640,661
Specie ..	9,518	22,456	20,403	108,150	253,687	285,821
<i>Total</i> ..	<i>51,181</i>	<i>82,513</i>	<i>92,711</i>	<i>421,309</i>	<i>388,429</i>	<i>2,926,482</i>
Bronze—Specie ..	6	272	1,042	854	21,853	1,875
Total— Australian pro- duce ..	..	..	..	9,385,581	6,855,460	10,058,648
Re-exports ..	..	..	..	13,408	24,935	14,399
Grand Total ..	2,199,582	2,557,349	2,392,082	9,398,989	6,880,395	10,073,047

2. Imports and Exports, by Country.—The following table shows the imports and exports of bullion and specie from and to various countries during the year 1963–64.

VALUES OF AUSTRALIAN IMPORTS AND EXPORTS OF BULLION AND SPECIE: COUNTRIES OF ORIGIN OR CONSIGNMENT, 1963-64
(£A. f.o.b.)

Country	Imports			Exports		
	Bullion	Specie	Total	Bullion	Specie	Total
Commonwealth countries—						
Australia (re-imported)	390	19,962	20,352	..	..	..
United Kingdom ..	1,440	752	2,192	776,619	7,911	784,530
Australian Territories—						
Nauru .. ..	..	..	..	..	3,068	3,068
New Guinea ..	684,695	..	684,695	..	223,210	223,210
Norfolk Is. ..	..	..	..	..	670	670
Papua	77	..	77	..	27,140	27,140
Canada	147	120	267	..	..	..
Hong Kong ..	..	165	165	7,014,828	537	7,015,365
New Zealand ..	106,248	101	106,349	136,651	7,219	143,870
Pacific Islands (British)—						
Fiji	1,550,546	114	1,550,660	5,178	..	5,178
Gilbert and Ellice Is.	..	..	..	..	460	460
Solomon Is. ..	2,653	..	2,653	..	16,580	16,580
Singapore .. ..	..	..	..	..	485	485
Total, Commonwealth Countries	2,346,196	21,214	2,367,410	7,933,276	287,280	8,220,556
Foreign countries—						
Austria	11	200	211	..	..	..
Finland .. ..	..	100	100	..	..	..
Germany, Federal Republic of ..	4,403	866	5,269	..	..	..
Iraq .. ..	..	100	100	..	..	..
Israel .. ..	..	122	122	..	..	..
Italy .. ..	..	80	80	..	..	..
Liberia .. ..	..	25	25	..	..	..
Peru .. ..	..	4	4	..	..	..
South Africa ..	..	10	10	..	203	203
Switzerland ..	..	4,860	4,860	..	..	..
United States of America "For Orders" ..	12,403	1,488	13,891	5,547	213	5,760
	..	..	..	1,846,528	..	1,846,528
Total, Foreign Countries	16,817	7,855	24,672	1,852,075	416	1,852,491
Grand Total ..	2,363,013	29,069	2,392,082	9,785,351	287,696	10,073,047

§ 15. Imports of Merchandise According to Economic Classes

The following table shows the value of imports of merchandise into Australia during the years 1961–62 to 1963–64 classified according to economic classes of (i) purpose and (ii) degree of manufacture. The classification according to purpose for the years 1953–54 to 1963–64 is shown in graphical form on page 513.

VALUES OF IMPORTS OF MERCHANDISE: ECONOMIC CLASSES, AUSTRALIA

Economic class	Value (£A.'000 f.o.b.)			Proportion of value of imports of merchandise (Per cent.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
PURPOSE						
Producers' materials for use in—						
Building and construction ..	27,354	33,689	38,505	3.1	3.1	3.3
Rural industries ..	12,260	12,480	16,262	1.4	1.2	1.4
Manufacturing—						
Motor vehicle assembly(a) ..	48,746	95,934	104,271	5.5	8.9	8.8
Other(b) ..	346,275	411,210	450,508	39.3	38.1	38.1
<i>Total(b)</i> ..	<i>434,635</i>	<i>553,313</i>	<i>609,546</i>	<i>49.3</i>	<i>51.3</i>	<i>51.6</i>
Capital equipment(c)—						
Producers' equipment ..	169,987	206,929	235,705	19.4	19.2	19.9
Transport equipment—						
Complete road vehicles and assembled chassis ..	12,421	23,172	28,246	1.4	2.1	2.4
Railway equipment, vessels and civil aircraft ..	18,908	18,702	19,618	2.1	1.7	1.6
<i>Total ..</i> ..	<i>201,316</i>	<i>248,803</i>	<i>283,569</i>	<i>22.9</i>	<i>23.0</i>	<i>23.9</i>
Finished consumer goods—						
Food, beverages and tobacco ..	39,630	40,998	45,889	4.5	3.8	3.9
Clothing and accessories ..	6,319	7,269	8,367	0.7	0.7	0.7
All other(d) ..	134,504	156,328	157,740	15.2	14.5	13.3
<i>Total(d)</i> ..	<i>180,453</i>	<i>204,595</i>	<i>211,996</i>	<i>20.4</i>	<i>19.0</i>	<i>17.9</i>
Fuels and lubricants(e) ..	25,688	30,384	28,798	2.9	2.8	2.4
Auxiliary aids to production(f) ..	30,893	34,529	36,156	3.5	3.2	3.0
Munitions and war stores ..	9,561	7,153	13,872	1.0	0.7	1.2
Grand Total ..	882,546	1,078,777	1,183,937	100.0	100.0	100.0
DEGREE OF MANUFACTURE(g)						
Producers' materials—						
Crude ..	140,456	158,151	174,192	15.9	14.6	14.7
Simply transformed ..	67,041	88,350	94,014	7.6	8.2	7.9
Elaborately transformed ..	227,138	306,812	341,340	25.8	28.4	28.9
Finished consumer goods—						
Crude ..	8,793	9,389	12,765	0.9	0.9	1.1
Simply transformed ..	18,091	18,622	18,536	2.0	1.7	1.6
Elaborately transformed ..	153,569	176,584	180,695	17.4	16.4	15.3
Total Imports—						
Crude ..	149,249	167,540	186,957	16.9	15.5	15.8
Simply transformed ..	125,932	156,608	162,247	14.3	14.5	13.7
Elaborately transformed ..	607,365	754,629	834,733	68.8	70.0	70.5
Grand Total ..	882,546	1,078,777	1,183,937	100.0	100.0	100.0

(a) Owing to insufficient information, it is not possible to treat unassembled tractors and other machinery in a similar manner to motor vehicles, and all such machinery and replacement parts therefore are treated as capital equipment whether imported in an assembled or unassembled condition. (b) Excludes a percentage for piece-goods to be sold at retail, and paper to be used solely for wrapping, which are recorded in Finished consumer goods, All other, and Auxiliary aids to production, respectively. (c) See footnote (a). (d) Includes a percentage for piece-goods to be sold at retail; see footnote (b). (e) Excludes crude petroleum, which is included in Producers' materials, Manufacturing—Other. (f) Includes a percentage for paper to be used solely for wrapping; see footnote (b). (g) The class Fuels and lubricants consists of goods "simply transformed" and the classes Capital equipment and Munitions and war stores entirely of goods "more elaborately transformed". The class Auxiliary aids to production is about equally divided between goods "simply" and "more elaborately transformed".

§ 16. Exports According to Industries

1. **Classification.**—The following table provides an analysis of the total recorded value of Australian exports for the years 1961-62 to 1963-64. 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.

VALUES OF EXPORTS OF AUSTRALIAN PRODUCE: INDUSTRIAL GROUPS

Industrial group	Value (£A.'000 f.o.b.)			Proportion of value of exports of Australian produce (excluding gold) (Per cent.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Agriculture, horticulture and viticulture—						
Unprocessed	184,576	143,780	220,086	17.8	13.7	16.2
Processed	83,579	91,879	141,426	8.0	8.8	10.5
Total	268,155	235,659	361,512	25.8	22.5	26.7
Pastoral—						
Unprocessed	439,971	476,853	588,711	42.2	45.6	43.4
Processed	65,520	64,926	72,405	6.3	6.2	5.3
Total	505,491	541,779	661,116	48.5	51.8	48.7
Dairy and farmyard—						
Unprocessed	2,605	2,471	2,477	0.2	0.2	0.2
Processed	41,688	43,535	47,974	4.0	4.2	3.5
Total	44,293	46,006	50,451	4.2	4.4	3.7
Mines and quarries (other than gold)—						
Unprocessed	36,882	31,935	41,056	3.6	3.1	3.0
Processed	39,460	41,039	54,813	3.8	3.9	4.1
Total (a)	76,342	72,974	95,869	7.4	7.0	7.1
Fisheries—						
Unprocessed	6,858	6,629	7,329	0.6	0.6	0.6
Processed	761	359	518	0.1	0.1	0.0
Total	7,619	6,988	7,847	0.7	0.7	0.6
Forestry—						
Unprocessed	607	427	514	0.1	0.1	0.0
Processed	3,296	2,863	2,742	0.3	0.2	0.2
Total	3,903	3,290	3,256	0.4	0.3	0.2
Total, Primary Produce—						
Unprocessed	671,499	662,095	860,173	64.5	63.3	63.4
Processed	234,304	244,601	319,878	22.5	23.4	23.6
Total	905,803	906,696	1,180,051	87.0	86.7	87.0
Manufactures	102,052	102,088	139,806	9.8	9.8	10.3
Refined petroleum oils	21,537	23,391	19,313	2.0	2.2	1.4
Unclassified	12,356	14,282	17,142	1.2	1.3	1.3
Total, Australian Produce (excluding Gold)	1,041,748	1,046,457	1,356,312	100.0	100.0	100.0
Re-exports (excluding Gold)	26,559	22,979	27,773	..	..	..
Gold exports	8,977	6,470	7,145	..	..	..
Total Recorded Value of Exports	1,077,284	1,075,906	1,391,230	..	..	..

2. **Relative Importance of Industrial Groups.**—In the year 1963–64 Australian produce (other than gold) exported amounted to approximately £1,356 million. Of this, £1,180 million or 87 per cent. was mainly produce of primary industries, comprising £860 million of unprocessed produce and £320 million of goods which had been processed in some degree before export. The values of the principal individual items of processed Australian primary produce exported were:—raw sugar, £78,256,000; flour, etc., £21,119,000; canned fruit, £17,118,000; dried fruit, £10,530,000; wool (scoured, tops, etc.), £50,729,000; canned meats, £6,295,000; butter, £27,357,000; milk (condensed, dried, etc.), £9,850,000; pig lead, £15,286,000; lead bullion, £8,789,000; zinc bars, blocks, etc., £8,833,000; copper ingots, £7,407,000; and undressed timber, £2,158,000.

The value of manufactures exported as classified on page 526 was £140 million, approximately 10 per cent. of Australian produce (other than gold) exported in 1963–64. The values of principal individual items here included were:—manufactures of metal, £62,210,000; implements and machinery, £17,504,000; drugs and chemicals, £10,174,000; and paper and stationery, £5,860,000.

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 1963–64 were:—individual consignments of less than £50 in value, £6,306,000; and military equipment and stores and supplies for Australian projects overseas, £2,415,000.

§ 17. 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-Luxembourg 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 home 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. Information for countries other than Australia has been extracted from publications of the United Nations.

VALUES OF IMPORTS CLEARED FOR HOME CONSUMPTION, AND EXPORTS OF DOMESTIC PRODUCTS (MERCHANDISE ONLY (a)): VARIOUS COUNTRIES, 1963

Country	Imports cleared c.i.f.	Exports f.o.b.	Total	Trade per head of population		
				Imports cleared	Exports	Total
	£A. m.	£A. m.	£A. m.	£A.	£A.	£A.
United States of America	(b) 7,635.7	10,253.1	17,888.8	40.3	54.1	94.4
Germany, Federal Republic of ..	5,812.1	6,525.4	12,337.5	104.8	117.7	222.5
United Kingdom ..	(c) 5,857.1	5,095.5	10,952.6	108.9	94.7	203.6
France ..	3,896.0	3,609.4	7,505.4	81.4	75.4	156.8
Italy ..	3,365.6	2,253.1	5,618.7	66.7	44.7	111.4
Canada ..	(b) 2,708.5	2,882.6	5,591.1	143.1	152.3	295.4
Japan ..	(d) 3,008.5	2,432.1	5,440.6	31.4	25.4	56.8
Netherlands ..	2,663.8	2,215.2	4,879.0	222.6	185.1	407.7
Belgium-Luxembourg ..	2,272.3	2,160.3	4,432.6	236.3	224.7	461.0
Sweden ..	(d) 1,512.9	1,429.5	2,942.4	199.0	188.0	387.0
Switzerland ..	1,453.1	1,078.1	2,531.2	250.1	185.6	435.7
Australia (e) ..	(b) 1,158.6	1,356.3	2,514.9	105.1	123.0	228.1
Denmark ..	(d) 950.0	849.6	1,799.6	202.8	181.4	384.2
Austria ..	747.8	592.0	1,339.8	104.3	82.5	186.8
Norway ..	812.9	479.0	1,291.9	221.7	130.6	352.3
Spain ..	867.0	322.3	1,189.3	27.9	10.4	38.3
Finland ..	539.7	511.2	1,050.9	118.7	112.5	231.2
Chile ..	284.4	242.0	526.4	34.6	29.4	64.0
Greece ..	358.9	129.5	488.4	42.3	15.3	57.6
Portugal ..	294.6	186.2	480.8	32.6	20.6	53.2
Turkey ..	308.0	164.3	472.3	10.2	5.4	15.6

(a) Includes silver. (b) f.o.b. (c) Covers goods imported less goods re-exported. (d) Covers goods imported as distinct from goods cleared for home consumption. (e) Year ended June, 1963.

§ 18. 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 1960 to 1964.

VALUE OF OVERSEA TRADE IN CALENDAR YEARS: AUSTRALIA

(£A.'000 f.o.b.)

Year	Merchandise		Bullion and specie		Total	
	Imports	Exports	Imports	Exports	Imports	Exports
1960 ..	1,056,842	874,585	2,389	40,577	1,059,231	915,162
1961 ..	934,333	1,036,950	2,331	17,753	936,664	1,054,703
1962 ..	1,009,594	1,046,550	2,224	5,367	1,011,818	1,051,917
1963 ..	1,106,304	1,243,828	3,328	8,673	1,109,632	1,252,501
1964 p ..	1,327,188	1,356,185	2,355	9,727	1,329,523	1,365,912

§ 19. 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 XXII. Public Finance. The following table shows the quantities of spirits, beer, tobacco, etc., on which excise duty was paid in Australia during the years 1962-63 and 1963-64.

QUANTITY OF SPIRITS, BEER, TOBACCO, ETC., ON WHICH EXCISE DUTY WAS PAID: AUSTRALIA

Article	1962-63	1963-64	Article	1962-63	1963-64
	'000 gallons	'000 gallons	Cigarettes—machine-made	'000 lb. 44,007	'000 lb. 45,835
Beer	238,918	251,715		'000 gallons	'000 gallons
	'000 proof gallons	'000 proof gallons	Petrol—		
Spirits—			Aviation petrol (by-law)	6,311	6,321
Brandy	883	928	Aviation petrol (non by-law)	578	495
Gin	359	364	Petrol, n.e.i.	1,224,793	1,361,820
Whisky	324	354	Total Petrol	1,231,682	1,368,636
Rum	529	576	Aviation turbine fuel	30,963	40,481
Liqueurs	62	66	Diesel fuel	51,682	76,661
Other	65	81			
Total Spirits (Potable)	2,222	2,369	Playing cards	doz. packs 98,094	doz. packs 104,132
Spirits for—				60 papers or tubes	60 papers or tubes
Fortifying wine	2,218	2,247	Cigarette papers and tubes	'000 78,320	'000 69,466
Industrial or scientific purposes	296	319		8,640 matches	8,640 matches
Manufacture of—			Matches	'000 3,468	'000 3,521
Essences	109	111	Coal	'000 tons 16,807	'000 tons 17,556
Scents and toilet preparations	95	106			
Vinegar	215	238	Canned fruit		'000 doz. containers (a) 2,503
Tobacco	'000 lb. 11,493	'000 lb. 10,198	Cathode ray tubes	'000 351	'000 327
Cigars	149	167			

(a) Operative from 30th October, 1963.

§ 20. Balance of Payments

1. *Introduction.*—Estimates of a country's balance of payments are prepared for the purpose of providing a systematic record in money terms of the economic transactions which take place over a period between that country and all other countries. Such records are essential to the examination of influences which external factors have on the domestic economy. The Australian economy is subject to fairly large fluctuations in export income, and it is also affected in important respects by variations in the level of foreign investment and the demand for imports. Consequently, these estimates have always assumed particular importance in this country.

Official estimates of Australia's balance of payments covering the period 1928-29 to 1930-31 were included in the Appendix to Official Year Book No. 24, 1931. Except for the war years (1939 to 1945), estimates have since been published annually. Detailed estimates are currently provided twice yearly in the form of a mimeographed publication *Balance of Payments*. This publication brings the estimates forward to the end of the most recent financial year or half-year and, together with a printed volume *The Australian Balance of Payments, 1928-29 to 1950-51*, provides also a description of the various items included and the sources from which the information is obtained. A summarized statement of the principal current account items and some identified capital movements is prepared and issued on a quarterly basis in the *Balance of Payments—Quarterly Summary*.

The form in which the Australian estimates are presented follows the pattern originally adopted by the International Monetary Fund. In this presentation, a basic distinction is drawn between "current account" transactions and "capital account" transactions. Current account transactions are defined as those which involve changes in the ownership of goods or the rendering of services between residents of Australia and the rest of the world. They include such important items as exports, imports, shipping freights, dividends, profits and interest, travel and government expenditure. The current account also includes transfers in the form of personal gifts and government gifts of technical assistance, for which there is no consideration. Capital account transactions are defined

as those which involve claims to money and titles to investments between residents of one country and those of another country. Details are shown according to whether the items with which transactions are concerned are classified as assets or liabilities. For practical purposes, items are also broadly divisible into investment items (including oversea investment in companies in Australia and government loans), certain financing transactions, and monetary movements (including transactions with the International Monetary Fund and changes in the level of international reserves).

By definition, the balance of payments on current account is always equivalent to the balance on capital account. The net monetary movement is used as a control figure to which the net sum of all other figures must reconcile. However, errors and omissions occur in the estimation of the amounts involved in various items included in both current and capital accounts, and in addition there are timing differences between the statistical recording of trade transactions and certain invisible items, and the relevant foreign exchange transactions. Therefore, in order to preserve the identity between the total shown in the current account and the total shown in the capital account, it is necessary to introduce a "balancing item". The "balancing item" is included in the capital account, but, as mentioned above, it may include discrepancies in the current account, and it does not, as is frequently supposed, include only errors and timing differences related to investment and financing transactions.

Recent changes in the estimates include an adjustment for the estimated excess of the value of imports, as recorded in oversea trade statistics, over the actual selling price to the importer (see Appendix IV. *The Australian Balance of Payments 1957-58 to 1961-62*). Significant amendments to figures previously published for transportation items and changes in concept and presentation were made in the *Balance of Payments 1960-61, 1961-62 and First Half 1962-63*. Information on these changes is provided in "Notes to Tables" and Appendix II. of that publication.

Details of the estimates are assembled from a variety of sources of which the following are the more important:—(i) statistics of exports and imports obtained from Australian trade statistics; (ii) details of the import valuation adjustment obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia; (iii) information on particular invisible current account items and capital movements obtained by regular inquiry from private organizations and government departments; (iv) details of receipts and payments of foreign exchange provided by the banking system; (v) information on dividends remitted, undistributed income and private investment in companies provided by statistics of oversea investment collected by this Bureau; (vi) information on freight on imports and other items concerned with oversea shipping obtained from a sample of the invoices submitted to the Department of Customs and Excise in respect of imports into Australia and a survey of shipping operations conducted by this Bureau; and (vii) information on international reserves supplied by the Reserve Bank of Australia.

2. Current Account.—The balance of payments on current account is arranged to show a series of credit items and a corresponding series of debit items. In general, entries on the credit side include all current transactions which result in receipts of foreign exchange (for goods and services, investment income or donations), and on the debit side the similar transactions which result in payments of foreign exchange. The principal exceptions to this rule are the amounts shown for undistributed income. In respect of these amounts no movement of foreign exchange takes place, the amounts concerned being treated as credits or debits in the relevant sections of the current account, and as corresponding outflows or inflows in the relevant sections of the capital account. Exceptions also occur where debts incurred for current account items, principally goods, are subsequently capitalized.

The largest items shown in the current account are exports and imports, and the difference between them represents the balance of visible trade. This is the most important, and usually the most variable, relationship in the balance of payments. A full evaluation of the overall position on current account, however, occurs only after the invisible items have been taken into account. The most important of these are the transportation items. Entries appear on both the debit and credit sides, the principal component on the debit side being freight payable overseas on imports into Australia. The principal component on the credit side is expenditure by oversea carriers, which represents mainly oversea ships' expenditure for stevedoring, port charges, etc., incurred in loading and discharging goods at Australian ports, and stores purchased in Australia. The items next in importance are those concerning income from property. Debit entries under this heading include dividends, profits, interest and royalties, payable overseas, while the credit entries include similar details of amounts receivable by Australian residents. These items include undistributed income for which, as mentioned above, no monetary payments occur. The remaining items are smaller than those mentioned above, and include travel, government transactions, donations (including foreign aid made available by the Australian Government), and, on the credit side, the net value of Australian gold production.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT

(£ million)

Particulars	1961-62	1962-63	1963-64
1. Exports f.o.b.(a)	1,066.8	1,065.1	1,371.9
2. Imports f.o.b.(a)	856.7	1,034.3	1,117.0
<i>Balance of Trade</i>	<u>210.1</u>	<u>30.8</u>	<u>254.9</u>
Invisible Credits—			
3. Gold production	16.1	15.9	14.4
4. Transportation—			
Expenditure of oversea carriers	70.6	74.1	83.6
Australian carriers	10.5	11.9	14.9
	81.1	86.0	98.5
5. Travel	15.6	14.5	17.8
6. Property income—			
Undistributed income	4.4	4.4	6.6
Royalties and copyrights	0.9	1.0	1.4
Other	34.5	32.5	38.5
	39.8	37.9	46.5
7. Government—			
Australian Government receipts	11.8	11.8	15.4
Foreign government expenditure	10.5	11.8	15.7
	22.3	23.6	31.1
8. Miscellaneous—			
Business expenses	7.2	8.5	10.5
Other	6.8	9.4	11.1
9. Donations, etc.—	14.0	17.9	21.6
Immigrants' funds	25.1	27.8	40.3
Other	10.7	11.2	16.2
	35.8	39.0	56.5
<i>Total Invisible Credits</i>	<u>224.7</u>	<u>234.8</u>	<u>286.4</u>
Invisible Debits—			
10. Transportation(b)—			
Freight	102.0	117.0	128.0
Other	37.1	37.8	41.7
	139.1	154.8	169.7
11. Travel	40.8	45.0	50.9
12. Property income—			
Public authority interest	32.0	33.0	35.0
Direct investment	56.5	62.6	56.3
Undistributed income	33.0	54.2	66.3
Royalties and copyrights	15.2	16.2	19.9
Other	11.7	15.2	16.6
	148.4	181.2	194.1
13. Government—			
Defence	9.7	9.7	10.0
Other	17.5	18.2	23.8
	27.2	27.9	33.8]
14. Miscellaneous—			
Business expenses	11.1	6.2	7.1
Other	14.6	20.7	26.2
15. Donations, etc.—	25.7	26.9	33.3
Government—			
Papua and New Guinea	22.0	25.4	32.3
Other foreign aid	4.5	7.3	5.4
Private	26.5	30.1	34.5
	53.0	62.8	72.2
<i>Total Invisible Debits</i>	<u>434.2</u>	<u>498.6</u>	<u>554.0</u>
Balance on Current Account	0.6	-233.0	-12.7

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect both coverage and valuation. (b) Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at £113 million in 1961-62, £129 million in 1962-63 and £140 million in 1963-64.

NOTE.—Minus sign (—) denotes deficit.

3. Capital Account.—The capital account shows net movements in assets and liabilities.

BALANCE OF PAYMENTS ON CAPITAL ACCOUNT

(£ million)

Particulars	1961-62	1962-63	1963-64
CHANGES IN ASSETS			
1. International reserves	10.4	64.9	228.0
2. International Monetary Fund .. ..	..	..	..
3. Other international financial agencies	1.7	1.7	1.7
4. Other government	-2.8	6.5	34.3
5. Marketing authorities	32.9	-5.1	-15.1
6. Portfolio investment	-2.2	-2.8	-3.8
7. Direct investment—			
Branches—			
Unremitted profits	0.5	0.2	-0.1
Other	3.5	-2.2	1.0
Subsidiaries—			
Undistributed profits	3.9	4.2	6.7
Other	1.8	3.6	-3.6
	9.7	5.8	4.0
8. Life insurance	-0.4	0.1	2.2
<i>Total</i>	<i>49.3</i>	<i>71.1</i>	<i>251.3</i>
CHANGES IN LIABILITIES			
9. Government loans—			
International Bank for Recon- struction and Development	-7.9	5.9	3.3
Other central government	14.9	43.4	7.9
Local government and semi- governmental	-0.2	-1.2	-0.2
Discounts, etc.	-0.4	-1.4	-0.4
	6.4	46.7	10.6
10. International Monetary Fund	-78.8	-11.5	..
11. Other international financial agencies	-1.2	-2.3	-2.4
12. Foreign banks	0.3	2.6	-1.4
13. Portfolio investment—			
Government securities	-1.5	-4.9	-1.3
Companies, etc.	37.9	42.2	17.0
	36.4	37.3	15.7
14. Direct investment—			
Branches—			
Unremitted profits	4.4	8.2	9.8
Other	22.6	3.1	18.4
Subsidiaries—			
Undistributed profits	28.6	46.0	56.5
Other	55.4	123.0	113.3
	111.0	180.3	198.0
15. Balancing item	-25.4	51.0	43.5
<i>Total</i>	<i>48.7</i>	<i>304.1</i>	<i>264.0</i>
Balance on Capital Account	-0.6	233.0	12.7

On the assets side, the most important item is Australia's holdings of monetary gold and foreign exchange, usually referred to as international reserves. On the liabilities side, the most important items are government loans, I.M.F. transactions and private investment in Australian companies.

Transactions with international monetary and financial agencies appear on both sides of the capital account. On the assets side, items 2 and 3 show increases in subscriptions to these institutions, and on the liabilities side, items 10 and 11 show corresponding increases in liabilities or changes in liabilities previously incurred. Liabilities comprise, on the one hand, bank balances and special non-negotiable, non-interest bearing securities (payable in Australian currency but convertible by arrangement into foreign currency or gold) related to capital subscriptions to the various agencies and, on the other hand, drawings from the International Monetary Fund.

Changes in overseas investment in companies by Australian residents are shown on the assets side of the capital account (items 6 and 7), and changes in investment in Australian companies by overseas residents are shown on the liabilities side (items 13 (part) and 14). Figures shown for marketing authorities (item 5) represent changes in the estimated value of commodity stocks held overseas or in amounts owed by overseas debtors to the principal Australian marketing authorities.

The balancing item includes errors and omissions and timing differences, referred to on page 530.

4. Balance of Payments on Current Account, by Major Groups of Countries.—Estimates are also made of Australia's current account transactions with the following groups of countries (see p. 504 for countries included in the several groups).

BALANCE OF PAYMENTS ON CURRENT ACCOUNT, BY MAJOR GROUPS OF COUNTRIES

(£ million)

Particulars	1961-62	1962-63	1963-64
EXPORTS f.o.b.(a)—			
Sterling—			
United Kingdom	216.3	209.6	260.9
Other	191.5	200.2	232.8
Non-sterling—			
North America	124.2	150.8	163.8
European Economic Community ..	181.0	165.9	213.2
European Free Trade Association(b)	10.9	11.5	13.6
Eastern Europe, China (Mainland), etc.	93.9	93.1	161.1
Other	249.0	234.0	326.5
Total	1,066.8	1,065.1	1,371.9
IMPORTS f.o.b.(a)—			
Sterling—			
United Kingdom	249.1	320.3	307.9
Other	122.7	136.1	147.3
Non-sterling—			
North America	210.9	258.0	294.8
European Economic Community ..	93.2	110.7	124.3
European Free Trade Association(b)	45.0	47.6	54.4
Eastern Europe, China (Mainland), etc.	8.7	10.7	14.6
Other	127.1	150.9	173.7
Total	856.7	1,034.3	1,117.0
INVISIBLES (NET)—			
Sterling—			
United Kingdom	-60.5	-82.8	-74.5
Other	-40.2	-49.2	-51.5
Non-sterling—			
North America	-81.7	-96.4	-103.9
European Economic Community ..	-14.0	-20.7	-20.5
European Free Trade Association(b)	2.7	3.8	7.0
Eastern Europe, China (Mainland), etc.	-1.1	-1.2	-0.8
Other	-22.3	-25.4	-28.5
International agencies	-8.5	-7.8	-9.3
Gold production	16.1	15.9	14.4
Total	-209.5	-263.8	-267.6

For footnotes, see next page.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT, BY MAJOR GROUPS OF COUNTRIES—*continued*

(£ million)

Particulars	1961-62	1962-63	1963-64
BALANCE ON CURRENT ACCOUNT—			
Sterling—			
United Kingdom	-93.3	-193.5	-121.5
Other	28.6	14.9	34.0
Non-sterling—			
North America	-168.4	-203.6	-234.9
European Economic Community ..	73.8	34.5	68.4
European Free Trade Association(b)	-31.4	-32.3	-33.8
Eastern Europe, China (Mainland), etc.	84.1	81.2	145.7
Other	99.6	57.7	124.3
International agencies	-8.5	-7.8	-9.3
Gold production	16.1	15.9	14.4
Total	0.6	-233.0	-12.7

(a) The amounts shown represent the recorded trade figures as shown on pages 504-5 adjusted for balance of payments purposes. Adjustments affect both coverage and valuation. (b) Other than the United Kingdom.

NOTE.—Minus sign (-) denotes deficit.

5. **International Reserves.**—The following table shows the net gold and foreign exchange holdings of official and banking institutions for the years 1961-62, 1962-63 and 1963-64.

INTERNATIONAL RESERVES

(Source: Reserve Bank of Australia)

(£ million)

Particulars	1961-62	1962-63	1963-64
Gold	79.2	89.3	97.3
Foreign exchange	482.0	536.8	756.8
Total at end of period	561.2	626.1	854.1
Change during period	+10.4	+64.9	+228.0

CHAPTER XV

TRANSPORT AND COMMUNICATION

NOTE.—The statistics in this chapter relate in the main to the year 1963–64, with comparisons restricted to a few recent years. More detailed figures and particulars for earlier years are included in the annual bulletins, *Transport and Communication*, *Commonwealth Finance*, and *State, Territory and Local Government Authorities' Finance and Government Securities* published by this Bureau.

Current information on subjects dealt with in this chapter appears in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics*, the *Monthly Bulletin of Registrations of New Motor Vehicles* and two preliminary monthly statements on *Registrations of New Motor Vehicles*.

SHIPPING

§ 1. Control of Shipping

1. *Commonwealth Navigation and Shipping Legislation.*—By section 51 (j) 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, this power is further defined as extending to navigation and shipping. Section 51 (vii) empowers the Commonwealth Parliament to legislate in respect of "Lighthouses, lightships, beacons and buoys" and section 51 (ix) in respect of "Quarantine".

A review of the introduction and development of the *Navigation Act 1912–1950* was given in Year Book No. 40, pages 110–2. Amendments to the principal Act were made by the Navigation Acts of 1952, 1953, 1956, 1958 and 1961.

Other shipping Acts under the powers of the Commonwealth are the *Sea-Carriage of Goods Act 1924–1961*, the *Seamen's Compensation Act 1911–1964*, the *Seamen's War Pensions and Allowances Act 1940–1964*, the *Pollution of the Sea by Oil Act 1960*, the *Australian Coastal Shipping Commission Act 1956–1964*, the *Australian Coastal Shipping Agreement Act 1956*, the *Stevedoring Industry Act 1956–1962*, the *Beaches, Fishing Grounds and Sea Routes Protection Act 1932–1961* (except Section 3), the *Submarine Cables and Pipelines Protection Act 1963* and the *Lighthouses Act 1911–1961*.

The control of shipping during, and immediately after, the 1939–45 War and the establishment of the Maritime Industry Commission (abolished in 1952), the Australian Stevedoring Industry Board (replaced in 1956 by the Australian Stevedoring Industry Authority), and the Australian Shipping Board (replaced in 1956 by the Australian Coastal Shipping Commission) are described in Year Books No. 36, pages 121–30, and No. 39, pages 147–8.

2. *Australian Coastal Shipping Commission.*—This Commission was established in 1956 for the purpose of maintaining and operating interstate, overseas and territorial shipping services, and replaced the Australian Shipping Board. It operates the Australian National Line, a Commonwealth owned merchant shipping service, which, at 30th June, 1964, comprised 41 vessels totalling 178,619 gross tons. These vessels included 15 with a gross tonnage of 500 to 3,000, 12 with a gross tonnage of 3,000 to 5,000, 12 with a gross tonnage of 5,000 to 8,000, and the bulk ore carriers *Mount Keira*, 10,229 gross tons, and *Mount Kembla*, 10,112 gross tons.

During 1963–64 the general purpose bulk carrier *Jeparit* of 6,341 gross tons, commissioned in February, 1964, was added to the fleet.

The Commission has recently taken over *Musgrave Range*, and a passenger vehicular vessel, *Empress of Australia*, of 12,037 gross tons for operation between Sydney and Tasmania. The *Empress of Australia* is augmenting the service already being provided between the mainland and Tasmania by the *Princess of Tasmania*, the vehicular container ship *Bass Trader* and the container vessel *South Esk*. The 21,400 ton deadweight bulk carrier *Musgrave Range* was brought into service during 1964.

In the year ended 30th June, 1964, the *Princess of Tasmania* carried 89,415 passengers, 20,800 accompanied vehicles, 7,773 commercial vehicles and 3,432 trade cars.

3. **Australian Shipbuilding Board.**—(i) *Constitution and Functions.* Established in March, 1941, as a wartime measure under the National Security (Shipbuilding) Regulations and constituted in 1948 under the *Supply and Development Act 1939–1948*, the Board now operates under the control of the Minister for Shipping and Transport. In November, 1963, the Commonwealth Public Service Board approved its permanent establishment as a branch of the Department of Shipping and Transport. The membership of the Board consists of a Chairman, a Finance Member and three other members, one of whom represents the Naval Board.

The functions of the Board are set out in detail in Regulation 22 (4) of the Supply and Development Regulations and, briefly, in the exercise of those functions the Board is responsible for—

- (a) Recommending to the Minister for Shipping and Transport the price at which vessels may be purchased and disposed of by him on behalf of the Commonwealth;
- (b) the design, construction, outfitting, repair or conversion of ships;
- (c) research into all matters connected with or incidental to shipbuilding;
- (d) advice to the Minister on developments in the shipbuilding industry;
- (e) rendering assistance to all sections of the industry.

(ii) *Construction Programme.* Up to 31st January, 1965, the Board had arranged the construction of 84 merchant vessels and one naval survey vessel totalling approximately 563,000 deadweight tons, at a cost of about £96,000,000, and also thirteen small craft on which the Commonwealth Shipbuilding subsidy did not apply.

At 31st January, 1965, the Board had current orders for the construction of twenty-two vessels totalling 210,300 deadweight tons. These vessels comprised three 47,500 ton deadweight bulk ore carriers, one 21,400 ton deadweight ore carrier, one 3,600 ton deadweight general cargo vessel, two 19,600 ton oil tankers, one vehicular ferry, one 3,300 ton limestone carrier, one lighthouse supply vessel, five tugs, four landing craft, one tuna fishing vessel and two small launches.

(iii) *Shipyards.* There are five major Australian shipyards building merchant vessels, two in Queensland, two in South Australia and one in New South Wales, and two shipyards principally engaged in naval shipbuilding, one in New South Wales and one in Victoria. There are also numerous smaller yards, situated in every State, building steel and wooden working and pleasure craft.

4. **Australian Stevedoring Industry Authority.**—In March, 1947, legislation established a permanent Stevedoring Industry Commission to continue in peace-time the functions performed during the war by the Commission established under National Security legislation. In June, 1949, legislation was enacted to abolish the Stevedoring Industry Commission, on which employers and employees were represented, and established in its place a Stevedoring Industry Board of three members, which attended to administrative matters formerly under the control of the Commission, such as the operation of labour bureaux at ports, payment of attendance money and provision of amenities. The industrial functions which previously came within the province of the Commission were assigned to a single Judge of the Commonwealth Court of Conciliation and Arbitration. In August, 1956, following a Committee of Inquiry into the stevedoring industry, the Stevedoring Industry Board was replaced by the Australian Stevedoring Industry Authority of three members, including a representative of the management side of industry and a representative of the trade union movement. At the same time, the judicial and non-judicial functions formerly exercised by the Commonwealth Court of Conciliation and Arbitration were divided between the Commonwealth Industrial Court and the Commonwealth Conciliation and Arbitration Commission respectively. Awards of the Conciliation and Arbitration Commission subsequently placed payment of sick pay, public holiday pay and annual leave under the administration of the Authority. Under amending legislation which operated from 6th June, 1961, the Authority became responsible for payment of long service leave to registered waterside workers, and its disciplinary powers were strengthened to reduce the time lost through unauthorized stoppages. The statutory provisions regulating the industry are now contained in the *Stevedoring Industry Act 1956–1962*, the *Stevedoring Industry Act 1963*, and Division 4 of Part III of the *Conciliation and Arbitration Act 1904–1961*.

§ 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, pp. 539-40). For the purpose of these statistics, the Australian mainland and Tasmania are treated as Australia and all external territories as oversea countries.

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 the Bureau of Census and Statistics. This information relates, in the main, only to vessels engaged in the carriage of passengers and/or cargo between Australian States or between Australia and oversea countries.

The size of a vessel may be expressed in a number of ways. A vessel's gross tonnage, expressed in tons of 100 cubic feet, represents the total volume of the enclosed space, i.e. a ship of 25,000 tons has a total enclosed capacity of 2,500,000 cubic feet. Its net tonnage, expressed in tons of 100 cubic feet, represents the volume of enclosed space that can be used for cargo or passengers. Its displacement is its total weight and is expressed in tons of 2,240 lb. Its deadweight tonnage is the difference between the displacement of the vessel loaded to its summer deadline and the displacement light, i.e. it is the weight the vessel can carry, including the weight of bunkers and stores. Net tonnage is the concept generally used in the tables in this chapter, but since it can give a misleading impression of the size of ships which have a function other than carrying passengers and cargo (e.g. a tug has no net tonnage), some figures are given for deadweight tons and tons gross also.

Most of the 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 used representing one ton measurement.

Except in § 5. Shipping at Principal Ports (pp. 542-3), intra-State (coastal) movements of vessels, including those of vessels engaged solely in trade within State limits, are excluded from the statistics in the following pages.

§ 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 1959-60 to 1963-64.

OVERSEA SHIPPING: ENTRANCES AND CLEARANCES (COMBINED) OF VESSELS DIRECT, AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Number of vessels	5,945	6,778	7,210	6,762	7,477
Net tonnage '000 tons	28,874	34,317	37,662	37,584	41,640

Particulars of the total oversea movement of shipping for each year from 1822 to 1920-21 were published in Year Book No. 15, page 507, and those for each year from 1921-22 to 1950-51 in Year Book No. 40, page 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 1963-64.

**OVERSEA SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS DIRECT,
1963-64**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	1,182	582	732	274	818	81	45	3,714
	'000 net tons	6,918	3,603	2,746	2,031	4,999	275	151	20,723
Clearances	No.	1,002	583	943	294	868	44	29	3,763
	'000 net tons	6,311	4,113	3,682	1,535	4,975	188	113	20,917

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 during each of the years 1961-62 to 1963-64.

**OVERSEA SHIPPING: COUNTRIES FROM WHICH ENTERED OR FOR WHICH
CLEARED, AUSTRALIA**
(’000 net tons)

Country from which entered or for which cleared	With cargo or in ballast	Entered			Cleared		
		1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
United Kingdom	Cargo	1,607	1,627	1,562	2,197	2,014	2,309
	Ballast	60	18	46	10	25	23
Canada	Cargo	493	502	499	277	345	274
	Ballast	5	5	..	..	..	..
Nauru	Cargo	550	532	561	265	280	322
	Ballast	6	..	..	62	62	43
New Zealand	Cargo	752	772	740	1,240	1,185	1,267
	Ballast	891	790	752	119	92	100
Singapore	Cargo	336	411	291	398	487	380
	Ballast	107	133	93	482	623	286
Other Commonwealth countries	Cargo	1,798	1,631	1,725	1,638	1,370	1,390
	Ballast	357	297	220	310	333	356
Arabian States	Cargo	2,012	3,158	3,183	118	139	266
	Ballast	3	43	53	2,838	2,961	2,976
France	Cargo	104	84	98	138	141	93
	Ballast	..	..	..	..	..	..
Germany, Federal Republic of	Cargo	347	357	353	407	368	429
	Ballast	4	..	1	6	13	..
Indonesia	Cargo	1,733	1,684	1,558	122	86	215
	Ballast	354	193	197	1,010	964	1,111
Iran	Cargo	1,006	1,020	1,102	64	107	107
	Ballast	..	10	25	498	753	876
Italy	Cargo	231	277	282	349	317	270
	Ballast	1	..	..	..	11	..
Japan	Cargo	811	921	1,197	2,661	2,402	3,220
	Ballast	2,522	1,968	3,321	13	41	34
Netherlands	Cargo	227	141	94	386	218	247
	Ballast	..	5	..	..	..	..
New Caledonia	Cargo	191	192	186	155	171	265
	Ballast	32	31	33	6	71	29
United States of America	Cargo	812	890	1,024	795	857	816
	Ballast	11	13	6	24	18	30
Other foreign countries	Cargo	1,061	920	987	1,989	1,925	2,906
	Ballast	439	333	534	227	247	277
Total	Cargo	14,071	15,119	15,442	13,199	12,412	14,776
	Ballast	4,787	3,839	5,281	5,605	6,214	6,141
Total with Cargo and in Ballast		18,858	18,958	20,723	18,804	18,626	20,917

4. Country of Registration of Oversea Shipping.—Particulars of oversea shipping which entered Australian ports during each of the years 1961-62 to 1963-64 are given in the following table according to country of registration of vessels.

OVERSEA SHIPPING: COUNTRY OF REGISTRATION OF VESSELS ENTERED, AUSTRALIA

('000 net tons)

Vessels registered at ports in—	1961-62	1962-63	1963-64	Vessels registered at ports in—	1961-62	1962-63	1963-64
Commonwealth countries—				Foreign countries—			
Australia	347	130	95	<i>continued—</i>			
Hong Kong	585	466	393	Norway	2,158	2,355	2,942
New Zealand	343	341	379	Panama	439	524	605
Singapore	95	49	36	Sweden	839	745	867
United Kingdom .. .	7,497	7,413	7,535	United States of America .. .	278	335	311
Other	179	129	89	Other	244	212	414
In cargo	7,133	7,244	7,180	In cargo	6,938	7,875	8,262
In ballast	1,913	1,284	1,347	In ballast	2,874	2,555	3,934
Total, Commonwealth Countries	9,046	8,528	8,527	Total, Foreign Countries	9,812	10,430	12,196
<i>Proportion of total</i>	<i>47.9</i>	<i>42.9</i>	<i>41.1</i>	<i>Proportion of total</i>	<i>52.1</i>	<i>57.1</i>	<i>58.9</i>
Foreign countries—				All countries—			
Denmark	561	566	680	In cargo	14,071	15,119	15,442
France(a)	456	276	289	<i>Proportion of total %</i>	<i>74.6</i>	<i>79.7</i>	<i>74.5</i>
Germany, Federal Republic	307	312	419	In ballast	4,787	3,839	5,281
Greece	1,212	933	1,410	<i>Proportion of total %</i>	<i>25.4</i>	<i>20.3</i>	<i>25.5</i>
Italy	656	898	669				
Japan	859	1,293	1,216	Grand Total ..	18,858	18,958	20,723
Liberia	886	1,150	1,400				
Netherlands	917	831	974				

(a) Includes New Caledonia (29 during 1963-64).

The Australian tonnage which entered Australian ports from overseas during the year 1963-64 represented 0.5 per cent. of the total tonnage entered and was confined mainly to the New Zealand and Pacific Islands trade.

§ 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 overseas countries and in the course of their voyages proceeding from one State to another. (However, these vessels, except under special circumstances, do not engage in interstate carrying. Numerous overseas vessels obtain single voyage permits or exemptions under the *Navigation Act 1912-1961*. Such vessels include overseas tankers carrying petroleum products interstate, and, since the withdrawal of interstate passenger liners, other overseas vessels, under permit, carrying passengers and frozen cargo on the interstate run.) No complexity enters into the record of those in category (a), but with regard to the method of recording the movements of the overseas vessels (b), some explanation is necessary. Each State desires that its shipping statistics should show in full its shipping communication with overseas countries, but at the same time it is necessary to avoid any duplication in the statistics of Australia as a whole. In order to meet these dual requirements, a vessel arriving in any State from an overseas country—say the United Kingdom—via another State, is recorded in the second State as from the United Kingdom "Oversea via States", thus distinguishing the movement from a direct overseas 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 preferential 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 an oversea vessel 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.

ITINERARY OF AN OVERSEA VESSEL ON THE AUSTRALIAN COAST

Particulars	Recorded as—		
	For the State and for Australia	For the States	
	1.	2.	3.
Inward Voyage—			
Enters Fremantle from United Kingdom	Overseas direct		
Clears Fremantle for Adelaide ..		Interstate direct	
Enters Adelaide from United Kingdom via Fremantle			Overseas via States
Clears Adelaide for Melbourne		Interstate direct	
Enters Melbourne from United Kingdom via Adelaide			Overseas via States
Clears Melbourne for Sydney		Interstate direct	
Enters Sydney from United Kingdom via Melbourne			Overseas via States
Outward Voyage—			
Clears Sydney for United Kingdom via Melbourne			Overseas via States
Enters Melbourne from Sydney		Interstate direct	
Clears Melbourne for United Kingdom via Adelaide			Overseas via States
Enters Adelaide from Melbourne		Interstate direct	
Clears Adelaide for United Kingdom via Fremantle			Overseas via States
Enters Fremantle from Adelaide		Interstate direct	
Clears Fremantle for United Kingdom ..	Overseas direct		

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 "Overseas direct" gives the overseas shipping for Australia as a whole; (b) the aggregate for all ships recorded in any State as "Overseas direct" plus those recorded as "Overseas via States" gives the total overseas shipping for that State; and (c) the aggregate for all ships recorded as "Overseas via States" may also be used, together with those recorded as "Interstate direct" (including those engaged solely in interstate movement) to furnish figures showing the total interstate movement of shipping.

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 overseas vessels on interstate direct voyages as in column 2 above) during each of the years 1961–62 to 1963–64.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES OF VESSELS INTERSTATE DIRECT

State or Territory	Number			Net tons ('000)		
	1961–62	1962–63	1963–64	1961–62	1962–63	1963–64
New South Wales	1,933	1,844	1,974	6,149	5,946	6,656
Victoria	1,749	1,711	1,763	5,147	4,915	5,355
Queensland	748	772	789	1,930	2,195	2,213
South Australia	1,147	1,132	1,228	3,969	4,010	4,397
Western Australia	685	649	667	3,206	2,950	3,176
Tasmania	1,223	1,200	1,131	1,675	1,739	1,719
Northern Territory	69	71	78	139	144	177
Australia	7,554	7,379	7,630	22,215	21,899	23,693

(ii) *Oversea via States.* The figures in the following table show the number of entrances and clearances of vessels to and from oversea countries via other Australian States as in column 3 in the table in para. 1, p. 540, and their aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING: ENTRANCES AND CLEARANCES OF VESSELS OVERSEAS VIA OTHER AUSTRALIAN STATES, 1963-64

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances ..	No.	867	1,015	491	665	76	296	..	3,410
	'000 net tons	4,374	5,657	2,207	3,058	405	1,353	..	17,054
Clearances ..	No.	899	894	262	547	45	295	7	2,949
	'000 net tons	4,076	4,424	1,146	2,714	280	1,294	40	13,974

(iii) *Total Interstate Movement.* In order to ascertain the aggregate movement of interstate shipping, including the total interstate movement of oversea vessels, the figures in the two preceding tables must be combined. 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 1963-64, together with the aggregate net tonnage.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, 1963-64

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances ..	No.	2,841	2,778	1,280	1,893	743	1,427	78	11,040
	'000 net tons	11,030	11,012	4,420	7,455	3,581	3,072	177	40,747
Clearances ..	No.	3,005	2,744	1,097	1,893	712	1,443	91	10,985
	'000 net tons	11,545	10,305	3,587	8,012	3,652	3,076	223	40,400

The following table shows the total interstate movement of shipping, including oversea vessels travelling overseas via States and interstate direct, for Australia for each of the years 1959-60 to 1963-64.

INTERSTATE MOVEMENT OF SHIPPING: TOTAL, AUSTRALIA

Particulars		1959-60	1960-61	1961-62	1962-63	1963-64
Entrances ..	No.	9,866	10,225	10,551	10,552	11,040
	'000 net tons	32,857	35,791	36,974	37,428	40,747
Clearances ..	No.	9,819	10,276	10,608	10,746	10,985
	'000 net tons	32,622	36,006	36,923	37,862	40,400

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 (i.e., excluding oversea vessels in continuation of their oversea voyages) during the year 1963-64, together with the net tonnage.

SHIPPING ENGAGED SOLELY IN INTERSTATE TRADE(a): ENTRANCES, 1963-64

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Ships entered ..		1,231	1,140	400	915	266	1,050	65	5,067
Net tons ..	'000	3,321	2,012	575	2,662	876	1,287	119	10,852

(a) Excludes vessels travelling interstate via ports in the same States.

4. **Australian Trading Vessels.**—The following table shows particulars of all Australian trading vessels of 200 gross tons or more engaged in the regular oversea, interstate or coastal (intrastate) services at 30th June, 1964.

**AUSTRALIAN TRADING VESSELS OF 200 GROSS TONS OR MORE,
30th JUNE, 1964**

Vessels	No.	Deadweight tons	Gross tons
Interstate vessels—			
Australian-owned, Australian-registered vessels ..	94	552,925	416,929
Oversea-owned, Australian-registered engaged in Australian coastal trade—New Zealand-owned ..	10	27,926	24,008
Other	1	15,330	10,166
Total Interstate Vessels	105	596,181	451,103
Intrastate vessels	20	25,755	22,314
<i>Total Coastal Trading Vessels</i>	125	621,936	473,417
Oversea trading vessels—			
Australian-owned, Australian-registered operated mainly on oversea services	7	21,902	21,300
Australian-owned, oversea-registered operated wholly on oversea services	14	141,683	104,480
<i>Total Oversea Trading Vessels</i>	21	163,585	125,780
Total Australian Trading Vessels	146	785,521	599,197

§ 5. Shipping at Principal Ports

NOTE.—For details of Harbour Boards and Trusts in each State see Chapter XX.

1. **Total Shipping, Australia.**—The following table shows the total volume of shipping—oversea, interstate and coastal—which entered the principal ports of Australia during the years 1962–63 and 1963–64. The movements of warships and of other non-commercial vessels are excluded from the table.

TOTAL SHIPPING: ENTRANCES AT PRINCIPAL PORTS, AUSTRALIA

Port of entry	1962–63		1963–64		Port of entry	1962–63		1963–64	
	Num- ber	Net tons	Num- ber	Net tons		Num- ber	Net tons	Num- ber	Net tons
		'000		'000		'000		'000	
New South Wales—					South Australia—				
Sydney(a) ..	4,142	14,683	4,170	15,619	Adelaide(b) ..	2,344	6,170	2,483	7,684
Newcastle ..	1,902	4,811	1,914	5,133	Port Lincoln ..	316	434	372	706
Port Kembla ..	1,131	3,872	1,156	4,178	Port Pirie ..	448	1,062	501	1,168
					Rapid Bay ..	110	310	91	250
					Walleroo ..	36	162	53	247
					Whyalla ..	474	1,718	568	2,056
Victoria—					Western Australia—				
Melbourne ..	2,862	11,288	2,944	11,865	Fremantle(c) ..	1,425	7,696	1,418	7,881
Geelong ..	657	3,495	669	3,729	Albany ..	140	674	149	713
					Bunbury ..	114	472	142	603
					Carnarvon ..	77	134	65	110
					Geraldton ..	110	386	112	389
					Yampi ..	136	608	165	676
Queensland—					Tasmania—				
Brisbane ..	1,488	5,303	1,597	5,663	Hobart ..	591	1,382	546	1,362
Bowen ..	37	115	42	133	Burnie ..	393	980	402	929
Cairns ..	300	637	277	639	Devonport ..	403	720	376	685
Gladstone ..	93	450	116	632	Launceston ..	580	987	512	904
Mackay ..	127	486	153	482					
Rockhampton ..	112	309	113	305	Northern Territory—				
Townsville ..	349	991	361	1,119	Darwin ..	109	255	126	335

(a) Includes Botany Bay.

(b) Includes Port Stanvac.

(c) Includes Kwinana.

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, New Zealand and the United Kingdom during 1963–64.

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—		NEW ZEALAND—		ENGLAND AND WALES—	
Sydney (N.S.W.)(a)	15,619	Wellington ..	5,045	<i>continued</i>	
Melbourne (Vic.) ..	11,865	Auckland ..	4,380	Manchester (including Runcorn) ..	7,424
Fremantle (W.A.)(b)	7,881	Lyttelton ..	3,329	Hull ..	6,736
Adelaide (S.A.)(c)	7,684	Otago ..	1,487	Bristol ..	6,141
Brisbane (Qld) ..	5,663	Napier ..	1,303	Middlesbrough ..	5,280
Newcastle (N.S.W.)	5,133	Bluff ..	1,048	Swansea ..	4,745
Port Kembla (N.S.W.)	4,178	Taranaki ..	996	Cardiff ..	3,428
Geelong (Vic.) ..	3,729	ENGLAND AND WALES—		SCOTLAND—	
Whyalla (S.A.) ..	2,056	London ..	46,477	Glasgow ..	7,904
Hobart (Tas.) ..	1,362	Southampton ..	26,425	NORTHERN IRELAND—	
Port Pirie (S.A.) ..	1,168	Liverpool (including Birkenhead) ..	21,641	Belfast ..	8,404
Townsville (Qld) ..	1,119	Dover ..	7,901		
Burnie (Tas.) ..	929	Tyne Ports ..	7,370		
Launceston (Tas.) ..	904				

(a) Includes Botany Bay.

(b) Includes Kwinana.

(c) Includes Port Stanvac.

§ 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 1959–60 to 1963–64. Most of the cargo is recorded in terms of the ton weight of 2,240 lb., the remainder, mainly bulky commodities, being shipped and recorded on the basis of 40 cubic feet of space occupied representing one ton measurement.

SHIPPING CARGO MOVEMENT: AUSTRALIA

(*000 tons)

Year	Oversea cargo				Interstate cargo			
	Discharged		Shipped		Discharged		Shipped	
	Weight	Meas.	Weight	Meas.	Weight	Meas.	Weight	Meas.
1959–60 ..	15,458	3,263	10,108	1,479	12,535	1,562	12,923	1,360
1960–61 ..	17,265	3,801	13,748	1,551	13,130	1,622	13,713	1,473
1961–62 ..	17,508	2,763	17,178	1,547	13,318	1,427	13,658	1,186
1962–63 ..	19,497	3,397	15,405	1,545	13,882	1,306	14,340	1,100
1963–64 ..	20,788	3,942	19,744	1,861	15,321	1,453	15,632	1,208

(ii) *Principal Ports.* The following table shows the tonnage of oversea and interstate cargo discharged and shipped at the principal ports of Australia during 1963-64.

CARGO DISCHARGED AND SHIPPED AT PRINCIPAL PORTS, 1963-64
(⁰000 tons)

Port	Discharged				Shipped			
	Oversea		Interstate		Oversea		Interstate	
	Wt	Meas.	Wt	Meas.	Wt	Meas.	Wt	Meas.
Sydney	1,801	1,575	829	121	3,545	493	238	88
Botany Bay	4,127	..	17	..	93	..	965	..
Newcastle	512	24	2,912	..	1,584	14	1,613	1
Port Kembla	535	..	4,048	..	1,512	..	982	..
Other .. .. .	..	..	26	..	10	6	..	..
<i>Total, New South Wales</i>	<i>6,975</i>	<i>1,599</i>	<i>7,832</i>	<i>121</i>	<i>6,744</i>	<i>513</i>	<i>3,798</i>	<i>89</i>
Melbourne	2,996	1,376	2,107	509	1,112	645	584	605
Geelong	3,697	..	404	15	2,278	1	887	3
Portland	3	..	104	..	157	..	8	..
<i>Total, Victoria</i>	<i>6,696</i>	<i>1,376</i>	<i>2,615</i>	<i>524</i>	<i>3,547</i>	<i>646</i>	<i>1,479</i>	<i>608</i>
Brisbane	468	366	957	162	910	98	50	60
Cairns	77	..	104	16	129	12	11	3
Gladstone	5	..	64	..	877	..	15	..
Mackay	32	..	71	2	340	..	45	..
Townsville	34	5	230	15	512	..	46	..
Other	5	1	96	2	721	2	465	..
<i>Total, Queensland</i>	<i>621</i>	<i>372</i>	<i>1,522</i>	<i>197</i>	<i>3,489</i>	<i>112</i>	<i>632</i>	<i>63</i>
Port Adelaide	394	402	1,110	70	524	207	191	23
Ardrossan .. .. .	..	..	..	..	196	..	226	..
Port Lincoln	76	..	46	..	436	..	10	..
Port Pirie	7	..	137	..	709	..	235	..
Port Stanvac	1,260	..	2	..	51	..	455	..
Rapid Bay .. .. .	..	..	..	..	..	..	539	..
Whyalla	8	..	261	..	52	..	4,394	..
Other	56	..	16	..	653	..	274	1
<i>Total, South Australia</i>	<i>1,801</i>	<i>402</i>	<i>1,572</i>	<i>70</i>	<i>2,621</i>	<i>207</i>	<i>6,324</i>	<i>24</i>
Fremantle(a)	3,984	149	599	90	2,161	51	1,341	27
Bunbury	122	..	..	..	364	63	43	2
Geraldton	65	..	..	..	271	2	1	..
Yampi .. .. .	..	..	4	..	..	..	1,370	..
Other	126	1	42	1	389	12	9	11
<i>Total, Western Australia</i>	<i>4,297</i>	<i>150</i>	<i>645</i>	<i>91</i>	<i>3,185</i>	<i>128</i>	<i>2,764</i>	<i>40</i>
Hobart	122	22	439	97	80	213	176	96
Burnie	35	7	230	6	42	14	100	63
Launceston	167	14	170	124	29	21	85	91
Other	2	..	194	222	3	5	269	134
<i>Total, Tasmania</i>	<i>326</i>	<i>43</i>	<i>1,033</i>	<i>449</i>	<i>154</i>	<i>253</i>	<i>630</i>	<i>384</i>
Darwin, Northern Territory	72	..	102	1	4	2	5	..
<i>Australia</i>	<i>20,788</i>	<i>3,942</i>	<i>15,321</i>	<i>1,453</i>	<i>19,744</i>	<i>1,861</i>	<i>15,632</i>	<i>1,208</i>

(a) Includes Kwinana.

2. Oversea Cargo according to Country of Registration of Vessels.—The following table shows the total overseas cargo, discharged and shipped combined, according to the country in which the vessels were registered, during each of the years 1961-62 to 1963-64.

OVERSEA CARGO DISCHARGED AND SHIPPED: COUNTRY OF REGISTRATION OF VESSELS, AUSTRALIA

('000 tons)

Vessels registered at ports in—	1961-62		1962-63		1963-64	
	Weight	Meas.	Weight	Meas.	Weight	Meas.
Commonwealth Countries—						
Australia	297	116	169	108	156	107
Hong Kong	1,092	27	695	71	898	69
New Zealand	487	358	515	407	641	396
United Kingdom	12,735	2,204	12,454	2,519	13,076	2,925
Other	457	173	396	116	259	99
<i>Total, Commonwealth Countries</i>	<i>15,068</i>	<i>2,878</i>	<i>14,229</i>	<i>3,221</i>	<i>15,030</i>	<i>3,596</i>
<i>Proportion of Total</i> %	<i>43.4</i>	<i>66.8</i>	<i>40.8</i>	<i>65.2</i>	<i>37.1</i>	<i>62.0</i>
Foreign Countries—						
Denmark	1,283	36	1,333	50	1,706	88
France and New Caledonia	730	83	374	106	415	107
Germany, Federal Republic of	546	215	627	246	765	350
Greece	2,422	47	1,800	18	2,818	131
Italy	864	52	1,319	56	623	46
Japan	1,697	216	2,622	205	2,589	271
Liberia	1,988	16	2,696	12	3,172	32
Netherlands	1,206	218	1,001	291	1,757	339
Norway	5,205	165	5,638	249	7,541	263
Panama	876	10	957	36	1,151	51
Sweden	1,884	257	1,621	325	2,049	373
United States of America	316	103	237	102	210	111
Other	601	14	448	25	706	45
<i>Total, Foreign Countries</i>	<i>19,618</i>	<i>1,432</i>	<i>20,673</i>	<i>1,721</i>	<i>25,502</i>	<i>2,207</i>
<i>Proportion of Total</i> %	<i>56.6</i>	<i>33.2</i>	<i>59.2</i>	<i>34.8</i>	<i>62.9</i>	<i>38.0</i>
Grand Total	34,686	4,310	34,902	4,942	40,532	5,803

§ 7. Vessels Registered in Australia

1. Australian-registered Trading Vessels.—The following table shows the number and gross tonnage of trading vessels of 200 tons and over registered in Australia at 30th June, 1964, classified according to—(i) year of construction, 1960 to 1964, and 1959 and earlier years, (ii) type of trade in which the vessels were engaged, and (iii) vessels built in Australian or in overseas shipyards. The statistics in this table have been compiled by the Commonwealth Department of Shipping and Transport. The Merchant Shipping Act 1894 (Imperial) 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, however, may be, and frequently are, registered at the request of the owners.

AUSTRALIAN-REGISTERED TRADING VESSELS, 30TH JUNE, 1964 (a)

Year of construction	Overseas and interstate vessels		Intrastate vessels		Built in Australian yards		Built overseas		Total	
	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons	No.	Gross tons
1959 and earlier	99	383,031	19	20,318	58	244,683	60	158,666	118	403,349
1960	3	24,457	..	..	3	24,457	..	..	3	24,457
1961	3	20,141	1	1,996	4	22,137	..	..	4	22,137
1962	2	16,715	..	..	2	16,715	..	..	2	16,715
1963	2	12,932	..	..	2	12,932	..	..	2	12,932
1964	3	15,127	..	..	3	15,127	..	..	3	15,127
Total, Registered in Australia ..	112	472,403	20	22,314	72	336,051	60	158,666	132	494,717

(a) 200 gross tons and over.

Figures in this table relate to gross tons, and are therefore not comparable with those in the table following, which relate to net tons and to *all* registered vessels irrespective of tonnage and type.

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, 1964.

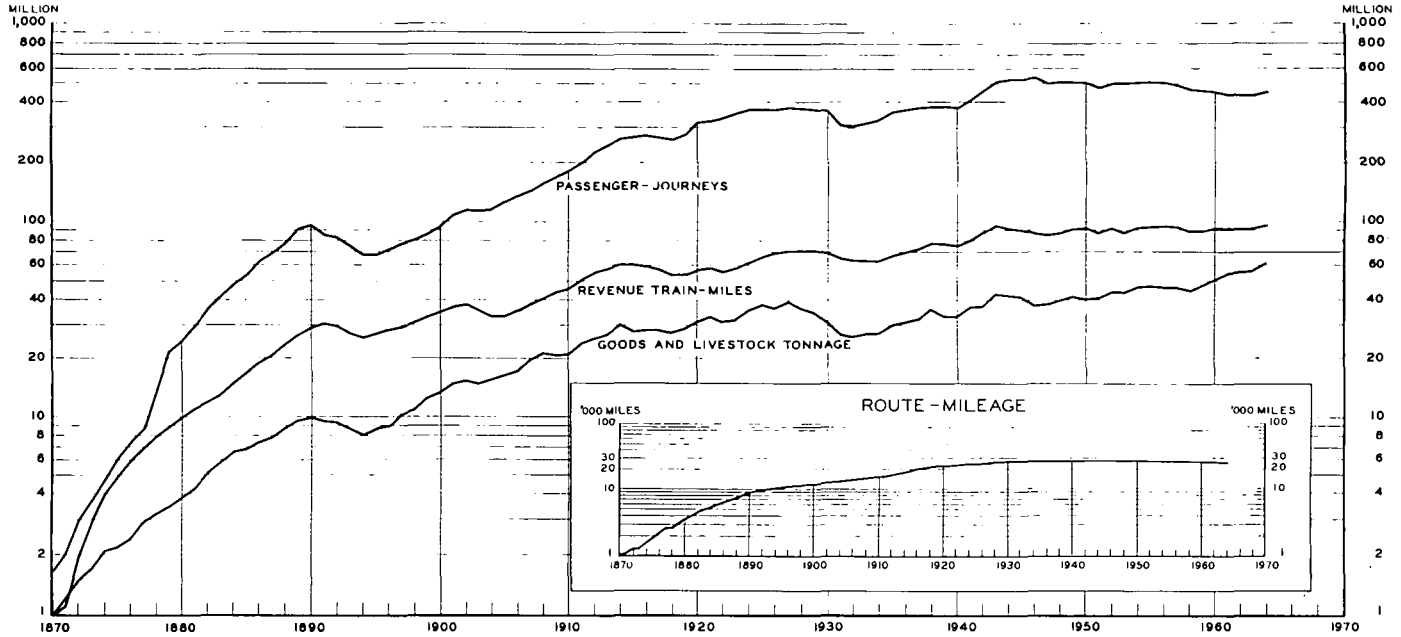
VESSELS REGISTERED, 31st DECEMBER, 1964

State or Territory	Steam and motor		Sailing				Barges, hulks, dredges, etc., not self-propelled		Total	
			Propelled by sail only		Fitted with auxiliary power					
	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons	No.	Net tons
New South Wales ..	333	82,713	29	296	168	2,076	12	1,849	542	86,934
Victoria ..	122	183,372	20	178	50	1,091	12	4,374	204	189,015
Queensland ..	94	34,156	33	594	56	649	5	1,321	188	36,720
South Australia ..	48	20,846	5	26	28	1,318	4	1,396	85	23,586
Western Australia ..	120	21,874	205	2,894	77	1,722	5	478	407	26,968
Tasmania ..	55	16,021	42	510	120	2,883	3	690	220	20,104
Northern Territory ..	..	..	17	162	11	227	..	..	28	389
Australia ..	772	358,982	351	4,660	510	9,966	41	10,108	1,674	383,716

3. World Shipping Tonnage.—At 1st July, 1964, the total steamships and motorships 100 gross tons and upwards throughout the world amounted to 40,859, with a gross tonnage of 152,999,621. Of these totals, steamships numbered 11,446 for 74,988,759 gross tons, and motorships 29,413 for 78,010,862 gross tons. Included therein were 5,130 oil tankers of 100 gross tons and upwards, with a gross tonnage of 50,563,315. Australian steamships and motorships, 292 for 593,700 gross tons, constituted 0.71 per cent. and 0.39 per cent. respectively of the total number and tonnage. This information has been derived from *Lloyd's Register of Shipping*.

GOVERNMENT RAILWAYS: AUSTRALIA, 1870 to 1964

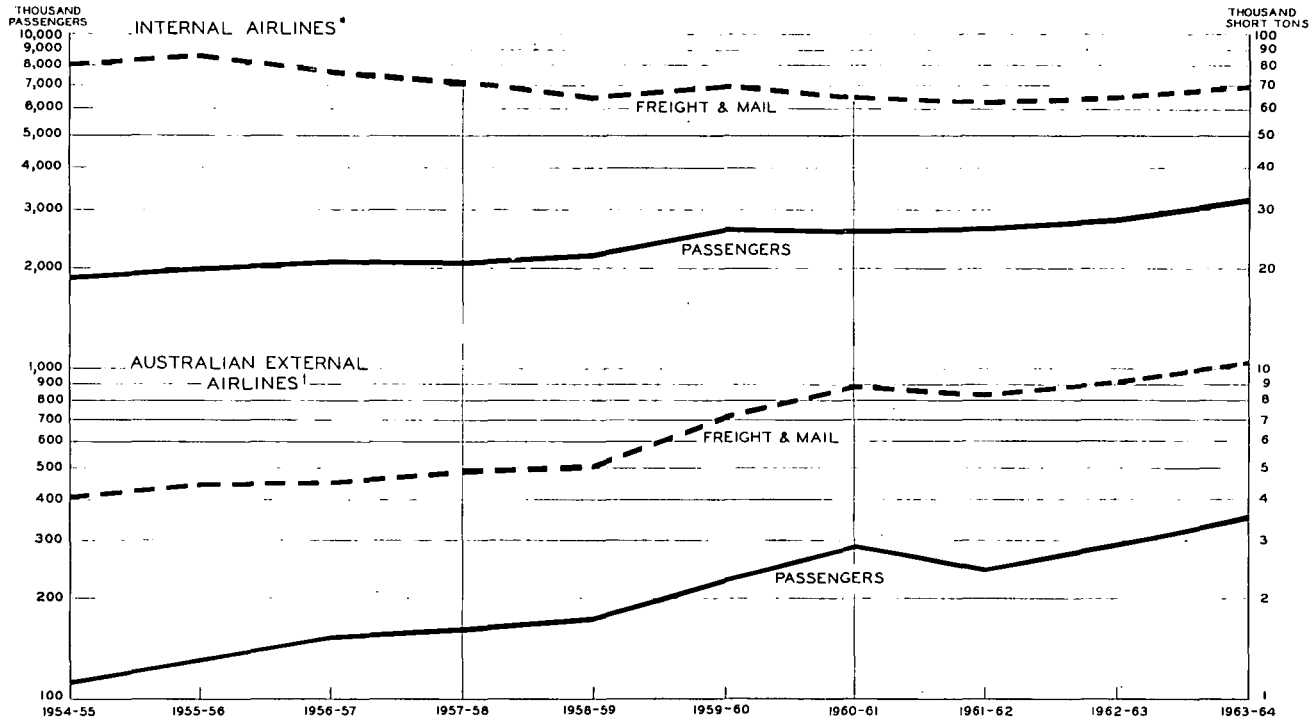
RATIO GRAPH
ROUTE-MILEAGE AND TRAFFIC



NOTE :- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE. ACTUAL NUMBERS ARE INDICATED BY SCALE.

CIVIL AVIATION: AUSTRALIA, 1954-55 TO 1963-64

PAYING PASSENGERS AND FREIGHT CARRIED



* INCLUDES ONLY SERVICES OPERATING WITHIN THE AUSTRALIAN MAINLAND AND TASMANIA. † AIRLINES WHOLLY OR PARTLY OWNED BY AUSTRALIAN INTERESTS
 NOTE:—VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE; ACTUAL NUMBERS ARE INDICATED BY THE SCALES

§ 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 principal ports of Australia and some important ports in other countries which trade with Australia were published in Year Book No. 48, page 525.

3. Shipping Freight Rates.—The *Quarterly Summary of Australian Statistics* shows a list of the current freight rates for general merchandise in respect of both overseas and interstate shipments.

The following table shows the freight rates from Australia to various countries for certain important commodities at 31st December, 1964.

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1964
(1 ton measurement = 40 cubic feet)

Article and country	Unit for which freight rate is quoted	Freight rate
UNITED KINGDOM AND CONTINENTAL EUROPE—		
Butter	Box 56 lb.	Rates—Sterling s. d. 11 6
Cheese	lb.	0 2 17/32
Eggs, in shell	Ton measurement	342 3
Meats, preserved by cold process—		
Beef, refrigerator, excluding carton	lb.	0 3.51
Lamb, refrigerator, excluding carton	lb.	0 4.33
Mutton, refrigerator, excluding carton	lb.	0 3.51
Beef, refrigerator, carton	lb.	0 2.53
Lamb, refrigerator, carton	lb.	0 2.53
Mutton, refrigerator, carton	lb.	0 2.53
Rabbits	Ton measurement	267 9
Preserved in tins	Ton measurement	224 6
Sausage casings, dried, in casks or cases	Ton measurement	353 3 Frozen
	Ton measurement	224 6 Dry
	Ton measurement	224 6
	Ton measurement	224 6
Meats, not frozen—preserved in tins		
Milk and cream, condensed	Ton measurement	224 6
Fruit—		
Canned	Ton measurement	178 0
Dried	Ton measurement	178 0
Fresh—		
Apples	Standard bushel case	12 9
Citrus	Standard bushel case	13 11
Pears	Standard bushel case	12 9
Pears	½ bushel case	11 8
	Standard bushel case	13 11
	½ bushel case	12 7
	¼ bushel case	9 0
	¼ bushel carton	8 5
Grapes, grapefruit, oranges, lemons and plums		
Grain and pulse, unprepared—		
Barley, in bags	Ton weight	122 6
Wheat, parcels—		
Bagged	Ton weight	120 0
Bulk	Ton weight	100 0
Maize	Ton weight	152 6
Oats, in bags	Ton weight	132 6
Rice, paddy, unhusked	Ton weight	177 6
Grain and pulse, prepared—		
Bran	Ton weight	167 6
Pollard	Ton weight	160 0
Flour, wheaten	Ton weight	147 6
Rice, clean, husked	Ton weight	152 6
Jams	Ton measurement	178 0
Wine	Ton measurement	213 6
Hides and skins—		
Calf	lb.	0 1 13/16
Cattle	lb.	
Fox	lb.	
Kangaroo	lb.	
Opossum	lb.	0 5 15/32
Rabbit and hare	lb.	
Wallaby	lb.	
Sheep—dumped	lb.	0 2 11/16
Other	lb.	0 5 15/32

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1964—continued

Article and country	Unit for which freight rate is quoted	Freight rate	
		Rates—Sterling	
		s.	d.
Pearlshell	Ton measurement	224	6
Trochus and green snail shell, bags or cases	Ton weight	337	6
Wool—			
Greasy, dumped	lb.	0	3.74
Scoured and washed, dumped	lb.	0	4.69
Tops	lb.	0	4.77 net
Bark, tanning	Ton weight	224	6
Sandalwood, in bags	Ton measurement	224	6
Apparel and attire, effects	Ton weight or measurement	352	0
Oils—			
Eucalyptus	Ton measurement	254	0
Coconut	Ton weight	254	0
Whale	Ton weight	254	0
Other	Ton weight	254	0
Stearine	Ton weight	254	0
Tallow, unrefined, in drums	Ton weight	254	0
Ore in casks, bags or drums, n.e.i.	Ton weight	139	0
Zinc—			
Ex Risdon	Ton weight	88	6
Other than above	Ton weight	106	0
Dust in tins, sealed cases or new lined drums	Ton weight	319	0
Copper	Ton weight	122	6
Lead	Ton weight	110	0
Steel billets—			
Up to 20 feet	Ton weight	140	0
Over 20 feet and up to 30 feet	Ton weight	150	0
Tin clippings, hydraulically pressed	Ton weight	133	0
Leather	Ton weight	494	0
Timber—			
Logs up to 40 feet long	100 super. ft.	78	2
Logs over 40 feet and up to 50 feet long	100 super. ft.	83	11
Logs over 50 feet and up to 60 feet long	100 super. ft.	90	0
Sawn undressed up to 30 feet—shipment of less than 50 tons	100 super. ft.	41	5
Toilet paper	Ton measurement	240	0
Stationery—			
Note paper and/or envelopes	Ton measurement	370	0
Other than above	Ton measurement	384	0
Casein	Ton weight	178	0
Fertilizers	Ton measurement	287	0
Soap	Ton measurement	224	6
Gold and silver specie	Ad valorem	15	0%
CEYLON—			
Flour, wheaten (all rates plus congestion charge of 25 per cent.)	Ton weight	155	0
Milk and cream—			
Condensed	Ton measurement	262	6
Frozen	Ton measurement	452	6
General cargo	Ton weight or measurement	262	6
INDIA—			
Milk products in cases, cartons, etc.	Ton measurement	200	0
Wheat in bags	Ton weight	150	6
Wool—			
Greasy	lb.	0	3.24
Scoured, etc.	lb.	0	4.15
Zinc bars	Ton weight	122	6
General cargo	Ton weight or measurement	235	0
SOUTH AFRICA—			
Wool—			
Greasy	lb.	0	3.50
Scoured, etc.	lb.	0	4.28
General cargo	Ton weight or measurement	224	0
CHINA—			
Flour	2,000 lb.	145	0
Wheat	Ton	150	0
Wool—			
Greasy	lb.	0	3
Scoured, etc.	lb.	0	3.49
General cargo	Ton weight or measurement	262	6

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1964—continued

Article and country	Unit for which freight rate is quoted	Freight rate
HONG KONG—		
Sugar	Ton weight	<i>Rates— Australian s. d.</i> 147 0
Wheat	Ton weight	150 0 net
Wool—		
Greasy	lb.	0 3
Scoured, etc.	lb.	0 3.49
General cargo	Ton weight or measurement	262 6
JAPAN—		
Cattle hides, wet salted	Ton weight	262 6
Coal	Ton weight	214 0
Copper ores and concentrates—		
Parcels	Ton weight	161 6
Bulk	Ton weight	126 0
Iron and steel scrap—		
Loose	Ton weight	240 0
4-cwt. drums	Ton weight	190 0
Over 4-cwt. drums	Ton weight	170 0
Iron, pig	Ton weight	105 0
Lead ores and concentrates—		
Parcels	Ton weight	161 6
Bulk	Ton weight	126 0
Lead, pig	Ton weight	160 0
Sugar	Ton weight	147 0
Wheat	Ton weight	150 0 net
Wool—		
Greasy	lb.	0 3.32
Scoured, etc.	lb.	0 3.86
Zinc ores and concentrates—		
Parcels	Ton weight	161 6
Bulk	Ton weight	126 0
General cargo	Ton weight or measurement	262 6
MALAYSIA—		
Milk products—		
Condensed—		
From eastern Australian ports	Ton measurement	245 0
From Western Australian ports	Ton measurement	225 0
Powdered in bags—		
From eastern Australian ports	Ton weight	305 0
From Western Australian ports	Ton weight	285 0
Powdered in cases or cartons—		
From eastern Australian ports	Ton weight or measurement	250 0
From Western Australian ports	Ton weight or measurement	230 0
Flour (in bags)—		
From eastern Australian ports	2,000 lb.	160 0
From Western Australian ports	2,000 lb.	150 0
General cargo—		
From eastern Australian ports	Ton weight or measurement	262 6
From Western Australian ports	Ton weight or measurement	242 6
INDONESIA—		
Flour—		
From eastern Australian ports	2,000 lb.	170 0
From Western Australian ports	2,000 lb.	160 0
General cargo—		
From eastern Australian ports	Ton weight or measurement	262 6
From Western Australian ports	Ton weight or measurement	242 6
CANADA—EAST COAST AND ST. LAWRENCE PORTS TO MONTREAL—		
Fruit—		<i>Rates— Canadian Dollars</i>
Canned	Ton measurement	39.10
Dried	Ton measurement	33.00
Preserved	Ton measurement	42.20
Wine	Ton measurement	47.50
General cargo	Ton measurement	47.60

OVERSEA SHIPPING FREIGHT RATES FROM AUSTRALIA TO VARIOUS COUNTRIES, 31st DECEMBER, 1964—continued

Article and country	Unit for which freight rate is quoted	Freight rate
UNITED STATES OF AMERICA—ATLANTIC AND GULF PORTS—		<i>Rates— U.S. Dollars</i>
Beef, preserved by cold process—		
Quarters, etc.	100 lb. gross weight	4.65
Cartons	100 lb. net weight	4.15
Casesin	Ton weight	47.00
Fish, preserved by cold process—		
Loose	Ton weight	90.00
Cartons	100 lb. net weight	4.50
Lead—		
Ores and concentrates	Ton weight	29.00
Unwrought	Ton weight	20.50
Mutton preserved by cold process—		
Carcasses	100 lb. gross weight	5.00
Cuts in cartons	100 lb. net weight	4.15
Pipes and tubes of iron and steel	Ton weight or measurement	33.00
Wool—		
Greasy	100 lb.	5.00
Scoured, etc.	100 lb.	6.00
General cargo	Ton weight or measurement	47.60

Interstate rates per ton weight or measurement for general cargo at 31st December, 1964, (expressed in Australian currency) were:—Sydney—Melbourne, 157s. 6d.; Sydney—Brisbane, 160s.; Sydney—Adelaide, 192s. 6d.; Sydney—Fremantle, 262s.; Sydney—Hobart, 155s. 6d.; Sydney—Darwin, 258s. 6d.

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*. For some major ports, information is given in Chapter XX. Local Government.

5. **Shipping 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 1959–60 to 1963–64 are shown in the table below.

SHIPPING CASUALTIES TO OVERSEA AND INTERSTATE STEAM AND MOTOR VESSELS(a): AUSTRALIA

Year	Shipping losses			Other shipping casualties			Total shipping casualties		
	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost	Vessels	Net tons	Lives lost
1959–60	229	708,418	..	229	708,418	..
1960–61	178	549,244	..	178	549,244	..
1961–62	147	569,644	1	147	569,644	1
1962–63	122	468,326	..	122	468,326	..
1963–64	109	362,798	..	109	362,798	..

(a) Vessels over 50 net tons.

6. **Ferry (Passenger) Services.**—For particulars of ferry passenger services operating in several States see page 570.

GOVERNMENT RAILWAYS

1. **General.**—The policy of government ownership and control of railways has been adopted generally throughout Australia, and, although a number of private railways exist, most of them are light railways intended primarily to transport goods involved in the commercial operations of their owners. There are three main gauges in use in the several States (5 ft. 3 in., 4 ft. 8½ in. and 3 ft. 6 in.), but in recent years considerable progress has been made towards the standardization of main trunk routes (*see* para. 3 below).

In the tables in this division, 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*.

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 Year Book No. 6, page 681, and in No. 22, page 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 750 miles. 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 a 4 ft. 8½ in. gauge railway of 221 miles extends northwards to Marree from where a 3 ft. 6 in. gauge of 540 miles continues to Alice Springs.

3. **Standardization of Railway Gauges.**—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, page 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.

In March, 1944, the late Sir Harold Clapp, Director-General of Land Transport, Commonwealth Department of Transport, and formerly Chairman of Commissioners, Victorian Railways, was requested by the Commonwealth Government to submit a report and recommendation regarding the standardization of Australia's railway gauges on the basis of a 4 ft. 8½ in. gauge. A summary of his report and recommendations, made in March, 1945, 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 Year Book No. 37, pages 146-9. The agreement, which was signed in 1946, was ratified by the Governments of the Commonwealth, Victoria and South Australia, but not by the New South Wales Government. After some time had elapsed and New South Wales had not ratified 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 the Commonwealth shall provide all funds required under the Agreement, with 30 per cent. of such moneys being repaid with interest by South Australia over 50 years, while the Commonwealth shall meet the full cost of works on Commonwealth railways in South Australia.

At the request of the South Australian Government, an amendment to the Agreement was approved to enable, as an interim measure, the narrow gauge (3 ft. 6 in.) lines in the South-Eastern Division of the State railways system to be converted to the broad gauge (5 ft. 3 in.). This work was completed in 1959 at a cost of £5 million. Construction and conversion work on the Central Australia Railway between Stirling North and Maree, 217 miles, has been completed by Commonwealth Railways at a cost of £12.2 million. In 1958, the Commonwealth Government made available £50,000 to South Australia for surveying the standard gauge line to be constructed between Broken Hill and Port Pirie, and in April, 1963, it announced its intention to provide funds for the standardization of the line. Work on this project has commenced and is planned to be completed by December, 1967.

In 1961, the Commonwealth undertook to provide £1.3 million, outside the Standardization Agreement, for the purchase of diesel-electric locomotives and ore wagons for use on the existing narrow gauge line on this route, the State to bear the cost of their subsequent conversion for operation on standard gauge track.

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.

In 1962, the opening of a new uniform gauge line between Albury and Melbourne completed the standard gauge link between South Brisbane and Melbourne, and for the first time through services were operated between Sydney and Melbourne. Legislation for this link was enacted by the Commonwealth, Victorian and New South Wales Governments in three separate Acts assented to towards the end of 1958. The agreement on this project between the Commonwealth and the two State Governments provided for the Commonwealth to meet 70 per cent. of the cost of unification and the two States to share equally the remaining 30 per cent. The Commonwealth was required to advance the whole of the necessary funds initially, the States' proportion, plus interest, being repayable over 50 years. The final cost of this project, met initially by the Commonwealth, amounted to £15,972,846. The cost of operation of, and the revenue derived from, the line are based proportionately, on a Sydney-Melbourne mileage basis. Details of operations are included in statistics of the various States.

In 1961, the Commonwealth and Western Australian Governments enacted legislation to enter into an Agreement to undertake certain standard gauge railway works, including the provision of rolling stock, in Western Australia, at an estimated cost of £41.2 million. The proposal is linked with the establishment of an integrated iron and steel industry at Kwinana in that State, and the new railway facilities will be used to transport iron ore from the Koolyanobbing deposits some 33 miles beyond Southern Cross. These railway facilities will also link Kalgoorlie with East Perth and Fremantle by a standard gauge line. It has been agreed that the project has standardization and developmental components in approximately equal parts, and, initially, the Commonwealth will in effect provide finance for all of the standardization portion of the works and 70 per cent. of the developmental portion. The State will repay with interest 30 per cent. of the standardization costs over 50 years and all the advance for developmental works over 20 years. Work on the project commenced in 1962 and is planned to be completed by December, 1968.

4. Mileage Open for Traffic, all Lines.—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 June—	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	..	56	..	..	..	..	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	..	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	3,725	4,634	665	317	5	26,636
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	613	490	5	26,954
1961 ..	6,303	4,050	6,324	3,836	4,577	517	490	5	26,102
1964 ..	6,259	4,007	5,954	3,817	4,131	500	490	5	25,163

(a) At 31st December.

At 30th June, 1964, 265 route-miles in Victoria and 234 route-miles in New South Wales were electrified.

5. Classification of Lines according to Gauge, at 30th June, 1964.—The next table shows the route-mileage of government railways open in each State and Territory classified according to gauge, and State totals in relation to population and area at 30th June, 1964.

GOVERNMENT RAILWAYS: ROUTE-MILEAGE OPEN, AT 30th JUNE, 1964

(Miles)

Gauge	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
5 ft. 3 in. ..	(a) 204	(b) 3,796	..	1,655	..	..	..	..	5,655
4 ft. 8½ in. ..	6,055	202	(c) 69	(d) 871	(d) 454	..	..	(d) 5	7,656
3 ft. 6 in. ..	..	..	5,855	(e) 1,291	3,677	500	(d) 490	..	11,813
2 ft. 6 in. ..	..	9	..	..	..	..	..	..	9
2 ft. 0 in. ..	..	..	30	..	..	..	..	..	30
Total ..	6,259	4,007	5,954	3,817	4,131	500	490	5	25,163
Per 1,000 of population ..	1.52	1.28	3.75	3.70	5.23	1.37	15.16	0.06	2.26
Per 1,000 square miles ..	20.23	45.59	8.93	10.04	4.23	18.95	0.94	5.32	8.48

(a) Portion of Victorian system. (b) Excludes 202 miles of 5 ft. 3 in. gauge line which roughly parallels the uniform gauge (4 ft. 8½ in.) line between Albury and Melbourne. (c) Queensland section of Grafton-South Brisbane Uniform Gauge Line. (d) Portion of Commonwealth system. (e) Includes 432 miles of Commonwealth system.

6. Summary of Operations.—In the following table a summary is shown of the operations of government railways open in Australia during 1963-64. Figures for earnings exclude State government grants and certain other earnings payable to railways, while figures for working expenses exclude certain other expenses charged to railways (see para. 10, p. 559).

GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS, 1963-64

Particulars	Commonwealth railways	State railways	Total
Route-mileage (30th June) miles	2,252	22,911	25,163
Track-mileage (30th June) miles	2,465	29,346	31,811
Gross earnings £'000	7,597	224,646	232,243
" " per revenue train-mile pence	683	574	578
Working expenses £'000	7,158	210,411	217,569
" " per revenue train-mile pence	644	538	541
Net earnings £'000	439	14,235	14,674
" " per revenue train-mile .. pence	39	36	36
Revenue train-miles '000	2,668	93,846	96,514
Passenger-journeys '000	338	447,443	447,781
Goods and livestock carried .. '000 tons	2,478	59,263	61,741
Average number of employees	2,820	126,638	129,458
" wages and salaries paid per employee £	1,329	1,205	1,208

7. Gross Earnings.—(i) General. Gross earnings are composed of earnings from (a) coaching traffic, including the carriage of mails, horses, parcels, etc., by passenger trains; (b) carriage of goods and livestock; and (c) rents and miscellaneous items. State Government grants are excluded. Details of these grants made during 1963-64 are shown in para. 10, page 559.

(ii) *Coaching, Goods and Miscellaneous Earnings.* (a) *Summary.* In the following table, gross earnings are shown for the years 1959-60 to 1963-64, together with earnings per average route-mile worked and per revenue train-mile.

GOVERNMENT RAILWAYS: GROSS EARNINGS(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
GROSS EARNINGS (£'000)								
1959-60 ..	83,563	39,190	35,671	12,758	14,846	2,808	5,327	194,163
1960-61 ..	89,751	42,987	36,530	13,870	16,317	2,732	6,036	208,223
1961-62 ..	88,351	42,557	36,159	13,924	17,549	2,703	6,241	207,484
1962-63 ..	91,241	43,439	37,622	13,836	16,460	2,799	6,979	212,376
1963-64 ..	101,244	46,389	42,130	14,748	17,301	2,834	7,597	232,243

GROSS EARNINGS PER AVERAGE ROUTE-MILE WORKED

(£)								
1959-60 ..	13,681	9,130	5,562	5,037	3,603	4,978	2,365	7,388
1960-61 ..	14,806	10,020	5,751	5,476	3,958	5,127	2,680	7,964
1961-62 ..	14,572	9,918	5,917	5,499	4,557	5,239	2,772	8,100
1962-63 ..	15,069	10,185	6,191	5,465	4,335	5,425	3,099	8,330
1963-64 ..	16,721	10,936	6,954	5,866	4,705	5,624	3,373	9,179

GROSS EARNINGS PER REVENUE TRAIN-MILE

(Pence)								
1959-60 ..	545.26	514.47	449.26	444.59	447.53	434.79	596.86	502.90
1960-61 ..	568.37	565.88	478.77	482.09	500.86	432.50	618.32	537.21
1961-62 ..	566.25	540.33	494.11	496.04	522.22	458.37	610.58	537.86
1962-63 ..	586.11	535.26	502.96	493.67	523.19	508.07	657.12	548.43
1963-64 ..	621.80	553.53	527.70	530.97	553.17	514.41	683.34	577.51

(a) Excludes government grants; see para. 10, p. 559.

(b) *Distribution.* The following table shows gross earnings for the year 1963-64 classified according to the three main sources of earnings together with the percentage of the total derived from each source.

GOVERNMENT RAILWAYS: DISTRIBUTION OF GROSS EARNINGS(a), 1963-64

Railway system	Gross earnings (£'000)			Proportion of total (per cent.)		
	Coaching	Goods and livestock	Miscellaneous	Coaching	Goods and livestock	Miscellaneous
New South Wales ..	24,233	72,323	4,688	23.94	71.43	4.63
Victoria ..	14,129	29,365	2,895	30.46	63.30	6.24
Queensland ..	4,758	36,185	1,187	11.29	85.89	2.82
South Australia ..	2,125	11,585	1,038	14.40	78.56	7.04
Western Australia ..	1,687	14,894	720	9.75	86.09	4.16
Tasmania ..	182	2,569	83	6.43	90.62	2.95
Commonwealth ..	1,197	5,916	484	15.76	77.87	6.37
Australia ..	48,311	172,837	11,095	20.80	74.42	4.78

(a) Excludes government grants; see para. 10, p. 559.

8. Working Expenses.—(i) *General.* In comparing the working expenses of 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.

Working expenses, wherever presented in the Railways section of this chapter, include reserves for depreciation in South Australia, Western Australia and Tasmania but exclude interest, sinking fund, exchange and certain other payments (*see* para. 10, p. 559).

(ii) *Working Expenses.* The following table shows the total working expenses, the ratio of working expenses to gross earnings, and working expenses per average route-mile worked, and per revenue train-mile for the years 1959–60 to 1963–64.

GOVERNMENT RAILWAYS: WORKING EXPENSES(a)

Year	N.S.W.	Vic.	Q'land	S. Aust. (b)	W. Aust. (b)	Tas. (b)	C'wealth (c)	Aust.
TOTAL WORKING EXPENSES								
(£'000)								
1959–60 ..	76,492	39,542	38,309	15,325	16,907	3,363	4,154	194,092
1960–61 ..	79,556	41,627	38,529	15,310	17,147	3,545	4,629	200,343
1961–62 ..	79,595	42,906	38,085	15,603	17,454	3,439	5,165	202,247
1962–63 ..	79,326	43,500	37,718	15,492	17,303	3,335	(c)6,643	203,317
1963–64 ..	d88,708	45,756	39,144	15,455	17,901	3,447	(c)7,158	217,569

RATIO OF WORKING EXPENSES TO GROSS EARNINGS

(Per cent.)

1959–60 ..	91.54	100.90	107.40	120.11	113.88	119.77	77.98	99.96
1960–61 ..	88.64	96.84	105.47	110.38	105.08	129.75	76.68	96.22
1961–62 ..	90.09	100.82	105.33	112.06	99.46	127.21	82.75	97.47
1962–63 ..	86.94	100.14	100.25	111.97	105.13	119.13	(c)95.19	95.72
1963–64 ..	(e)87.62	98.64	92.91	104.80	103.47	121.61	(c)94.23	93.68

WORKING EXPENSES PER AVERAGE ROUTE-MILE WORKED

(£)

1959–60 ..	12,523	9,213	5,974	6,050	4,103	5,963	1,845	7,385
1960–61 ..	13,124	9,703	6,066	6,044	4,159	6,652	2,055	7,663
1961–62 ..	13,128	9,999	6,232	6,162	4,532	6,665	2,294	7,895
1962–63 ..	13,101	10,199	6,207	6,119	4,557	6,463	(c)2,950	7,975
1963–64 ..	e14,650	10,786	6,461	6,148	4,868	6,839	(c)3,179	8,599

WORKING EXPENSES PER REVENUE TRAIN-MILE

(Pence)

1959–60 ..	499.12	519.09	482.50	534.03	509.63	520.72	465.43	502.72
1960–61 ..	503.81	547.98	504.97	532.15	526.33	561.17	474.15	516.88
1961–62 ..	510.14	544.76	520.42	555.86	519.39	583.10	505.28	524.28
1962–63 ..	509.57	536.02	504.24	552.76	550.01	605.27	c625.52	525.04
1963–64 ..	e544.80	545.97	490.30	556.45	572.36	c625.56	c643.89	541.02

(a) *See* para. 10, p. 559. (b) Includes depreciation. (c) Includes depreciation as from 1st July, 1962. Before this depreciation was not charged to working expenses. (d) Includes contributions to Railways Renewals Fund on account of previous years, £1,050,000; provision for accrued leave, £400,000; and estimated liability from employees transferring to the Railways Retirement Fund, £3,250,000 (estimated liability in 1964–65, £1,500,000). (e) *See* footnote (d).

(iii) *Distribution.* The following table shows the total working expenses for the year 1963-64 classified according to the four main expenditure headings.

GOVERNMENT RAILWAYS: DISTRIBUTION OF WORKING EXPENSES, 1963-64
(£'000)

Railway system	Maintenance of way and works	Motive power(a)	Traffic	Other charges	Total working expenses(b)
New South Wales	15,457	29,860	20,408	(c) 22,983	88,708
Victoria	8,817	13,194	12,528	11,217	45,756
Queensland	9,918	17,470	9,497	2,259	39,144
South Australia	(d) 3,388	(d) 6,045	(d) 4,069	1,953	15,455
Western Australia	(d) 3,913	(d) 7,882	4,079	2,027	17,901
Tasmania(d)	865	1,272	893	417	3,447
Commonwealth	2,288	1,956	1,112	(d) 1,802	7,158
Australia	44,646	77,679	52,586	42,658	217,569

(a) Includes maintenance of rolling stock. (b) See para. 10, p. 559. (c) Includes contributions to Railways Renewals Fund on account of previous years, £1,050,000; provision for accrued leave, £400,000; and an estimated liability from employees transferring to the Railways Retirement Fund, £3,250,000 (estimated liability in 1964-65, £1,500,000). (d) Includes provision of reserves for depreciation.

9. *Net Earnings.*—The following table shows, for the years 1959-60 to 1963-64, net earnings, i.e., the excess of gross earnings over working expenses and the amount of such net earnings per average route-mile worked and per revenue train-mile.

GOVERNMENT RAILWAYS: NET EARNINGS(a)

Year	N.S.W.	Vic.	Q'land	S. Aust. (b)	W. Aust. (b)	Tas. (b)	C'wealth (c)	Aust.
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TOTAL NET EARNINGS
(£'000)

1959-60 ..	7,071	- 352	- 2,638	- 2,567	- 2,061	- 555	1,173	71
1960-61 ..	10,195	1,360	- 1,999	- 1,440	- 830	- 813	1,407	7,880
1961-62 ..	8,756	- 349	- 1,926	- 1,679	95	- 736	1,076	5,237
1962-63 ..	11,915	- 61	- 96	- 1,656	- 843	- 536	(c) 336	9,059
1963-64 ..	12,536	633	2,986	- 707	- 600	- 613	(c) 439	14,674

NET EARNINGS PER AVERAGE ROUTE-MILE WORKED
(£)

1959-60 ..	1,158	- 83	- 412	- 1,013	- 500	- 985	520	3
1960-61 ..	1,682	317	- 315	- 568	- 201	- 1,525	625	301
1961-62 ..	1,444	- 81	- 315	- 663	25	- 1,426	478	205
1962-63 ..	1,968	- 14	- 16	- 654	- 222	- 1,038	(c) 149	355
1963-64 ..	2,071	150	493	- 282	- 163	- 1,215	(c) 194	580

NET EARNINGS PER REVENUE TRAIN-MILE
(Pence)

1959-60 ..	46.14	- 4.62	-33.24	-89.44	-62.10	- 85.93	131.43	0.18
1960-61 ..	64.56	17.90	-26.20	-50.06	-25.47	-128.67	144.17	20.33
1961-62 ..	56.11	- 4.43	-26.31	-59.82	2.83	-124.73	105.30	13.58
1962-63 ..	76.54	- 0.76	- 1.28	-59.09	-26.82	- 97.20	c31.60	23.39
1963-64 ..	77.00	7.56	37.40	-25.48	-19.19	-111.15	c39.45	36.49

(a) See para. 10, p. 559. to table on p. 557.

(b) See footnote (b) to table on p. 557.

(c) See footnote (c)

NOTE.—Minus sign (-) denotes loss.

10. Net Earnings, Grants to Railways, Interest, Sinking Fund, Surplus or Deficit, 1963-64.—The following table shows, for each railway system for the year 1963-64, (i) net earnings as in para. 9 above, (ii) State grants and other items credited to railways accounts, (iii) loan interest, exchange, sinking fund, etc., payments charged against the accounts, and (iv) the net surplus or deficit after these items have been taken into account. Particulars of items (ii) to (iv) are not included in the preceding tables in this section.

The figures shown in this table accord with those published in the Annual Reports of the Railways Commissioners of the several systems. Because of the differences in governmental practice concerning costs other than operative charged against railways accounts, compensation for non-paying and developmental lines, etc., and the inclusion in some railways finances of the operations of ancillary transport services, direct comparison cannot be made between the results shown in the table.

GOVERNMENT RAILWAYS: SURPLUS OR DEFICIT AT 30th JUNE, 1964

(£)

System	Net earnings—excess of gross earnings over working expenses(a)	Plus grants and other income	Less other expenses charged to railways				Surplus (+) or deficit (-)	
			Loan interest and exchange	Sinking fund	Loan management expenses	Other		Total
State—								
N.S.W. ..	12,536,115	b 1,600,000	11,299,400	2,406,100	31,840	(c) 185,330	13,922,670	213,445
Victoria ..	633,010	(d) 13,610	..	..	..	(e) 25,166	25,166	(f) 621,454
Queensland ..	2,986,304	(g) 81,565	4,824,591	..	..	h 1,340,040	6,164,631	(i) -3,096,762
S. Australia ..	-707,839	(j) 4,009,164	2,399,775	..	..	(k) 76,580	2,476,355	(f) 824,970
W. Australia ..	-599,962	(l) 36,928	2,780,642	..	..	..	2,780,642	f -3,343,676
Tasmania ..	-612,442	..	443,259	..	..	(m) 23,296	466,555	-1,078,997
Total, States ..	14,235,186	5,741,267	21,747,667	2,406,100	31,840	1,650,412	25,836,019	-5,859,566
Commonwealth	438,555	(n) 81,888	..	..	..	..	..	520,443
Australia ..	14,673,741	5,823,155	21,747,667	2,406,100	31,840	1,650,412	25,836,019	-5,339,123

(a) See para. 9, p. 558. (b) Grants to meet losses on country development lines, £800,000, and to subsidize payments due from superannuation account, £800,000. (c) Loan flotation expenses. (d) Kerang-Koondrook Tramway recoup from Treasury. (e) Net loss on road motor services not included in previous pages. (f) Includes road motor services. (g) Adjustment for deficit on Queensland portion of Uniform Gauge Railway as included in foregoing tables. (h) Interest on unopened lines, £183,728; demolished assets written off, £236,312 and repayments to loan fund accounts for credit to closed lines account, £120,000; and provision for capital losses on branch lines closed, £800,000. (i) Excludes Queensland portion of Uniform Gauge Railway. (j) Grants towards working expenses £3,200,000, and debt charges, £800,000; and surplus from road motor services, £9,164. (k) Interest and repayment under Railways Standardization Agreement. (l) Net profit on road motor services. (m) Obsolete and other stocks written off. (n) Income from sale of assets.

NOTE.—For further information on railways finance, in particular expenditure from loan and other funds, see Chapter XXII. Public Finance of this Year Book. See also the Reports of the several Railways Commissioners.

11. Traffic.—(i) General. The following table shows particulars of railway passenger and goods traffic for the years 1959-60 to 1963-64.

GOVERNMENT RAILWAYS: TRAFFIC

Year	N.S.W.	Vic.	Q'land (a)	S. Aust.	W. Aust.	Tas.	C'wealth	Aust.
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PASSENGER-JOURNEYS (SUBURBAN AND COUNTRY)(b)

('000)

						(c)		
1959-60 ..	236,573	158,294	32,347	17,038	13,879	2,292	275	460,698
1960-61 ..	235,416	149,929	28,876	15,574	12,661	2,103	303	444,862
1961-62 ..	234,638	152,768	26,700	15,176	11,906	1,816	315	443,319
1962-63 ..	235,169	152,727	26,081	14,922	11,537	1,558	334	442,328
1963-64 ..	240,677	153,396	25,903	15,227	10,814	1,426	338	447,781

PASSENGER-JOURNEYS (SUBURBAN AND COUNTRY) PER AVERAGE ROUTE-MILE WORKED

(Number)

						(c)		
1959-60 ..	38,732	36,881	5,044	6,726	3,369	4,065	122	17,529
1960-61 ..	38,835	34,948	4,546	6,147	3,071	3,946	134	17,015
1961-62 ..	38,700	35,602	4,369	5,994	3,092	3,519	140	17,306
1962-63 ..	38,839	35,809	4,292	5,893	3,038	3,018	148	17,350
1963-64 ..	39,748	36,161	4,276	6,057	2,941	2,828	150	17,697

GOODS AND LIVESTOCK CARRIED

('000 tons)

1959-60 ..	22,127	9,687	8,116	4,036	4,533	1,191	1,482	51,172
1960-61 ..	24,104	10,977	7,981	4,537	4,833	1,192	1,738	55,362
1961-62 ..	24,050	10,350	8,153	4,616	5,342	1,096	1,958	55,565
1962-63 ..	23,641	10,841	8,736	4,503	4,793	1,165	2,230	55,909
1963-64 ..	25,814	12,132	9,796	5,179	5,187	1,155	2,478	61,741

GOODS AND LIVESTOCK CARRIED PER AVERAGE ROUTE-MILE WORKED

(Tons)

1959-60 ..	3,623	2,257	1,266	1,594	1,100	2,111	658	1,947
1960-61 ..	3,976	2,559	1,256	1,791	1,172	2,236	772	2,118
1961-62 ..	3,967	2,412	1,334	1,823	1,387	2,124	869	2,169
1962-63 ..	3,904	2,542	1,438	1,778	1,262	2,257	990	2,193
1963-64 ..	4,263	2,860	1,617	2,060	1,411	2,291	1,100	2,440

(a) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only. (b) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (c) Concession tickets are counted according to the proportion of the adult fare charged.

(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, while traffic classed as "country" originates or terminates at stations outside 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 1959-60 to 1963-64. Most of the suburban services in New South Wales and Victoria are operated within electrified areas.

GOVERNMENT RAILWAYS: SUBURBAN PASSENGER SUMMARY

Year	Suburban passenger-journeys (a)	Suburban revenue passenger-train-miles	Suburban passenger-miles	Average number of passengers per train-mile	Average mileage per passenger-journey (Miles)	Suburban passenger earnings			
						Gross (£'000)	Per passenger journey (Pence)	Per passenger-mile (Pence)	Per passenger train-mile (Pence)

NEW SOUTH WALES

1959-60	221,788	11,212	n.a.	n.a.	n.a.	12,222	13.23	n.a.	262
1960-61	222,333	11,176				12,755	13.77	n.a.	274
1961-62	221,861	11,250				12,745	13.79	n.a.	272
1962-63	221,960	10,915				12,836	13.88	n.a.	282
1963-64	227,319	10,939				13,173	13.91	n.a.	289

VICTORIA

1959-60	153,660	7,999	1,349,319	169	8.79	8,826	13.78	1.57	265
1960-61	145,558	7,902	1,282,975	162	8.81	8,885	14.65	1.66	270
1961-62	147,977	8,296	1,299,379	157	8.78	9,006	14.61	1.66	261
1962-63	147,587	8,303	1,302,094	157	8.82	8,989	14.62	1.66	260
1963-64	148,314	8,369	1,315,105	157	8.87	9,028	14.61	1.65	259

QUEENSLAND

1959-60	27,548	2,131	n.a.	n.a.	n.a.	865	7.54	n.a.	97
1960-61	24,582	2,009				962	9.39	n.a.	115
1961-62	22,890	1,850				977	10.25	n.a.	127
1962-63	22,413	1,706				966	10.35	n.a.	136
1963-64	22,512	1,742				962	10.26	n.a.	133

SOUTH AUSTRALIA

1959-60	15,997	2,134	128,183	60	8.01	792	11.89	1.48	89
1960-61	14,584	2,082	117,423	56	8.05	795	13.08	1.62	92
1961-62	14,211	1,962	114,852	59	8.08	781	13.19	1.63	96
1962-63	13,978	1,941	115,219	59	8.24	789	13.55	1.64	98
1963-64	14,332	1,967	120,110	61	8.38	817	13.68	1.63	100

WESTERN AUSTRALIA

1959-60	13,171	1,343	90,003	67	6.83	478	8.70	1.27	85
1960-61	12,026	1,357	82,612	61	6.87	484	9.65	1.41	86
1961-62	11,308	1,355	78,469	58	6.94	469	9.95	1.43	83
1962-63	10,937	1,334	76,312	57	6.98	462	10.13	1.45	83
1963-64	10,298	1,368	71,468	52	6.94	477	11.12	1.60	84

TASMANIA

	(b)								
1959-60	2,031	206	12,438	60	6.12	51	5.98	0.98	59
1960-61	1,859	202	11,018	54	5.93	55	7.06	1.19	65
1961-62	1,585	188	9,778	52	6.17	56	8.41	1.36	71
1962-63	1,347	135	8,385	62	6.23	49	8.70	1.40	87
1963-64	1,229	137	7,664	56	6.24	45	8.80	1.41	79

(a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (b) Concession tickets are counted according to the proportion of the adult fare charged.

(b) *Country Passenger Traffic.* The following table shows a summary of country passenger operations for the years 1959-60 to 1963-64.

GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY

Year	Country passenger-journeys (a)	Country revenue passenger train-miles (b)	Country passenger-miles (c)	Average number of passengers per train-mile (c)	Average mileage per passenger-journey (Miles)	Country passenger earnings				
						Gross (£'000)	Per passenger-journey (Pence)	Per passenger-mile (Pence)	Per passenger-train-mile (d) (Pence)	
NEW SOUTH WALES										
1959-60	14,785	10,007	} n.a.	} n.a.	} n.a.	6,570	106.64	n.a.	158	
1960-61	13,083	10,206				6,825	125.19	n.a.	160	
1961-62	12,777	10,410				6,948	130.51	n.a.	160	
1962-63	13,209	10,475				7,416	134.73	n.a.	170	
1963-64	13,358	10,576				7,649	137.44	n.a.	174	
VICTORIA										
1959-60	4,634	4,599	394,690	86	85.16	3,291	170.44	2.00	172	
1960-61	4,371	4,482	388,258	87	88.84	3,248	178.35	2.01	174	
1961-62	4,791	4,726	413,435	87	86.31	3,473	174.01	2.02	176	
1962-63	5,140	4,829	418,887	87	81.50	3,531	164.89	2.02	176	
1963-64	5,082	4,835	410,830	85	80.84	3,541	167.22	2.07	176	
QUEENSLAND										
1959-60	(e) 4,799	4,962	} n.a.	} n.a.	} n.a.	2,273	113.70	n.a.	110	
1960-61	4,294	4,869				2,406	134.50	n.a.	119	
1961-62	3,810	4,714				2,378	149.75	n.a.	121	
1962-63	3,668	4,689				2,349	153.71	n.a.	120	
1963-64	3,391	4,608				2,225	157.46	n.a.	116	
SOUTH AUSTRALIA										
1959-60	1,041	2,089	105,386	50	101.31	806	185.89	1.83	93	
1960-61	990	2,039	100,683	49	101.69	822	199.31	1.96	98	
1961-62	965	2,043	100,591	49	104.24	838	208.50	2.00	99	
1962-63	944	2,014	99,761	50	105.69	846	215.18	2.04	101	
1963-64	895	1,954	96,877	50	108.20	829	222.13	2.05	102	
WESTERN AUSTRALIA										
1959-60	708	1,504	77,450	51	109.32	666	225.56	2.06	106	
1960-61	635	1,254	73,900	59	116.34	641	242.11	2.08	123	
1961-62	598	1,184	74,230	63	124.12	671	269.10	2.17	136	
1962-63	600	1,121	75,684	67	126.19	669	267.71	2.12	143	
1963-64	516	982	66,753	68	129.39	671	312.37	2.41	164	
TASMANIA										
1959-60	(f) 261	325	13,805	42	52.92	86	79.07	1.49	63	
1960-61	244	323	12,940	40	53.10	80	78.59	1.48	59	
1961-62	231	324	12,745	39	55.10	80	82.68	1.50	59	
1962-63	211	318	12,255	39	58.19	78	89.13	1.53	59	
1963-64	197	314	11,380	36	57.98	72	87.79	1.51	55	

NOTE.—For footnotes see next page.

GOVERNMENT RAILWAYS: COUNTRY PASSENGER SUMMARY—continued

Year	Country passenger journeys (a)	Country revenue passenger train-miles (b)	Country passenger-miles	Average number of passengers per train-mile	Average mileage per passenger-journey	Country passenger earnings			
						Gross	Per passenger-journey	Per passenger-mile	Per passenger-train-mile (d)
	(⁰⁰⁰)	(⁰⁰⁰)	(⁰⁰⁰)	(c)	(Miles)	(£ ⁰⁰⁰)	(Pence)	(Pence)	(Pence)
COMMONWEALTH(g)									
1959-60	275	798	84,371	106	307.57	749	654.89	2.13	225
1960-61	303	825	93,540	113	309.07	838	664.51	2.15	244
1961-62	315	923	100,604	109	319.15	904	688.57	2.16	235
1962-63	334	939	107,991	115	322.99	957	686.59	2.13	244
1963-64	338	898	107,005	119	316.20	958	679.15	2.15	256

(a) Based on ticket sales, making allowances for periodical tickets. Except in Tasmania, tickets sold at concession rates are counted as full journeys. (b) Includes a proportion of mixed train-miles. (c) Passenger-miles divided by passenger train-miles inclusive of a proportion of mixed train-miles. (d) Passenger earnings divided by passenger train-miles inclusive of a proportion of mixed train-miles. (e) Traffic originating on the 3 ft. 6 in. gauge system and continuing on the Uniform Gauge Railway, or vice versa, has been counted once only. (f) Concession tickets are counted according to the proportion of the adult fare charged. (g) Railways controlled by Commonwealth Government.

NOTE.—Train-miles refer to revenue mileages only. Figures include a proportion of mixed train-miles for all systems except Western Australia and, after 1961-62, Victoria, where they do not apply.

(iii) *Freight Traffic.* (a) *Commodities Carried and Earnings.* The following table shows the quantities of various commodities carried on the various systems and the earnings derived during 1963-64.

GOVERNMENT RAILWAYS: COMMODITIES CARRIED AND EARNINGS, 1963-64

Railway system	Coal, coke and briquettes	Other minerals (a)	Agricultural produce (b)	Wool	Live-stock	All other commodities	Total
QUANTITY CARRIED (⁰⁰⁰ Tons)							
New South Wales ..	9,827	2,289	4,068	239	553	8,838	25,814
Victoria ..	2,289	112	3,648	132	312	5,639	12,132
Queensland(c) ..	2,524	1,184	3,100	51	717	2,220	9,796
South Australia ..	59	1,401	1,426	45	152	2,096	5,179
Western Australia ..	704	627	1,852	90	115	1,799	5,187
Tasmania ..	199	33	45	3	27	848	1,155
Commonwealth ..	1,630	57	30	5	83	673	2,478
Australia ..	17,232	5,703	14,169	565	1,959	22,113	61,741

FREIGHT EARNINGS (£ ⁰⁰⁰)							
New South Wales ..	n.a.	n.a.	n.a.	n.a.	3,207	n.a.	72,323
Victoria ..	3,411	159	8,642	580	966	15,607	29,365
Queensland ..	4,819	3,003	7,585	918	4,365	15,495	36,185
South Australia ..	38	3,309	2,454	245	519	5,020	11,585
Western Australia ..	1,069	827	4,596	535	368	7,449	14,894
Tasmania ..	344	32	100	16	71	2,006	2,569
Commonwealth ..	932	210	148	28	234	4,364	5,916
Australia ..	n.a.	n.a.	n.a.	n.a.	9,730	n.a.	172,837

(a) Includes sand and gravel. (b) Includes wheat and fruit. (c) Includes Queensland portion of Uniform Gauge Railway. Tonnages carried over both systems have been counted once only.

(b) *Freight Summary.* A summary of freight traffic on each railway system for each of the years 1959-60 to 1963-64 is shown in the following table.

GOVERNMENT RAILWAYS: FREIGHT SUMMARY

Year	Revenue goods train-miles (a)	Revenue net ton-miles	Average train load (paying traffic) (b)	Average haul per ton (c)	Goods and livestock earnings				Density of traffic (e)
					Gross	Per average route-mile worked	Per revenue net ton-mile	Per revenue goods train-mile (d)	
	('000)	(Million)	(Tons)	(Miles)	(£'000)	(£)	(Pence)	(Pence)	('000)
NEW SOUTH WALES									
1959-60	15,563	3,216	202	146	57,598	9,430	4.30	925	526
1960-61	16,516	3,613	219	150	63,057	10,402	4.19	916	596
1961-62	15,786	3,576	227	149	61,424	10,131	4.12	934	590
1962-63	15,971	3,743	234	158	63,323	10,458	4.06	952	618
1963-64	17,563	4,282	244	166	72,323	11,944	4.05	988	707
VICTORIA									
1959-60	5,684	1,385	244	143	22,876	5,330	3.96	966	323
1960-61	5,847	1,612	276	147	26,582	6,196	3.96	1,091	376
1961-62	5,880	1,581	269	153	25,733	5,997	3.91	1,050	368
1962-63	6,345	1,693	267	156	26,508	6,215	3.76	1,003	397
1963-64	6,909	1,906	276	157	29,365	6,923	3.70	1,020	449
QUEENSLAND(f)									
1959-60	11,795	1,515	126	196	29,420	4,637	4.66	586	239
1960-61	11,267	1,472	131	195	29,803	4,743	4.86	635	234
1961-62	10,832	1,461	135	189	29,467	4,877	4.84	653	242
1962-63	11,375	1,559	137	190	31,004	5,160	4.77	654	260
1963-64	12,604	1,841	146	200	35,414	5,913	4.62	674	307
SOUTH AUSTRALIA									
1959-60	2,664	596	224	148	9,840	3,885	3.96	886	235
1960-61	2,784	645	232	142	10,906	4,305	4.06	940	255
1961-62	2,733	650	238	141	10,880	4,297	4.02	956	257
1962-63	2,771	679	245	151	10,747	4,244	3.80	931	268
1963-64	2,745	754	275	146	11,585	4,608	3.69	1,013	300
WESTERN AUSTRALIA									
1959-60	5,115	705	138	156	12,251	2,974	4.17	575	171
1960-61	5,208	748	144	155	13,940	3,381	4.48	642	181
1961-62	5,526	831	150	156	15,114	3,925	4.36	656	216
1962-63	5,095	762	150	159	14,063	3,704	4.43	662	201
1963-64	5,156	813	158	157	14,894	4,050	4.39	693	221
TASMANIA									
1959-60	1,019	119	116	100	2,537	4,498	5.13	597	210
1960-61	991	114	115	95	2,456	4,601	5.19	595	213
1961-62	903	107	119	98	2,411	4,673	5.41	641	207
1962-63	869	112	129	96	2,522	4,887	5.41	696	217
1963-64	871	114	131	99	2,569	5,096	5.41	708	226
COMMONWEALTH(g)									
1959-60	1,343	438	326	296	3,963	1,760	2.17	708	194
1960-61	1,519	549	362	316	4,537	2,015	1.98	717	244
1961-62	1,530	581	380	297	4,671	2,074	1.93	733	258
1962-63	1,610	664	412	298	5,331	2,367	1.93	795	295
1963-64	1,770	744	421	300	5,916	2,627	1.91	802	331

(a) Includes a proportion of mixed train-miles. (b) Net ton-miles per goods (including a portion of mixed) train-mile. (c) Net ton-miles per ton carried. (d) Goods and livestock earnings divided by goods train-miles, inclusive of a proportion of mixed train-miles. (e) Total net ton-miles per average route-mile worked. (f) Excludes Queensland portion of Uniform Gauge Railway. (g) Railways controlled by the Commonwealth Government.

NOTE.—Revenue goods train-miles figures include a proportion of mixed train-miles for all systems except Western Australia and, after 1961-62, Victoria, where they do not apply.

12. Rolling Stock.—(i) *Each System, 1964.* The following table shows the number of rolling stock on capital account of Government railways at 30th June, 1964.

GOVERNMENT RAILWAYS: ROLLING STOCK(a) AT 30th JUNE, 1964

Railway system	Locomotives					Coaching stock(c)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other (b)	Total			
New South Wales ..	614	205	41	22	882	(d) 3,452	e 20,579	(f) 2,144
Victoria ..	246	139	35	65	485	dg 2,407	e 21,073	(h) 1,660
Queensland ..	661	109	..	11	781	1,454	23,973	2,046
South Australia ..	166	86	..	..	252	(g) 580	7,846	(h) 509
Western Australia ..	244	75	..	15	334	543	11,443	942
Tasmania ..	26	35	..	20	81	135	2,388	168
Commonwealth ..	24	45	..	7	76	149	1,611	474
Australia ..	1,981	694	76	140	2,891	(i) 8,829	i 88,929	(i) 7,944

(a) Included in capital account. (b) Includes non-passenger-carrying diesel power vans. (c) Includes all brake vans. (d) Excludes 41 interstate coaching stock owned jointly by New South Wales and Victoria. (e) Excludes 16 interstate goods stock owned jointly by New South Wales and Victoria. (f) Includes all vehicles, not only those having a capital value. (g) Excludes 68 interstate coaching stock owned jointly by Victoria and South Australia. (h) Excludes one dynamometer car owned jointly by Victoria and South Australia. (i) Includes jointly owned stock.

(ii) *Australia, 1954 to 1964.* The following table shows the numbers of rolling stock on capital account for all railway systems at 30th June of each of the years 1954 to 1964.

GOVERNMENT RAILWAYS: ROLLING STOCK(a), AUSTRALIA

30th June—	Locomotives					Coaching stock(c)	Goods stock	Service stock
	Steam	Diesel-electric	Electric	Other(b)	Total			
1954 ..	3,598	161	36	22	3,817	9,545	100,569	5,253
1955 ..	3,511	204	38	26	3,779	9,522	99,968	5,468
1956 ..	3,366	257	37	26	3,686	9,399	99,137	5,418
1957 ..	3,249	315	65	28	3,657	9,387	99,064	5,474
1958 ..	3,077	367	76	37	3,557	9,358	97,361	5,783
1959 ..	2,905	402	76	48	3,431	9,282	95,312	6,613
1960 ..	2,775	451	76	71	3,373	9,287	94,443	6,602
1961 ..	2,651	491	76	109	3,327	9,172	92,455	6,896
1962 ..	2,456	541	76	123	3,196	9,177	91,094	7,976
1963 ..	2,215	608	76	132	3,031	8,969	90,020	7,960
1964 ..	1,981	694	76	140	2,891	8,829	88,929	7,944

For footnotes see previous table.

13. 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 1963-64.

GOVERNMENT RAILWAYS: ACCIDENTS(a), 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Cwth	Aust.
Persons killed ..	29	49	18	12	16	1	..	125
Persons injured ..	789	689	163	59	92	7	14	1,813

(a) Excludes accidents to railway employees.

14. Consumption of Coal, Oil and Petrol.—The following table shows the value of coal, oil and petrol consumed by the various Government railways during 1963-64.

**GOVERNMENT RAILWAYS: VALUE OF COAL, OIL AND PETROL
CONSUMED, 1963-64**
(£'000)

Railway system	Coal		Oil				Petrol for rail cars
	Locomotives	Other purposes	Diesel(a)	Fuel(b)	Lubrication	Other purposes	
New South Wales ..	(c)	(c)	1,505	114	208	171	..
Victoria ..	625	18	702	313	120	116	..
Queensland ..	1,190	28	739	..	59	101	(d)
South Australia ..	186	17	430	38	n.a.	n.a.	(d)
Western Australia ..	597	10	292	..	115	97	5
Tasmania ..	4	1	99	..	11	13	..
Commonwealth ..	1	2	314	..	34	26	1

(a) Used in internal combustion engines of locomotives and rail cars. (b) Used in oil-fired furnaces of steam locomotives. (c) Not available. The quantity of coal used in New South Wales was 670,766 tons for locomotives and 15,829 tons for other purposes. (d) Less than £500.

15. 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 1963-64.

**GOVERNMENT RAILWAYS: AVERAGE NUMBER OF EMPLOYEES, AND
SALARIES AND WAGES PAID, 1963-64**

Railway system	Operating staff			Construction staff			Total salaries and wages paid (£'000)	Average earnings per employee (£)
	Salaried	Wages	Total	Salaried	Wages	Total		
New South Wales ..	9,081	38,781	47,862	..	..	..	60,041	1,254
Victoria ..	(a) 5,364	(a) 23,358	(a) 28,722	(b)	(b)	(b)	34,502	1,201
Queensland(c) ..	4,309	21,884	26,193	19	388	407	31,183	1,172
South Australia ..	1,795	6,744	8,539	13	775	788	11,014	1,181
Western Australia ..	1,997	9,726	11,723	..	..	..	13,252	1,130
Tasmania ..	366	1,895	2,261	31	112	143	2,610	1,086
Commonwealth ..	454	2,366	2,820	..	..	..	3,746	1,329
Australia ..	(d) 23,366	d 104,754	d 128,120	63	1,275	1,338	156,348	1,208

(a) Includes construction staff. (b) Included with operating staff. (c) Excludes Queensland portion of Uniform Gauge Railway. (d) Includes construction staff, Victoria.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES

1. Systems in Operation.—(i) *Tramway and Trolley-bus.* Since 1st April, 1947, all systems have been operated by government or municipal authorities. During the year 1963-64, tramway systems were in operation in the following cities—Melbourne, Bendigo, and Ballarat, Victoria; Brisbane, Queensland; and Adelaide, South Australia. Trolley-bus services operated in Brisbane, Queensland; Adelaide, South Australia, to 13th July, 1963; Perth, Western Australia; and Hobart and Launceston, Tasmania. All systems were 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) *Motor Omnibus.* Services are operated by government or municipal authorities and private operators. Statistics are collected for government and municipal omnibus services located in all State capital cities; Canberra, Australian Capital Territory; Newcastle, New South Wales; Maryborough and Rockhampton, Queensland; Fremantle and the Eastern Goldfields area, Western Australia; Launceston and Burnie, Tasmania; Darwin, Northern

Territory; and for country road services operated by the Western Australian Government Railways. In Sydney, the Government tramway system has been replaced by omnibus services, and in Perth, the Metropolitan (Perth) Passenger Transport Trust has replaced privately owned services in the metropolitan area. In Hobart, the Government trolley-bus and omnibus services have replaced the Government tramway service.

Particulars of motor omnibus services under the control of private operators are recorded for the States of New South Wales, Victoria, Queensland, South Australia and Western Australia. In New South Wales, particulars of private services are compiled for the Sydney Metropolitan and Newcastle transport districts and the city of Greater Wollongong. In Victoria, particulars relate to the omnibus services operating within eight miles of the limits of the city of Melbourne only, and in South Australia to services licensed by the Municipal Tramways Trust and the Transport Control Board. In Queensland, they relate to all cities with a population of 10,000 persons or more. In Western Australia, particulars of all private services throughout the State are included.

2. Government and Municipal Services.—(i) *Summary of Operations, States.* Because of the development in recent years of the various forms of public road transport under the control of single authorities, and the gradual replacement of tramway services by motor omnibus services, it is no longer possible to obtain separate statistics for all phases of the activities of each form of transport, particularly financial operations. In this section, therefore, statistics of public tramway, trolley-bus and motor omnibus services are combined in single tables with separate details shown for each form of transport where possible.

The tramway gauge is 4 feet 8½ inches throughout.

The following table gives a summary for 1963-64 of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Route-miles at 30th June—									
Tram .. miles	..	156	64	7	..	..	..	..	227
Trolley-bus .. "	..	20	20	(a) 17	..	28	..	..	65
Omnibus .. "	562	123	280	141	3,813	910	29	63	5,921
Vehicle miles—									
Tram .. '000	..	18,415	6,776	498	..	..	..	..	25,689
Trolley-bus .. "	..	1,149	(a) 23	(b) ..	1,340	..	..	..	..
Omnibus .. "	44,398	7,283	6,304	10,956	17,594	5,094	487	1,729	96,357
Rolling stock at 30th June—									
Tram .. No.	..	757	287	30	..	..	..	..	1,074
Trolley-bus .. "	..	..	36	(a) ..	50	66	..	..	152
Omnibus .. "	1,744	232	297	353	585	233	13	83	3,540
Passenger-journeys—									
Tram .. '000	..	165,424	63,382	2,542	..	..	..	..	231,348
Trolley-bus .. "	..	..	7,278	(a) 117	(b) ..	2,673	..	..	152
Omnibus .. "	262,208	32,426	31,873	55,912	50,906	22,083	817	4,792	471,085
Gross revenue(c)—									
Tram, trolley-bus and omnibus .. £'000	12,405	8,442	3,960	2,737	2,907	1,139	43	211	31,844
Working expenses(d)—									
Tram, trolley-bus and omnibus .. £'000	13,846	8,627	3,988	2,597	3,096	1,412	84	298	33,948
Net revenue—									
Tram, trolley-bus and omnibus .. £'000	-1,441	-185	-28	140	-189	-273	-41	-87	-2,104
Ratio of working expenses to gross revenue—									
Tram, trolley-bus and omnibus .. per cent.	111.61	102.20	100.71	94.90	106.49	123.97	194.21	141.36	106.61
Employees at 30th June—									
Tram, trolley-bus and omnibus .. No.	7,529	5,028	2,682	1,443	1,814	694	23	133	19,346
Accidents—									
Tram, trolley-bus and omnibus(e)—									
Persons killed .. No.	7	15	11	3	..	2	..	..	38
Persons injured .. "	1,459	663	93	260	321	38	..	5	2,839

(a) Trolley-bus services ceased operation on 13th July, 1963. (b) Included with omnibus services.
 (c) Excludes government grants. (d) Includes provision of reserves for depreciation, etc., where possible.
 (e) Excludes accidents to employees.

NOTE.—Minus sign (—) denotes deficit.

(ii) *Summary of Operations, Australia.* The following table gives a summary of the operations of tramway, trolley-bus and omnibus systems controlled by government and municipal authorities, for the years 1959-60 to 1963-64.

TRAMWAY, TROLLEY-BUS AND OMNIBUS SERVICES: GOVERNMENT AND MUNICIPAL, AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Route-miles at 30th June—					
Tram miles	275	238	229	223	227
Trolley-bus "	92	92	88	88	65
Omnibus "	5,773	5,413	5,777	5,735	5,921
Vehicle miles—					
Tram(a) '000	34,379	30,010	28,034	26,363	25,689
Trolley-bus "	5,444	4,558	} 93,647	94,883	96,357
Omnibus "	81,755	85,924			
Rolling stock at 30th June—					
Tram No.	1,514	1,227	1,158	1,087	1,074
Trolley-bus "	246	246	240	208	152
Omnibus "	3,154	3,366	3,450	3,474	3,540
Passenger-journeys—					
Tram(a) '000	312,913	265,473	248,396	237,929	231,348
Trolley-bus "	25,403	19,461	} 469,549	474,194	471,085
Omnibus(c) "	420,360	440,822			
Gross revenue(d)—					
Tram, trolley-bus and omnibus £'000	31,817	31,800	31,757	31,697	31,844
Working expenses(e)—					
Tram, trolley-bus and omnibus £'000	33,629	34,382	34,206	33,672	33,948
Net revenue—					
Tram, trolley-bus and omnibus £'000	-1,812	-2,582	-2,449	-1,975	-2,104
Ratio of working expenses to gross revenue—					
Tram, trolley-bus and omnibus per cent.	105.70	108.12	107.71	106.23	106.61
Employees at 30th June—					
Tram, trolley-bus and omnibus No.	21,555	21,455	20,607	19,986	19,346
Accidents—					
Tram, trolley-bus and omnibus(f)—					
Persons killed .. No.	40	25	42	32	38
Persons injured .. "	3,147	2,756	3,076	2,915	2,839

(a) Includes particulars of New South Wales trolley-buses up to cessation of operation in August, 1959, and tramway services up to February, 1961. (b) Includes a small number of passenger-ferry miles for Western Australia. (c) Includes particulars for Tasmanian trams (to October, 1960) and trolley-buses. (d) Excludes government grants. (e) Includes provision of reserves for depreciation, etc., where possible. (f) Excludes accidents to employees.

NOTE.—Minus sign (-) denotes deficit.

3. Private Services.—*Summary of Operations.* The following table shows the operations of motor omnibus services under the control of private operators in New South Wales, Victoria, Queensland, South Australia and Western Australia during each of the years 1959-60 to 1963-64. Particulars are not available for Tasmania.

MOTOR OMNIBUS SERVICES: PRIVATE

Year	Number of omnibuses	Omnibus-miles (^{'000})	Passenger-journeys (^{'000})	Value of plant and equipment (£ ^{'000})	Gross revenue (£ ^{'000})	Persons employed
NEW SOUTH WALES(a)						
1959-60.. ..	930	26,676	98,303	1,661	4,025	1,679
1960-61(b) ..	1,011	20,611	76,157	1,847	3,288	1,662
1961-62.. ..	1,171	26,336	83,523	1,963	4,194	1,593
1962-63.. ..	1,083	25,141	72,082	1,994	3,888	1,452
1963-64.. ..	1,165	29,516	79,122	2,425	4,696	1,657
VICTORIA(c)(d)						
1959-60.. ..	477	15,448	70,719	(e) 759	2,319	(f) 705
1960-61.. ..	495	15,702	70,273	755	2,467	732
1961-62.. ..	486	15,805	69,150	694	2,613	721
1962-63.. ..	492	16,405	70,197	700	2,684	709
1963-64.. ..	515	16,633	70,545	754	2,764	723
QUEENSLAND(g)						
1959-60.. ..	362	7,605	25,344	713	1,165	539
1960-61.. ..	378	8,298	25,806	741	1,238	578
1961-62.. ..	394	8,714	26,301	806	1,281	582
1962-63.. ..	402	8,562	25,563	867	1,254	574
1963-64.. ..	416	8,754	25,597	946	1,320	562
SOUTH AUSTRALIA(h)						
1959-60.. ..	(i) 117	6,208	11,457	} n.a. {	833	} n.a. {
1960-61.. ..	281	5,963	11,171		849	
1961-62.. ..	258	6,030	11,153		869	
1962-63.. ..	244	6,045	11,583		903	
1963-64.. ..	256	6,357	11,783		933	
WESTERN AUSTRALIA(j)						
1959-60.. ..	137	4,142	11,183	243	585	272
1960-61.. ..	142	4,049	10,394	353	586	273
1961-62(k) ..	53	3,098	7,268	142	383	82
1962-63.. ..	54	1,088	1,696	120	135	74
1963-64.. ..	54	978	1,425	122	115	67

(a) Metropolitan, Newcastle and Wollongong transport districts only. (b) Nine months ended March, 1961: subsequent figures relate to the years ended 31st March. (c) Particulars relate to the omnibus services operating within eight miles of the limits of the city of Melbourne. (d) Partly estimated. (e) Vehicles only. (f) Drivers only. (g) All cities with a population of 10,000 persons or more. (h) Services licensed by the Municipal Tramways Trust and the Transport Control Board. (i) Excludes Transport Control Board licensed omnibuses. (j) Includes services operated in metropolitan and rural areas. (k) Decrease due to Metropolitan (Perth) Passenger Transport Trust's acquisition of services previously privately owned.

FERRY (PASSENGER) SERVICES

1. **General.**—Ferry passenger services are operated in the following States—New South Wales, at Sydney and Newcastle; Western Australia on the Swan River at Perth; Tasmania, on the Mersey River at Devonport. Control is exercised by both governmental authorities and private operators. In Victoria and Queensland the services operated are not extensive. There are no ferry passenger services in South Australia.

2. **Summary of Operations.**—The operations of ferry passenger services in New South Wales, Western Australia and Tasmania during the years 1959–60 to 1963–64 are summarized in the following table. Particulars of vehicular ferries are not included.

FERRY (PASSENGER) SERVICES

Year	Number of vessels	Passenger accommodation	Passenger-journeys (‘000)	Gross revenue (£)	Persons employed
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NEW SOUTH WALES—SYDNEY AND NEWCASTLE

1959–60	37	19,191	15,365	835,700	298
1960–61	40	19,211	15,093	872,000	316
1961–62	39	17,641	14,452	830,000	295
1962–63	38	17,653	14,456	836,000	300
1963–64	38	17,463	14,777	881,313	289

WESTERN AUSTRALIA—PERTH

1959–60	4	785	362	12,219	7
1960–61	4	785	180	9,211	7
1961–62	4	800	168	9,889	8
1962–63	4	800	192	11,221	8
1963–64	4	800	185	11,948	8

TASMANIA—HOBART AND DEVONPORT

1959–60	4	1,482	431	12,061	13
1960–61	4	1,482	436	10,434	12
1961–62	4	1,482	406	9,419	12
1962–63	4	1,482	380	10,376	12
1963–64(a)	1	40	177	3,789	3

(a) Devonport only.

MOTOR VEHICLES

The arrangements for the registration of motor vehicles and the licensing of drivers and riders are not uniform throughout Australia, since they are the function of a separate authority, or authorities, in each State and Territory. Particulars of registration, licences, fees payable, etc., in each State and Territory at 30th June, 1960, were given in Year Book, No. 47, pp. 553–6, and at 30th June, 1963 in *Transport and Communication*, Bulletin No. 54, 1962–63.

§ 1. Motor Vehicles on Register

1. *Census of Motor Vehicles, 1962.*—A census of motor vehicles on register at 31st December, 1962, was conducted by the Commonwealth Statistician in co-operation with the Deputy Commonwealth Statisticians and the motor vehicle registration authorities. The census covered items shown on the motor vehicle registration certificate such as make of vehicle, year of model, type of vehicle, horsepower, motive power, location (i.e. address on registration certificate), ownership (private, government, etc.), and for specific types of vehicles such items as unladen weight, carrying capacity, passenger capacity, and in some States gross vehicle weight.

Preliminary results of the census were published in mimeographed preliminary statements and further details were published in printed bulletins for each State and Territory and for Australia and in issue No. 54, 1962–63 of the annual bulletin *Transport and Communication*. Year Book No. 50, 1964, contains on pages 591–594 summarized particulars of the census.

Previous enumerations of this nature were the census of motor vehicles, 31st December, 1955, and the survey of motor vehicles, 1947–48. The results were published in a series of bulletins and, in summarized form, in issues of the annual bulletin *Transport and Communication* No. 48, 1956–57 (1955 census) and No. 40, 1948–49 (1947–48 survey). Year Book No. 44, 1958, contains on page 415 a summary, for each State and Territory and for Australia, of the vehicles of each type recorded at the census of 31st December, 1955.

The following table contains a summary for each State and Territory of the number of motor vehicles of each type on the register at 31st December, 1962. The total number of each type recorded for Australia at the previous motor vehicle census (31st December, 1955) is included for purposes of comparison.

CENSUS OF MOTOR VEHICLES, 31st DECEMBER, 1962: TYPES OF VEHICLE

State or Territory	Motor cars	Station wagons	Utilities	Panel vans	Trucks	Other truck-type	Omni-buses	Motor cycles	Total motor vehicles
New South Wales	742,947	85,746	137,138	49,479	84,670	2,822	5,004	20,398	1,128,204
Victoria ..	611,497	69,528	94,470	31,328	76,591	2,890	3,409	15,802	905,515
Queensland ..	258,942	31,253	92,128	13,359	40,502	450	1,836	14,680	453,150
South Australia	220,010	18,895	38,539	9,678	31,684	982	1,580	16,717	338,085
Western Australia	149,799	15,838	37,784	8,585	27,256	541	1,365	12,257	253,425
Tasmania ..	69,020	6,677	11,183	6,364	8,487	301	940	2,101	105,073
Northern Territory ..	4,321	1,258	2,806	471	1,326	73	91	325	10,671
Aust. Cap. Terr.	15,591	2,408	1,802	808	935	34	115	296	21,989
Australia, 31st Dec., 1962 No.	2,072,127	231,603	415,850	120,072	271,451	8,093	14,340	82,576	3,216,112
Per cent.	64.4	7.2	12.9	3.7	8.4	0.3	0.5	2.6	100.0
Australia, 31st Dec., 1955 No.	1,356,682	15,948	361,970	53,808	250,630	5,884	10,142	127,129	2,182,193
Per cent.	62.2	0.7	16.6	2.5	11.5	0.3	0.4	5.8	100.0

(a) Includes panel vans, Queensland.

(b) Excludes panel vans, Queensland, which are included with utilities.

2. *Motor Vehicles on Register, etc.*—The following table shows particulars of the number of motor vehicles on register and the number per 1,000 of population at 31st December, 1963. All Commonwealth Government-owned vehicles are included except those belonging to the Defence Services.

MOTOR VEHICLES(a) ON REGISTER, 31st DECEMBER, 1963

State or Territory	Motor cars and station wagons	Utilities, panel vans, trucks(b), omnibuses	Motor cycles	Total(c)	Per 1,000 of population
New South Wales	896,459	283,948	18,160	1,198,567	293
Victoria	734,919	213,123	14,518	962,560	312
Queensland	321,840	150,815	13,719	486,374	309
South Australia	257,172	83,292	15,477	355,941	349
Western Australia	181,424	77,738	10,960	270,122	344
Tasmania	81,642	28,125	1,856	111,623	299
Northern Territory	6,647	5,341	353	12,341	428
Australian Capital Territory ..	21,927	4,203	293	26,423	341
Australia	2,502,030	846,585	75,336	3,423,951	311

(a) On a basis comparable with the Census of Motor Vehicles, 1962. All figures are subject to revision. (b) Includes other truck-type vehicles. (c) Excludes tractors, trailers, plant and equipment, etc.

The table following shows a summary for Australia of the number of motor vehicles on register and the number per 1,000 of population at 31st December each year, 1959 to 1963. All Commonwealth Government-owned vehicles are included except those belonging to the Defence Services.

MOTOR VEHICLES ON REGISTER: AUSTRALIA

Year	Motor cars and station wagons	Utilities, panel vans, trucks(a), omnibuses	Motor cycles	Total(b)	Per 1,000 of population
1959(c)	1,851,934	766,298	106,822	2,725,054	268
1960(c)	2,028,419	801,163	99,452	2,929,034	282
1961(c)	2,128,301	806,032	90,063	3,024,396	285
1962(d)	2,303,730	829,806	82,576	3,216,112	298
1963(e)	2,502,030	846,585	75,336	3,423,951	311

(a) Includes other truck-type vehicles. (b) Excludes tractors, trailers, plant and equipment, etc. (c) Estimates for inter-censal years on a basis comparable with the Censuses of 1955 and 1962. (d) Census figures. (e) Subject to revision.

The table following shows the number of motor vehicles on register per 1,000 of population in each State and Territory at 31st December, for each of the years 1959 to 1963. All Commonwealth Government-owned vehicles are included except those belonging to the Defence Services.

MOTOR VEHICLES(a) ON REGISTER PER 1,000 OF POPULATION

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
1959(b) ..	251	276	269	297	286	259	325	299	268
1960(b) ..	262	288	281	333	301	268	352	310	282
1961(b) ..	267	290	282	332	311	275	386	309	285
1962(c) ..	281	300	292	338	331	284	406	319	298
1963(d) ..	293	312	309	349	344	299	428	341	311

(a) Excludes tractors, trailers, plant and equipment, etc. (b) Estimates for inter-censal years on a basis comparable with the Censuses of 1955 and 1962. (c) Census figures. (d) Subject to revision.

3. **World Motor Vehicle Statistics, 1964.**—At 1st January, 1964, there were 158,395,700 motor cars, trucks and omnibuses registered in various countries of the world. This was an increase of 8.3 per cent. on the figure for the previous year, 146,190,200. Of the 1964 registrations, 83,500,000 or 52.7 per cent. of the world total were in the United States of America, while Australian registrations amounted to 2.1 per cent. This information is derived largely from the *Automobile International*, May, 1964.

§ 2. Licenses, Registration Fees, etc.

The following table shows particulars of the number of drivers' and riders' licences in force at 30th June, and gross revenue derived from vehicle registrations, motor tax, licences, etc., in each State and Territory for the year ended 30th June, 1964.

NUMBER OF DRIVERS' AND RIDERS' LICENCES IN FORCE AND GROSS REVENUE, 30th JUNE, 1964

State or Territory	Number of drivers' and riders' licences in force at 30th June	Gross revenue (£'000) derived from—			
		Vehicle registrations and motor tax	Drivers' and riders', etc., licences	Other sources	Total
New South Wales	1,526,810	17,379	3,256	6,690	27,325
Victoria	1,162,448	12,305	1,464	4,480	18,249
Queensland	n.a.	6,925	366	3,736	11,027
South Australia	419,742	(a) 5,388	(b)	94	5,482
Western Australia	321,920	3,449	391	414	4,254
Tasmania	133,071	1,569	123	173	1,865
Northern Territory	15,647	83	13	1	97
Australian Capital Territory ..	44,983	n.a.	n.a.	n.a.	241
Australia	c3,624,621	(d) 47,098	(e) 5,613	(f) 15,588	68,540

(a) Includes drivers', etc., licence fees. (b) Included in registration fees. (c) Excludes Queensland. (d) Excludes Australian Capital Territory but includes drivers', etc., licence fees for South Australia. (e) Excludes South Australia and Australian Capital Territory. (f) Excludes Australian Capital Territory.

The following table shows corresponding particulars for the years 1959–60 to 1963–64.

NUMBER OF DRIVERS' AND RIDERS' LICENCES IN FORCE AND GROSS REVENUE: AUSTRALIA

Year	Number of drivers' and riders' licences in force at 30th June(a)	Gross revenue (£'000) derived from—			
		Vehicle registrations and motor tax	Drivers' and riders', etc., licences	Other sources	Total
1959–60.. ..	2,984,852	34,044	3,275	10,203	47,522
1960–61.. ..	3,197,510	(c) 35,227	(c) 3,799	(c) 10,871	50,061
1961–62.. ..	3,325,774	(d) 37,324	(e) 3,504	(c) 11,767	52,778
1962–63.. ..	3,426,499	(d) 40,917	(e) 4,499	(c) 13,232	58,852
1963–64.. ..	3,624,621	(d) 47,098	(e) 5,613	(c) 15,588	68,540

(a) Excludes Queensland. (b) Includes Australian Capital Territory. (c) Excludes Australian Capital Territory. (d) Excludes Australian Capital Territory, but includes drivers', etc., licence fees for South Australia. (e) Excludes South Australia and Australian Capital Territory.

§ 3. Registrations of New Motor Vehicles

The following table shows the number of new motor vehicles registered in each State and Territory during the year ended 31st December, 1964.

REGISTRATIONS OF NEW MOTOR VEHICLES, 1964

State or Territory	Motor cars and station wagons	Utilities, panel vans, trucks(a) and omnibuses	Motor cycles	Total
New South Wales	122,196	26,101	2,499	150,796
Victoria	91,439	17,670	864	109,973
Queensland	47,284	13,748	1,448	62,480
South Australia	34,288	7,103	1,006	42,397
Western Australia	23,127	7,091	562	30,780
Tasmania	10,123	2,426	45	12,594
Northern Territory	1,042	689	23	1,754
Australian Capital Territory	3,564	664	35	4,263
Australia	333,063	75,492	6,482	415,037

(a) Includes other truck-type vehicles and ambulances.

Particulars of the registrations of new motor vehicles during each of the years ended 31st December, 1960 to 1964, are shown in the following table.

REGISTRATIONS OF NEW MOTOR VEHICLES: AUSTRALIA

Year	Motor cars and station wagons	Utilities, panel vans, trucks(a) and omnibuses	Motor cycles	Total
1960	244,818	65,541	9,153	319,512
1961	188,132	49,608	6,103	243,843
1962	266,789	56,457	5,414	328,660
1963	307,380	66,783	5,272	379,435
1964	333,063	75,492	6,482	415,037

(a) Includes other truck-type vehicles and ambulances.

ROADS AND BRIDGES

Information on the length of roads in Australia, the class of roads and their composition, together with particulars of the financial operations of the roads authorities in the several States, is included in Chapter XX. Local Government, of this Year Book.

ROAD TRAFFIC ACCIDENTS

§ 1. Accidents Reported

1. States and Territories, 1963.—The following table gives a summary of road traffic accidents involving casualties in each State and Territory for the year ended December, 1963.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED AND PERSONS INJURED, 1963

State or Territory	Accidents involving casualties	Persons killed			Persons injured		
		Number	Per 100,000 of mean population	Per 10,000 motor vehicles registered	Number	Per 100,000 of mean population	Per 10,000 motor vehicles registered
New South Wales ..	18,101	900	22	8	24,652	609	212
Victoria ..	12,590	780	26	8	17,577	575	188
Queensland ..	6,724	398	25	8	9,445	604	201
South Australia(b) ..	6,299	223	22	6	8,271	820	238
Western Australia ..	4,057	198	26	8	5,399	698	206
Tasmania ..	1,051	75	21	7	1,595	438	147
Northern Territory ..	218	16	56	14	313	1,092	272
Aust. Cap. Terr. ..	425	8	11	3	628	856	259
Total ..	49,465	2,598	24	8	67,880	622	204

(a) Accidents (reported to the police) which occurred in public thoroughfares and which resulted in the death of any person within a period of 30 days after the accident, or injury to an extent requiring surgical or medical treatment. (b) Includes all accidents resulting in bodily injury to any person whether or not requiring medical or surgical treatment.

2. States and Territories, 1959 to 1963.—The following table shows the number of road traffic accidents involving casualties and persons killed or injured in road traffic accidents in each State and the Australian Capital Territory during each of the years ended December, 1959 to 1963 and for the Northern Territory for the year ended December, 1963.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS, PERSONS KILLED AND PERSONS INJURED

Year	N.S.W.	Vic.	Q'land	S. Aust. (b)	W. Aust.	Tas.	N.T.	A.C.T.	Total	
									Number	Per 10,000 motor vehicles registered

ACCIDENTS INVOLVING CASUALTIES

1959 ..	15,885	12,703	5,599	4,292	3,521	798	n.a.	253	43,051	163
1960 ..	17,011	12,087	5,764	5,988	3,713	778	n.a.	339	45,680	162
1961 ..	16,380	11,719	5,371	5,865	3,528	855	n.a.	296	44,014	148
1962 ..	16,076	12,026	6,310	6,491	3,685	833	n.a.	348	45,769	147
1963 ..	18,101	12,590	6,724	6,299	4,057	1,051	218	425	49,465	149

PERSONS KILLED

1959 ..	859	671	353	183	171	75	n.a.	9	2,321	9
1960 ..	978	760	346	234	199	78	n.a.	10	2,605	9
1961 ..	918	794	337	178	172	73	n.a.	7	2,479	8
1962 ..	876	808	403	194	177	61	n.a.	8	2,527	8
1963 ..	900	780	398	223	198	75	16	8	2,598	8

PERSONS INJURED

1959 ..	20,910	17,009	7,748	5,553	4,624	1,016	n.a.	386	57,246	216
1960 ..	22,655	16,669	8,175	7,704	4,862	1,079	n.a.	490	61,634	219
1961 ..	21,839	16,115	7,467	7,297	4,779	1,173	n.a.	451	59,121	199
1962 ..	21,468	16,781	8,703	8,321	5,077	1,158	n.a.	498	62,006	199
1963 ..	24,652	17,577	9,445	8,271	5,399	1,595	313	628	67,880	204

(a) Accidents (reported to the police) which occurred in public thoroughfares and which resulted in the death of any person within a period of 30 days after the accident, or injury to an extent requiring surgical or medical treatment. (b) Includes all accidents resulting in bodily injury to any person whether or not requiring medical or surgical attention.

3. Types of Road User Killed or Injured.—The following table shows the number of persons killed and the number injured in each State and Territory, classified according to types of road user for the year ended December, 1963. Responsibility for cause of accident is not indicated by this classification.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): TYPES OF ROAD USER KILLED OR INJURED, 1963

Type of road user	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Total
PERSONS KILLED									
Drivers of motor vehicles ..	282	255	139	69	72	25	8	5	855
Motor cyclists ..	18	18	20	14	19	1	1	..	91
Pedal cyclists ..	24	47	32	12	8	2	..	..	125
Passengers (all types)(c) ..	266	203	111	64	49	22	5	1	721
Pedestrians ..	310	251	96	64	50	25	2	2	800
Other classes(d) ..	..	6	..	..	..	..	..	..	6
Total ..	900	780	398	223	198	75	16	8	2,598

PERSONS INJURED									
Drivers of motor vehicles ..	8,835	6,221	3,428	2,980	1,852	582	135	239	24,272
Motor cyclists ..	877	486	700	805	503	49	22	17	3,459
Pedal cyclists ..	956	1,098	565	755	438	52	6	48	3,918
Passengers (all types)(c) ..	9,948	7,125	3,798	2,962	1,955	685	136	268	26,877
Pedestrians ..	4,000	2,555	943	765	640	226	14	56	9,199
Other classes(d) ..	36	92	11	4	11	2	..	..	155
Total ..	24,652	17,577	9,445	8,271	5,399	1,595	313	628	67,880

(a) Accidents (reported to the police) which occurred in public thoroughfares and which resulted in the death of any person within a period of 30 days after the accident, or injury to an extent requiring surgical or medical treatment. (b) Includes all accidents resulting in bodily injury to any person whether or not requiring medical or surgical treatment. (c) Includes pillion riders. (d) Includes tram drivers, riders of horses and drivers of animal-drawn vehicles.

4. Age Groups of Persons Killed or Injured.—The following table shows the age groups of persons killed or injured in traffic accidents in each State and Territory for the year ended December, 1963.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): AGES OF PERSONS KILLED OR INJURED, 1963

Age group (years)	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
PERSONS KILLED									
Under 5 ..	35	28	8	11	10	2	1	..	95
5 and under 7 ..	20	15	7	6	2	5	..	..	55
7 " " 17 ..	64	60	32	16	12	8	..	..	192
17 " " 21 ..	130	92	65	23	29	11	3	2	355
21 " " 30 ..	162	113	61	30	41	10	5	3	425
30 " " 40 ..	92	88	45	29	20	15	4	1	294
40 " " 50 ..	88	101	47	31	18	7	2	..	294
50 " " 60 ..	99	92	43	26	26	5	..	..	291
60 and over ..	210	187	90	47	39	12	1	2	588
Not stated ..	..	4	..	4	1	..	..	..	9
Total ..	900	780	398	223	198	75	16	8	2,598

PERSONS INJURED									
Under 5 ..	847	630	297	220	181	49	6	12	2,242
5 and under 7 ..	521	427	145	150	130	27	7	13	1,420
7 " " 17 ..	3,033	2,341	1,268	1,091	724	233	20	98	8,808
17 " " 21 ..	4,560	3,082	2,008	1,694	1,082	365	43	114	12,948
21 " " 30 ..	5,224	3,861	1,934	1,514	1,027	328	117	168	14,173
30 " " 40 ..	3,377	2,408	1,137	955	632	158	61	66	8,794
40 " " 50 ..	2,789	1,850	1,040	860	521	128	32	70	7,290
50 " " 60 ..	2,019	1,405	774	553	421	118	17	46	5,353
60 and over ..	1,973	1,337	735	499	354	89	9	30	5,026
Not stated ..	309	236	107	735	327	100	1	11	1,826
Total ..	24,652	17,577	9,445	8,271	5,399	1,595	313	628	67,880

(a) Accidents (reported to the police) which occurred in public thoroughfares and which resulted in the death of any person within a period of 30 days after the accident, or injury to an extent requiring surgical or medical treatment. (b) Includes all accidents resulting in bodily injury to any person whether or not requiring medical or surgical treatment.

5. **Types of Accident.**—The following table shows the number of accidents involving casualties and persons killed or injured in each State and Territory, classified according to types of accident, for the year ended December, 1963.

ROAD TRAFFIC ACCIDENTS INVOLVING CASUALTIES(a): NUMBER OF ACCIDENTS AND PERSONS KILLED AND PERSONS INJURED, BY TYPE OF ACCIDENT, 1963

Type of accident	N.S.W.	Vic.	Qld	S.A. (b)	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF ACCIDENTS									
Collisions between vehicles	8,844	6,640	2,988	3,979	2,102	518	67	265	25,403
Vehicles overturning or leaving road ..	3,358	2,019	2,352	752	1,103	238	122	69	10,013
Vehicles colliding with fixed object(c)	1,705	999	212	734	115	47	7	30	3,849
Vehicles colliding with animal	121	60	72	39	25	4	1	3	325
Vehicles colliding with pedestrian ..	3,893	2,665	992	743	656	240	15	51	9,255
Passenger accidents ..	180	129	85	42	54	4	6	4	504
Other ..	..	78	23	10	2	..	..	3	116
Total	18,101	12,590	6,724	6,299	4,057	1,051	218	425	49,465
PERSONS KILLED									
Collisions between vehicles	297	298	142	93	62	25	9	4	930
Vehicles overturning or leaving road ..	164	158	141	40	78	22	4	2	609
Vehicles colliding with fixed object(c)	120	57	9	26	5	3	1	..	221
Vehicles colliding with animal	..	5	1	1	..	..	..	..	7
Vehicles colliding with pedestrian ..	308	250	97	60	48	25	2	2	792
Passenger accidents ..	11	8	7	2	5	..	..	..	33
Other ..	..	4	1	1	..	..	..	..	6
Total	900	780	398	223	198	75	16	8	2,598
PERSONS INJURED									
Collisions between vehicles	13,457	10,338	4,662	5,366	3,000	881	104	397	38,205
Vehicles overturning or leaving road ..	4,671	3,060	3,311	1,066	1,527	401	177	120	14,333
Vehicles colliding with fixed object(c)	2,337	1,351	286	1,007	152	69	11	49	5,262
Vehicles colliding with animal	153	72	86	47	34	6	1	4	403
Vehicles colliding with pedestrian ..	3,830	2,549	980	731	633	234	14	51	9,022
Passenger accidents ..	204	129	91	45	51	4	6	4	534
Other ..	..	78	29	9	2	..	..	3	121
Total	24,652	17,577	9,445	8,271	5,399	1,595	313	628	67,880

(a) Accidents (reported to the police) which occurred in public thoroughfares and which resulted in the death of any person within a period of 30 days after the accident, or injury to an extent requiring surgical or medical treatment. (b) Includes all accidents resulting in bodily injury to any person whether or not requiring medical or surgical treatment. (c) Includes parked vehicles.

§ 2. Road Safety Organization

Australian Road Safety Council.—(i) *Origin, Objectives and Organization.* The Australian Road Safety Council was formed in 1947 by the Australian Transport Advisory Council, which comprises Commonwealth and State transport ministers and Commonwealth ministers with associated interests, to co-ordinate road safety activities in Australia. It was re-constituted in February, 1961, by the Australian Transport Advisory Council, in order to provide a smaller, more effective, organization.

The Council comprises 16 members, representing the Commonwealth and State Governments and the major categories of organized road users. It meets approximately twice each year and has established a number of temporary sub-committees to investigate and report upon particular aspects of its activities.

The Department of Shipping and Transport provides the central executive for the Council. Each section represented on the Australian Road Safety Council—Commonwealth, State and community/commercial—exercises full control over its own activities.

A sum of £150,000 is provided annually by the Commonwealth for the promotion of road safety practices; £50,000 is distributed to the State Governments for public education in road safety, and the remaining £100,000 is used for the national public education campaign. The £50,000 grant to the States is allocated in the following proportions:—New South Wales, £12,500; Victoria, £10,000; Queensland, £9,250; South Australia, £6,250; Western Australia, £8,250; Tasmania, £3,750.

(ii) *Mode of Operation.* The media used by the Australian Road Safety Council in its national campaigns include metropolitan daily press and metropolitan radio and television, platform and pulpit, plus a wide variety of posters, pamphlets, booklets, publications and films. The official publication of the Council is the *Australian Road Safety Council Report* which is published monthly. Close liaison is maintained with State and Commonwealth educationists in the preparation and distribution of road safety instructional material for schools.

The Council, through its Central Executive in the Department of Shipping and Transport, works in close collaboration with two companion Committees, established by the Australian Transport Advisory Council. These are the Australian Road Traffic Code Committee, which prepares model regulations with the object of attaining national uniformity of traffic laws; and the Australian Motor Vehicle Standards Committee, which devises national standards for the construction, equipment, and operational efficiency of all road vehicles.

At the present time a special committee of educationists, called together by the Australian Road Safety Council, is investigating ways and means of broadening and strengthening the impact of road safety education throughout the school system. Another committee is looking into the question of more comprehensive and purposeful road accident statistics.

The Council is, jointly with the Australian Motor Vehicle Standards Committee, investigating the desirability of compulsory vehicle inspections. The Council works in co-operation with the National Health and Medical Research Council and also the Australian Traffic Code Committee in examining existing arrangements on the policy and procedures best suited to Australian conditions for the promotion of driver improvement through health standards, licensing and enforcement.

The Council recently brought together representatives of commerce and industry and seat-belt manufacturers to promote a national seat-belt campaign. The move resulted from both Australian and overseas studies which indicated that the risk of death or serious injury to drivers and passengers could be reduced by up to 80 per cent. by the use of seat belts.

CIVIL AVIATION

1. **The Department of Civil Aviation.**—Control of civil aviation in Australia is exercised by the Department of Civil Aviation which was established in 1939 to take over from the Civil Aviation Board the regulation of civil aviation in Australia.

The Department—

provides, operates and maintains the Australian air traffic control and air navigation network, and aeronautical information service, and provides, in conjunction with the Commonwealth Meteorological Bureau, a national weather information service for aircraft;

designs, operates and maintains aerodromes and related facilities and licences their use;

approves fares, freight rates and timetables;

determines the rules of the air and general conditions of flight over Australian territory;

- licences air services—operating in liaison with State Government transport authorities;
- has the power to suspend or cancel pilot licences and airworthiness certificates, enforces safety regulations and institutes prosecutions for infringements;
- investigates aircraft accidents and incidents;
- licences flying schools and training organizations and supervises their activities;
- determines airworthiness requirements for civil aircraft and issues certificates of airworthiness and of type approval;
- licences pilots, flight engineers, radio operators, maintenance engineers, and technicians;
- negotiates and administers international air transport agreements with oversea countries and regulates international flights and air services;
- imposes, varies and collects charges levied on aircraft operators for the use of aerodromes and air route facilities;
- conducts continuous economic and statistical studies of airlines and other civil aviation activities;
- negotiates and administers Government-airline agreements on air services, mail carriage, and other matters;
- represents the Australian Government on several international Civil Aviation Organizations (I.C.A.O., S.P.A.T.C.) and also at international conventions and meetings dealing with civil aviation problems.

The Department's jurisdiction covers not only Australia but also Papua, New Guinea (including New Britain) and areas of the Indian and Pacific Oceans. The head office of the Department is in Melbourne with regional offices in each State and Territory including Papua and New Guinea.

Year Books Nos. 16, 19 and 38 trace the establishment of civil aviation control in Australia and the appropriate Acts of Parliament and Regulations under which this control is exercised.

2. 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 Year Book No. 37, and particulars of subsequent activity in the international field were included in No. 38. The International Civil Aviation Organization had a membership of 104 nations in December, 1964. Australia has continued its representation on the Council, a position which it held since I.C.A.O. was established in 1947. Further details will be found in Year Book No. 40 and earlier issues.

(ii) *International Agreements.* Australia has signed air services agreements with nineteen countries, of which seventeen were in force at December, 1964. The countries concerned were Canada, United States of America, Pakistan, India, Ceylon, Netherlands, United Arab Republic, Lebanon, South Africa, Japan, Germany, Ireland, Britain, Thailand, New Zealand, Italy and Malaysia. Agreements with Turkey and Iran await ratification by these countries. Provisional arrangements have also been concluded with seven other countries. Under both types of arrangements, traffic rights are granted to Australia's international airline Qantas in return for reciprocal traffic rights for the designated international airlines of the countries concerned to operate air services into Australia. Australia also has concluded provisional arrangements with five other countries providing for the over-flight of their territory by Qantas scheduled services but not covering traffic rights.

(iii) *International Air Services.* Ten international airlines, including Qantas, were operating services between Australia and oversea countries in February, 1965. By January, 1965, Qantas was operating a fleet of 13 Boeing 707-138B V-Jet aircraft and 4 Lockheed Electras over a world-wide network of 81,413 unduplicated route miles. Qantas also has on order six of the larger Boeing 707-338C jet aircraft for delivery during 1965-66.

3. **Australian National Airlines Commission.**—The *Commonwealth Australian National Airlines Act 1945* constituted the Australian National Airlines Commission for the purpose of establishing, maintaining and operating airline services for the transport of passengers and goods between Australian States and/or Territories and within Australian Territories. The Commission may, with the approval of the Minister, undertake services between Australia and places outside Australia, and, in certain circumstances, may engage in intra-State operations.

The operating organization set up to give effect to the Act is Trans-Australia Airlines.

4. **Regular Air Services within Australia.**—Eleven airlines operate domestic services throughout Australia and the Territory of Papua and New Guinea over a network of 80,455 unduplicated route miles. Australia's domestic airlines can be classified into three groups as follows.

Trans-Australia Airlines—operated by the Australian National Airlines Commission on behalf of the Commonwealth Government. T.A.A. operates on the main interstate routes throughout Australia and on territorial air services, as well as intrastate services in Queensland and Tasmania, and internal services in the Australian sector of Papua and New Guinea. At 30th June, 1964, T.A.A. was operating a front line fleet of 3 Electras, 12 Viscounts, 3 DC6B's, and 9 Friendships, as well as a number of DC4's, DC3's, 3 helicopters and smaller aircraft—a total fleet of 63 aircraft.

Ansett Transport Industries airline group—a private enterprise organization which comprises seven airlines. The group operates on the major interstate and territorial routes. The aircraft of the group at 30th June, 1964 included 3 Electras, 11 Viscounts, 3DC6B's and 4 Friendships as well as a number of DC4's and DC3's and 7 helicopters—a total fleet of 98 aircraft.

Small private enterprise airlines—this group comprises three independent feeder type airlines operating basically intrastate services in New South Wales, Western Australia, Northern Territory and internally in Papua and New Guinea.

Competition between the two major airlines T.A.A. and Ansett-A.N.A., which operate on all the major interstate and territorial air routes throughout Australia and between the mainland and the Territory of Papua and New Guinea, is controlled by airline agreements and legislation passed by the Commonwealth Parliament. The two principal Acts which establish the legislative basis of this controlled competition are the *Airlines Agreement Act 1952-1961* and the *Airlines Equipment Act 1958*. The Airlines Equipment Act establishes the machinery for the achievement and maintenance of comparable, but not necessarily identical, aircraft fleets between T.A.A. and Ansett-A.N.A. and is designed to prevent the provision of excess aircraft capacity. The Airlines Agreement Act establishes the basis of control of the two-airline competitive system and extends this machinery to 1977.

5. **General Aviation.**—General aviation activity, which covers all non-airline operations such as charter, aerial work and private flying, has grown rapidly throughout Australia in the post-war period so that now it is an important sector of the Australian aviation industry. In 1963, hours flown totalled 522,693 compared with 295,441 hours flown by the Australian airline industry. At 30th June, 1964, aircraft employed in general aviation numbered more than 1,700.

6. **Training of Air Pilots.**—Since 1926, the Commonwealth has subsidized flying training in Australia largely through the Aero Club movement. In 1961 the Government altered the basis of financial assistance to flying training organizations. The new system provides for the payment of £637,000 in subsidies to Australian flying training organizations, including the aero clubs, flying schools and the Gliding Federation of Australia, spread over a four-year period from 1961 to 1965. A feature of the new subsidy arrangements was the establishment of the Australian Flying Scholarship scheme which is designed to train career pilots for the Australian commercial aviation industry. The scholarships provide financial assistance in much the same way as Commonwealth scholarships provide for people undertaking other professions. Of the 159 flying scholarships awarded for 1964-65, 114 were scholarships to take the student through to the commercial licence standard, 37 were to commercial licence plus instructor rating and eight were for agricultural rating.

During the year 1963-64, pupils of the Australian flying training organizations (aero clubs and commercial flying schools) received 266 private licences, 127 commercial licences, and 63 instructor licences. Subsidized hours flown by aero clubs and flying schools totalled 126,544 hours out of a total of 165,363 hours flown and their subsidy earnings totalled £93,749. A limit placed on the subsidy restricted the total payment to £75,000. During the year 13 clubs were also assisted with the purchase of 15 aircraft and 3 aircraft radios. The value of this assistance under the Aircraft Replacement Fund was £10,000. The permanent secretariats of the Royal Federation of Aero Clubs and the Commercial Flying Schools also received £8,000 and £1,000 respectively during 1963-64 as additional financial assistance.

Thirty-one clubs were affiliated with the Gliding Federation of Australia in 1963-64. There were 1,084 members and 428 Certificates and Awards of Competency were obtained during the year.

During 1963-64 the Commonwealth assisted gliding clubs to the extent of £6,000. This amount was allocated as follows:—£3,000 on the basis of active membership and certificates and awards gained, £1,000 to the National Gliding School, £2,000 for development and design work and secretarial functions.

The total of all subsidy payments and financial assistance to flying training organizations and the gliding movement during 1963-64 was £150,000.

7. **Aerodromes.**—The number of aerodromes throughout Australia and its Territories at 30th June, 1964, was 636. One hundred and twenty-five were owned by the Commonwealth Government and 511 by local authorities and private interests. Those owned by the Commonwealth included all major aerodromes, e.g. Sydney, Melbourne, Brisbane, Adelaide, Perth, Darwin, Hobart, Canberra, etc., while the remainder were aerodromes which basically served a local rather than a national need. Since 1957 the Commonwealth Government has encouraged local authorities to take ownership of previously Government-owned aerodromes in this second category, free of charge, with the Commonwealth and the local authority sharing maintenance and further development costs. At 30th June, 1964, 163 aerodromes were being operated under this Aerodrome Local Ownership Plan.

In November, 1962, the Commonwealth Government approved a five-year programme of aerodrome development involving major projects at Sydney, Melbourne and Launceston as well as major works at other Commonwealth-owned aerodromes in all States and in Papua and New Guinea. Work has already started on several of these projects including a major runway extension into Botany Bay at Sydney, to be followed by a new international terminal scheduled for completion in 1968, a new airport at Melbourne which is expected to open for airline services in late 1967, and major runway extensions and improvements and a new terminal at Launceston. The primary purpose of this programme is to enable Australia's major aerodromes to handle more satisfactorily the increased operational demands of long-range international jets and also cater for the general improvement in internal services following the introduction of Boeing 727's on internal routes in November, 1964.

8. **Airways Facilities.**—Concurrently with the five-year aerodrome development programme, the Commonwealth Government has approved major extensions and improvements to Australia's air navigation and communications system. New long-range radar units have been installed at Sydney and Adelaide to assist air traffic control, and other units are being established at Melbourne, Brisbane and Perth. Total cost of this radar programme is approximately £2.5 million.

During 1963 work started on stage two of the Department of Civil Aviation's plan to improve further its nationwide network of navigation facilities. This second stage, together with stage one of the plan, which is now three-quarters complete, involves the installation of a total of 116 facilities, including 28 Visual Omni Radio Ranges (VOR). The work will increase the number of laterally spaced air routes throughout Australia and improve the network of navigation aids defining them.

9. **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 1960 to 1964.

CIVIL AVIATION: REGISTRATIONS, LICENCES, ETC., AUSTRALIA^(a)

Particulars	30th June—				
	1960	1961	1962	1963	1964
Registered aircraft owners ..	745	850	938	1,006	1,167
Registered aircraft ..	1,360	1,502	(b) 1,600	(b) 1,787	(c) 1,936
Pilots' licences—					
Private ..	3,001	3,206	3,627	4,066	4,720
Private helicopter ..	..	2	2	3	6
Commercial ..	948	973	1,090	1,159	1,263
Senior commercial ..	132	147	154	176	189
Helicopter (commercial) ..	30	34	33	42	53
Student ..	3,696	4,151	4,433	4,845	5,676
Student helicopter ..	14	10	12	15	41
1st class airline transport ..	618	659	690	684	670
2nd class airline transport ..	418	471	432	464	603
Flight navigators' licences ..	168	142	141	135	137
1st class flight radio-telegraphy operators' licences ..	55	43	37	20	19
Flight radio-telephone operators' licences ..	2,651	3,679	5,370	6,552	7,956
Flight engineers' licences ..	193	200	175	168	215
Aircraft maintenance engineers' licences ..	2,382	2,492	2,485	2,521	2,553
Aerodromes, Australia—					
Government ^(d) ..	149	132	129	122	113
Licensed ^(e) ..	323	351	359	380	381
Flying-boat bases ^(f) ..	13	13	13	13	13

(a) Except for aerodromes and flying-boat bases, includes the Territory of Papua and New Guinea. (b) In addition, there were 125 gliders on the register. (c) Excludes 145 gliders. (d) Under the control and management of the Department of Civil Aviation. (e) Under the control and management of a municipality, shire, station owner, private individual, etc. Includes emergency aerodromes. (f) Includes alighting areas.

(ii) *Types of Aircraft and Gliders on the Australian Register.* The various types of aircraft and gliders on the Australian register at 31st December, 1961, were shown in Year Book No. 48, p. 559.

Details of aircraft and gliders on the Australian register at 30th June, 1964, may be found in *Transport and Communication*, Bulletin No. 55, 1963-64.

(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 1959-60 to 1963-64.

CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES, AUSTRALIA^(a)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Hours flown ..	225,050	219,918	207,210	217,897	244,517
Miles ..	'000 43,199	42,301	41,176	43,700	48,971
Paying passengers ..	2,660,412	2,639,080	2,666,160	2,832,934	3,256,937
Paying passenger-miles ..	'000 1,132,517	1,109,552	1,119,430	1,221,178	1,408,317
Freight—					
Tons ^(b) ..	65,402	62,971	57,207	59,373	63,161
Ton-miles ^(b) ..	'000 29,240	28,220	26,076	28,270	30,491
Mail—					
Tons ^(b) ..	4,825	5,956	6,311	6,467	7,082
Ton-miles ^(b) ..	'000 2,567	3,064	3,198	3,324	3,741

(a) Includes only services operating within the Australian mainland and Tasmania.

(b) In terms of short tons (2,000 lb.).

(iv) *Operations of Oversea Services wholly or partly Australian-owned.* The following table furnishes a summary for the years 1959-60 to 1963-64 of overseas services wholly or partly owned by Australian interests. This table incorporates aggregate particulars of all traffic originating on overseas services of Qantas Empire Airways Limited and Tasman Empire Airways Limited, which, in the case of Qantas, includes considerable traffic which does not enter Australia. The transfer of the Australian Government's shares in Tasman Empire Airlines to the New Zealand Government on 25th July, 1961, made TEAL a wholly New Zealand-owned airline, and statistics of its operations are therefore not included in Australian statistics after 1960-61. An air services agreement was signed whereby air traffic rights into and through the two countries were exchanged at the same time, and on 1st October, 1961, both airlines commenced joint scheduling arrangements for trans-Tasman services. The table also includes traffic between Australia and Papua, New Guinea and Norfolk Island.

CIVIL AVIATION: OPERATIONS OF OVERSEA SERVICES(a)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Route miles (unduplicated) at 30th June ..	76,125	72,290	69,712	71,676	84,532
Hours flown	54,668	57,385	51,066	48,669	53,792
Miles '000	16,992	20,068	19,240	20,343	22,357
Paying passengers	232,714	291,258	247,517	294,908	352,442
Paying passenger-miles '000	720,099	847,713	836,570	1,014,867	1,185,982
Freight—					
Tons(b)	5,150	6,575	6,432	6,756	8,043
Ton-miles(b) '000	24,625	30,134	30,429	33,135	38,634
Mail—					
Tons(b)	2,015	2,335	2,015	2,468	2,646
Ton-miles(b) '000	10,351	11,269	11,622	15,191	16,056

(a) Airlines wholly or partly owned by Australian interests.

(b) In terms of short tons (2,000 lb.).

(v) *Accidents and Casualties.* Particulars of accidents in which persons were killed or injured, involving aircraft on the Australian register, are shown in the following table for the years 1959-60 to 1963-64.

CIVIL AVIATION: AUSTRALIAN AIRCRAFT(a), ACCIDENTS INVOLVING CASUALTIES

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Number	43	40	46	32	33
Persons killed	44	28	52	16	24
Persons injured	42	38	38	26	26

(a) Aircraft on Australian register and gliders irrespective of location of accident.

10. Territory of Papua and New Guinea.—For brief particulars of civil aviation in Papua and New Guinea see Chapter V. The Territories of Australia, pages 128 and 134.

POSTS; TELEGRAPHS; TELEPHONES; OVERSEA TELECOMMUNICATION SERVICES

NOTE.—In this division, particulars for the Australian Capital Territory are included with those for New South Wales and the South Australian figures include particulars for the Northern Territory, unless otherwise indicated.

§ 1. General

1. **The Postmaster-General's Department.**—Under the provisions of the *Post and Telegraph Act 1901–1961*, the Postmaster-General's Department is responsible for the control and operation of postal, telegraphic and telephonic services throughout Australia. The Postmaster-General's Department is also responsible for the provision and operation of the transmitters and technical facilities required for broadcasting and television services by the Australian Broadcasting Commission (*see pp. 595–9*), and, in conjunction with the Overseas Telecommunications Commission (*see pp. 591–2*), with whom there is close cooperation, provides facilities for communication with overseas countries. Subsidiary to its major activities, the Postmaster-General's Department performs a number of important functions for other Commonwealth and State departments, including the payment of pensions, child endowment, and military allotments, the provision of banking facilities on behalf of the Commonwealth Savings Bank, the sale of tax and duty stamps, and the collection of land tax.

2. **Postal Facilities.**—(i) *Relation to Area and Population.* The following table 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, 1964.

POSTAL FACILITIES: RELATION TO AREA AND POPULATION AT 30th JUNE, 1964

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Number of post offices—							
Official	514	328	231	172	148	54	1,447
Non-official	1,925	1,846	1,002	753	488	446	6,460
Total	2,439	2,174	1,233	925	636	500	7,907
Number of square miles of territory per office	127	40	541	973	1,534	53	375
Number of inhabitants per office	1,721	1,440	1,289	1,150	1,242	729	1,408
Number of inhabitants per 100 square miles	1,352	3,563	238	118	81	1,382	375

(ii) *Employees and Mail Contractors.* The number of employees and mail contractors in the Central Office and in each of the States at 30th June, 1964, is given in the following table.

NUMBER OF POSTAL EMPLOYEES AND MAIL CONTRACTORS AT 30th JUNE, 1964(a)

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Full-time employees—								
Permanent officers	1,461	23,706	16,462	9,831	6,649	4,842	2,556	65,507
Temporary and exempt officers	200	9,047	8,467	2,413	2,356	1,281	813	24,577
Total	1,661	32,753	24,929	12,244	9,005	6,123	3,369	90,084
Other employees—								
Non-official postmasters and staff	..	2,372	2,489	1,280	943	535	485	8,104
Telephone office-keepers .. .. .	..	317	138	439	108	258	19	1,306
Mail contractors (including persons employed to drive vehicles)	..	2,103	1,096	1,160	355	316	198	5,228
Total .. .. .	..	4,792	3,723	2,879	1,406	1,136	702	14,368
Grand Total	1,661	37,545	28,652	15,123	10,411	7,259	4,071	104,722

(a) Excludes 2,963 part-time staff.

3. Cash Revenue, Branches—Postmaster-General's Department.—(i) *States*, 1963–64. The cash revenue (actual collections) in respect of each branch of the Department during the year 1963–64 is shown in the following table.

POSTMASTER-GENERAL'S DEPARTMENT: CASH REVENUE, 1963-64(a)

(£'000)

Source	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Postal	3,305	20,456	14,318	6,229	4,332	3,104	1,233	52,977
Telegraph	1,016	2,595	1,950	1,313	926	633	194	8,627
Telephone	1,114	40,481	29,368	13,140	9,590	6,245	2,844	102,782
Miscellaneous .. ..	..	79	110	13	23	16	12	253
Total	5,435	63,611	45,746	20,695	14,871	9,998	4,283	b164,639

(a) The figures in this table relate to revenue actually collected during the year as recorded for Treasury purposes. (b) Excludes Post Office Stores and Services Trust Account repayment, £792,393.

(ii) *Australia*. The following table shows the cash revenue (actual collections) of the Department for each of the five years 1959–60 to 1963–64.

POSTMASTER-GENERAL'S DEPARTMENT: CASH REVENUE, AUSTRALIA(a)

(£'000)

Source	1959–60	1960–61 (b)	1961–62	1962–63	1963–64
Postal	39,167	45,890	47,104	49,427	52,977
Telegraph	6,804	7,275	7,448	7,919	8,627
Telephone	71,209	82,732	85,166	92,315	102,782
Miscellaneous	(c) 4,451	224	96	175	253
Total	121,631	d 136,121	139,814	e 149,836	e 164,639

(a) See footnote (a) to previous table. (b) Figures not entirely comparable with those for earlier years. (c) Includes items allocated to other headings after 1959–60. (d) An amount of £43,625 has been excluded from 1960–61 figures published in Year Book No. 48. This amount represents receipts under the Wireless Telegraphy Act which are now credited to broadcasting and television revenue. (e) Excludes Post Office Stores and Services Trust Account repayments, £853,231 in 1962–63 and £792,393 in 1963–64.

4. Cash Expenditure, Postmaster-General's Department.—(i) *States*. The following table shows, as far as possible, the distribution of cash expenditure (actual payments) in each State during 1963–64, 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
CASH EXPENDITURE, 1963-64(a)**

(£'000)

Particulars	Central Office	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Expenditure from Ordinary Services								
Votes—								
Salaries and payments in the nature of salary	850	20,175	14,651	7,896	5,137	3,414	1,859	53,982
Administration	301	2,703	2,068	818	740	418	246	7,294
Stores and material	104	568	468	198	162	98	56	1,654
Mail services	7,249	1,983	1,049	934	463	265	133	12,076
Engineering services (other than capital works)	1,166	14,197	10,249	5,103	3,970	2,542	1,448	38,675
Other services	140	..	..	..	..	..	..	140
Total	9,810	39,626	28,485	14,949	10,472	6,737	3,742	113,821
Rent, repairs, maintenance .. .. .	..	706	770	271	196	114	46	2,103
Capital works and services—								
Plant and equipment	(b) 998	23,420	17,136	6,402	6,240	4,765	2,242	61,203
New buildings, etc. .. .. .	..	3,076	1,686	1,258	624	414	300	7,358
Grand Total	10,808	66,828	48,077	22,880	17,532	12,030	6,330	184,485

(a) The figures in this table represent actual payments made during the year as recorded for Treasury purposes. (b) Includes expenditure on research laboratories.

(ii) *Australia.* The following table shows the distribution of cash expenditure (actual payments) of the Department, for Australia as a whole, for each of the years 1959-60 to 1963-64.

**POSTMASTER-GENERAL'S DEPARTMENT: CASH EXPENDITURE,
AUSTRALIA(a)**

(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Expenditure from Ordinary Services					
Votes—					
Salaries and payments in the nature of salary	48,174	48,691	50,430	51,128	53,982
Administration	5,318	5,811	6,115	6,151	7,294
Stores and material	2,563	2,567	2,373	1,797	1,654
Mail services	9,637	10,376	10,885	11,518	12,076
Engineering services (other than capital works)	40,604	41,006	43,185	34,406	38,675
Other services	108	142	125	140	140
Total	106,404	108,593	113,113	105,140	113,821
Rent, repairs, maintenance	1,374	1,543	1,659	1,763	2,103
Capital works and services—					
Plant and equipment	35,658	37,296	40,511	55,797	61,203
New buildings, etc.	4,279	4,849	5,428	5,943	7,358
Other expenditure, not allocated to States	3,832	3,928	(b)	(b)	(b)
Grand Total	151,547	156,209	160,711	168,643	184,485

(a) See footnote (a) to previous table, Department.

(b) Items no longer debited against Postmaster-General's Department.

5. Profit or Loss, Postmaster-General's Department.—The foregoing tables of cash 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 1962–63 and 1963–64.

POSTMASTER-GENERAL'S DEPARTMENT: PROFIT OR LOSS, BRANCHES
(£'000)

Particulars	1963–64				1962–63
	Postal	Tele- phone	Tele- graph	All branches	All branches
<i>Earnings</i>	53,288	102,548	8,810	164,646	151,469
<i>Working expenses—</i>					
Direct working expenses	46,388	52,040	5,879	104,307	97,860
Management and administration ex- penses	1,780	2,163	389	4,332	3,746
Depreciation	807	23,302	635	24,744	22,308
Superannuation liability and pensions ..	3,015	4,331	550	7,896	7,140
<i>Total Working Expenses (excluding Interest)</i>	51,990	81,836	7,453	141,279	131,054
<i>Profit or loss before charging interest</i> ..	1,298	20,712	1,357	23,367	20,415
<i>Interest</i>	820	22,379	465	23,664	21,178
<i>Profit or loss after charging interest</i> ..	478	– 1,667	892	– 297	– 763

NOTE.—Minus sign (–) denotes loss.

6. Fixed Assets.—The following table shows particulars of the fixed assets of the Postmaster-General's Department from 1st July, 1963, to 30th June, 1964.

POSTMASTER-GENERAL'S DEPARTMENT: FIXED ASSETS

Class of plant	Value at 1st July, 1963	Additions during year	Instalments of plant written out	Value at 30th June, 1964	
				Amount	Percentage of total
Telecommunications plant ..	£'000 570,838	£'000 64,294	£'000 – 5,502	(a) £'000 629,630	83.6
Postal plant	3,056	852	– 7	3,901	0.5
Engineers' movable plant ..	13,150	2,079	– 340	14,889	2.0
Motor vehicles	10,469	2,432	– 1,545	11,356	1.5
Other plant and equipment ..	11,923	1,249	– 262	12,910	1.7
Buildings	64,071	7,695	..	(b) 71,766	9.5
Land	9,044	229	..	9,273	1.2
Total	682,551	78,830	– 7,656	753,725	100.0

NOTE.—Minus sign (–) denotes plant written out.

(a) Includes plant valued at £31,513,027 under construction. (b) Includes buildings valued at £4,322,601 under construction.

§ 2. Posts

1. Postal Matter Dealt With.—(i) States, 1963-64. The following table shows a summary of the postal matter dealt with in each State during the year 1963-64. 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), 1963-64

('000)

State	Letters (b)	News- papers and packets (c)	Parcels (d)	Registered articles (e)	Letters (b)	News- papers and packets (c)	Parcels (d)	Registered articles (e)
	Posted for delivery within Australia				Posted for delivery overseas			
New South Wales ..	643,674	136,438	5,860	3,676	42,332	10,949	266	739
Victoria ..	555,636	84,536	4,789	2,498	19,975	3,465	126	483
Queensland ..	225,923	28,553	2,195	1,391	8,456	968	35	29
South Australia ..	156,379	16,464	1,309	756	6,410	899	41	54
Western Australia ..	130,715	11,262	1,016	533	6,855	1,216	29	55
Tasmania ..	45,172	7,252	204	364	566	76	10	3
Australia ..	1,757,499	284,505	15,373	9,218	84,594	17,573	507	1,363
	Received from overseas				Total postal matter dealt with			
New South Wales ..	51,853	28,729	528	1,089	737,859	176,116	6,654	5,504
Victoria ..	42,841	10,914	351	499	618,452	98,915	5,266	3,480
Queensland ..	5,595	5,213	89	70	239,974	34,734	2,319	1,490
South Australia ..	4,479	5,111	80	28	167,268	22,474	1,430	838
Western Australia ..	3,454	6,453	64	44	141,024	18,931	1,109	632
Tasmania ..	1,714	2,012	18	4	47,452	9,340	232	371
Australia ..	109,936	58,432	1,130	1,734	1,952,029	360,510	17,010	12,315

(a) Number of distinct articles handled. (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.

(ii) Australia. The next table shows the total postal matter dealt with in Australia in relation to the mean population during each of the years 1959-60 to 1963-64.

TOTAL POSTAL MATTER DEALT WITH: AUSTRALIA

Year	Letters, postcards and letter-cards		Newspapers and packets		Parcels(a)		Registered articles other than parcels	
	Total (‘000)	Per head of mean popula- tion	Total (‘000)	Per head of mean popula- tion	Total (‘000)	Per head of mean popula- tion	Total (‘000)	Per head of mean popula- tion
1959-60 ..	1,602,830	158	319,831	31	16,433	1.6	13,671	1.5
1960-61 ..	1,700,544	164	318,614	31	15,976	1.5	12,935	1.2
1961-62 ..	1,748,054	165	324,694	31	15,854	1.5	12,357	1.2
1962-63 ..	1,835,869	170	337,644	31	16,545	1.5	12,339	1.1
1963-64 ..	1,952,029	177	360,510	33	17,010	1.5	12,315	1.1

(a) Includes registered, cash on delivery and duty parcels.

During 1963-64, 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 £4,265,000; railway £1,523,000; sea £275,000; air—internal £1,482,000, oversea £5,796,000; grand total £13,341,000.

2. **Money Orders and Postal Notes.**—The issue of money orders and postal notes is regulated by sections 74–79 of the *Post and Telegraph Act* 1901–1961. 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 by any one person to a person or persons outside Australia is £A.10 a week. A postal note is not available for a sum larger than twenty shillings.

The following table shows the number and value of money orders and postal notes issued in Australia in each of the years 1959–60 to 1963–64.

MONEY ORDERS AND POSTAL NOTES: TRANSACTIONS, AUSTRALIA

Year	Money orders			Postal notes		
	Issued		Net commission received	Issued		Poundage
	Number	Value		Number	Value	
	'000	£'000	£'000	'000	£'000	£'000
1959–60..	9,535	94,335	805	16,492	8,380	324
1960–61..	9,652	100,760	867	15,959	8,194	307
1961–62..	(a) 10,176	(a) 132,496	876	15,514	8,096	307
1962–63..	(a) 11,076	(a) 153,433	929	16,330	8,620	321
1963–64..	(a) 11,838	(a) 169,337	1,002	15,987	8,617	317

(a) Includes official money orders used in bringing to account telephone accounts and collections on War Service Homes repayments.

Of the total money orders issued in Australia during 1963–64, 11,424,000 valued at £168,045,000 were payable in Australia, and 414,000 valued at £1,292,000 were payable overseas. Of the total money orders paid in Australia during 1963–64, 11,357,000 (£168,255,000) were issued in Australia, and 168,000 (£1,123,000) were issued overseas.

Of the total postal notes paid in Australia during 1963–64 (16,323,000 valued at £8,932,000), 11,246,000 (£6,355,000) were paid in the State in which issued, and 5,077,000 (£2,577,000) were paid in States other than those in which issued.

§ 3. Telegraphs

1. **General.**—A review of the development of telegraph services in Australia up to 1921 appeared in Year Book No. 15, page 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, and these matters have been dealt with in some detail in recent issues of the Year Book.

2. **Telegraph and Telephone Mileage.**—At 30th June, 1964, the combined single-wire mileages for both telegraph and telephone purposes were:—aerial, underground and submarine cables, 11,725,000 miles; trunk telephone and telegraph cables, 643,000 miles; aerial wires, 1,349,000 miles. There were 122,000 miles of pole routes. Joint use is made of poles for power and telephone reticulation.

3. **Telegraph Offices.**—The numbers of telegraph offices, including railway telegraph offices in the various States at 30th June, 1964, were:—New South Wales, 2,781; Victoria, 2,228; Queensland, 1,671; South Australia, 1,008; Western Australia, 920; Tasmania, 500; total, 9,108.

4. **Telegrams.**—The following table shows the number of telegrams dispatched to places within Australia and to adjacent islands and to ships at sea, according to the class of message transmitted.

TELEGRAMS DISPATCHED WITHIN AUSTRALIA, 1963-64
(’000)

State	Paid and collect							Unpaid (departmental)	Total telegrams
	Ordinary	Meteorological	Urgent	Radiograms	Press	Lettergrams	Total		
New South Wales	6,504	238	219	61	52	33	7,107	238	7,345
Victoria ..	3,832	167	128	6	16	7	4,156	123	4,279
Queensland ..	3,538	185	102	89	34	14	3,962	148	4,110
South Australia	1,610	108	42	24	16	11	1,811	52	1,863
Western Australia	1,573	161	45	96	10	17	1,902	38	1,940
Tasmania ..	448	62	9	1	2	4	526	22	548
Australia ..	17,505	921	545	277	130	86	19,464	621	20,085

For particulars of telegrams received from, and dispatched to, other countries, see § 5, para. 2, page 592.

§ 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, p. 589. Developments in the telephone system in recent years have been dealt with in previous issues of this Year Book.

2. **Summary.**—Particulars relating to the telephone services in each State at 30th June, 1964, are shown in the following table.

TELEPHONE SERVICES: SUMMARY, 30th JUNE, 1964

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust
Exchanges ..	2,061	1,680	1,270	742	767	368	6,888
Services in operation .. '000	733	602	240	173	114	57	1,919
Instruments in operation '000	1,053	819	324	241	155	78	2,670
(i) Subscribers' instruments '000	1,032	799	313	233	150	75	2,602
(ii) Public telephones .. '000	11	7	4	2	2	1	27
(iii) Other local instruments '000	10	13	7	6	3	2	41
Instruments per 100 of population	25.1	26.2	20.4	22.7	19.6	21.4	24.0

Of the total telephone services (1,918,880) in operation at 30th June, 1964, 730,616 or 38 per cent. were connected to exchanges situated beyond the limits of the metropolitan telephone networks, while 1,549,632 or 81 per cent. were connected to automatic exchanges.

During 1963-64, 2,006 million local calls and 95.7 million trunk line calls were made within Australia, averaging 1,045 local calls and 50 trunk calls per service.

3. **Overseas Telephone Services.**—Telephone circuits to other countries are provided by the Overseas Telecommunications Commission (see § 5, para. 1) for conduct of these services by the Postmaster-General's Department. At 30th June, 1964, telephone calls could be made from Australia direct to 133 countries. International telephone calls to and from Australia during 1963-64 numbered 301,668, an increase of 100,493 or 50 per cent. over 1962-63. Switched radiotelephone services were established with Raratonga, Tahiti, Aden, Thailand, Tonga, Western Samoa and American Samoa during the year. The marked increase in traffic on the overseas service has been brought about largely by the introduction of cable working to New Zealand, United Kingdom and North America.

4. **World Telephone Statistics, 1964.**—The following table shows the number of telephones in use in various countries with two million or more telephones at 1st January, 1964, together with the number per 100 of population and the proportion in each country to the world total.

WORLD TELEPHONE STATISTICS(a) AT 1st JANUARY, 1964

Country	Number of telephones ('000)	Telephones per 100 of population	Proportion of total (per cent.)
United States of America	84,453	44	49.3
Japan(b)	10,682	11	6.2
United Kingdom(b)	9,345	17	5.5
Germany, Federal Republic of	7,600	13	4.4
Canada	6,664	35	3.9
U.S.S.R.	6,502	3	3.8
France	5,336	11	3.1
Italy	5,057	10	3.0
Sweden	3,223	42	1.9
Australia(c)	2,670	24	1.6
Spain	2,283	7	1.3
Netherlands	2,023	17	1.2
Other	25,310	..	14.8
<i>Total</i>	<i>171,148</i>	<i>..</i>	<i>100.0</i>

(a) Partly estimated. Information derived, in the main, from *The World's Telephones* compiled by the American Telephone and Telegraph Company. (b) At 31st March, 1963. (c) At 30th June, 1964.

§ 5. Oversea Telecommunication Services; Radiocommunication Stations Authorized

1. **General.**—The Overseas Telecommunications Commission (Australia) is the authority responsible for the establishment, maintenance, operation and development of Australia's oversea public telegraph, phototelegraph and telex services by cable and by radio, and the provision, maintenance, and development of cable and radio facilities for the conduct of Australia's oversea telephone services and of the facilities for radiotelephone services with ships at sea.

The Commission was established under the *Overseas Telecommunications Act 1946–1948*. This Act implemented, in Australia, a recommendation of the 1945 Commonwealth Telecommunications Conference for national ownership of the external telecommunication services of the British Commonwealth countries concerned and for the establishment of a representative advisory board, the Commonwealth Telecommunications Board, to co-ordinate their development.

The Commission provides telegraph, telex, phototelegraph, and, in conjunction with the Postmaster-General's Department, telephone services with oversea countries and Australian Territories. Leased one- and two-way circuits are also provided for large commercial users. In addition, it operates the Australian coastal radio services for communication with ships at sea in Australian waters and high frequency radio services for communication with ships in any part of the world. The Commission's coastal radio stations also provide certain services to a number of remote stations within Australia and its Territories.

Details of oversea communication systems operating in Australia prior to 1946 and developments leading to the establishment of the Commission were published in Year Book No. 37, pages 220–4.

To meet Australia's increasing demand for oversea communication channels, and because of limitations to performance and capacity inherent in current forms of telegraph cables and high frequency radio systems, the Commission, in partnership with the oversea telecommunications authorities of Britain, Canada and New Zealand, installed a large capacity telephone cable across the Pacific Ocean, connecting Australia, New Zealand and Canada via Suva and Honolulu. This project stemmed from the Pacific Cable Conference between representatives of Britain, Canada, Australia and New Zealand held in Sydney, 28th September to 20th October, 1959. Work was commenced in August, 1960, and the first section, between Australia (Sydney) and New Zealand (Auckland), opened in July, 1962. The next section, between New Zealand (Auckland) and Fiji (Suva), was opened in December, 1962, and the remaining section in December, 1963. This cable forms part of

the British Commonwealth round-the-world large capacity cable scheme, in which a complementary cable between Britain and Canada (CANTAT) was officially opened in December, 1961. The two cable connexions are linked across Canada by a microwave system.

The Commonwealth cable system feeds into the United States of America network at Hawaii, and into the European network at London.

The Pacific Cable project is administered by a management committee consisting of representatives of the oversea telecommunication authorities of the four partner Governments.

The four partners and a fifth, Malaysia, have embarked on the next stage of the system, the south-east Asia cable project and known as SEACOM, which will extend the large capacity telephone cable from Sydney to Singapore and Kuala Lumpur via Cairns, Madang, Guam, Hong Kong and Jesselton. The Singapore-Jesselton section was opened for service on 15th January, 1965, and the Jesselton-Hong Kong section on 31st March, 1965. The whole project is scheduled for completion in 1966.

2. International Telegrams.—(i) *Number of Telegrams.* The number of telegrams received from and dispatched overseas in each State during 1963-64 is shown hereunder.

INTERNATIONAL TELEGRAMS, 1963-64
(’000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
Received	856	(a) 427	118	79	83	(a) 21	1,584
Dispatched	815	557	123	85	84	21	1,685
Total	1,671	984	241	164	167	42	3,269

(a) Estimated.

The traffic in international telegrams to and from Australia increased by 12 per cent. during 1963-64. Prior to this there had been little change since 1959-60.

(ii) *Number of Words.* Particulars of the international business, originating and terminating in Australia, transacted over the cable and radio services during 1963-64 are shown in the following table.

INTERNATIONAL TELEGRAMS: NUMBER OF WORDS, AUSTRALIA, 1963-64(a)
(’000 words)

Class of telegram	Words transmitted to—			Words received from—		
	Commonwealth countries	Foreign countries	Total	Commonwealth countries	Foreign countries	Total
Letter	8,093	8,532	16,625	7,563	7,501	15,064
Ordinary	8,741	6,580	15,321	8,034	4,919	12,953
Press	4,849	550	5,399	8,775	506	9,281
Greetings	1,277	..	1,277	1,337	..	1,337
Government	472	384	856	878	781	1,659
Urgent	537	144	681	398	85	483
Other	9	1	10	54	38	92
Total	23,978	16,191	40,169	27,039	13,830	40,869

(a) Year ended 31st March.

3. Oversea Telephone Services.—See § 4, para. 3, page 590 for particulars of these services.

4. Coast Stations.—At 30th June, 1964, there were 115 radio stations established at points around the Australian coast and 17 about the coast of Papua and New Guinea and other external Territories. During the year ended 31st March, 1964, the coastal radio service handled 3,963,697 paid words to ships and 2,698,056 words from ships. Ship calls over the radio telephone service extended over 16,152 paid minutes.

5. Radiocommunication Stations Authorized.—The following table shows particulars of the different classes of radiocommunication stations authorized in Australia and the external Territories at 30th June, 1964. Figures relate to radiocommunication (radio telegraph and radiotelephone) stations only; particulars of broadcasting stations and of broadcast listeners' licences are shown on pages 597 and 601 respectively.

RADIOCOMMUNICATION STATIONS AUTHORIZED, 30th JUNE, 1964

Class of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	Ext. Terr.	Total
TRANSMITTING AND RECEIVING											
Fixed(a)—											
Aeronautical	11	4	12	5	14	9	5	1	61	26	87
Services with other countries	58	13	..	..	12	..	3	..	86	46	132
Outpost(b)	264	..	523	183	402	15	194	..	1,581	620	2,201
Other	288	221	153	97	75	36	51	4	925	167	1,092
Land(c)—											
Aeronautical	58	16	32	8	20	8	24	1	167	18	185
Base—											
Land mobile services ..	1,540	1,061	728	418	294	202	22	68	4,333	26	4,359
Harbour mobile services ..	23	18	17	9	24	5	..	..	96	5	101
Coast(d)	28	14	16	14	20	21	2	..	115	17	132
Special experimental ..	130	135	38	44	51	12	4	..	414	11	425
Mobile(e)—											
Aeronautical	440	274	252	91	171	29	30	..	1,287	59	1,346
Land mobile services ..	15,813	11,049	6,038	4,780	2,812	1,404	245	252	42,393	212	42,605
Harbour mobile services ..	178	142	60	56	77	41	..	..	554	10	564
Outpost	221	..	317	204	307	45	592	..	1,686	113	1,799
Ship	1,361	370	776	263	294	240	17	..	3,501	196	3,697
Amateur	1,555	1,454	518	615	352	160	19	44	4,717	73	4,790
Total	21,968	14,771	9,480	6,787	4,925	2,227	1,208	370	61,916 (f)	1,599	63,515

RECEIVING ONLY

Fixed(a)	148	177	131	..	52	..	..	..	508	..	508
Total	148	177	131	..	52	..	..	..	508	..	508

TOTAL STATIONS AUTHORIZED

Grand Total	22,116	14,948	9,611	6,787	4,977	2,227	1,208	370	62,424 (f)	1,599	64,023
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(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 (ships), and mobile equipment of organizations such as the Royal Flying Doctor Service.
 (f) Includes 180 stations which cannot be classified according to State, etc.

BROADCASTING AND TELEVISION

§ 1. General

Broadcasting and television services in Australia operate under the *Broadcasting and Television Act 1942-1964* 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 below*). Details of each service will be found on pages 595-9. Licence fees for commercial broadcasting and television stations are payable under the *Broadcasting Stations Licence Fees Act 1964* and the *Television Stations Licence Fees Act 1964* respectively.

The Australian Broadcasting Control Board, which was constituted on 15th March, 1949, consists of five (including two part-time) members and operates under the Ministerial jurisdiction of the Postmaster-General. No person shall be appointed 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 station or a commercial 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 station or commercial television station; or
- (c) is a licensee of, or an applicant for a licence for, a commercial broadcasting station or commercial television station.

The Board's principal functions, as set out in Section 16 of the *Broadcasting and Television Act 1942-1964* are—

- (a) to ensure the provision of services by broadcasting stations and television stations in accordance with plans from time to time prepared by the Board and approved by the Minister;
- (b) to ensure that the technical equipment and operation of such stations are in accordance with such standards and practices as the Board considers to be appropriate;
- (c) to ensure that adequate and comprehensive programmes are provided by commercial broadcasting and commercial television stations to serve the best interests of the general public; and
- (d) to detect sources of interference, and to furnish advice and assistance in connexion with the prevention of interference, with the transmission or reception of the programmes of broadcasting stations and television stations.

In addition, the Board may exercise such other functions as are prescribed in relation to broadcasting and television stations.

The Board may make recommendations to the Minister as to the exercise by the Minister of any power under Part IV (the Commercial Broadcasting Service and the Commercial Television Service) of the Act.

The Board has power—

- (a) subject to any direction of the Minister, to determine the situation and operating power of a broadcasting station or television station;
- (b) subject to any direction of the Minister, to determine the frequency of a broadcasting station and the frequencies of a television station, within bands of frequencies notified to the Board by the Postmaster-General as being available;
- (c) to determine the hours during which programmes may be broadcast or televised;
- (d) to determine the conditions subject to which advertisements may be broadcast or televised by licensees;
- (e) subject to any direction of the Minister, to regulate the establishment and operation of networks of commercial broadcasting stations or of commercial television stations and the making of arrangements by licensees for the provision of programmes or the broadcasting or televising of advertisements;
- (f) to conduct examinations as to the competency of persons to operate the technical equipment of broadcasting stations and television stations and to charge fees in respect of those examinations; and

- (g) to make recommendations to the Minister regarding the grant of licences for television translator stations in areas where, in the opinion of the Board, satisfactory reception of television programmes is not being obtained from commercial television stations.

The Board is obliged to hold public inquiries into applications, made to the Minister, for licences for commercial broadcasting and commercial 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.

In exercising its powers and functions in relation to commercial broadcasting and commercial television stations the Board is obliged to consult representatives of those stations.

The Australian Broadcasting Commission, which consists of seven members, at least one of whom must be a woman, controls the activities of the National Broadcasting Service and the National Television Service.

§ 2. Broadcasting

1. **The National Broadcasting Service.**—(i) *General.* In sound broadcasting, the programmes of the National Broadcasting Service are provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department.

(ii) *Technical Facilities.* At 30th June, 1964, the National Broadcasting Service comprised the following 75 transmitting stations, of which 65 were medium frequency and 10 high frequency.

Medium Frequency Stations—

New South Wales—2BL and 2FC, Sydney; 2AN, Armidale; 2BA, Bega; 2CO, Albury; 2CR, Orange; 2GL, Glen Innes; 2KP, Kempsey; 2LG, Lithgow; 2ML, Murwillumbah; 2NA and 2NC, Newcastle; 2NB, Broken Hill; 2NR, Grafton; 2NU, Tamworth; 2TR, Taree; 2UH, Muswellbrook; and 2WN, Wollongong.

Victoria—3AR and 3LO, Melbourne; 3GI, Sale; 3WL, Warrnambool; and 3WV, Horsham.

Queensland—4QG and 4QR, Brisbane; 4AT, Atherton; 4GM, Gympie; 4MI, Mount Isa; 4QA, Mackay; 4QB, Maryborough; 4QL, Longreach; 4QN, Townsville; 4QS, Toowoomba; 4QY, Cairns; 4RK, Rockhampton; 4SO, Southport.

South Australia—5AN and 5CL, Adelaide; 5CK, Port Pirie; 5LN, Port Lincoln; 5MG, Mount Gambier; 5MV, Renmark; 5PA, Penola; and 5WM, Woomera.

Western Australia—6WF and 6WN, Perth; 6AL, Albany; 6CA, Carnarvon; 6DN, Dalwallinu; 6GF, Kalgoorlie; 6GN, Geraldton; 6NM, Northam; and 6WA, Wagin.

Tasmania—7ZL and 7ZR, Hobart; 7NT, Launceston; and 7QN, Queenstown.

Northern Territory—8AL, Alice Springs; 8DR, Darwin; 8KN, Katherine; 8TC, Tennant Creek.

Australian Capital Territory—2CN and 2CY, Canberra.

Territory of Papua and New Guinea—9PA, Port Moresby; and 9RB, Rabaul.

High Frequency Stations—

VLI Sydney, New South Wales; VLG, VLH and VLR Lyndhurst, Victoria; VLM and VLQ Brisbane, Queensland; VLW and VLX Perth, Western Australia; and VLK and VLT Port Moresby, Papua.

The medium-frequency transmitters operate in the broadcast band 525 to 1,605 kilocycles per second. The high-frequency stations, using frequencies within the band 3 to 30 megacycles per second, provide service 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 provided 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, 1964, 51 of the Australian medium-frequency stations were situated outside the six State capital cities. Additional country stations are to be established, and, when these additions are complete, 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 1963-64 was as follows:—classical music, 24.9 per cent.; light entertainment, 23.3 per cent.; news, 7.5 per cent.; sporting, 6.5 per cent.; light music, 6.2 per cent.; talks, 6.0 per cent.; drama and features, 3.4 per cent.; education, 3.4 per cent.; Parliament, 3.4 per cent.; religious, 3.4 per cent.; children's programmes, 2.6 per cent.; rural, 1.8 per cent.; special programmes, 0.8 per cent.; and non-departmental, 6.8 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. Its regular broadcasts command a large audience, and a total of 878,123 people attended A.B.C. concerts during 1963-64. There are symphony orchestras in Sydney, Melbourne, Brisbane, Adelaide, Perth and Hobart, which have developed from the studio broadcasting orchestras set up in 1936.

In 1963-64, the A.B.C. organized 579 public orchestral concerts (including 173 free concerts for school children and 35 free concerts for adults) and 156 public recitals by famous artists throughout the Commonwealth.

(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 radio drama programmes are broadcast on Sunday afternoons and Sunday and Monday evenings, and special series of longer plays are also given at various times. 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.

(d) *Youth Education.* The A.B.C. provides a regular series of broadcasts to schools in all States as an addition to normal class-room education. The total number of listening schools at the end of June, 1964, was 9,912 or about 95 per cent. of all schools, State and private, throughout the Commonwealth. (See also Chapter XIX. Education, Cultural Activities, and Research, 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, literature, science and 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. Controversial issues are covered in sessions such as "Fact and Opinion" as well as in the commentaries. The week-day "News Review" and "World Report" give the background to current news developments recorded over landline from all States in the Commonwealth, or by radiotelephone or cable from abroad.

(f) *Rural Broadcasts.* The Rural Broadcasts Department exchanges programmes with several oversea countries and provides service, educational, and entertainment programmes all designed to be of value to the man-on-the-land and industries allied with primary production. Special programmes are designed for country women and junior farmers, while urban dwellers are provided with gardening programmes and shopping guides. A complete weather and marketing service is provided. Rural programmes are broadcast on a national, State, and regional basis, in Papua and New Guinea, and on the Overseas Service (Radio Australia). The 23 officers at regional stations present specific information and educational programmes in relation to their own regions. The rural broadcasts for primary producers in Papua and New Guinea have now been extended to indigenous farmers in a programme conducted by an indigenous Rural Officer.

(g) *News.* The Commission collects 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, Japanese, Cantonese, Vietnamese 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 more than 200 news bulletins each day, including those given over Radio Australia.

(h) *Other Activities.* The proceedings of the Commonwealth Parliament are broadcast regularly on one of the two national transmitters in each capital city, one in Newcastle and 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, art, literature, natural history and sport.

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. With its variety session, the policy of the A.B.C. is 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.

A comprehensive coverage of sport at home and abroad is provided by the A.B.C. On Saturday afternoons, the sporting panel provides listeners with progress results, scores and descriptions from several fields of sport. Events of international interest such as Test matches and the Davis Cup are covered by simultaneous descriptions from A.B.C. commentators.

2. **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 Broadcasting Control 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 an amount ascertained by applying the following rates to "gross earnings", within the meaning of the *Broadcasting Stations Licence Fees Act 1964*, during the financial year—1 per cent. up to £500,000; 2 per cent. £500,001 to £1,000,000; 3 per cent. £1,000,001 to £2,000,000; and 4 per cent. over £2,000,000.

3. **Oversea Broadcasting Service.**—There are eight high-frequency stations at Shepparton, Victoria, which provide 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. 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.

4. **Broadcasting Stations.**—The following table shows the number of broadcasting stations in operation at 30th June, 1964.

BROADCASTING STATIONS, 30th JUNE, 1964

Type of station	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Papua and New Guinea	Total
National—										
Medium frequency ..	18	5	13	8	9	4	4	2	2	65
High frequency—										
Domestic ..	1	3	2	..	2	..	..	..	2	10
Oversea ..	..	8	..	..	..	..	..	..	..	8
Commercial ..	37	20	21	8	14	8	1	1	..	110

Tables showing the call sign, location, frequency and aerial power of national and commercial broadcasting stations in operation at 30th June, 1964, are shown in *Transport and Communication*, Bulletin No. 55.

§ 3. Television

1. **General.**—Television services in Australia operate under the *Broadcasting and Television Act 1942-1964* and comprise the National Television Service and the Commercial Television Service.

2. **The National Television Service.**—(i) *General.* The National Television Service is provided by the Australian Broadcasting Commission through transmitters operated by the Postmaster-General's Department. At 31st December, 1964, twenty stations had been established.

Australian Capital Territory—ABC channel 3, Canberra; New South Wales—ABN channel 2, Sydney; ABHN channel 5, Newcastle-Hunter River area; ABWN channel 5a, Illawarra area; ABCN channel 1, Central Tablelands area; ABRN channel 6 Richmond-Tweed area; Victoria—ABV channel 2, Melbourne; ABEV channel 1, Bendigo area; ABRV channel 3, Ballarat area; ABLV channel 4, Latrobe Valley area; ABGV channel 3, Goulburn Valley area; ABAV channel 1, Upper Murray area; Queensland—ABQ channel 2, Brisbane; ABDQ channel 3, Darling Downs area; ABRQ channel 3, Rockhampton area; ABTQ channel 3, Townsville area; South Australia—ABS channel 2, Adelaide; Western Australia—ABW channel 2, Perth; Tasmania—ABT channel 2, Hobart; ABNT channel 3, North Eastern Tasmania area.

Additional national television stations which had been authorized but had not commenced to operate at 31st December, 1964, are as follows.

New South Wales—Bega-Cooma area (channel 8); Broken Hill area (channel 2); Grafton-Kempsey area (channel 2); Central Western Slopes area (channel 3); Murrumbidgee Irrigation area (channel 7); Upper Namoi area (channel 7); Manning River area (channel 1); South Western Slopes and Eastern Riverina area (channel 0); Victoria—Mildura area (channel 4); Swan Hill area (channel 2); Queensland—Cairns area (channel 9); Mackay area (channel 4); Wide Bay area (channel 6); Southern Downs area (channel 1); South Australia—South East area (channel 1); Spencer Gulf North area (channel 1); Western Australia—Bunbury area (channel 5); Central Agricultural area (channel 4); Southern Agricultural area (channel 2).

It is planned that all services will be in operation by the end of 1966.

(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, 1964, was as follows:—Drama and features, 22.4 per cent.; talks, 16.3 per cent.; sport, 13.9 per cent.; children's session, 9.2 per cent.; news, 6.9 per cent.; light entertainment, 7.9 per cent.; education, 9.7 per cent.; music, 3.5 per cent.; religion, 3.1 per cent.; rural services, 2.7 per cent.; non-departmental, 4.4 per cent. A summary of the activities of the departments in the field of television is given in the following paragraphs. Transmission time for the year ended 30th June, 1964, totalled 46,212 hours.

(b) *Talks.* In television, talks also cover a wide and growing field, ranging from public affairs type programmes such as "Four Corners" to commentaries on international and Australian affairs and outside telecasts of public events. Film and studio documentaries, discussions on literature, art and science, topical programmes, interviews, magazine programmes, and demonstrations 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 in all State capitals. A Television Writers' Workshop gives writers practical advice on television writing. Of 31 studio productions during 1963-64, the majority were by Australian authors.

(d) *Music.* Extensive development has taken place in the A.B.C.'s television music programmes. Major operas, which are regularly produced in the studios, have achieved a progressively higher standard, and are now fully comparable with overseas productions. Television programmes by resident ballet companies have also been encouraged and further advances in this field are envisaged. The number of telecasts of A.B.C. and visiting overseas symphony orchestras has been increased, while telecasts of overseas and resident artists have become an established part of programme output.

(e) *Rural Services.* Weather reports and forecasts are telecast six evenings a week on National TV. stations. In Sydney and Melbourne, there is a half-hour magazine each week, "Country Call", and in each State a weekly edition of another, "Town and Country".

These include rural film items from all States, topical interviews and demonstrations. Gardening programmes are telecast weekly in Sydney and Canberra. Outside broadcast programmes are devised in all States at Royal Shows and other places of rural interest. The National Junior Farmer Radio and Television Competition is a major annual event. Film items are regularly exchanged with member countries of the European Broadcasting Union. In all States, a weekly programme is "To Market, To Market", a practical buying guide for housewives.

The aim of rural broadcasts in television is to provide consumer-interest material for urban viewers and to convey to them aspects of food production and country life and to provide a rural news and extension service to farmer viewers.

(f) *Education.* The A.B.C. provides daily television programmes for schools in all Australian States with certain series repeated to meet their convenience. Programmes for primary schools are of a supplementary type, while those for secondary schools are designed to contribute directly to classroom instruction. In addition, there is a daily programme for pre-school children entitled "Kindergarten Playtime". At the adult level, there are two television programmes weekly, designed in series and known as "University of the Air" which are presented in the evenings. Bridging courses in certain subjects to help students across the gap between schools and university have also been transmitted.

(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. Since then, those news items have been included in the programmes of other State capitals. The A.B.C. is a member of the *British Commonwealth International Newsfilm Agency (B.C.I.N.A.)*, through which it receives world-wide television newsfilm and provides newsfilm of Australian origin for international distribution.

(h) *Other Activities.* Special television programmes are presented for children, including filmed material obtained on an exchange basis from oversea television organizations. Special religious services and programmes have also been televised. Outside television cameras have covered a number of sporting events, including the Olympic Games, Davis Cup tennis, Test and Sheffield Shield cricket, swimming championships and the Commonwealth Games.

3. *The Commercial Television Service.*—Commercial television stations are operated under licences granted by the Postmaster-General. As at 31st December, 1964, licences for commercial television stations had been granted as follows: *Australian Capital Territory*—Canberra area CTC (channel 7); *New South Wales*—Sydney ATN (channel 7), TCN (channel 9), TEN (channel 10); CBN (channel 8), Central Tablelands area; NBN (channel 3), Newcastle—Hunter River area; RTN (channel 8), Richmond—Tweed Heads area; WIN (channel 4), Illawarra area; NEN (channel 9), Upper Namoi area; RVN (channel 2), South Western Slopes and Eastern Riverina area; NRN (channel 10), Grafton—Kempsey area; *Victoria*—Melbourne HSV (channel 7), GTV (channel 9), ATV (channel 0); BCV (channel 8), Bendigo area; BTV (channel 6), Ballarat area; GLV (channel 10), Latrobe Valley area; GMV (channel 6), Goulburn Valley area; AMV (channel 4), Upper Murray area; *Queensland*—Brisbane BTQ (channel 7), QTQ (channel 9); DDQ (channel 10), Darling Downs area; TNQ (channel 7), Townsville area; RTQ (channel 7), Rockhampton area; WBQ (channel 8), Wide Bay area; *South Australia*—Adelaide ADS (channel 7), NWS (channel 9); *Western Australia*—Perth TVW (channel 7); *Tasmania*—Hobart TVT (channel 6); TNT (channel 9), North-Eastern Tasmania area.

The initial grant of a licence is for a period of five years and thereafter the licence is renewable annually. The fee payable is £100 for the first year and thereafter £100 a year plus an amount ascertained by applying the following rates to "gross earnings" within the meaning of the *Television Stations Licence Fees Act 1964* during the preceding financial year—1 per cent. up to £500,000; 2 per cent. £500,001 to £1,000,000; 3 per cent. £1,000,001 to £2,000,000; and 4 per cent. over £2,000,000.

4. *Extension of Television Services.*—Approval has been given for the grant of a third commercial television station licence in the Brisbane area and the Adelaide area and for a second commercial television station licence in the Perth area. The licences will be issued, and the stations will commence operations, during 1965.

In accordance with the Government's policy of authorizing both a national and a commercial service in each area to which television has been extended, the Postmaster-General, on 18th September, 1963, announced the approval of the grant of the following further commercial television station licences: *New South Wales*—Manning River area,

Central Western Slopes area, Murrumbidgee Irrigation area, Broken Hill area; *Victoria*—Mildura area; *Queensland*—Cairns area, Mackay area, Southern Downs area; *South Australia*—South East area; *Western Australia*—Bunbury area. It is expected that the majority of these stations will commence operations during 1965.

By notice published in the *Commonwealth Gazette* of 26th November, 1964, the Postmaster-General re-invited applications for the grant of licences for commercial television stations to serve the following areas: *New South Wales*—Bega—Cooma area; *Victoria*—Murray Valley area; *South Australia*—Spencer Gulf North area; *Western Australia*—Central Agricultural area (Northam—York); Southern Agricultural area (Katanning—Albany). Applications closed on 1st March, 1965. Although applications had previously been invited in respect of these five areas, applications were either not received or not pursued, and licences could not, therefore, be granted.

When all of the authorized stations commence operation, it is estimated that 91 per cent. of the Australian people will be able to receive a television service.

§ 4. Licences, Revenue from Fees, etc.

1. **Broadcast Listeners' and Television Viewers' Licences.**—(i) *General.* Broadcast listeners', television viewers', and combined receiving licences are issued at post offices in accordance with the provisions of the *Broadcasting and Television Act 1942–1964*, 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 or a television viewer's licence, whichever is appropriate, authorizes the operation of any broadcast receiver or 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 is ordinarily kept at that address; (b) installed in a vehicle which is ordinarily in the possession of the holder, or a member of his family, and is ordinarily kept at that address when not in use. A person who has both broadcast and television receivers at the one address is required to take out a combined receiving licence, provision for which was introduced by legislation effective from 1st April, 1965.

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 and at a concession rate to certain classes of pensioners. Receivers provided for the use of inmates of an institution (including a hospital) are covered by an appropriate licence held by the institution. Persons residing in Zone 2 may also be granted a broadcast listener's licence at a reduced rate. Zone 1 is the areas within 250 miles of specified broadcasting stations and Zone 2 is the remainder of Australia.

Each broadcast or television receiver let out on hire (except under a hire purchase agreement) must be covered by a hirer's licence held by the person or firm from whom the receiver is hired.

The keeper of a lodging house (which includes a hotel, motel, boarding house or any other premises where lodging or sleeping accommodation is provided for reward) must take out a lodging house licence for each broadcast or television receiver provided by the proprietor in any room or part of the lodging house occupied or available for occupation by lodgers.

The fees payable for the various classes of licence are as follows.

BROADCAST LISTENERS' AND TELEVISION VIEWERS' LICENCES

Licence	Ordinary rate	Pensioner rate
	£ s. d.	£ s. d.
Broadcast listener's licence and hirer's licence for a broadcast receiver Zone 1	2 15 0	10 0
	Zone 2	1 8 0
Lodging house licence for a broadcast receiver Zone 1	2 15 0	..
	Zone 2	1 8 0
Television viewer's licence and hirer's licence for a television receiver	6 0 0	1 10 0
	Lodging house licence for a television receiver	6 0 0
Combined receiving licence	8 10 0	2 0 0

(ii) *Broadcast Listeners' Licences. (a) Number in Force.* The following table shows the number of broadcast listeners' licences in force at five-year intervals from 1925 to 1960 and for 1964.

BROADCAST LISTENERS' LICENCES IN FORCE

At 30th June—	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1925	34,857	20,290	1,267	3,331	3,562	567	63,874
1930	111,253	140,072	23,335	25,729	5,755	6,048	312,192
1935	279,166	237,247	67,546	76,515	41,257	20,121	721,852
1940	458,256	348,264	151,152	124,928	87,790	42,191	1,215,581
1945(c)	548,074	394,315	180,089	146,611	98,210	47,930	1,415,229
1950(c)	683,271	505,078	260,033	195,261	133,199	64,369	1,841,211
1955	746,050	549,690	293,542	223,593	150,199	71,602	2,034,676
1960	832,659	606,587	344,198	249,148	171,693	78,900	2,283,185
1964	822,499	622,663	342,321	266,027	174,121	74,159	2,301,790

(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 2,301,790 broadcast listeners' licences in force at 30th June, 1964, 1,363,022 or 59.2 per cent. were held by persons living in metropolitan areas and 938,768 or 40.8 per cent. by persons in country areas. Short-term hirers' licences (included above) at 30th June, 1964, were:—New South Wales, 321; Victoria, 77; Queensland, 154; South Australia, 847.

(b) *Revenue Received from Fees.* The following table shows the revenue received from broadcast listeners' licence fees for the years 1959-60 to 1963-64.

REVENUE RECEIVED FROM BROADCAST LISTENERS' LICENCE FEES

(£'000)

Year	N.S.W.(a)	Vic.	Qld	S.A.(b)	W.A.	Tas.	Aust.
1959-60	2,023	1,545	846	626	420	196	5,656
1960-61	1,992	1,488	827	619	419	191	5,536
1961-62	1,957	1,452	797	615	407	185	5,413
1962-63	1,937	1,493	792	626	407	179	5,434
1963-64	1,962	1,525	804	643	408	178	5,520

(a) Includes the Australian Capital Territory.

(b) Includes the Northern Territory.

(iii) *Television Viewers' Licences. (a) Number in Force.* The following table shows the number of television viewers' licences in force each year at 30th June, 1957, and 1960 to 1964.

TELEVISION VIEWERS' LICENCES IN FORCE

At 30th June—	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1957	28,912	44,986	..	..	..	(a) 11	73,909
1960	409,334	353,091	67,337	84,967	35,604	4,662	954,995
1961	488,516	401,395	113,954	124,808	69,628	18,985	1,217,286
1962	564,707	460,558	142,422	143,794	83,951	29,003	1,424,435
1963	637,766	530,256	178,391	167,502	95,907	45,503	1,655,325
1964	721,043	581,286	214,763	194,430	115,272	55,305	1,882,099

(a) These licences were for television sets in the north coast area of Tasmania which were able to receive programmes from Victoria.

Of 1,882,099 television viewers' licences in force at 30th June, 1964, 93,429 were held by short-term hirers, and therefore could not be separated into metropolitan licences or country licences. Persons living in the metropolitan area held 1,257,295 or 70 per cent. of the remainder. Short-term hirers' licences (included above) at 30th June, 1964, were:—New South Wales, 29,391; Victoria, 13,488; Queensland, 15,315; South Australia, 21,435; Western Australia, 10,650; and Tasmania, 3,150.

(b) *Revenue Received from Fees.* The following table shows the revenue received from television viewers' licence fees during the years 1959–60 to 1963–64.

REVENUE RECEIVED FROM TELEVISION VIEWERS' LICENCE FEES
(£'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
1959–60	1,994	1,717	321	406	165	21	4,624
1960–61	2,292	1,938	542	594	324	91	5,781
1961–62	2,623	2,170	664	651	380	138	6,626
1962–63	2,993	2,491	827	792	462	213	7,778
1963–64	3,317	2,712	991	888	514	255	8,677

CHAPTER XVI

WELFARE SERVICES

§ 1. Introduction

This chapter relates to welfare services other than those concerned specifically with education, health and repatriation. The latter are dealt with, in the main, in the relevant chapters of this Year Book. Apart from a summary of government expenditure on welfare services and short descriptions of certain interstate organizations providing welfare services, the chapter is devoted to a description in some detail of the services provided by the Commonwealth. For information on the many important welfare services provided by State and local governments, especially in the fields of child and Aboriginal welfare, reference should be made to the Year Books or Statistical Registers of the States and the annual reports of the State departments concerned.

In addition, there are numerous services of this nature provided by charitable and other non-government institutions and organizations. There are institutions providing shelter and/or caring for needy, aged, infirm or handicapped persons, neglected children, destitute persons, wayward boys and girls, and the like. Many organizations, too, provide aid in kind (food, clothing, etc.), auxiliary medical and nursing services, and other assistance to relieve suffering and hardships. Considerable work is also done by such organizations in the rehabilitation or establishment in the community of various types of people, such as prisoners and migrants, and in the prevention and alleviation of cruelty and maltreatment of any sort. Comprehensive information regarding the activities of such organizations is not available.

Further information on subjects dealt with in this chapter may be found in the annual bulletins *Commonwealth Finance and State, Territory and Local Government Authorities' Finance and Government Securities*. Current and summarized information on Commonwealth social services is contained in the *Quarterly Summary of Australian Statistics* and the *Monthly Review of Business Statistics*.

§ 2. Expenditure on Welfare Services

NOTE.—Information concerning the cost of administering each Commonwealth benefit separately is not compiled. Particulars of Commonwealth capital expenditure on mental hospitals and the anti-tuberculosis campaign are given in Chapter XVIII. Public Health. For grants made to private organizations for the construction of homes for elderly people see § 3, para. 10. Particulars of the cost of administering the Department of Health and the Department of Social Services are given in Chapter XXII. Public Finance—Commonwealth Consolidated Revenue Fund Expenditure.

1. Commonwealth Expenditure on Welfare Services—The National Welfare Fund.—
 (i) *General.* The National Welfare Fund was established by the *National Welfare Fund Act 1943* to finance a scheme of national welfare and has operated from 1st July, 1943. At its commencement it was used to finance funeral benefits and maternity allowances, but other social and health benefits were made a charge on the fund from time to time and 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, or of capital works associated with the benefits.

For particulars of the income of the fund, see Chapter XXII, Public Finance—Commonwealth Consolidated Revenue Fund Expenditure.

(ii) *Expenditure from the National Welfare Fund, 1963–64.* The following table sets out expenditure from the fund during 1963–64.

COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND
 ON SOCIAL AND HEALTH SERVICES, 1963–64

(£'000)

Service	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (a)	A.C.T. (a)	Abr- oad	Total
Social Services—										
Age and Invalid Pen- sions ..	79,058	50,118	31,775	18,060	13,686	6,171	474	401	197	199,940
Child Endowment ..	29,591	23,432	12,763	7,958	6,497	3,057	419	637	25	84,379
Commonwealth Re- habilitation Service	221	206	109	106	81	22	..	..	..	745
Funeral Benefits ..	163	105	61	36	28	12	..	1	..	406
Maternity Allowances	1,325	1,032	564	338	273	136	27	30	4	3,729
Unemployment Benef- its ..	2,542	1,375	1,347	376	701	375	2	11	..	5,729
Sickness Benefits ..	1,397	883	530	254	261	108	6	11	..	3,450
Special Benefits(b)	186	265	93	35	27	26	1	..	..	633
Widows' Pensions ..	7,836	5,158	3,425	1,942	1,557	734	55	54	23	20,784
National Health Ser- vices—										
Hospital Benefits ..	11,479	6,547	4,315	2,499	2,353	851	32	32	..	28,108
Medical Benefits ..	5,109	3,189	1,293	1,410	1,080	343	..	..	..	12,424
Medical Benefits for Pensioners ..	1,983	1,225	647	448	324	127	..	12	..	4,766
Milk for School Children ..	1,329	1,092	558	353	308	196	25	27	..	3,888
Pharmaceutical Benef- its ..	11,012	8,840	4,200	2,450	1,927	617	..	(e) 72	..	29,118
Pharmaceutical Benef- its for Pensioners	4,415	2,410	1,565	954	693	264	..	..	..	10,301
Tuberculosis Cam- paign—										
Allowances ..	277	188	184	64	45	39	..	..	..	797
Maintenance and surveys(d) ..	1,875	1,386	1,059	355	375	181	..	5	..	5,236
Miscellaneous(e) ..	53	69	134	7	14	32	31	(g) 552	..	892
Rental Losses(f) ..	..	..	23	..	..	..	..	..	..	23
Total ..	159,851	107,520	64,645	37,645	30,230	13,291	1,072	1,845	249	416,348

(a) Payments for some Health Services to residents of the Northern Territory and the Australian Capital Territory are included in the amounts shown for States. (b) Includes special benefits to migrants in reception and training centres. (c) Includes payments to the Royal Flying Doctor Service and Bush Nursing Centres. (d) Paid to State Governments as a contribution towards the cost of surveys and the maintenance of institutions for the treatment of tuberculosis. (e) This item covers the cost of the Commonwealth Health Laboratory Services, subsidies to home nursing services, the cost of radio-active isotopes provided under the National Health Act, and running expenses of the Blood Fractionation Plant. (f) Contributions to States, under Commonwealth and State Housing Agreement 1945, for losses on rental housing. (g) Includes running expenses of the Blood Fractionation Plant at the Commonwealth Serum Laboratories, £300,000, and Commonwealth Health Laboratories, £62,000; and subsidies to home nursing services, £186,000.

(iii) *Expenditure from the National Welfare Fund, 1959–60 to 1963–64.* Expenditure from the fund during each of the years 1959–60 to 1963–64, and the amount per head of population for each service during 1963–64, are shown in the following table.

COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND
ON SOCIAL AND HEALTH SERVICES

Service	1959-60	1960-61	1961-62	1962-63	1963-64	
					Amount	Per head
	£'000	£'000	£'000	£'000	£'000	£
Social Services—						
Age and Invalid Pensions	147,005	157,926	180,245	187,754	199,940	18.13
Child Endowment(a)	62,532	74,303	66,378	67,710	84,379	7.65
Commonwealth Rehabilitation Service	681	693	723	698	745	0.07
Funeral Benefits	353	367	376	401	406	0.04
Maternity Allowances	3,652	3,898	3,908	3,781	3,729	0.34
Unemployment, Sickness and Special Benefits(b)	7,253	7,140	15,905	14,657	10,812	0.98
Widows' Pensions	12,137	13,468	15,094	15,677	20,784	1.88
National Health Services—						
Hospital Benefits	18,599	20,668	22,202	23,663	28,108	2.55
Medical Benefits	9,292	9,976	10,912	11,737	12,424	1.13
Medical Benefits for Pensioners	4,113	4,200	4,398	4,573	4,766	0.43
Milk for School Children	3,359	3,560	3,742	3,727	3,888	0.35
Pharmaceutical Benefits	20,761	20,543	26,092	28,522	29,118	2.64
Pharmaceutical Benefits for Pensioners	3,574	7,338	9,097	9,933	10,301	0.93
Tuberculosis Campaign—						
Allowances	1,026	947	873	803	797	0.07
Maintenance and Surveys(d)	4,337	4,179	4,333	4,874	5,236	0.47
Miscellaneous(e)	689	1,046	848	765	892	0.08
Rental Losses(f) .. .. .	..	352	65	19	23	..
Total	299,363	330,604	365,191	379,294	416,348	37.76

(a) See footnote (b) to table on p. 613.

For footnotes (b), (d), (e) and (f) see table on previous page.

2. State Expenditure on Certain Welfare Services.—The following table shows net expenditure from State Government funds on certain welfare services. The figures exclude expenditure on unemployment, bush fire, flood, etc., relief, Aboriginal welfare and some other items which are excluded because information cannot be obtained for all States. Loan Fund expenditure is excluded also. Because of differences in organization and accounting methods, the information shown for some classes is not on exactly the same basis for all States; it may also be incomplete because particulars of some activities are not separately recorded and are therefore excluded. The expenditure shown is "net" in the sense that receipts for services rendered have been deducted from gross expenditure.

NET EXPENDITURE BY STATE GOVERNMENTS ON CERTAIN WELFARE SERVICES, 1963-64

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Relief of aged, indigent and infirm, child welfare, etc. ..	5,642	3,811	1,887	938	1,392	655	14,325
Miners' phthisis ..	38	37	..	..	33	..	108
Total	5,680	3,848	1,887	938	1,425	655	14,433

3. Aboriginal Welfare.—Expenditure out of Commonwealth and State Consolidated Revenue Funds specifically on Aboriginal welfare during the years 1959-60 to 1963-64 is shown in the following table. As with the table in the previous paragraph, the figures hereunder may be incomplete because separate particulars of some activities may not be available.

ABORIGINAL WELFARE: EXPENDITURE FROM CONSOLIDATED REVENUE FUNDS

(£)

Year	N.S.W.	Vic.	Q'land	S.Aust.	W.Aust.	N.T.	A.C.T.	Australia
1959-60 ..	239,541	25,000	695,773	357,169	636,224	979,984	5,102	2,938,793
1960-61 ..	250,658	25,000	770,013	428,021	762,294	965,227	5,485	3,206,698
1961-62 ..	280,838	50,000	803,529	524,038	1,300,443	1,011,983	4,372	3,975,203
1962-63 ..	344,545	60,000	805,136	512,552	1,658,862	1,297,387	5,340	4,683,822
1963-64 ..	302,700	60,000	852,500	606,084	774,854	1,522,608	5,423	4,124,169

§ 3. Commonwealth Social Services

1. **Introduction.**—(i) *General.* 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 28th September, 1946. The enabling Act was assented to on 19th December, 1946.

Before 1947, each social service benefit was paid under a separate Act. On 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 1947–1964*.

(ii) *Social Service Benefits Provided.* 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	1st July, 1941
Child endowment—student children	14th January, 1964
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
Supplementary assistance (age, invalid and widow’s pensions)	15th October, 1958
Unemployment benefit	1st July, 1945
Widow’s pension	30th June, 1942
Widow’s pension—children’s allowances	2nd October, 1956
Wives’ and children’s allowances for pensioners who are invalids	8th July, 1943

2. **Age and Invalid Pensions.**—(i) *General.* Age pensions are payable to men, 65 years of age and over, and women, 60 years of age and over, who are British subjects and who have lived in Australia continuously for at least 10 years, which need not be immediately prior to the date of claim for a pension. If a person has completed five years but not 10 years continuous residence and has lived in Australia for periods which exceed a total of 10 years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of 10 years. Absence in a Territory of the Commonwealth, any periods of absence during which a person’s home remains in Australia, and absences in certain other circumstances, are counted as residence. Residence in New Zealand or the United Kingdom may be treated as residence in Australia.

Invalid pensions are payable to persons, 16 years of age and over, who have lived in Australia for a continuous period of five years (including certain absences) at any time, and who are permanently incapacitated for work to the extent of at least 85 per cent., or permanently blind. If the incapacity or blindness first occurred outside Australia, except during a temporary absence, a period of 10 years’ continuous residence is necessary, but if a person has completed five years but not 10 years continuous residence and has lived in Australia for periods which exceed a total of 10 years, the period of continuous residence otherwise required is reduced by the total of his periods of residence in Australia in excess of 10 years. Residence in New Zealand or the United Kingdom may be treated as residence in Australia. Certain absences do not affect eligibility.

Aboriginals, other than those who are nomadic or primitive, are eligible for age and invalid pensions on the same conditions as other members of the community.

A pension is not payable to an alien.

(ii) *Current Rates of Pension.* The maximum standard rate was increased to £312 per annum (£6 a week) from 1st October, 1964. This is payable to a single, widowed, or divorced pensioner, or a married pensioner whose spouse is not receiving an age or invalid pension, a wife's allowance, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension. The maximum married rate was also increased from 1st October, 1964, and is £572 per annum (£11 a week) for a married couple, both pensioners, i.e., £286 per annum (£5 10s. a week) each. The married rate applies to a pensioner whose spouse is also receiving an age or invalid pension or whose spouse receives a wife's allowance, an unemployment, sickness or special benefit, a tuberculosis allowance or a service pension.

A wife's allowance may be granted, subject to the means test, to the non-pensioner wife of an invalid pensioner or a permanently incapacitated or blind age pensioner if she is not receiving an age or invalid pension, or a service pension under the *Repatriation Act 1920-1964* (see Chapter XXVIII. Repatriation). The maximum annual rate of a wife's allowance has been £156 per annum (£3 a week) since 3rd October, 1963. A child's allowance of £39 per annum (15s. a week), free of the means test, is payable for the first child under 16 years of an invalid pensioner, and the pension may also be increased by £39 per annum (15s. a week), subject to the means test, for each other child under 16 years.

Since 3rd October, 1963, eligibility for a child's allowance and the additional pension for children has been extended to include a child over 16 years until the end of the calendar year in which he reaches 18 years, provided he is wholly or substantially dependent on the pensioner and is receiving full-time education at a school, college or university. Supplementary assistance of 10s. a week is available to pensioners receiving the maximum standard rate pension if they pay rent and are considered to depend entirely on the pension. At 30th June, 1964, 533,456 age pensioners (87 per cent. of all age pensioners) and 102,267 invalid pensioners (93 per cent. of all invalid pensioners) were receiving the maximum pension.

If the pensioner is an inmate of a benevolent home, the maximum payable to him is £2 2s. a week if he is eligible for the standard rate pension, or £1 19s. a week otherwise. The rest is paid to the home for his maintenance. The balance is not paid to the home if the pensioner is in an infirmary ward, as payments under the Commonwealth Hospital Benefits Scheme are made in that case.

(iii) *Means Test.* Age and invalid pensions (other than invalid pensions paid to blind persons) and allowances paid to wives of invalid pensioners (but not a child's allowance of 15s. a week) are subject to a means test which applies to income and property. From March, 1961, the means tests previously applied separately on income and property were merged into one composite means test. The rate of pension payable depends on the claimant's *means as assessed*. These consist of his annual rate of income plus a property component equal to £1 for each complete £10 of his net property above £200. A person's *means as assessed* may consist entirely of income, entirely of the property component, or of various combinations of income and property component. The pension payable is calculated by deducting from the applicable maximum annual rate of pension the amount by which *means as assessed* exceed £182. Where the standard rate applies, no pension is payable where the value of property is £5,140 or more. Where the married rate applies, no pension is payable where the value of property is £4,880 or more. The wife's allowance is affected by income and property on the same basis as the pension, i.e., it is reduced by the amount of *means as assessed* over £182.

Certain types of income are excepted. The main exceptions are:—income from property; gifts or allowances from children, parents, brothers, or sisters; benefits (other than annuities) from friendly societies; child endowment or other payments for children; Commonwealth health benefits and amounts received from registered benefit organizations.

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, and the value of any reversionary interests.

For the purposes of the means test the income and property of a married person are considered to be half the total income and property of the husband and wife unless they are legally separated or in other special circumstances.

(iv) *Rates of Pension since 1909.* 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.

MAXIMUM RATES OF PENSION PAYABLE(a)

Date from which operative	Maximum pension payable		Limit of income (including pension) per annum	Date from which operative	Maximum pension payable		Limit of income (including pension) per annum
	Per week	Per annum			Per week	Per annum	
1st July, 1909 ..	<i>s.</i> 10	<i>d.</i> 0	£ 26 0	5th July, 1945 ..	<i>s.</i> 32	<i>d.</i> 6	£ 84 10
12th October, 1916 ..	12	6	32 10	13th August, 1946 ..	32	6	84 10
1st January, 1920 ..	15	0	39 0	3rd July, 1947 ..	37	6	97 10
13th September, 1923 ..	17	6	45 10	21st October, 1948 ..	42	6	110 10
8th October, 1925 ..	20	0	52 0	2nd November, 1950 ..	50	0	130 0
23rd July, 1931 ..	17	6	45 10	1st November, 1951 ..	60	0	156 0
13th October, 1932(b) ..	15	0	39 0	2nd October, 1952 ..	67	6	175 10
26th October, 1933 ..	17	6	45 10	29th October, 1953 ..	70	0	182 0
4th July, 1935(c) ..	18	0	46 16	14th October, 1954 ..	70	0	182 0
24th September, 1936 ..	19	0	49 8	27th October, 1955 ..	80	0	208 0
9th September, 1937 ..	20	0	52 0	24th October, 1957 ..	87	6	227 10
26th December, 1940 ..	21	0	54 12	8th October, 1959 ..	95	0	247 0
3rd April, 1941(c) ..	21	6	55 18	6th October, 1960 ..	100	0	260 0
11th December, 1941 ..	23	6	61 2	5th October, 1961 ..	105	0	273 0
2nd April, 1942(c) ..	24	0	62 8	14th November, 1963—			
2nd April, 1942(d) ..	25	0	65 0	Standard rate ..	115	0	299 0
1st October, 1942(c) ..	25	6	66 6	Married rate ..	105	0	273 0
7th January, 1943(c) ..	26	0	67 12	1st October, 1964—			
1st April, 1943(c) ..	26	6	68 18	Standard rate ..	120	0	312 0
19th August, 1943(c) ..	27	0	70 4	Married rate ..	110	0	286 0

(a) Excludes amounts payable for wives and children of invalid pensioners and supplementary assistance.

(b) Additional pension of £6 10s. per annum (2s. 6d. a week) was payable to a pensioner with no income. Pensioners with income of less than 2s. 6d. a 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.

NOTE.—Provision for variations according to retail price index numbers was repealed on 6th April, 1944.

(v) *Number and Characteristics of Pensioners, 1963-64.* The number of age pensioners at 30th June, 1964, was 615,186 of whom 186,338 (30 per cent.) were males and 428,848 (70 per cent.) were females. This was an increase of 7,836 for the year.

The number of invalid pensioners at 30th June, 1964, was 109,725 of whom 59,850 (55 per cent.) were males and 49,875 (45 per cent.) were females.

The following table shows the number of pensions in force at 30th June, 1964, in each State and Territory.

AGE AND INVALID PENSIONS, 30th JUNE, 1964

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Age pensions in force—									
Males	71,914	45,983	32,432	16,888	12,467	5,779	598	277	186,338
Females	165,076	113,675	65,976	40,392	29,352	13,024	657	696	428,848
Persons	236,990	159,658	98,408	57,280	41,819	18,803	1,255	973	615,186
Invalid pensions in force—									
Males	25,032	13,725	9,538	4,519	4,719	1,966	244	107	59,850
Females	22,232	11,237	7,355	3,774	3,587	1,397	153	140	49,875
Persons	47,264	24,962	16,893	8,293	8,306	3,363	397	247	109,725

The number of age and invalid pension claims granted during 1963-64 are shown in the following table, classified according to the sex and conjugal condition of the pensioner.

SEX AND CONJUGAL CONDITION OF NEW PENSIONERS, 1963-64

Conjugal condition	Age pensioners			Invalid pensioners			Total
	Males	Females	Persons	Males	Females	Persons	
Single	3,071	5,349	8,420	4,268	3,566	7,834	16,254
Married	13,460	17,835	31,295	6,599	2,527	9,126	40,421
Widowed	2,629	9,563	12,192	625	762	1,387	13,579
Divorced	308	735	1,043	366	354	720	1,763
Total	19,468	33,482	52,950	11,858	7,209	19,067	72,017

The average age of new age pensioners was 69 years for men and 66 years for women. The ages of new invalid pensioners are shown in the following table.

INVALID PENSIONS: AGES OF NEW PENSIONERS, 1963-64

Particulars	16-19 years	20-44 years	45-59 years	60-64 years	65 years and over	Total
Number	1,863	3,456	8,960	4,303	485	19,067
Per cent.	10	18	47	23	2	100

(vi) *Pensioners, 1959-60 to 1963-64.* The following table gives details of age and invalid pensions for the years 1959-60 to 1963-64.

AGE AND INVALID PENSIONS: SUMMARY, AUSTRALIA

Year	Pensioners at 30th June				Total payments during year (b)	Average weekly pension as at 30th June		
	Age		Invalid	Total		Age	Invalid	Age and invalid combined
	Number	Rate (a)						
1960	(c)538,022	501	(c) 80,816	No. 618,838	£'000 147,005	s. d. 90 3	s. d. 94 8	s. d. 90 10
1961	562,790	510	88,642	651,432	157,926	97 10	100 6	98 2
1962	594,012	529	97,246	691,258	180,245	101 11	105 3	102 5
1963	607,350	534	104,038	711,388	187,754	101 7	105 3	102 2
1964	615,186	533	109,725	724,911	199,940	107 1	112 7	107 11

(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) Year ended 30th June. Includes allowances and supplementary assistance. (c) During 1959-60, 9,906 invalid pensioners in Victoria, Queensland and Western Australia were transferred to their correct designation of age pensioners.

The sum paid in age and invalid pensions in 1963-64, including the amount paid to homes for the maintenance of pensioners and allowances to wives of invalid pensioners, represented an expenditure of £18.1 per head of population, compared with £17.4 in 1962-63.

3. *Child Endowment.*—(i) *General.* A person who is resident in Australia and has the custody, care, and control of one or more children under the age of 16 years or of a student child over 16 but under 21 years, or an approved institution of which children are inmates, is qualified to receive an endowment in respect of each such child. There are provisions to meet cases of families divided because of divorce, separation, unemployment or death of a parent. There is no means test.

Twelve months' residence in Australia is required if the claimant and the child were not born here, but this requirement is waived if the Department of Social Services is satisfied that they are likely to remain in Australia permanently. Where the child's father is not a British subject, endowment is payable if the child was born in Australia, if the mother is a British subject, or if the Department is satisfied that the child is likely to remain permanently in Australia.

Under certain conditions, endowment may be paid to Australians who are temporarily absent overseas. Endowment is payable to Aborigines unless they are nomadic or primitive.

(ii) *Rates of Endowment.* From 1st July, 1941, the rate of endowment was 5s. a week for each child under 16 in excess of one in a family, and for each child under 16 in an approved institution. The rate was increased to 7s. 6d. a week in June, 1945, and to 10s. a week in November, 1948. From June, 1950, 5s. a week has been paid for the first child under 16 in a family, 10s. a week for each other child under 16 in a family, and 10s. a week for each child under 16 in an institution.

Since January, 1964, the rate has been increased to 15s. a week for the third and subsequent children under 16 years in families, and that amount is also paid, under the provisions of the *Social Services Act* 1964, for full-time students between 16 and 21 years. Full-time student children are those receiving full-time education at a school, college or university and who are not in employment or engaged in work on their own account.

(iii) *Number of Claims and Endowed Children, 30th June, 1964.* (a) *Children under 16 years.* The number of families receiving child endowment at 30th June, 1964, in respect of children under 16 years was 1,555,630, an increase of 20,242 or 1.3 per cent. during the year. The following table shows, for each State and Territory, the number of claims for child endowment in force and the number of endowed children under 16 years at 30th June, 1964.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED CHILDREN
UNDER 16 YEARS, 30th JUNE, 1964**

State or Territory	Family groups			Institutions		Total endowed children under 16 years
	Claims in force	Endowed children under 16 years		Number	Endowed child inmates under 16 years	
		Number	Average number per claim			
New South Wales	572,377	1,237,215	2.16	142	6,937	1,244,152
Victoria ..	428,260	951,375	2.22	121	5,257	956,632
Queensland ..	219,068	520,323	2.38	59	2,770	523,093
South Australia ..	149,449	335,838	2.25	57	1,738	337,576
Western Australia	115,645	272,356	2.36	69	3,554	275,910
Tasmania ..	53,042	126,413	2.38	19	483	126,896
Northern Territory	5,991	13,766	2.30	35	5,368	19,134
Australian Capital Territory ..	11,546	26,202	2.27	..	..	26,202
Abroad ..	252	520	2.06	..	..	520
Total ..	1,555,630	3,484,008	2.24	502	26,107	3,510,115

The following table shows, as at 30th June, 1964, the number of claims in force and the number of endowed children under 16 years in family groups, classified according to the number of endowed children in the family group. The families included in the table are not necessarily made up entirely of the children of one marriage, but may include step-children, foster children, adopted children, and any other children under the custody, care and control of the claimant.

**CHILD ENDOWMENT: ENDOWED CHILDREN UNDER 16 YEARS
IN FAMILY GROUPS, 30th JUNE, 1964**

Number of endowed children under 16 years in family group		Claims in force	Endowed children under 16 years	Number of endowed children under 16 years in family group		Claims in force	Endowed children under 16 years
1	.. ..	533,964	533,964	9	.. ..	1,441	12,969
2	.. ..	499,524	999,048	10	.. ..	602	6,020
3	.. ..	291,241	873,723	11	.. ..	186	2,046
4	.. ..	139,099	556,396	12	.. ..	58	696
5	.. ..	54,584	272,920	13	.. ..	13	169
6	.. ..	22,211	133,266	14 and over	.. ..	7	105
7	.. ..	8,914	62,398				
8	.. ..	3,786	30,288	Total	.. ..	1,555,630	3,484,008

(b) *Student children 16 to 21 years.* The number of families receiving endowment at 30th June, 1964, in respect of student children 16 to 21 years was 113,062. The following table shows, for each State and Territory, the number of claims for student endowment in force and the number of endowed student children at 30th June, 1964.

**CHILD ENDOWMENT: CLAIMS AND ENDOWED STUDENT CHILDREN,
30th JUNE, 1964**

State or Territory	Family groups			Institutions		Total endowed student children
	Claims in force	Endowed student children		Number	Endowed student child inmates	
		Number	Average number per claim			
New South Wales	34,793	36,900	1.06	12	50	36,950
Victoria	40,164	43,263	1.08	22	123	43,386
Queensland	14,390	15,440	1.07	..	..	15,440
South Australia	12,401	13,121	1.06	..	..	13,121
Western Australia	7,386	7,809	1.06	16	56	7,865
Tasmania	2,871	3,020	1.05	3	6	3,026
Northern Territory	177	184	1.04	..	..	184
Australian Capital Territory	864	941	1.09	..	..	941
Abroad	16	19	1.19	..	..	19
Total	113,062	120,697	1.07	53	235	120,932

The following table shows the number of student endowments in force under family groups of children at 30th June, 1964.

**CHILD ENDOWMENT: ENDOWED STUDENT CHILDREN IN
FAMILY GROUPS, 30th JUNE, 1964**

Number of endowed student children in family groups		Claims in force	Endowed student children	Number of endowed student children in family groups		Claims in force	Endowed student children
1	.. ..	105,734	105,734	4	.. ..	12	48
2	.. ..	7,035	14,070	5	.. ..	1	5
3	.. ..	280	840	Total	.. ..	113,062	120,697

(iv) *Liability and Expenditure, 1963-64. (a) Children under 16 years.* The following table shows the annual liability for child endowment at 30th June, 1964, in respect of children under 16 years and the actual expenditure thereon for the year 1963-64 in each State and Territory.

**CHILD ENDOWMENT: CHILDREN UNDER 16 YEARS,
LIABILITY AND EXPENDITURE, 1963-64
(£)**

State or Territory	Annual liability at 30th June, 1964(a)			Total payments to endowees and institutions during 1963-64 (b)
	Family groups	Institutions	Total	
New South Wales	28,656,680	270,543	28,927,223	29,002,721
Victoria	22,301,942	205,023	22,506,965	22,720,603
Queensland	12,652,744	108,030	12,760,774	12,519,962
South Australia	7,921,264	67,782	7,989,046	7,763,016
Western Australia	6,569,030	138,606	6,707,636	6,372,853
Tasmania	3,081,663	18,837	3,100,500	3,011,166
Northern Territory	331,955	209,352	541,307	416,472
Australian Capital Territory	621,348	..	621,348	618,037
Abroad	11,648	..	11,648	24,576
Total	82,148,274	1,018,173	83,166,447	82,449,406

(a) Rate of endowment for third and subsequent children increased from January, 1964. (b) Expenditure for this year includes five twelve-weekly payments instead of the usual four twelve-weekly payments for the endowments paid to the credit of bank accounts.

(b) *Student children 16 to 21 years.* The following table shows the annual liability for endowment at 30th June, 1964, in respect of student children 16 to 21 years, and the actual expenditure thereon in each State and Territory since 14th January, 1964, when eligibility for student endowment commenced.

**CHILD ENDOWMENT: STUDENT CHILDREN, LIABILITY AND
EXPENDITURE, 1963-64
(£)**

State or Territory	Annual liability at 30th June, 1964			Total payments to endowees and institutions during period 14th January, 1964 to 30th June, 1964
	Family groups	Institutions	Total	
New South Wales	1,439,100	1,950	1,441,050	587,746
Victoria	1,687,257	4,797	1,692,054	711,697
Queensland	602,160	..	602,160	243,171
South Australia	511,719	..	511,719	194,875
Western Australia	304,551	2,184	306,735	124,185
Tasmania	117,780	234	118,014	45,573
Northern Territory	7,176	..	7,176	2,679
Australian Capital Territory	36,699	..	36,699	19,538
Abroad	741	..	741	304
Total	4,707,183	9,165	4,716,348	1,929,768

(v) *Child Endowment, 1959-60 to 1963-64.* The following table shows, for Australia, the number of claims, the number of all endowed children and the annual liability at 30th June for each of the years from 1960 to 1964 and the actual expenditure for the years 1959-60 to 1963-64.

CHILD ENDOWMENT: SUMMARY, AUSTRALIA

At 30th June—	Family group claims in force (a)	Institutions	Endowed children	Annual liability for endowment (b)	Total payments (b)(c)
				£	£
1960	1,476,835	443	3,252,413	65,363,883	62,531,977
1961	1,501,180	465	3,340,302	67,332,512	(d) 74,302,614
1962	1,523,074	479	3,420,134	69,123,522	66,377,628
1963	1,535,388	497	3,457,620	69,938,076	67,710,463
1964	1,555,630	502	(e)3,631,047	e 87,882,795	ef 84,379,174

(a) In respect of family groups containing endowed children under 16 years of age. (b) 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. Figures for annual liability, therefore, reflect trends in expenditure on child endowment more accurately than do figures for payments. (c) Year ended 30th June. (d) Endowment payable on 4th July, 1961, to the credit of bank accounts and in cash at post offices was brought to account in 1960-61. (e) Includes student children. (f) Expenditure for this year includes five twelve-weekly payments.

4. Commonwealth Rehabilitation Service.—(i) *General.* The Commonwealth Rehabilitation Service has been set up to help persons who are unable to work because of physical handicap, or who have had to give up their employment because of sickness or injury. It helps disabled persons to reach their maximum physical fitness and to prepare for suitable employment. 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 service is available to invalid and widow pensioners, persons receiving unemployment, sickness or special benefits, persons receiving tuberculosis allowances, and persons aged 14 or 15 who, without treatment and training, would be likely to qualify for an invalid pension on reaching the age of 16 years. During treatment, payment of pension or benefit continues. When vocational training begins, the pension or benefit is suspended and a rehabilitation allowance, together with a training allowance of £1 10s. a week, is paid instead. With an invalid pensioner, or a sickness, unemployment or special beneficiary, this is equivalent to and calculated in the same manner as an invalid pension. In the case of a widow pensioner, the rate is the same as that of the widow's pension.

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 up to £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, he receives the pension or benefit to which he is entitled.

Disabled persons who cannot qualify for the free service may pay for rehabilitation themselves, or they may be sponsored by government or private organizations. Rehabilitation allowances, training allowances, living-away-from-home allowances and other allowances are not payable in these cases. Books, tools, etc., are available on a repayment basis.

(ii) *Numbers dealt with by the Service, 1963-64.* The numbers of persons receiving benefits who were examined, accepted, trained and placed in employment during the year 1963-64 are shown in the following table.

COMMONWEALTH REHABILITATION SERVICE: AUSTRALIA, 1963-64

Type	Examined	Accepted	Completed training	Placed in employment	
				After training	Without training
Invalid pensioners	7,190	301	86	80	105
Widow pensioners	16	4	..	..	1
Unemployment and sickness beneficiaries	9,913	1,100	197	157	764
Special beneficiaries	4	2	..	..	1
Recipients of tuberculosis allowance	88	60	24	30	23
Persons aged 14-15 years ..	182	82	24	20	55
Persons provided with rehabilitation on payment of the cost by another authority	117	86	..	..	63
Total	17,510	1,635	331	287	1,012

There were 1,635 persons accepted during the year, 82 more than during the previous year. Of those, 69 per cent. were under 40 years of age. The average number receiving rehabilitation training during the year was 1,130.

5. **Funeral Benefits.**—(i) *General.* 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.

(ii) *Number of Benefits, 1959-60 to 1963-64.* The following table shows the number of funeral benefits which were granted in each State and Territory in the years 1959-60 to 1963-64.

FUNERAL BENEFITS GRANTED: AUSTRALIA

State or Territory	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	14,764	15,019	15,228	16,365	16,680
Victoria	9,069	9,200	9,702	10,861	10,594
Queensland	4,891	5,523	6,000	5,952	6,176
South Australia	3,141	3,192	3,103	3,595	3,618
Western Australia	2,448	2,654	2,605	2,589	2,749
Tasmania	1,100	1,100	1,174	1,183	1,242
Northern Territory	3	7	11	5	14
Australian Capital Territory ..	49	54	66	74	73
Abroad .. ..	..	..	..	..	2
Total	35,465	36,749	37,889	40,624	41,148

6. **Maternity Allowances.**—(i) *General.* 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.

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 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 from the country from which she came. An alien mother may receive the allowance if she or her husband resided in Australia for at least twelve months immediately prior to the birth of the child, or if she is likely to remain in Australia permanently. Aboriginals, other than those who are nomadic or primitive, are eligible for maternity allowances on the same conditions as other members of the community.

(ii) *Rates of Allowance.* The allowance is £15 if the mother has no other children, £16 if she has one or two children under 16, and £17 10s. if she has three or more other children under 16. The amount is increased by £5 for each additional child born at a birth. An advance payment of £10 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 child had developed for at least 5½ months.

(iii) *Claims Paid, 1963-64.* The following table shows the number of claims paid in each State and Territory at the several rates of maternity allowances during the year 1963-64.

MATERNITY ALLOWANCES: CLAIMS PAID AT EACH RATE, 1963-64
(Number)

State or Territory	Single births			Multiple births						Total claims paid
	£15	£16	£17 10s.	Twins			Triplets			
				£20	£21	£22 10s.	£25	£26	£27 10s.	
New South Wales	27,167	38,714	16,537	550	402	200	3	3	4	83,580
Victoria ..	20,853	29,366	13,460	201	351	199	2	4	2	64,438
Queensland ..	10,206	15,353	9,014	92	167	132	..	1	1	34,966
South Australia ..	6,812	9,735	4,317	67	103	60	..	2	..	21,096
Western Australia	5,275	7,852	3,680	48	87	45	..	1	..	16,988
Tasmania ..	2,547	3,717	2,079	15	42	37	..	..	..	8,437
Northern Territory	567	614	467	3	8	4	..	..	..	1,663
Australian Capital Territory ..	620	992	383	3	11	4	..	..	..	2,013
Abroad ..	102	140	26	..	1	1	..	..	..	270
Total ..	74,149	106,483	49,963	979	1,172	682	5	11	7	233,451

(iv) *Number of Claims Paid, and Amounts Paid, 1959-60 to 1963-64.* The following table shows the number of maternity allowance claims paid in each State and Territory during the years 1959-60 to 1963-64.

MATERNITY ALLOWANCES: NUMBER OF CLAIMS PAID

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Abroad	Total
1959-60..	81,241	62,853	35,515	21,443	17,012	8,985	767	1,311	262	229,389
1960-61..	85,751	66,511	35,587	21,774	17,648	9,077	1,215	1,511	310	239,384
1961-62..	87,659	65,847	36,339	21,328	17,366	8,942	1,398	1,662	300	240,841
1962-63..	82,700	66,021	35,659	21,357	17,152	8,560	1,516	1,789	310	235,064
1963-64..	83,580	64,438	34,966	21,096	16,988	8,437	1,663	2,013	270	233,451

The following table gives details of the amounts paid in each State and Territory for the years 1959-60 to 1963-64.

MATERNITY ALLOWANCES: AMOUNT PAID
(£'000)

Year	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Abroad	Total
1959-60	1,277	1,008	575	337	275	143	12	21	4	3,652
1960-61	1,399	1,069	590	359	284	148	20	24	5	3,898
1961-62	1,442	1,057	589	344	279	145	23	24	5	3,908
1962-63	1,332	1,059	576	343	276	138	24	28	5	3,781
1963-64	1,325	1,032	564	338	273	136	27	30	4	3,729

7. **Unemployment, Sickness and Special Benefits.**—(i) *General.* 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 are unemployed or who are temporarily incapacitated for work and thereby suffer loss of income. They must have been living in Australia during the preceding twelve months or be likely to remain permanently in Australia. A person receiving an age, invalid or widow's pension, or a service pension (as distinct from a war pension) under the *Repatriation Act 1920-1964*, 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 Office is necessary.

To qualify for a sickness benefit, a person must establish that he is temporarily incapacitated for work because 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 unemployment benefit in her own right.

A special benefit may be granted to a person not qualified for unemployment or sickness benefit who is not receiving an age, invalid or widow's pension or a service pension, if, because 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. Recipients of special benefits include, among others, persons caring for invalid parents, deserted wives, and naturalized persons ineligible for age, invalid or widows' pensions.

Special benefits are also paid to migrants who are in reception centres and are awaiting their first placement in employment in Australia. During this time they receive a short instruction in English and in Australian conditions to facilitate their assimilation into the community and employment.

Aboriginals, other than those who are nomadic or primitive, are eligible for these benefits on the same conditions as other members of the community.

(ii) *Rates of Benefit.* The maximum weekly rates of benefit payable and permissible income in respect of benefit periods which commenced on or after 1st March, 1962, are as follows.

Age and marital status of claimant	Maximum weekly rate	Permissible weekly income
	£ s. d.	£ s. d.
Unmarried person under 18 years of age	1 15 0	1 0 0
Unmarried person 18 to 20 years of age	2 7 6	1 0 0
All others	4 2 6	2 0 0

An additional benefit of £3 a week may be paid for a dependent spouse and 15s. a week for each dependent child under 16 years of age if resident in Australia. Additional benefit, at the same rate as that for a dependent spouse, may be paid where a woman is keeping house for a claimant who has one or more children under 16 years of age in his care. It may be granted only if no such benefit is payable for his wife and the housekeeper is substantially dependent on him but not employed by him.

The weekly rate of benefit is reduced by the amount by which a beneficiary's other income exceeds the amount shown in the relevant line of the final column in the preceding table. For unemployment benefit purposes the income of the spouse is also taken into account, unless the claimant and his spouse are permanently separated. For sickness benefit purposes the income from an approved friendly society or other similar approved body in respect of the incapacity for which sickness benefit is payable is disregarded. "Income" does not include child endowment or other payments for children, Commonwealth hospital and pharmaceutical benefits, a tuberculosis allowance, or an amount paid in reimbursement of medical, dental or similar expenses. There is no means test on property.

The amount of compensation, damages or similar payment, or war pension, if paid in respect of the same incapacity as that for which sickness benefit is claimed, is deducted from the sickness benefit. If not paid in respect of the same incapacity, compensation is regarded as income and war pension is ignored.

There is a waiting period of seven days for which unemployment or sickness benefit is not payable.

(iii) *Benefits, 1963-64.* The following table shows the number admitted to unemployment, sickness, and special benefit during 1963-64, the number of persons on benefit at 30th June, 1964, and the amount paid for each benefit during 1963-64.

UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS, 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Number admitted to benefit—									
Unemployment—									
Males ..	31,405	15,225	25,437	4,600	10,159	4,467	104	252	91,649
Females ..	17,727	7,408	11,053	4,407	4,812	2,253	28	163	47,851
Persons ..	49,132	22,633	36,490	9,007	14,971	6,720	132	415	139,500
Sickness—									
Males ..	19,476	11,565	9,153	4,147	4,687	1,658	113	138	50,937
Females ..	7,154	4,995	2,980	1,406	1,440	509	27	55	18,566
Persons ..	26,630	16,560	12,133	5,553	6,127	2,167	140	193	69,503
Special—									
Ordinary—									
Males ..	465	535	439	109	53	53	11	..	1,665
Females ..	480	1,670	245	73	48	82	2	2	2,602
Persons ..	945	2,205	684	182	101	135	13	2	4,267
Migrants—									
Persons ..	351	2,768	12	159	45	..	..	..	3,335
Total—									
Males(a) ..	51,346	27,325	35,029	8,856	14,899	6,178	228	390	144,251
Females(a) ..	25,361	14,073	14,278	5,886	6,300	2,844	57	220	69,019
Persons(b) ..	77,058	44,166	49,319	14,901	21,244	9,022	285	610	216,605
Persons on benefit at end of year—									
Unemployment—									
Males ..	3,258	2,019	1,454	458	1,360	905	4	20	9,478
Females ..	3,593	1,361	1,349	809	1,007	494	2	36	8,651
Persons ..	6,851	3,380	2,803	1,267	2,367	1,399	6	56	18,129
Sickness—									
Males ..	3,034	1,838	1,178	519	623	198	12	29	7,431
Females ..	1,331	969	466	242	236	91	2	8	3,345
Persons ..	4,365	2,807	1,644	761	859	289	14	37	10,776
Special—									
Ordinary—									
Males ..	178	138	91	46	26	25	5	..	509
Females ..	530	962	286	97	86	104	1	2	2,068
Persons ..	708	1,100	377	143	112	129	6	2	2,577
Migrants—									
Persons ..	7	86	..	12	..	..	..	..	105
Total—									
Males(a) ..	6,470	3,995	2,723	1,023	2,009	1,128	21	49	17,418
Females(a) ..	5,454	3,292	2,101	1,148	1,329	689	5	46	14,064
Persons(b) ..	11,931	7,373	4,824	2,183	3,338	1,817	26	95	31,587
Benefits paid—									
Unemployment £	2,542,013	1,374,817	1,347,109	375,536	701,475	375,123	1,926	11,037	6,729,036
Sickness £	1,397,131	883,122	530,218	254,141	261,005	107,545	6,197	11,320	3,450,679
Special(b) £	185,540	265,343	93,065	34,725	26,763	26,001	991	346	632,774
Total Benefits Paid(b) £	4,124,684	2,523,282	1,970,392	664,402	989,243	508,669	9,114	22,703	10,812,489

(a) Excludes migrants in reception centres.

(b) Includes migrants in reception centres.

(iv) *Benefits, 1959-60 to 1963-64.* The following table shows the number of persons who were admitted to benefit, the average number receiving benefit at the end of each week and the amount paid for each benefit during each of the years 1959-60 to 1963-64.

**UNEMPLOYMENT, SICKNESS AND SPECIAL BENEFITS: SUMMARY,
AUSTRALIA**

Year	Number admitted to benefit			Average number of persons on benefit at end of each week			Amount paid in benefits		
	Un-employment	Sick-ness	Special (a)	Un-employment	Sick-ness	Special (a)	Un-employment	Sick-ness	Special (b)
							£	£	£
1959-60 ..	108,224	59,159	14,590	21,374	8,755	2,650	4,504,504	2,238,281	510,163
1960-61 ..	161,113	58,184	14,001	21,569	8,513	2,829	4,468,532	2,151,479	519,907
1961-62 ..	278,936	63,586	7,466	52,950	9,286	2,867	12,636,766	2,664,322	603,191
1962-63 ..	200,982	66,402	8,227	39,706	10,514	2,647	10,650,628	3,375,235	631,592
1963-64 ..	139,500	69,303	7,602	25,925	10,994	2,684	6,729,036	3,450,679	632,774

(a) Includes migrants in reception and training centres.

(b) Includes payments to migrants in reception and training centres.

8. *Widows' Pensions.*—(i) *Rates and Conditions.* Widows' pensions are payable according to the following classes. The rates shown have been in operation since October, 1964.

Class "A". A widow who has the custody, care and control of one or more children under the age of 16 years—£416 per annum (£8 a week). This includes the standard rate pension at £312 per annum (£6 a week) and a mother's allowance of £104 per annum (£2 a week). In addition, a flat rate allowance of £39 per annum (15s. a week) for one child and, subject to the means test, extra pension of £39 per annum (15s. a week) for each other child under sixteen years are payable. Payment may be made for a child over sixteen years until the end of the calendar year in which he reaches eighteen years, if he is wholly or substantially dependent on the widow and is receiving full-time education at a school, college, or university.

Class "B". A widow who has no children under 16 years of age, or eligible full-time student children, 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" widows' pension because she no longer had the custody, care and control of a child—£279 10s. per annum (£5 7s. 6d. a week).

Class "C". A widow who is under 50 years of age and has no children under the age of 16 years, or eligible full-time student children, in her custody, care and control, but is in necessitous circumstances within the 26 weeks after the death of her husband—£5 7s. 6d. a week for not more than 26 weeks after the death of her husband. If the widow is pregnant, this period may be extended until the child's birth. She may then become eligible for a Class "A" widow's pension.

Widow pensioners may receive supplementary assistance of £26 per annum (10s. a week) if they pay rent and are considered to be dependent entirely on their pensions.

For classes "A" and "B", the term "widow" includes a wife who has been deserted by her husband without just cause for a period of at least six months, a divorcee, a woman whose husband has been imprisoned for at least six months, and a woman whose husband is in a mental hospital. Certain dependent females also may qualify for "A", "B" or "C" Class pensions.

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 if the widow and her husband were living permanently in Australia when he died. Certain absences are ignored.

A widow's pension is not payable to an alien, a woman receiving an age or invalid pension, a tuberculosis allowance, a war widow's pension, or a deserted wife or a divorcee who has not taken reasonable action to obtain maintenance from her husband or former husband. Aboriginals, other than those who are nomadic or primitive, are eligible for widows' pensions on the same conditions as other members of the community.

(ii) *Means Test.* Widows' pensions are subject to a means test on income and property. The pension payable depends on the claimant's *means as assessed*. These consist of her annual rate of income together with a property component equal to £1 for every complete £10 by which the value of her property is in excess of a stipulated sum. In the case of a Class "B" widow, £200 of property is exempt. A Class "A" widow has a basic exemption of £1,000 when the value of her property exceeds £2,250, but no property component is calculated where she has property of no more than £2,250 in value. A Class "A" pension is not payable where a widow has property valued at £6,980 or more; no Class "B" pension is payable where property is £4,820 or more. There is no specific means test for the Class "C" pension, which is paid only where it is evident that a widow has insufficient means of support. The types of income and property disregarded for means test purposes are the same as for age and invalid pensions.

(iii) *Pensions, 1963-64.* The following table shows details of widows' pensions paid in each State and Territory in the year 1963-64.

WIDOWS' PENSIONS AT 30th JUNE, 1964

State or Territory	Pensions current				Average weekly pension (a)	Amount paid in pensions during 1963-64. (a)(b)
	Class "A"	Class "B"	Class "C"	All classes		
					<i>s. d.</i>	£
New South Wales ..	9,862	13,573	46	23,481	134 1	7,836,236
Victoria	6,722	8,841	18	15,581	135 5	5,158,146
Queensland	4,759	5,226	15	10,000	138 7	3,424,443
South Australia ..	2,632	3,208	2	5,842	136 0	1,942,159
Western Australia ..	2,120	2,607	7	4,734	134 1	1,557,504
Tasmania	1,090	1,016	3	2,109	141 5	733,497
Northern Territory ..	80	83	2	165	142 11	55,129
Australian Capital Territory	106	105	1	212	138 9	53,860
Abroad	(c)	(c)	(c)	(c)	..	23,342
Total	27,371	34,659	94	62,124	135 9	20,784,316

(a) Includes allowances and supplementary assistance. (b) Includes payments to benevolent homes for maintenance of pensioners. (c) Included in the figures for the State in which the pensioner is permanently domiciled.

9. *Reciprocal Agreements with Other Countries.*—(i) *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 may be treated 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.

(ii) *Britain.* A new reciprocal agreement on social services between Britain and Australia came into operation on 1st April, 1958, replacing the original agreement which operated from 7th January, 1954.

Under this agreement, residence in one country may be treated as residence in the other country as the basis for entitlement to benefits in which a residential qualification applies.

Australians going to Britain for permanent residence are treated in Britain as if they had been insured under the National Insurance Scheme while in Australia, so that they can qualify for various National Insurance benefits.

There is also provision for the safeguard of social service rights for persons going from one country to the other for temporary residence.

10. Commonwealth Assistance to Aged Persons Homes and Sheltered Work Shops.—
(i) *The Aged Persons Homes Act 1954-1957*. This Act is designed to encourage the provision of homes in which aged persons may reside in conditions approaching normal domestic life.

To be eligible for assistance under the 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 purposes of the 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 the 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, including land, to be used permanently for the accommodation of aged persons. The grant is made on a basis of £2 for each £1 raised by the organization, not counting money which the organization received from a governmental body or borrowed. Before a grant is made, the Director-General must be satisfied that the sum of the money expended and the money at present 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.

The following table gives information regarding grants approved during 1963-64.

**AGED PERSONS HOMES: GRANTS APPROVED, AMOUNTS GRANTED,
AND BEDS PROVIDED, 1963-64**

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Total
Grants approved	No.	36	43	12	28	9	3	1	2	134
Amounts granted	£'000	1,166	1,163	88	691	266	59	10	24	3,467
Beds provided	No.	835	802	85	493	188	39	8	16	2,466

The following table gives information regarding grants approved since the commencement of the Act.

**AGED PERSONS HOMES: GRANTS APPROVED, AMOUNTS GRANTED,
AND BEDS PROVIDED, AUSTRALIA**

Year	Grants approved	Amounts granted	Beds provided
	No.	£'000	No.
1954-55 ..	67	893	1,477
1955-56 ..	65	782	1,184
1956-57 ..	54	667	957
1957-58 ..	75	1,192	1,195
1958-59 ..	112	2,220	2,126
1959-60 ..	110	1,860	1,644
1960-61 ..	131	2,792	2,089
1961-62 ..	130	3,053	2,260
1962-63 ..	155	4,183	2,939
1963-64 ..	134	3,467	2,466

(ii) *Disabled Persons Accommodation Act.* The *Disabled Persons Accommodation Act* 1963, which came into operation on 25th November, 1963, provides that grants may be made to eligible organizations towards the capital cost of approved buildings which will provide residential accommodation for disabled persons engaged, or likely to be engaged, in paid employment in a sheltered workshop.

The Act covers both the erection of buildings to be used for accommodation and the purchase of existing premises for conversion into accommodation. In both cases the cost of the necessary land may be included.

Eligibility of organizations for grants under this Act is on the same basis as for the Aged Persons Homes Act.

For the purposes of the Act, a disabled person is a person who is qualified by age (sixteen years or over) and on medical grounds for an invalid pension under the Social Services Act. A sheltered workshop is a factory or workshop, or part thereof, in which all or a substantial number of employees are disabled persons who receive payment for their work.

§ 4. Selected Non-Government Organizations

1. **National Safety Council of Australia.**—The National Safety Council of Australia was founded in Victoria in 1927. In 1959 it was reorganized, and new Articles of Association were adopted in 1961, placing it on a more truly federal basis and reflecting the expanded character of the Council in the 34 years since its formation.

The objects of the Council are to devise and encourage the adoption of safety measures of all kinds, to promote discussion of all matters relating to safety measures, to conduct an educational campaign among the people of Australia to stimulate the adoption and observance of safety measures, and to consider, initiate and support improvements in the laws of the Commonwealth of Australia, the States and local governing bodies calculated to prevent accidents.

The Council is now registered in Canberra, with Divisions established in all States. It is managed by a Federal Council responsible for those objectives which are of a national character. Each State Division controls its own affairs which are of State or local character.

The Council is a non-profit making organization and, apart from fees which may be charged to members and others for services provided, its work is financed by subscriptions, grants and donations. The Federal Council receives a grant from the Commonwealth Government.

2. **Lifesaving.**—There are two life saving organizations in Australia, the Royal Life Saving Society—Australia, and the Surf Life Saving Association of Australia.

The objects of these organizations are the prevention of death from drowning and other forms of asphyxiation; the education of the general public in methods of life saving and resuscitation of the apparently drowned or asphyxiated; technical education in water safety; the encouragement of swimming and life saving in schools and other organizations; the encouragement of all aspects of swimming and aquatics which would assist in saving lives; and the initiation of research within the field of water safety and lifesaving.

The Royal Life Saving Society operates at lakes, rivers, bay and harbour beaches, and gives instruction to school pupils and members of other bodies throughout Australia except on surf beaches. The Surf Life Saving Association patrols surf beaches.

Numerous certificates and medallions of proficiency in various grades are awarded.

3. **Royal Humane Society.**—The Royal Humane Society of Australasia has as its main object the granting of awards to all who with bravery, skill and perseverance 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.

4. **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. In October, 1963, at Canberra, the Priory for the first time held its meetings in Australia under the chairmanship of the Prior, his Excellency, the Governor-General.

Members of the St. John Ambulance Association teach first aid, 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 maintains ambulance transport services in some States, acts as an auxiliary 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.

CHAPTER XVII

PUBLIC JUSTICE

NOTE.—In interpreting statistics of public justice, it should be realized that a number of factors affect comparability from State to State and from year to year, e.g.:

- (a) Differences in the jurisdiction of courts;
- (b) Changes in the law in particular States and differences in the laws between States;
- (c) Differences in the methods of compiling the figures (e.g. in respect of persons convicted for more than one offence);
- (d) The attitude to laws such as those connected with liquor, vagrancy, gaming, and traffic offences;
- (e) The strength and distribution of the police force;
- (f) The proportion of various types of crimes reported and solved.

§ 1. The Australian Legal System

1. Development of the System.—The two major factors in the development of the Australian legal system have been its British origin and the Federal Constitution of 1900. When the various parts of Australia were first settled by British colonists, the common law and statutes of England were brought with them by the settlers. When local law-making bodies were established, the law so brought in was gradually modified and augmented by local legislation, but the Imperial Parliament in London also continued to legislate (to a lesser and lesser extent) in respect of Australia. The Federal Constitution of 1900, which is itself an Imperial Act, limited the legislative power of State Parliaments in some respects and created a federal legislature. Since the *Statute of Westminster Adoption Act 1942*, the Imperial Parliament can legislate for Australia only at Australia's request. The sources of Australian law of today are, therefore, found in Commonwealth and State legislation, in some Imperial legislation and in the common law. No significant attempt has been made at codification of the law, but three of the States (Queensland, Western Australia, and Tasmania) have Criminal Codes. However, separate consolidations of the statutes of the Commonwealth and of all States except Western Australia (which has adopted a system of reprinting of individual statutes at intervals) have been brought out from time to time.

There are few constitutional or other legislative guarantees of individual rights and liberties in Australia. These rights are nevertheless protected, because a basic feature of the Australian system is the "rule of law": no act, official or unofficial, however bona fide and apparently reasonable, which infringes the liberty or rights of an individual is justifiable unless it is authorized by law, and for any such unlawful act, by whatever authority commanded, the official or other person is personally liable in an action in the ordinary courts. In the case of subordinate legislation, and even in the case of Federal or State Acts, the validity of the law itself may be challenged in the courts. The remedy for the protection of the personal liberty of the individual is the writ of habeas corpus, which requires the person named therein to be produced in the court.

Australian law adheres to the principle that judicial control must in general be exercised by ordinary courts. There is no integrated system of administrative tribunals, but there is a great variety of such tribunals of various descriptions. The ordinary courts exercise supervision over administrative tribunals either by way of statutory appeal or by the use of prerogative writs of mandamus, prohibition, or *certiorari*, by which the administrative tribunals can be enjoined to perform a duty or to abstain from excess of jurisdiction, or can have their decisions set aside.

Independence of the judiciary is an essential part of the Australian legal system. Security of tenure of superior court judges is guaranteed, mostly by the Constitutions of the Commonwealth and the States, and they can be removed from office only by resolution of both Houses of Parliament of the Commonwealth or the States, as the case may be, for proven misbehaviour or incapacity. Their independence is further secured by relatively high salaries which, in the case of High Court judges, cannot be reduced during their tenure of office, and liberal (mostly non-contributory) pensions for the judges or their widows.

Civil judgments given in the courts of any part of Australia can be enforced in any other part of Australia under the *Service and Execution of Process Act* 1901-1963. Since 1st January, 1964, this applies also to fines imposed by courts of summary jurisdiction.

2. *State and Territory Courts.*—(i) *Civil jurisdiction.* Lower civil courts (i.e., Magistrates' Courts, Courts of Petty Sessions, Local Courts, Small Debts Courts, Courts of Request and Courts of General Sessions) are usually constituted or presided over by a stipendiary or special magistrate or a commissioner. In some limited instances, justices of the peace may exercise the jurisdiction of the court. Local Courts are sometimes constituted by a Judge. The powers of the magistrates in the various States and Territories are set out in § 2, pages 625-7. In most cases, unless the amount involved is very small, 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 prerogative writs, to examine whether a lower court has properly exercised its jurisdiction.

In the higher courts (i.e., 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 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 referred to on page 625.

(ii) *Criminal jurisdiction.* Criminal courts are of two kinds, namely, courts of summary jurisdiction and higher courts. Courts of summary jurisdiction, usually called Courts of Petty Sessions, may deal summarily with minor offences; higher courts, known as Courts of Sessions, Quarter Sessions or General Sessions (not to be confused with the lower court of civil jurisdiction of that name) and the Supreme Court, 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 and, within the limits of the law, the punishment of the convicted person.

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 facie* 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.*—(i) *General.* 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. (§§ 71-80) of the Commonwealth Constitution (*see* p. 16 of this Year Book).

Particulars concerning the Federal Court of Bankruptcy will be found in § 8 of this chapter. Information regarding the Commonwealth Industrial Court, which was established under the *Conciliation and Arbitration Act* 1904-1964, will be found in Chapter XIII. Labour, Wages and Prices (pp. 426-8).

(ii) *High Court of Australia.* The High Court of Australia consists of a Chief Justice and six other Justices. Its principal seat is in Melbourne, but sittings are held in every State capital as occasion requires. The High Court has both original and appellate jurisdiction. Its original jurisdiction is usually exercised by a single Justice, appellate jurisdiction by at least three Justices.

The Constitution itself confers original jurisdiction on the High Court 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. In addition, Parliament may, under the Constitution, confer additional original jurisdiction on the High Court in certain classes of matters, and has in fact conferred original jurisdiction on the High Court in all matters arising under the Constitution or involving its interpretation and in trials of indictable offences against the laws of the Commonwealth. In matters (i) and (v) and in suits between the Commonwealth and a State or between States the jurisdiction of the High Court is exclusive of that of the State Courts, and in matters (other than trials of indictable offences) involving any question as to the limits *inter se* of the constitutional powers of the Commonwealth and those of the States, the jurisdiction of the High Court is exclusive of that of the Supreme Courts of the States.

Under the Constitution the High Court has jurisdiction, with such exceptions and subject to such regulations as the Parliament permits, to hear and determine appeals from all judgments, decrees, orders and sentences of (i) any Justice or Justices exercising the original jurisdiction of the High Court, (ii) any other Federal court or court exercising Federal jurisdiction and (iii) from the Supreme Court or other court of any State from which appeal lay to Privy Council at the establishment of the Commonwealth. In respect of (iii) the Parliament has prescribed that, generally, appeal can be brought only by special leave of the High Court. However, in the case of judgments affecting the status of any person under the laws relating to aliens, marriage, bankruptcy or insolvency, or in respect of any sum or matter at issue, or involving any claim, demand, or question, to or regarding any property or civil right, amounting to or of the value of £1,500, appeal may be brought as of right from final judgments, and by leave of the High Court or the Supreme Court from interlocutory judgments.

By Acts of Parliament and by subordinate legislation the High Court has also been given appellate jurisdiction in respect of the courts of the Territories under the control of the Commonwealth. Provision is also made in various enactments for appeal to the High Court on points of law from administrative determinations, such as decisions of the Commissioner of Taxation, Taxation Boards of Review, the Commissioner of Patents, or the Registrar of Trade Marks. Such proceedings, although called appeals, are in reality proceedings in the original jurisdiction of the High Court.

Transactions of the High Court are shown in § 6. p. 633.

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. Lower (Magistrates') Courts

1. Powers of the Magistrates.—(i) *New South Wales*. The powers of the magistrates with regard to offences punishable summarily depend in each case on the statute which creates the offence and gives them jurisdiction. A magistrate may, with the consent of the accused, deal summarily with certain indictable offences under the Commonwealth Crimes Act and offences involving £250 or less under the State Crimes Act; offences under the Commonwealth Act and certain offences under the State Act may be disposed of summarily without such consent if the amount involved does not exceed £50. 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 £150 before a court constituted by a stipendiary magistrate. Where the amount claimed exceeds £50 the Court must transfer the action to the District Court when the defendant gives notice that he objects to the action being heard and determined by a Court of Petty Sessions. Magistrates have power to entertain claims of up to £500 under the *Money Lenders and Infants Loans Act 1941-1961*. The amount in actions of debt or damages before one or more justices of the peace ranges up to £30 in certain cases.

(ii) *Victoria*. The civil jurisdiction of magistrates is restricted as follows:—(a) ordinary debts, to £100; (b) any action in tort or contract, with the exception of a few torts such as breach of promise or illegal arrest (on which magistrates have no power to adjudicate), to £300; and (c) any action in tort arising out of any accident in which a vehicle is involved, to £500.

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 impose 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 made cumulative on a previous sentence.

(iv) *South Australia*. The power of special magistrates to impose fines and imprisonment is defined by the special Act creating the offence and conferring jurisdiction. In the case of minor indictable offences which are tried summarily, a maximum penalty of £100 fine or two years imprisonment is fixed by the Justices Act, 1921–1960. 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 which are tried 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 Local 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 Session Courts. 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 1963, by an amendment to the *Justices Act 1959*, the categories of crimes triable summarily was extended to include crimes of a less serious nature. In the case of certain crimes the defendant has the option of electing summary trial or trial on indictment in the Supreme Court. However, the choice of election applies only where the property concerned exceeds the value of £10 but does not exceed £200. The defendant no longer has any right of election where the value of the property does not exceed £10. In the case of a charge of forgery or uttering, a right of election exists provided the complaint is in respect of a cheque for not more than £200. In the case of a charge of breaking into a building, other than a dwelling house, a defendant may elect to be tried summarily under certain conditions.

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 Flinders Island, has the maximum jurisdiction, the others being limited to £30.

(vii) *Northern Territory*. Stipendiary and special 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 indictable offences under the Territory law may be tried summarily by a magistrate or two justices of the peace, who may impose a fine of up to £100 or imprisonment for up to two years.

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 (every special magistrate is also a justice of the peace) has a civil jurisdiction to hear claims up to £50.

(viii) *Australian Capital Territory.* Stipendiary and special magistrates have general jurisdiction to try offences 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 on the law which creates the offence. In addition to jurisdiction (possessed by stipendiary and special magistrates throughout Australia) to try summarily with the consent of the defendant offences indictable under the *Crimes Act 1914-1960* (in which case the magistrate cannot impose a fine exceeding £100 or imprisonment exceeding one year), under Territory law certain indictable offences may also be tried summarily by a magistrate, who may impose a fine not exceeding £50 or imprisonment for up to one year. Magistrates also hear proceedings for committal on indictable offences. In civil proceedings, magistrates try actions for amounts up to £200. Justices of the peace have no judicial functions.

2. **First Offenders.**—In all States and Territories statutes are in force for dealing with first offenders. For particulars of the relevant legislation, see Year Book, No. 46, page 632. Provisions are incorporated in the various Acts whereby courts may extend leniency to the offender by means such as: (i) dismissal of the charge without proceeding to a conviction; (ii) freeing the offender or suspending sentence with the requirement of a recognizance for good behaviour for a specified period; and (iii) by placing the offender under the supervision of a probation officer for a specified period.

3. **Children's Courts.**—Special provisions exist in all States and Territories for dealing with juvenile offenders in special courts. Particulars of the relevant legislation and the constitution and powers of these courts are given in Year Book No. 49, pages 665-6.

4. **Proceedings at Lower (Magistrates') Courts.**—Particulars of the differences in the jurisdiction of Lower Courts in the various States are given in para. 1, Powers of Magistrates, pages 625-7. The proceedings of these courts are summarized in this paragraph. In interpreting the statistics in the tables the factors affecting comparability listed at the beginning of this chapter should be borne in mind.

(i) *Criminal. (a) Total Cases.* The total numbers of cases dealt with at magistrates' courts in each State and Territory for the years 1959 to 1963 are shown in the following table.

CASES AT MAGISTRATES' COURTS: OFFENCES CHARGED

State or Territory	1959	1960	1961	1962	1963
New South Wales(a) ..	331,195	332,728	345,730	322,848	323,501
Victoria ..	287,622	(a)268,104	(a)259,268	(a)270,275	(a)290,332
Queensland(a)(b) ..	65,773	73,804	79,448	79,772	87,737
South Australia(a)(b) ..	38,003	47,427	59,534	61,276	68,707
Western Australia(a) ..	50,696	50,107	48,220	52,764	54,907
Tasmania(a) ..	21,355	24,047	27,227	30,415	34,728
Northern Territory ..	3,617	2,958	3,091	4,350	5,886
Australian Capital Territory ..	2,539	3,168	3,305	4,795	6,435
Australia ..	800,800	802,343	825,823	826,495	872,233

(a) Excludes minor traffic offences settled without court appearance.

(b) Year ended 30th June.

Differences in the figures in the table above between States, and within a State over a period of time, are influenced by the large number of traffic offences and the arrangements which have been introduced at various times for dealing with them. Provision exists in the States for settlement of parking and minor traffic offences by payment of fines without court appearance. The following table shows the number of such offences for the years 1959 to 1963.

MINOR TRAFFIC OFFENCES SETTLED WITHOUT COURT APPEARANCES

State	1959	1960	1961	1962	1963
New South Wales ..	321,157	351,685	370,688	443,689	389,395
Victoria ..	(a)	69,895	113,874	132,144	170,590
Queensland(b) ..	22,701	40,648	58,977	75,322	79,237
South Australia(b) ..	145,276	149,241	156,067	191,592	183,684
Western Australia ..	44,973	50,879	44,392	42,582	43,970
Tasmania ..	18,554	25,801	36,745	33,217	34,394
Total ..	552,661	688,149	780,743	918,546	901,270

(a) Not applicable.

(b) Year ended 30th June.

(b) *Cases in which Convictions were made.* Of the cases dealt with in Magistrates' Courts in 1963, the following table shows the number in which convictions were made.

CASES AT MAGISTRATES' COURTS IN WHICH CONVICTIONS WERE MADE, 1963

Class of offence	N.S.W.	Vic.	Qld (a)(b)	S.A. (a)	W.A.	Tas.	N.T.	A.C.T.	Aust.
Against the person ..	3,468	2,719	675	573	527	362	203	97	8,624
Against property ..	28,105	18,211	5,093	3,143	7,278	1,196	338	392	63,756
Forgery and offences against the currency ..	1,083	610	..	11	8	12	50	3	1,777
Against good order ..	106,167	36,522	31,172	9,335	6,983	1,373	3,096	340	194,988
Other ..	148,230	208,026	41,924	44,462	36,916	27,002	1,816	5,194	513,570
Total ..	287,053	266,088	78,864	57,524	51,712	29,945	5,503	6,026	782,715

(a) Year ended 30th June.

(b) A person convicted on several counts at the one hearing is included only once.

The following table shows the number of cases in which convictions were made in each year from 1959 to 1963.

CASES AT MAGISTRATES' COURTS IN WHICH CONVICTIONS WERE MADE

State or Territory	1959	1960	1961	1962	1963
New South Wales(a) ..	303,504	306,436	314,307	292,484	287,053
Victoria ..	265,214	(a)245,807	(a)235,581	(a)246,017	(a)266,088
Queensland(a)(b)(c) ..	60,212	67,508	71,642	71,702	78,864
South Australia(a)(b) ..	34,203	42,531	52,155	53,531	57,524
Western Australia(a) ..	47,579	47,462	45,773	49,691	51,712
Tasmania(a) ..	19,094	20,196	23,212	26,211	29,945
Northern Territory ..	3,212	2,664	2,812	3,968	5,503
Australian Capital Territory ..	1,787	2,280	2,613	4,089	6,026
Australia ..	734,805	734,884	748,095	747,693	782,715

(a) Excludes minor traffic offences settled without court appearance.

(b) Year ended 30th June.

(c) A person convicted on several counts at the one hearing is included only once.

(c) *Cases in which Convictions were made for Drunkenness.* The numbers of cases in which convictions were recorded during each of the years 1959 to 1963 are given in the following table.

DRUNKENNESS: CASES IN WHICH CONVICTIONS WERE MADE

State or Territory	1959	1960	1961	1962	1963
New South Wales	69,201	68,591	67,809	68,546	65,630
Victoria	29,334	29,116	27,212	28,529	27,606
Queensland(a)	26,918	28,538	26,136	26,293	28,580
South Australia(a)	4,439	5,273	5,438	6,178	7,485
Western Australia	5,587	5,144	5,333	5,320	4,877
Tasmania	660	512	534	575	562
Northern Territory	1,010	822	1,037	1,388	1,730
Australian Capital Territory	255	298	307	252	237
Australia	137,404	138,294	133,806	137,081	136,707

(a) Year ended 30th June.

The term "drunkenness" includes "drunkenness and disorderliness", and "habitual drunkenness".

The rate of convictions for drunkenness since 1901 is shown below.

RATE OF CONVICTIONS FOR DRUNKENNESS: AUSTRALIA

Year	1901	1911	1921	1931	1941	1951	1961	1963
Convictions per 10,000 persons	133	133	97	57	91	175	129	125

For particulars of legislation relevant to the remedial treatment of drunkenness and some details of the various institutions established for the treatment of inebriates, see Year Book No. 46, p. 632.

(ii) *Civil Proceedings.* Civil proceedings in the lower courts refer to those in 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, Local Courts in the Northern Territory and the Court of Petty Sessions in the Australian Capital Territory. Statistics of civil proceedings in the Lower Courts are given in § 5.

§ 3. Higher (Judges') Courts

1. *General.*—Higher courts are presided over by a judge, sometimes with a jury (see para. 2, page 624). Jurisdiction of the Higher Courts, which include District, County and Supreme Courts, includes appeals from the lower courts, cases of serious crime committed from lower courts, and civil cases involving Common Law, Commercial Causes, Equity, etc.

Under powers vested by the Commonwealth under the *Matrimonial Causes Act 1959* and the *Bankruptcy Act 1924-1960* separate courts within the jurisdiction of the Supreme Courts of the various States and Territories deal exclusively with matrimonial cases and bankruptcy cases respectively.

2. *Habitual Offenders.*—An account of the methods adopted in each jurisdiction in connexion with habitual offenders is given in Year Book No. 49, pages 668-9.

3. *Capital Punishment.*—There were seven executions in Australia during the period 1955 to 1964. Three took place in South Australia (in 1956, 1958 and 1964), and four in Western Australia (one in 1960 and 1961, two in 1964). In each case the offence was murder.

Under " *The Criminal Code Amendment Act of 1922* " capital punishment was abolished in Queensland, and in New South Wales the Crimes Act was amended in 1955, abolishing capital punishment for all offences except treason and piracy with violence. In the Australian Capital Territory the *Child Welfare Ordinance 1957-1962* provides that no death sentence is to be pronounced or recorded against a person under the age of 18 years, and sub-section (2.) of section 389 of the Tasmanian *Criminal Code Act 1924* as amended contains a similar provision.

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. The present 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; from 1941 to 1950, 0.5; and from 1951 to 1960, 0.7.

4. **Proceedings at Higher (Judges') Courts.**—Proceedings at higher courts comprise criminal, civil, divorce and bankruptcy proceedings. Separate details of each are given in § 4, paragraph 2, § 5, § 7, and § 8, respectively.

§ 4. Serious Crime

NOTE.—In interpreting the statistics in this section the factors affecting comparability listed at the beginning of the chapter should be borne in mind. As a step towards obtaining uniform and informative statistics of the more serious crime in Australia as a whole, a conference of Police Commissioners in 1963 recommended that a statistical collection be introduced to provide information on the incidence of, and trend in, certain selected categories of reported crime and also some detail of the involvement of persons according to age and sex. The statistics would be derived from police records. Definitions and procedural arrangements were to be determined which could be applied uniformly in all States as far as possible. The police in all States have made arrangements for the compilation of these figures and it is intended that figures in this series will be published in future issues of the Year Book.

1. **Lower Courts.**—(i) *Convictions for Serious Crime at Magistrates' Courts.* The figures given in the tables on pp. 627-9 refer to all convictions, and include offences of a technical nature, drunkenness, and minor breaches of good order, which come under the heading of crime in a very different sense from the more serious offences. The following table has therefore been prepared to show convictions at Magistrates' Courts for the years 1959 to 1963 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.

CONVICTIONS FOR SERIOUS CRIME^(a) AT MAGISTRATES' COURTS

State or Territory	1959	1960	1961	1962	1963
New South Wales	30,769	31,529	31,696	32,320	32,656
Victoria	12,260	15,646	15,949	19,016	21,540
Queensland ^{(b)(c)}	4,422	4,678	4,736	4,833	5,768
South Australia ^(b)	2,554	2,604	3,552	3,693	3,727
Western Australia	5,423	5,764	5,256	6,814	7,813
Tasmania	1,634	1,788	1,636	1,704	1,570
Northern Territory	297	243	285	419	591
Australian Capital Territory ..	384	331	573	286	492
Australia	57,743	62,583	63,683	69,085	74,157

(a) Offences against the person, offences against property, forgery and offences against the currency.
 (b) Year ended 30th June. (c) A person convicted on several counts at the one hearing is included only once.

The numbers of convictions for serious crime at Magistrates' Courts per 10,000 of population for the same series of years for Australia were:—1959, 57.6; 1960, 61.1; 1961, 60.8; 1962, 64.6; 1963, 68.1.

(ii) *Committals to Higher Courts.* The following table shows the number of offences, classified according to the nature of the offence, which were committed to higher courts for each State and Territory for the year 1963.

COMMITTALS TO HIGHER COURTS, 1963

Class of offence	N.S.W.	Vic.	Qld (a)(b)	S.A. (a)	W.A.	Tas.	N.T.	A.C.T.	Australia
Against the person ..	1,604	1,235	319	290	68	85	18	16	3,635
Against property ..	6,341	2,610	1,012	275	432	554	76	74	11,374
Forgery and offences against the currency ..	419	414	9	17	17	16	12	2	906
Against good order ..	147	198	4	4	6	10	1	..	370
Other	27	849	10	14	..	40	..	..	940
Total	8,538	5,306	1,354	600	523	705	107	92	17,225

(a) Year ended 30th June. (b) A person committed on several counts at the one hearing is included only once.

The following table shows the number of committals to higher courts for each of the years 1959 to 1963.

COMMITTALS TO HIGHER COURTS

State or Territory	1959	1960	1961	1962	1963
New South Wales	7,522	8,212	8,294	7,414	8,538
Victoria	4,523	5,274	4,598	5,468	5,306
Queensland(a)(b)	954	1,211	1,527	1,295	1,354
South Australia(a)	558	542	671	712	600
Western Australia	447	362	298	450	523
Tasmania	529	475	725	643	705
Northern Territory	93	26	86	92	107
Australian Capital Territory..	65	97	65	110	92
Australia	14,691	16,199	16,264	16,184	17,225

(a) Year ended 30th June. (b) A person committed on several counts at the one hearing is included only once.

2. Higher Courts.—(i) *Offences for which Persons were convicted at Higher Courts, 1963.* The following table shows the number of persons convicted at higher courts in each of the States and Territories of Australia during 1963, classified according to the nature of the offence.

PERSONS CONVICTED AT HIGHER COURTS, 1963

Offence	N.S.W.	Vic.	Old (a)(b)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Against the person—									
Infanticide .. .. .	..	1	..	..	..	1	..	..	2
Murder	15	6	5	2	4	..	..	..	32
Attempted murder	4	3	4	..	..	1	..	..	12
Manslaughter(c)	13	9	8	8	11	..	2	..	51
Culpable driving	21	..	16	6	..	..	..	..	43
Rape	23	20	19	11	6	4	..	..	83
Incest .. .. .	..	21	8	7	3	..	..	..	39
Other offences against females	262	382	84	166	1	11	5	8	919
Abduction	3	4	2	..	..	..	..	..	9
Unnatural offences	144	80	11	33	9	..	2	1	280
Abortion and attempt to procure	2	..	3	5	..	1	..	..	11
Bigamy	16	14	8	3	1	1	..	..	43
Malicious wounding	36	..	..	..	..	..	8	..	36
Aggravated assault	56	21	32	18	4	1	8	..	140
Common assault	22	7	5	2	5	4	..	..	45
Other offences against the person	8	59	4	..	2	5	..	2	80
Total	625	627	209	261	46	29	17	11	1,825
Against property—									
Burglary, breaking and entering	1,247	464	687	274	155	205	35	28	3,095
Robbery and stealing from the person	47	45	16	10	12	4	1	..	135
Livestock stealing .. .. .	..	15	6	13	..	..	..	..	34
Embezzlement and fraudulent misappropriation	125	27	7	18	13	..	3	..	193
Other larceny	642	111	29	19	43	..	21	2	867
Unlawfully using vehicles	2	29	136	..	..	..	..	..	167
Receiving	44	43	31	7	9	8	..	..	142
Fraud and false pretences	75	43	13	31	9	16	2	5	194
Arson	4	12	22	4	1	4	..	..	47
Malicious damage	24	7	..	1	..	..	4	..	36
Other offences against property	7	24	1	1	2	..	6	3	44
Total	2,217	820	948	378	244	237	72	38	4,954
Forgery and offences against the currency	37	59	9	30	5	8	3	2	153
Against good order	3	9	3	1	5	13	..	..	34
Other	25	431	18	75	..	6	..	..	555
Grand Total	2,907	1,946	1,187	745	300	293	92	51	7,521

(a) Year ended 30th June. (b) A person convicted on several counts at the one hearing is included only once, but if a person has been 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) Includes causing death by dangerous driving.

(ii) *Persons Convicted at Higher Courts, 1959 to 1963.* The number of persons convicted at higher courts for the years 1959 to 1963 are given in the following table.

PERSONS CONVICTED AT HIGHER COURTS

State or Territory	1959	1960	1961	1962	1963
New South Wales	2,325	2,635	2,712	2,513	2,907
Victoria	1,799	1,996	2,307	2,329	1,946
Queensland(a)(b)	915	1,020	1,279	1,175	1,187
South Australia	499	580	606	718	745
Western Australia	216	183	203	228	300
Tasmania	290	295	304	270	293
Northern Territory	69	29	87	74	92
Australian Capital Territory	40	62	54	57	51
Australia	6,153	6,800	7,552	7,364	7,521

(a) Year ended 30th June. (b) A person convicted on several counts at the one hearing is included only once.

The numbers of persons convicted at higher courts in Australia per 10,000 of population for the years 1959 to 1963 were:—1959, 6.1; 1960, 6.6; 1961, 7.0; 1962, 6.9; 1963, 6.9.

§ 5. Civil Cases

In interpreting the statistics in the two tables in this section it should be borne in mind that there are factors which affect comparability between States and between courts.

The total number of plaints entered and amounts awarded plaintiffs in the lower courts, during 1963, are shown in the following table.

CIVIL CASES AT LOWER COURTS, 1963

Particulars	N.S.W.	Vic.	Qld (a)	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aus- tralia
Plaints entered No.	184,938	194,502	47,772	97,038	54,916	40,574	2,872	8,737	631,349
Amount awarded to plaintiffs £	2,919,886	3,699,899	1,645,176	2,041,932	1,091,112	287,057	40,321	148,576	11,873,959

(a) Year ended 30th June.

The following table shows the civil judgments (excluding those for divorce and bankruptcy) in the higher courts during 1963. The particulars given below include the number and amount of judgments entered by default or confession or agreement.

CIVIL CASES AT HIGHER COURTS, 1963

Particulars	N.S.W.	Vic.	Qld (a)	S.A.	W.A. (b)	Tas.	N.T.	A.C.T.	Aus- tralia
Judgments No.	48,201	24,841	542	274	509	n.a.	n.a.	232	n.a.
Amount awarded £	n.a.	9,606,669	1,853,395	798,300	741,669	n.a.	n.a.	245,373	n.a.

(a) Year ended 30th June.

(b) Judgments signed and entered.

§ 6. Transactions of the High Court

The following table shows the transactions of the High Court for 1963 and 1964.

TRANSACTIONS OF THE HIGH COURT OF AUSTRALIA

Original jurisdiction(a)	1963		1964		Appellate jurisdiction		
	1963	1964	1963	1964	1963	1964	
Number of writs issued ..	84	108			Number of appeals set down for hearing ..	118	107
Number of cases entered for trial ..	42	51			Number allowed ..	33	31
Judgments for plaintiffs ..	18	7			Number dismissed ..	62	88
Judgments for defendants	4	15			Otherwise disposed of ..	23	16
Otherwise disposed of ..	15	36					
Amount of judgments ..	£125,823	£29,622					

(a) Some matters dealt with by the High Court neither originate as writs nor are entered as cases.

During 1963 and 1964, respectively, the High Court dealt also with the following:— appeals from assessments under the Taxation Assessment Act, 22, 52; special cases stated for the opinion of the Full Court, 13, 22; applications for prohibition, etc., 31, 14; The fees collected amounted to £3,289 in 1963, and £4,654 in 1964.

§ 7. Divorce and Other Matrimonial Relief

1. **Separation and Maintenance Orders of Courts of Summary Jurisdiction.**—In all States and Territories there are laws enabling a wife whose husband leaves her or the children of the marriage without adequate means of support to obtain a maintenance order against the husband from a court of summary jurisdiction. In some States and in the Northern Territory courts of summary jurisdiction also have power to make separation orders. A separation order is intended primarily for the protection of the person of the wife.

2. **Divorce and Other Matrimonial Relief Granted by Higher Courts.**—A marriage may be terminated by a Supreme Court of a State or Territory in one of three ways. Firstly, there may be a dissolution of the marriage, commonly known as divorce; secondly, the courts may annul a marriage; and thirdly, there can be a judicial separation of the parties.

Until recently each State was primarily responsible for the provision of matrimonial relief. The law varied from State to State; for example, as to the period of desertion needed to obtain a decree for the dissolution of marriage.

In 1959, however, the Commonwealth Parliament passed the *Matrimonial Causes Act 1959* which came into force on 1st February, 1961. The Act establishes uniform grounds throughout the whole of the Commonwealth for the termination of marriage. While the Act displaces corresponding State law, it vests jurisdiction in existing State and Territorial Courts.

3. **Matrimonial Causes Act 1959.**—Under this Act a decree for the dissolution of marriage may be granted on one or more of fourteen grounds, which include adultery, desertion, separation for five years in certain circumstances, cruelty, drunkenness, and failure to comply with a restitution decree.

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 it is not legally necessary to obtain a decree of nullity of marriage, but since the issue may depend on difficult questions of fact, such as proof that the consent of one of the parties to the marriage was not a real consent, it is advisable and customary to seek a court judgment which decides the question of the validity of the marriage.

Proceedings for annulling a voidable marriage may be instituted on various grounds, as, for example, where at the time of the marriage either party was a mental defective. A voidable marriage is void from the date of the decree absolute, but until then the parties have the status of married people, and transactions 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 may remarry.

The death of either husband or wife terminates any proceedings for matrimonial relief. A decree for dissolution or annulment of a voidable marriage is first a decree *nisi*. The decree automatically becomes absolute at the expiration of three months, unless it is in the meantime rescinded, appeal proceedings are instituted, or there are children of the marriage under the age of 16, in which case the Court must be satisfied that appropriate arrangements have been made for their welfare before the decree will become absolute. The parties cannot remarry until a decree *nisi* has become absolute.

A decree of judicial separation is available on most of the grounds available for divorce. It leaves unimpaired the status of marriage, but suspends rights and duties with respect to cohabitation. A husband is not responsible for the acts of his wife, except that he is liable for necessities supplied to her if he has failed to pay alimony ordered by a court. Persons who have judicially separated cannot remarry, but a divorce may be obtained on the same facts as those on which the decree of judicial separation was based.

The new Commonwealth Act provides for financial grants to approved marriage guidance organizations, and the courts are enjoined to consider at all times the possibility of reconciliation and they may take certain steps to endeavour to effect a reconciliation.

In the following tables the term "divorce" is used to cover dissolution of marriage, nullity of marriage and judicial separation.

4. **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 1964.

PETITIONS FILED FOR DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATION, 1964

Petition for—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of marriage—									
Husband petitioner ..	1,748	993	511	420	313	149	28	53	4,215
Wife petitioner ..	2,736	1,364	610	614	340	173	25	71	5,933
<i>Total</i> ..	<i>4,484</i>	<i>2,357</i>	<i>1,121</i>	<i>1,034</i>	<i>653</i>	<i>322</i>	<i>53</i>	<i>124</i>	<i>10,148</i>
Nullity of marriage—									
Husband petitioner ..	8	5	..	..	1	..	..	..	14
Wife petitioner ..	9	10	4	5	1	..	..	1	30
<i>Total</i> ..	<i>17</i>	<i>15</i>	<i>4</i>	<i>5</i>	<i>2</i>	<i>..</i>	<i>..</i>	<i>1</i>	<i>44</i>
Dissolution or nullity—									
Husband petitioner ..	..	3	1	1	..	..	..	..	5
Wife petitioner ..	3	7	1	1	..	..	..	..	12
<i>Total</i> ..	<i>3</i>	<i>10</i>	<i>2</i>	<i>2</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>17</i>
Judicial separation—									
Wife petitioner ..	13	7	6	4	1	2	..	1	34
<i>Total</i> ..	<i>13</i>	<i>7</i>	<i>6</i>	<i>4</i>	<i>1</i>	<i>2</i>	<i>..</i>	<i>1</i>	<i>34</i>
Dissolution or judicial separation—									
Wife petitioner ..	..	1	..	..	..	..	..	..	1
<i>Total</i> ..	<i>..</i>	<i>1</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>1</i>
Total petitions—									
Husband petitioner No.	1,756	1,001	512	421	314	149	28	53	4,234
Per cent.	39	42	45	40	48	46	53	42	41
Wife petitioner No.	2,761	1,389	621	624	342	175	25	73	6,010
Per cent.	61	58	55	60	52	54	47	58	59
Grand Total ..	4,517	2,390	1,133	1,045	656	324	53	126	10,244

5. Number of Divorces Granted.—The following table shows the number of dissolutions of marriage, nullities of marriage and judicial separations granted in each State during 1964.

DISSOLUTIONS OF MARRIAGE, NULLITIES OF MARRIAGE AND JUDICIAL SEPARATIONS GRANTED, 1964

Decree for—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Dissolution of marriage—									
Husband petitioner ..	1,222	939	431	357	259	115	15	39	3,377
Wife petitioner ..	1,802	1,189	550	529	282	114	16	54	4,536
Granted on petitions of both ..	..	2	..	1	1	..	..	..	4
<i>Total</i> ..	<i>3,024</i>	<i>2,130</i>	<i>981</i>	<i>887</i>	<i>542</i>	<i>229</i>	<i>31</i>	<i>93</i>	<i>7,917</i>
Nullity of marriage—									
Husband petitioner ..	3	5	1	..	1	1	..	..	11
Wife petitioner ..	11	14	4	3	1	..	..	..	33
<i>Total</i> ..	<i>14</i>	<i>19</i>	<i>5</i>	<i>3</i>	<i>2</i>	<i>1</i>	<i>..</i>	<i>..</i>	<i>44</i>
Judicial separation—									
Wife petitioner ..	3	2	..	..	1	..	..	..	6
<i>Total</i> ..	<i>3</i>	<i>2</i>	<i>..</i>	<i>..</i>	<i>1</i>	<i>..</i>	<i>..</i>	<i>..</i>	<i>6</i>
Total decrees—									
Husband petitioner No.	1,225	944	432	357	260	116	15	39	3,388
Per cent.	40	44	44	40	48	50	48	42	43
Wife petitioner No.	1,816	1,205	554	532	284	114	16	54	4,575
Per cent.	60	56	56	60	52	50	52	58	57
Granted on petitions of both ..	..	2	..	1	1	..	..	..	4
Grand Total ..	3,041	2,151	986	890	545	230	31	93	7,967

(a) Decrees absolute.

(b) Final decrees.

6. Number of Divorces Granted, 1960 to 1964.—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 1960 to 1964.

DISSOLUTIONS OF MARRIAGE, NULLITIES OF MARRIAGE AND JUDICIAL SEPARATIONS GRANTED

State or Territory	1960	1961	1962	1963	1964
DISSOLUTIONS OF MARRIAGE(a)					
New South Wales	3,243	3,156	3,113	3,293	3,024
Victoria	1,296	1,248	1,615	1,616	2,130
Queensland	696	779	920	910	981
South Australia	610	718	685	765	887
Western Australia	540	466	582	553	542
Tasmania	210	286	248	260	229
Northern Territory	5	23	38	38	31
Australian Capital Territory	33	36	44	41	93
<i>Australia</i>	<i>6,633</i>	<i>6,712</i>	<i>7,245</i>	<i>7,476</i>	<i>7,917</i>

NULLITIES OF MARRIAGE(b)					
New South Wales	27	18	18	13	14
Victoria	16	9	8	7	19
Queensland	7	2	5	6	5
South Australia	9	7	6	5	3
Western Australia	2	..	2	1	2
Tasmania .. .. .	..	..	1	..	1
Northern Territory	1	..	..	..	..
Australian Capital Territory	1	1	..	..	..
<i>Australia</i>	<i>63</i>	<i>37</i>	<i>40</i>	<i>32</i>	<i>44</i>

JUDICIAL SEPARATIONS					
New South Wales	5	1	..	..	3
Victoria	1	..	..	3	2
Queensland	2	..	3	3	..
South Australia .. .. .	..	..	1	..	..
Western Australia	5	1	1	..	1
Tasmania .. .. .	..	..	..	1	..
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
<i>Australia</i>	<i>13</i>	<i>2</i>	<i>5</i>	<i>7</i>	<i>6</i>

TOTAL DIVORCES GRANTED					
Grand Total, Australia	6,709	6,750	7,290	7,513	7,967

(a) Decrees absolute.

(b) Final decrees.

7. Average Number of Divorces granted Annually.—The ten-year averages of the numbers of divorces (i.e., dissolutions, nullities and judicial separations) granted annually in Australia for the 80 years from 1881 to 1960 are as follows.

DIVORCES: AUSTRALIA

Decade	1881-90	1891-1900	1901-10	1911-20	1921-30	1931-40	1941-50	1951-60
Average	70	357	399	741	1,692	2,508	6,187	6,973

8. Grounds on which Divorces were Granted.—The grounds on which dissolutions of marriage, nullities of marriage and judicial separations were granted in each State and Territory during 1964 are shown in the following table. Some of the decrees granted during 1964 were for petitions lodged under the former, superseded legislation.

GROUND OF DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE AND JUDICIAL SEPARATION, 1964

Ground	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
DISSOLUTION OF MARRIAGE									
Single grounds—									
Desertion	1,423	1,004	506	268	134	95	11	27	3,468
Adultery	659	484	165	243	198	54	8	22	1,833
Separation	515	552	220	180	160	45	5	10	1,687
Cruelty	136	31	19	102	3	9	2	14	316
Drunkenness	32	10	8	13	4	6	2	6	81
Intoxication by drugs ..	1	1	..	1	1	..	..	..	4
Failure to pay maintenance	1	2	1	1	5	..	..	..	10
Non-compliance with restitution decree ..	15	..	..	..	2	..	..	..	17
Refusal to consummate ..	14	2	2	2	..	..	1	1	22
Insanity	5	2	5	3	1	..	..	..	16
Frequent convictions	3	4	2	..	3	..	..	..	12
Imprisonment	2	..	1	1	1	..	..	..	5
Other single grounds	3	1	2	2	..	..	..	..	8
Dual grounds—									
Desertion and adultery ..	27	13	8	8	10	7	..	..	73
Desertion and separation ..	70	9	21	34	13	8	..	4	159
Desertion and cruelty	30	2	2	6	1	..	2	1	44
Desertion and drunkenness ..	7	1	2	2	..	..	..	1	13
Desertion and failure to pay maintenance ..	2	2	..	1	..	..	..	..	5
Desertion and frequent convictions	2	1	1	..	..	..	..	..	4
Adultery and separation ..	3	1	2	1	1	..	..	1	9
Adultery and cruelty	4	..	2	5	..	..	..	..	11
Adultery and drunkenness ..	5	..	..	..	..	..	..	..	5
Separation and refusal to consummate	5	..	..	..	..	..	..	..	5
Cruelty and drunkenness ..	41	5	7	9	1	3	..	3	69
Cruelty and sodomy .. .. .	..	..	3	1	..	..	..	..	4
Other dual grounds	7	3	1	1	2	..	..	2	16
Three grounds or more	12	..	1	3	2	2	..	1	21
Total	3,024	2,130	981	887	542	229	31	93	7,917

NULLITY OF MARRIAGE

Bigamy	7	7	1	..	1	..	..	..	16
Incapacity to consummate ..	6	10	4	3	..	..	..	..	23
Invalid marriage .. .. .	..	2	..	..	1	..	..	..	3
Other grounds	1	..	..	..	..	1	..	..	2
Total	14	19	5	3	2	1	..	..	44

GROUNDS OF DISSOLUTION OF MARRIAGE, NULLITY OF MARRIAGE
AND JUDICIAL SEPARATION, 1964—*continued*

Ground	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
JUDICIAL SEPARATION									
Desertion	1	1	..	..	..	..	..	..	2
Adultery	1	..	..	..	..	..	..	..	1
Cruelty	1	..	..	..	1	..	..	..	2
Cruelty and drunkenness ..	..	1	..	..	..	..	..	..	1
<i>Total</i>	3	2	1	6

TOTAL DIVORCES GRANTED

Grand Total ..	3,041	2,151	986	890	545	230	31	93	7,967
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9. **Ages of Husband and Wife at Time of Marriage.**—The following table shows the ages at time of marriage of husbands and wives who were parties to marriages dissolved in 1964.

**DISSOLUTIONS: AGES OF PARTIES AT TIME OF MARRIAGE, AUSTRALIA,
1964**

Age of husband (years)	Age of wife (years)										Total husbands	
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over		Not stated
Under 20 ..	397	91	9	..	..	..	..	..	..	..	..	497
20-24 ..	1,536	1,949	237	41	7	2	1	1	..	..	2	3,776
25-29 ..	426	1,045	408	99	36	3	6	..	..	..	1	2,024
30-34 ..	81	271	251	144	44	19	3	1	..	..	..	814
35-39 ..	21	84	79	81	81	29	5	..	..	..	..	380
40-44 ..	5	26	36	45	42	29	14	4	1	..	..	202
45-49 ..	..	4	11	23	21	21	17	4	2	..	..	103
50-54 ..	2	..	4	4	10	11	11	3	5	1	..	51
55-59 ..	..	2	3	2	4	2	7	5	2	..	..	28
60 and over ..	1	..	1	..	..	1	2	5	12	8	..	30
Not stated ..	..	..	..	..	1	1	1	..	..	..	9	12
Total Wives	2,469	3,472	1,039	439	246	118	67	23	22	10	12	7,917

10. **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 1964. Age is taken at the time the decree absolute was made.

DISSOLUTIONS: AGES OF PARTIES AT TIME OF DISSOLUTION OF MARRIAGE, AUSTRALIA, 1964

Age of husband (years)	Age of wife (years)										Total hus-bands	
	Under 20	20-24	25-29	30-34	35-39	40-44	45-49	50-54	55-59	60 and over		Not stated
Under 20 ..	..	..	..	..	..	..	..	..	..	..	..	..
20-24 ..	6	139	18	2	..	..	..	..	..	..	..	165
25-29 ..	3	318	527	58	3	3	..	1	..	..	..	913
30-34 ..	4	86	564	524	104	16	4	4	..	..	..	1,306
35-39 ..	..	19	142	578	540	130	23	4	4	1	1	1,442
40-44 ..	..	8	28	150	505	462	103	24	2	..	..	1,282
45-49 ..	..	1	9	39	142	398	344	67	11	6	1	1,018
50-54 ..	..	..	1	11	53	133	294	232	52	20	1	797
55-59 ..	..	..	1	..	15	43	92	162	145	40	..	498
60 and over ..	..	1	2	2	3	41	66	53	100	214	1	483
Not stated ..	..	..	..	..	..	1	..	1	..	1	10	13
Total Wives	13	572	1,292	1,364	1,365	1,227	926	548	314	282	14	7,917

11. Duration of Marriages Dissolved and Number of Children.—A table showing the number of dissolutions of marriage granted in 1964, 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 number of children, appears in the Appendix to this Year Book. Corresponding information for the year 1963 appeared on page 659 of Year Book No. 50.

12. Ages of Children of Dissolved Marriages.—The following table shows the ages of children of marriages dissolved in 1964. The children referred to are those under 21 years of age at the time of petition.

CHILDREN OF DISSOLVED MARRIAGES(a), BY AGE AT TIME OF PETITION: AUSTRALIA, 1964

Petitioner	Age of children at time of petition—																	Total number of children	
	Under 12 mths	1 yr	2 yrs	3 yrs	4 yrs	5 yrs	6 yrs	7 yrs	8 yrs	9 yrs	10 yrs	11 yrs	12 yrs	13 yrs	14 yrs	15 yrs	16-20 yrs		Not stated
Husband ..	23	70	139	185	218	231	276	250	241	248	229	222	203	225	190	184	720	2	3,856
Wife ..	45	102	235	324	349	376	380	415	364	392	361	373	392	320	296	325	1083	4	6,136
Petitions of both ..	..	..	..	..	..	..	..	..	..	2	2	..	1	..	..	..	..	..	5
Total ..	68	172	374	509	567	607	656	665	605	642	592	595	596	545	486	509	1803	6	9,997

(a) This table refers to children, under 21 years at time of petition, of marriages for which decrees absolute for dissolution have been granted in 1964.

13. Number of Divorced Persons at each Census, 1911 to 1961.—The following table shows the number and proportion of divorced persons in Australia as recorded from returns supplied at each census from 1911 to 1961. A classification of divorced persons by age, for the censuses from 1891 to 1947, appeared in earlier issues of the 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 beyond that date.

DIVORCED PERSONS AT CENSUS DATES: AUSTRALIA

Sex	Number						Proportion per 10,000 of males or females, 15 years of age and over					
	1911	1921	1933	1947	1954	1961	1911	1921	1933	1947	1954	1961
Males ..	2,368	4,233	10,298	25,052	32,389	38,641	15	23	42	89	100	105
Females ..	2,140	4,304	10,888	27,516	36,650	43,339	15	24	46	96	115	119

§ 8. Bankruptcy

1. *General.*—Particulars of bankruptcy in each State to the end of 1927 were incorporated in issues of the Year Book prior to No. 23. On 1st August, 1928, the Bankruptcy Act of the Commonwealth, which is now the *Bankruptcy Act* 1924–1960, came into operation.

Under the *Bankruptcy Act* 1924–1960 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 apply voluntarily 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 the debt or debts amount to £50, the act of bankruptcy relied on has occurred within the six months preceding the presentation of the petition, and 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.

Under Part XI. of the Act, instead of having a sequestration order made against his estate, 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 Act provides for an Inspector-General in Bankruptcy. It 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 realize and administer the estate of the debtor. In respect of these activities, the Official Receiver is under the control of 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 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.

2. **Bankruptcy Proceedings.**—The following table shows the number of bankruptcies of the various types in each State, together with the assets and liabilities of the debtors, during the twelve months ended 30th June, 1964.

BANKRUPTCY PROCEEDINGS, 1963-64

State or Territory		Sequestration orders and orders for administration of deceased debtors' estates	Compositions and schemes under Part XI	Deeds under Part XI	Deeds of arrangement, Part XII	Total
N.S.W. (a)	Number ..	717	9	1	45	772
	Liabilities £	3,124,682	141,879	7,165	613,045	3,886,771
	Assets £	1,029,180	115,868	869	450,310	1,596,227
Vic. ..	Number ..	551	23	..	57	631
	Liabilities £	2,190,328	287,363	..	518,955	2,996,646
	Assets £	798,307	121,171	..	404,085	1,323,563
Q'land	Number ..	255	2	..	14	271
	Liabilities £	786,653	22,681	..	90,490	899,824
	Assets £	631,316	32,632	..	140,477	804,425
S. Aust.	Number ..	552	58	18	1	629
	Liabilities £	1,102,397	212,154	319,264	11,453	1,645,268
	Assets £	540,507	201,838	228,686	33,670	1,004,701
W. Aust.	Number ..	186	50	4	1	241
	Liabilities £	300,763	212,564	17,341	40,552	571,220
	Assets £	54,784	143,799	15,333	40,762	254,678
Tas. ..	Number ..	125	..	..	3	128
	Liabilities £	250,676	..	..	21,830	272,506
	Assets £	111,950	..	..	20,237	132,187
N.T. ..	Number ..	6	..	..	..	6
	Liabilities £	48,641	..	..	..	48,641
	Assets £	30,449	..	..	..	30,449
Australia	Number ..	2,392	142	23	121	2,678
	Liabilities £	7,804,140	876,641	343,770	1,296,325	10,320,876
	Assets £	3,196,493	615,308	244,888	1,089,541	5,146,230

(a) Includes the Australian Capital Territory.

For purposes of comparison, the two tables which follow 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.

BANKRUPTCY PROCEEDINGS: AUSTRALIA

Year		Sequestration orders and orders for administration of deceased debtors' estates	Compositions and schemes under Part XI	Deeds under Part XI	Deeds of arrangement, Part XII	Total
1959-60	Number ..	1,949	119	28	192	2,288
	Liabilities £	5,126,243	529,885	161,978	1,961,335	7,779,441
	Assets £	2,738,689	411,084	176,205	1,531,283	4,857,261
1960-61	Number ..	2,004	118	21	225	2,368
	Liabilities £	5,609,860	424,969	189,434	2,170,643	8,394,906
	Assets £	3,333,274	325,602	196,254	1,665,396	5,520,526
1961-62	Number ..	2,239	172	31	218	2,660
	Liabilities £	6,988,310	1,078,263	237,796	1,636,481	9,940,850
	Assets £	3,503,851	873,393	193,760	1,384,849	5,955,853
1962-63	Number ..	2,371	183	23	158	2,735
	Liabilities £	7,005,128	1,888,043	215,914	1,582,536	10,691,621
	Assets £	2,962,459	1,770,700	256,775	1,406,338	6,396,272
1963-64	Number ..	2,392	142	23	121	2,678
	Liabilities £	7,804,140	876,641	343,770	1,296,325	10,320,876
	Assets £	3,196,493	615,308	244,888	1,089,541	5,146,230

BANKRUPTCY PROCEEDINGS: STATES

Year		N.S.W. (a)	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aus- tralia.
1959-60	Number ..	892	494	234	372	199	96	1	2,288
	Liabilities £	3,216,889	2,019,268	725,189	801,093	628,876	373,246	14,880	7,779,441
	Assets £	2,001,621	1,182,287	631,121	446,738	412,387	168,030	15,077	4,857,261
1960-61	Number ..	868	489	253	468	206	81	3	2,368
	Liabilities £	3,305,964	1,951,320	952,715	1,343,854	545,522	287,718	7,813	8,394,906
	Assets £	2,342,275	1,297,881	725,656	696,223	327,729	125,340	5,422	5,520,526
1961-62	Number ..	865	587	285	581	238	98	6	2,660
	Liabilities £	3,260,021	2,406,429	1,320,514	1,756,016	863,282	306,171	28,417	9,940,850
	Assets £	2,061,455	1,003,823	1,172,556	1,051,451	492,323	164,418	9,827	5,955,853
1962-63	Number ..	872	625	258	617	241	119	3	2,735
	Liabilities £	3,702,456	2,789,678	1,119,884	1,466,003	1,185,366	422,242	11,992	10,691,621
	Assets £	1,972,361	1,681,579	712,270	793,041	1,070,484	166,254	283	6,396,272
1963-64	Number ..	772	631	271	629	241	128	6	2,678
	Liabilities £	3,886,771	2,996,646	899,824	1,645,268	571,220	272,506	48,641	10,320,876
	Assets £	1,596,227	1,323,563	804,425	1,004,701	254,678	132,187	30,449	5,146,230

(a) Includes the Australian Capital Territory.

§ 9. Police

1. **General.**—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 the Commonwealth Police Force (*see* next page) and the 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 and the number of persons to each police officer are shown in the following table for the years 1960 to 1964. The figures include traffic and water police, probationers, cadets, special constables and women police, but exclude parking police, native trackers (Aboriginals employed in outlying districts in tracking lost persons and persons wanted by the police), female searchers, wardresses and interpreters.

STRENGTH OF POLICE FORCES

30th June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
TOTAL STRENGTH									
1960	5,378	3,867	2,647	1,498	1,142	550	103	79	15,264
1961	5,575	4,025	2,673	1,694	1,169	558	105	89	15,888
1962	5,687	4,127	2,748	1,727	1,164	579	125	101	16,258
1963	5,826	4,290	2,798	1,752	1,184	629	137	115	16,731
1964	5,977	4,389	2,818	1,830	1,260	598	149	135	17,156

POPULATION TO EACH POLICE OFFICER

1960	713	739	565	631	632	625	248	680	673
1961	703	728	568	572	630	628	258	661	661
1962	699	725	561	573	648	617	222	650	659
1963	695	712	560	576	652	574	215	639	653
1964	689	713	564	564	627	609	217	596	649

NUMBER OF POLICEWOMEN(a)

1960	54	55	9	34	13	10	..	2	177
1961	58	58	9	35	14	10	5	2	191
1962	57	60	8	39	14	10	2	2	192
1963	57	58	7	39	15	10	6	2	194
1964	58	60	8	45	15	9	7	4	206

NUMBER OF NATIVE TRACKERS(b)

1960	5	1	18	(c)	4	..	32	..	60
1961	5	1	17	(c)	4	..	31	..	58
1962	5	1	16	(c)	4	..	34	..	60
1963	5	1	14	(c)	4	..	30	..	54
1964	4	1	14	..	..	..	32	..	51

(a) Included in total strength shown above.

(b) Not included in total strength shown above.

(c) One native tracker, who was paid a small weekly retainer and was supplied with rations, was continually on call.

2. The Commonwealth Police Force.—The Commonwealth Police Force commenced operations on 21st April, 1960, and is the principal agency for the enforcement of the laws passed by the Commonwealth Parliament. It is also responsible for the protection of Commonwealth property and interests at various buildings and establishments under the control of the Commonwealth. This force co-ordinates the work of other Commonwealth investigation and law enforcement agencies and acts on behalf of the United Nations Organization for the suppressing of traffic in women and the suppression of obscene literature.

Under the control of the force is the Australian Police College at Manly, N.S.W., which provides training for officers of various police forces and other agencies in Australia and New Zealand.

The force has its Head Office in Canberra and District Offices in each Capital City. The strength of the force at 31st December, 1964, was 621 policemen and 3 policewomen. Twenty-six guard dogs were available for use by the force and by State police forces as required.

§ 10. Prisons

1. Prisons and Prison Accommodation.—The table below shows the number of prisons in each State and the Northern Territory and the accommodation therein at 30th June, 1963.

PRISONS AND PRISON ACCOMMODATION, 1963

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Australia
Prisons	18	12	7	14	19	1	2	73
Accommodation ..	3,100	2,281	969	1,018	1,026	404	91	8,889

There is no gaol in the Australian Capital Territory, but there is a lock-up attached to the police station at Canberra and another 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. Long-term prisoners from the Australian Capital Territory normally serve their sentences in New South Wales prisons.

2. Convicted Prisoners.—The number of convicted prisoners at 30th June of each of the years 1959 to 1963 and the proportion per 10,000 of the population are shown in the following table.

CONVICTED PRISONERS

30th June—	N.S.W. (a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T. (b)	Australia
NUMBER								
1959	2,895	(c) 1,539	868	577	477	223	28	6,607
1960	2,903	1,678	865	570	526	195	26	6,763
1961	3,090	1,827	877	592	526	237	41	7,190
1962	3,052	1,844	843	658	573	207	49	7,226
1963	3,050	1,942	879	688	640	228	48	7,475

NUMBER PER 10,000 OF POPULATION

1959	7.6	5.5	5.9	6.3	6.7	6.6	11.6	6.6
1960	7.5	5.9	5.8	6.0	7.3	5.7	10.2	6.6
1961	7.8	6.2	5.8	6.1	7.1	6.8	15.1	6.9
1962	7.5	6.1	5.4	6.6	7.6	5.7	17.6	6.7
1963	7.4	6.3	5.5	6.8	8.3	6.3	16.3	6.8

(a) Includes the Australian Capital Territory. (b) Excludes full-blood Aborigines. (c) At 31st December.

§ 11. Patents, Trade Marks and Designs

1. **Patents.**—Patents for inventions are granted under the *Patents Act 1952–1962*, 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 £19 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.

The number of separate inventions in respect of which applications were filed and the number of letters patent sealed during the years 1960 to 1964 are shown in the following table.

PATENTS: AUSTRALIA

Particulars	1960	1961	1962	1963	1964
Applications	11,828	12,901	13,026	13,051	14,134
Applications accompanied by provisional specifications ..	3,772	3,919	3,710	3,557	3,603
Letters patent sealed ..	4,857	4,940	3,866	5,361	5,456

2. **Trade Marks and Designs.**—Under the *Trade Marks Act 1955–1958* the Commissioner of Patents is also Registrar of Trade Marks. Provision is made for the registration of users of trade marks and for their assignment with or without the goodwill of the business concerned. A new classification of goods was adopted in 1958, and trade marks registered under repealed Acts are reclassified on renewal.

Under the *Designs Act 1906–1950*, the Commissioner of Patents is also Registrar of Designs.

The following table shows the applications for trade marks and designs received and registered during the years 1960 to 1964.

TRADE MARKS AND DESIGNS: AUSTRALIA

Particulars	1960	1961	1962	1963	1964
Trade marks—					
Received	6,083	6,209	5,920	6,411	6,280
Registered	3,203	4,592	3,558	4,224	3,606
Designs—					
Received	1,283	1,413	1,392	1,425	1,572
Registered	1,507	1,522	1,064	1,251	1,287

§ 12. 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. The Act is administered by the Commissioner of Patents.

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.

2. **Applications and Registrations.**—The following table shows under the various headings the number of applications for copyright lodged and registered for the years 1960 to 1964.

COPYRIGHT: AUSTRALIA

Particulars	1960	1961	1962	1963	1964
Applications lodged—					
Literary	1,042	1,088	1,131	1,236	1,322
Artistic	53	65	31	29	38
International .. .. .	..	..	..	..	..
Applications registered—					
Literary	916	1,005	1,172	1,128	1,246
Artistic	61	37	52	18	29
International .. .. .	..	..	..	..	..

§ 13. 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, recoups for services rendered, etc.) from Consolidated Revenue during 1963-64 in connexion with the administration of justice, police and prisons in each State.

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. Small differences also result from differing accounting practices. However, the figures shown for individual States are comparable from year to year.

NET EXPENDITURE ON LAW AND ORDER, 1963-64

State	Net expenditure			Per head of population		
	Justice	Police	Prisons	Justice	Police	Prisons
	£	£	£	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
New South Wales	1,645,998	10,139,347	1,630,101	8 1	49 8	8 0
Victoria	760,259	8,559,829	1,146,686	4 11	55 5	7 5
Queensland	306,965	5,123,752	556,582	3 10	65 1	7 1
South Australia(a)	-409,132	2,963,166	487,207	-8 1	58 1	9 7
Western Australia	218,914	2,141,201	345,218	5 7	54 9	8 10
Tasmania	264,405	1,097,975	251,905	14 4	60 0	13 9
Total	2,787,409	30,025,270	4,417,699	5 1	55 0	8 1

(a) Receipts for legal fees and registrations exceed the expenditure under "Justice".

2. Commonwealth Expenditure.—(i) *Attorney-General's Department.* The expenditure shown in the previous table is that incurred by the State Governments. Since the functions of the Commonwealth Government in the administration of law and order differ considerably from those of the States, precise comparison between Commonwealth and State expenditure in this field is not possible. The following table, however, shows the gross expenditure by the Commonwealth Attorney-General's Department during the year 1963-64 on the main services it performs.

**EXPENDITURE BY THE COMMONWEALTH ATTORNEY-GENERAL'S
DEPARTMENT, 1963-64**
(£)

Particulars	Gross expenditure
Administration	469,041
Australian Police College	31,297
Bankruptcy	281,445
Commonwealth Police Force	425,922
Conciliation and arbitration	290,302
Crown Solicitor's Office	571,835
High Court	109,474
Judges' salaries and pensions	215,026
Legal Service Bureau	66,880
Matrimonial causes—grants to organizations	61,150
Patents, trade marks and designs	664,546
Rent	92,393
Repairs and maintenance	27,035
Court Reporting Branch	222,976
Territory courts	170,689
Total	3,700,011

In addition, £264,405 was spent by the Attorney-General's Department on capital works and services.

The items of expenditure shown in the table above are gross. Receipts of the Attorney-General's Department for 1963-64 aggregated £1,108,510, of which revenue on account of Patents, Trade Marks and Designs, and Copyright amounted to £640,414, Bankruptcy £202,418, Court Reporting Branch £157,645, Fees, Fines and Costs of Court £66,051, and Miscellaneous £41,982.

Expenditure and receipts of the Attorney-General's Department for the five years 1959-60 to 1963-64 are shown in the following table.

**EXPENDITURE BY THE COMMONWEALTH ATTORNEY-GENERAL'S
DEPARTMENT**
(£)

Year	Gross expenditure	Receipts	Net expenditure
1959-60	2,534,609	670,048	1,864,561
1960-61	2,699,095	812,493	1,886,602
1961-62	2,913,966	946,934	1,967,032
1962-63	3,249,249	1,039,207	2,210,042
1963-64	3,700,011	1,108,510	2,591,501

(ii) *Police and Prisons.* Expenditure (other than capital) by the Commonwealth Government on police in the Australian Capital Territory (excluding the Commonwealth Police Force shown above) and police and prisons in the Northern Territory for the five years 1959-60 to 1963-64 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)
1959-60	..	..	..	..	262,261	168,952
1960-61	..	..	..	..	322,763	197,275
1961-62	..	..	..	..	335,485	215,921
1962-63	..	..	..	..	394,984	263,148
1963-64	..	..	..	..	451,488	304,973

(a) Expenditure on police only. There is no prison in the Australian Capital Territory.

CHAPTER XVIII

PUBLIC HEALTH

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 New South Wales Ministry of Health, which is under the control of the Minister for Health, embraces the Department of Public Health, the Hospitals Commission, and a variety of boards, committees, and other authorities concerned with health, hospitals, and associated services.

The State Department of Public Health includes divisions of maternal and baby welfare, tuberculosis, occupational health, epidemiology, dental services, and school medical services, and maintains laboratories which provide diagnostic and analytical services for governmental authorities and private bodies. The Department also controls the State hospitals and homes and the State mental hospitals, supervises the operations of private hospitals and rest homes, conducts the anti-poliomyelitis campaign in New South Wales, administers the Pure Food Act and laws relating to sanitation, and supervises the work of local government authorities relating to public health matters. The principal officers of the Department are the Under-Secretary (who is permanent head for administrative purposes), the Director-General of Public Health (who is *ex officio* President of the Board of Health and chief medical adviser to the State Government), and the Director-General of Psychiatric Services (who is concerned with mental hospitals). Many of the Department's functions are administered by Medical Officers of Health in the eight health districts into which the State is divided.

The Hospitals Commission of New South Wales supervises the public hospital services and determines the amount of State Government subsidy to be paid to each public hospital.

Other authorities concerned with health, hospital and associated services in New South Wales include the Master in the Protective Jurisdiction of the Supreme Court (who controls and administers the estates of patients in mental hospitals), the Ambulance Transport Service Board (which supervises district ambulance services throughout the State), boards established for the registration of practitioners in certain professions (chiropractic, dental, medical, nursing, optometry, pharmacy, and physiotherapy), the State Cancer Council (for cancer education and research), and various boards and committees (e.g. the Board of Health, the Poisons Advisory Committee, and the Air Pollution Advisory Committee).

2. **Victoria.**—(i) *General.* The Ministry of Health combines under the control of one Minister all the health, hospital and associated services either administered directly or supported financially by the Government. The central administration of the Department of Health assists the Minister with the task of co-ordinating the work of a variety of associated bodies as well as carrying out the functions of a headquarters of a Department consisting of four branches—the General Health Branch, the Maternal and Child Welfare Branch, the Tuberculosis Branch and the Mental Hygiene Branch. The functions of these branches are described below.

(ii) *The General Health Branch.* This branch, which, *inter alia*, is the administrative branch for the Commission of Public Health, protects or promotes the health of the community in the following ways.

The Engineering Division scrutinizes from a public health point of view the plans of all public buildings and provincial sewerage installations and makes periodical inspections. Other activities include prevention of air pollution from industrial sources, prevention of stream pollution, and supervision of abattoirs and cattle sale yards.

The Poliomyelitis Division provides a comprehensive orthopaedic, physiotherapy, and respirator service for all eligible patients and carries out rehabilitation in conjunction with the Commonwealth Government. Facilities developed for poliomyelitis are now being used for other neurological disorders. The Division is also concerned with the Salk immunization campaign being undertaken in Victoria. Through the municipalities, immunization against poliomyelitis, diphtheria, smallpox, whooping cough, and tetanus is encouraged and supervised.

Prevention and control of infectious diseases are functions of this Branch, which also sponsors original research into virus diseases and epidemiological investigations throughout Victoria.

The Venereal Diseases Division provides a centrally situated headquarters where the use of modern remedies is effecting a general improvement in the standard of treatment.

Standards of quality and purity of foods and drugs are fixed by the Food Standards Committee and are administered and enforced by both departmental and municipal health inspectors.

Investigations into occupational hazards to the health of workers, the treatment and incidence of occupational diseases, and research into the effects of toxic substances used in industry are conducted by the Industrial Hygiene Division.

The Poisons Control Division is responsible for administering the law relating to poisons and deleterious substances. Legislation provides for extensive control, particularly at the wholesale (manufacturing and import) level. Control is exercised by a system of licences and permits.

Subsidies are granted to municipalities to provide meals for pensioners, to clubs for elderly citizens, and to emergency housekeeper services.

Other services operated by the Branch are:—registering plumbers and gasfitters; providing free travel to hospital for people with limited incomes; analysing food, drink, water and sewerage effluents; registering cinematograph operators; administering the Cemeteries Acts; and advising industry on health hazards associated with handling radio-active substances.

(iii) *The Maternal and Child Welfare Branch.* This branch is concerned with pre-natal hygiene, infant welfare, the development of pre-school services, and the school medical and dental services.

(iv) *The Tuberculosis Branch.* The Tuberculosis Branch is concerned with the prevention of tuberculosis and the treatment and rehabilitation of tubercular patients. It controls the compulsory chest X-ray programme introduced in October 1963.

(v) *The Mental Hygiene Branch.* This Branch is controlled by the Mental Health Authority, appointed in 1951, and consists of institutions for in-patient care, out-patients' clinics and other services necessary for a comprehensive community mental health programme.

3. Queensland.—(i) *General.* “*The Health Acts 1937 to 1964*” are administered by the Director-General of Health and Medical Services subject to the Minister for Health. A central staff controls the following divisions.

(ii) *Division of Public Health Supervision.* This Division is controlled by the Deputy Director-General of Health and Medical Services, and comprises separate sections for communicable disease control, environmental sanitation, food and drug control, enthetic (venereal) diseases, hookworm control and Hansen's disease (leprosy) control. Free treatment of venereal diseases is offered at the Department's clinics in Brisbane and at any public hospital. Free immunization against poliomyelitis, diphtheria, whooping cough, tetanus, and smallpox is offered by most of the local authorities and the majority of school children are immunized against diphtheria, whooping cough, tetanus and poliomyelitis.

(iii) *Division of Tuberculosis.* A central chest clinic in Brisbane offers skin tests, X-ray examinations and B.C.G. vaccination of skin negative reactors free of charge. Similar clinics are situated at the Cairns, Rockhampton, Thursday Island, Toowoomba, and Townsville district hospitals. Children in the final grade of primary schools are skin tested and given B.C.G. vaccine. The division controls the compulsory X-ray examination of all persons over the age of 14 years. A survey of residents of the metropolitan area is two thirds completed, and a second survey of country areas has covered the State north of Mackay.

(iv) *Division of Industrial Medicine.* The services of this Division are available both to industry and to the trade union movement for the prevention of industrial hazards. The Division is particularly interested in occupational diseases, such as silicosis and lead and other poisoning, and advises on industrial problems such as lighting, ventilation, fatigue, hearing loss and the use of radio-active isotopes.

(v) *Division of Maternal and Child Welfare.* This Division offers supervision and advice on the rearing and health of infants and pre-school children at 265 infant welfare 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.

(vi) *Division of School Health Services.* This Division comprises the Chief Medical Officer, School Health Services, and a staff of doctors, dentists and visiting school nurses. The dental officers inspect school children and carry out essential treatment at schools or in the rail dental clinics. Medical examinations are made every one to two years.

(vii) *Division of Mental Health.* The Director of Psychiatric Services is associated with a planned integration of services. Mentally ill persons requiring special care are admitted to the State's four special hospitals at Brisbane, Toowoomba, Ipswich and Charters Towers. In the metropolitan area of Brisbane out-patient, day hospital and in-patient care are provided by general hospitals and a community-based Psychiatric Clinic. The Brisbane General, Chermiside, and Princess Alexandra Hospitals all provide psychiatric services. Regional development of services is based on general hospital services at Townsville, Rockhampton, Toowoomba and Ipswich. Special care for epileptics is provided at a home in Toowoomba.

(viii) *Division of Welfare and Guidance.* Clinics for the diagnosis and management of emotional and behaviour disorders in children have been set up in the Greater Brisbane Area, and further clinics are planned for Townsville and Toowoomba. A part-time clinic functions in Toowoomba at present. These services are extensively used. The Wilson Youth Hospital has been opened for the social and psychiatric rehabilitation of boys convicted in the Children's Court. About 40 boys can be accommodated. There is an Out-patient Section which girls can attend also.

A Child Guidance Unit for out-patients, day-hospital patients and 30 in-patients is to be constructed in the grounds of the Brisbane Children's Hospital. A similar unit is at present being planned for Townsville.

(ix) *Division of Social Work.* It is the policy of the Department to establish social work services, where possible, in all relevant aspects of the health, medical and hospital services. Through these services, patients in hospitals, and sick, elderly and disabled persons in the community may receive assistance with their personal and social problems. Social work departments have been established in the major hospitals in Brisbane and in four country hospitals, and social workers have been appointed to work in health, psychiatric and child welfare and guidance services. Development of this work is co-ordinated through the Division of Social Work and the Senior Social Worker provides official liaison with other State Government Departments as services relating to social work and family welfare are established.

(x) *Division of Geriatrics.* A geriatric unit is established at Princess Alexandra Hospital. The unit consists of two wards with accommodation for 102 in-patients, administration section, day hospital, physio-therapy and occupational therapy departments.

(xi) *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 institutions, country hospitals and private doctors, and provides a medico-legal service for the whole State. The Institute of Forensic Pathology is controlled by the medical staff of the Laboratory of Microbiology and Pathology, and coroners' autopsies are conducted there.

(xii) *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 12 hospitals regions with a base hospital for each region. Each region comprises a number of hospitals districts, the purpose of the regional scheme being 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 nor more than eight members appointed by the Governor-in-Council, and one member elected by the component local authorities. During the year 1962-63 there were 60 hospitals boards controlling 133 public hospitals, 9 of which treated out-patients only. In addition, 24 other hospitals, six of which are treated as public hospitals, received aid from the Government, and an institution for the treatment of Hansen's disease in Aborigines was maintained at Fantome Island near Townsville. Other persons suffering from this disease are treated at an annexe of the Princess Alexandra Hospital, South Brisbane.

4. **South Australia.**—The Department of Public Health embraces the activities of the Central Board of Health, the Food Drugs Advisory Committee, the Advisory Council on Health and Medical Services, the Radiological Advisory Committee, the School Health Services (comprising School Medical and Dental Services and the Deafness Guidance Clinic), Poliomyelitis Services, and the public health aspects of the control of tuberculosis, including the State X-ray Health Survey and the Chest Clinic.

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 Act, 1935–1963, Food and Drugs Act, 1908–1962, Dangerous Drugs Act, 1934–1955, Noxious Trades Act, 1943–1955, Bakehouses Registrations Act, 1945–1947 and Notification of Birth Act, 1926–1936. 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, 1935–1963 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 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, 1911–1964*. The central authority is the Department of Public Health, controlled by a Commissioner, who must be a qualified medical practitioner. The State is divided into local government areas, each administered by a municipal council. All local government authorities have health administration powers.

In any emergency, the Commissioner may exercise all the powers of a health authority in any part of the State.

Features of legislation since 1957 are as follows:—(a) Act No. 30 of 1958 provides for the establishment of the Health Education Council with the object of promoting and improving the health of the people of Western Australia; (b) Act No. 43 of 1958 provides for the establishment of the Cancer Council of Western Australia with the object of co-ordinating, promoting and subsidizing cancer research; (c) Act No. 23 of 1960 established a Maternal Mortality Committee to investigate each maternal death and to recommend preventive measures; and (d) Act No. 33 of 1962 empowers medical practitioners to give blood transfusions to minors despite parental objections, where life is endangered.

6. **Tasmania.**—The Department of Health Services is under the jurisdiction of the Minister for Health. The Department consists of a Headquarters and three Divisions. The Director-General of Health Services is the permanent head of the Department and he administers the Department through a Director of each of the three divisions (Division of Public Health, Division of Psychiatric Services and Division of Tuberculosis) and through several other clinical directors and other senior officers attached to the headquarters of the Department, including the Directors of Orthopaedics, Pathology and Anaesthetics, and the Government Analyst and Chemist.

In addition to his responsibility for the functioning of the Department as a whole, the Director-General of Health Services administers directly the various branches of the work performed by headquarters. They are concerned particularly with the following:— (a) the administration of the hospital services throughout the State, (b) the District Medical Service, (c) the Hospital and Government Nursing Service, which includes the administration of 24 district nursing centres throughout the State, (d) legislation concerned with health and allied matters, the Nurses' Registration Board and the Dental Mechanics' Registration Board, (e) the National Fitness Council and Handicapped Children's Advisory Council, (f) specialist medical services, (g) statistical classification of diseases and injuries, (h) liaison with other States and the Commonwealth Health Department; and (i) all matters dealing with the maintenance of departmental property and the appointments and salaries of departmental staff.

The Division of Public Health is responsible for the oversight of those services (except those specifically related to tuberculosis) which aim at the attainment and maintenance of good physical health in the community. It controls the school health services (both medical and dental) and the child health service. It supervises the immunization campaigns conducted by local health authorities and is responsible for custody of poliomyelitis vaccine and maintenance of records of its use. The Division also sets standards of food quality and of

environmental sanitation, which are policed in detail by local health authorities. The Division administers laws relating to standards of food, drugs and food premises, and to environmental sanitation, public buildings, infectious disease (other than tuberculosis) and cremation.

The Division of Psychiatric Services provides a community psychiatric service. This includes a mental hospital and a neurosis hospital; institutional care for mental defectives, alcoholics and sexual offenders; and a community psychiatric service on a regional basis covering the whole State. In addition, the Division administers the *Mental Hospitals Act* 1885 as amended (to 1960) and the *Mental Deficiency Act* 1920 as amended (to 1956), and provides a State-wide service for the supervision of mental defectives in the community.

The Tuberculosis Division is concerned with the prevention (including B.C.G. vaccination), detection, notification, examination and treatment of all forms of tuberculosis, and the maintenance of chest hospitals and diagnostic clinics.

7. Northern Territory.—The Commonwealth Department of Health provides health services in the Northern Territory which include hospital, medical and dental services.

Four general hospitals have been established and at 31st December, 1964, the available accommodation for in-patients was as follows:—Darwin Hospital, 309; Alice Springs Hospital, 153; Katherine Hospital, 41 and Tennant Creek Hospital, 35. The treatment of Hansen's disease (leprosy) is carried out at East Arm Settlement. 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. The Department of Health has two De Havilland Dove aircraft stationed at Darwin and one 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, medical officers of the Department of Health provide the medical services to the Royal Flying Doctor Service (South Australian) base.

Public health services are provided and health inspectors visit all settlements periodically.

A section of the Department of Health undertakes continuous investigations into native health.

8. Australian Capital Territory.—The *Public Health Ordinance* 1928–1951 places under the control of the Minister for Health matters relating to public health and hygiene in the Australian Capital Territory. In addition to the public health activities normally undertaken by the State Governments the Commonwealth Department of Health undertakes certain duties which in the States would be the responsibility of local government instrumentalities.

A medical officer of health and a staff of four health inspectors have been appointed to administer the Public Health Ordinance and ancillary regulations. During 1964, 827 licences were issued under various public health regulations, while legal action was taken in 16 cases for offences against these regulations. The inspection staff is also responsible for the quarantine inspection of parcels arriving under bond at the Canberra Post Office.

In continuation of the campaign to control the incidence of poliomyelitis, the Department of Health in Canberra gave 8,380 injections of poliomyelitis vaccine to infants, 1,245 to school children and 1,398 to adults during 1964.

The Commonwealth Health Laboratory in Canberra provides full clinical laboratory services to the Canberra Community Hospital and to private medical practitioners in the Australian Capital Territory. In 1964, 340,841 pathological services were carried out, including more than 3,500 chemical and bacterial analyses of water, milk, other foods, and sewage.

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. At 30th June, 1964, the hospital had accommodation for 427 in-patients.

The Director of the Tuberculosis Division of the Commonwealth Department of Health, in addition to the responsibility of co-ordinating the activities of the States in the national campaign against tuberculosis, is concerned with the prevention, detection, examination and treatment of tuberculosis in the Australian Capital Territory. In 1964, 10 cases of tuberculosis were notified in the Australian Capital Territory.

The supervision of the hygiene of dairies and piggeries and the control of the Canberra Abattoir is the responsibility of the veterinary service of the Department of Health. The duties of this service also include the prevention and control of disease in stock and advice to district stock owners, with field diagnosis on a herd or flock basis supported by laboratory confirmation.

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. This service, available at the request of a registered medical practitioner, is provided by ten sisters, who, in 1964, made 32,465 visits. Throughout the year liaison was maintained by the sisters with agencies engaged in social welfare work.

§ 2. Supervision and Care of Infant Life

1. **General.**—Because the health of mothers and infants depends largely on pre-natal attention as well as after-care, government, local 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 infant welfare centres, baby clinics, crèches, etc.

In all States, Acts have been passed with the object of supervising the conditions of infant life and reducing the rate of mortality. Departments control the boarding-out of the wards of the State to suitable persons. 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.

Under the provisions of the *Social Services Act 1947-1964* maternity allowances are paid to provide financial assistance towards the expenses associated with the birth of children. 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. More detailed information concerning maternity allowances is given in Chapter XVI. Welfare Services.

Information regarding infant mortality will be found in Chapter X. Vital Statistics (see pp. 328-32).

2. **Nursing Activities.**—Several State Governments maintain institutions which provide treatment for mothers and children, and, in addition, subsidies are granted to various associations engaged in welfare work.

(i) **Infant Welfare Centres.** The following table gives particulars of the activities of infant welfare centres for the year 1964. The figures relate to all centres, whether permanently staffed or on a temporary or part-time basis. Centres may be located at accommodation specially provided for this purpose or at halls, schools, etc.

INFANT WELFARE CENTRES, 1964

Particulars	N.S.W.	Vic.	Q'land (a)	S. Aust. (a)	W. Aust.	Tas.	N.T.	A.C.T.	Aus- tralia
Number of centres	415	655	265	264	72	102	16	29	1,818
Attendances at centres ..	1,152,014	1,350,328	444,372	255,766	243,530	134,216	17,447	39,065	3,636,738
Visits by nurses to homes ..	n.a.	173,551	33,379	34,614	27,131	79,377	7,854	4,532	n.a.

(a) Year ended 30th June, 1964.

Mobile units are used as centres in some States. The numbers of these in 1964, included in the above table, were as follows:—Victoria, 5; Queensland, 2; South Australia, 3; Western Australia, 4; and Tasmania, 10.

In the last thirty years, the number of attendances at the infant welfare centres has quadrupled. 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; 1955, 3,099,233; and 1960, 3,482,383. During the year 1964 the number of attendances was 3,636,738.

(ii) *Bush Nursing Associations.* Treatment for mothers and children is also provided by the Bush Nursing Associations.

The number of centres maintained by the Associations in 1964 were:—New South Wales, 19; Victoria, 57; Queensland, 5; South Australia, 32; Western Australia, 15; and Tasmania, 24.

(iii) *Canberra Mothercraft Society.* This society, which is subsidized by the Commonwealth Department of Health, administers the Infant Welfare Service in Canberra with a staff of nine triple certificated nurses. The Queen Elizabeth II. Coronation Home for Mothers and Babies, which is under the management of the Society, was opened on 7th January, 1963. It is staffed by qualified nursing staff and provides post-natal care for mothers and problem babies. The Home has accommodation for two mothers and nine babies.

§ 3. Medical Inspection of School Children

1. *General.*—Medical and dental inspection of school children is carried out in all States, in the Northern Territory and in the Australian Capital Territory. In some States travelling clinics have been established to deal with dental defects.

2. *New South Wales.*—The school medical and dental services in New South Wales are under the control of the State Department of Public Health.

The aim of the school medical service is to examine all school children in the State, in order to discover any departure from normal health, physical or mental, and to notify the parent or guardian of any need for further investigation or treatment. Annual visits are made to schools in the metropolitan, Newcastle and Wollongong areas, and in some of the larger country towns. Full examinations are conducted on a child's entry into school. Review examinations, with particular emphasis on vision and hearing, are conducted on pupils in fourth class in primary schools and second and fourth years in secondary schools, and on others who appear to need additional examinations. Medical officers of this service examined 260,148 children in 1964.

In other country areas there is a scheme for school children to be examined by local medical practitioners under the supervision of local municipal and shire councils. The majority of local councils in New South Wales have expressed interest in this scheme and are endeavouring to arrange with local medical practitioners to have the scheme introduced.

The school medical service conducts nine child guidance clinics (eight in the metropolis and one at Newcastle), five child health centres (four in the metropolis and one at Newcastle), seven hearing clinics (five in the metropolis, one at Newcastle and one at Wollongong), and an asthma clinic in Sydney.

The school dental service had a staff of 34 dental officers and 30 dental assistants at the end of 1964. The service is provided by dental clinics established in the grounds of three metropolitan and two country public schools, eighteen mobile clinics in country areas and two dental teams with the Royal Flying Doctor Service (located at Broken Hill). In addition, a dental service is provided for children in 22 Child Welfare establishments.

In 1964, 116,127 school children were examined by the school dental service and 15,358 of these were treated.

3. *Victoria.*—School medical services are conducted in close association with the Education Department. All children between the ages of 5 and 15 years attending State and registered schools are examined regularly and any disabilities found in the children are brought to the notice of their parents. School nurses, under medical direction, visit the homes and schools. Children suffering from physical and mental disabilities are recommended to attend appropriate schools or classes by the medical officers. Some special training for the handicapped is given.

The School Dental Service has an establishment of 43 dental officers and provides dental attention for children in the metropolitan area at three dental centres, and for a number of country districts by means of 15 mobile units, including 6 twin-surgery units. It also provides dental services for children's institutions in and around Melbourne and certain provincial centres. The service is now providing dental attention for some 80,000 primary school children.

4. **Queensland.**—During 1963–64 medical officers and nurses examined 96,163 school children; 5,352 children had disabilities of which parents were notified and advised to seek attention. In western Queensland local doctors act as part-time ophthalmic surgeons. Advice is given on school sanitation, infectious diseases in schools and health education.

During 1963 school dentists gave treatment to 11,451 school children who resided in areas beyond easy reach of hospital dental clinics. The treatment was carried out at four rail dental clinics and with portable equipment at schools. In addition, school children are treated at hospital dental clinics in the larger towns.

5. **South Australia.**—South Australian State schools within a radius of 60 miles from Adelaide and at 5 large country centres are visited annually and the children 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 the remaining country schools every three years, when all the children are examined. Students who wish to become teachers are examined on appointment as Honours Teaching Scholars 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 health education are given to all College students and, in addition, domestic art students are lectured on home nursing.

During 1964, 81,261 children were examined by medical officers in 189 country and 152 metropolitan schools. Of these, 6,620 required treatment for defective vision, 2,497 for defective hearing, and 8,851 for dental disorders.

Dentists using mobile vans examined 5,823 school children in country areas where a private dental service was not readily available; 4,054 children were offered treatment; 3,657 accepted and were treated free of charge.

There were 2,266 children examined at the Deafness Guidance Clinic during 1964. Of the 1,356 new patients, 1,097 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.

6. **Western Australia.**—The School Medical Service of the State Health Department employs seven full-time medical officers for schools. During 1963 these officers examined 55,463 children (metropolitan 34,409, country 21,054). The 405 schools visited comprised metropolitan, 251 (Government schools 176, non-government schools 75), and country, 154 (government schools 118, non-government schools 36). The aim is to examine each school child three times in his school career.

During 1963 the twelve full-time dentists employed by the School Dental Service visited 6 metropolitan schools, 84 country schools, 7 orphanages and 7 native missions. The number of children examined was 8,259. With the consent of their parents, 5,280 of these were treated. The number of dental vans operating was 12.

7. **Tasmania.**—During 1964, three full-time and four part-time medical officers examined school children in Government and non-government schools. In addition, two regional medical officers of health and one specialist medical officer also examined school children. Eighteen full-time and five part-time sisters visited homes and schools. Of the 22,567 children examined by medical officers, 6,579 were found to have defects.

Fourteen school dental officers were employed during 1963–64, operating from surgeries at Hobart, Launceston, Burnie, Devonport, Ulverstone, Currie and Flinders Island, and from mobile clinics in other districts. A full-time dental surgeon is in charge of each surgery or clinic. During the year there were 20,140 new visits to the school dentists and 26,238 repeat visits.

8. **Northern Territory.**—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 so examined by him are those at the Native Welfare Settlement School, i.e. full-blood Aborigines, who are examined during native health surveys.

A special dental service for school and pre-school children is available in Darwin and Alice Springs. School doctors and dentists travel throughout the Territory to carry out diagnosis and treatment.

9. **Australian Capital Territory.**—The Commonwealth Department of Health is responsible for health aspects of child welfare in the Australian Capital Territory. These include a school medical service carried out by two medical officers and three trained nurses, and a school dental service, staffed by 11 dentists, together with surgery and clinical assistants.

Medical examinations are carried out at all schools, public and private, within the Territory. The total number of children examined during 1964 was 7,153. The majority of the examinations were of children in the six, eight, 12, 15 and 17 year age groups, but another large group of children was referred for examination of special conditions. In addition, examination of children attending pre-school centres was made according to the time available, 698 pre-school children being examined.

Defects notified during the year were:—393 eyesight, 176 ear, nose and throat, and 533 miscellaneous; while 366 cases of hearing loss not requiring further treatment were also found. Triple antigen injections, totalling 8,645 in 1964, were given at regular sessions held throughout the year, while 1,254 anti-poliomyelitis injections were given to school children and 8,380 at baby health clinics.

The School Dental Service provides free treatment for children attending infants' and primary schools, both public and private, in the Australian Capital Territory. During 1964 9,715 children were examined in Canberra and Jervis Bay schools. As in previous years, visits were also made to the Cocos (Keeling) Islands, Norfolk Island, and the Wreck Bay Aboriginal settlement. In all, a total of 10,032 children were examined by the School Dental Service, involving 34,063 visits. A resident dental officer has now been appointed to Norfolk Island.

§ 4. Disposal of Dead by Cremation

The first crematorium in Australia was opened in South Australia in 1903. At 31st December, 1964, there were nineteen crematoria in Australia, situated as follows:—New South Wales, 7; Victoria, 4; Queensland, 3; South Australia, 1; Western Australia, 2; Tasmania, 2.

There is no crematorium in the Northern Territory or in the Australian Capital Territory at present, but a site has been allocated for one in the Australian Capital Territory and it is expected that construction will begin during 1965.

The following table shows the number of cremations and total deaths in each State for each of the years 1960 to 1964.

CREMATIONS AND TOTAL DEATHS

State or Territory	1960		1961		1962		1963		1964	
	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths	Cremations	Total deaths
New South Wales	13,809	35,030	13,991	35,048	15,198	36,861	15,664	37,226	16,321	39,487
Victoria ..	7,839	24,547	7,923	24,500	8,425	25,847	8,782	26,920	9,832	27,548
Queensland ..	3,709	12,370	3,998	12,756	4,220	13,182	4,432	13,275	4,745	14,523
South Australia ..	915	7,804	908	7,815	1,122	8,232	1,304	8,201	1,506	8,906
Western Australia	1,526	5,697	1,576	5,729	1,640	5,810	1,900	5,976	2,003	6,429
Tasmania ..	692	2,670	731	2,789	792	2,870	786	2,818	864	3,174
Northern Territory	..	134	..	128	..	144	..	161	..	164
Australian Capital Territory ..	..	212	..	196	..	217	..	317	..	363
Australia ..	28,490	88,464	29,127	88,961	31,397	93,163	32,868	94,894	35,271	100,594

COMMONWEALTH GOVERNMENT ACTIVITIES

NOTE.—The Commonwealth services outlined in this chapter are those provided under the National Health Services or otherwise administered by the Commonwealth Department of Health. For particulars of services administered by the Commonwealth Department of Social Services and of Commonwealth expenditure from the National Welfare Fund on all forms of social and health services, see Chapter XVI. Welfare Services.

§ 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. Following on the passing of the *Quarantine Act* 1908 a branch of the Department of Trade and Customs under the control of a Director of Quarantine was created on 1st July, 1909. 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.

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.

§ 2. National Health Benefits

1. **Pharmaceutical Benefits.**—A comprehensive range of drugs and medicines is made available to all persons receiving treatment from a medical practitioner registered in Australia. The benefits are supplied by an approved pharmacist upon presentation of a prescription, or by an approved hospital to patients receiving treatment at the hospital.

The patient pays the first 5s. of the cost of the prescription, but pensioners who are eligible for treatment under the Pensioner Medical Service (see para. 5, p. 663) receive all benefits without any contribution being made.

Total Commonwealth expenditure on pharmaceutical benefits in the year 1963–64 was £39,419,336.

2. **Hospital and Nursing Home Benefits.**—(i) *General.* The *National Health Act* 1953–1964 provides for the payment of Commonwealth hospital and nursing home benefits. Commonwealth benefits are payable only in respect of treatment received in approved hospitals and approved nursing homes. For the purposes of the National Health Act premises which provide medical treatment, care and accommodation for sick persons are approved either as hospitals or as nursing homes depending mainly on their clinical standards and the type of patients accommodated. Usually premises are approved as hospitals if their general standards are substantially equivalent to those of a public hospital and if hospital treatment as defined in the National Health Act is provided. Premises are approved as nursing homes where their general standards are similar to those prevailing in benevolent homes, convalescent homes, rest homes or homes for the aged, and if nursing home treatment as defined in the Act is provided.

(ii) *Patients in Approved Hospitals.* A basic principle of the provision of benefits for patients in approved hospitals is the Commonwealth support of voluntary insurance against the costs involved. Insured patients in approved hospitals receive a Commonwealth hospital benefit of 20s. a day which is paid through the contributors' registered hospital benefits organizations. Total payments by contributors to organizations range from 1s. to 4s. a week for single persons and from 2s. to 8s. a week for families. Examples of contributions and benefits payable, including Commonwealth benefits of £1 a day, are:—

Weekly contribution		Total benefits	
Single person	Family	Daily	Weekly
<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>£ s. d.</i>
1 0	2 0	44 0	15 8 0
1 6	3 0	56 0	19 12 0
2 0	4 0	68 0	23 16 0
2 6	5 0	80 0	28 0 0
4 0	8 0	116 0	40 12 0

A contribution of 5s. a week covers a family for benefits at least equal to the public ward charge in any State. Contributions are allowable deductions for income tax purposes.

During the waiting period of two months after joining an organization, the Commonwealth benefit is payable at the rate of 8s. a day, unless the organization pays fund benefits, in which case Commonwealth benefit is payable at the higher rate of 20s. a day. While a member is in arrears with his contributions and fund benefits are not payable, the Commonwealth benefit is payable at the rate of 8s. a day unless the member was in receipt of unemployment or sickness benefits under the *Social Services Act 1947-1964*.

Contributors who would have been excluded from fund benefits because of organizations' rules covering pre-existing ailments, chronic illnesses or maximum benefits are assured of hospital fund benefits by the provisions of the special account plan. The hospital fund benefit usually payable in such cases is 16s. a day and is paid either from special accounts, guaranteed by the Commonwealth, or from the ordinary accounts of the organization. One condition of payment is that the treatment in respect of which the fund benefit was paid was given in an approved hospital, although fund benefit is paid in certain circumstances in respect of treatment given in approved nursing homes. If the payments from the special accounts exceed contributions credited to the account, the amount of deficit is reimbursed by the Commonwealth.

A person who joins a registered hospital benefits organization within eight weeks of being discharged from an approved nursing home is entitled to immediate Commonwealth benefit of 20s. per day and to fund benefits without having to serve a waiting period.

If a qualified patient in an approved hospital is not insured (i.e., not a member of a hospital benefits organization), a Commonwealth benefit of 8s. a day is deducted from his account by the hospital. The Commonwealth subsequently reimburses the hospital.

Under arrangements made with the States, pensioners who are enrolled in the Pensioner Medical Service and are treated in public wards of public hospitals are entitled (with a few exceptions) to free public ward treatment. For this the Commonwealth pays the hospitals a benefit of 36s. a day for each pensioner.

(iii) *Patients in Approved Nursing Homes.* The Commonwealth nursing home benefit of 20s. a day is payable to all qualified patients in approved nursing homes whether the patients are insured or not. This benefit is deducted from the patient's account and subsequently paid by the Commonwealth to the nursing home. If no charge is made by the nursing home, the Commonwealth nursing home benefit of 20s. a day is still payable to the nursing home in respect of qualified patients.

There is no need for patients in approved nursing homes to be insured with a registered hospital benefits organization. Fund benefits are generally not payable. However, the National Health Act provides that where an insured special account patient is treated in an approved nursing home for an acute illness or condition and is given treatment equivalent to that which he would have received in an approved hospital, approval may be given to the payment of special account fund benefits.

(iv) *Australians Overseas.* Australian residents who receive hospital treatment in recognized hospitals in overseas countries, while temporarily absent from Australia, are eligible to receive the Commonwealth and fund benefits to which they are entitled.

(v) *Expenditure on Hospital and Nursing Home Benefits.* Expenditure on hospital and nursing home benefits for 1963-64 was £26,234,325. In addition, Commonwealth payments towards special account deficits totalled £1,874,623. This does not include expenditure on mental hospitals (see p. 661).

The following table shows the amount of Commonwealth hospital and nursing home benefits paid during the year 1963-64.

COMMONWEALTH HOSPITAL AND NURSING HOME BENEFITS PAID, 1963-64
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Uninsured patients (8s.) ..	349	255	483	65	75	29	28	5	1,289
Insured patients (20s.)(a) ..	4,041	2,189	1,083	923	775	317	(b)	(b)	9,328
Pensioner patients (36s.) ..	2,552	1,497	1,302	504	602	188	3	29	6,677
Nursing home patients (20s.) ..	3,568	2,085	1,381	817	783	306	..	..	8,940

(a) Does not include payments of £1,874,623 towards special accounts deficits in 1963-64. (b) No hospital benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of these Territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States and payments to them are included in the respective States.

Arrangements for the payment of hospital benefits were changed as from 1st January, 1963. For benefits paid until 31st December, 1962, under the old arrangements, and for the remainder of 1962-63 under the new arrangements, see Year Book No. 50, 1964, pages 680-1.

(vi) *Registered Hospital Benefit Organizations.* The following table shows the number of registered hospital benefit organizations, the membership at 30th June, 1964, and fund benefits paid during the year 1963-64. As many persons contribute on behalf of both themselves and their dependants, the total number of persons covered by hospital benefit schemes is considerably higher than the number of members.

HOSPITAL BENEFITS: ORGANIZATIONS AND FUND BENEFITS, 1963-64

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.(a)
Registered organizations at 30th June, 1964(b) ..	33	(c) 44	3	13	9	10	112
Membership at 30th June, 1964 ..	1,281,126	955,902	304,801	366,504	260,663	115,735	3,284,731
Fund benefits paid £'000	10,992	4,204	1,743	2,275	1,681	746	21,641

(a) No hospital benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of these Territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States and payments to them are included in the respective States. (b) Interstate branches are not included. (c) Includes 18 Bush Nursing Hospitals.

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 the States would cease making charges for the maintenance of mental patients and that the Commonwealth would pay the States a benefit based on the amount which had been collected by the States from the relatives of patients in mental hospitals by way of charges for maintenance.

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 Hygiene Authority, was commissioned to undertake a survey of mental health facilities and needs in Australia. His report, released in May, 1955, 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.

Following the report, the Commonwealth made an offer of £10 million to the States as part of a capital expenditure programme of £30 million on increasing and improving patient accommodation. All States accepted the Commonwealth offer. By 1963 more than three-quarters of the total grant under the *States Grants (Mental Institutions) Act 1955* had been distributed and the Commonwealth Government announced in November, 1963, its intention of continuing assistance to the States towards capital costs on a similar basis, but without overall limit, for a period of three years. In May, 1964, the *States Grants (Mental Health Institutions) Act 1964* was passed to implement that policy. This Act provided for the continuation of Commonwealth aid of £1 for every £2 of capital expenditure by the States on mental health facilities. The new Act makes no provision limiting the size of the grant and the assistance is limited to the three year period concluding on 30th June, 1967.

The following table sets out the amounts which have been paid to the State Governments by the Commonwealth Government from 1955-56 to 1963-64.

**EXPENDITURE ON MENTAL HOSPITALS BY THE COMMONWEALTH
GOVERNMENT**

(£)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
1955-56 ..	208,763	445,746	66,588	12,245	9,985	29,822	773,149
1956-57 ..	383,555	527,213	88,068	128,467	51,855	68,974	1,248,132
1957-58 ..	324,152	545,365	114,103	152,159	29,236	91,384	1,256,399
1958-59 ..	196,831	619,621	118,512	122,328	17,210	45,892	1,120,394
1959-60 ..	359,060	518,235	74,613	91,770	36,799	66,995	1,147,472
1960-61 ..	432,881	83,820	97,642	45,691	15,276	51,933	727,243
1961-62 ..	648,637	..	70,718	27,839	77,022	..	824,216
1962-63 ..	647,562	..	37,593	52,112	57,894	..	795,161
1963-64 ..	491,089	..	54,083	86,293	165,792	..	797,257
Total, 1955-56 to 1963-64	3,692,530	2,740,000	721,920	718,904	461,069	355,000	8,689,423

There are no mental hospitals in the Northern Territory or in the Australian Capital Territory.

4. **Medical Benefits.**—(i) *General.* 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 1953-1964*.

The basic principle of the scheme is Commonwealth support of voluntary insurance towards meeting the costs of medical attention. The benefits provided by the Commonwealth are paid either on a fee-for-service basis in respect of the items set out in the schedule 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.

During 1963-64 the National Health Act was amended by the *National Health Act 1964* to provide a new schedule of Commonwealth benefits which came into operation on 1st June, 1964. The general effect of the new schedule is to increase Commonwealth benefits by 33½ per cent. In a number of instances, because of alterations to benefits to adjust previous anomalies, the increase is greater.

In order to qualify for the Commonwealth benefit, a person is required to be insured with a registered medical benefit organization. The organization pays the Commonwealth benefit to the contributor, usually at the time it pays its own benefit. Reimbursement of the Commonwealth benefit is subsequently made to the organization by the Commonwealth.

Commonwealth benefits ranging from 8s. for ordinary general practitioner visits to £30 for major operations are payable to members of registered medical benefit organizations. The fund benefit payable varies according to the weekly contributions paid by the member and the particular medical service.

Examples of the range of benefits are as follows.

Type of service	Combined Commonwealth and fund benefits ^(a)		
	£	s.	d.
Certain major operations	67	10	0
Appendix operation	22	10	0
Midwifery	15	0	0
Tonsils—			
Under 12 years	6	12	6
12 years and over	10	0	0
Surgery consultation—general practitioner	0	18	0
	(15s. 6d. in some States)		

(a) The total benefit varies according to the weekly contribution rate. The most common contribution rates are 2s. a week for single persons and 4s. a week for a family.

Provision is made for the payment of fund benefit from special accounts for claims lodged by contributors who have reached maximum benefits or who make claims in respect of pre-existing ailments. The medical special accounts are operated along the same principles as the hospital special accounts (*see* p. 659) and the special account fund benefit paid usually matches the Commonwealth benefit for the particular service.

(ii) *Australians Overseas.* Australian residents temporarily absent from Australia who receive medical attention by registered medical practitioners in the country they are visiting are entitled, if insured, to the Commonwealth benefit and the medical fund benefit to which they would be entitled if the service were rendered in Australia.

(iii) *Expenditure on Medical Benefits.* In 1963–64 Commonwealth expenditure on medical benefits was £12,116,425. In addition, Commonwealth payments towards special account deficits totalled £307,718.

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.

MEDICAL BENEFITS: SUMMARY, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (a)
Registered organizations ^(b)							
No.	28	21	6	8	8	10	81
Members ..	1,239,443	869,221	302,723	329,820	247,192	107,078	3,095,477
Medical services ..	9,789,101	6,378,157	2,709,709	2,642,360	2,069,854	718,671	24,307,852
Commonwealth benefit	£ 4,899,968	3,134,966	1,291,633	1,390,504	1,058,282	341,072	12,116,425
Fund benefit ..	£ 7,571,469	3,875,896	1,939,836	1,828,739	1,464,039	541,241	17,221,220

(a) No medical benefit organization is registered in the Northern Territory or the Australian Capital Territory. Members who live in one of those Territories, or who are abroad, receive their Commonwealth benefit and fund benefit through membership of an organization registered in one of the States.

(b) Interstate branches are not included.

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 Services Act 1948–1949*. The service has been continued under the provisions of the *National Health Act 1953–1964*.

The service provided to eligible pensioners consists of medicine provided free of charge and a medical service of a general practitioner nature such as that ordinarily rendered by a general medical practitioner in his surgery or at the patient's home. Specialist services are not provided. Patients may be charged a small fee by doctors for travelling and attendance outside normal surgery or visiting hours. Doctors participating in the scheme are paid on a fee-for-service basis by the Commonwealth Government.

Persons eligible to receive the benefits of the service are those who satisfy a means test and are receiving an age, invalid or widow's pension under the *Social Services Act 1947–1964* or a service pension under the *Repatriation Act 1920–1964*, persons receiving a tuberculosis allowance under the *Tuberculosis Act 1948*, and dependants of persons eligible for the service.

Since 1st November, 1955, the means test which has applied to new enrolments in the service is the income test that had to be satisfied in order to qualify for a full rate pension as at 31st December, 1953.

The means test does not apply to persons who had applied for and were eligible to receive a pension prior to 1st November, 1955, or to persons receiving a tuberculosis allowance.

At 30th June, 1964, the total number of pensioners and dependants enrolled in the Pensioner Medical Service was 844,048, while the number of doctors participating in the scheme at that date was 5,899.

During the year ended 30th June, 1964, doctors in the scheme performed 7,425,546 services—visits and surgery consultations—for persons enrolled in the scheme. For these services they were paid £4,765,625. The average number of services rendered by doctors to each enrolled person was 8.9.

6. **Anti-Tuberculosis Campaign.**—(i) *General.* 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 to their dependants.

Under an arrangement with the Commonwealth Government, each State conducts 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 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. There are twelve members, the chairman being the Commonwealth Director-General of Health.

To help reduce the spread of infection the Commonwealth Government pays living allowances to persons suffering from tuberculosis, so that they may give up work and undergo treatment. These allowances have been in operation since 13th July, 1950. The rates now payable are:—married sufferer with a dependent wife, £12 12s. 6d. a week; dependent child or children under sixteen years of age and full-time student children from 16 years until the end of the year in which they attain 18 years, 15s. a week for each dependent child (additional to child endowment); sufferer without dependants, £7 12s. 6d. a week (reducible to £6 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.

(ii) *New Tuberculosis Cases Notified.* The following table gives particulars of the number of new cases of tuberculosis notified in Australia for the year 1964.

TUBERCULOSIS: NEW CASES NOTIFIED(a), 1964

State or Territory	Age group (years)					Total
	0-14	15-34	35-54	55 and over	Not stated	
New South Wales ..	41	194	479	538	2	1,254
Victoria	83	168	293	274	2	820
Queensland	14	112	323	391	3	843
South Australia ..	9	47	69	52	..	177
Western Australia ..	11	21	69	71	..	172
Tasmania	5	23	45	23	..	96
Northern Territory ..	2	23	31	18	..	74
Australian Capital Territory ..	1	6	..	3	..	10
Australia ..	166	594	1,309	1,370	7	3,446

(a) Figures supplied by the Director of Tuberculosis in each State.

(iii) *Commonwealth Expenditure.* Expenditure by the Commonwealth Government during 1963-64 on its anti-tuberculosis campaign is set out in the following table. The figures for maintenance differ from those in the table shown in Chapter XVI. Welfare Services, because they include administrative costs which are not a charge on the National Welfare Fund.

COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN, 1963-64
(£)

State or Territory	Allowances	Maintenance (a)	Capital	Total
New South Wales	(b) 276,853	1,900,046	76,317	2,253,216
Victoria	188,513	1,426,159	25,178	1,639,850
Queensland	183,333	1,061,635	141,463	1,386,431
South Australia	(c) 64,230	368,241	14,885	447,356
Western Australia	44,260	388,748	21,889	454,897
Tasmania	39,478	190,000	19,510	248,988
Australian Capital Territory ..	(d)	4,676	..	4,676
Australia	796,667	5,339,505	299,242	6,435,414

(a) Includes £103,104 for administrative costs. (b) Includes Australian Capital Territory.
(c) Includes Northern Territory. (d) Included with New South Wales.

The following table sets out expenditure by the Commonwealth Government on its anti-tuberculosis campaign during the years 1959-60 to 1963-64.

COMMONWEALTH EXPENDITURE ON ANTI-TUBERCULOSIS CAMPAIGN
(£)

Year	Allowances	Maintenance (a)	Capital	Total
1959-60	1,025,473	4,414,210	781,089	6,220,772
1960-61	946,446	4,259,092	410,370	5,615,908
1961-62	872,853	4,418,986	386,579	5,678,418
1962-63	803,516	4,970,951	491,993	6,266,460
1963-64	796,667	5,339,505	299,242	6,435,414

(a) Includes administrative costs.

7. Anti-poliomyelitis Campaign.—(i) *General.* Information concerning the initial production by the Commonwealth Government of anti-polio vaccine in Australia in 1955, and of the testing procedures which were carried out, is contained in Year Book No. 49 and earlier issues.

Distribution of the Salk poliomyelitis vaccine, which was supplied free of charge to the States, began in July, 1956. The States were 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. Up to 1958, priority was given to children in the 0-14 age group, expectant mothers, and persons subjected to special risk. During 1958, this priority was extended to persons in the 15-44 age group. No child can be vaccinated without the consent of parents or guardian.

Vaccination against poliomyelitis takes the form of four injections of the vaccine. The second injection is given approximately four weeks after the first, the third injection is given not less than 32 weeks after the first and the fourth injection a minimum of one year after the third dose. Where the incidence of the disease in certain areas approaches epidemic proportions, special efforts have been made to vaccinate as soon as possible all persons in the area who give their consent.

One million doses of each of the three types of monovalent Sabin vaccine were imported by the Commonwealth in October, 1962, for use in a possible emergency. The decision whether to use the Sabin vaccine rests with the individual State Health Authorities.

At present, a pilot scheme is being undertaken by the Tasmanian Government in co-operation with the Commonwealth, using Sabin Vaccine as a booster. Over 70,000 children have received two doses of Sabin Vaccine at intervals of six weeks and immunity levels reached have been satisfactory.

It is difficult to give a completely accurate estimate of the vaccination coverage for the whole of Australia because methods of recording vaccination data differ from State to State. The proportion of children who had received three injections by 12 months of age is considered to be very small; by the recommended dosage schedule the third injection is given at 14 months or later. More than 60 per cent. of children from 15 months to 4 years have received 3 injections. In the age group 5 to 14 years, 90 per cent. have had 3 injections, as also have the 15 to 19 years group. Only 40 per cent. of persons 20 to 45 years old have received 3 or more injections.

Australia-wide information is not available regarding the proportion of the population which has now received a fourth injection, but if information from South Australia can be taken as a guide, it would appear that approximately 16 per cent. of those persons who have already received 3 injections have also received a fourth dose.

(ii) *New Cases of Poliomyelitis Notified.* The numbers of new cases of poliomyelitis notified in each State are shown for each year from 1956 to 1964 in the following table.

POLIOMYELITIS: NEW CASES NOTIFIED

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1956	240	251	112	122	401	55	..	13	1,194
1957	58	13	24	16	8	6	..	..	125
1958	23	60	5	10	2	..	..	..	100
1959	16	30	4	1	3	..	..	..	54
1960	9	23	6	10	4	36	17	..	105
1961	201	50	141	44	2	11	1	..	450
1962	178	22	38	17	4	..	1	..	260
1963	3	19	1	8	5	..	..	..	36
1964p.. ..	2	5	..	..	..	..	..	..	7

8. *Free Milk for School Children Scheme.*—The *States Grants (Milk for School Children) Act 1950* was passed with the object of improving 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 government or non-government primary schools, including nursery schools, kindergartens, crèches and missions for Aborigines, are eligible to receive free milk. The cost of the milk and half the capital or incidental costs, including administrative expenses of the scheme, are reimbursed by the Commonwealth to the States. All States now participate in the scheme. At 30th June, 1964, approximately 1,687,000 children were entitled to receive free milk under this scheme.

Expenditure by the Commonwealth Government during the years 1959–60 to 1963–64 was as follows.

COMMONWEALTH EXPENDITURE ON MILK FOR SCHOOL CHILDREN SCHEME

(£)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Australia
1959–60 ..	1,286,672	910,000	480,246	275,000	229,872	156,358	10,493	22,874	3,371,515
1960–61 ..	1,279,460	1,020,000	518,244	282,000	225,377	200,075	21,994	24,064	3,571,214
1961–62 ..	1,329,363	1,036,165	565,000	332,258	264,392	175,256	23,271	27,734	3,753,439
1962–63 ..	1,317,903	950,407	572,762	356,910	293,069	192,093	26,595	30,014	3,739,753
1963–64 ..	1,331,688	1,093,000	559,933	353,932	309,046	199,717	25,052	27,305	3,899,673

The figures in the foregoing table differ slightly from those in the table shown in Chapter XVI. Welfare Services, as 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 Organizations concerned with Health

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”. 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 on medical research and on projects of medical research generally; and to advise Commonwealth and State Governments on 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 other officers of the Commonwealth Department of Health, the official head of each State Health Department, the Director of Public Health for Papua and New Guinea, a representative of the Commonwealth Serum Laboratories Commission, and ten other members, one each being nominated by the Australian Medical Association, the Australian Dental Association, the Australian Paediatric Association, the Australian College of General Practitioners, the Royal Australasian College of Physicians, the Royal Australasian College of Surgeons, the Australian Regional Council of the Royal College of Obstetricians and Gynaecologists, the College of Pathologists of Australia, the College of Radiologists of Australasia, and the Australian universities having medical schools. An eminent layman and laywoman, appointed by the Commonwealth Minister for Health, also serve on the council.

The Council has established three advisory committees—the Medical Research Advisory Committee, the Medicine Advisory Committee and the Public Health Advisory Committee—to provide advice in each specialized field. It has also established other committees to consider specialized subjects such as antibiotics, dental health, food standards, maternal and child health, nursing, nutrition, out-patient health and veterinary public health.

The first session of the National Health and Medical Research Council was held at Hobart in February, 1937. The fifty-eighth session was held at Canberra in October, 1964.

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. For 1963–64, this appropriation was £318,500 and for 1964–65, £413,000.

2. The National Biological Standards Laboratory.—The *Therapeutic Substances Act 1953–1959* provides the Commonwealth with powers to ensure that therapeutic substances used for the prevention, diagnosis and treatment of disease in man and animals are safe, pure and potent.

The Director-General of Health is authorized under this Act to set up laboratories to test such substances. In 1958 the first steps were taken to establish an Australian National Biological Standards Laboratory in Canberra.

The laboratory is divided into two main divisions, a Biological Division and a Pharmaceutical Division. The Biological Division consists of the Bacterial Products Laboratory, the Viral Products Laboratory, an Endocrine Products Laboratory and an Antibiotic Products Laboratory. The Pharmaceutical Division consists of an Analytical Chemistry Laboratory and a Pharmacology Laboratory.

All these laboratories have now been established and have commenced work.

Samples of therapeutic agents available in Australia are taken and tested for compliance with legal standards. A major function of the laboratories is the establishment of such standards where none at present exist or present standards are unsatisfactory.

The laboratories receive international reference standards of biological substances from stocks maintained by the World Health Organization, and will on request issue Australian reference standards which have been assayed against international standards.

3. Commonwealth Serum Laboratories.—The laboratories were established in 1916 under the administration of the Department of Trade and Customs and from 1921 to 1961 were operated under the Department of Health. Control of the laboratories passed to the Commonwealth Serum Laboratories Commission on 2nd November, 1961.

The laboratories' basic function is to ensure the supply of essential biological products in accordance with national health needs. This includes production and supply of essential biological products; research and development relating to biological products and allied fields; and the maintenance of potential production capacity for use in emergencies.

Since their foundation, the laboratories have greatly extended in size and scope. They now produce some 450 regular products and many special products for use in the diagnosis, prevention and treatment of human and animal diseases. Professional, technical and other staff total over 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 testing materials and desensitizing preparations, culture media, and diagnostic agents for clinical and laboratory work. More recently, tissue culture materials have been prepared and supplied to virus research workers throughout Australia.

Continual research is conducted into the relevant aspects of microbiology 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.

Facilities are maintained for investigations into public health matters which are 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 the 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 these 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.

4. **The Commonwealth Health Laboratories.**—Health laboratories, of which there are fifteen, are situated in the following towns: Albury, Alice Springs, 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 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 exists with State and local health and hospital services, especially 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.

The laboratories are unique in that, with the exception of the use of X-rays, they cover all the fields of diagnostic requirements, namely, pathology, public health, haematology, parasitology, mycology, bacteriology, biochemistry and blood group serology.

5. **Commonwealth Acoustic Laboratories.**—Sponsored by the National Health and Medical Research Council, the Acoustic Research Laboratory, Sydney, investigated inter-communication difficulties and noise problems in aircraft and tanks (1942-46). It then investigated the problem of congenital deafness in children resulting from maternal rubella. The Department of Health took over the laboratory in January, 1947, and subsequently established branch laboratories in all other State capitals.

The *Acoustic Laboratories Act* 1948 gave the Minister for Health the right to establish, maintain and operate, within the Commonwealth, acoustic laboratories for scientific investigations, including tests in respect of hearing aids and their application to the needs of individuals, and in respect of problems associated with noise as it affects individuals. Scientific investigations are carried out in the Central Laboratories in Sydney by specialized scientific groups in psychology and audiology, acoustics and electroacoustics, medical ultrasonics, and psychoacoustics. The results of this research are published in scientific literature

and Commonwealth Acoustic Laboratories reports. In 1949 the Government approved the provision and maintenance of hearing aids, without charge, to deaf school and pre-school children. This service has since been extended to those whose hearing loss is discovered after leaving school, but who are still under 21 years of age. Since May, 1964, the cost of hearing aids is met from the National Welfare Fund. The laboratories' functions also include:—provision and maintenance of hearing aids on behalf of the Repatriation and other Commonwealth Departments; assistance to the State Education Departments in measuring deafness by providing and maintaining portable audiometers; the making of hearing tests of civil aviation aircrew as required by international agreement; and the making of independent tests on behalf of State and other authorities.

The Central Laboratories located in Sydney are responsible for staff training, production of equipment, calibration of hearing-aids and audiometers, and the technical administration of branch laboratories.

6. Commonwealth X-ray and Radium Laboratory.—In 1928 the Commonwealth Government purchased ten grammes of radium for use in medical treatment and research in Australia. The use of this radium was to be co-ordinated by the Department of Health and in 1929 the Department established the Commonwealth Radium Laboratory to act as custodian of the radium and to ensure its equitable distribution and efficient use.

The radium is distributed on loan to treatment centres throughout Australia. Under the terms of these loans, treatment at well-equipped clinics is available to all persons requiring it, irrespective of their ability to pay. Portions of the original stock of radium have been remounted from time to time, reflecting changes in techniques of treatment.

In 1935 the work of the laboratory was extended to include physical aspects of X-ray therapy and the name of the laboratory was changed at this time to its present form.

Since 1939 the functions of the laboratory have included investigations of the physical aspects of the diagnostic use of X-rays with particular emphasis on miniature radiography and high-kilovoltage techniques.

In 1946 the laboratory imported the first artificially-produced radioactive isotopes used in Australia and established a system for the procurement and distribution of these substances.

A radiochemical laboratory and associated facilities were set up in the laboratory to permit the assay of radioactive materials present in minute amounts in the environment—in air, water, soil and foods such as milk, grain and vegetables. A programme of monitoring the fall-out in Australia arising from the testing of nuclear weapons is continuing.

The laboratory co-operates with the 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 the exposure to radiation of those who work with X-rays and radioactive materials. The services of the laboratory are available to all who work with ionizing radiations.

A radon service has been operated by the laboratory since its inception. During the year ended 30th June, 1964, 39,766 millicuries of radon were issued by the laboratory in the form of implants, needles and tubes for use in Victoria, Tasmania, South Australia and Western Australia. A further 23,688 millicuries were issued by the associated centres in Sydney and Brisbane. The corresponding figures for 1962–63 were 33,701 millicuries and 20,483 millicuries, respectively. The issue of radon from a few centres to serve hospitals all over the continent is an Australian development which enables very efficient use to be made of the radium available.

Since 1935 the laboratory has maintained the Australian (free-air) standard for the precise measurement of X-ray dose. Sub-standard clinical dosimeters used by the laboratory and by centres in other States are calibrated in terms of this standard.

Through the development of atomic energy programmes overseas, supplies of radio-isotopes have been available for use in Australia since 1946. Some of the radio-isotopes required in Australia are prepared by the Australian Atomic Energy Commission in its reactor at Lucas Heights. At the present time, the procurement and distribution of radio-isotopes to be used in medicine and medical research are the responsibility of the Department of Health and these isotopes are procured by the laboratory, as a central procurement agency, principally from Great Britain, Canada, and the United States of America. The procurement and distribution of radio-isotopes for industrial and non-medical uses are the responsibility of the Australian Atomic Energy Commission.

The importation of radio-isotopes is restricted under the Customs (Prohibited Imports) Regulations. Approval for importation is given either by the Director-General of Health or by the Australian Atomic Energy Commission, depending on the category of use, after it has been established that the isotope will be used safely and usefully.

During 1963-64 38 different isotopes were procured for use in medicine and medical research. They represented 1,559 separate deliveries, of which 76 (including seven different isotopes) were from the Australian Atomic Energy Commission. Of the 38 isotopes, 16 were for use in medical diagnosis or treatment, as distinct from medical research. Bulk supplies of radio-isotopes used for diagnosis or treatment are obtained regularly and these are distributed by the laboratory as individual doses for use on patients throughout Australia in accordance with 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. In the year ended 30th June, 1964, 18,159 individual doses of these materials were issued for medical diagnosis and therapy.

Investigations of the degree of protection necessary in particular applications of X-rays and radioactive materials continue to be an important activity of the laboratory. It prepares specifications of the protection facilities necessary in departments and laboratories employing ionizing radiations in medicine, research and industry, and carries out measurements of radiation levels in existing departments and laboratories. A film-badge service to measure the radiation dose received by those exposed to ionizing radiations is maintained. In 1963-64, 72,411 film-badges were processed, assessed and reported on; the corresponding figure for the previous year was 46,370.

The laboratory maintains a library of radiological literature and issues library bulletins at appropriate intervals. Technical communications on topics related to its functions are issued from time to time.

7. The School of Public Health and Tropical Medicine.—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 School comprises sections of Preventive Medicine, Tropical Medicine, Occupational Health, Environmental Health, Biochemistry, Bacteriology and Pathology, Parasitology, Medical Entomology, and Medical Statistics. The Child Welfare section of the Institute of Child Health is located at the School, with which it is closely associated. The Occupational Health Section undertakes surveillance of the health of persons employed at the Small Arms Factory, Lithgow, and at the Munitions Filling Factory, St. Mary's. The Library, which includes approximately 17,000 bound volumes and a large collection of official and institutional papers and reports, forms an important information centre in the subjects of public health and tropical medicine.

The work of the school comprises both teaching and investigation. Courses are held for the university post-graduate diploma in public health and the diploma in tropical medicine and hygiene. Lectures are given in public health and preventive medicine as prescribed for the fifth year of the medical curriculum. Courses are provided also in hygiene and social medicine for students of architecture and social studies; in tropical medicine for lay officers, nurses in tropical service and missionaries; and in industrial health for engineering students. Training is also provided for certain personnel of the armed services, for laboratory workers from various services and institutions, and for post-graduate nursing diploma students.

Investigations cover a wide range 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. Limited accommodation and other facilities for investigation can be made available at the school for independent research workers.

8. Institute of Child Health.—Associated with the School of Public Health is the Institute of Child Health, part of which is located in the School of Public Health and Tropical Medicine in the grounds of the University of Sydney and part at the Royal Alexandra Hospital for Children, Camperdown. The activities of the Institute are concerned with research into medical and social problems of childhood, undergraduate teaching of students

of the Faculty of Medicine in the University of Sydney, post-graduate teaching of doctors and members of associated professions, and collaboration with other bodies concerned with the general field of child health.

The establishment of the Institute at present consists of the director, two senior medical officers, one child psychiatrist, five other medical officers, a psychologist, two social workers, and clerical staff.

The director of the Institute is the Professor of Child Health in the University of Sydney. He is also a senior honorary paediatrician on the staff of the Children's Hospital. The child psychiatrist is also Associate Professor of Child Psychiatry in the University of Sydney.

The director is required to co-ordinate and control undergraduate and post-graduate teaching in paediatrics and child health. Each group of medical students attends the Children's Hospital for 10 weeks tuition in paediatrics and child health.

The particular research activities of the Institute vary with the immediate and long-term problems which present themselves. Fields of study have included rheumatic fever, scurvy, accidents, prematurity, hypothyroidism and mental deficiency. Studies are undertaken into the problems of infants and children deprived of a normal home life.

Members of the Institute staff are available for consultation by Commonwealth and State authorities and voluntary agencies.

9. Commonwealth Bureau of Dental Standards.—This Bureau 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 then Dental Materials Research Laboratory established itself as a recognized authority in its special field and proved to be of 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:—original research into dental equipment, materials, techniques and processes; regular reporting of the results of these investigations in recognized Australian scientific journals; the development of specifications for dental materials and equipment, 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; and 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.

10. The Australian Institute of Anatomy.—The Australian Institute of Anatomy is situated in a building erected in Canberra by the Commonwealth Government under the *Zoological Museum Agreement Act 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 Institute. The Institute became part of the Commonwealth Department of Health in 1931.

The original collection has been greatly augmented. In addition to donations of material, there have been several endowments for orations and lectures.

The Institute consists of a museum section and a laboratory section. In the museum section, which is open to the public, a portion of the original collection of anatomical specimens assembled by Sir Colin MacKenzie is displayed, 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 Aborigines and Indigenes 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 a 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.

§ 4. Control of Infectious and Contagious Diseases

1. **General.**—The provisions of the various Acts with regard to the compulsory notification of infectious diseases and the precautions to be taken against their spread are dealt with under the headings of quarantine and notifiable diseases (including venereal diseases).

2. **Quarantine.**—The *Quarantine Act* 1908–1961 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, and 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 subject to a medical inspection 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 the Commonwealth Director of Health, who is a medical officer of the Commonwealth Department 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 to Australia and it is of great importance to prevent their entry. Quarantine stations at the major ports and at Darwin 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.

Valid vaccination certificates are required of travellers to Australia as follows:

Cholera. All arrivals from infected local areas and from India, Pakistan, Burma, Thailand, Vietnam, Malaysia, Philippines and Indonesia. No certificate is required in respect of children under one year of age.

Yellow Fever. All arrivals from yellow fever endemic zones.

Smallpox. All arrivals from all countries except British Solomon Islands, Fiji, Nauru, New Zealand, Norfolk Island, Ocean Island, Australian Territory of Papua and New Guinea, provided travellers have not been outside these areas for at least 14 days before arrival and that these areas are free of smallpox. Australia reserves the right, in respect of arrivals from other countries, to isolate any person who arrives by air without a smallpox vaccination certificate and refuses to be vaccinated. Children under one year of age are exempt. For

passengers arriving in Australia by sea, exemption is granted to infants under twelve months of age and to persons who hold religious convictions against vaccination or who are suffering from a medical condition certified by a medical practitioner to contra-indicate smallpox vaccination.

All passengers, whether they arrive by sea or air, are required to give their intended place of residence in Australia, 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 numbers of cases of infectious (non-quarantinable) diseases which were discovered among the passengers and crew of overseas vessels and aircraft calling at Australian ports during the year ended 30th June, 1964, 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, 1963-64

Disease	Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
		Passengers	Crew
Chicken pox	36	82	4
Enteritis	1	1	..
Glandular fever	1	2	..
Gonorrhoea	3	..	3
Infectious hepatitis	7	9	1
Measles	30	196	..
Mumps	28	53	1
Paratyphoid	1	1	..
Pulmonary tuberculosis	1	..	1
Pneumonia	1	1	..
Rubella	7	12	..
Scarlet fever	1	1	..
Syphilis	1	..	1
Typhoid	1	1	..
Whooping cough	1	2	..
Total	(a) 92	361	11

(a) On some vessels there were cases of more than one disease.

HUMAN QUARANTINE: OVERSEA VESSELS AND AIRCRAFT ARRIVING IN AUSTRALIA AND CASES OF INFECTIOUS (NON-QUARANTINABLE) DISEASE FOUND

Year	Number of overseas vessels and aircraft cleared		Number of overseas vessels and aircraft on which cases were found	Number of cases of infectious disease	
	Ships	Aircraft		Passengers	Crew
1959-60	3,046	2,063	61	234	12
1960-61	3,481	2,354	55	296	4
1961-62	3,761	2,417	67	221	15
1962-63	2,943	2,423	91	438	35
1963-64	3,184	2,620	92	361	11

(ii) *Animal Quarantine.* Animal quarantine, authorized by the provisions of the *Quarantine Act 1908-1961*, 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.

Of the domesticated animals, only horses, 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 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, types of wool, skins and hides, are specially treated under quarantine control. 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 Animal Quarantine Service is also responsible for the health certification of animals for export overseas in accordance with requirements of the various countries.

The Division of Veterinary Hygiene was created in 1926 to deal with the administration of animal quarantine. 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 that 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.

Every two years the director of the Division convenes the Biennial Conference of Principal Commonwealth and State Veterinarians, which meets under the auspices of the Australian Agricultural Council to discuss problems of animal health and disease control and animal quarantine.

(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 1908-1961*, 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. It is controlled by 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 treatment is 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. Importation of plants likely to be infected with plant diseases or pests, of noxious plants or fungi, and of poison plants is prohibited. Agricultural seed, not restricted under quarantine legislation, must conform to standards of purity, and insect pest and disease freedom. Seed of commercial crops which could introduce diseases are prohibited imports except with special permission. All plant products not specifically restricted, such as timber, logs and crates, are subject to inspection upon arrival and treatment if necessary. Many commodities, including hops, cotton, peanuts in shell, potatoes, and certain crop seeds, may be imported only by approved importers under specified conditions. All nursery stock, including bulbs, must be grown in post-entry quarantine. Prior approval is necessary and such material may be imported only by approved importers who are registered for this purpose. The number of plants which may be imported in any one year is limited. The importation of propagating material of commercial fruits, vines and berries is permitted only after special prior approval and is subject to specific screening for virus by qualified authorities.

3. Notifiable Diseases.—(i) *General.* (a) *Methods of Prevention and Control.* Provision exists in the Health Acts of all States for the compulsory notification of certain infectious and other diseases and for the application of preventive measures. 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 provide 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. Regulations also provide that persons suspected to be suffering from, or to be carriers of, infectious disease must submit to clinical and laboratory examination. Persons suffering from certain communicable diseases, for example, smallpox and leprosy, are detained in isolation.

(b) *Diseases Notifiable and Cases Notified in each State and Territory.* The following tables show, for each State and Territory, the diseases notifiable in 1964, and the number of cases notified. Diseases not notifiable in a State or Territory are indicated by an asterisk.

Factors such as the following affect both the completeness of the figures and the comparability from State to State and from year to year:—availability of medical aid; diagnostic practices of doctors—e.g., infectious hepatitis may not be diagnosed as such unless jaundice is also present; enforcement and follow-up of notifications by Health Departments; differences in sources of notifications; differences in definitions of notifiable diseases in Health Acts—e.g., puerperal fever and encephalitis; and varying degrees of attention to notification of diseases of minor importance.

**DISEASES NOTIFIABLE^(a) IN EACH STATE AND TERRITORY OF AUSTRALIA
AND NUMBER OF CASES REPORTED, 1964**

Disease	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
DISEASES NOTIFIABLE IN ALL STATES AND TERRITORIES^(b)									
Acute rheumatism (rheumatic fever) ..	41	39	(c)100	..	8	26	7	1	222
Ankylostomiasis ..	224	1	91	1	37	..	297	..	651
Brucellosis ..	19	36	12	2	4	..	..	1	74
Diarrhoea, infantile ..	587	426	336	12	44	6	142	19	1,572
Diphtheria ..	9	71	3	..	3	..	..	1	87
Encephalitis ..	89	21	12	3	..	1	1	..	127
Infectious hepatitis ..	2,731	2,697	1,163	289	101	636	57	12	7,686
Leprosy (Hansen's disease) ..	7	1	6	..	11	..	49	1	75
Meningococcal infection ..	61	31	115	5	1	12	2	2	229
Paratyphoid fever ..	5	..	1	1	..	4	..	1	7
Polio-myelitis ..	..	5	..	..	..	..	..	..	2
Puerperal fever ..	79	7	34	2	3	..	13	..	139
Scarlet fever ..	432	647	73	202	60	380	..	4	1,798
Tuberculosis ^(d) ..	1,254	820	843	177	172	96	74	10	3,446
Typhoid fever ..	6	5	4	4	..	..	..	1	20
Typhus (flea, mite or tick borne) ..	3	..	12	..	..	..	..	..	15

DISEASES NOTIFIABLE IN SOME STATES AND TERRITORIES^(b)

									Total for the States, etc., in which the disease is notifiable
Acute nephritis ..	*	43	*	*	*	3	*	*	46
Amoebiasis ..	*	3	72	1	1	..	3	..	80
Anthrax ..	*	..	..	..	..	..	..	..	..
Ascariasis ..	110	..	..	..	..	..	..	..	110
Bilharziasis ..	*	1	*	..	..	..	..	..	1
Breast abscess ..	1	28	16	..	4	..	..	..	49
Chorea ..	4	1	(c)	..	..	..	..	..	5
Dengue ..	..	..	..	..	..	..	..	..	..
Dysentery, bacillary ..	..	28	50	73	135	1	120	1	408
Eclampsia ..	..	5	*	..	..	..	..	..	5
Erythema nodosum ..	..	12	(e)	3	..	..	..	..	15
Filariasis ..	..	4	2	..	..	..	..	..	2
Helminthiasis ..	..	..	..	..	..	..	..	..	4
Homologous serum jaundice ..	..	..	(f)	..	..	..	..	..	..
Hydatid ..	..	22	1	..	3	21	..	..	47
Lead poisoning ..	..	..	6	1	..	..	..	..	7
Leptospirosis ..	14	..	103	2	4	..	..	..	123
Leukemia ..	..	33	*	..	..	..	..	..	33
Malaria ..	..	16	47	..	5	..	5	1	74
Melioidosis ..	..	*	*	..	..	..	..	..	..
Ophthalmia ..	..	*	*	..	14	..	..	13	27
Ornithosis ..	..	1	3	1	..	..	..	..	5
Pleural effusion ..	..	18	(e)	..	1	..	..	..	19
Q-fever ..	..	*	189	*	..	..	..	..	189
Relapsing fever ..	..	*	..	..	..	..	..	..	..
Rubella ..	..	1,388	110	664	190	46	8	53	2,459
Salmonella infection ..	..	*	*	120	61	..	24	6	211
Staphylococcal infection (infancy) ..	943	9	4	..	..	..	..	..	956
Staphylococcal pneumonia ..	34	..	..	..	..	..	..	..	34
Taeniasis ..	..	*	5	..	..	..	..	..	5
Tetanus ..	..	7	23	..	8	..	..	..	38
Trachoma ..	..	..	*	42	147	..	26	..	215
Trichinosis ..	..	*	*	..	1	..	..	..	1
Veneral diseases—									
Syphilis ..	399	59	122	..	11	10	4	6	611
Gonorrhoea ..	3,937	1,302	1,274	*	392	188	73	35	7,201
Other ..	201	..	78	..	..	..	28	1	308

(a) No cases of cholera, plague, smallpox, epidemic typhus or yellow fever were notified. (b) There are popular names for various diseases mentioned in the table above. While these names may not be clearly defined or acceptable for diagnostic purposes, the most common ones are listed here for the information of the lay reader:—hookworm (ankylostomiasis); undulant fever (brucellosis); St. Vitus dance (chorea); Weil's disease or seven-day fever or swamp fever (leptospirosis); parrot fever (ornithosis); childbed fever (puerperal fever); German measles (rubella). (c) Chorea is included with acute rheumatism (rheumatic fever). (d) These are figures supplied by the Directors of Tuberculosis in each State. (e) Under the Queensland Health Acts notifications of tuberculosis include erythema nodosum and pleural effusion. (f) Included with infectious hepatitis. * Not notifiable.

(ii) *Specific Diseases.* (a) *Tuberculosis and Poliomyelitis.* The number of new cases of tuberculosis notified in each State and Territory by age groups for the year 1964 is shown on page 664. Some data regarding deaths from tuberculosis are shown on page 339 of Chapter X. Vital Statistics.

Cases of poliomyelitis notified in each State and Territory for the years 1956 to 1964 are shown on page 666.

(b) *Infectious Hepatitis.* The following table shows the number of cases of infectious hepatitis notified in each State and Territory during the years 1960 to 1964.

INFECTIOUS HEPATITIS: CASES NOTIFIED

State or Territory	1960	1961	1962	1963	1964
New South Wales	4,925	6,050	3,358	2,822	2,731
Victoria	2,385	3,515	3,533	3,840	2,697
Queensland	713	1,022	884	1,433	1,163
South Australia	1,121	1,406	504	293	289
Western Australia	256	262	117	145	101
Tasmania	44	304	630	856	636
Northern Territory	23	61	101	104	57
Australian Capital Territory	88	281	88	20	12
Australia	9,555	12,901	9,215	9,513	7,686

(c) *Venereal Diseases.* The prevention and control of venereal diseases are the responsibility of State Health Departments. The necessary powers for the purpose are provided either by a special Venereal Diseases Act or by a special section of the Health Act. Venereal diseases are notifiable in all States except in South Australia, where, however, the Director-General of Public Health is empowered to compel a venereal disease suspect to submit to medical examination and, if found infected, to medical treatment. While the provisions of the legislation differ from State to State, the Acts usually make it obligatory upon the patient to report for and continue under treatment until certified as cured. Treatment of venereal disease must be by a registered medical practitioner. Facilities for treatment of venereal disease free of charge may be arranged at subsidized hospitals or at special clinics. 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, or 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 §§ 2-4 above, the Commonwealth Government gives financial assistance to certain organizations associated with public health. Examples of organizations included in this category are the National Fitness Organizations, the Royal Flying Doctor Service of Australia, the Red Cross Blood Transfusion Service, the Lady Gowrie Child Centres, and the National Heart Foundation of Australia.

2. *National Fitness.*—In 1938, arising from a recommendation of the National Health and Medical Research Council, the Commonwealth Government appointed a National Co-ordinating Council for National Fitness, under the Commonwealth Minister for Health, to effect collaboration of Commonwealth, State and local government authorities in the National Fitness Movement. Following the recommendations of the first Co-ordinating 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.

The movement was placed on a statutory basis with the passing of the *National Fitness Act* 1941. The Act provides for a Commonwealth Council for National Fitness to advise the Minister for Health concerning the promotion of national fitness. It provides also for the establishment of a Trust Account, known as the National Fitness Fund, to assist in financing the movement. In June, 1942, the annual appropriation from revenue to the National Fitness Fund was increased to £72,500 to include grants to the State Education Departments and for the work in the Australian Capital Territory. The annual appropriation was increased to £100,000 in 1962, the increase of £27,500 being made available to the National Fitness Councils in the States. The £100,000 is disbursed as follows:—State National Fitness Councils, £64,454; Universities, £12,400; State Education Departments, £17,000; central administration, £3,396; and Australian Capital Territory, £2,750.

The annual grant of £2,750 allocated in the Australian Capital Territory is distributed mainly on a £1 for £1 basis to youth and sports organizations for the purchase of equipment, the development of coaching schemes, and the extension of club and camp facilities.

3. **Royal Flying Doctor Service of Australia.**—The purpose of the Royal Flying Doctor Service of Australia is to provide medical and dental services to 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 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. 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 for 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 the service for operational expenses since 1936. The Commonwealth annual grant to the Royal Flying Doctor Service of Australia towards maintenance was increased from £40,000 to £55,000 per annum for three years from 1st July, 1962. The Commonwealth grant towards capital expenditure was increased from £27,500 to £40,000 per annum for the same period. 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, which has bases at Port Hedland and Meekatharra, is sponsored by the Western Australian section.

4. **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 made 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. In March, 1954, therefore, 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 condition 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 payments made by the Commonwealth Government to the State Governments in 1963-64 were as follows:—New South Wales, £50,354; Victoria, £60,735; Queensland, £40,855; South Australia, £22,097; Western Australia, £18,313; Tasmania, £5,557; total, £197,911.

5. **Lady Gowrie Child Centres.**—In 1940 the Commonwealth Government established a pre-school demonstration centre in each of the six State capital cities. These centres are known as the Lady Gowrie Child Centres and are administered by local State committees under supervision of the Australian Pre-school Association located at Canberra. An annual grant is made available by the Commonwealth towards the operation of the centres, £50,000 being allocated for 1963-64 and £60,000 for 1964-65. In addition, a special grant of £12,000 was approved to re-build the Melbourne centre which had been destroyed by fire. Of this grant, £7,500 was made available for 1963-64 and £4,500 for 1964-65.

The specialized function of the centres is that of demonstration and research, and the programmes are carried out under the supervision of the Federal Pre-school 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.

The centres are used for observation by students of medicine, psychology, education, social studies, architecture, nursing and domestic science, and by student teachers.

6. **Home Nursing Subsidy Scheme.**—The Home Nursing Subsidy Scheme provides payments to assist the expansion of home nursing activities. To be eligible for a subsidy, an organization must be non-profit making and must receive assistance from a State Government, local government body, or other authority established by or under a State Act. It must employ registered nurses. It is provided that Commonwealth subsidy must not exceed the amount of State assistance received by the organization concerned. Eligible organizations established prior to November, 1956, now receive £1,000 a year in respect of each additional qualified nurse employed. New organizations established since November, 1956, receive £500 a year in respect of each qualified nurse employed.

Expenditure during 1963-64 on the promotion of the Home Nursing Service was £185,938. The Commonwealth subsidy paid to various district nursing organizations has led to the employment of 228 trained nurses.

7. **National Heart Foundation of Australia.**—The National Heart Foundation of Australia is a national organization established to promote research in cardiovascular disease, to rehabilitate heart sufferers and to foster the dissemination of information about heart diseases.

Formed in 1960, as a result of a public appeal yielding £2,500,000 to which the Commonwealth Government contributed £10,000, the Foundation has its headquarters in Canberra.

The organization is controlled by a Board of Directors assisted by various Committees. State Divisions with their own administrations deal especially with rehabilitation and education.

From its inception to the end of 1964, the Foundation has allocated over £800,000 for grants-in-aid towards research in university departments, hospitals and research institutes, research fellowships tenable in Australia and overseas, and overseas travel grants. Most of the annual expenditure of about £300,000 is devoted to supporting research in cardiovascular disease.

INSTITUTIONS

NOTE.—Institutions referred to under this heading are classified into the following groups:—(i) Public hospitals and nursing homes (referred to as “public hospitals” in previous issues of the Year Book); (ii) Mental hospitals; (iii) Private hospitals and nursing homes (previously referred to as “private hospitals”); (iv) Repatriation hospitals; (v) Isolation (leper hospitals).

§ 1. Public Hospitals and Nursing Homes

1. General.—The statistics shown under the heading public hospitals and nursing homes refer to institutions providing hospital and nursing home treatment, whether general or special, with the exception of mental hospitals, private hospitals and nursing homes, repatriation hospitals and leper hospitals. They include institutions wholly provided for by the State, partially subsidized by the State or by State endowments but receiving private aid also, and hospitals established and endowed by individuals for the treatment of the sick generally. Public hospitals are premises of this kind in which patients are received and lodged exclusively for “hospital” treatment, i.e., nursing care for the purpose of professional attention. Public nursing homes are such premises in which patients are received and lodged exclusively for the purpose of nursing home care, i.e., of a kind ordinarily provided in a benevolent home, convalescent home, home for aged persons or rest home for patients requiring professional attention. The statistics shown under this heading agree in scope with those classified as public hospitals in previous issues of the Year Book.

2. Number, Staff and Accommodation.—Details regarding the number of public hospitals and nursing homes, staff, and accommodation for the year 1962–63 are given in the following table.

PUBLIC HOSPITALS AND NURSING HOMES: NUMBER, STAFF AND ACCOMMODATION, 1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Number of hospitals and nursing homes	269	146	139	66	93	28	4	1	746
Medical staff—									
Honorary ..	4,747	1,636	8	635	392	151	..	77	7,646
Salaried ..	972	981	895	215	173	112	20	8	3,376
Total ..	5,719	2,617	903	850	565	263	20	85	11,022
Nursing staff ^(a) ..	15,110	10,509	6,060	3,194	3,318	1,484	230	306	40,211
Accommodation—									
Number of beds and cots ..	23,415	13,395	12,545	4,513	5,049	2,773	480	343	62,513

(a) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides and nursing aide trainees.

3. In-patients Treated.—The following table gives particulars of in-patients treated. The figures shown refer to cases, that is to say, a person who is admitted to hospital or nursing home twice during a year is counted twice. Newborn babies are excluded unless they remain in hospital or nursing home after their mothers' discharge.

PUBLIC HOSPITALS AND NURSING HOMES: IN-PATIENTS TREATED,
1962-63

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
In-patients at beginning of year—									
Males ..	7,281	3,768	3,692	1,263	1,288	881	163	92	18,428
Females ..	9,738	5,163	4,460	1,539	1,593	1,009	147	156	23,805
Persons ..	17,019	8,931	8,152	2,802	2,881	1,890	310	248	42,233
Admissions and re-admissions during year—									
Males ..	198,739	107,553	100,329	39,965	46,667	14,081	4,621	3,413	515,368
Females ..	305,275	177,653	126,458	51,377	57,229	21,920	5,293	6,519	751,724
Persons ..	504,014	285,206	226,787	91,342	103,896	36,001	9,914	9,932	1,267,092
Total in-patients (cases) treated—									
Males ..	206,020	111,321	104,021	41,228	47,955	14,962	4,784	3,505	533,796
Females ..	315,013	182,816	130,918	52,916	58,822	22,929	5,440	6,675	775,529
Persons ..	521,033	294,137	234,939	94,144	106,777	37,891	10,224	10,180	1,309,325
Discharges—									
Males ..	190,546	101,795	96,389	38,121	45,207	13,358	4,434	3,311	493,161
Females ..	298,363	172,858	123,634	49,932	56,087	21,347	5,141	6,432	733,794
Persons ..	488,909	274,653	220,023	88,053	101,294	34,705	9,575	9,743	1,226,955
Deaths—									
Males ..	8,203	5,496	3,627	1,728	1,256	710	164	100	21,284
Females ..	6,909	4,504	2,716	1,343	1,003	597	104	70	17,246
Persons ..	15,112	10,000	6,343	3,071	2,259	1,307	268	170	38,530
In-patients at end of year—									
Males ..	7,271	4,030	4,005	1,379	1,492	894	186	94	19,351
Females ..	9,741	5,454	4,568	1,641	1,732	985	195	173	24,489
Persons ..	17,012	9,484	8,573	3,020	3,224	1,879	381	267	43,840
Average daily number resident ..	16,825	9,221	8,378	2,901	3,103	1,869	370	259	42,926

In addition to those admitted to the hospitals and nursing homes, there are large numbers of out-patients treated. During 1962-63 there were 1,274,666 out-patients treated in New South Wales, 666,589 in Victoria, 688,574 in Queensland, 118,836 in South Australia, 153,000 (estimated) in Western Australia, 94,908 in Tasmania, 93,518 in the Northern Territory and 17,176 in the Australian Capital Territory, making an estimated total for Australia of 3,107,267. 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 1962-63 are shown in the next table. The revenue includes the Commonwealth Hospital Benefits Scheme. For some States expenditure on capital items out of individual hospitals own funds are not included in the figures shown. Comparison between the States should therefore be made with caution.

PUBLIC HOSPITALS AND NURSING HOMES: REVENUE AND EXPENDITURE,
1962-63
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Revenue—									
Government aid ..	33,379	19,117	14,243	5,003	8,779	3,688	1,108	1,387	90,355
Commonwealth Hospital Benefits, etc.									
Municipal aid ..									
Public subscriptions, legacies, etc. ..	146	2,787	35	279	49	..	..	..	3,296
Fees ..	14,072	8,730	1,979	2,471	3,094	738	115	212	31,411
Other ..	628	517	2,208	704	42	9	..	4	4,112
Total Revenue ..	48,225	33,864	18,465	9,653	11,965	4,435	1,267	1,603	129,477
Expenditure—									
Salaries and wages ..	27,259	14,965	9,471	5,025	5,827	1,985	582	506	65,620
Upkeep and repair of buildings and grounds ..	1,270	720	639	458	964	61	95	32	4,239
All other maintenance	12,319	10,789	6,298	2,528	2,818	984	268	195	36,199
Total Maintenance ..	40,848	26,474	16,408	8,011	9,609	3,030	945	733	106,058
Capital ..	6,729	6,480	1,879	1,591	2,308	1,388	322	823	21,520
Total Expenditure	47,577	32,954	18,287	9,602	11,917	4,418	1,267	1,556	127,578

5. **Summary.**—A summary, for the years 1958–59 to 1962–63, of the number of public hospitals and nursing homes 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 AND NURSING HOMES: AUSTRALIA

Particulars	1958–59	1959–60	1960–61	1961–62	1962–63
Hospitals and nursing homes	733	736	736	739	746
Medical staff(a)	9,354	9,954	10,386	10,535	11,022
Nursing staff(b)	34,372	36,023	37,607	39,082	40,211
Beds and cots	58,544	60,203	61,039	61,650	62,513
Admissions during year ..	1,133,172	1,153,690	1,182,198	1,235,665	1,267,092
Total in-patients (cases) treated	1,172,861	1,196,111	1,225,060	1,278,417	1,309,325
Out-patients (cases)(c) ..	2,665,700	2,710,900	2,794,400	2,946,800	3,107,000
Deaths	35,848	35,407	36,619	37,569	38,530
Average daily number resident	40,021	40,672	41,009	42,166	42,926
Revenue £'000	90,512	98,976	109,399	119,894	129,477
Expenditure £'000	90,157	97,987	108,556	119,774	127,578

(a) Honorary and salaried. (b) Qualified and student nurses, assistant nurses, assistant nurse trainees, nursing aides and nursing aide trainees. (c) Partly estimated.

§ 2. Mental Hospitals

1. **General.**—In addition to the mental hospitals proclaimed under the Lunacy and Mental Health Acts of the various States, the statistics shown in the following tables include other institutions providing accommodation and treatment of patients who are legally certified as requiring treatment for mental disorders. The statistics also include the number of voluntary patients in these institutions. With the exception of tables relating to revenue and expenditure, particulars of the two authorized hospitals conducted by religious organizations in New South Wales are included. Particulars of reception houses, observation wards in gaols, psychiatric clinics and intellectual deficiency training centres are excluded.

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 1963. Figures for Victoria and Western Australia relate to 31st December, 1963. Figures for the other States relate to 30th June, 1963.

MENTAL HOSPITALS: NUMBER, STAFF, ACCOMMODATION, 1963

Particulars	N.S.W.	Vic.(a)	Q'land (b)	S. Aust.	W. Aust. (a)	Tas.	Aust.
Number of hospitals	15	10	5	2	6	1	39
Medical staff—							
Males	108	111	16	14	16	5	270
Females	19	23	2	5	..	..	49
Persons	(c) 181	134	18	19	16	5	(c) 373
Nursing staff and attendants—							
Males	1,343	1,281	666	278	231	108	3,907
Females	1,421	1,479	506	288	209	104	4,007
Persons	2,764	2,760	1,172	566	440	212	7,914
Accommodation—							
Number of beds and cots ..	13,315	9,420	4,308	2,676	1,926	850	32,495

(a) 31st December, 1963. (b) Includes the Epileptic Home. (c) Includes 54 visiting specialists in New South Wales who are paid for their services.

3. **Patients.**—Information regarding patients treated during 1962–63 is given in the following table. The figures include voluntary patients in all States with the exception of South Australia, but they are included in the average daily number resident shown for that State.

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. These persons have been included in the table below as patients at the end of the year.

MENTAL HOSPITALS: PATIENTS, DEATHS, ETC., 1962-63

Particulars	N.S.W.	Vic. (a)	Q'land (b)	S. Aust. (c)	W. Aust. (a)	Tas.	Aust.
Number of patients at beginning of year—							
Males	7,136	4,154	2,427	1,342	1,218	347	16,624
Females	7,097	4,286	1,845	1,067	916	421	15,632
Persons	14,233	8,440	4,272	2,409	2,134	768	32,256
Admissions and re-admissions (excluding absconders retaken and transfers from other mental hospitals)—							
Males	4,025	2,287	907	334	970	281	8,804
Females	4,136	2,114	843	244	741	209	8,287
Persons	8,161	4,401	1,750	578	1,711	490	17,091
Number of persons treated during year—							
Males	11,161	6,441	3,334	1,676	2,188	628	25,428
Females	11,233	6,400	2,688	1,311	1,657	630	23,919
Persons	22,394	12,841	6,022	2,987	3,845	1,258	49,347
Discharges (including absconders not retaken)—							
Males	3,745	1,937	785	336	880	270	7,953
Females	3,905	1,790	797	241	724	266	7,723
Persons	7,650	3,727	1,582	577	1,604	536	15,676
Deaths—							
Males	479	376	137	94	61	18	1,165
Females	518	409	104	95	60	17	1,203
Persons	997	785	241	189	121	35	2,368
Number of patients at end of year—							
Males	6,937	4,128	2,412	1,246	1,247	340	16,310
Females	6,810	4,201	1,787	975	873	347	14,993
Persons	13,747	8,329	4,199	2,221	2,120	687	31,303
Average daily number of patients resident—							
Males	6,076	n.a.	2,220	1,342	1,068	346	n.a.
Females	5,814	n.a.	1,556	1,054	753	413	n.a.
Persons	11,890	(d)8,358	3,776	2,396	1,821	759	29,000
Average number of patients resident in mental hospitals per 1,000 of population—							
Males	3.01	n.a.	2.81	2.66	2.72	1.88	n.a.
Females	2.91	n.a.	2.04	2.13	1.98	2.31	n.a.
Persons	2.96	(d)2.74	2.43	2.40	2.35	2.10	2.67

(a) Year ended 31st December, 1963. (b) Includes persons treated at the Epileptic Home. (c) Includes voluntary patients average daily number resident only. (d) As a consequence of a re-organization of the statistics collected by the Victorian Mental Hygiene Authority, average daily patient figures are no longer compiled, and the figure shown is the number of patients on the books of these institutions on 30th November, 1963.

4. Revenue and Expenditure, 1962-63.—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 1962-63 these sources provided less than eight per cent. of all their revenue. For a statement on the funds provided by the Commonwealth Government for mental hospitals, see para. 3, Mental Hospitals, page 660-1.

In New South Wales the expenditure includes the cost of Broken Hill patients treated in South Australian mental hospitals.

MENTAL HOSPITALS: FINANCES, 1962-63
(£'000)

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust.	W. Aust.	Tas.	Australia
Revenue (excluding Government Grants)—							
Fees of patients ..	694	285	115	73	72	26	1,265
Other ..	40	422	9	31	59	3	564
Total Revenue	734	707	124	104	131	29	1,829
Expenditure—							
Salaries and wages	4,799	5,093	1,614	779	889	363	13,537
Upkeep and repair of buildings, etc.	328	308	97	119	38	22	912
All other ..	2,681	2,450	901	511	424	189	7,156
Total Maintenance Capital(d) ..	7,808	7,851	2,612	1,409	1,351	574	21,605
	2,155	990	167	132	239	82	3,765
Total Expenditure	9,963	8,841	2,779	1,541	1,590	656	25,370

(a) Excludes the two authorized hospitals conducted by religious organizations. (b) Includes institutions in addition to the nine hospitals. (c) Includes the Epileptic Home. (d) 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 1958-59 to 1962-63.

MENTAL HOSPITALS: SUMMARY, AUSTRALIA

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Hospitals	40	40	40	38	39
Medical staff(a)	265	281	297	346	373
Nursing staff and attendants	6,931	7,106	7,412	7,587	7,914
Beds	32,148	32,191	32,170	32,113	32,495
Admissions(b)	10,554	9,982	13,395	14,637	17,091
Discharged as recovered, relieved, etc.(b)	7,838	9,171	10,963	13,278	15,676
Deaths(b)	2,666	2,403	2,289	2,327	2,368
Patients at end of year(b)	33,874	32,282	34,110	32,256	31,303
Average daily number of patients resident	(c) 30,478	(c) 31,051	29,636	28,706	(d) 29,000
Revenue (excluding Government grants) £'000	1,068	1,138	1,460	1,602	1,829
Total expenditure £'000	18,354	20,355	22,075	24,347	25,370

(a) Includes visiting specialists who are paid for their services, as follows:—1959, 43; 1960, 44; 1961 43; 1962, 57; and 1963, 54. (b) Excludes voluntary patients in South Australia. (c) Excludes patients on trial leave in N.S.W. (d) Victorian figure included in 1963 total represents the number of patients on books at 30th November, 1963—see footnote (d) on page 683.

6. Patients in Mental Hospitals.—The total number of inmates of mental hospitals and patients on trial leave each year from 1959 to 1963 is shown in the following table. 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, would not necessarily imply an increase in mental diseases. The numbers of patients in mental hospitals in the several States is affected to some extent by differences in practice. For instance, in some States there is a greater tendency to treat certain mental diseases in clinics attached to general hospitals.

PATIENTS IN MENTAL HOSPITALS

State	1959	1960	1961	1962	1963
New South Wales	13,792	12,665	14,486	14,233	13,747
Victoria	9,739	9,600	9,773	(a) 8,440	8,329
Queensland(b)	4,624	4,364	4,311	4,272	4,199
South Australia(c)	2,643	2,564	2,506	2,409	2,221
Western Australia	2,297	2,302	2,279	2,134	2,120
Tasmania	779	787	755	768	687
Australia	33,874	32,282	34,110	32,256	31,303

(a) Excludes patients in two institutions listed as mental hospitals in previous years but re-classified in 1962 as mental deficiency training centres. (b) Includes persons treated at the Epileptic Home. (c) Excludes voluntary patients.

§ 3. Private Hospitals and Nursing Homes

In addition to the other hospitals and nursing homes referred to in previous sections, there are private hospitals and nursing homes in each State. The figures shown in the following table refer to those private hospitals and nursing homes which have been approved for the payment of hospital benefits under the Commonwealth *National Health Act* 1953-1964.

PRIVATE HOSPITALS AND NURSING HOMES: AUSTRALIA

State or Territory	1959	1960	1961	1962	1963
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NUMBER OF HOSPITALS AND NURSING HOMES

New South Wales	429	444	461	474	507
Victoria	239	256	254	260	272
Queensland	74	79	92	116	130
South Australia	140	144	143	156	173
Western Australia	63	74	79	85	85
Tasmania	28	33	32	34	39
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
Australia	973	1,030	1,061	1,125	1,206

NUMBER OF BEDS FOR PATIENTS

New South Wales	8,172	8,864	9,678	10,563	11,482
Victoria	4,830	5,013	4,998	5,556	5,896
Queensland	1,949	2,162	2,445	2,943	3,350
South Australia	2,742	2,796	2,866	3,440	3,755
Western Australia	1,605	1,799	1,945	2,381	2,549
Tasmania	607	665	687	763	870
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
Australia	19,905	21,299	22,619	25,646	27,902

PRIVATE HOSPITALS AND NURSING HOMES: AUSTRALIA—*continued*

State or Territory	1959	1960	1961	1962	1963 (a)
NUMBER OF PATIENTS (AVERAGE DAILY NUMBER RESIDENT)					
New South Wales	6,398	7,129	7,955	8,644	9,534
Victoria	3,494	3,620	4,014	4,410	4,737
Queensland	1,476	1,708	1,905	2,219	2,559
South Australia	1,956	2,049	2,255	2,477	2,797
Western Australia	1,362	1,524	1,707	1,839	2,026
Tasmania	400	510	573	598	689
Northern Territory .. .. .	..	..	..	..	..
Australian Capital Territory .. .. .	..	..	..	..	..
Australia	15,086	16,540	18,409	20,187	22,342

(a) The average daily numbers of patients resident had been calculated on the basis of the Commonwealth "ordinary" benefit paid to each institution. This method of payment of benefit was discontinued from the beginning of 1963. Therefore the figures shown are estimates, on a comparable basis with those for previous years, in respect of the six months ended June, 1963. Commonwealth benefit is not payable in respect of patients entitled to accident and workers' compensation, nor in respect of patients at these institutions who do not receive hospital treatment or nursing home care.

§ 4. Repatriation Hospitals

The medical care of eligible ex-servicemen and dependants of deceased ex-servicemen is a major function of the Commonwealth Repatriation Department (*see* Chapter XXVIII. Repatriation), which provides a comprehensive service.

In-patient treatment is provided at Repatriation General Hospitals in each capital city and at auxiliary hospitals in all States except Tasmania. "Anzac Hostels" are maintained in Queensland and Victoria for long-term patients. In-patient treatment may also be provided in country hospitals at the Department's expense in certain circumstances. Mental patients requiring custodial care are, by agreement with the State Governments, accommodated at the expense of the Department in mental hospitals administered by the State authorities.

The average daily number of patients resident in the six Repatriation General Hospitals and nine auxiliary hospitals during the year ended 30th June, 1964, was 3,920. The number of medical, nursing and other staff employed at these institutions at 30th June, 1964, was 5,666 and a further 525 were employed at Repatriation out-patient clinics, and limb and appliance centres.

§ 5. Isolation (Leper) Hospitals

There are four isolation hospitals in Australia for the care and treatment of persons suffering from Hansen's Disease (leprosy). The numbers of isolation patients at these hospitals on 31st December, 1964, were:—Little Bay (New South Wales), 10; Fantome Island (North Queensland), 18; Derby (Western Australia), 164; and East Arm Settlement (Northern Territory), 39. In addition, there were 78 voluntary patients resident in the East Arm Settlement, mostly for the purpose of reconstructive surgery. This type of patient was included in figures for East Arm Settlement published in previous issues of the Year Book. With the exception of the Little Bay lazaret, nursing services are provided mostly by Sisters of religious orders under supervision of Government medical officers.

Special wards for the isolation and treatment of leprosy patients are also provided at other centres. The location of these wards and the numbers of isolation patients resident at 31st December, 1964, were —Concord Repatriation Hospital (New South Wales), 1; Fairfield (Victoria), 8; Princess Alexandra Hospital (Queensland), 4; and Wooroloo (Western Australia), nil.

Of the total 244 cases in isolation, 190 were full-blood Aboriginals, 31 were half-caste Aboriginals, 3 were Pacific Islanders, 2 were Asians, and 18 were Europeans.

CHAPTER XIX

EDUCATION, CULTURAL ACTIVITIES AND RESEARCH

NOTE.—For the most recent statistics available on subjects dealt with in this Chapter, reference should be made to the series of mimeographed bulletins *Social Statistics* issued by this Bureau. The *Quarterly Summary of Australian Statistics* contains summarized information on these subjects, and financial aspects are dealt with in the annual bulletins *Commonwealth Finance and State, Territory and Local Government Authorities' Finance and Government Securities*.

EDUCATION

NOTE.—An account of the development of the Australian school system up to 1929 may be found in Year Books Nos. 1, 2, 17 and 22. In Year Book No. 40, a review of changes which occurred up to 1951 and of the practices then current was presented from material furnished by the Commonwealth Office of Education, which contributed much of the textual matter in the following sections.

§ 1. Education in Australian Schools

1. **Administration and Organization.**—(i) *General.* In Australia the provision of schools is mainly the responsibility of State Governments. During the nineteenth century all six Australian colonies had established systems of compulsory education, beginning with the *Education Act 1872* in Victoria, and followed by similar Acts in Queensland (1875), South Australia (1875), New South Wales (1880), Tasmania (1893), and Western Australia (1893). These Acts, with subsequent amendments, constitute the legal basis of compulsory education in the Australian States to-day.

School attendance is compulsory throughout Australia between the ages of 6 and 14 at least. The minimum leaving age is 15 years in New South Wales, Victoria, Queensland, and South Australia, and 16 years in Tasmania, while in Western Australia attendance is compulsory until the end of the year in which the child turns 14 years. Legislation has been passed in Western Australia extending the compulsory attendance age by one year in 1966.

The Education Acts require that all children between the prescribed ages must attend either a government school or some other recognized educational institution. Children may be exempted from the requirement of compulsory attendance if they live too far from a school or suffer a physical disability. These children usually receive correspondence tuition.

The school year in Australia begins at the end of January or early in February; it ends in mid-December. The long vacation is taken over the summer months (December to February) and two short vacations divide the school year into three terms.

At government primary schools it is usual for both boys and girls to attend the same school; at the secondary level, practices vary, but the trend is towards mixed schools. Non-government schools cater mainly for boys and girls separately.

(ii) *Government School Systems.* Government schools, except in the Commonwealth Territories, are a responsibility of the six State Governments. Although the educational systems are not identical, they have many similar features. Responsibility for framing educational policy and having it put into effect rests with a Minister for Education, who is a member of the State Cabinet.

The administrative authority in each State is an Education Department headed by a Director-General or Director of Education. Separate divisions of the Education Department in each State administer primary, secondary and technical education (in New South Wales there is a separate Department of Technical Education). Other divisions look after such matters as the recruitment and training of teachers, pupil guidance, research and the education of atypical children.

In some States administration has been decentralized to a degree by the appointment of "Area" or "Regional" directors, who are responsible for policy in the area which they control.

Tuition at government primary and secondary schools is free in all States. Parents are usually expected to bear the cost of text-books, uniforms and charges for such things as the use of sports materials. However, income tax concessions exist in respect of these expenditures for both government and non-government systems.

(iii) *Non-government Schools Systems.* More than eighty per cent. of the children at non-government primary and secondary schools attend Roman Catholic schools, which form a highly developed but not centralized system. At the primary level these children normally attend mixed parish schools, but at the secondary level there are boys' schools, approximately half taking boarders, and girls' schools. Some of the small convent schools in country districts enrol young boys as well as girls. The organization of Roman Catholic schools is primarily on a diocesan basis under the general direction of the bishop, although many of the religious orders which conduct schools are Australia-wide, and have their own internal organization.

The majority of other non-government schools, sometimes known as "private" or "independent" schools, are conducted by, or are under the auspices of, various religious denominations, particularly the Church of England, Presbyterian, and Methodist Churches. Others are conducted by the Baptist, Lutheran, Congregational, and Seventh-day Adventist Churches and by smaller religious groups. There are Jewish schools in several capital cities. A few non-government schools, including some of the foremost, are undenominational and conducted under the auspices of corporate bodies.

The methods adopted by the educational authorities to ensure an acceptable standard of education at non-government schools vary from State to State. In New South Wales, Victoria, Western Australia, and Tasmania, these schools are regularly inspected. In Victoria and Tasmania, schools and teachers must be registered. In Queensland, eight grammar schools, which exist by statutory authority and are subsidized by the State, are subject to annual inspection. Other non-government schools in Queensland, and also those in South Australia, are not subject to inspection.

The principals of a number of the larger non-government schools have formed organizations with both State and Australia-wide coverage, namely, the Headmasters' Conference of Australia and the Headmistresses' Association of Australia.

2. *Schools and Courses.*—(i) *Primary Education in Government Schools.* Though school attendance is not compulsory until the age of six, most Australian children begin school when they are five, attending infants' schools or infants' classes attached to a primary school. In some States the first year in the infants' department is known as "kindergarten".

The emphasis in infants' classes, which occupy two or three years, is on general development, play activities and the informal aspects of education, with a gradual shift towards more formal activities in the second and third years. Creative expression through drawing, dancing, handiwork, dramatization, painting and similar activities is encouraged. Attention is given to speech training and to activities with music.

At the end of their infants' school training most children are able to read with some fluency, carry out simple arithmetical operations founded on the basic number facts, and write in pencil. In addition, they have acquired elementary skills in art, music and the like.

At about the age of eight most children pass into the primary school proper, where they usually spend four or five years. Primary schools are normally provided when and where there is sufficient population to justify them. Irrespective of the size or the location of the school, standards of tuition do not vary appreciably, because teachers within a State follow similar courses of training and transfer freely between metropolitan and country areas.

The Education Departments prescribe syllabuses of instruction, which are drawn up with the assistance of expert committees. The primary syllabuses have an emphasis on basic subjects like reading, writing, arithmetic, social studies, and oral language, but the teacher has some freedom to modify courses to suit local circumstances and the varying abilities of his students.

Children attend primary schools in their own districts, usually within walking distance of their homes, on five days each week. The school day is broken up into three or four sessions by a lunch break and by a morning and sometimes an afternoon recess. The total period of instruction is 4½ to 5 hours' daily with individual subject lessons lasting 20 to 30 minutes. Periods are set aside for physical education and sport. One teacher generally has charge of a class and teaches it all the subjects set out in the curriculum for the particular grade.

Pupils do not, as a rule, sit for a public examination during or at the end of their primary course, and progression from primary to secondary school is automatic. Allocation to particular schools or particular courses is based on the recommendations of the headmaster, general ability tests, tests of achievement in the basic subjects and parents' wishes. In South Australia pupils may proceed to secondary school on receiving the Progress Certificate, which is awarded on satisfactory completion of the seventh grade, the highest grade at primary level.

(ii) *Secondary Education in Government Schools.* The age of transfer from a government primary to secondary school is usually between 12 and 13. Most secondary schools are co-educational, although separate schools for boys and girls are not uncommon in capital cities.

In the cities and larger country centres secondary courses are provided in separate schools from primary courses, but in less populous areas secondary classes sometimes share buildings with primary classes.

The secondary student takes up new studies such as foreign languages and technical or commercial subjects, and moves on to more specialized studies in natural and social sciences and mathematics. The study of basic subjects begun in primary school is continued. The actual subjects studied depend on the ability of the pupil and the type of school. A school day is divided into "periods" and the children are taught by a number of teachers, each specializing in a particular subject or group of subjects.

In the past, to meet the varying abilities and needs of students, various kinds of secondary schools were established in which different types of education were provided, although in country areas secondary schools tended of necessity to be comprehensive and offered a full range of secondary courses. But following the re-examination by expert committees in all States of the problems associated with the provision of appropriate secondary education for all, significant changes in the structure and curricula of secondary schools are taking place. In New South Wales, for example, following a committee's recommendation that the secondary curriculum should offer a core of common basic education to all students, secondary schools have become comprehensive. Pupils of different aptitudes and interests in a given locality now attend the same secondary school, undertake this core of common basic studies, and in addition specialize according to their proven abilities and interests.

The most common type of secondary school is the comprehensive or multi-purpose high school, which offers a wide range of subjects. To cater for this diversity of subjects, most high schools now have modern facilities for the teaching of domestic science, commercial subjects, woodwork and other technical subjects. In some States there are still, however, separate high schools specializing in technical, commercial or home science subjects.

In each State there are also a few separate agricultural high schools, some of them residential. The curriculum consists of general educational subjects and practical farm training. There are also "area" and "rural" schools offering up to three years of secondary study, and in some States courses in agriculture are also given at high schools.

(iii) *Primary and Secondary Education in Non-government Schools.* Non-government schools follow curricula similar to those laid down by Education Departments, and prepare their students for examinations conducted by public examining authorities. Most non-government schools are comprehensive type schools, providing a range of subjects and courses at various levels. Although there are similarities between non-government and government schools in the courses they provide, more emphasis is given to the religious training of pupils in denominational schools. A few schools, mostly Roman Catholic secondary schools, specialize in agricultural and technical courses. Non-government schools offer some facilities additional to those normally found in government schools, such as personal tuition in music, ballet, etc. A few are organized on "experimental" lines.

3. *Examinations.*—During the course of secondary education State-wide examinations are taken at two levels. The earlier examination, usually called the Intermediate or Junior Examination, qualifies pupils for entry to trade courses at technical colleges and agricultural colleges, to junior commercial positions in, for instance, insurance and banking, to nursing and secretarial courses, to lower grades of the public service and to industry. The examination at the end of the secondary school course is usually called the Leaving Examination and qualifies students for entry to teacher's colleges, the higher grades of the public service, and commercial occupations. In the majority of States the Leaving Examination is also the qualification for entry to the university, certain subjects and combinations of subjects being set down as the matriculation requirements by the respective universities.

In most States the Leaving Examination is controlled by a Board consisting of representatives of the Department of Education, the universities, non-government schools, and sometimes of other bodies such as teachers' organizations. In New South Wales, Victoria, and Tasmania, a final secondary examination is designed specifically for matriculation.

A brief description of the examinations in each State follows.

New South Wales. For pupils who commenced their secondary education in 1961 or earlier the secondary course is of five years duration with the Intermediate Certificate Examination taken after three years secondary study at about the age of 15, and the Leaving Certificate Examination taken after a further two years, at about 17. The Leaving Examination will be conducted until 1966.

Pupils commencing their secondary education in 1962 and subsequent years undertake a four-year course leading to the School Certificate Examination, and the Higher School Certificate Examination (Matriculation) after a further two years. In addition a modified form of the Intermediate examination may be taken at the end of third year by those who wish to leave school at that stage.

Victoria. The Intermediate Examination is taken at the end of the fourth secondary year, at about the age of 15, the School Leaving Examination at the end of fifth year, at 16, and the matriculation examination at the end of sixth year, at the age of 17. Pupils at approved non-government schools and certain government schools may be accredited for the Intermediate and Leaving by passing examinations set by their own schools.

Queensland. The Junior Public Examination is taken at the end of second year, at about the age of 15. The Senior Public Examination conducted by the University of Queensland is taken at the end of fourth year, at the age of 17, and matriculation is obtained on results in this examination. At the beginning of the 1964 school year a five-year secondary course was introduced. Pupils enter secondary school one year earlier than formerly, and the Junior Public Examination will be taken at the end of the third year and the Senior Public Examination at the end of the fifth year.

South Australia. The Intermediate Examination is taken at the end of the third year, at about the age of 15½. The Leaving Examination is taken at the end of the fourth year and matriculation is gained on results in this examination. A further year may be taken, leading to the Leaving Honours Examination. The Leaving Honours year is designed primarily as additional preparation for university work, although it is not compulsory for intending students of the University of Adelaide.

Western Australia. The Junior Certificate Examination is taken at the end of third year, at about the age of 15½. Students who pursue a less academic course may take the High School Certificate Examination at this level. The Leaving Certificate Examination is taken at the end of fifth year, at an average age of 17½, and matriculation is gained on results in this examination.

Tasmania. The Schools Board Certificate Examination is taken at the end of the fourth year, at about the age of 16½, and the Matriculation Examination conducted by the University of Tasmania at the end of the fifth or sixth year.

§ 2. Numbers of Schools, Teachers and Pupils

1. *General.*—The statistics which follow relate generally to schools providing education according to the primary, secondary, or both school curricula of the various State Education Departments, whether provided in government or non-government schools. Junior technical schools, correspondence schools and schools in institutional homes, hospitals and similar establishments are included. Institutions providing only pre-school education, senior technical and agriculture colleges, evening schools, continuation classes and institutions such as business colleges and coaching establishments are, as a rule, excluded.

School censuses are conducted annually, at or about the beginning of August, throughout all States and Territories of Australia. The numbers of pupils refer to enrolments at the school census date. The numbers of schools and teachers refer to the position at dates which vary from State to State and in some instances from year to year.

It has not been possible to present all figures on a uniform basis between States. However, continuity of the figures for any one State over the period of years shown has been maintained as far as possible.

Particulars relating to senior technical colleges are given in § 6. pages 703-5.

2. *Schools, Pupils, and Teachers, 1964.*—The numbers of schools and pupils for 1964 are shown in the following table.

SCHOOLS: NUMBER, PUPILS, 1964

Category of school	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF SCHOOLS									
Government	2,816	2,229	1,379	660	535	293	39	26	7,977
Non-government—									
Denominational—									
Church of England ..	38	34	21	12	9	5	..	3	122
Hebrew	2	7	..	..	1	..	..	..	10
Lutheran	3	8	3	13	..	..	..	..	28
Methodist	7	4	(a) 5	4	3	1	3	..	27
Presbyterian	13	14	6	2	2	2	..	..	39
Roman Catholic	684	469	299	128	174	50	10	13	1,827
Seventh-day Adventist	18	8	6	4	5	3	..	..	44
Other .. .. .	..	4	1	2	2	1	5	..	15
Undenominational	51	20	9	5	1	2	5	..	93
Total	816	568	350	170	197	64	24	16	2,205
Grand Total	3,632	2,797	1,729	830	732	357	63	42	10,182

PUPILS (CENSUS ENROLMENT)									
Government	633,418	487,192	257,649	194,741	137,573	70,643	6,421	13,674	1,801,311
Non-government—									
Denominational—									
Church of England ..	11,978	15,137	5,329	4,061	3,442	1,827	..	1,056	42,830
Hebrew	308	2,168	..	..	106	..	..	..	2,582
Lutheran	230	486	823	1,496	..	..	121	..	3,156
Methodist	2,951	3,880	(a) 2,106	1,976	1,403	364	385	..	13,065
Presbyterian	5,373	7,827	1,088	1,484	1,136	591	..	..	17,459
Roman Catholic	179,813	142,559	67,360	26,621	30,074	10,297	1,440	4,961	463,125
Seventh-day Adventist	1,097	539	216	148	428	160	..	..	2,588
Other .. .. .	..	2,241	132	489	139	959	441	..	4,401
Undenominational	6,429	3,813	3,969	1,376	47	187	96	..	15,917
Total	208,179	178,650	81,023	37,651	36,775	14,385	2,483	6,017	565,163
Grand Total	841,597	665,842	338,672	232,392	174,348	85,028	8,904	19,691	2,366,474

(a) Presbyterian and Methodist Schools' Association.

The next two tables refer to the numbers of teachers in 1964. It has not been possible so far to obtain uniformity in the methods used for counting part-time teaching. For New South Wales and Australian Capital Territory government schools, part-time teachers are counted as full-time equivalents (i.e., as fractions based on the proportion of their pay to the normal full-time salary in each teaching grade) and figures for part-time teaching separate from full-time teachers are not available. In Western Australia, also, government school part-time teaching is shown in this way. As many differences in the counting of teachers remain, comparisons of teacher figures between States and systems and over years should be made with great caution.

SCHOOLS: TEACHERS, 1964(a)

State or Territory	Government schools		Non-government schools		All schools	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
New South Wales	(b) 24,858		6,541	1,621	n.a.	n.a.
Victoria	(c) 19,026	(c) 1,568	5,326	1,004	24,352	2,572
Queensland	9,058	819	2,472	539	11,530	1,358
South Australia	7,340	477	1,231	329	8,571	806
Western Australia	4,713	(d) 16	1,188	(e) 141	5,901	(e)
Tasmania	3,016	141	503	132	3,519	273
Northern Territory	239	6	(f) 65	..	304	6
Australian Capital Territory	(b) 518		215	27	n.a.	n.a.

(a) Unless otherwise indicated, the figures refer to the number of teachers employed. Teachers-in-training are generally excluded. (b) Includes part-time teaching calculated in equivalent full-time units. Separate figures for part-time teaching are not available. Excludes 1,249 "casual" teachers in New South Wales and 32 "casual" teachers in the Australian Capital Territory. (c) Excludes all teachers in the Technical Schools Division of the Education Department. (d) Part-time teaching calculated in equivalent full-time units. (e) The 141 part-time teachers at non-government schools were equivalent to 32 full-time units. (f) Unqualified teachers and teaching assistants at mission schools are excluded.

NON-GOVERNMENT SCHOOLS: TEACHERS, 1964(a)

Category of school	New South Wales		Victoria		Queensland		South Australia		Western Australia		Tasmania		Northern Territory (b)		Australian Capital Territory	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
Denominational—																
Baptist ..	..	..	97	27	..	..	24	3	..	..	..	..	..	..	..	..
Church of England	743	176	840	159	272	49	214	33	179	40	103	27	..	..	72	6
Hebrew ..	20	3	145	20	..	..	..	..	6	..	..	..	..	..	..	..
Lutheran ..	14	5	23	2	33	8	59	27	..	..	..	..	5	..	..	..
Methodist ..	171	44	195	32	(c) 97	(c) 19	91	22	73	16	17	8	11	..	..	..
Presbyterian ..	296	65	421	64	68	21	72	16	58	5	38	6	..	..	..	..
Roman Catholic ..	4,757	1,219	3,346	595	1,821	416	702	201	845	75	278	77	30	..	143	21
Seventh-day Adventist ..	61	10	30	11	11	..	10	1	20	4	10	1	..	..	..	..
Other ..	..	..	14	2	3	..	..	..	5	..	47	12	14	..	..	..
Udenominational	479	99	215	92	167	26	59	26	2	1	10	1	5	..	..	..
Total ..	6,541	1,621	5,326	1,004	2,472	539	1,231	329	1,188	141	503	132	65	..	215	27

(a) The figures refer to the number of teachers employed. Teachers-in-training are generally excluded. (b) Unqualified teachers and teaching assistants at mission schools are excluded. (c) Presbyterian and Methodist Schools' Association.

3. Growth of Schools.—The numbers of schools, teachers and pupils in Australia are shown in the following tables for the years 1960 to 1964.

SCHOOLS: NUMBER AND PUPILS, AUSTRALIA

Particulars	1960	1961	1962	1963	1964
Numbers of schools—					
Government schools ..	7,920	7,952	7,938	7,949	7,977
Non-government schools ..	2,117	2,149	2,178	2,193	2,205
Total	10,037	10,101	10,116	10,142	10,182
Numbers of Pupils(a)—					
Government schools ..	1,613,139	1,663,915	1,713,104	1,756,511	1,801,311
Non-government schools ..	510,720	527,197	539,887	552,594	565,163
Total	2,123,859	2,191,112	2,252,991	2,309,105	2,366,474

(a) Census enrolment.

SCHOOLS: TEACHERS(a)

Particulars	Government schools		Non-government schools		All schools	
	Full-time	Part-time	Full-time	Part-time	Full-time	Part-time
New South Wales—						
1961	(b) 20,638		7,358		n.a.	
1962	(b) 21,614		7,574		n.a.	
1963	(b) 23,293		7,801		n.a.	
1964	(b) 24,858		6,541	1,621	n.a.	n.a.
Victoria—						
1961	(c) 16,476		4,860		21,336	
1962	(c) 17,724		5,102		22,826	
1963	(c) 17,373	(c) 1,668	5,038	978	22,411	2,646
1964	(c) 19,026	(c) 1,568	5,326	1,004	24,352	2,572
Queensland—						
1961	8,257	857	2,262	414	10,519	1,271
1962	8,583	805	2,331	459	10,914	1,264
1963	8,810	854	2,333	468	11,143	1,322
1964	9,058	819	2,472	539	11,530	1,358
South Australia—						
1961	5,870	451	1,104	338	6,974	789
1962	6,312	432	1,130	324	7,442	756
1963	6,895	431	1,165	319	8,060	750
1964	7,340	477	1,231	329	8,571	806
Western Australia—						
1961	4,117	108	1,110		n.a.	
1962	4,241	(d) 18	1,097	96	5,338	n.a.
1963	4,471	(d) 17	1,148	(d) 44	5,619	(d) 61
1964	4,713	(d) 16	1,188	(e) 141	5,901	(e)
Tasmania—						
1961	2,479	109	497	73	2,976	182
1962	2,797	111	503	94	3,300	205
1963	2,919	183	509	85	3,428	268
1964	3,016	141	503	132	3,519	273
Northern Territory—						
1961	158	6	(f) 54	1	212	7
1962	182	2	(f) 61	1	243	3
1963	207	4	(f) 68	1	275	5
1964	239	6	(f) 65	..	304	6
Australian Capital Territory—						
1961	(b) 372		166		n.a.	
1962	(b) 429		192		n.a.	
1963	(b) 445		201		n.a.	
1964	(b) 518		215	27	n.a.	n.a.

(a) Unless otherwise indicated, the figures refer to the number of teachers employed. Teachers-in-training are generally excluded. (b) Includes part-time teaching calculated in equivalent full-time units. Separate figures for part-time teaching are not available. Casual teachers are excluded. (c) Excludes all teachers in the Technical Schools Division of the Education Department. (d) Part-time teaching calculated in equivalent full-time units. (e) Part-time teaching in equivalent full-time units was 32 units for non-government schools and 48 units for all schools. (f) Unqualified teachers and teaching assistants at mission schools are excluded.

Particulars of the average daily attendance at schools for a series of years back to 1891 may be found in earlier issues of this Year Book. For detailed statistical information in respect of schools in each State, see the Annual Reports of the respective State Education Departments.

4. Ages of Pupils.—The ages of pupils at government and non-government schools at the school census date 1964 are shown in the following table.

SCHOOLS: AGES OF PUPILS, AUSTRALIA, 1964
(Census Enrolment)

Age last birthday (years)	Government schools (a)			Non-government schools (b)			Total (c)		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Under 6 ..	76,226	72,151	148,377	21,293	21,133	42,426	97,519	93,284	190,803
6 ..	89,872	84,606	174,478	25,016	25,206	50,222	114,888	109,812	224,700
7 ..	88,275	82,613	170,888	25,410	25,810	51,220	113,685	108,423	222,108
8 ..	87,694	81,080	168,774	24,188	25,278	49,466	111,882	106,358	218,240
9 ..	85,844	80,643	166,487	23,757	25,183	48,940	109,601	105,826	215,427
10 ..	84,365	79,040	163,405	24,081	24,865	48,946	108,446	103,905	212,351
11 ..	85,887	79,728	165,615	23,706	25,500	49,206	109,593	105,228	214,821
12 ..	83,712	76,335	160,047	23,630	25,885	49,515	107,342	102,220	209,562
13 ..	82,347	74,655	157,002	23,087	26,013	49,100	105,434	100,668	206,102
14 ..	78,083	69,502	147,585	21,534	24,551	46,085	99,617	94,053	193,670
15 ..	53,860	43,127	96,987	17,759	18,190	35,949	71,619	61,317	132,936
16 ..	30,749	21,294	52,043	13,094	11,751	24,845	43,843	33,045	76,888
17 ..	14,632	8,274	22,906	8,194	5,368	13,562	22,826	13,642	36,468
18 and over ..	3,836	1,232	5,068	3,119	995	4,114	6,955	2,227	9,182
Total ..	945,382	854,280	1,799,662	277,868	285,728	563,596	1,223,250	1,140,008	2,363,258

(a) Excludes 867 boys and 782 girls, whose ages were not collected, at 21 special schools for Aborigines in South Australia and the Northern Territory. (b) Excludes 754 boys and 813 girls, whose ages were not collected, at 20 special schools for Aborigines in the Northern Territory. (c) Excludes 1,621 boys and 1,595 girls, whose ages were not collected, at 41 Special schools for Aborigines in South Australia and the Northern Territory.

The ages of all pupils in each State and Territory for 1964 are shown in the following table.

SCHOOLS: AGES OF PUPILS, 1964
(Census Enrolment)

Age last birthday (years)	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Under 6 ..	78,786	58,277	19,080	(a) 17,561	7,430	7,007	(b) 572	(c) 2,090	190,803
6 ..	80,670	62,005	32,725	21,464	17,257	7,919	681	1,979	224,700
7 ..	79,271	61,504	32,185	21,443	17,278	7,934	641	1,852	222,108
8 ..	76,581	60,832	31,590	21,119	17,547	8,147	598	1,826	218,240
9 ..	75,865	59,513	32,186	20,718	17,224	7,749	557	1,615	215,427
10 ..	75,469	58,229	31,574	20,633	16,687	7,508	521	1,730	212,351
11 ..	76,446	59,142	31,638	20,890	16,912	7,627	528	1,638	214,821
12 ..	75,087	56,719	31,381	20,501	16,489	7,278	500	1,607	209,562
13 ..	73,044	56,844	30,224	20,541	16,322	7,124	419	1,584	206,102
14 ..	71,828	52,305	26,300	19,873	14,284	7,198	366	1,516	193,670
15 ..	43,381	39,078	19,742	14,527	9,453	5,399	235	1,121	132,936
16 ..	23,192	25,388	11,398	8,750	4,544	2,796	133	687	76,888
17 ..	10,037	12,791	6,378	3,476	2,285	1,072	51	378	36,468
18 and over ..	1,940	3,215	2,271	769	636	270	13	68	9,182
Total ..	841,597	665,842	338,672	232,265	174,348	85,028	5,815	19,691	2,363,258

(a) Excludes 127 pupils at 2 special schools for Aborigines, whose ages were not collected.
(b) Excludes 3,089 pupils at 39 special schools for Aborigines, whose ages were not collected.
(c) Excludes 3,216 pupils at 41 special schools for Aborigines, whose ages were not collected.

The ages of all pupils in Australia from 1960 to 1964 are shown in the following table.

SCHOOLS: AGES OF PUPILS, AUSTRALIA

(Census Enrolment)

Age last birthday (years)	1960 (a)		1961 (a)		1962 (a)		1963 (a)		1964 (b)	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
Under 6	86,329	83,462	90,219	85,518	91,801	88,208	95,282	91,355	97,519	93,284
6 ..	104,499	100,131	107,069	102,905	110,551	104,032	112,383	107,418	114,888	109,812
7 ..	106,765	102,980	106,046	101,615	108,735	104,722	112,140	105,473	113,685	108,423
8 ..	104,747	99,883	106,902	103,090	106,567	102,267	108,911	104,830	111,882	106,358
9 ..	103,493	99,048	105,561	100,303	107,531	103,527	106,839	102,837	109,601	105,826
10 ..	103,484	98,973	104,860	100,516	106,418	101,299	108,927	104,033	108,446	103,905
11 ..	100,469	96,451	104,298	99,549	105,413	100,722	107,316	102,072	109,593	105,228
12 ..	101,237	95,996	100,687	95,897	104,823	99,480	105,383	101,015	107,342	102,220
13 ..	107,783	102,784	100,986	95,538	100,160	95,567	104,639	99,676	105,434	100,668
14 ..	80,601	73,298	99,348	90,987	93,321	86,377	93,510	87,264	99,617	94,053
15 ..	53,194	44,372	58,341	47,706	74,412	61,759	71,299	59,746	71,619	61,317
16 ..	26,915	20,068	30,339	22,127	35,384	24,920	44,172	32,731	43,843	33,045
17 ..					15,147	8,670	17,709	10,117	22,826	13,642
18 and over	14,370	7,219	16,680	8,411	4,844	1,418	5,339	1,652	6,955	2,227
Total	1,093,886	1,024,665	1,131,336	1,054,162	1,165,107	1,082,968	1,193,849	1,110,219	1,223,250	1,140,008

(a) Excludes boys and girls at certain special schools for Aborigines in Queensland, South Australia and the Northern Territory whose ages were not collected. (b) Excludes boys and girls at certain special schools for Aborigines in South Australia and the Northern Territory whose ages were not collected. However, the figures for 1964 include, for the first time, 1,804 children at government native and non-government mission schools in Queensland.

5. Grades of Pupils.—The numbers of pupils enrolled in grades in each State and Territory are shown in the following table. The grading of pupils differs for the various school systems in Australia because of the differences in curricula set by Education Departments. In addition, the methods of allocating classes to grades vary from State to State, and there are also differences in the administrative methods of aggregating grades of a more or less similar nature. The figures presented in these tables represent essentially the system of grading adopted in each different State and are therefore not comparable between States.

SCHOOLS: GRADES OF PUPILS, 1964

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
NEW SOUTH WALES									
Infants—									
Kindergarten ..	32,728	30,519	63,247	10,582	10,435	21,017	43,310	40,954	84,264
1 ..	37,989	34,930	72,919	10,376	10,223	20,599	48,365	45,153	93,518
2 ..	33,709	31,163	64,872	10,180	9,854	20,034	43,889	41,017	84,906
Primary—									
3 ..	32,415	30,101	62,516	9,518	9,849	19,367	41,933	39,950	81,883
4 ..	31,751	29,733	61,484	9,362	9,665	19,027	41,113	39,398	80,511
5 ..	30,647	28,838	59,485	9,377	9,680	19,057	40,024	38,518	78,542
6 ..	30,068	28,433	58,501	9,183	10,070	19,253	39,251	38,503	77,754
Special primary grades	3,117	2,132	5,249	743	694	1,437	3,860	2,826	6,686
Secondary—									
1st (or 7) ..	29,889	27,592	57,481	8,845	9,701	18,546	38,734	37,293	76,027
2nd (or 8) ..	28,410	25,977	54,387	8,290	9,124	17,414	36,700	35,101	71,801
3rd (or 9) ..	21,645	19,927	41,572	7,474	7,889	15,363	29,119	27,816	56,935
4th ..	10,467	6,861	17,328	4,869	4,355	9,224	15,336	11,216	26,552
5th ..	8,006	5,537	13,543	4,461	3,122	7,583	12,467	8,659	21,126
Special secondary grades	631	203	834	..	258	258	631	461	1,092
Total ..	331,472	301,946	633,418	103,260	104,919	208,179	434,732	406,865	841,597

SCHOOLS: GRADES OF PUPILS, 1964—*continued*

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
VICTORIA									
1(a)	48,886	44,604	93,490	15,960	15,232	31,192	64,846	59,836	124,682
2	24,172	22,076	46,248	8,286	8,496	16,782	32,458	30,572	63,030
3	23,609	21,573	45,182	8,302	8,352	16,654	31,911	29,925	61,836
4	22,816	21,081	43,897	7,967	8,059	16,026	30,783	29,140	59,923
5	22,317	20,715	43,032	8,016	8,236	16,252	30,333	28,951	59,284
6	22,70 ^a	21,151	43,860	8,088	8,248	16,336	30,797	29,399	60,196
Ungraded (b)	1,189	840	2,029	147	130	277	1,336	970	2,306
7 or I	23,951	21,051	45,002	6,928	8,389	15,317	30,879	29,440	60,319
8 or II	22,288	19,302	41,590	6,080	7,641	13,721	28,368	26,943	55,311
III	20,025	16,279	36,304	5,731	6,665	12,396	25,756	22,944	48,700
IV	14,412	11,593	26,005	5,003	5,634	10,637	19,415	17,227	36,642
V	8,527	6,074	14,601	3,986	4,040	8,026	12,513	10,114	22,627
VI	3,549	2,403	5,952	2,893	2,141	5,034	6,442	4,544	10,986
Total	258,450	228,742	487,192	87,387	91,263	178,650	345,837	320,005	665,842
QUEENSLAND									
Primary—Preparatory				377	354	731	377	354	731
I	15,760	14,250	30,010	4,286	4,048	8,334	20,046	18,298	38,344
II	14,974	13,737	28,711	3,975	3,942	7,917	18,949	17,679	36,628
III	14,473	13,168	27,641	3,627	3,746	7,373	18,100	16,914	35,014
IV	14,045	12,971	27,016	3,690	3,758	7,448	17,735	16,729	34,464
V	13,564	12,684	26,248	3,445	3,565	7,010	17,009	16,249	33,258
VI	13,558	12,652	26,210	3,473	3,755	7,228	17,031	16,407	33,438
VII	13,196	12,291	25,487	3,651	3,816	7,467	16,847	16,107	32,954
Secondary—1st (c)	11,867	11,220	23,087	3,732	3,683	7,415	15,599	14,903	30,502
2nd (c)	10,435	9,624	20,059	3,627	3,775	7,402	14,062	13,399	27,461
3rd	7,713	7,327	15,040	3,399	3,167	6,566	11,112	10,494	21,607
4th	2,480	1,874	4,354	1,819	1,290	3,109	4,299	3,164	7,463
5th	2,293	1,493	3,786	1,876	1,147	3,023	4,169	2,640	6,809
Total	134,358	123,291	257,649	40,977	40,046	81,023	175,335	163,337	338,672
SOUTH AUSTRALIA									
Kindergarten	2,202	2,026	4,228				2,202	2,026	4,228
I	11,657	10,600	22,257	2,196	2,284	4,480	13,853	12,884	26,737
II	10,143	9,434	19,577	1,695	1,788	3,483	11,838	11,222	23,060
III	9,979	9,423	19,402	1,639	1,836	3,475	11,618	11,259	22,877
IV	10,099	9,240	19,339	1,658	1,709	3,367	11,757	10,949	22,706
V	9,865	9,152	19,017	1,647	1,729	3,376	11,512	10,881	22,393
VI	9,696	8,976	18,672	1,607	1,631	3,238	11,303	10,607	21,910
VII	9,420	8,760	18,180	1,588	1,718	3,306	11,008	10,478	21,486
Ungraded (d)	1,058	666	1,724	18	18	36	1,076	684	1,760
VII or 1st	9,218	8,336	17,554	1,556	1,928	3,484	10,774	10,264	21,038
IX or 2nd	7,671	7,182	14,853	1,523	1,711	3,234	9,194	8,893	18,087
X or 3rd	6,638	5,765	12,403	1,503	1,669	3,172	8,141	7,434	15,575
XI or 4th	3,382	2,372	5,754	1,091	980	2,071	4,473	3,352	7,825
5th	1,147	496	1,643	588	341	929	1,735	837	2,572
Ungraded (e)	77	61	138				77	61	138
Total	102,252	92,489	194,741	18,309	19,342	37,651	120,561	111,831	232,392

(a) In Victoria, children are admitted at the beginning of the school year if they will turn five years of age by 1st July of that year. The younger children may not reach grade 2 until they have been at school for two years.

(b) Pupils at certain special schools classified as primary.

(c) From the beginning of 1964, a five year secondary course was introduced so that pupils enter secondary schools one year earlier than formerly. Therefore the former primary grade VIII appears as 1st secondary, with consequent advance by one of the remaining secondary grades, compared with previous years.

(d) Pupils in special centres and classes at primary levels.

(e) Speech and hearing centres at secondary levels and special schools for Aborigines.

SCHOOLS: GRADES OF PUPILS, 1964—continued

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
WESTERN AUSTRALIA									
Primary—Kindergarten ..				229	226	455	229	226	455
1 ..	7,895	7,232	15,127	1,827	1,872	3,699	9,722	9,104	18,826
2 ..	7,664	6,938	14,602	1,830	1,779	3,609	9,494	8,717	18,211
3 ..	7,460	6,700	14,160	1,663	1,708	3,371	9,123	8,408	17,531
4 ..	7,361	6,977	14,338	1,659	1,777	3,436	9,020	8,754	17,774
5 ..	6,847	6,562	13,409	1,386	1,750	3,136	8,233	8,312	16,545
6 ..	6,995	6,599	13,594	1,380	1,787	3,167	8,375	8,386	16,761
7 ..	6,778	6,321	13,099	1,421	1,740	3,161	8,199	8,061	16,260
Special classes ..	803	391	1,194	..	..	..	803	391	1,194
Secondary—									
1 ..	7,129	5,865	12,994	1,673	1,999	3,672	8,802	7,864	16,666
2 ..	5,877	5,484	11,361	1,574	1,784	3,358	7,451	7,268	14,719
3 ..	4,427	3,962	8,389	1,371	1,481	2,852	5,798	5,443	11,241
4 ..	1,403	990	2,393	843	756	1,599	2,246	1,746	3,992
5 ..	949	686	1,635	700	560	1,260	1,649	1,246	2,895
Special classes ..	279	179	458	..	..	..	279	179	458
Special schools(a) ..	491	329	820	..	..	..	491	329	820
Total ..	72,358	65,215	137,573	17,556	19,219	36,775	89,914	84,434	174,348

TASMANIA

Pre-school ..	1,253	1,170	2,423	52	36	88	1,305	1,206	2,511
Primary—Kindergarten ..	931	875	1,806	116	150	266	1,047	1,025	2,072
1 ..	5,075	4,348	9,423	975	924	1,899	6,050	5,272	11,322
2 ..	3,760	3,518	7,278	595	674	1,269	4,355	4,192	8,547
3 ..	3,650	3,397	7,047	639	645	1,284	4,289	4,042	8,331
4 ..	3,415	3,262	6,677	553	614	1,167	3,968	3,876	7,844
5 ..	3,353	3,238	6,591	553	645	1,198	3,906	3,883	7,789
6 ..	3,357	3,238	6,595	648	729	1,377	4,005	3,967	7,972
Secondary—									
I ..	3,497	3,086	6,583	691	806	1,497	4,188	3,892	8,080
II ..	3,180	2,944	6,124	619	779	1,398	3,799	3,723	7,522
III ..	2,861	2,586	5,447	583	727	1,310	3,444	3,313	6,757
IV ..	1,486	1,315	2,801	505	540	1,045	1,991	1,855	3,846
V ..	363	305	668	158	222	380	521	527	1,048
VI ..	229	96	325	139	68	207	368	164	532
Special schools (b) ..	469	386	855	..	..	..	469	386	855
Total ..	36,879	33,764	70,643	6,826	7,559	14,385	43,705	41,323	85,028

NORTHERN TERRITORY

Kindergarten ..	24	24	48	..	..	..	24	24	48
I ..	472	427	899	110	81	191	582	508	1,090
II ..	350	314	664	70	69	139	420	383	803
III ..	292	227	519	65	54	119	357	281	638
IV ..	292	278	570	46	63	109	338	341	679
V ..	274	218	492	49	44	93	323	262	585
VI ..	227	222	449	41	58	99	268	280	548
VII ..	173	192	365	30	50	80	203	242	445
VIII or 1st ..	158	175	333	11	22	33	169	197	366
IX or 2nd ..	135	125	260	5	31	36	140	156	296
X or 3rd ..	82	99	181	3	14	17	85	113	198
XI or 4th ..	37	33	70	..	..	..	37	33	70
5th ..	9	6	15	..	..	..	9	6	15
Ungraded(c) ..	820	736	1,556	754	813	1,567	1,574	1,549	3,123
Total ..	3,345	3,076	6,421	1,184	1,299	2,483	4,529	4,375	8,904

(a) Schools for physically and mentally handicapped children. (b) Includes pupils at special and correspondence schools aged below 17 years. (c) Mainly Aboriginal children at special schools at missions and pastoral stations.

SCHOOLS: GRADES OF PUPILS, 1964—*continued*

Grade, year or form	Government schools			Non-government schools			All schools		
	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
AUSTRALIAN CAPITAL TERRITORY									
Infants—Kindergarten ..	797	720	1,517	332	297	629	1,129	1,017	2,146
1	850	782	1,632	355	321	676	1,205	1,103	2,308
2	708	657	1,365	278	276	554	986	933	1,919
Primary—3	669	669	1,338	252	270	522	921	939	1,860
4	645	590	1,235	258	260	528	913	850	1,763
5	665	613	1,278	250	223	473	915	836	1,751
6	642	570	1,212	237	277	514	879	847	1,726
Special primary grades(a)	51	30	81	..	..	..	51	30	81
Secondary—1st	539	579	1,118	286	249	535	825	828	1,653
2nd	562	519	1,081	258	240	498	820	759	1,579
3rd	457	386	843	268	204	472	725	590	1,315
4th	322	262	584	189	132	321	511	394	905
5th	228	162	390	150	110	260	378	272	650
Special secondary grades(b) .. ..	..	..	..	..	35	35	..	35	35
Total	7,135	6,539	13,674	3,123	2,894	6,017	10,258	9,433	19,691

(a) Opportunity classes.

(b) Commercial class.

§ 3. Teacher Training and Recruitment

1. Teachers for Government Schools.—(i) *Recruitment.* The teacher shortage evident in past years has now been overcome to a certain extent. Some States have no difficulty in recruiting and training sufficient staff to meet the present needs of primary schools. Despite expanded training programmes the shortage of secondary school teachers has proved a greater problem, especially in mathematics and science.

State Education Departments recruit most prospective teachers for government service from students leaving schools after a secondary course. Each Department offers training awards annually on the basis of academic merit and personal suitability. The traineeships cover the cost of a teacher training course (which may include university studies) and provide a living allowance. Students are usually required to enter into a bond to serve for a specified number of years in the government schools of the State where they have trained. In some States intending teachers can obtain a scholarship at Intermediate Certificate level to enable them to complete teachers' college entrance requirements. Such an award entails a bond of service for a longer period.

(ii) *Training of Primary School Teachers.* In most States teachers for government primary schools are trained in teachers' training colleges controlled and administered by the State Education Departments. These colleges are described in para. 2, p. 725. Generally, the duration of courses for primary teachers is two years. The basic subjects taken in the various courses are history and principles of education, general and special methods of teaching in the primary school, school organization, and educational psychology. In addition, students undertake courses in English (including speech training), mathematics, handicrafts, music, art, social studies, natural science, and physical and health education. Optional subjects may include dramatic art, visual aids, and so on. Supervised practice teaching in schools and the observation of demonstration lessons form part of all training courses. Since primary teachers in Australia may be called upon at some time to teach grouped classes in a small school or a "one-teacher" school, special training for this kind of work is included in their course.

(iii) *Training of Secondary School Teachers.* Secondary teachers are normally specialists in a combination of subjects, such as English and history, modern languages, or mathematics and science. Intending secondary school teachers are normally required to complete a university degree and a year of professional training qualifying for a Diploma in Education.

The degree courses followed are usually in arts, science, or economics, with the major studies providing the essential background for future subject teaching. During the post-graduate or professional year the student takes such subjects as the history and principles of education, comparative education, educational psychology, and special teaching methods. Training also includes practice teaching under the supervision of teachers' college and university staff, and the observation of demonstration lessons.

At several Australian universities students wishing to take up teaching as a profession can receive their professional training along with the study of their teaching subjects as part of a first degree course in Education. The time taken to complete such a Bachelor of Education degree course is four years.

(iv) *Training for Specialist Teaching.* Teachers of specialist subjects, such as music, art, manual arts, domestic science, and commercial subjects, receive from two to five years' training which varies according to the institution concerned and the type of secondary school in which the teacher is to serve. In several States the shorter courses are provided wholly by the teachers' colleges. In four States, teachers of music receive their specialist training at conservatoria of music. Where the specialist course is given at an institution other than the teachers' college—e.g., 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.

Courses designed to train physical education teachers are offered in universities in all States, and in three States at a teachers' college as well.

Training for 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 there is also a two-year agricultural college diploma course which follows on the normal two-year primary teachers' course.

Teachers of technical subjects in secondary schools may be trained in manual or industrial arts courses of two to four years' duration, at teachers' colleges, technical colleges, or, in one State, at a university. These courses include basic training in such subjects as wood and metal work, and geometrical drawing. In Victoria there is a separate Technical Teachers' College. Some teachers of trade subjects in technical schools are recruited from the ranks of qualified tradesmen engaged in industry or commerce. These teachers usually receive instruction in classroom teaching techniques and procedures upon appointment.

(v) *In-service Training.* As almost all teachers now enter the profession by way of teachers' colleges or universities, 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.

In-service training usually takes the form of short courses held sometimes during vacations, sometimes during school-time or in the evening. In some States, in-service courses for teachers in remote areas are provided by correspondence. 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, visual aids, 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 in 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.

In 1963 and 1964 groups of Australian teachers attended refresher courses in New Caledonia for Australian and New Zealand teachers of French. These courses were offered to the Australian Government by the French Government.

The official publications of the Education Departments contain articles dealing with educational theory and practice. Magazines of the teachers' organizations, which reach the majority of government teachers, also contain articles of this type.

(vi) *Status.* Most teachers in government schools are permanent public servants and have security of tenure, superannuation rights, and the right of appeal in matters of promotion. The centralized education systems and the general policy of providing fully trained teachers for both city and country areas mean that teachers are subject to transfer to any part of the State in which they serve. It is common for a teacher's first appointment to be to a country school.

In each State there is a union of State school teachers and these together form a federal body, the Australian Teachers' Federation. Their aim is to advance the teacher's status and conditions and to stimulate community interest in educational problems.

2. Training of Non-government School Teachers.—Teachers for non-government schools receive their training in a number of ways. The Roman Catholic Church staffs both its primary and secondary schools mainly with members of religious orders whose training has been obtained in conformity with the requirements of the particular order concerned. In recent years there has been a growth in the number of lay teachers being employed in Catholic schools and some training of students to become lay primary teachers has been instituted. Secondary teachers receive their academic training mostly through courses provided by Australian universities.

Other non-government schools tend to recruit their staffs from teachers who have already obtained qualifications in Australia or overseas. There are two training institutions—one each in New South Wales and Victoria—which offer courses designed principally for teaching in non-government schools. Non-government schools recruit also university graduates who are then given some guidance by senior members of the school staff.

Private students may enrol at government teachers' colleges on payment of a fee, but the number of places available is limited. Some teachers destined for non-government schools are trained in this way.

During vacations, many non-government teachers attend in-service training courses organized by Education Departments. In recent years vacation courses have been provided by bodies other than Education Departments for teachers from both government and non-government schools. For example, an independent body, the Nuclear Research Foundation, has provided such courses for teachers of science in secondary schools in New South Wales.

The training of pre-school teachers is carried out in five States in kindergarten training colleges, set up by the Kindergarten Unions. These are described in § 10, para. 3, p. 725.

§ 4. Other Aspects of School Education

NOTE.—Information relating to school medical and dental services is given in Chapter XVIII. Public Health, and particulars of School Savings Banks in Chapter XXI. Private Finance.

1. Provisions for Isolated Areas.—(i) *General.* Although the task of bringing education to isolated areas in Australia presents problems, all education authorities have aimed at providing opportunities for country children comparable to those available to city children. Country children follow the same curricula (with local adaptation, if desirable) and are under the guidance of teachers who are trained for service in country and city schools alike.

In areas where there are sufficient children of school age a "one-teacher" school may be formed with all primary grades in a single classroom under the control of the one teacher. Special training is given to teachers undertaking work of this kind. Children who complete a primary course in a one-teacher school and cannot attend a secondary school may do secondary correspondence lessons under the teacher's supervision.

In districts where a number of small centres are scattered around a larger centre or country town the tendency is to close the one-teacher schools and transport pupils each day by buses to a "consolidated" school in the larger centre. Consolidated schools provide primary instruction and from two to four years of post-primary instruction. The post-primary curriculum adopted is usually directed towards practical activities and training in subjects bearing on the primary industries of the locality.

Where a group of children is too small to warrant the establishment of a one-teacher school at public expense 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.

(ii) *Correspondence Schools.* These have been established in each State capital city to meet the needs of children whose daily attendance at school is prevented by distance between home and school, by illness or by physical disability. The correspondence schools also cater for inmates of penal institutions, Australian children overseas, pupils of other schools in

which particular courses are not available, student teachers, members of the Defence Forces, and other adults completing their secondary education. Lessons are done with the help of a supervisor, usually a member of the child's family, and posted back to the correspondence school in the capital city, where they are corrected and returned with helpful comments. Every endeavour is made to maintain a personal link between teacher and pupil. Correspondence schools began with primary grades only, but were soon extended to cater for secondary pupils, and it is now possible to do a complete secondary course to matriculation standard by correspondence. Each year more than 20,000 students receive all or part of their instruction by correspondence.

(iii) *Schools of the Air.* These are intended to give the outback child of school age some of the benefits of school life and to supplement correspondence education. Using the two-way wireless equipment developed first by the Royal Flying Doctor Service, children hundreds of miles apart participate in the same lesson and teacher and pupils can talk directly with each other. The first School of the Air was established in 1950 at Alice Springs in the Northern Territory; it has been followed by similar schools at Broken Hill in the far west of New South Wales; at Ceduna and Port Augusta in South Australia; Cloncurry and Charters Towers in Queensland; and Meekatharra, Derby, Kalgoorlie and Port Hedland in Western Australia. These ten schools serve children in an area of a million square miles.

2. Handicapped Children.—Special provision is made for the education of physically and mentally handicapped children, both by the State authorities and by church and voluntary organizations, often working in conjunction. In many cases, where residential schools are necessary for particular groups, educational facilities and teaching staff are provided by a State Education Department, while a voluntary organization provides accommodation and accepts responsibility for the general welfare of the children. Among the facilities available are:—hospital schools for sick and crippled children; "spastic centres" for cerebral palsied children; special schools and special classes for deaf children; schools for blind children; and special schools and classes for mentally retarded children. Special schools and classes have involved the appointment of departmental specialists, the provision of special training courses, and close liaison with school health services. In some States 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.

3. Educational Guidance.—Each Australian State has a comprehensive system of educational guidance administered by trained and experienced educational psychologists and backed by a system of individual pupil record cards. The functions of these services are the selection of pupils for courses at secondary level, diagnosis and guidance of atypical children, preliminary guidance and, in some States, research. The weight given to each of these functions varies from State to State, but the aim is to provide thorough educational guidance for all children.

Throughout Australia branches of the Commonwealth Employment Service co-operate with State Education Departments by giving post-school vocational guidance, using the data obtained during the school careers of the children and made available by the Education Departments. In New South Wales a similar service is also provided by the Youth Welfare Section of the State Department of Labour and Industry.

4. Research.—All State Education Departments have set up branches undertaking research directed towards departmental activities. The work of the research branches is concerned with such matters as curriculum content, new teaching methods, evaluation procedures, wastage rates and educational statistics.

5. School Broadcasting and Television.—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 Australian Broadcasting Commission's Education Department is responsible for preparing and broadcasting programmes, but it draws freely on the advice and services of teachers and maintains permanent liaison with State Education Departments. It is estimated that in 1964 approximately 95 per cent. of Australian schools were equipped to receive radio lessons. In 1964 over 3,800 separate programmes were produced for school broadcasts.

School broadcasts are presented as part of the regular Australian Broadcasting Commission programmes without separate stations or wave lengths. Special efforts are made 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 year 1964 saw a further increase in the number of schools receiving television broadcasts and in the number of programmes produced. During 1964, after consultation with the six Education Departments, the Australian Broadcasting Commission increased its output of school television programmes, especially instructional programmes in mathematics and science for secondary schools. At the same time most Education Departments began to subsidize the purchase of television sets and by the end of 1964 about 2,000 schools in Australia were making use of educational television programmes. Some 399 separate programmes were produced for telecast to schools in 1964.

6. Scholarships and Bursaries.—All States have schemes of financial assistance to school pupils, mostly at the secondary level, through scholarships or bursaries. As tuition in government schools is free, this assistance is usually in the form of maintenance allowances, both for children living with their parents and for those living away from home. These may be paid in a lump sum or in instalments throughout the year. Awards are usually made on the results of a competitive examination, and sometimes a means test is applied. Other government and private authorities, such as the Repatriation Department and the Legacy War Orphans Fund, assist special categories of pupils with their school education. Many non-government schools also award scholarships, on a competitive basis, which enable students to attend the particular schools without payment of fees.

The Commonwealth Government, with the co-operation of the State Departments of Education, has introduced a programme of secondary scholarships to encourage successful candidates to complete the final two years of secondary schooling. Ten thousand of these scholarships are awarded each year. In addition, there are 2,500 scholarships for technical education each year.

First awards were made on the basis of competitive examinations held by the Education Departments during 1964. These awards are tenable from the beginning of 1965.

7. School Transport.—All States have systems of subsidies whereby transport is made available free or at concession rates for children travelling to and from school. In some States allowances are paid if private transport has to be used.

8. School Buildings.—The great increase in the school population in the last decade led to an expansion in school building, first for infants' and primary classes and later for secondary pupils. To cope with this growth in population, it was necessary at first to make use of temporary and emergency structures, but the period of resorting to this expedient has now given way to one of consolidation and development in school building programmes. Quite large schools may be built in stages to match increase in local population in new and rapidly developing suburbs in metropolitan areas. Authorities are giving much attention to the use of new materials and especially to the planning of sites. An increasing number of schools are planned with playing fields and tennis courts. Gymnasiums which may also serve as assembly halls are included, and lighting, heating and ventilation to meet different climatic conditions are carefully planned.

During 1964-65, £5,000,000 was provided by the Commonwealth Government for the building and equipping of science laboratories in both government and non-government schools.

9. Textbooks, Materials and Other Equipment.—The State Education Departments supply government schools, free of charge, with essential equipment, including scientific apparatus, maps, blackboards, chalk and cleaning materials, and non-consumable equipment for commercial, home science and manual training. Garden tools and physical training equipment are also supplied in most States.

Readers and writing equipment for individual pupils are usually supplied free in primary schools, and several Education Departments produce monthly school magazines which are supplied free or cheaply. In primary schools (except in one State) and in secondary schools, textbooks must, however, be purchased by students. In several States schools own stocks of textbooks which are hired to students, and in one State secondary textbooks are sold at reduced prices.

Equipment such as radios, film and filmstrip projectors, pianos, duplicators, and library books is ordinarily purchased for individual schools by the parent and citizen organizations associated with them, with the assistance of subsidies from the Departments.

The design of school furniture is undergoing considerable change following research on posture and the physical measurement of children. Dual desks are now being replaced

in many schools by individual tables and chairs, provided in a range of sizes suitable to each class. In line with modern educational practice, the new type of furniture has been designed to allow more flexible arrangements of the classroom.

10. **Visual Aids.**—Visual aids are widely used in Australian education. Each of the State Education Departments has a visual education branch to handle the production and distribution of such materials. Film strips and posters are distributed free or at low cost. Films are held in central libraries and are requisitioned by schools as required for teaching purposes.

§ 5. Pre-school Education

Pre-school centres of various kinds are conducted by private individuals, church bodies and voluntary organizations such as the Kindergarten Unions. Over recent years, the Commonwealth Government, State Governments, and some municipal councils have provided an increasing amount of financial assistance and themselves maintain centres.

The Australian Pre-School Association is a federal body composed of the Kindergarten Unions and several other organizations. Its aim is to promote the development of pre-school education throughout Australia. It is also responsible for the administration of six Lady Gowrie Child Centres which were established in capital cities by the Commonwealth Government as model pre-school centres.

Centres are located in city and country areas. Programmes are adapted to suit the areas in which centres are situated. Types of pre-school centres are nursery kindergartens, crèches with full-day care for children in closely settled industrial areas, play groups and play centres, occasional care centres, and residential holiday homes.

Pre-school centres can cater only for a small proportion of children in the three to five or six year age group, but radio and television have brought a form of education within the reach of practically every pre-school child in Australia. "Kindergarten of the Air", the first programme of its kind in the world, is a session of 25 minutes broadcast every week-day over the national radio network of the Australian Broadcasting Commission. Through it, young children in hospitals, in homes in city and country towns, and in bush homesteads in the outback, perhaps many miles from any school, receive some of the advantages of pre-school training.

"Kindergarten Playtime" is a 15-minute television programme transmitted each week-day. It is based on the interests of children from three to five years and is now broadcast in all State capital cities and many country regions by the Australian Broadcasting Commission.

§ 6. Technical Education

1. **General.**—The following description of technical education refers to training in technical fields given by institutions other than secondary schools and universities. Students may proceed to this kind of training after completing three to five years at secondary school.

Each State has developed a system of technical education based on institutions set up in all the State capital cities and in many country areas. These institutions are known variously as technical colleges, technical schools, institutes of technology and schools of mines. The earliest began as local and even private ventures in the second half of the nineteenth century, but almost all of them have now come under the control of the State Governments.

The technical colleges in Queensland, South Australia, Western Australia, and Tasmania are administered by branches of the State Education Departments and are financed from the budget of the State Minister for Education. New South Wales has a separate State Department of Technical Education. In Victoria there is a dual system with a number of the older colleges controlled by their own "councils" in addition to government-controlled colleges administered by the Technical Education Branch of the Education Department. The council-controlled colleges receive government grants-in-aid and their teachers' salaries are paid by the State Government.

Australian technical colleges offer training in all the major industrial skills and in a wide variety of commercial, artistic and domestic occupations. The three main types of courses are described below.

2. **Trade Courses.**—These offer part-time training for apprentices. In developing a system of technical education, the Australian authorities were influenced by the British tradition which regards practical experience on the job as the fundamental training procedure, to be supplemented by theoretical and practical training at an appropriate school. In each of the Australian States there is an apprenticeship authority which supervises the administration of apprenticeships and an education authority which provides technical education through its technical colleges.

The time spent on training varies from three to five years in different trades and States. Between four and eight hours' instruction a week are required. Most of this takes place in the employer's time, and it is unusual for more than two hours a week to be spent in attending classes outside working hours.

3. **Certificate Courses.**—There is considerable variation between the States in the aims and organization of certificate courses. In New South Wales they provide training of a semi-professional nature in occupations for which no apprenticeship awards exist. Some of the courses are open to qualified tradesmen only. For others no occupational entry qualifications are demanded, but it is necessary to hold an Intermediate Certificate or its equivalent. The courses are usually for four years, most of them being part-time.

The Victorian certificate course is designed to develop specialized skills in a particular phase of an occupation. In the building field, for instance, there is a certificate course in architectural drafting. The courses are offered at three levels—professional certificate courses which include diploma subject-matter and can be counted towards a diploma; special short courses which are designed to increase the efficiency of people in their chosen field; and technicians' courses which give a standard of training between trade and professional courses. In general, they consist of part-time day and/or evening instruction concurrent with employment in the field, and entrance requirements are of approximately Intermediate Examination standard.

Courses in other States are mostly part-time and of two to seven years' duration. They provide a wide range of training for skilled technical and semi-professional workers and in most cases entrance is at the level of the Intermediate Examination or equivalent.

4. **Diploma Courses.**—Diploma courses are designed to provide professional training in fields such as architecture, art, building, commerce, management, public administration, manual arts, the various branches of engineering and metallurgy, and pure and applied science. They usually follow completion of a full secondary school course.

The courses consist of complete progressive units of study in which the lecture room, laboratory and workshop are closely associated. They vary from three to five years' full-time and from three to seven years' part-time study. At least one full year's employment in an appropriate occupation is usually required.

The aim of the courses is to develop highly trained technologists with the qualifications and experience required for membership of a professional institution.

5. **Other Courses.**—Most colleges provide short post-diploma and refresher courses to keep students in touch with new developments in their fields, as well as courses of general interest such as handicrafts and motor mechanics. Training in certain technical aspects of agriculture such as farm mechanics and wool classing is often given in the technical colleges. Some also offer general secondary courses to enable adults to prepare for matriculation and other public examinations.

6. **Correspondence Teaching.**—Each State has a well developed system of technical education by correspondence to extend the facilities of a metropolitan college to rural students. Entrance qualifications are identical with those for the regular classes. A major problem of correspondence work is the linking of theory with practice. This is overcome to a certain extent by holding practical sessions at appropriate training centres once or twice a year at the technical college where the correspondence school is based, or at a mobile workshop stationed for the time at a focal point within the district. In New South Wales these mobile workshops are rail cars equipped with machinery and fittings to make them self-contained training schools for engineering and other trades. Among practical courses offered by correspondence are trade drawing, fitting and machinery, welding, diesel engine operation, automotive engineering and workshop practice, and farm mechanics.

7. Colleges, Teachers and Students.—The numbers of colleges, teachers and enrolments of individual students during the years 1959 to 1963 are given in the following table.

TECHNICAL EDUCATION: COLLEGES, TEACHERS, AND ENROLMENTS

State	Colleges	Teachers			Students enrolled		
		Full-time	Part-time	Total	Males	Females	Persons
New South Wales(a)(b)—							
1959	48	1,299	1,691	2,990	57,064	31,736	88,800
1960	51	1,286	1,682	2,968	62,523	34,195	96,718
1961	51	1,302	2,051	3,353	66,715	35,495	102,210
1962	52	1,348	2,390	3,738	68,889	35,165	104,054
1963	52	1,474	2,399	3,873	73,402	36,145	109,547
Victoria—							
1959	63	2,644	1,678	4,322	39,820	11,354	51,174
1960	70	2,796	1,766	4,562	42,526	11,390	53,916
1961	76	3,333	1,929	5,262	(c) 47,053	(c) 13,424	(c) 60,477
1962	82	3,438	1,956	5,394	(c) 48,939	(c) 12,487	(c) 61,426
1963	86	4,010	2,033	6,043	(c) 50,325	(c) 13,456	(c) 63,781
Queensland(a)—							
1959(d)	13	176	517	693	17,293	8,396	25,689
1960(d)	14	174	647	821	18,155	9,942	28,097
1961	14	174	663	837	18,290	9,156	27,446
1962	15	228	718	946	19,365	10,843	30,208
1963	15	247	820	1,067	21,949	12,074	34,023
South Australia(a)(e)—							
1959	25	294	779	1,073	18,130	9,271	27,401
1960	25	323	737	1,060	15,728	7,722	23,450
1961	25	363	712	1,075	15,596	8,457	24,053
1962	24	387	827	1,214	17,599	10,177	27,776
1963	24	432	916	1,348	18,661	11,291	29,952
Western Australia(a)—							
1959	24	(f) 282	(f) 739	(f) 1,021	15,604	8,888	24,492
1960	19	(f) 307	(f) 802	(f) 1,109	17,017	8,739	25,756
1961	20	(f) 317	(f) 862	(f) 1,179	17,992	9,083	27,075
1962	25	352	1,136	1,488	20,362	10,386	30,748
1963	32	373	1,257	1,630	20,126	10,286	30,412
Tasmania—							
1959	8	104	398	502	4,837	2,463	7,300
1960	8	111	413	524	5,253	2,085	7,338
1961(g)	12	97	383	480	4,871	1,427	6,298
1962	11	95	414	509	4,884	1,763	6,647
1963	10	90	449	539	5,564	2,023	7,587
Total—							
1959	181	4,799	5,802	10,601	152,748	72,108	224,856
1960	187	4,997	6,047	11,044	161,202	74,073	235,275
1961	198	5,586	6,600	12,186	170,517	77,042	247,559
1962	209	5,848	7,441	13,289	180,038	80,821	260,859
1963	219	6,626	7,874	14,500	190,027	85,275	275,302

(a) Excludes correspondence students. (b) Includes A.C.T. (c) Number enrolled at Census. (d) Student figures are enrolments at end of year. (e) Student figures are individual enrolments. (f) Number of teaching positions. (g) In 1961 there was a transfer of classes in the hobby category to the Adult Education Board.

8. Training of Technical Instructors.—Prior to the 1939–45 War technical colleges were staffed chiefly by trained teachers in the employment of the Education Departments or technicians drawn from industry. Although some of the latter were highly qualified, the great majority had not been trained as teachers.

To preserve links with industry and trade practice, schemes have been developed which continue the recruitment of specialist tradesmen as instructors but provide also for their training in educational method and teaching techniques. In Victoria the Technical Teachers' College provides training for students with appropriate diploma or trade qualifications and suitable industrial experience. In New South Wales technical college lecturers and tradesmen-instructors receive an in-service course of teacher training in general educational theory and teaching method, while correspondence courses and visiting lecturers assist the newly appointed tradesman-instructor in country colleges. Variations of this scheme are in operation in other States. Many technical teachers, principally of academic, commercial and domestic science subjects, hold trained teacher's certificates from teachers' colleges.

§ 7. Government Expenditure on Schools and Technical Education

1. **General.**—The following tables show particulars of the total net expenditure (i.e., gross expenditure less receipts for services rendered) from certain funds on government schools, education departments and technical education. The data have been compiled on the same basis as far as differences in organization and accounting methods between States and Territories will permit.

The tables include only expenditure from the consolidated revenue funds and certain trust or special funds. They exclude loan fund expenditure; expenditure on debt charges, payroll tax and superannuation payments, in so far as it is possible to identify these items; and some items for which information cannot be obtained from the public accounts of all States.

2. **Government Schools' and Education Departments' Expenditure.**—(i) *Total Net Expenditure.* The figures relate throughout to years ended 30th June. Net expenditure per pupil relates the total net expenditure to the mean of the numbers of pupils enrolled at government schools at two subsequent school censuses. Net expenditure per head of population relates the total net expenditure to the mean population.

GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS: NET EXPENDITURE

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
TOTAL NET EXPENDITURE (£'000)									
1958-59	.. 36,544	24,563	11,347	7,963	7,541	3,662	217	504	92,341
1959-60	.. 40,445	27,323	12,130	9,232	8,246	4,327	278	587	102,568
1960-61	.. 46,580	30,762	13,931	10,354	9,271	4,773	353	792	116,816
1961-62	.. 50,934	34,172	15,109	11,577	10,102	5,427	428	913	128,662
1962-63	.. 54,044	38,131	16,802	12,592	10,842	5,839	466	1,112	139,828

TOTAL NET EXPENDITURE PER PUPIL (£ s. d.)

1958-59	.. 64 16 0	5 62 7	0 49 12	5 51 6	3 66 8	11 58 17	0 74 1	3 72 12	10 60 9	10 14 1
1959-60	.. 69 15 0	6 66 2	7 51 7	6 56 12	9 69 19	11 67 11	7 86 14	3 73 9	11 64 14	1 1 1
1960-61	.. 78 8 1	7 71 3	7 37 13	7 60 18	5 75 17	3 72 10	0 101 0	7 86 9	10 71 6	11 4 0
1961-62	.. 83 18 10	7 6 4	11 61 1	1 65 11	5 79 10	4 80 8	1 112 13	3 88 0	6 76 4	7 9 6
1962-63	.. 87 5 4	8 62 6	4 66 12	2 68 15	7 82 1	6 84 12	9 113 3	6 95 6	11 80 12	6 12 6

TOTAL NET EXPENDITURE PER HEAD OF POPULATION (£ s. d.)

1958-59	.. 9 16 0	8 18 8	7 16 5	8 15 4	10 13 8	10 16 3	9 12 10	11 12 1	9 5 8
1959-60	.. 10 13 1	9 13 10	8 4 1	9 17 9	11 10 0	0 12 11	6 11 6	3 11 14	9 10 1
1960-61	.. 12 0 5	10 12 7	9 5 4	10 16 4	12 14 1	1 13 12	8 13 15	0 14 6	10 11 4
1961-62	.. 12 18 0	11 11 0	9 17 11	11 16 2	13 10 1	11 5 4	3 16 2	2 14 12	5 12 2
1962-63	.. 13 9 2	12 12 4	10 16 7	12 12 1	14 3 8	16 2 6	16 19 8	16 1 4	12 18 8

(ii) *Classification of Expenditure.* The following table shows, for the six States, the net expenditure on government schools and education departments classified into the following headings:—(i) Primary Education, (ii) Secondary Education, (iii) Administration, (iv) Transportation of School Children and Students, and (v) Training of Teachers. Expenditure on technical and agricultural education is excluded from the tables.

It has been necessary to estimate some items of expenditure, largely because the meanings of "primary" and "secondary" differ between States and because elementary and higher educations are sometimes given in the same school by the same teachers.

Expenditure on government schools in the Northern Territory and Australian Capital Territory is not included in the following table because the detail is not available.

GOVERNMENT EXPENDITURE ON SCHOOLS AND TECHNICAL EDUCATION 707

GOVERNMENT SCHOOLS AND EDUCATION DEPARTMENTS:
CLASSIFICATION OF EXPENDITURE

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total(a)
PRIMARY EDUCATION							
1958-59	20,562	13,953	7,980	4,905	4,095	1,751	53,246
1959-60	22,272	14,892	8,325	5,527	4,464	1,858	57,338
1960-61	25,076	16,366	9,352	6,009	4,930	1,926	63,659
1961-62	27,025	17,769	9,717	6,621	5,286	2,023	68,441
1962-63	27,940	19,488	10,408	6,996	5,577	2,165	72,574
SECONDARY EDUCATION							
1958-59	10,661	5,406	1,830	1,800	1,631	997	22,325
1959-60	12,139	6,372	2,148	2,237	1,894	1,261	26,051
1960-61	14,826	7,538	2,791	2,714	2,218	1,509	31,596
1961-62	16,551	9,000	3,453	3,048	2,583	1,835	36,470
1962-63	17,693	10,230	4,047	3,456	2,959	1,979	40,364
ADMINISTRATION							
1958-59	1,479	651	465	199	314	230	3,338
1959-60	1,703	760	518	246	274	419	3,920
1960-61	1,853	810	607	245	363	531	4,413
1961-62	2,074	836	638	265	358	559	4,730
1962-63	2,069	890	672	300	375	687	4,993
TRANSPORTATION OF SCHOOL CHILDREN AND STUDENTS							
1958-59	1,613	2,002	502	467	910	458	5,952
1959-60	1,813	2,120	601	486	957	516	6,493
1960-61	2,058	2,393	685	523	998	569	7,226
1961-62	2,282	2,524	778	567	1,054	615	7,820
1962-63	2,650	2,676	903	586	1,085	642	8,542
TRAINING OF TEACHERS							
1958-59	2,229	2,551	570	592	591	226	6,759
1959-60	2,518	3,179	538	736	657	273	7,901
1960-61	2,767	3,655	496	859	762	238	8,777
1961-62	3,002	4,043	523	1,076	821	395	9,860
1962-63	3,692	4,847	772	1,254	846	366	11,777

(a) Excludes Northern Territory and Australian Capital Territory.

3. **Technical Education Expenditure.**—The following table shows the net expenditure on technical education from the State consolidated revenue funds, together with expenditure in the Australian Capital Territory.

TECHNICAL EDUCATION: NET EXPENDITURE

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1958-59 ..	3,163	4,287	1,120	1,429	735	450	54	11,238
1959-60 ..	3,763	5,435	1,237	1,645	789	397	61	13,327
1960-61 ..	4,114	6,050	1,234	1,853	918	345	69	14,583
1961-62 ..	4,632	6,640	983	2,383	1,088	246	73	16,045
1962-63 ..	4,765	7,856	1,072	2,704	1,168	344	81	17,990

§ 8. Non-government Schools' Finance

Most Roman Catholic parochial schools charge fees, but payment is not insisted on in the case of families who cannot afford it. 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. With these exceptions, pupils of non-government schools must pay fees.

Certain State scholarships and bursaries are tenable at approved non-government 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. The eight undenominational grammar schools in Queensland, however, receive a State subsidy under "*The Grammar Schools Acts 1860-1900*". In 1956, the Commonwealth Government undertook to contribute to the interest payments on loans raised in order to build non-government secondary school accommodation in the Australian Capital Territory. This contribution is now available for both primary and secondary school buildings, extensions and additions.

As from 1964-65 the Commonwealth Government has provided assistance to non-government schools for the building and equipping of science laboratories. (*See* § 4, para. 8, p. 702.)

§ 9. Universities

1. **General.**—Students qualify for entrance to Australian universities by passing a matriculation examination in one of the States after 5 or 6 years of secondary education. Each university has its own regulations for matriculation, specifying the number and combination of subjects to be passed for admission. Students entering the universities have the choice of undergraduate study in various faculties. All universities provide also post-graduate courses of study.

The Australian universities, with their faculties, are listed below in the order of their foundation.

University of Sydney, 1850, Sydney, New South Wales: Agriculture, Architecture, Arts, Dentistry, Economics, Engineering, Law, Medicine, Science, Veterinary Science.

University of Melbourne, 1853, Melbourne, Victoria: Agriculture, Applied Science, Architecture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Music, Science, Veterinary Science.

University of Adelaide, 1874, Adelaide, South Australia: Agricultural Science, Architecture and Town Planning, Arts, Dentistry, Economics, Engineering, Law, Medicine, Music, Science, Technology.

University of Tasmania, 1890, Hobart, Tasmania: Agricultural Science, Arts, Commerce, Education, Engineering, Law, Science.

University of Queensland, 1909, Brisbane, Queensland: Agriculture, Architecture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science, Veterinary Science.

University of Western Australia, 1912, Perth, Western Australia: Agriculture, Arts, Dental Science, Economics and Commerce, Education, Engineering, Law, Medicine, Science.

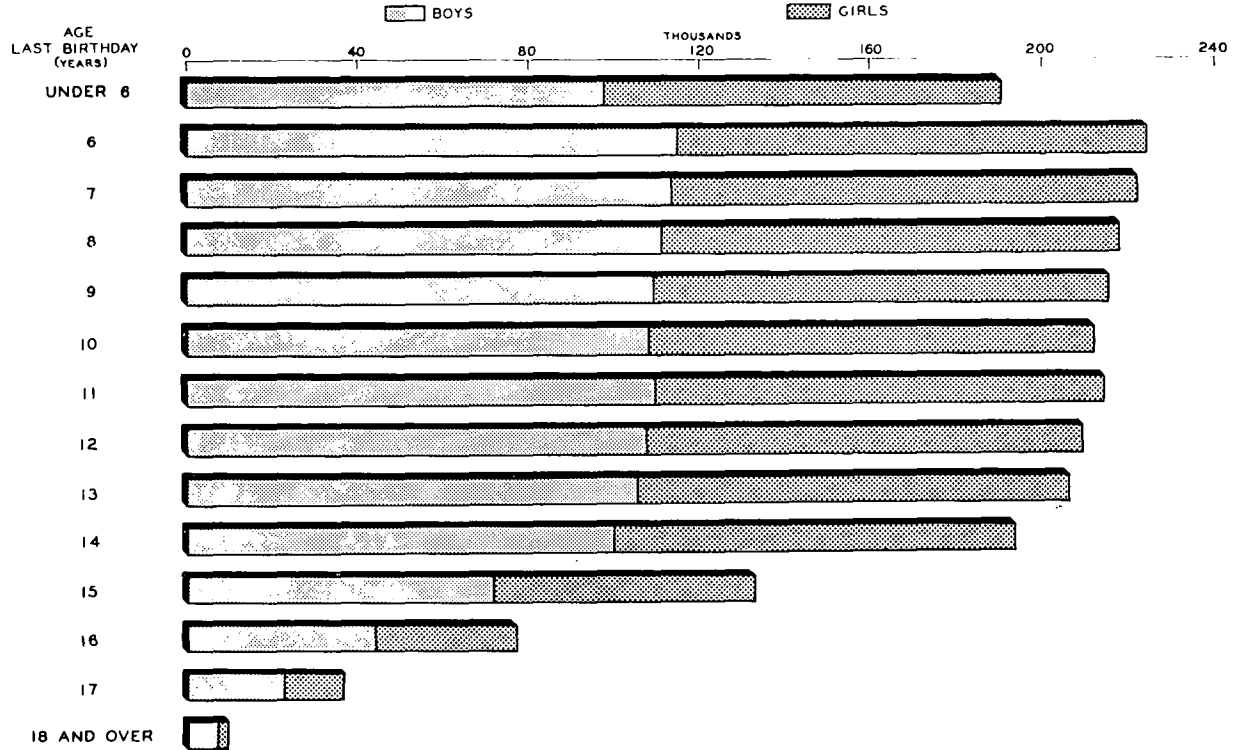
Australian National University, 1946, Canberra, Australian Capital Territory.—Institute of Advanced Studies: John Curtin School of Medical Research, Research School of Physical Sciences, Research School of Social Sciences, Research School of Pacific Studies. School of General Studies (formerly Canberra University College, established in 1930): Arts, Economics, Law, Oriental Studies, Science.

University of New England, 1954 (formerly New England University College, established in 1938), Armidale, New South Wales: Agricultural Economics, Arts, Economics, Rural Science, Science.

University of New South Wales, 1958 (formerly the New South Wales University of Technology, established in 1948), Sydney, New South Wales: Applied Science, Architecture, Arts, Commerce, Engineering, Medicine, Science.

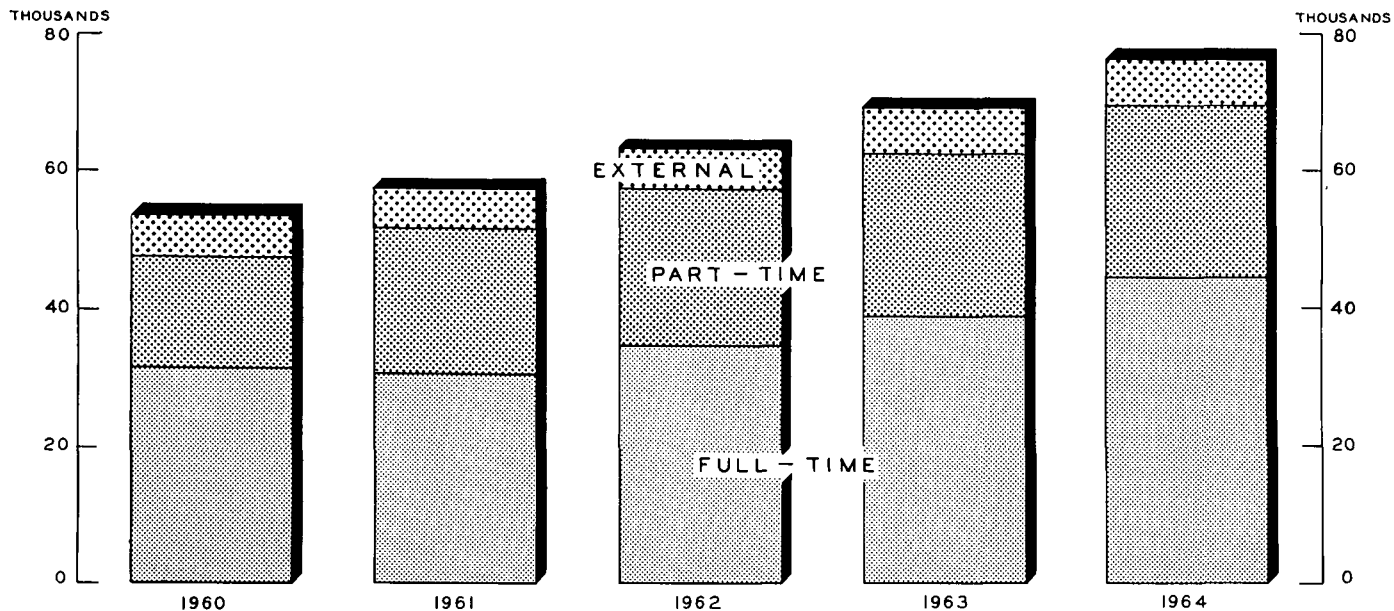
Monash University, 1958, Melbourne, Victoria: Arts, Economics and Politics, Engineering, Medicine, Science.

SCHOOLS: AGES OF PUPILS, AUSTRALIA, 1964*



* SEE PAGE 694

UNIVERSITIES: STUDENTS ENROLLED, AUSTRALIA *
1960 TO 1964



* SEE PAGE 715

University of Newcastle, 1965 (formerly Newcastle University College, established in 1951), Newcastle, New South Wales; Applied Science, Architecture, Arts, Commerce, Engineering, Science.

Each of the universities was established by a parliamentary Act as an autonomous institution, with its own Governing Council or Senate. Nevertheless, the Australian universities receive substantial government support from both State and Commonwealth sources, only part of their income being derived from students' fees, private donations and bequests.

There are also two university colleges. Townsville University College, founded in 1961, is a constituent part of the University of Queensland. It offers some courses in the faculties of Agriculture, Arts, Commerce and Economics, Dentistry, Education, Engineering, Law, Medicine, Science and Veterinary Science. Wollongong University College was opened in 1962 and is affiliated with the University of New South Wales. It offers some courses in the faculties of Arts, Commerce, Engineering, and Science.

2. Organization of Courses.—Bachelor degree courses are from three to six years in length, depending on the faculty, and for the majority full-time attendance is required. Certain courses, however, may also be undertaken by part-time or evening students. The university academic year begins in March and finishes in early December. At most universities two short vacation periods divide the year into three terms, but there are four terms in some universities.

Several universities make provision for external tuition, whereby students living away from university towns 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, adjacent Pacific islands and Asian countries. External students living in Queensland receive tutorial assistance at university centres in the principal country towns.

The University of New England's Department of External Studies offers a wide range of subjects for external study, leading to the degrees of Bachelor of Arts, Bachelor of Letters, the Diploma of Education, and the Diploma in Educational Administration. External students must attend short annual residential schools of instruction in their subjects, usually held at the university.

Post-graduate courses leading either to a Master's degree or to a Doctorate are available at all universities. Facilities cover the humanities, social sciences, pure and applied sciences.

Additional courses are constantly being introduced by the universities at both the undergraduate and the post-graduate level, to cover new fields of knowledge and specialization. Announcements of the following new courses were made in 1964: at the University of New South Wales, Master of Technology in Industrial Engineering, Bachelor of Science in Sheep and Wool Technology and Graduate Diploma in Civil Design; at the University of New England, Diploma in Farm Economics; at the University of Melbourne, Master of Business Administration; at Monash University, Bachelor of Jurisprudence; at the University of Queensland, Diploma in Computing; and at the University of Adelaide, Bachelor of Pharmacy and Bachelor of Applied Science in Mineral Engineering.

A faculty of Medicine has been established in the University of Tasmania from the beginning of 1965.

3. Research.—A wide range of research work and training in research techniques is carried out by the universities as part of their normal functions. Post-graduate students and members of university staff are engaged in research, both as part of their work for post-graduate degrees and also as part of group and departmental research programmes. Support for research in universities is derived from public and private sources, including funds and foundations established to encourage research in a particular field.

4. University Expansion and Development.—Since the 1939-45 War, the Australian universities have had to face greatly increased demands on their facilities, firstly from large numbers of ex-service personnel in the immediate post-war years and later from greatly increased numbers of students leaving secondary schools each year. By 1964, the total enrolments in Australian universities had reached a figure of 76,188 compared with an early post-war peak of 32,453 in 1948.

To assist the universities to cope with these demands, increasing co-operation between the Commonwealth Government and the State Governments in university finance became necessary. The Commonwealth Government set up a Committee on Australian Universities, whose 1957 report ("The Murray Report") led to more finance becoming available to universities and to the setting up of a permanent body, the Australian Universities Commission, to advise the Commonwealth Government on university development. In the years since the Murray Report, the following major developments have taken place in the Australian university structure:—the University of New South Wales was created from the earlier University of Technology in 1958; in the same year, Monash University was established in Victoria; in 1960, the Australian National University was reconstituted, combining both undergraduate and post-graduate facilities, and now consists of the Institute of Advanced Studies and the School of General Studies created from the Canberra University College; the University of Queensland set up the University College of Townsville in 1961; the University of New South Wales established the Wollongong University College in 1962; and in 1965 the University of Newcastle was created from the Newcastle University College.

The New South Wales Government is proceeding with plans for the construction of a fifth university, to be called Macquarie University, on a site at North Ryde. It is intended that the new university should be opened not later than 1967.

During 1964, the Victorian Government announced plans for the extension of facilities for tertiary education. These plans include the development of a third university in the metropolitan area, to be named La Trobe University, and the extension of the Ballarat School of Mines to teach the humanities and to provide degree courses.

In 1966 the University of Adelaide plans to open additional facilities at Bedford Park where four schools will be established initially in Biological Sciences, Languages and Literature, Physical Sciences, and Social Sciences.

Despite rapid expansion, the Australian universities are still faced with a problem in providing tuition for all students who reach matriculation standard. As a result, several universities have found it necessary to impose quotas on enrolments in their courses.

During 1961 the Commonwealth Government set up a committee to consider the pattern of tertiary education in relation to the needs and resources of Australia and to make recommendations to the Australian Universities Commission on the future development of tertiary education. The first two volumes of the Committee's Report were made public early in 1965.

5. Teaching and Research Staff.—The following table shows particulars of the teaching and research staff of the universities during 1964.

UNIVERSITIES: TEACHING AND RESEARCH STAFF, 1964

University	Teaching and research staff(a)					Research only staff(a)		
	Full-time				Part-time (b)	Full-time	Part-time (c)	
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, tutors and teaching fellows				Total
Australian National University ..	23	14	113	37	187	68	549	6
Sydney ..	83	63	479	196	821	1,172	293	2
New South Wales ..	63	75	544	124	806	717	108	..
New England ..	19	23	138	81	261	22	41	..
Melbourne ..	70	82	475	153	780	968	201	16
Monash ..	36	4	173	92	305	139	22	..
Queensland ..	47	52	367	199	665	486	100	2
Adelaide ..	62	47	286	75	470	384	199	8
Western Australia ..	41	38	192	26	297	323	135	4
Tasmania ..	19	11	80	21	131	79	27	7
Total ..	463	409	2,847	1,004	4,723	4,358	1,675	45

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes Research only staff which is shown separately. (b) Teaching hours in units of 100 hours per annum.

(c) In equivalent full-time units of 35 hours per week.

The next table gives details of the teaching and research staff of Australian universities for each year from 1961 to 1964.

UNIVERSITIES: TEACHING AND RESEARCH STAFF, SUMMARY, AUSTRALIA

Year	Teaching and research staff(a)						Research only staff(a)	
	Full-time					Part-time (b)	Full-time	Part-time (c)
	Professors	Associate professors and readers	Senior lecturers and lecturers	Assistant lecturers, demonstrators, tutors and teaching fellows	Total			
1961	337	289	2,142	628	3,396	3,199	1,163	30
1962	363	330	2,438	770	3,901	3,472	1,369	27
1963	404	374	2,663	848	4,289	3,847	1,481	35
1964	463	409	2,847	1,004	4,723	4,358	1,675	45

(a) Filled positions. Teaching and research staff includes all staff with teaching functions, but excludes Research only staff which is shown separately. (b) Teaching hours in units of 100 hours per annum. (c) In equivalent full-time units of 35 hours per week.

6. Students.—(i) *Total*. The numbers of students enrolled for courses at the universities for the year 1964 are shown in the following table.

UNIVERSITIES: STUDENTS ENROLLED, 1964

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
Australian National University ..	2,257	..	1	..	165	2,345
Sydney	14,489	638	236	..	242	15,503
New South Wales	9,990	242	293	..	452	10,957
New England	3,190	311	..	..	43	3,513
Melbourne	12,527	102	602	..	875	13,892
Monash	2,883	38	..	..	2	2,923
Queensland	10,854	73	590	488	419	12,424
Adelaide	6,318	364	1,685	23	256	8,203
Western Australia	4,361	125	..	..	96	4,565
Tasmania	1,450	91	69	117	227	1,863
Total	68,319	1,984	3,476	628	2,777	76,188

(a) Includes *ad hoc* courses.

(b) Adjustment made for students enrolled for more than one course.

Of the students enrolled in 1964, 56,424 were males and 19,764 females. Included in those enrolled for degrees were 5,383 enrolled for higher degree courses—Australian National University, 511; Sydney, 1,451; University of New South Wales, 697; New England, 186; Melbourne, 727; Monash, 149; Queensland, 616; Adelaide, 535; Western Australia, 410; and Tasmania, 101.

The following table shows the numbers of students enrolled at Australian universities for each of the years from 1960 to 1964.

UNIVERSITIES: STUDENTS ENROLLED, AUSTRALIA

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1960	2,770	39,166	1,032	6,861	1,609	2,514	53,391
1961	3,170	(c) 46,338	1,328	(c) 3,379	1,760	2,461	57,672
1962	3,814	50,757	1,622	3,307	1,779	2,849	63,317
1963	4,551	56,077	1,764	3,349	1,424	2,504	69,074
1964	5,383	62,936	1,984	3,476	628	2,777	76,188

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course. (c) From 1961, a new degree of B.Sc. (Technology) replaced many sub-graduate diploma courses at the University of New South Wales.

(ii) *New Students Enrolled.* The numbers of new students enrolled for courses at the universities during the year 1964 are shown in the following table.

UNIVERSITIES: NEW STUDENTS ENROLLED, 1964

University	Degree courses	Diploma courses		Certificate courses	Miscellaneous subjects (a)	Adjusted total(b)
		Post-graduate	Sub-graduate			
Australian National University ..	888	..	..	..	129	984
Sydney	3,522	192	106	..	68	3,886
New South Wales	3,008	98	43	..	242	3,390
New England	964	130	..	..	10	1,097
Melbourne	2,848	15	171	..	306	3,289
Monash	1,600	1	..	..	1	1,602
Queensland	2,873	7	194	117	194	3,385
Adelaide	1,618	10	443	2	35	2,086
Western Australia	1,165	4	..	..	22	1,190
Tasmania	456	5	14	39	111	619
Total	18,942	462	971	158	1,118	21,528

(a) Includes *ad hoc* courses. (b) Adjustment made for students enrolled for more than one course.

Of the new students enrolled in 1964, 14,747 were males and 6,781 females. Included in those enrolled for degrees were 603 enrolled for higher degree courses—Australian National University, 169; Sydney, 53; University of New South Wales, 104; New England, 24; Melbourne, 57; Monash, 65; Queensland, 39; Adelaide, 45; Western Australia, 29; and Tasmania, 18.

The following table shows the numbers of new students enrolled at Australian universities during each of the years from 1960 to 1964.

UNIVERSITIES: NEW STUDENTS ENROLLED, AUSTRALIA

Year	Degree courses		Diploma courses		Certificate courses	Miscellaneous subjects	Adjusted total(a)
	Higher degrees	Bachelor degrees	Post-graduate	Sub-graduate			
1960	278	11,646	223	1,971	521	1,113	15,685
1961	349	(b) 13,254	231	(b) 884	605	1,040	16,263
1962	475	14,487	279	926	455	1,149	17,626
1963	538	15,717	387	944	236	960	18,746
1964	603	18,339	462	971	158	1,118	21,528

(a) Adjustment made for students enrolled for more than one course. (b) From 1961, a new degree of B.Sc. (Technology) replaced many sub-graduate diploma courses at the University of New South Wales.

(iii) *Full-time, Part-time and External Students.* The following table classifies students at each university in 1964 according to whether they were studying full-time, part-time or externally.

UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS, 1964

University	Full-time	Part-time	External	Total
Australian National University	1,163	1,182	..	2,345
Sydney	11,734	3,769	..	15,503
New South Wales	4,760	6,146	51	10,957
New England	1,143	123	2,247	3,513
Melbourne	8,844	4,409	639	13,892
Monash	2,572	351	..	2,923
Queensland	5,606	4,330	2,488	12,424
Adelaide	4,721	2,952	530	8,203
Western Australia	2,697	1,483	385	4,565
Tasmania	1,087	571	205	1,863
Total	44,327	25,316	6,545	76,188

The next table shows the numbers of full-time, part-time and external students enrolled at Australian universities during each of the years from 1960 to 1964.

UNIVERSITIES: FULL-TIME, PART-TIME AND EXTERNAL STUDENTS, AUSTRALIA

Year	Full-time	Part-time	External	Total
1960	31,590	16,304	5,497	53,391
1961(a)	30,834	21,048	5,790	57,672
1962	34,723	22,430	6,164	63,317
1963	38,931	23,752	6,391	69,074
1964	44,327	25,316	6,545	76,188

(a) The figures of full-time and part-time students for 1961 and following years are not comparable with those shown for previous years, as from 1961 all universities used a uniform classification of students which differed from that used previously by some universities.

(iv) *Assistance to Students.* The Commonwealth Government, through the Commonwealth Scholarships Board, grants undergraduate and post-graduate scholarships to university students. (Details of the Commonwealth Scholarship Scheme are given on page 727.) Commonwealth, State and local governments also award cadetships and other assistance to their employees. Foreign students are assisted by the Commonwealth Government under arrangements such as the Colombo Plan. The Universities themselves grant exhibitions and scholarships as well as special assistance to teachers, etc.

The following table gives details of students assisted at each university in 1964.

UNIVERSITIES: ASSISTED STUDENTS, 1964

University	Source of assistance					Type of course	
	Commonwealth Government	State Governments	Universities	Other	Adjusted total (a)	Higher degrees	Other
Australian National University ..	533	..	773	44	1,181	403	778
Sydney ..	5,256	2,725	3,579	167	8,613	520	8,093
New South Wales ..	1,824	955	1,763	753	4,427	362	4,065
New England ..	365	450	1,366	51	2,209	149	2,060
Melbourne ..	4,434	2,604	3,850	120	8,694	507	8,187
Monash ..	644	882	194	43	1,763	140	1,623
Queensland ..	2,826	904	449	283	4,462	320	4,142
Adelaide ..	1,797	2,023	1,592	160	5,064	354	4,710
Western Australia ..	1,204	703	105	97	2,051	119	1,932
Tasmania ..	478	428	94	53	952	39	913
Total ..	19,361	11,674	13,765	1,771	39,416	2,913	36,503

(a) Adjustment made for students assisted from more than one source.

The next table shows the numbers of assisted students at Australian universities in the years 1960 to 1964.

UNIVERSITIES: ASSISTED STUDENTS, AUSTRALIA

Particulars	1960	1961	1962	1963	1964
Government assistance ..	20,345	22,181	24,613	26,670	31,035
University assistance ..	6,649	9,025	10,710	12,063	13,765
Other assistance ..	2,648	2,726	1,553	1,620	1,771
Adjusted Total(a) ..	26,061	28,953	31,041	33,678	39,416

(a) Adjustment made for students assisted from more than one source.

(v) *Resident Students.* In 1964, 5,940 full-time and 311 part-time students were in residence at affiliated colleges, halls of residence and university hostels. The 6,251 students in residence were distributed as follows:—Australian National University, 463; Sydney, 838; New South Wales, 278; New England, 913; Melbourne, 1,443; Monash, 141; Queensland, 1,044; Adelaide, 369; Western Australia, 520; and Tasmania, 242. There were 4,635 male students and 1,616 female students in residence.

7. *Degrees Conferred, etc.*—The following table shows the numbers of degrees conferred and diplomas and certificates granted for males and females separately at each university during the year ended 31st July, 1964.

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, YEAR ENDED 31st JULY, 1964

Course	Australian National University		Sydney		New South Wales		New England		Melbourne		Monash	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Degrees—												
Arts	52	28	269	332	51	63	166	68	221	256	19	26
Divinity .. ..	..	..	1	..	..	..	..	..	..	..	..	..
Music .. ..	..	..	1	..	..	..	..	..	9	16	..	..
Psychology .. ..	..	..	..	..	4	1	..	..	..	..	..	..
Law	6	..	85	9	..	..	..	..	134	27	..	..
Commerce/Economics ..	43	..	115	12	150	6	..	..	202	30	10	1
Education .. ..	..	..	18	7	..	..	..	..	55	9	..	..
Social Studies	3	2	..	..	..	..	..	..	..	..	..	..
Science	36	3	243	100	261	22	52	14	259	78	9	2
Architecture and Town Planning .. ..	..	..	19	4	23	3	..	..	56	4	..	..
Building .. ..	..	..	..	..	4	..	..	..	2	..	..	..
Engineering .. ..	..	..	172	..	293	..	..	..	158	..	..	..
Surveying .. ..	..	..	..	..	5	..	..	..	1	..	..	..
Dentistry .. ..	..	..	67	5	..	..	..	..	23	2	..	..
Medicine	12	3	228	36	1	..	..	..	140	19	..	..
Pharmacy .. ..	..	..	50	32	..	..	..	..	..	..	..	..
Physiotherapy .. ..	..	..	..	..	..	..	..	..	..	..	..	..
Agriculture .. ..	..	..	41	7	..	..	20	3	36	4	..	..
Agricultural Economics ..	..	..	..	..	..	..	10	..	..	..	..	..
Forestry .. ..	..	..	5	..	..	..	..	..	11	..	..	..
Veterinary Science .. ..	..	..	47	4	..	..	..	..	1	..	..	..
Total	152	36	1,361	548	792	95	248	85	1,308	445	38	29
Post-graduate Diplomas—												
Education .. ..	..	..	101	152	27	63	38	80	51	47	..	..
Engineering .. ..	..	..	3	1	24	..	..	..	13	..	..	..
Medicine .. ..	..	..	37	2	..	..	..	..	8	..	..	..
Agriculture .. ..	..	..	3	..	..	..	..	..	2	..	..	..
Total .. ..	..	..	144	155	51	63	38	80	74	47	..	..
Sub-graduate Diplomas ..	1	..	3	16	2	1	..	..	39	57	..	..
Certificates .. ..	..	..	..	..	25	1	..	..	..	..	..	..

Table continued on next page.

UNIVERSITIES: DEGREES CONFERRED, AND DIPLOMAS AND CERTIFICATES GRANTED, YEAR ENDED 31st JULY, 1964—*continued*

Course	Queensland		Adelaide		Western Australia		Tasmania		All Universities		
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.	
Degrees—											
Arts	89	123	78	76	113	85	44	50	1,102	1,107	
Divinity	2	..	..	..	..	..	..	..	3	..
Music .. .. .	..	..	3	3	..	..	..	..	13	19
Psychology ..	..	..	..	..	..	..	..	..	4	1
Law	18	..	17	4	23	2	14	1	297	43	
Commerce/Economics ..	98	6	44	1	18	3	12	..	692	59	
Education	20	7	..	..	21	6	..	..	114	29
Social Studies	1	7	..	..	..	..	..	..	4	9
Science	134	52	225	57	104	19	49	10	1,372	357	
Architecture and Town Planning	17	..	13	2	..	..	..	..	128	13
Building .. ..	..	..	..	..	..	..	..	..	6	..
Engineering	109	..	139	..	32	..	19	..	922	..	
Surveying	8	..	..	..	..	..	..	..	14	..
Dentistry	34	9	8	1	11	..	..	..	143	17
Medicine	84	11	64	10	43	4	..	..	572	83
Pharmacy	26	20	..	..	..	..	..	..	76	52
Physiotherapy .. ..	..	1	..	..	..	..	..	..	..	1
Agriculture	41	1	28	1	13	..	..	..	179	16
Agricultural Economics ..	..	..	..	..	..	..	..	..	10	..
Forestry	11	..	..	..	3	..	..	..	30	..
Veterinary Science ..	42	3	..	..	..	..	..	..	90	7
Total	734	240	619	155	381	119	138	61	5,771	1,813	
Post-graduate Diplomas—											
Education	38	24	29	26	47	27	20	12	351	431	
Engineering	3	..	..	..	..	..	..	..	43	1
Medicine .. ..	..	1	..	..	..	..	..	..	45	3
Agriculture	4	..	..	..	..	..	..	..	9	..
Total	45	25	29	26	47	27	20	12	448	435	
Sub-graduate Diplomas ..	87	43	98	99	..	..	..	..	230	216
Certificates	245	84	5	..	..	..	11	19	286	104

Table continued from previous page.

The next table shows total degrees conferred at all Australian universities during each of the years 1960 to 1964.

UNIVERSITIES: DEGREES CONFERRED, AUSTRALIA(a)

Degree	1960			1961			1962			1963			1964		
	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.	M.	F.	P.
Arts ..	752	597	1,349	742	647	1,389	890	733	1,623	936	946	1,882	1,102	1,107	2,209
Divinity ..	..	..	..	1	..	1	..	..	3	..	..	1	3	..	6
Music ..	9	26	35	9	15	24	9	17	26	8	25	33	13	19	32
Psychology ..	..	..	..	..	..	..	8	1	9	12	1	13	7	1	5
Law ..	218	24	242	244	29	273	310	30	340	260	39	299	297	43	340
Commerce/Economics ..	288	28	316	389	42	431	552	49	601	545	59	604	692	59	751
Education ..	87	19	106	94	20	114	97	19	116	103	20	123	114	29	143
Social Studies ..	..	..	..	..	..	..	..	..	5	6	8	14	4	9	13
Science ..	868	192	1,060	997	247	1,244	1,042	276	1,318	1,253	320	1,573	1,372	357	1,729
Architecture and Town Planning ..	65	9	74	60	9	69	79	5	84	133	8	141	128	13	141
Building ..	..	..	..	..	..	..	2	..	2	6	..	6	..	..	6
Engineering ..	551	..	551	703	..	703	788	..	788	829	1	830	922	..	922
Surveying ..	8	..	..	5	..	5	11	..	11	15	..	15	14	..	14
Dentistry ..	118	10	128	117	17	134	139	16	155	141	3	144	143	17	160
Medicine ..	413	65	478	453	71	524	466	84	550	538	74	612	572	83	655
Pharmacy ..	..	..	..	..	..	..	..	..	53	39	92	76	52	128	
Physiotherapy ..	1	8	9	..	1	1	..	1	1	1	3	4	..	1	
Agriculture and Agricultural Economics ..	146	16	162	178	16	194	168	12	180	191	17	208	189	16	205
Forestry ..	20	1	21	32	..	32	16	..	16	27	..	27	30	..	30
Veterinary Science ..	56	2	58	58	4	62	65	4	69	79	4	83	90	7	97
Total—															
Higher Doctorates ..	21	1	22	26	2	28	35	1	36	32	1	33	32	2	34
Ph.D.'s ..	127	10	137	112	14	126	124	14	138	161	13	174	188	15	203
Master's Degrees ..	223	31	254	279	28	307	301	31	332	319	47	366	342	45	387
Bachelor's Degrees ..	3,229	955	4,184	3,665	1,078	4,743	4,185	1,206	5,391	4,625	1,506	6,131	5,209	1,751	6,960
Grand Total ..	3,600	997	4,597	4,082	1,122	5,204	4,645	1,252	5,897	5,137	1,567	6,704	5,771	1,813	7,584

(a) Figures for 1962 and later years refer to degrees conferred during the 12 months ended July. Figures for 1960 and 1961 refer to degrees conferred during the calendar year. Details of degrees conferred during the five months ended December, 1961, which are included in both 1961 and 1962 figures shown in the table, are as follows: Arts, 129; Music, 10; Law, 59; Commerce and Economics, 45; Education, 18; Science, 97; Architecture and Town Planning, 9; Engineering, 56; Dentistry, 8; Medicine, 207; Physiotherapy, 1; Agriculture and Agricultural Science, 15; Forestry, 3; Veterinary Science, 25; total degrees, 682, including 10 Higher Doctorates, 34 Ph.D.'s, 86 Master's Degrees and 552 Bachelor's Degrees.

8. Finance.—(i) *General.* Australian universities are incorporated by statute. Since their establishment they have come to depend greatly on government grants for their income. In recent years large amounts have been required for new buildings, as well as for current expenditure to provide staff and equipment to cope with increased student enrolments. In 1963 income other than from State and Commonwealth grants, including student fees, amounted to little more than one-fifth of the total income. Income from non-government sources includes grants, mainly for research purposes, from businesses, international foundations, and private individuals. Some income is also received from endowments.

(ii) *Financial Assistance from the Commonwealth Government.* (a) *General.* Prior to 1939 Commonwealth assistance was almost entirely concerned with research projects carried out by or in collaboration with the universities. During and since the 1939–45 War the Commonwealth extended assistance to university students, at first to increase the number of highly trained people required for the war effort, then with the object of rehabilitating ex-servicemen, and finally as a social service benefit to the community. For the purpose of reconstruction training, the Commonwealth Government made available to the universities approximately £1 million for buildings and £500,000 for equipment.

Following a report submitted by a committee of inquiry appointed to report on university finances and requirements, the Commonwealth, since 1951, has made matched grants to the States for recurrent expenditure on university purposes. Since 1958 the Commonwealth has also assisted with the capital needs of the universities for building projects and for equipment, and provided unmatched recurrent grants and grants for the building programmes of residential colleges affiliated with universities. In the 1961–63 triennium the Commonwealth matched State grants for buildings at teaching hospitals and in 1960 instituted grants for special research projects at universities. As well as making grants available for State universities, the Commonwealth has continued to support the university institutions for which it is responsible.

In 1959, following the Report of the Committee on Australian Universities, the Commonwealth Government established the Australian Universities Commission under the *Australian Universities Commission Act 1959*. The Commission's principal functions are to advise the Prime Minister on financial assistance to Commonwealth universities and to States in relation to their universities and also on the balanced development of Australian universities. The Commission commenced its work in July, 1959. Since its establishment the Commission has produced two reports; the first, presented in October, 1960, and covering the years 1961 to 1963, recommended Commonwealth grants totalling £110 million for State universities. The Commission's second report was presented in August, 1963, and recommended Commonwealth grants totalling more than £151 million for State universities for the period 1964 to 1966. The *Universities (Financial Assistance) Act 1963* gave effect to the major financial recommendations contained in the Commission's second report.

(b) *Commonwealth Grant for Recurrent Expenditure in Universities.* This is a continuation of matched grants provided since 1951. The maximum amount available in 1964 is shown in the following table. These amounts have been adjusted to allow for the recommendations of the Report of the Inquiry into Academic Salaries by Mr. Justice Eggleston. However, the amounts are subject to further amendment when the full cost is known.

STATE UNIVERSITIES, ETC.: COMMONWEALTH GRANT FOR RECURRENT EXPENDITURE, 1964

University, etc.	Amount
	£'000
Sydney	2,311
New South Wales(a)	2,212
New England	675
Melbourne	1,922
Monash	1,032
Queensland(b)	1,488
Adelaide	1,292
Western Australia	895
Tasmania	366
South Australian Institute of Technology	114
Total	12,307

(a) Includes grants for the University Colleges at Wollongong and Newcastle (the University of Newcastle as from 1st January, 1965). (b) Includes grant of £80,000 for the University College at Townsville.

Since 1961, matched grants have been made on a basis of £1 of Commonwealth money for every £1.85 of income received by a university from fees and State grants. From 1951 to 1960 the matching ratio was, in general, £1 to £3.

(c) *Commonwealth Grants for the Teaching and Administrative Costs of Residential Colleges.* From 1964 the grants consist of unmatched Commonwealth payments each year of £2,500 (previously £2,000) to each college affiliated with or administered by a university, plus the sum of £15 for each resident student, and a further £5 for each non-resident student receiving tutorial assistance. The Commonwealth total grant paid in 1964 was £215,575.

(d) *Commonwealth Grants for Selected Building Projects in Universities.* Those grants, for the period 1964 to 1966, are shown in detail in the Second Schedule to the 1963 Act. Payments are made up to a given maximum for each project, on the basis of £1 from the Commonwealth for every £1 of State grants. From 1964 there was a change in this grant in that, where appropriate, an allowance for furnishings and equipment is included in the building grants for each project. Previously, separate grants were provided for these items.

Also, from 1964, the schedule showing grants for university building projects includes grants for university computing facilities, but grants for the erection and alteration of buildings for halls of residence administered by universities are shown elsewhere. The total Commonwealth grant under this heading for each University is shown in the following table.

STATE UNIVERSITIES, ETC.: COMMONWEALTH GRANTS FOR BUILDING PROJECTS, ETC., 1964 TO 1966

University, etc.	Amount
	£'000
Sydney	2,340
New South Wales	1,940
New England	676
Newcastle	460
Macquarie, New South Wales	550
Melbourne	2,406
Monash	2,235
La Trobe, Victoria	550
Queensland	1,508
Adelaide	1,634
Western Australia	960
Tasmania	468
 South Australian Institute of Technology	 331
 Total	 16,058

(e) *Commonwealth Grants for Special Research Projects in Universities.* Under the 1963 Act special provision is made to assist universities to develop and extend their research programmes, including the purchase of equipment. Under the 1961-1963 legislation grants were provided for equipment only. The grants are available on the basis of £1 from the Commonwealth for every £1 of State grants. For the 1964 to 1966 triennium the Australian Universities Commission recommended a Special Research Grant of £5,000,000 for the State Universities. To the end of 1964, £1,000,000 had been allocated under the the legislation. The maximum amount available to each university is shown in the following table.

STATE UNIVERSITIES: COMMONWEALTH GRANTS FOR SPECIAL RESEARCH PURPOSES, 1964

University	Amount
	£'000
Sydney	80
New South Wales(a)	63
New England	37
Melbourne	80
Monash	38
Queensland	55
Adelaide	55
Western Australia	55
Tasmania	37
 Total	 500

(a) Includes the former Newcastle University College.

(f) *Commonwealth Grants for Buildings for Halls of Residence and Affiliated Residential Colleges.* Under the 1963 Act an amount representing the grant available to each university for both types of student residence is shown in the Fourth Schedule. Previously, grants for buildings for university-administered halls of residence were included in the Schedule showing university building projects. Payments were made up to a given maximum for each project. For halls of residence the grant comprised £1 from the Commonwealth for every £1 of State grants. For affiliated residential colleges Commonwealth grants were up to one-half of the cost of a project, the other half being met from college or State Government sources. For the 1964-66 triennium, however, payments are made up to a given maximum for each project on the basis of £1 from the Commonwealth for every £1 of Residential college funds and State grants. The maximum Commonwealth grants available for each State university in the 1964-66 triennium are shown in the following table.

STATE UNIVERSITIES: MAXIMUM COMMONWEALTH GRANTS FOR BUILDINGS FOR HALLS OF RESIDENCE AND AFFILIATED RESIDENTIAL COLLEGES, 1964 TO 1966

University							Amount
							£ 000
Sydney	..	..	..	..	..	..	316
New South Wales	..	..	..	..	..	..	294
New England	..	..	..	..	..	..	475
Newcastle	..	..	..	..	..	..	110
Melbourne	..	..	..	..	..	..	280
Monash	..	..	..	..	..	..	605
Queensland	..	..	..	..	..	..	387
Adelaide	..	..	..	..	..	..	320
Western Australia	..	..	..	..	..	..	309
Tasmania	..	..	..	..	..	..	177
Total	..	..	..	..	..	..	3,273

(iii) *University Income.* The following table summarizes the income of each university in 1963.

UNIVERSITIES: INCOME, 1963
(£'000)

University	Government grants(a)		Other income			Total income
	Commonwealth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	

(i) INCOME FOR SPECIFIC CAPITAL PURPOSES(d)

Australian National University	..	..	..	..	..	..	2,086
Sydney	..	..	..	..	..	..	1,853
New South Wales	..	..	..	..	..	..	1,798
New England	..	..	..	..	..	5	633
Melbourne	..	..	..	..	..	..	1,620
Monash	..	..	..	..	..	..	2,199
Queensland	..	..	..	..	..	4	1,037
Adelaide	..	..	..	..	..	..	1,060
Western Australia	..	..	..	..	..	..	1,058
Tasmania	..	..	..	..	..	..	400
Total	..	..	..	..	..	10	13,744

NOTE.—For footnotes see next page.

UNIVERSITIES: INCOME, 1963—*continued*
(£'000)

University	Governments grants(a)		Other income			Total income
	Commonwealth Government grants	State Government grants	Donations and endowments(b)	Student fees(c)	Other income	

(ii) INCOME FOR OTHER PURPOSES

Australian National University	3,910	..	143	86	271	4,410
Sydney	2,232	2,305	1,556	1,478	192	7,763
New South Wales	2,007	2,976	274	789	303	6,349
New England	669	1,042	59	124	239	2,133
Melbourne	1,958	1,775	735	1,084	523	6,075
Monash	632	1,031	99	140	45	1,947
Queensland	1,372	1,591	332	761	128	4,184
Adelaide	1,185	1,556	252	359	164	3,516
Western Australia	856	1,160	204	222	207	2,649
Tasmania	343	453	40	87	59	982
Total	15,164	13,889	3,694	5,130	2,131	40,008

(iii) TOTAL INCOME

Australian National University	5,943	..	195	86	272	6,496
Sydney	2,995	3,067	1,884	1,478	192	9,616
New South Wales	2,745	4,003	307	789	303	8,147
New England	1,001	1,336	61	124	244	2,766
Melbourne	2,741	2,519	828	1,084	523	7,695
Monash	1,730	2,132	99	140	45	4,146
Queensland	1,830	2,102	396	761	132	5,221
Adelaide	1,715	2,086	252	359	164	4,576
Western Australia	1,432	1,642	204	222	207	3,707
Tasmania	520	676	40	87	59	1,382
Total	22,652	19,563	4,266	5,130	2,141	53,752

(a) Includes funds expended by various government departments and other bodies in respect of universities but not controlled by the universities. (b) In the case of endowments, only income from property and other investment of these endowments is included. The treatment of donations depends on the terms of the gift, etc. When the capital sum is specified to be expended over several years, only the portion of the capital sum allocated to each year is shown as income in that year, but if the capital sum is available for spending without limitation as to time, the full amount is recorded as income in the year it is received, irrespective of whether it is spent in that year or not. The capital value of land and buildings donated to the universities is not recorded as income, unless these properties are sold, in which case the amounts realized are included. (c) Excludes fees collected on behalf of student unions. (d) Income received specifically for new buildings, major alterations and additions to buildings, installation of services, purchase of land and buildings and major equipment.

(iv) *University Expenditure.* The following table summarizes the expenditure of each university in 1963.

UNIVERSITIES: EXPENDITURE, 1963
(£'000)

University	Teaching and research	Administration and general overhead	Libraries	Buildings, premises, grounds	Sundry auxiliary expenditure	Total expenditure
Australian National University	3,430	473	203	2,691	213	7,010
Sydney	5,545	672	277	1,993	164	8,651
New South Wales	4,440	541	313	2,011	319	7,624
New England	1,082	255	95	636	376	2,444
Melbourne	4,216	440	267	2,054	693	7,670
Monash	1,289	143	210	2,452	33	4,127
Queensland	3,128	295	180	1,306	84	4,993
Adelaide	2,597	267	211	1,738	197	5,010
Western Australia	1,902	213	130	1,246	292	3,783
Tasmania	665	111	64	507	67	1,414
Total	28,294	3,410	1,950	16,634	2,438	52,726

(v) *Income and Expenditure.* The following table shows income and expenditure at each Australian university for each of the years 1959 to 1963.

UNIVERSITIES: INCOME AND EXPENDITURE
(£'000)

University	1959	1960	1961(a)	1962(a)	1963(a)
Australian National University—					
Income	2,964	3,786	5,664	5,591	6,496
Expenditure	2,555	3,587	5,053	6,138	7,010
Sydney—					
Income	5,184	5,997	7,016	8,219	9,616
Expenditure	4,756	5,725	7,303	8,171	8,651
New South Wales—					
Income	3,951	5,160	7,070	7,811	8,147
Expenditure	3,530	4,922	7,453	7,900	7,624
New England—					
Income	1,812	1,693	1,923	2,083	2,766
Expenditure	1,379	1,976	2,043	2,338	2,444
Melbourne—					
Income	4,800	5,735	5,597	7,307	7,695
Expenditure	4,154	5,158	6,114	7,706	7,670
Monash—					
Income	329	1,446	3,999	4,254	4,146
Expenditure	323	1,017	3,921	4,527	4,127
Queensland—					
Income	2,747	3,787	4,180	4,944	5,221
Expenditure	2,698	3,663	4,161	4,363	4,993
Adelaide—					
Income	2,279	2,595	3,504	3,918	4,576
Expenditure	2,421	2,758	3,367	3,739	5,010
Western Australia—					
Income	1,798	2,335	2,403	3,022	3,707
Expenditure	1,790	2,061	2,563	2,853	3,783
Tasmania—					
Income	1,429	1,177	1,275	1,652	1,382
Expenditure	1,441	1,153	1,324	1,632	1,414
Total Income	27,293	33,711	42,631	48,801	53,752
Total Expenditure	25,047	32,020	43,302	49,367	52,726

(a) Figures for 1961, 1962 and 1963 were compiled on a new basis and totals for individual universities are not necessarily comparable with previous years.

§ 10. Other Tertiary Institutions

1. **General.**—In addition to the degree-granting universities, various other institutions offer courses at tertiary level which may lead to a certificate, diploma, or similar qualification. Included among these institutions are technical colleges, which have been described in § 6, page 703.

2. **Teachers' Colleges.**—The State Education Departments conduct teachers' colleges to train teachers for government schools. There are eight colleges in New South Wales, twelve in Victoria, three in South Australia, and two each in Queensland, Western Australia and Tasmania, making a total of 29 colleges.

These colleges provide a variety of teacher training courses, including those for primary teachers, secondary teachers, and those specializing in teaching infants, handicapped children, art, music, and handicrafts. A description of the courses is given in § 3, page 698.

Teachers' colleges are co-educational and, in the larger States, have been established in country areas as well as in cities. Students entering them have completed their secondary schooling and are usually about 17 years of age. The principal and staff of the colleges are responsible to the Director of Education in the State concerned.

3. **Kindergarten Training Colleges.**—The Kindergarten Unions in all States except Tasmania have established teacher training colleges providing three-year courses. The minimum entrance age is usually 17 years and the Leaving Certificate is required for admission. In addition, in New South Wales, the Sydney Day Nursery and Nursery Schools' Association maintains a training college.

The pre-school teacher training courses in these colleges are all full-time diploma courses and are similar in content and standards. Teachers are trained for work with children between the ages of 2 and 7 years, and the training courses include the study of general educational theory, the theory of pre-school education, general cultural subjects, and art and crafts (including music). In addition, training is given in practical pre-school teaching.

4. **Agricultural Colleges.**—There are seven State agricultural colleges—Hawkesbury and Wagga (New South Wales), Longerenong and Dookie (Victoria), Gatton (Queensland), Roseworthy (South Australia), and Muresk (Western Australia), offering a comprehensive course of two or three years leading to the award of a Diploma in Agriculture or in a specialized field such as animal husbandry, dairy manufactures, and horticulture. The School of Horticulture, Burnley, Victoria, also offers a three-year diploma course.

Agricultural colleges are government institutions administered by the State Departments of Agriculture in New South Wales, Victoria, South Australia and Western Australia and by the State Department of Education in Queensland. Their purpose is to teach the principles and practices of agriculture and its specialized branches to those intending to take up farming as a career and to those who propose to enter such occupations as agricultural field officer or technical officer in food processing industries.

The minimum entrance standard is the Intermediate Certificate or equivalent examination in all cases except Western Australia where it is the Sub-leaving Examination. As entry is competitive, there is a tendency for students to hold better than the minimum qualifications. All the colleges are fully residential and the age at which students may enter them varies from 15 to 17 years, depending on the college and the type of course.

In addition to their formal courses of training, agricultural colleges offer short courses of from three days to one month to farmers and teachers in country districts.

5. **Schools of Forestry.**—From 1965 tertiary training in forestry, previously carried out by the Australian Forestry School, Canberra, will be provided by a Department of Forestry in the Faculty of Science within the Australian National University's School of General Studies. A four-year degree course will be offered. Training in forestry is also carried out at the Creswick School of Forestry in Victoria.

6. **Conservatoria of Music.**—There are conservatoria of music in four States. Those in Victoria and South Australia are attached to the Universities of Melbourne and Adelaide respectively. The New South Wales State Conservatorium and the Queensland Conservatorium are controlled by the respective Departments of Education.

All four conservatoria offer diploma courses for which matriculation status is not required; at Melbourne and Adelaide degree courses are also available to matriculated students.

7. **Service and Administrative Colleges.**—Each of the three armed services maintains institutions for the training of officers. Descriptions of these can be found in Chapter XXVII. Defence. The Royal Military College, Duntroon, Australian Capital Territory, has arrangements with universities whereby its graduates may enter university courses at an advanced stage. The Royal Air Force Academy, Point Cook, Victoria, has evolved from the Royal Australian Air Force College, which was established in 1948 as a tertiary training centre to provide a professional education for permanent officers of the Air Force. It is affiliated to the University of Melbourne and has adopted that University's Bachelor of Science course leading to the degree of Bachelor of Science (Melbourne). The Academy is also permitted to present students for higher degrees in science and the degree of Doctor of Philosophy.

The Australian School of Pacific Administration, controlled by the Department of Territories, trains students in the various aspects of service and administration in Commonwealth Territories, including teaching.

8. **The Australian Administrative Staff College.**—Opened in 1957, the Australian Administrative Staff College is a private organization working in close co-operation with government and other public bodies, the armed services and the trade union movement. It was founded, and is owned, by a large group of leading Australian companies and has its permanent premises at Mount Eliza, near Melbourne.

The College conducts residential courses for administrators to further the study of the problems which arise in managerial work.

§ 11. Commonwealth Activities in Education

1. **General.**—(i) *Fields of Activity.* Although education is primarily the responsibility of the States, the Commonwealth is engaged in educational activities incidental to its responsibilities in such areas as defence, external relations, immigration and social services. It is also responsible for public education in its own Territories. Activities of the Commonwealth in education are not administered by a single authority but are divided among a number of departments and instrumentalities. Education in Commonwealth Territories is described in Chapter V. The Territories of Australia; various schools and colleges for the defence services are treated in Chapter XXVII. Defence; and other activities which may be considered broadly as educational are described in the section on Broadcasting and Television and elsewhere in Chapter XV. Transport and Communication.

(ii) *The Commonwealth Office of Education.* The Commonwealth Office of Education was set up under the *Education Act 1945* to provide advice to the Commonwealth Government on educational matters and to serve as a channel for liaison between Commonwealth and State educational authorities. Among its major commitments are those which arise from international relations in education, including the association of Australia with the aims and activities of the United Nations Educational, Scientific and Cultural Organization (UNESCO), and the planning and supervision of training for oversea students given awards by the Australian Government to attend Australian universities and similar institutions.

The Office acts as the administering authority for Australian participation in the Scheme of Commonwealth Co-operation in Education and concerns itself with the techniques of teaching English as a second language in connexion with the assimilation of immigrants and tuition for sponsored foreign students. It also administers the Commonwealth schemes of secondary and technical scholarships.

(iii) *The Commonwealth Scholarships Board.* The Office of Education provides the secretariat for the Commonwealth Scholarships Board. This Board under its former title of the Universities Commission was also established by the *Education Act 1945*. Prior to 1945 the Commission had functioned under wartime National Security Regulations. The Board consists of a chairman, who is the *Director of the Office of Education*, and three other members. The main responsibilities of the Board at present are advising the Government on the policy and co-ordinating the administration of the Commonwealth scholarship schemes and of Commonwealth post-graduate awards. The Board is responsible for arranging and supervising the training of ex-service personnel and war widows at university and university type institutions under the Korea and Malaya Training Scheme and the Disabled Members' and Widows' Training Scheme. It was also responsible for arranging and supervising training under the Commonwealth Reconstruction Training Scheme until its completion at the end of 1961.

2. *Assistance to Students.*—The Commonwealth Government provides financial assistance to students who are undergoing tertiary training through a number of scholarship schemes, all of which are administered by the Commonwealth Scholarships Board. The most extensive of these is the Commonwealth Scholarship Scheme, under which 5,000 scholarships are offered annually to undergraduates at universities and other approved institutions.

The majority of the undergraduate scholarships are open entrance awards allocated amongst the States on a population basis and awarded competitively on the results of examinations accepted for matriculation in each State. In addition, 1,280 later year awards are available to students who have completed one or more years of a course, and mature age awards are available to older persons in the 25 to 30 years age group. All successful applicants have their fees paid. Scholarship holders may also be paid a living allowance subject to a means test. As from 1st January, 1965, the maximum rates of allowance have been £396 10s. per annum for a scholar living away from home and £260 per annum when living at home.

At 30th June, 1964, 16,937 Commonwealth scholars were enrolled in undergraduate courses including 5,750 new award holders. Up to the end of 1964, 24,368 scholars had completed undergraduate courses under the scheme.

In 1959 a scheme of Commonwealth post-graduate awards tenable at Australian universities was introduced under which 100 awards were made available each year. The benefits comprise a living allowance without means test and payment of university fees. The possible number of post-graduate awards was increased to 225 from 1963 and to 300 from 1965. The Commonwealth Government contribution towards the stipend in respect of each award was raised to £900 per annum from 1st January, 1964. Awards may be renewed annually up to a maximum period of four years; in 1964, 472 students were holding awards.

Training under the Commonwealth Reconstruction Training Scheme was completed at the end of 1961, a total of 21,424 students having completed training. At the end of 1963, 31 students were in training under the Korea and Malaya Training Scheme and the Disabled Members' and Widows' Training Scheme, 14 of them following full-time courses and 17 studying part-time.

3. *International Relations.*—The Commonwealth has been actively involved in the considerable extension which has recently taken place in relations and exchanges with other countries in the field of education. A significant encouragement to this growth has been membership in UNESCO, to which Australia has belonged since 1946 when the organization was founded.

Twelve specialist UNESCO committees in Australia are responsible for a wide and varied programme of activities and have helped to make Australia's contribution to many international conferences and seminars highly effective. The Committees' projects include the organization of Australian and regional seminars, information programmes, and the preparation and circulation of travelling exhibitions which deal with subjects forming part

of UNESCO's programme. The Australian National Advisory Committee for UNESCO co-ordinates the work of the specialist committees and advises the Commonwealth Government on Australian participation in UNESCO.

With the co-operation of educational institutions, State Education Departments and other bodies, the Commonwealth has accepted increasing commitments in schemes of international assistance and co-operation. The Colombo Plan Technical Co-operation Scheme, the United Nations Expanded Programme of Technical Assistance, the Australian International Awards Scheme, and the Special Commonwealth African Assistance Plan are some of the programmes through which the Commonwealth Government is providing training for overseas students in Australia and is sending Australian experts and equipment to many of the newly developing countries, especially in Asia and Africa. Australia is also actively sharing with other Commonwealth countries in the Scheme of Commonwealth Co-operation in Education which includes the Commonwealth Scholarship and Fellowship Plan. There were some 1,500 sponsored foreign students in Australian institutions in 1964, compared with about 800 in 1956. About three-quarters of these were Colombo Plan trainees, most of whom were studying in various fields of engineering, science, medicine, education and economics.

Support is given to Australian participation in many international governmental and non-governmental organizations. For example, Australian educationists have attended yearly meetings of the International Bureau of Education, and regular contributions are made to the Bureau's international surveys into various aspects of education. Assistance has been given to bodies such as the Australian Teachers' Federation in sending delegates to meetings of the World Confederation of Organizations of the Teaching Profession.

4. Grants for Other Educational Purposes.—The Commonwealth gives assistance to various educational schemes and institutions. Grants are made each year by the Commonwealth to the Australian Pre-school Association for the development of kindergarten education, to the Commonwealth National Fitness Council, to the Australian Council for Educational Research, to the Department of Adult Education at the University of Sydney for the publication of the *Current Affairs Bulletin*, and to assist in the provision of training in Occupational Therapy, Physiotherapy, and Nursing. The cost of the Departments of Indonesian and Malayan Studies at the University of Melbourne and the University of Sydney is also met by the Commonwealth Government.

5. Migrant Education.—The Commonwealth Government's post-war immigration policy has brought to Australia a large number 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. This service is provided free of charge to immigrants above school leaving age.

Before arriving in Australia migrants who do not speak English are given some instruction in English by shipboard education officers. Some may have attended classes in Europe organized by the Inter-governmental Committee for European Migration, with which the Australian Government co-operates.

In Australia evening classes are arranged by State Education Departments wherever nine or more migrants in country areas, or twelve or more migrants in city areas, wish to learn English. There is also available through State Education Departments 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, while responsibility for the overall supervision of the programme rests with the Department of Immigration, which also meets the costs.

In November, 1964, 13,355 migrants were enrolled in classes and 7,759 were enrolled in radio and correspondence courses. Since the inception of the programme in 1948 approximately 500,000 migrants have been enrolled for English tuition.

6. Technical Training by Government Departments.—Although most needs of departments for trained staff are met by apprenticeship schemes and other technical college courses and by the universities, some departments provide training which is not available elsewhere. The most important field for which such training is provided is the training of telephone, telegraph, radio and television technicians by the Postmaster-General's Department.

§ 12. Adult Education

1. **General.**—The term “adult education” as used in Australia refers mainly to non-vocational educational and cultural activities for adults. While the nature of the recognized adult education authorities varies from State to State, their major activities have many common features. Regular courses of lectures are organized on such topics as literature, music, drama, international affairs, languages and crafts. Some authorities also organize discussion groups, festivals and summer schools, and provide special services for groups in remote areas. In 1960 an Australian Association of Adult Education was formed, and its first Annual Conference was held in Adelaide in 1961. The Association handles matters pertaining to adult education at a national level and arranges liaison with similar bodies in other countries.

One of the first bodies active in the field of adult education in Australia was the Workers' Educational Association, which formed associations in all States in 1913. Its aims are to bring the universities into closer relationship with the community in general and to provide for higher education in civic and cultural subjects. These 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.

The organization of adult education and some of the activities in each State are described below.

2. **New South Wales.**—State Government grants for adult education are allocated on the advice of the Adult Education Advisory Board. Grants are made to the University of Sydney (Department of Adult Education), the Worker's Educational Association, the University of New England (Department of University Extension), the Public Library of New South Wales (Adult Education Section), and the Arts Council of Australia (New South Wales Division).

(i) *University of Sydney.* There were formerly two separate authorities concerned with adult education at Sydney University, the Extension Board and the Department of Tutorial Classes. However, administrative amalgamation of the work of these two bodies took place in 1964 with the formation of a new Department of Adult Education. This new Department provides all the services previously supplied by the two bodies. The two earlier bodies, however, maintain their identities under the new organization.

The work of the Department of Adult Education is carried out under the supervision of two Senate Committees, namely, the University Extension Board and the joint committee for Tutorial Classes.

The University Extension Board provides two forms of education—the extension of existing university education to the public in the form of lectures, or to graduates in the form of refresher courses; and the extension of academic education beyond the existing university curriculum by special courses or classes in subjects not provided by University Departments.

The Joint Committee for Tutorial Classes works in conjunction with the Workers' Educational Association. 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. It also publishes the fortnightly *Current Affairs Bulletin*.

(ii) *University of New England.* The Department of University Extension at the University of New England brings university extension activities especially 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. Vacation schools attract participants from many other areas as well.

(iii) *Workers' Educational Association.* In addition to co-operating with the Sydney University Department of Adult Education, the Workers' Educational Association itself provides classes in a wide variety of fields. It publishes *The Australian Highway*, a bi-monthly journal of adult education, and maintains a property near Sydney where short residential schools are held through the year.

(iv) *Public Library of New South Wales.* The Public Library of New South Wales Adult Education section provides an adult education library service for all classes and groups conducted by the bodies mentioned above.

(v) *New South Wales Department of Education.* The New South Wales Department of Education has established evening colleges consisting of classes held in school buildings and staffed largely by departmental teachers. Such colleges provide a wide range of educational, cultural and leisure activities for adolescents and adults, and at some there are facilities enabling adults to prepare for public examinations.

(vi) *Arts Council of Australia.* Adult education of a more informal kind is provided by the New South Wales Division of the Arts Council of Australia which maintains a mobile theatre unit and organizes touring ballet, opera, and drama companies to country towns.

3. **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, usually lasting from 10 to 20 weeks, on topics ranging from social studies, psychology, language and literature, to crafts, music and drama. The general Summer School, organized by the Council of Adult Education for many years, is no longer held. In its place, four separate non-residential schools are held in the city area. The Council publishes a monthly newsletter, *Group Affairs*, and a quarterly journal, *Adult Education*. Its group service assists, and provides programme material for, discussion groups formed by organizations and individuals throughout the State.

An important development 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 to country towns which otherwise would have no opportunity of seeing such performances.

The Council's income is derived mainly from a government grant, but also from student fees and Community Arts Service performances.

The University of Melbourne Extension Committee arranges free public lectures and organizes classes for matriculation students on points of interest in their studies.

The Victorian Education Department arranges classes in commercial subjects, arts and crafts, and shorthand and typing. Evening classes in leaving and matriculation subjects are also offered.

4. **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 are six district officers, one based in Brisbane and five 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 extending over a full year, and film screenings. Library and film services are provided.

A Public Lecture Committee established by the University of Queensland is responsible for organizing public lectures by local speakers and distinguished visitors to the University. Through the Institute of Modern Languages, the University provides facilities for the study of modern languages by members of the general public.

5. **South Australia.**—Since 1917 the University of Adelaide, through the Joint Committee for Tutorial Classes, has provided 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, in co-operation with the Workers' Educational Association of South Australia.

In 1957 a Department of Adult Education was established in the University and a full-time Director appointed. A wide range of university extension courses and educational conferences, summer schools and seminars, including a number dealing with subjects at post-graduate level, are organized directly by the University.

The Workers' Educational Association of South Australia, in addition, carries on an independent educational programme of classes, schools, exhibitions, and film festivals.

The State Education Department also arranges an extensive programme of educational activities for adults. In addition to classes in academic and craft subjects, the Department's Adult Education centres offer a wide range of leisure interests and cultural subjects.

6. **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.

In the metropolitan area the Board conducts classes, refresher courses and short schools, conferences, seminars and public lectures and maintains a library. The Board's country work operates mainly through a box library scheme for discussion groups. Lecture tours and week-end schools are held, and local adult education is encouraged through local committees. *Metropolitan work and country work are drawn together in an annual summer school.* The Board also operates a community arts service and arranges screenings of foreign films. Regional drama festivals and music festivals are arranged, culminating in the annual Festival of Perth, inaugurated and administered by the Board.

7. **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. The Adult Education Board, established under the *Adult Education Act 1948*, organizes classes of ten weeks' duration on a wide range of subjects. The Board 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 students' fees.

The executive officer of the Board is the Director of Adult Education. Activities are organized on a regional basis by organizers based in Hobart, Launceston and three large country centres.

8. **Australian Capital Territory.**—The School of General Studies of the Australian National University has organized classes and discussion groups through its Adult Education Department since 1959.

§ 13. Oversea Students in Australian Educational Institutions

The development of closer ties in education between Australia and other countries and the demand for education in many countries in Asia, Africa, and the Pacific have brought about a remarkable growth in the number of overseas students who come to Australia to further their education. Part of the growth and much of the awareness of the facilities available may be attributed directly to the schemes mentioned in § 11, para. 3. Since 1955, when there were about 3,500 overseas students in Australia, the number has increased to about 12,500 in 1964. Some attend institutions of higher education such as universities and technical colleges, and Australian qualifications are receiving increasing acceptance and recognition as students return home on completion of their courses. Between 1955 and 1964 the numbers of foreign students in institutions of higher education have risen from about 1,800 to 6,800, most of whom came from Asian countries. Australian institutions have shown a readiness to accept overseas students, and in many cases special provisions have been made to suit their needs. Nevertheless, population growth and the demand for education, especially for higher education, within Australia have forced many institutions to restrict the admission of overseas students in common with Australian students.

§ 14. Organizations Associated with Education

1. **Australian Council for Educational Research.**—The Australian Council for Educational Research, a non-governmental body, is 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 give substantial financial support.

2. **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. A major conference of the New Education Fellowship was held in Australia in 1962, during which prominent educationists from Australia and overseas met in all States.

3. **Australian College of Education.**—The Australian College of Education was formed in 1959. Its aim is to bring together leading teachers and administrators in every field of education, to raise the standard of the profession of education in Australia, to establish and proclaim fundamental educational values, and to recognize outstanding contributions to educational practice. Chapters of the College have been set up in all States, and several of the addresses and papers delivered at meetings of the College have been issued in published form.

4. **Parent and Citizen Organizations.**—In Australia, where all government schools are administered by central departments, there is limited opportunity for local participation in 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 an interest in the school by bringing parents, pupils and teaching staff together, to help provide supplementary teaching aids and recreation materials, to foster 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 are maintained by groups in some States.

A notable achievement of the parent groups has been the establishment of school children'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.

State-wide councils of federations of parents' groups are associated in a federal body, the Australian Council of School Organizations.

CULTURAL ACTIVITIES

§ 1. 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, the passing of legislation in all States to increase library services, and 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 and incorporated by Royal Charter in 1963, and its functions now include 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 Commonwealth National Library, Canberra, and the Public Libraries at Sydney and Melbourne. In 1960 the first library school to be attached to an Australian University was opened in the University of New South Wales, and the Royal Melbourne Institute of Technology set up a library school in 1963.

2. **Commonwealth.**—(i) *National Library of Australia.* This Library grew directly from the Library of the Commonwealth Parliament established in Melbourne in 1901, the Committee of which soon afterwards announced its intention of developing a library patterned on the Library of Congress at Washington, U.S.A., capable of serving purposes beyond those essential to the Parliament itself, appropriate to a national library and on a national scale. This policy was steadily pursued, so that, in addition to its primary function of serving Parliament, it gradually became a central source of information for the Government and its departments and other agencies, and assumed increasing reference and bibliographical responsibilities in relation to scholarship and research in Australia and abroad. It was also influenced by the basic elements of the national library concept of the older countries of Europe: namely, 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. For these growing extra-Parliamentary activities, the Parliamentary Library Committee, in 1923, adopted the title of Commonwealth National Library.

In 1957, a committee appointed to examine the future control and functions of the Commonwealth National Library recommended its establishment as the National Library of Australia, separate from the Parliamentary Library, with wide functions and controlled by a board subject to a Minister; the transfer, as a separate agency to an appropriate department, of its Archives Division, which constituted the Commonwealth's agency for the custody and organization of departmental records of permanent value which need no longer be held within departmental offices; and that the Parliamentary Library be a separate library under separate Parliamentary control. Continuing co-operation, where possible, between the two libraries was also proposed.

Effect was given to these recommendations by the *National Library Act 1960*, which created the *National Library of Australia as a body corporate under the control of a Council of nine members, of whom one is a Senator elected by the Senate, one a member of the House of Representatives elected by that House, and seven appointed by the Governor-General. Its functions are:—to maintain and develop a national collection of library material, including a comprehensive collection relating to Australia and the Australian people; to make the national collection available to such persons and institutions in such manner and subject to such conditions as the Council determines with a view to its most advantageous use in the national interest; to make available such other services in relation to library matters and material, including bibliographical services, as the Council thinks fit, particularly for the purposes of the library of the Parliament, the Departments and authorities of the Commonwealth, and the Territories of the Commonwealth; and to co-operate in library matters (including the advancement of library science) with authorities or persons, whether in Australia or elsewhere.*

The National Library comprehensively collects and preserves Australian books, periodicals, newspapers, government publications, pictures, prints, manuscripts, maps, moving picture films and sound recordings. It is assisted in this by the deposit provisions of the *Copyright Act 1912–1950* and has also 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, the Nan Kivell collection of 16,000 items of Australian and Pacific interest including original paintings, prints, manuscripts and printed material in 1959, and the Ferguson collection which is still under transfer. A 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 over three million pages in the Public Record Office in London. Compilation of a guide to collections of manuscripts relating to Australia began in 1964.

The Library maintains a permanent exhibition of selected paintings, prints and other historical material from its collections. This exhibition is displayed in Parliament House, Canberra.

The Library publicizes Australian publications, both at home and abroad, through select lists which include *Australian Books* (annual) and *Australian Public Affairs Information Service* (a monthly subject index with an annual cumulation), and by collections of Australian books maintained by it at all posts at which Australia is officially represented abroad. In London and New York the National Library maintains and staffs Australian Reference Libraries supervised by its own Liaison Officers in those centres.

In the discharge of its wider bibliographical responsibilities, the Library publishes the *Australian National Bibliography* (monthly with an annual cumulation), which lists books, pamphlets, maps, prints, sheet music, government publications, the first issue of each new periodical or newspaper, and moving picture films produced in or relating to Australia. Commonwealth and State official documents, both monographic and serial, are listed in *Australian Government Publications* (annual). The Library is also building up union catalogues of serials in the social sciences and humanities, and of monographs in Australian libraries. A revised loose-leaf edition of *Serials in Australian Libraries: Social Sciences and Humanities*, of which the letters A–B were issued in 1964, will progressively supersede the interim edition published in two volumes in 1963.

In 1956 the Australian Bibliographical Centre was established within the National Library to serve as the secretariat of the Australian Advisory Council on Bibliographical Services. The Council, made up of representatives of the National Library, State libraries and library boards, the Commonwealth Scientific and Industrial Research Organization, each of the universities, and the Library Association of Australia, plans the further development and co-ordination of bibliographical services and co-operates with UNESCO and

its committees. The Centre organizes bibliographical projects recommended by the Council and operates as a centre for bibliographical information in Australia and overseas. It has published a *Union List of Newspapers in Australian Libraries: Part 1: Newspapers published outside Australia* (1959); and Part 2: *Newspapers published in Australia* (1960). Both were supplemented in 1964. *Resources of Australian Libraries*, a summary report of a survey conducted for the Council in 1961 by Maurice F. Tauber, was published in 1963.

The Library acts as a central library of documentary and educational films, its film collection containing over 7,000 titles, together with Australian historical films and a great number of film strips. It published *Australian Films: a Catalogue of Scientific, Educational and Cultural Films, 1940-58* in 1959 and annual supplements in succeeding years. A revised edition of the *Catalogue of 16-mm. Films*, which lists all films available for loan, was also published in 1960 and has been supplemented by annual accession lists. Special efforts are made to discover and preserve samples of early Australian film production.

Through its Extension Division, the Library conducts the Canberra Public Library Service for residents of the Australian Capital Territory, to whom 596,689 books were lent during 1963-64. It also assists in the provision of similar services in the Northern Territory, the Territory of Papua and New Guinea, and Norfolk Island.

The National Library's collections contain approximately 750,000 volumes, 37,000 pictures, prints, drawings and other graphic materials, 1,335,000 feet of microfilm, 112,000 maps, and eleven million feet of moving picture films. Special features of the book collection are its strong holdings of Australiana, materials relating to the Pacific area and east and south-east Asia, the publications of foreign governments and international organizations, and works in the social sciences, particularly in political theory and economics.

(ii) *Patent Office Library.* The Library of the Commonwealth Patent Office, Canberra, contains approximately 10,250 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 9,200,000. Indexes include a microfilm of a classified index to 3,000,000 U.S.A. patents and translations of abstracts of U.S.S.R. patents.

(iii) *The Commonwealth Archives Office.* In 1943, following a report by an Inter-departmental Committee, the Prime Minister directed the formation of a War Archives Committee to arrange for the preservation of war records. This Committee recognized that war archives could not be separated from peace-time archives and in 1946 the name was changed to the Commonwealth Archives Committee. In 1952 the National Library became the sole Archival Authority for the Commonwealth and the Chief Archives Officer became the Executive Officer for the Committee. In March, 1961, in accordance with a recommendation of the National Library Inquiry Committee, the Archives Division of the National Library was reconstituted as the Commonwealth Archives Office within the Prime Minister's Department.

The Archives Office is primarily a central agency for the control of those records created by the Commonwealth Government which are no longer required for frequent use in the day-to-day business of government. This function is carried out through the following three basic activities.

Control of Destruction. No Commonwealth records may be destroyed without the concurrence of the Chief Archivist whose responsibility it is to safeguard reference interests other than those of the department which compiled the records. This concurrence is given as far as practicable through continuing disposal authorities which enable Commonwealth departments to destroy certain routine classes of records automatically, but records not covered by such continuing authorities are checked before destruction is authorized.

Provision of Accommodation. Any records which are no longer in active use but which are considered, either by the originating department or by the Archives Office, to warrant preservation, either permanently or for a further period, may be transferred to an archives repository. While in archival custody, they are arranged and described so that the best use can be made of them.

Provision of Information. Records in the custody of the Archives Office are available for use by the depositing and other departments of the Commonwealth Public Service. The Office also provides departments with a service for the provision of information from the records in its custody.

As a complementary function the Office also provides a service to persons engaged in academic and other forms of research. The headquarters of the Commonwealth Archives Office is in Canberra and there are branches in Sydney, Melbourne, Brisbane, Adelaide and Perth.

(iv) *Commonwealth Scientific and Industrial Research Organization.* The library holdings of the Organization cover the pure and applied sciences. In addition to the Head Office Library in East Melbourne, each of the Divisions and Sections has a specialized collection covering such subjects as food preservation, forest products, chemistry, physics, animal health, and fisheries. The collections are particularly strong in the publications of oversea scientific and technical research institutions, with many of which extensive exchange arrangements have been made.

The Head Office library maintains a union catalogue of the holdings of all C.S.I.R.O. libraries and is responsible for the following publications:—*Scientific Serials in Australian Libraries*; *Australian Science Index*, an index of articles published in Australian scientific and technical periodicals; and *C.S.I.R.O. Abstracts*, which include abstracts of papers published by C.S.I.R.O. officers, C.S.I.R.O. translations, translations available from other Australian organizations and additions to the British Commonwealth Index of Scientific Translations.

The larger libraries in the Organization have photocopying facilities which, while normally for internal use, will provide a service for the public when a publication is not held elsewhere in Australia.

(v) *The Australian War Memorial Library.* In the War Memorial library are housed the documentary and pictorial records of Australia's fighting services in the 1914–18 and 1939–45 Wars, 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 70,000 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 requests for information are met where practicable.

(vi) *Other Commonwealth Government Libraries.* Most Commonwealth authorities have specialized collections in their own fields and in addition draw largely on the National Library.

(vii) *Northern Territory Library Service.* The Northern Territory Library Service maintains four centres in the Territory. At 30th June, 1964, stocks totalled 51,740 volumes which were held at the following centres:—Darwin, 27,625; Alice Springs, 16,350; Tennant Creek, 4,296; Katherine, 3,469.

3. States (other than university libraries, for which see pp. 739–42).—(i) *State 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 similar institutions elsewhere in the world. The following statement gives the number of volumes in the public library of each capital city at 30th June, 1963. Later figures for some of the libraries are given in the text relating to the respective libraries.

STATE PUBLIC LIBRARIES, 30th JUNE, 1963

City	Number of volumes in—			Total
	Reference branch	Ordinary lending branch	Country lending branch	
Sydney	(a) 641,609	..	(b) 108,934	750,543
Melbourne	800,000	130,000	48,000	978,000
Brisbane	162,244	..	75,170	237,414
Adelaide	213,779	(c) 88,210	173,043	475,032
Perth(d)	203,861	(e) 327,134	(f)	530,995
Hobart	89,102	(g) 183,294	159,490	431,886

(a) Includes 180,663 volumes in the Mitchell Library and 20,421 volumes in the Dixon Library.
 (b) Includes 1,941 volumes in the model school library. (c) Includes 32,911 volumes in the children's branch and 12,865 volumes in the youth lending branch. (d) Figures for Library Board of Western Australia; separate details for Perth are not available. (e) Public libraries and circulation stock.
 (f) Included under ordinary lending branch. (g) Includes 138,273 volumes in the children's branch.

(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 179 councils which have adopted the Library Act, 165 have put their adoption into effect. During 1964 they spent on their libraries £1,587,036, including £446,693 received in subsidy. There are 218 libraries, of which 59 are in the metropolitan area and 159 in the country. There are also 20 bookmobiles, of which two are in Sydney, eight in the suburbs of Sydney and ten in country municipalities and shires. These libraries contain 2,827,301 volumes.

New South Wales departmental libraries are staffed by officers attached for duty from the State Library, which also provides a central cataloguing service for municipal and shire libraries constituted under the 1939-1959 Act. The State Library maintains an adult education section servicing adult education activities for the universities of Sydney and New England 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 1963-64, 89,525 books were lent to small State schools, and 2,177 to country libraries, while 47,664 reference works were lent to individual country students and to libraries to satisfy special requests.

The State Library, known as the Public Library of New South Wales, includes a general reference department of 455,644 volumes, together with the Shakespeare Tercentenary Memorial Library and the Mitchell and Dixon Libraries and Galleries which are mainly devoted to Australian and Pacific material. The Mitchell Library, with 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. In 1964 there were 186,415 volumes in the library, in addition to valuable manuscripts, maps and other material. In 1929 Sir William Dixon 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 total number of volumes in the State Library now exceeds 780,000, apart from manuscripts, historical pictures and other material.

The maintenance and control of the ordinary lending branch of the Public Library were transferred in 1908 to the Sydney Municipal Council to become the City of Sydney Public Library.

The State Library, which had previously been the repository for State archives, transferred this responsibility to an Archives Authority in June, 1961. The Authority consists of nine members, one of whom the Trustees of the Public Library have a right to nominate.

Other important libraries in New South Wales are:—Teachers' Colleges, 262,529 volumes; the Sydney Public Library, 234,807; Railway Institute, 170,800; Technical Education Branch, 142,850; Australian Museum, 34,405; Government Transport Institute, 32,965; New South Wales Public School Teachers' Federation Library, 22,000; Workers' Educational Association, 14,600; and the Library at the National Herbarium, 10,340 volumes. At 30th June, 1964, the Parliamentary Library contained 149,500 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 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, 116 municipalities have established libraries. Of these, 26 are in the city and 90 in the country. An amount of £414,000 was paid to the Councils in library subsidy for the year 1963-64 and £887,662 was expended in municipal library services for the same year. More than 1,700,000 books are available to the communities in which libraries are established.

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 18, comprising a total of 72 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 1963-64, 42 of them shared a grant of £2,000.

The State Library of Victoria was established in 1856. It is controlled by a board of seven trustees and receives its finance from the State Government. The reference collections now total about 800,000 volumes, and the lending and travelling libraries have another 178,000 volumes. In addition, the library files 3,000 current periodicals, about 2,000 government publications from Australia and overseas, and 500 newspapers, in all about 50,000 volumes. Special collections include the J. K. Moir Collection of Australiana, the M. V. Anderson Chess Collection and the Green and Brodie Shipping Collections. The Victorian Historical Collection contains nearly 20,000 pictures, drawings, prints and objects of historical interest. The Archives Division is responsible for the preservation of government records.

(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 eight members including the State Librarian as *ex officio* member and secretary. A general function of the Board is to ensure that the fullest co-operation exists with the Department of Education, the University of Queensland, local bodies, and other bodies having for their object the encouragement of education, literature and the arts and sciences. A specific function of the board is the control and management of the Public Library of Queensland. Its policy is to build up the main collection of the Library as the State's reference centre.

The Country Extension Service, which is administered as a department of the Public Library, 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, established in 1923, has been administered as a department of the Public Library since 1946 and the collection has been kept separate. It contains books, manuscripts, pamphlets and other graphic material relating to the history and literature of Australia, and of Queensland in particular, and provides facilities for research students in Queensland literature and history.

In 1958 the section of the Libraries Act dealing with the preservation of public records was proclaimed, and in 1959 an Archives Section of the Public Library was instituted and an archivist appointed.

Since 1948 a course in librarianship has been held annually at the Public Library for the purpose of preparing trainees for the examinations of the Library Association of Australia, up to 1961 for its Preliminary Examination, from 1962 for subjects 1 to 3 of its re-organized Registration Examination. In 1959, a course covering some compulsory subjects of the Association's Registration Examination was inaugurated at the Central Technical College, Brisbane.

The holdings of the Public Library of Queensland and its extension services in 1963-64 were:—main reference collection, 150,520 volumes and 8,622 maps and pamphlets; country extension service, 78,802 volumes; Oxley Memorial Library, 23,143 volumes and 16,442 maps, pamphlets and miscellaneous items.

Local authorities are empowered by the Libraries Act to establish and conduct library services as a function of local government. The Board encourages local authorities to use these powers. In 1963-64, 72 local authorities were conducting 114 library services. The Brisbane City Council has established 14 of these libraries. There were 92 libraries in Queensland free to adults.

To help overcome the problems of a large area and sparse population, various local authorities provide library services on a regional basis. By 30th June, 1964, four regional library services had been established:—the South Western (seven shires), the Central Western (eight shires), the North Western (eight shires), and the Central Highlands (five shires), with head-quarters at Charleville, Barcaldine, Mt. Isa and Emerald respectively. Other regional services are being planned.

During 1963-64 the Board received a grant of £238,985 from consolidated revenue to finance the activities of the Public Library and to pay subsidies to local bodies of fifty per cent. on the purchase of books and the acquisition or improvement of library buildings and equipment. Subsidies were paid to four regional library service boards, 49 local authorities and 45 other bodies.

The library of the Parliament of Queensland was established in 1860. At 30th June, 1964, the library held 92,784 books and pamphlets, consisting of official publications and books devoted largely to history, the social sciences, biography and literature.

"*The Libraries Act Amendment Act of 1949*" provides for the Public Library and the Parliamentary Library each to receive a copy of all books, pamphlets, maps and other printed material published in Queensland.

(v) *South Australia.* In the reference department of the Public Library of South Australia, there are about 220,500 volumes, most of which may be borrowed. Over 4,000 periodicals are filed and the collection of newspapers includes every newspaper printed in South Australia. There are 44,500 volumes in the lending department available to persons living in the metropolitan area and the country lending service has 220,700 volumes, of which more than half are suitable for children. The library has an active programme for the publishing of facsimile editions of early Australian texts.

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, 1964.

There are sixteen local public libraries in South Australia provided by twelve local government authorities. The libraries are subsidized on a £1 for £1 basis by the State Government. The Libraries Board of South Australia, through the Public Library of South Australia, provides various central services. Book-stocks are pooled in the Public Library of South Australia and are interchanged between the libraries.

At the end of June, 1964, these local public libraries contained 110,990 books. There were 70,731 registered borrowers. In the year 1963-64, 901,500 books were lent.

(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:—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; to administer the State Library; to advise the Government on all matters relating to libraries; and 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 non-fiction books may be made available at any public library throughout the State on request to the Board. All cataloguing is done by the Board. The first library under this scheme was opened in August, 1954. By 31st December, 1964, 81 libraries had been established.

The State Library, established in 1887, is the reference division of the Library and Information 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; and 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 State Library is fully equipped with microfilm and photocopy apparatus.

The book-stock of the Board at 30th June, 1964, was:—lending library services (including books in public libraries), 419,253 volumes; State Library, 211,059 bound volumes.

The University of Western Australia, through its Adult Education Board, manages the Adult Education Library of some 17,000 volumes of general reading and fiction. Books are sent to country readers each month.

There are some 100 special libraries in government departments and industrial firms. Union catalogues of periodicals and books received in the libraries in Western Australia are maintained by the Library Board of Western Australia in the Bibliographical Centre of the State Library.

(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, for the control of State aid to libraries and for the State archives. The first stage of a new State Library headquarters building in Hobart was completed in 1962. The State Government provided £191,707 towards the cost of library services in 1963–64.

Municipal libraries are assisted with the purchase of books and participate in a book exchange scheme. In 1964, 45 municipalities took part in the service, leaving only four outside the scheme. In Hobart, the Board operates the Hobart Lending Library on behalf of the City Council. Two bookmobiles operate in Hobart and country districts, catering for areas without library premises, for children, old people's homes, etc.

The Board also operates a Reference Library in Hobart from which reference services are available to people throughout the State. There is also a documentary film library and a recorded music library. The Board arranges 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 sessions.

4. *University Libraries*.—(i) *General*. These libraries provide material not only for the education of graduates and undergraduates, but also for 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 professorial staff.

The following table shows the volumes held, accessions during the year, and expenditure of the Australian university libraries.

UNIVERSITY LIBRARIES, 1964

University	Volumes	Accessions during year	Expenditure (a)
			£'000
Australian National University	329,214	24,906	203
Sydney	869,952	54,047	277
New South Wales	312,197	54,112	313
New England	174,952	22,226	95
Melbourne	388,060	37,220	267
Monash	160,000	40,000	210
Queensland	337,488	30,466	180
Adelaide	379,728	51,675	211
Western Australia	247,531	16,646	130
Tasmania	155,500	8,200	64
Total	3,354,622	339,498	1,950

(a) 1963.

(ii) *Australian National University.* This library consists of two main collections; the former Australian National University Library, founded in 1948, which serves primarily the Institute of Advanced Studies, and the former Canberra University College Library, founded in 1938, which serves primarily the School of General Studies. At the end of 1964 the stock included some 65,000 volumes in oriental languages. The collection serving the Institute of Advanced Studies (185,000 volumes) specializes in the fields of the physical and medical sciences, excluding clinical works. The R. G. Menzies Building of the University Library, which was opened by Queen Elizabeth in March, 1963, houses the administrative, cataloguing, etc., departments serving the whole university as well as certain research collections of the Institute of Advanced Studies. In the social sciences, the library endeavours 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 collection serving the School of General Studies (100,000 volumes) has been built up to meet the needs primarily of undergraduates studying arts, economics, law, oriental studies and science.

(iii) *University of Sydney.* The library consists of the central collection which is known as the Fisher Library, the Law Library, the Medical Branch Library, the Burkitt Library for pre-clinical medicine, and some fifty-two departmental libraries. The University Library, together with departmental libraries and associated libraries in the University grounds, holds a total of more than one million volumes.

The first books were acquired in 1851, and shortly afterwards the library of Sydney College was added. The collection of Nichol D. Stenhouse was acquired in 1878 as the gift of Thomas Walker. In 1885 Thomas Fisher bequeathed the sum of £30,000, the income from which is used as a book fund. The Fisher Fund was matched in 1961 by establishment of the W. H. and Elizabeth M. Deane Library Fund. Perhaps the finest collection in extent and importance which has been given to the University is that of Sir Charles Nicholson. There have been numerous other benefactions, among which may be mentioned the library of Sir Francis Anderson, the W. H. Deane collection of books and manuscripts and the Dalley-Scarlett music library. In 1961 the University acquired the English literature collection of the late Hugh Macdonald, and the late Professor J. Stewart's library, an outstanding collection on archaeology and numismatics, was acquired in 1963. The Sydney University Library has an extensive collection of mediaeval manuscripts and early printed books.

(iv) *University of New South Wales.* The libraries of this university consist of the Central Library and a Bio-medical Library at Kensington. There is also a library at Wollongong University College. The Broadway campus is serviced by the Sydney Technical

College Library, where about 25,000 books from the University's library are placed. Service to the university division at Broken Hill is also provided by the Department of Technical Education. In December, 1964, the university had 338,687 volumes in its libraries and in Department of Technical Education libraries. This figure includes 86,640 volumes in the former Newcastle University College library.

(v) *University of New England.* The library was founded in 1938, when the New England University College was established. Sir William Dixson was its first benefactor. The library, which receives about 3,500 current periodical titles annually, is now housed in a three-storied, air-conditioned building. The building also houses a bindery, photographic and archives division. A further wing is to be built later to house a library of post-graduate and research volumes which, at present, are on the library's main shelves. The library has its own training officer and conducts formal courses in librarianship.

(vi) *University of Melbourne.* Early in 1854 the first allocation for books was made, but the library was housed in temporary quarters until 1959. 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 Commonwealth and State Governments, and a new building was occupied at the beginning of 1959, the first in the University to be designed specifically for library purposes. Since 1959 the use of the library has increased fourfold and during the academic year admissions of readers to the building average 8,000 a day. The resources of the library are also used extensively on inter-library loan by industries and other organizations throughout Australia. The University Library, including 13 branch libraries in various departments, is administered from the centrally situated Baillieu Library. The large medical branch library is specially rich in periodicals.

(vii) *Monash University.* The library started to acquire books in 1960 and subscribes to some 2,500 journals. It has been decided that the library organization will develop into four large units—the main library, a bio-medical library, a law library, and a library for the physical sciences and technology. The physical sciences and technology library has been named the Hargrave Library and was opened in December, 1962. The main library, catering mainly for the humanities, was occupied in November, 1963.

(viii) *University of Queensland.* The library was founded in 1911. The main library is in its own building in the University and there are a considerable number of departmental libraries. Among the more important possessions of the library are its large holdings of periodicals, its geology collection, and its material relating to the history, development and culture of the countries surrounding the Pacific Ocean.

(ix) *University of Adelaide.* The library bears the title of its original benefactor, Robert Barr Smith, who, with members of his family in and after 1892 gave the university over £50,000 for the library. The book collection is in two divisions, a collection of some 25,000 of the most frequently used books being kept in the main reading room and the remainder, consisting of older or more specialized books, being shelved on the four levels of the extensions. There are branch libraries for medicine, law and music. The South Australian branches of the Australian Medical Association, the Australian Physiotherapy Association and the Australian Dental Association make annual contributions towards the maintenance of the medical library in return for borrowing privileges for their members. At the end of 1964 the Barr Smith Library held approximately 350,000 books and pamphlets. The Waite Agricultural Research Institute has a separately administered library of about 20,000 publications in agriculture.

(x) *University of Western Australia.* The first full-time library staff was appointed in 1927. Provision for a permanent library building was not possible when the University moved to its present site, and space and facilities were inadequate for many years. A new four-storey building was completed at the end of 1963. The building provides facilities for microfilm readers, type-writing booths and photo-copying facilities. The University Library developed very slowly in the early years, but recently has been adding about 14,000 volumes a year to its stock. In addition to the main library there are a number of departmental libraries of which the more important are engineering, agriculture, pre-clinical and law. There is also a medical library, in accommodation provided by the Royal Perth Hospital, for the use of the medical school.

(xi) *University of Tasmania.* Although this library was founded in 1893, a full-time librarian was appointed for the first time at the end of 1945. 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. The library receives currently about 3,600 periodicals. The University Library also collects private and business archives and it has some important classical manuscripts as well as a collection of early printed books.

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, and an increasing number of primary schools, have teacher librarians.

(ii) *Victoria.* Under the auspices of the Free Library Service Board, 116 municipal children's libraries have been, or are 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 augmented. An annual grant of £5,000, which is additional to the ordinary annual municipal library grant, is provided to assist these libraries. In addition, nine independently controlled children's libraries shared in this grant in 1963.

The Education Department is making provision for the building of library rooms in new schools. Where accommodation is available in existing schools, library furniture is provided free of cost to the schools and the Government subsidizes the purchase of books. In June, 1964, 470 schools had central libraries.

A scheme of circulating libraries for small schools, particularly in remote areas, has been operating for some years. One hundred and eighty schools benefited from this scheme in 1964.

The Education 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 25 teachers are trained each year.

(iii) *Queensland.* The Library Board of Queensland stresses to local bodies the importance of providing adequate library services for children. There are in Queensland 110 libraries free to children, of which 10 are conducted by the Brisbane City Council. The children's libraries at Rockhampton, Toowoomba, and Townsville are particularly active. Country children who are not catered for locally may borrow from the Country Extension Service which possesses a separate children's collection. The purchase of books for State school libraries in Queensland is financed by school committees and parents' associations, with a subsidy from the Department of Education on a £1 for £1 basis. Trainees at the Teachers' Colleges are instructed in school library organization and management.

(iv) *South Australia.* A children's library of 34,200 volumes is used by school classes and individual children living in the metropolitan area. There is a large collection of children's historical books assembled for the use of research workers. In August, 1957, a youth lending service was opened for young people from 13 to 18 years of age. It has a stock of 14,250 volumes.

(v) *Western Australia.* The Education Department provides library services and makes library subsidies and grants to schools. Advisory, central cataloguing, processing, repair and binding services are provided by the Library Services Branch. The Teachers' Colleges provide courses in school library organization and library service.

The Perth Technical College and technical schools are equipped with libraries and an allocation for books is provided annually for each school and college department. A librarian at the College provides central ordering and cataloguing services throughout the Technical Division.

All high schools are provided with a library room and furniture, and trained teacher-librarians 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 the Charles Hadley Travelling Library and the Small Schools Fixed Library Scheme. Under the Fixed Library Scheme grants are made once every three years to each school to provide additional books for the permanent libraries of reference books. The Hadley library provides recreational reading and operates 360 boxes which are exchanged each school term. Boxes are sent to small schools, mission schools and special classes. Finance is provided from a government grant and contributions from the participating schools of commission received from the Commonwealth Savings Bank for school savings bank activities.

Children in isolated areas who are unable to attend school 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, with headquarters at the State Library, Hobart, aim at serving all children in Tasmania. At 30th June, 1964, 161 children's libraries and depots had been established.

The Education Department provides library quarters in all high schools and in some of the larger primary schools. The purchase of books is financed by parents' associations and by departmental subsidies. Teacher-librarians are appointed in high schools. The Schools Library Service issues loan collections of books to schools and gives advice on the setting up of school libraries.

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 staff. These libraries, which are most numerous in Sydney and Melbourne, are being increasingly administered by trained librarians.

§ 2. Museums and Art Galleries

NOTE.—During 1964 an annual collection of statistics on a uniform basis was commenced from Australian museums and art galleries. So far, the collection is essentially exploratory and detailed statistics have not yet been compiled. The following paragraphs provide summarized results of the collection and refer individually to the more important museums and art galleries.

1. *General*.—A museum or art gallery is considered to be a building, group of buildings or parts of buildings, managed as a unit and intended predominantly for the permanent display of objects of interest (museum) or objects of art (art galleries) to the general public. Institutions displaying live exhibits are excluded (the more important of these are mentioned in § 3. Botanical and Zoological Gardens, pp. 748–9), as are buildings used for temporary displays (exhibitions, commercial galleries exhibiting only for sale) without a permanent stock of exhibits, permanent exhibitions which are ancillary to other activities, such as exhibits at council chambers, libraries, hotels and other commercial enterprises providing services to tourists and sightseers, and collections which are not readily accessible to the general public, such as university collections for the use of students and research workers.

2. Museums and Art Galleries, 1964.—The following table sets out summary information in respect of the 47 institutions in Australia which have been identified in 1964 as museums and art galleries (branches of museums and art galleries are not shown separately).

MUSEUMS AND ART GALLERIES: SUMMARY, 1964

Particulars	Major institutions			Other institutions			All institutions
	Museums	Art galleries	Mixed institutions	Museums	Art galleries	Mixed institutions	
States—							
New South Wales ..	3	1	..	..	3	2	9
Victoria ..	2	1	..	2	6	..	11
Queensland ..	1	1	..	1	3	..	6
South Australia ..	1	1	..	1	..	..	12
Western Australia ..	1	1	..	2	1	..	4
Tasmania ..	..	..	2	..	..	..	2
Northern Territory ..	..	..	..	1	..	..	1
Australian Capital Territory ..	1	..	1	..	..	..	2
<i>Total</i>	9	5	3	15	13	2	47
Ownership—							
Commonwealth Government ..	1	..	1	..	..	..	2
State Governments ..	8	5	1	6	..	..	21
Municipal authorities ..	..	..	1	3	5	1	10
Private trusts ..	..	..	..	3	6	..	9
Universities ..	..	..	..	1	1	..	2
Private ..	..	..	..	2	1	..	3
<i>Total</i>	9	5	3	15	13	2	47
Display area—							
Under 1,000 sq. ft. ..	..	..	..	3	3	..	6
1,000 and under 5,000 sq. ft. ..	..	..	..	8	4	1	13
5,000 and under 10,000 sq. ft. ..	1	2	..	2	4	1	10
10,000 and under 20,000 sq. ft. ..	2	..	..	..	..	..	2
20,000 sq. ft. and over ..	6	3	3	..	1	..	13
Not available ..	..	..	..	2	1	..	3
<i>Total</i>	9	5	3	15	13	2	47
Estimated attendance during year—							
Under 10,000 ..	..	..	..	9	5	..	14
10,000 and under 20,000 ..	1	..	..	2	1	..	4
20,000 and under 50,000 ..	..	..	..	..	5	..	5
50,000 and over ..	7	2	2	1	..	..	12
Not available ..	1	3	1	3	2	2	12
<i>Total</i>	9	5	3	15	13	2	47
Staff—							
Under 5 ..	..	..	..	11	11	1	23
5 to 9 ..	..	..	..	2	2	..	4
10 to 19 ..	2	2	1	1	..	1	7
20 and over ..	7	3	2	..	..	..	12
Not available ..	..	..	..	1	..	..	1
<i>Total</i>	9	5	3	15	13	2	47
Expenditure—							
Under £1,000 ..	..	..	..	9	6	1	16
£1,000 and under £5,000 ..	..	..	..	3	2	..	5
£5,000 and under £10,000 ..	..	..	..	..	3	..	3
£10,000 and under £50,000 ..	4	3	2	1	2	..	12
£50,000 and under £100,000 ..	3	..	..	..	..	..	3
£100,000 and over ..	1	1	..	..	..	..	2
Not available ..	1	1	1	2	..	1	6
<i>Total</i>	9	5	3	15	13	2	47

3. Major Institutions.—Some detail is provided here in respect of the 17 institutions identified in 1964 as major because of the size of their display, the value of their exhibits, their popularity and the extent of the information and investigation services which they provide.

(i) *Australian Capital Territory.* (a) *The Australian War Memorial, Canberra.* The Memorial comprises the national collection of war relics, and the building in which these are preserved. The building was opened in 1941. The memorial is owned by the Commonwealth Government and is administered by a director responsible to a board of trustees. There is a collection of 4,000 art works, and a museum collection of more than 40,000 war relics, the gathering of which began on the battlefields of the 1914–18 War and was continued during the subsequent campaigns in which Australian forces have participated. The collection has been enhanced by gifts of relics from the governments of Great Britain, the sister dominions, and of allied countries, and also by presentations made by ex-servicemen and relatives of those who died. The collection consists of items such as tanks, aeroplanes, submarines, field-guns and boats, and the widest possible range of war trophies down to the smallest items, each relic dependent for its value on its historical background. The works of art, all by Australian artists, depict battle scenes, individual officers and men, etc., and include oil and water colour paintings, drawings, statuary, bronzes, dioramas and mosaics. There is also a library, which is described in § 1, page 735. The area used for display is 80,300 square feet. Total attendance during 1963–64 was estimated at 471,000. Staff numbered 72. Expenditure (excluding expenditure on the maintenance of the building and environs) was about £185,000, and the major items of receipt were Commonwealth Government contributions (£130,000) and the sale of publications, etc. (£56,000).

(b) *The Australian Institute of Anatomy, Canberra.* The Institute is described in Chapter XVIII. Public Health, pages 671–2. The museum has a display area of 9,048 square feet. It contains displays of biological and anatomical aspects of man and the anatomy of Australian animals. A display of Aboriginal and Melanesian artefacts from the National Ethnographic Collections is temporarily housed in the Institute. Estimated attendance in 1964 was 157,000. The museum has a staff of 12. Museum expenditure, met by the Commonwealth Government, was about £19,000 for administration and other current expenditure, and £8,800 for maintenance of building, etc. in 1964.

(ii) *New South Wales.* (a) *The Australian Museum, Sydney.* Founded in 1836, this is the oldest museum in Australia. It is administered by a director and 25 trustees as a Government Department attached to the New South Wales Department of Education, with a staff of 77. It has fine collections of all groups of animals including insects, as well as mineral and ethnological collections, particularly in relation to Australia and the Pacific. There is a valuable library which in 1963–64 comprised 34,405 bound volumes. Its scientific staff engages in research which involved, in that year, 724 man-days of field work in Australia and New Guinea. In addition, staff spent 393 man-days on study leave abroad. Total attendance in 1963–64 was estimated at more than 353,000 with an average daily attendance of 893 on weekdays and 1,420 on Sundays. Twenty-six educational course lectures and 491 lectures to school parties were provided, as well as other lectures, film sessions, etc., with total attendance at these of nearly 31,000. The total area available for display is 51,874 square feet. Current expenditure (excluding amounts spent by the Public Works Department on maintenance, completion of a new wing and alterations) amounted to £114,132.

(b) *Museum of Applied Arts and Sciences, Sydney.* This museum, with branches at Bathurst, Goulburn and Broken Hill, New South Wales, is owned by the New South Wales Government, and administered by a director and a board of seven trustees appointed by the Governor of New South Wales. The museum specializes in applied arts (ceramics, glass, oriental arts, costumes, musical instruments, furniture, etc.), applied science and technology (engineering, transport, textiles, metallurgy, etc.), and among its special features are an opal collection and a planetarium. Total display area is 20,700 square feet. The museum's library contains about 7,500 books and periodicals. Attendances in 1963 were estimated at 206,300 (Sydney), 14,000 (Bathurst) and 17,000 (Broken Hill). The museum had, in 1963, a staff of 46 and undertook research in the fields of transport, chemistry and botany, involving 148 man-days of fieldwork.

(c) *Geological and Mining Museum, Sydney.* This museum is administered as a branch of the Department of Mines by a curator under the control of the Government Geologist. Its collections illustrate the mineral industries of New South Wales with mineral specimens,

building stones, etc. and geological, stratigraphical and palaeontological exhibits. The museum is the principal source of supply of geological specimens for schools. During 1963-64 some 1,400 collections (about 51,300 specimens) were supplied free of charge to New South Wales schools and 25 collections (about 1,650 specimens) to schools in other States. The museum has 10,000 square feet of display areas and a staff of 11. Total attendance was about 12,500, the museum being closed on Sundays. Expenditure (excluding new works and maintenance) amounted to more than £19,000 in 1963-64.

(d) *Art Gallery of New South Wales, Sydney.* The Gallery originated in the Academy of Art founded in 1871. It is administered by a director and secretary under a board of thirteen trustees responsible to the New South Wales Minister for Education. The gallery has 7,503 exhibits, including 1,586 oils and 153 pieces of sculpture. Australian art in all aspects (except early colonial and naive) and modern European painting and sculpture are featured. An Aboriginal art collection includes a unique set of large Melville Island graveposts. There are display areas of 40,000 square feet and a library with 3,690 books. In 1963, the gallery prepared seven special exhibitions. Assistance is provided to governments and private organizations in the design of books, coins, notes, etc., the preparation and judging of exhibitions, and in the supply of research material and information. Total attendance in 1963 was estimated at 750,000. Staff numbered 31. Apart from the payment of wages and salary and the maintenance of buildings, the State Government in 1963 contributed £10,000 to the Gallery. Other income came mainly from bequests (£12,000) and the sale of publications, etc. (£3,342).

(iii) *Victoria. (a) National Museum of Victoria, Melbourne.* The museum was founded in 1854. It is State-owned and administered by a director and board of trustees. It houses substantial collections in the fields of zoology, geology and anthropology. There is a small branch at Tidal River, Victoria. The museum has display areas of 40,738 square feet and a library. Fieldwork involving 136 man-days was undertaken in 1963-64 for the collection of specimens and research in the fields of palaeontology, ornithology and anthropology. Two hundred and one lectures were provided to school parties. Staff numbered 54. Total expenditure by and on the museum in 1963-64 amounted to £79,668.

(b) *Institute of Applied Science of Victoria, Melbourne.* The Institute was founded in 1870. It is State-owned and administered by a director and board of seven trustees. Its collections are concerned with aspects of application of all science subjects, but with special emphasis on transport, astronomy, public health, arms, agriculture and electronics. The total area available for display is 26,000 square feet. Its library contains about 2,600 books and periodicals. A planetarium is nearing completion. Total attendance during 1963-64 was estimated at 318,000. The Institute provided 150 educational course lectures and 130 lectures to school parties. Total attendance at these and other lectures amounted to about 9,600. Staff numbered 63. Expenditure during 1963-64 (including works and maintenance) amounted to £48,799.

(c) *National Gallery of Victoria, Melbourne.* The State-owned gallery is administered by a director and board of trustees. Its large collections of nearly 20,000 items feature paintings by Rembrandt, Tiepolo and the Flemish primitives, Dürer engravings, Blake drawings and English 18th century furniture. The gallery has a display area of 44,000 square feet. During 1963-64 there were 38 lectures to adult parties and 518 to school parties. Staff numbered 78. Excluding new works and maintenance, expenditure in 1963-64 amounted to £157,070, including £39,402 for the acquisition of exhibits under the E. S. Miller bequest and £30,000 spent by the Felton Bequest Committee.

(iv) *Queensland. (a) Queensland Museum, Brisbane.* The Museum, founded in 1855, is the State museum of natural science. It is administered by a Director as a sub-department of the Queensland Department of Education. The collections are in the fields of the natural sciences, ethnology and history and include extensive collections of fossil vertebrates. The museum has a display area of 27,700 square feet. In 1963-64, 58 man-days were spent on fieldwork, particularly the examination of sites of anthropological interest. Its extensive library contained about 32,800 volumes of books and periodicals. Total attendance in 1963-64 was estimated at 114,600. There were 4,900 attendances at 21 educational course lectures, 24 lectures to school parties, and 27 other lectures and sessions. Staff numbered 28. Expenditure (excluding maintenance of buildings) amounted to £42,739.

(b) *Queensland Art Gallery, Brisbane.* This State gallery was established in 1895. It is administered by a director and trustees. The gallery especially features Australian art of all periods, British modern art, French sculpture and French paintings from the

Rubin collection. There are display areas totalling 6,600 square feet and 1,532 display items, including 493 oils. Its library contains 850 items. There were 40 art school and educational course lectures. Staff numbered 15. Its expenditure (including maintenance) was £37,348. It had no bequest income.

(v) *South Australia. (a) The South Australian Museum, Adelaide.* The museum forms a part of the South Australian Department of Public Service and is administered by a director and board of trustees. It features natural science and anthropological collections. The latter refer to the Australasian and Pacific regions and include an outstanding collection of Aboriginal artefacts. Entomology is the most important of the zoological sections. During 1963-64, 387 man-days were spent in field work, particularly the collection of Australites (glassy meteorites). The museum's area available for display is 40,344 square feet and it has a library of about 22,500 volumes. Total attendance during 1963-64 was estimated at 224,700 and there were 20 lectures to school parties and 43 other lectures, sessions, etc. The museum had, in 1963-64, a staff of 58. Total expenditure in 1963-64 (including new works and maintenance) was £86,935.

(b) *National Gallery of South Australia, Adelaide.* The gallery originated in 1881. It is State-owned and administered by a director and board of seven trustees. Apart from the usual art gallery collections, devoted chiefly to British and Australian works, it contains a numismatic collection, the South Australian Historical Collection, and a small collection of weapons. It has a display area of 28,178 square feet and a library. In June, 1964, it had 55,462 exhibits, including more than 2,000 oils and watercolours, and nearly 12,000 engravings and prints. Many loan exhibitions are held and, in 1963-64, there were 13 guide lectures to adult parties and 7 other lectures, etc. Staff numbered 24. Total expenditure (including maintenance) was £62,714.

(vi) *Western Australia. (a) Western Australian Museum, Perth.* The museum was established in 1895. It is administered by a director under a board of trustees appointed by the Western Australian Government. The zoological collections cover all vertebrate and most invertebrate fields, particularly marine. There are collections relating to vertebrate palaeontology and meteorites, fossil invertebrates and some fossil plants. There are extensive collections of Aboriginal artefacts and European arms and armour. In 1963-64 areas available for display totalled 14,250 square feet. During that year 526 man-days were spent on field-work. The library contained 1,731 books and periodicals. Total attendance was estimated at 115,800 and there were 64 lectures to school parties, 11 educational course and 19 other lectures with an overall attendance of nearly 5,000. Staff numbered 36. Total expenditure (including works and maintenance) amounted in 1963-64 to £78,018, which was met mainly from State funds, but also from a Commonwealth Government contribution and from trust funds from private persons for fieldwork and research.

(b) *The Western Australian Art Gallery, Perth.* The gallery was established in 1895 and is administered by a director and government-appointed board of trustees. It features especially collections of Australian paintings, drawings, ceramics and sculpture, a fine collection of Australian contemporary art and a major Henry Moore sculpture. It has collections of coins and of Western Australian stamps. Altogether there are 3,362 items. The gallery has a library with some 800 books and periodicals and a display area of 9,000 square feet. Total attendance in 1964 was estimated at nearly 119,000, and 18 lectures to school parties and 10 other lectures were provided. Staff numbered 15. Expenditure (other than on works and maintenance) in 1963-64 was £38,973.

(vii) *Tasmania. (a) Tasmanian Museum and Art Gallery, Hobart.* Opened in 1887, the Tasmanian Museum and Art Gallery is State-owned and administered by a board of trustees. The museum part contains zoological, anthropological and geological displays relating to Tasmania. The art displays contain an excellent holding of Tasmanian historical works. The area available for display is 50,000 square feet. In 1964 there was a staff of 23. Total expenditure (including expenditure on new extensions) amounted to £83,940.

(b) *Queen Victoria Museum and Art Gallery, Launceston.* This institution, opened in 1891, is owned and administered by the Launceston City Council through a director and a sub-committee of aldermen. Attention is concentrated on collections relating to the natural, biological and historical environment of Tasmania, featuring Tasmanian fauna, Aboriginal relics and historical material. The arts associated with Tasmania are represented by 1,554 items, particularly early colonial period painting and also costumes, lace and ceramics. Total display area amounts to 28,800 square feet and there is a library with some 2,000 books.

In 1963-64 140-man-days were spent on fieldwork in studies of Tasmanian native rats, in mapping the geology of the Launceston basin, and in archeological and Aboriginal studies. Attendance was estimated at 68,000. There were 20 lectures to school parties and 21 other lectures, with an estimated total attendance of 2,200. There was a staff of 15. The Queen Victoria Museum and Art Gallery received £7,000 in 1963-64 from the State Government, but the remainder out of a total expenditure of £21,889 was met, in the main, by the municipality.

4. **Other Museums and Art Galleries.**—A short description of some of the 30 remaining museums and art galleries is given in the following paragraphs. The institutions are grouped into those owned by the States, by municipalities and private trusts, by universities, and by private persons.

(i) *State-owned Institutions.* The Dixon and Mitchell Libraries (sections of the Public Library of New South Wales) have galleries in which paintings, drawings, engravings, photographs, coins and postage stamps, all related to Australian and south-west Pacific history, are exhibited. The main area of display comprises 7,051 square feet. Only a fraction of the many thousands of items can be shown. Museums are maintained at two botanical gardens, at Brisbane and Adelaide respectively. They exhibit plants, plant products, fungi and other items of economic botany. There is a geological museum, maintained by the Victorian State Mines Department, with a comprehensive collection of geological specimens. In South Australia there are two smaller museums of local and tourist interest—the Old Government House, Belair, displaying furniture, etc. of the colonial era, and "Dingly Dell", Port Macdonnell, the historical cottage of the poet Adam Lindsay Gordon, where relics and literature are on display.

(ii) *Municipal and Private Trust Institutions.* In 1964 there were nine institutions owned by various non-metropolitan municipalities throughout Australia. These range from the Mildura Art Gallery, the central point of the Mildura Cultural Centre with expenditure of over £10,000 in 1964, to the Broken Hill Art Gallery, a part of the Broken Hill Technical College, where local artists' pictures of mining activities are exhibited amongst others. Similar institutions are often maintained in major provincial cities by private trusts. These and the municipal institutions often exhibit artistic, historical and other items of special local interest, and as a rule there are associated with them various local societies devoted to the exploration and encouragement of the arts, local history and the like. Thus the Lionel Lindsay Art Gallery and Library at Toowoomba, Queensland, is administered by a board of trustees, originally appointed in 1959 by deed of trust.

(iii) *University Institutions.* Most university collections, some of them comprehensive and containing unique material, are reserved essentially for the use of students and research workers, and are therefore not included as museums or art galleries. However, the John Darnell Art Gallery of the University of Queensland, originating from a bequest in 1930, and the Macleay Museum of Natural History at the University of Sydney, stemming from a gift to the university in 1888, are open to the public.

(iv) *Private Museums and Art Galleries.* Only three establishments of this nature combine the sale of objects of art or interest with permanent displays and are therefore included here as museums or art galleries; two of them are in South Australia and one in the Northern Territory.

§ 3. Botanical and Zoological Gardens

1. **General.**—In addition to the zoological gardens referred to in the following paragraphs there are numerous privately owned zoos and sanctuaries, many of them at tourist resorts, which maintain collections of Australian flora and fauna. There are also various national parks, forests, reserves, etc., dedicated for public use, which are preserved largely in their natural condition.

2. **New South Wales.**—The Sydney Botanic Gardens are situated on the shores of Farm Cove, Sydney Harbour, close to the heart of the city and on the site of the first farm established in 1788 by Governor Phillip. Now occupying 66 acres, they contain a large and varied collection of flowering plants, shrubs and trees as well as hothouses of orchids and ferns.

The Zoological Gardens at Taronga Park, on the northern side of Sydney Harbour, were opened in 1916. The area is about 70 acres. The natural formation has been retained as far as practicable, with the object of displaying the animals in natural surroundings, and an aquarium has been built within the gardens. In 1963-64 admissions to the grounds were 853,142 and to the aquarium 299,905. The receipts of the zoological department of the Taronga Park Trust amounted to £197,605 in 1963-64, excluding an annual State grant of £3,250, and expenditure amounted to £195,498. Exhibits at 30th June, 1964, comprised 1,220 mammals, 2,640 birds, 184 reptiles, and 1,100 fish.

3. **Victoria.**—The main botanical gardens in the State are the Royal Botanic Gardens, an area of 88 acres situated within one mile of the centre of the City of Melbourne and containing over 12,000 species of plants, of which there are some 30,000 individual specimens. Many species of native birds breed on islands in lakes within the gardens.

The Zoological Gardens are situated in Royal Park and contain a wide selection of animals, birds and reptiles. Wild life sanctuaries are also maintained at Healesville and North Balwyn and contain specimens of indigenous fauna.

4. **Queensland.**—Botanical gardens have been established in Brisbane and in several other cities. The Brisbane Botanic Gardens were established in 1855 by the Government of New South Wales. In 1925 the Queensland Government transferred them to the Brisbane City Council. They occupy approximately 46 acres on the banks of the Brisbane River in the central city area and are noted for their collections of palms, tropical trees and shrubs, and succulents; they contain over 7,500 plants.

5. **South Australia.**—The Botanic Gardens, begun in 1854, occupy 45 acres planted with many tropical and sub-tropical trees, shrubs and plants.

The Zoological Gardens, opened in 1883, have an area of approximately 19 acres and contain a fine collection of animals, reptiles and birds. There were 288,600 visitors in 1963-64.

6. **Western Australia.**—A botanic garden for the native plants of Western Australia was officially inaugurated in March, 1963, and planting of the garden began in May, 1963. The site of 25 acres which has been selected for garden development during the first five years is in King's Park, a reserve of almost 1,000 acres close to the centre of Perth. An arboretum of 36 acres for the collection of native trees was founded in June, 1962. It is now almost fully planted, and, with the exception of some rare mallees, nearly all trees native to the southern part of the State are represented.

The Zoological Gardens, which were opened in 1898 at South Perth, have an area of 46 acres and are under the control of the Acclimatisation Committee. Animals, birds and reptiles are exhibited. During the year 1963-64, 128,523 adults and 125,213 children visited the zoo.

7. **Tasmania.**—The Hobart Botanical Gardens adjoining Government House on the Queen's Domain contain a fine collection of exotic trees and shrubs. They are controlled by a Board appointed by the State Government, which supports the gardens by annual grants.

There is no zoo in Tasmania, but a small collection of animals and birds is maintained by the Launceston City Council at the City Park.

8. **Northern Territory.**—The Darwin Botanical Gardens were established in 1873 and were planted with imported exotic plants and trees. The gardens now occupy 80 acres and feature tropical plants of both native and overseas origin. They are controlled by the Darwin City Council.

§ 4. Book Publishing

1. **Australian Book Publishing.**—Some statistics relating to Australian book publishing are compiled by the National Library of Australia as part of its bibliographical responsibilities (see p. 733). Through the deposit provisions of the *Copyright Act 1912-1950*, its overseas collection agents and its own efforts, the library receives practically all Australian publications, although not necessarily in the year of publication. Because the statistics compiled and shown hereunder are classified according to the year of publication, the figures are subject to revision as publications not yet received in the National Library come to hand.

For books published in 1961 and thereafter, the method of counting conforms with international practice. Each title is counted as one unit. The figures cover all non-periodical publications (i.e. those published at irregular intervals or regularly at intervals of one year or longer) published in Australia. They refer to all publications of five pages or more and include pamphlets, new translations and re-editions. They include government publications, educational textbooks, university theses, etc., but exclude publications not available to the general public, advertising material, publications of transitory interest, off-prints, musical works, children's picture books, maps and charts.

Figures for 1960 are less comprehensive, excluding most government publications and certain paper-backs.

2. Number of Publications.—The following table shows the number of books, etc., published in Australia and received by the National Library during the years 1960 to 1964. For 1960 the figures are on the "old" basis of compilation and exclude most government publications.

**NUMBER OF PUBLICATIONS RECEIVED BY THE NATIONAL LIBRARY:
AUSTRALIA**

Received by the National Library up to the end of—	Published during—				
	1960	1961	1962	1963	1964
1960	531	..	..	..	..
1961	839	1,840	..	..	..
1962	984	2,848	1,793	..	..
1963	1,039	2,963	2,501	1,416	..
1964	1,063	2,993	2,675	2,167	1,385

The next table shows the 1962, 1963 and 1964 publications received up to the end of 1964, classified by subject matter.

**NUMBER OF 1962, 1963 AND 1964 PUBLICATIONS RECEIVED BY THE
NATIONAL LIBRARY, BY SUBJECT(a): AUSTRALIA, TO 1964**

Subject	Published during—		
	1962	1963	1964
Bibliography, libraries, general	63	53	33
Philosophy, psychology	21	14	17
Religion	104	72	49
Social sciences	887	700	458
Philology	18	33	29
Science	188	209	126
Technology, business	639	455	224
Art, amusement	103	102	93
Literature	382	322	211
Australian poetry	24	47	29
Australian drama	6	4	22
Australian fiction	164	180	119
Australian essays	1	4	3
Australian humour and miscellany	22	10	3
Criticisms, anthologies, school editions	132	44	18
Other literature	33	33	17
Travel, biography, history	270	207	145
Total	2,675	2,167	1,385

(a) The classification is based on the divisions of the Dewey Decimal Classification.

3. **The Commonwealth Literary Fund.**—In 1908 the Commonwealth Government, under Alfred Deakin, first established the Commonwealth Literary Fund. The Fund was entirely a compassionate one devoted to literary pensions for aged or infirm authors, for the families of literary men who died in poverty, and for writers who were unable for financial reasons to continue their activities.

In 1939, in an endeavour to encourage the development of Australian literature and to foster appreciation of it, the Commonwealth Government greatly enlarged the scope of the Fund. The Fund now awards fellowships each year, assists in the publication of manuscripts of high literary merit, makes annual grants for lectures in Australian literature, and awards pensions to writers who have achieved a nation-wide reputation for their work in the field of creative literature.

The fellowships are awarded each year to writers who have proved their capacity in the field of creative literature, to enable them to devote their time to working on a literary project they specify. A fellowship carries a maximum value of £2,000 a year. The Fund does not seek out people on whom to bestow fellowships, but considers only those who submit applications.

The Fund also assists in the publication of manuscripts which have outstanding literary merit, but which, in the opinion of publishers, may constitute a commercial risk. This assistance takes the form of a guarantee of assistance to the publisher. The Fund does not itself enter the field of publishing, nor does it make outright grants to authors to enable them to arrange publication.

Since 1940 annual grants for special lectures in Australian literature have been made to all universities. In 1956 the Fund initiated a scheme of lectures to the general public and to schools, mainly in country areas, with the co-operation of State adult education authorities and Education Departments. Annual grants are now made to the States for this purpose.

The Fund also assists certain literary magazines of long standing and recognized literary value.

The Fund is administered by a Committee consisting of one representative of each of the three main political parties in the Parliament, the Chairman being nominated by the Prime Minister. The Committee is advised on all literary matters by an Advisory Board of six persons with literary qualifications.

4. **The Literature Censorship Board.**—In 1937 the Commonwealth Government introduced legislation to provide for a Literature Censorship Board to advise the Minister for Customs and Excise on imported literature. At the same time an Appeal Censor was appointed to afford appellants an avenue of appeal which did not make expensive court proceedings necessary. The Appeal Censor was replaced by an Appeal Board in 1960.

The Boards were set up to deal with that part of the problem which provides the greatest amount of controversy—restriction on books which have a real place in the field of literature. In practice, no imported publication having literary merit is prohibited without prior reference to the Literature Censorship Board. Should the Minister decide to prohibit the importation of a book on the recommendation of the Board, an appeal against the decision may be made for reference to the Literature Censorship Appeal Board. A decision to prohibit the importation of a book may be challenged through the normal processes of law.

The Literature Censorship Board consists of a Chairman, a Deputy Chairman, and two other members, while the Appeal Board is made up of a Chairman and two other members.

The foregoing refers to imported literature. Control of indigenous matter comes under the jurisdiction of the State Governments.

§ 5. Film Production

1. **Australian Film Production.**—Australia was one of the pioneers in the history of film-making, a short story film, *John Vane, Bushranger*, having been made in 1904, only a year after America's *The Great Train Robbery*, which is generally considered to be the first genuine story-film. It has been claimed that *The Kelly Gang*, made in 1905-6, was the first full-length feature film produced in the world.

Following the outbreak of the 1914–18 War a series of short patriotic films were produced. In 1917 the first of a successful series of rural comedies was made, featuring a family called the Hayseeds. In the same year *The Kelly Gang* was remade and the first film version of *For the Term of his Natural Life* appeared. A first film version of C. J. Dennis's *The Sentimental Bloke* was made in 1919.

The year 1920 was notable for a number of productions with an authentic Australian flavour:—*On our Selection*, a first version of *Robbery Under Arms*, another remake of *The Kelly Gang*, and C. J. Dennis's *Ginger Mick*. Production continued at about the same level until the coming of sound in 1928. Altogether, approximately 160 theatrical films were produced by Australian units in the silent period (1900–1930).

Lack of equipment hampered the commencement of production of sound films in Australia, but during the 1930's nearly 60 sound films were produced.

During the 1939–45 War, commercial film production combined with the Commonwealth Government in making films. Since the war, a number of British and American companies have made films in Australia. Altogether, about 115 feature films were produced in Australia between 1930 and 1960.

2. The Australian National Film Board.—The Australian National Film Board was inaugurated in April, 1945, on the recommendation of a Commonwealth Government inter-departmental committee. It was attached, for administrative purposes, to the Department of Information. With the abolition of that Department 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 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; and 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 twelve, with the Director of the News and Information Bureau as 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.

3. The Film Division of the News and Information Bureau.—The first Australian Government organization for the production of motion pictures for national information 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. When the Australian National Film Board was established in 1945, the Film Division of the Department of Information became the official film production and distribution agency for Commonwealth departments and instrumentalities. In 1950, with the closing down of the Department of Information and the transfer of its functions, the Division became the Film Division of the News and Information Bureau then set up within the Department of the Interior. The Film Division is also known as the Commonwealth Film Unit. Theatrical and television distribution in Australia, and both theatrical and non-theatrical distribution overseas, of all Film Division productions are organized by the 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.

Since 1946 the Film Division has produced films for general exhibition, as well as training and special purpose films. In 1963–64 the Film Unit produced 82 reels of new films and 15 reels of foreign versions of existing films. Prints are distributed to 50 oversea centres. In Britain there is regular distribution through commercial 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 arrangement with the Canadian Film Institute secures placement of films on television and the Australian High Commission handles the films for non-theatrical use. Selected films have been recorded in French, Dutch, German, Italian, Swedish, Russian, Spanish, Japanese, Malay, Thai and various dialects of Hindustani and Tamil.

In addition to films made on its own initiative, the Film Division produces films under the sponsorship of, or with the co-operation of, Commonwealth departments and many other bodies such as the Australian Road Safety Council, the Snowy Mountains Hydro-electric Authority, the Australian National University, the Australian Broadcasting Commission, the Victorian State Electricity Commission, the National Capital Development Commission, the Atomic Energy Commission, the British Broadcasting Corporation, the Australian National Shipping Line, and the Institute of Aboriginal Studies.

4. *Film Censorship.*—(i) *Legislation.* The Commonwealth Government's powers over censorship of films extend only to imported films and imported advertising matter 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 and related advertising material 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. 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 not. 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 seven persons and an Appeal Censor, the headquarters being in Sydney. Importers have a right of appeal to the Minister against decisions of the Board and the Appeal Censor.

(ii) (a) *Thirty-five mm. Films for Exhibition in Motion Picture Theatres.* In 1964, 1,096 films comprising approximately 4½ million feet were censored. This represented approximately 796 hours' screening time. Of these films, 389 originated in the United States of America, 360 in the United Kingdom, and 347 in other countries. The principal suppliers among the last mentioned were: U.S.S.R., 66; Italy, 46; Greece, 43; France, 34; Japan, 12; and Czechoslovakia, 8. Included in these figures were 422 full-length feature films which constituted the main theatrical attractions. This was a decrease of 53 compared with the imports for 1963. Feature films came from: The United States of America, 160; the United Kingdom, 88; Greece, 32; Italy and U.S.S.R., 30 each; France, 24; Germany, 9; and Spain and Japan, 5 each. Fourteen feature films were rejected and cuts were made from 128. There were 17 appeals, 11 against rejection, five against cuts and one against rejection of advertising matter. Three were allowed and 14 disallowed. Feature films classified as suitable for general exhibition numbered 209, and 213 were not suitable for children. Of the latter, 38 carried the special condition that all advertising should indicate that they were suitable only for adults. These classifications are advisory only and are designed to enable picture-goers and particularly parents to obtain a general idea of the nature of any particular film. In addition to these imported films, 283 35mm. films of 218,824 feet produced in Australia were cleared. These were mainly newsreels and documentaries intended for commercial exhibition or export.

(b) *Sixteen mm. Films.* Excluding those imported for television use, 6,541 16mm. films of approximately 6 million feet were examined. These were films commercially produced for screening in theatres used by business undertakings for advertising and instructional purposes and for screening in churches, schools and universities, and on home movies. Eleven were rejected.

(c) *Eight mm. and 9.5mm. Films.* Approximately 66,000 feet of these small dimension type films were examined. Seventy-seven films with an approximate footage of 5,000 feet were rejected.

(d) *Television Films.* 9,870 films, predominantly 16mm., of approximately 12 million feet, for use on television, were censored. The number of films is not a true indication of volume because many of these were of short duration. In terms of screening time, the

films censored for television amounted to approximately 5,000 hours. On a footage basis, the United States of America supplied 73 per cent. of the total imports and the United Kingdom 25 per cent. Thirty-eight television films were rejected outright and an additional six were classified as unsuitable for televising. Eliminations were made from 994. There were 17 appeals, 16 against rejection and one against cuts. Three were allowed and 14 disallowed.

(e) *Foreign Language Films.* Countries other than the United Kingdom and the United States of America supplied 347 of the 35mm. films imported for theatrical exhibition, of which 174 were feature films. Generally, the dialogue is in a foreign language with explanatory English captions. A few have an English commentary and in some cases English "dubbed" dialogue. Of 6,541 16mm. commercial films censored, 1,478 originated from non-English-speaking countries. The chief supplying countries were: Germany, 330; France, 241; Japan, 149; Italy, 118; Czechoslovakia, 59; Holland, 46; Switzerland, 43; India, 42; China, 38; Poland, 35; U.S.S.R., 32; and Spain, 32.

(iii) *Export of Films.* The quantity of films exported for the year was approximately 2.5 million feet, consisting mainly of newsreels, advertising films and documentaries. This footage included in many cases several prints of the one film. It also included large quantities of exposed negatives sent overseas for processing.

§ 6. The Arts Council of Australia

Patterned on the Council for the Encouragement of Music and Arts which operated in the United Kingdom during the Second World War, an Australian organization was brought into being in 1943. In 1945 it became The Arts Council of Australia. Originating in New South Wales, Divisions are active now in the Australian Capital Territory, New South Wales, Queensland, South Australia and Tasmania. A Federal Council was formed in 1964. The centre of activity has been in New South Wales, which has a country branch network of over fifty centres. Rapid development in Queensland has resulted in the formation of over 22 branches in this State.

The Arts Council receives State Government grants through the Departments of Education in New South Wales and Queensland. In 1963, for the first time, a substantial contribution was received from a private organization. Some activities of the Council are supported financially by non-metropolitan local government bodies and a grant was made by the Gulbenkian Foundation in 1964 to help in re-establishing the Federal Council.

The New South Wales Division is a member of the Adult Education Advisory Board in that State, representing the "live art" section of adult education. The Tasmanian Division is represented on, and works closely with, the Adult Education Board of that State.

Activities of the Arts Council are directed towards decentralization of the arts for the benefit of country centres and metropolitan and country schools. It is greatly concerned with taking the arts to children as a basic cultural development. Tours of high standard companies in opera, ballet, drama, puppets, etc., are operating throughout the year.

The Young Elizabethan Players Company was formed jointly by the Arts Council and the Australian Elizabethan Theatre Trust in 1958 to take Shakespeare to schools in New South Wales and Queensland, and is still operating.

The Council handles a wide range of art exhibitions, both for city and country areas. Summer schools for drama, painting, pottery, music and other arts are an established annual feature of the work of the New South Wales and Queensland Divisions.

Yearly drama festivals are conducted for the Little Theatre movement. In 1963 the New South Wales Division sponsored the first arts festival for Sydney (North Side Arts Festival), with a wide range of cultural activities concentrated on the north side of Sydney Harbour. It is intended to make the festival a biennial event with the second festival being planned for August, 1965.

§ 7. The Australian Elizabethan Theatre Trust

Inaugurated in 1954 to commemorate the first visit to the Commonwealth of Her Majesty The Queen, the Australian Elizabethan Theatre Trust has since presented drama, opera and ballet throughout the Commonwealth. The Trust receives annual grants from the Federal Government, the State Governments and city councils. Its income also includes subscriptions from members and donations from business houses.

In the field of drama it has presented, *inter alia*, the works of Australian playwrights, including plays which were subsequently presented overseas.

The Elizabethan Trust Opera Company has given seasons of opera and has presented oversea guest artists, conductors and producers. Since 1956, to the end of 1964, more than 1,000 performances of opera have been given by the Trust Opera Company in all States and in the Australian Capital Territory. Twenty-six operas have been the repertoire in this period. The Australian Ballet, which commenced its inaugural season in November, 1962, has visited all mainland capitals and New Zealand and presented world premiere productions of three commissioned ballets during 1964. The Commonwealth Government, late in 1964, promised financial assistance for the Ballet in its plans to be represented at the Commonwealth Festival of Arts in Britain in 1965. This company also features guest appearances by renowned oversea performers. The Trust has also been associated with commercial managements in the presentation of oversea attractions and large-scale musicals.

Country areas have been visited by Trust companies presenting opera, drama and puppets, in association with the Council of Adult Education in Victoria and The Arts Council of Australia in New South Wales. During 1965 two companies of Young Elizabethan Players will again present Shakespeare for schools in five States.

In Victoria the Trust is associated with the University of Melbourne in the Union Theatre Repertory Company. It is also associated with the University of New South Wales in the Old Tote Theatre Company which had its inaugural season during 1963. Assistance is given to the Perth Playhouse, the Festival of Perth, the National Theatre and Fine Arts Society of Tasmania, and other companies. The Trust contributes productions to the biennial Adelaide Festival of Arts.

One of the most important activities undertaken by the Trust is its association with the University of New South Wales and the Australian Broadcasting Commission in the establishment and maintenance of the National Institute of Dramatic Art. This provides a training ground for young Australian actors, producers and technicians.

SCIENTIFIC RESEARCH

NOTE.—This section refers specifically to various organizations, etc., associated with scientific research. Particulars regarding Commonwealth medical research organizations are given in Chapter XVIII. Public Health.

A special article on Science and Technology in Australia, prepared by the Commonwealth Scientific and Industrial Research Organization of Australia, was included in Year Book No. 49 (*see p. 781*).

§ 1. 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 Year Book. (*See No. 14, p. 1061 and No. 37, p. 1183.*)

2. **Science and Industry Research Act 1949-1959.**—This Act provides for an Executive of the Organization consisting of nine members, to be appointed by the Governor-General, of whom at least five shall be persons possessing scientific qualifications, and 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 research 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 to persons engaged in scientific research and 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.

4. **Work of the Organization.**—(i) *General.* The activities of the Commonwealth Scientific and Industrial Research Organization have necessitated a widespread and adaptable arrangement of its research laboratories. Centralization has been avoided, in the first place by establishing laboratories in different places in the Commonwealth wherever the necessary facilities, contacts and other suitable conditions could best be found, and secondly by 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 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 Organization so as to provide assistance to secondary industries and several laboratories were established for work in that field; it was thus able to render assistance to these industries almost immediately after the outbreak of war.

The Organization has devoted part of its effort to basic research and has achieved world leadership in certain fields. In applied research some notable successes have been achieved. Particular attention has been directed to the potentialities of Australian raw materials and to the improvement of the industrial processes concerned with processing these resources into finished products.

The basis has been provided for the establishment of a flourishing pulp and paper industry based upon indigenous hardwoods as raw material. Wool research, supported by a statutory contribution by the industry, has been able to show the way to notable advances in manufacturing techniques, and, in particular, new moth-proofing and shrink-proofing processes have been developed. Recent outstanding successes include processes for permanently pleating woollen fabrics and for endowing woollen fabrics with "wash-and-wear" properties.

The Organization's Division of Chemical Physics has pioneered the development of methods of chemical analysis based on atomic absorption spectroscopy. The method and apparatus have been patented and licences to manufacture granted to firms in the U.K., U.S.A., Italy, France and Australia. The atomic absorption method of chemical analysis is now used in more than 70 Australian laboratories engaged in mining, metallurgy, agriculture, medical research, electro-plating, brewing, wine making and oil analysis.

(ii) *Establishments.* 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 thirty-one, 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 designation as Divisions. As the Organization's investigations extend over the whole Commonwealth, 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.

Divisions.

- Plant Industry, with main laboratories at Canberra and field stations.
- Entomology, with main laboratories at Canberra and field stations.
- Animal Health (laboratories in Melbourne, Sydney and Brisbane), Animal Genetics (main laboratory in Sydney) and Animal Physiology (main laboratory in Sydney), which together comprise the Animal Research Laboratories.
- Biochemistry and General Nutrition, with main laboratories at Adelaide and field stations.
- Soils, with main laboratories at Adelaide and extensive operations in the field.
- Forest Products, with main laboratories in Melbourne and field experiments.
- Food Preservation, with main laboratories at North Ryde (New South Wales) and a subsidiary laboratory in Brisbane.
- Fisheries and Oceanography, with main laboratories at Cronulla (New South Wales) and experimental work in coastal waters of Australia.
- Mechanical Engineering, with laboratories in Melbourne.
- Physics and Applied Physics, comprising the National Standards Laboratory at Sydney.
- Radiophysics, with main laboratory at Sydney and Observatory at Parkes, New South Wales.
- Physical Chemistry, Chemical Physics, Mineral Chemistry, Applied Mineralogy, Chemical Engineering, and Organic Chemistry, comprising the Chemical Research Laboratories in Melbourne.
- Tribophysics, with laboratories in Melbourne.
- Building Research, with laboratories in Melbourne.
- Mathematical Statistics, with main laboratory in Adelaide.
- Meteorological Physics, with main laboratory and field station in Melbourne.
- Land Research and Regional Survey, with headquarters in Canberra and field stations in the Northern Territory and Western Australia.
- Protein Chemistry (Melbourne), Textile Industry (Geelong, Victoria) and Textile Physics (Sydney), which together comprise the Wool Research Laboratories.
- Coal Research, Sydney.
- Tropical Pastures, with main laboratories in Brisbane and Townsville and field stations.
- Dairy Research, Melbourne.
- Wildlife Research, with main laboratories at Canberra.

Sections.

- Horticultural Research Sections, Adelaide and Merbein (Victoria).
- Irrigation Research Laboratory, Griffith (New South Wales).
- Upper Atmosphere, with laboratory at Camden (New South Wales).
- Mineragraphic Investigations, Melbourne.
- Ore-dressing Investigations, Melbourne and Kalgoorlie (Western Australia).
- Fodder Conservation, Melbourne.
- Physical Metallurgy, Melbourne.
- Soil Mechanics, Melbourne.
- Industrial Research Liaison, Melbourne.
- Editorial and Publications, Melbourne.
- Wheat Research Unit, Sydney.
- Sugar Research Unit, Melbourne.
- Computing Research Section, Canberra.

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 Liaison Unit, Industrial Research Liaison Section and Editorial and Publications 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. It has more than 1,600 professional officers in its total staff of 5,400, and has an annual budget of £16 million.

The Organization maintains liaison offices in London and Washington, in each case as part of the British Commonwealth Scientific Office. These offices keep in close touch with developments throughout Europe and North America, and through them Australia receives advice of significant advances. These offices also play an important role in assisting scientists who are studying in the regions concerned. Numerous oversea studentships are maintained by the Organization as a means of raising the standard of training among its professional staff.

§ 2. Mount Stromlo Observatory

Mount Stromlo Observatory—since 1957 incorporated into the Australian National University—is the largest observatory in the southern hemisphere. It is in effect the Department of Astronomy of the Australian National University, and its staff members assist in the training of the future astronomers of Australia. In its instrumental resources, it is second only to some of the great observatories of America. Since it is located south of the Equator, it is placed especially advantageously for the conduct of research into the structure of the Milky Way system and of the Star Clouds of Magellan. The telescopes and auxiliary equipment at the Observatory provide access to parts of the sky that are forever hidden from the view of northern hemisphere astronomers. Mount Stromlo astronomers have therefore a special responsibility to do research on stars and other celestial objects at far southern declinations.

Mount Stromlo itself is a ridge of hills, approximately one mile long, situated at 35° 19' 16" South Latitude and 149° 0' 20" East Longitude, seven miles west of the city of Canberra. Its highest point is about 2,560 feet above sea level, and telescopes can be situated so as to be well screened from the lights of the city.

The first permanent installation on the site was established in 1911, but, because of the war and other circumstances, the development of the Observatory was delayed. It was not until 1925 that regular astronomical work could be undertaken. Since then, the Observatory has developed steadily, and, under its third Director, the scientific staff now consists of fifteen astronomers. This does not include fifteen scholars and a number of oversea astronomers visiting Mount Stromlo for periods of a year or so. With technical, clerical and maintenance personnel, the total staff amounts to about 75.

Mount Stromlo Observatory possesses ten mounted telescopes with apertures ranging from five inches to 74 inches. The 74-inch reflector is of the largest size of telescope in the southern hemisphere. There are also special telescopes for the Time Service, and the University of Uppsala, Sweden, has a 26-inch Schmidt telescope on Mount Stromlo.

The principal fields of research at Mount Stromlo are as follows.

Studies of the structure and dynamics of the Milky Way system.

Investigation of the Large and Small Magellanic Clouds.

Studies of the physical properties of the interstellar medium of gas and dust, and its relation to the spiral structure of our galaxy.

Studies of the physics of the stars of the southern hemisphere by spectrographic means and by photoelectric techniques.

Maintenance of the National Time Service, leading to studies of the variable rotation of the earth and polar motion.

Published accounts of the researches have a world-wide distribution.

The Observatory is at present completing a major expansion of equipment and staff. A permanent Field Station is in operation on Siding Spring Mountain (Latitude 31° 16' South; Longitude 148° 41' East; altitude, 3,820 feet) near Coonabarabran, New South Wales. This is an area having less cloud than Mount Stromlo. The principal instrument is a modern 40-inch reflector, alongside of which is a 16-inch telescope. Both telescopes were built in the United States and are now in operation. A 24-inch polarization reflector is on order. Other sites are being examined for the future development of astronomy in Australia.

At certain times Mount Stromlo is open for inspection by members of the public when arrangements can be made so that the scientific work of the Observatory is not interrupted. A more detailed description of the Observatory's work is given in Year Book No. 46, pages 1142-4.

§ 3. Australian Atomic Energy Commission

1. **Establishment and Functions of the 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. Under amending legislation, the number of Commissioners was increased to five in April, 1958. 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.

2. Research.—The Commission's Lucas Heights Research Establishment is Australia's major atomic energy research and information centre. Its research programme is concerned with the development of nuclear power, the utilization of radioisotopes, and other related fields, and is directed towards the long-term development of national resources.

The major research effort of the Lucas Heights establishment is the evaluation of a high-temperature gas-cooled reactor system in which the fuel is dispersed in the moderator. This is an advanced reactor concept which is considered to have considerable promise in the long term in relation to the present generation of power reactors now operating or under development overseas.

For various reasons, including the avoidance of duplication of effort, the Commission decided to investigate the feasibility of using beryllium metal or beryllium oxide as the moderator and carbon dioxide as the coolant. Much work has been done on the metal system but effort is now being concentrated on the oxide or ceramic system, as applied to a specific reactor concept, namely a pebble-bed core cooled with carbon dioxide.

With all-ceramic fuel, higher operating temperatures can be achieved. This permits a reduction in the size and cost of heat exchangers and associated civil works and an improvement in steam conditions and overall efficiency.

The development of a new power reactor concept to a commercially economic stage generally takes 15 to 20 years and involves considerable expense. Since a number of different types of reactors have already been developed to a commercial stage, a new concept faces strong competition, and its development can in general be justified only if it offers promise of some long-term advantages. The beryllium oxide moderated all-ceramic fuel reactor holds such promise.

Provided certain design problems can be satisfactorily solved, a dispersed fuel beryllium oxide based high-temperature gas-cooled reactor should yield lower plant and equipment costs than most other gas-cooled systems. The use of a dispersion fuel capable of a high burn-up gives promise of low fuel cycle costs.

The maximum gas temperature will be limited by the ability of materials used in parts of the heat exchangers and for duct work to withstand it. Nevertheless it should be possible to achieve steam conditions equal to those likely to be used in any future conventional plants. At present, using available steels which are economically practicable, the maximum temperature of the carbon dioxide coolant would appear to be 750° C., a considerable advance on British gas-cooled stations of current design. There is no obvious reason why this temperature should not be raised as better structural materials are developed. Then gas-turbines or other plant could be used as topping sets, as has been proposed for future development in the conventional power field.

Thus there is plenty of scope for development, and the general concept is unlikely to become prematurely obsolete.

The Commission is also seeking to extend the use of radioisotopes in Australia in scientific research and development, in the treatment of disease, in raising production and lowering costs in agriculture and in manufacturing industry. New applications are being continually devised. The use of isotopes is fostered by providing an advisory service which is a ready source of information on established uses, and by investigation of other projected applications. Radioisotopes, including short-lived isotopes which cannot be economically imported, are being produced in the high flux research reactor HIFAR, and some are being exported.

Research and development work on technical and scientific applications of radiation is also being carried out. The possibilities of radiation for such purposes as industrial sterilization, food preservation, and the control of insect pests are being investigated. Scientists at Lucas Heights are also studying the biological effects and questions of health and safety involved in the use of radioactive materials.

The Research Establishment has developed facilities for the absolute standardization of radioisotopes and has participated in international intercomparisons in the health and safety field. Work is directed to various aspects of radiation dosimetry, to radiation biology and to aspects of the toxicology of beryllium compounds.

Lucas Heights is a centre of specialized equipment and information. In addition to the research reactor HIFAR, used for testing materials and producing radioisotopes, there is much other equipment unique in Australia. All these facilities are available to universities and other institutions under suitable conditions. 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 results of British research on peaceful atomic energy uses. Results of research in Australia are in like manner available to Britain. Work in Australia, though constituting a self-contained programme, is co-ordinated with the British programme to avoid overlapping of research objectives and duplication of investigations. Australia also has bilateral arrangements with the United States, Canada and Japan and recently accredited a diplomatic mission to the European Atomic Energy Community (Euratom). Australia is also taking part in the promotion of the peaceful uses of atomic energy through the International Atomic Energy Agency. For the year 1963-64 the Commission placed £51,000 worth of research contracts mainly within Australian universities on matters related to the research programme at Lucas Heights. Since 1954 the Commission has placed research contracts to a total value exceeding £410,000.

The Australian Institute of Nuclear Science and Engineering comprises the Australian Atomic Energy Commission and Australian universities. Twenty-five operations are financed by membership subscriptions and a Commonwealth Government grant. The purpose of the Institute is to stimulate research and training in nuclear science and engineering and to arrange access for university research workers to the highly specialized equipment at the A.A.E.C. Research Establishment.

The Australian School of Nuclear Technology, jointly sponsored by the Commission and the University of New South Wales, will offer courses in the near future in nuclear technology, production and use of radioisotopes, radiological safety, health physics, and other related topics.

§ 4. The Standards Association of Australia

The Standards Association of Australia is the national standardizing organization and issues Australian standard specifications and test methods for materials and products and standard codes of practice.

The Standards 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 was incorporated by Royal Charter in 1950. 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 of industry. Half of its funds are provided by Commonwealth Government grant, the remainder coming from membership subscriptions, other contributions, and sale of publications. Organizations, companies, and individuals are eligible for subscription membership.

The governing body of the Association is a 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. They are organized into some hundreds of committees. These committees are grouped under broad industry divisions including building construction and civil engineering, electrical engineering, mechanical engineering, chemical, timber, plastics, packaging, and iron and steel.

The Association publishes standards of many kinds for the benefit of industry and commerce. Its specifications 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. As a rule it creates national standards based on Australian practices, but there is some endorsement of British standards, with or without modification. At present there are more than 1,300 Australian standards, and over 600 projects are in hand.

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.

The Association has two specialized libraries, one in Sydney and one in Melbourne, containing the national standards of all countries with standards organizations. These libraries serve to provide necessary material for committee work and also give freely a service to those concerned with standards or related matters, e.g., to importers and exporters seeking details of practice in other countries.

The Association has international affiliations and is a member, representing Australia, of the International Organization for Standardization (ISO) and of the International Electrotechnical Commission (IEC). Close links are maintained with the British Standards Institution and the standards organizations of other British Commonwealth countries. The Association is the Australian agent of the British Standards Institution and can supply all British standards.

Its functions are linked to some extent with those of the National Association of Testing Authorities in that whereas the Standards Association establishes and publishes standard test methods, the Association of Testing Authorities works to ensure that registered testing laboratories maintain their level of competence.

The headquarters office of the Association is in Sydney and there is a major branch office in Melbourne. Branch offices are located also in other capital cities and at Newcastle, New South Wales.

§ 5. The National Association of Testing Authorities

The National Association of Testing Authorities organizes testing facilities throughout Australia to serve private and governmental needs.

Membership is open to authorities whose testing laboratories conform to the standards of staffing and operation defined by the Association. Testing authorities may register their laboratories voluntarily. The Association assesses the competence of the laboratories and ensures that their standards of competence are maintained. Certificates of test issued by registered laboratories may be endorsed in the name of the Association. NATA endorsed test certificates are generally accepted by governmental, industrial and commercial interests.

Laboratories are registered for performance of specific tests in the fields of metrology, mechanical testing, electrical testing, optics and photometry, industrial radiography and flaw detection, heat and temperature measurement, chemical testing, biological testing and acoustic and vibration measurement. At the end of 1964 there were 480 laboratories registered with the Association, which had a further 105 applications for registration before it.

§ 6. Scientific Societies

1. *Royal Societies.*—The following table contains the latest available statistical information regarding the Royal Society in each State, the headquarters of which are in the capital cities.

ROYAL SOCIETIES, DECEMBER, 1964

Particulars	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	Canberra
Year of charter	1866	1859	1884	1880	1913	1844	1930
Number of members	373	445	274	232	227	625	188
Volumes of transactions issued	97	(a) 950	(a) 75	88	53	98	..
Number of books in library	32,695	25,500	64,810	22,500	6,250	35,000	..
Societies on exchange list	392	337	296	297	228	316	..

(a) Volumes of proceedings.

2. Australian Academy of Science.—The Australian Academy of Science is the national institution representing science in Australia. Constituted by Royal Charter in 1954, the Academy promotes scientific knowledge and research, maintains standards of scientific endeavour and achievement in the natural sciences in Australia, and recognizes outstanding contributions to the advancement of science.

The Academy represents Australian science and scientists at the national and international level, organizes meetings of scientists, holds symposia, and arranges for visits of scientists from other countries to Australia.

In its functions the Australian Academy is comparable with the Royal Society of London and national academies of science of many other countries. Its 106 Fellows (designated F.A.A.) are eminent in some branch of the physical or biological sciences in Australia, occupying professional positions in universities, the Commonwealth Scientific and Industrial Research Organization, other research organizations, and industry. A very few places are reserved for Fellows who have rendered conspicuous service in the cause of science.

No more than six new Fellows are elected in any one year. His Royal Highness, Prince Philip, Duke of Edinburgh, was admitted as a Royal Fellow during his visit to Canberra on 20th November, 1962.

The Australian Academy co-ordinates Australian contributions to such co-operative ventures as the International Geophysical Year, the International Year of the Quiet Sun, and the International Biological Programme.

Representation is provided at the General Assemblies of the International Scientific Unions and similar bodies relating to astronomy, geophysics, geology, physics, crystallography, mathematics, biochemistry, physiology, geography, biological sciences, chemistry, Antarctic research, space research and oceanic research.

As the Australian Academy of Science is too young a body to be financially self-sufficient, the Commonwealth Government makes annual grants of general purpose funds without affecting the autonomy of the Academy. These grants, together with substantial private benefactions, enable the Academy to continue its work. Research fellowships provided by industry are administered.

The Academy is managed by an elected council comprising a President, Treasurer, two secretaries and eight ordinary members who are drawn equally from the physical sciences and biological sciences. Chief administrative officer is the Executive Secretary, who is not a Fellow. Its conference centre in Canberra was opened in 1959.

3. The Australian and New Zealand Association for the Advancement of Science.—This association was founded in 1887. Its headquarters are at Science House, Sydney, and congresses are held at intervals of approximately eighteen months in the various States and in New Zealand. The 38th Congress is to be held in Hobart in August, 1965.

4. Other Scientific Societies.—The Linnean Society of New South Wales, with headquarters 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. One fellowship was awarded for 1965. The library has some 19,000 volumes. Eighty-nine 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 1964 was 285.

The British Astronomical Society has a branch in Sydney, and in each of the States there is a branch of the Australian Medical Association.

There are over 200 other learned societies devoted to the study of particular sciences. Some of these, including the Royal Australian Chemical Institute and the Institute of Engineers, Australia, are qualifying bodies, admission to which is by qualification only. Others, such as the Institute of Food Technologists, are open to any interested person. Some societies, such as the Australian Biochemical Society, have annual symposia of a very high standard. A great many of these bodies publish appropriate journals.

STATE GOVERNMENT EXPENDITURE ON EDUCATION, ETC.

Estimates of the expenditure by each State Government on education and related items are shown in the following tables.

(i) *Expenditure from Revenue and Special Funds.* Details shown below relate to net expenditure from Consolidated Revenue and the following special funds: Opera House Account, Maintenance and Repairs to Schools and Police Buildings Account and the Joint Coal Board Welfare Fund (New South Wales); Forestry Fund (Victoria); and Lotteries Commission Fund (Western Australia). Details exclude expenditure from the Commonwealth university grants, and expenditure on debt charges, payroll tax and superannuation payments. The cost of medical and dental inspection of school children is also excluded, as this service is considered to be more appropriately classified under public health. For these reasons, the figures do not represent total current government expenditure on education in each State. Furthermore, because of differences in organization and accounting methods, the information shown is not on exactly the same basis for all States, and consequently comparisons of State expenditures are approximate only.

STATE NET EXPENDITURE ON EDUCATION, ETC. (a) FROM REVENUE AND SPECIAL FUNDS

(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1958-59 ..	44,624	31,256	13,624	10,812	9,217	4,636	114,169
1959-60 ..	50,286	35,429	14,789	12,363	10,019	5,300	128,186
1960-61 ..	58,135	40,193	16,947	14,127	11,378	5,756	146,536
1961-62 ..	62,987	44,632	18,008	16,267	12,508	6,361	160,763
1962-63 ..	67,588	50,176	19,926	17,806	13,461	6,960	175,917

(a) Includes expenditure on administration, transport of school children, teacher training, primary, secondary, technical, agricultural and university education; and expenditure on libraries, museums, etc.

(ii) *State Loan Fund Expenditure on Educational Buildings.* Details in the following table show gross Loan Fund expenditure in each State on educational buildings.

STATE GROSS LOAN FUND EXPENDITURE ON EDUCATIONAL BUILDINGS
(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
1958-59 ..	11,620	9,039	3,021	3,489	1,782	2,000	30,951
1959-60 ..	15,194	11,305	3,400	3,997	2,111	1,775	37,782
1960-61 ..	15,749	12,750	3,539	4,836	2,734	2,009	41,617
1961-62 ..	16,178	14,160	3,417	5,944	2,907	1,885	44,491
1962-63 ..	16,074	14,065	4,409	5,955	2,729	2,023	45,255

CHAPTER XX

LOCAL GOVERNMENT

NOTE.—This chapter includes, in addition to information on the operation of local government authorities, information on the operation of certain semi-governmental authorities. The latter information is not comprehensive for this type of authority, and is included partly because of the association of the functions performed with those of local government authorities, and partly for convenience in preparation. Particulars of the activities of other semi-governmental authorities, e.g. transport, electricity and gas, and banking undertakings, for which only some financial statistics are given in this chapter, are included in the chapters relevant to those subjects.

§ 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 899, 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, towns and shires; 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 (except for the City of Darwin), 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, water and sewerage, electricity and irrigation, 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. Owing to difficulty in obtaining complete particulars of receipts and expenditure of 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. However, estimates of the aggregate net expenditure of all public authorities concerned with roads and bridges in Australia are given in paragraph 10 of that section. 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 appointed by the government. In some 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.

§ 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 include important towns). At the end of 1963 the area incorporated was 272,000 square miles, or nearly nine-tenths 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, gas, abattoirs. At 31st December, 1963, there were 56 county councils, including the Sydney County Council.

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 (41,600 acres) in Westernport Bay, Lady Julia Percy Island (652 acres) off Port Fairy, Bass Strait Islands (966 acres), part of Gippsland Lakes (81,920 acres), and Tower Hill (1,460 acres) adjacent to the Borough of Kororoit. 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 of 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.**—Local government is established throughout the State, the divisions being cities, towns and shires.

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 for the year 1962-63 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 1961 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 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. Unoccupied dwellings include vacant dwellings available for sale and renting, "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, 1962-63

Location	Number	Area '000 acres	Population '000	Dwellings		Value of ratable property		
				Occupied	Unoccupied	Unimproved capital value	Improved capital value	Annual value
				No. (a)	No. (a)	£'000	£'000	£'000
NEW SOUTH WALES(b)								
Metropolitan—								
Capital city	1	7	169	48,599	2,311	212,151	537,896	29,645
Other	34	702	2,131	570,916	22,825	1,055,768	2,984,306	178,763
Outside metropolitan area ..	190	173,648	1,735	441,537	47,267	657,361	n.a.	68,648
Total	225	174,357	4,035	1,061,052	72,403	1,925,280	n.a.	n.a.
VICTORIA(c)								
Metropolitan—								
Capital city	1	8	76	18,971	740	n.a.	331,139	16,557
Other	43	715	1,928	505,637	16,093	n.a.	1,980,474	99,863
Outside metropolitan area(d)	164	55,387	1,042	264,769	30,469	n.a.	1,370,479	68,648
Total	208	56,110	3,046	789,377	47,302	n.a.	3,682,092	185,068
QUEENSLAND(e)								
Capital city	1	246	619	160,588	5,441	72,525	n.a.	n.a.
Other(f)	130	425,980	941	236,845	28,544	257,383	n.a.	n.a.
Total	131	426,226	1,560	397,433	33,985	329,908	n.a.	n.a.
SOUTH AUSTRALIA(e)								
Metropolitan—								
Capital city	1	4	22	5,846	437	60,639	140,000	7,012
Other	20	100	578	158,054	5,157	n.a.	543,000	27,131
Outside metropolitan area ..	120	36,857	391	95,205	11,208	n.a.	501,000	25,061
Total	141	36,961	991	259,105	16,802	n.a.	1,184,000	59,204
WESTERN AUSTRALIA(e)								
Metropolitan—								
Capital city	1	16	95	26,845	1,001	2,657	n.a.	6,358
Other	16	107	350	88,003	2,686	52,950	n.a.	3,399
Outside metropolitan area ..	128	624,466	324	79,469	9,939	77,408	n.a.	1,939
Total	145	624,589	769	194,317	13,626	133,015	n.a.	11,756

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: AREA, POPULATION, DWELLINGS AND VALUE OF RATABLE PROPERTY, 1962-63—continued

Location	Number	Area '000 acres	Popula- tion '000	Dwellings		Value of ratable property		
				Occu- pied	Unoccu- pied	Unim- proved capital value	Im- proved capital value	Annual value
				No. (a)	No. (a)	£'000	£'000	£'000
TASMANIA(e)								
Metropolitan—								
Capital city	1	18	54	15,281	507	22,484	71,179	4,876
Other	2	99	64	14,483	795	17,481	57,632	3,981
Outside metropolitan area ..	46	16,661	244	61,494	7,280	68,039	234,625	15,454
Total	49	16,778	362	91,258	8,582	108,004	363,436	24,311

(a) Particulars of dwellings as at Census 30th June, 1961. (b) Year ended 31st December, 1962.
 (c) Year ended 30th September, 1963. (d) Excludes Yalourn Works Area under the jurisdiction of the State Electricity Commission. (e) Year ended 30th June, 1963. (f) Includes City of Redcliffe and that part of Pine Rivers Shire within the Metropolitan Area of Brisbane but outside the Brisbane City Area.

8. **Finances.**—(i) *General.* The following tables show the latest available financial statistics for local government authorities. The figures relate to the year 1962-63 except for New South Wales, where they relate to the year 1962. For further detail on local government finances, see *State, Territory and Local Government Authorities' Finance and Government Securities*, Bulletin No. 2, 1963-64, issued by this Bureau.

(ii) *Ordinary Services.* In the returns of revenue and expenditure for 1962-63 in the following tables 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, 1962-63

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (c)	W. Aust. (c)	Tas. (c)	Total
Number of local government authorities	225	208	131	141	145	49	899

REVENUE (EXCLUDING LOAN RECEIPTS) (£'000)

Taxation—							
Rates (net)	46,999	27,637	16,573	7,867	5,195	} 2,883	107,737
Penalties	456	127	..	..	..
Licences	952	240	178	197	88		
Total	48,407	28,004	16,751	8,064	5,283	2,917	109,426
Public works and services—							
Sanitary and garbage services ..	4,517	1,765	2,922	90	527	160	9,981
Council properties	4,068	(d) 5,522	778	616	1,556	391	12,931
Street construction	2,954	2,112	..	(e) 3,194	523	24	8,807
Other	4,667	1,066	353	107	260	225	6,678
Total	16,206	10,465	4,053	4,007	2,866	800	38,397
Government grants—							
Roads	13,649	395	3,415	1,494	2,458	670	22,081
Other	1,737	1,878	376	114	187	354	4,646
Total	15,386	2,273	3,791	1,608	2,645	1,024	26,727
Profits from business undertakings .. ..	..	454	..	..	..	..	454
Fees and fines .. ..	..	346	..	..	79	..	425
All other .. ..	..	429	(f) 6,739	115	1,805	157	9,245
Total Revenue	79,999	41,971	31,334	13,794	12,678	4,898	184,674

NOTE.—See next page for footnotes.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE, 1962-63—*continued*

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (c)	W. Aust. (c)	Tas. (c)	Total
EXPENDITURE (EXCLUDING LOAN EXPENDITURE) (£'000)							
General administration ..	5,269	5,298	2,666	1,232	1,159	494	16,118
Debt services (excluding business undertakings)—							
Interest ..	2,834	2,217	3,072	469	821	389	9,802
Redemption ..	5,090	2,615	3,422	797	1,248	365	13,537
Exchange ..	20	..	111	..	..	..	131
Other ..	..	48	44	..	..	..	92
Total Debt, etc. ..	7,944	4,880	6,649	1,266	2,069	754	23,362
Public works and services—							
Roads, streets and bridges ..	35,976	14,100	8,782	8,145	3,831	1,995	72,829
Health administration ..	2,175	449	3,292	287	257	102	17,659
Sanitary and garbage services ..	5,772	4,112					
Street lighting ..	1,834	861	450	306	205	119	3,775
Council properties ..	11,085	(g) 7,540	3,703	1,276	3,200	841	27,645
Other ..	4,003	1,293	109	210	750	55	6,420
Total ..	60,845	28,355	16,336	10,652	8,883	3,257	128,328
Grants—							
Fire brigades ..	449	603	219	141	133	53	1,598
Hospitals and ambulances ..	233	124	..	279	10	..	5,509
Other charities ..							
Other ..	(h) 2,357	(i) 1,610	705	58	58	65	..
Total ..	3,039	2,337	924	488	201	118	7,107
All other ..	2,660	987	(j) 4,376	..	223	94	8,340
Total Expenditure	79,757	41,857	30,951	13,638	12,535	4,717	183,455

(a) Figures for New South Wales relate to the year ended 31st December, 1962, 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, 1963. (c) Year ended 30th June, 1963. (d) Includes £2,611,000 plant hire. (e) Includes £1,609,000 reimbursement from Highways Department. (f) Includes the following reimbursements: £2,134,000 from Main Roads Department, £496,000 from other State Government Departments and £1,736,000 from other sources. (g) Includes £828,000 plant and equipment. (h) To Main Roads Department. (i) Includes £769,000 to Country Roads Board. (j) Includes expenditure on work done for re-imbursement: for Main Roads Department £2,131,000; for other State Government Departments £496,000; other £1,651,000.

LOCAL GOVERNMENT AUTHORITIES: ORDINARY SERVICES—REVENUE AND EXPENDITURE (£'000)

Year	N.S.W.(a)	Vic.(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
1959 ..	55,946	29,456	23,618	9,977	(d) 8,544	3,147	130,688
1960 ..	61,024	32,864	25,593	10,667	(d) 9,437	3,404	142,989
1961 ..	67,624	35,836	26,698	11,890	(d) 10,495	3,799	156,342
1962 ..	75,219	39,031	28,470	13,329	(c) 10,536	4,203	170,788
1963 ..	79,999	41,971	31,334	13,794	(c) 12,678	4,898	184,674
EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
1959 ..	54,024	29,332	23,184	10,024	(d) 8,343	3,149	128,056
1960 ..	58,911	32,295	25,631	10,898	(d) 9,364	3,410	140,509
1961 ..	67,962	36,413	27,217	12,463	(d) 10,582	3,836	158,473
1962 ..	74,964	39,071	28,046	13,409	(c) 10,381	4,081	169,952
1963 ..	79,757	41,857	30,951	13,638	(c) 12,535	4,717	183,455

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

(iii) *Business Undertakings.* The tables hereunder show, for 1962-63, 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, 1962-63**
(£'000)

Particulars	N.S.W. (a)	Vic. (b)	Q'land (c)	S. Aust. (c)	W. Aust. (c)	Tas. (c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
Water supply and sewerage—							
Rates	3,742		2,473	..	..	1,340	} 11,983
Charges for services and sales of products ..	1,082	} 454	{ 2,694	3	19	176	
Other (including grants) ..	(d) 1,127							12	532	..	..	227
<i>Total</i>	5,951	466	5,699	3	19	1,743	13,881
Electricity and gas—							
Rates	552	..	6	..	..	..	558
Charges for services and sales of products ..	83,913	17,299	9,601	574	862	..	112,249
Other (including grants) ..	1,919	287	1,178	28	..	..	3,412
<i>Total</i>	86,384	17,586	10,785	602	862	..	116,219
Railways, tramways and omnibuses—							
Charges for services and sales of products ..	..	..	3,922	..	..	..	3,922
Other (including grants) ..	..	..	257	..	..	..	257
<i>Total</i> .. .. .	..	..	4,179	..	..	..	4,179
Other—	(e)	(f)	(g)	(h)	(i)	(j)	..
Rates	13	..	11	..	..	..	24
Charges for services and sales of products ..	4,694	1,067	402	100	48	241	6,552
Other (including grants) ..	188	33	1	48	..	..	270
<i>Total</i>	4,895	1,100	414	148	48	241	6,846
Grand Total	97,230	19,152	21,077	753	929	1,984	141,125

EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
Water supply and sewerage—							
Working expenses ..	2,428	351	2,469	3	9	762	6,022
Depreciation	(k) -130	22	..	..	..	..	-108
Debt charges	2,267	63	2,389	..	17	892	5,628
Other (including transfers to general revenue and construction) ..	..	29	646	..	..	66	741
<i>Total</i>	4,565	465	5,504	3	26	1,720	12,283
Electricity and gas—							
Working expenses ..	71,404	15,921	6,688	474	659	..	95,146
Depreciation	(k) 1,607	541	..	..	81	..	2,229
Debt charges	9,630	609	2,862	51	95	..	13,247
Other (including transfers to general revenue and construction) ..	..	419	957	87	..	..	1,463
<i>Total</i>	82,641	17,490	10,507	612	835	..	112,085
Railways, tramways and omnibuses—							
Working expenses ..	..	..	3,888	..	..	..	3,888
Debt charges .. .. .	..	..	373	..	..	..	373
Other (including transfers to general revenue and construction) ..	..	..	290	..	..	..	290
<i>Total</i> .. .. .	..	..	4,551	..	..	..	4,551
Other—	(e)	(f)	(g)	(h)	(i)	(j)	..
Working expenses ..	4,466	818	193	111	32	156	5,776
Depreciation	9	49	..	..	..	..	58
Debt charges	220	98	24	3	1	35	381
Other (including transfers to general revenue and construction) ..	..	71	36	41	..	..	148
<i>Total</i>	4,695	1,036	253	155	33	191	6,363
Grand Total	91,901	18,991	20,815	770	894	1,911	135,282

(a) Year ended 31st December, 1962. (b) Year ended 30th September, 1963. (c) Year ended 30th June, 1963. (d) Includes Government grant, £865,000, for part of cost of new works borne by Government. (e) Abattoirs. (f) Abattoirs, hydraulic power undertakings, quarries, iceworks and reinforced concrete pipe and culvert works. (g) Off-street car parking, municipal markets, hostels, hotels and cinemas. (h) Quarries, hospitals and cinemas. (i) Quarries, canteen and abattoirs. (j) Abattoirs. (k) Net balance after deducting charge for debt redemption. The full amount of charge for debt redemption is included under debt charges.

NOTE.—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 1958-59 to 1962-63.

LOCAL GOVERNMENT AUTHORITIES: BUSINESS UNDERTAKINGS—REVENUE AND EXPENDITURE
(£'000)

Year	N.S.W.(a)	Victoria(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
REVENUE (EXCLUDING LOAN RECEIPTS)							
1959 ..	66,378	15,242	14,113	563	(d) 771	1,272	98,339
1960 ..	72,790	16,505	15,329	601	(d) 896	1,487	107,608
1961 ..	80,276	16,884	16,182	628	(d) 865	1,635	116,470
1962 ..	87,744	17,712	17,859	656	(c) 768	1,846	126,585
1963 ..	97,230	19,152	21,077	753	(c) 929	1,984	141,125
EXPENDITURE (EXCLUDING LOAN EXPENDITURE)							
1959 ..	63,777	14,815	14,296	556	(d) 747	1,269	95,460
1960 ..	69,628	16,202	15,481	625	(d) 885	1,471	104,292
1961 ..	77,585	16,732	17,317	621	(d) 869	1,626	114,750
1962 ..	83,961	17,676	17,726	648	(c) 711	1,809	122,531
1963 ..	91,901	18,991	20,815	770	(c) 894	1,911	135,282

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

(iv) *Loan Expenditure.* The tables below show particulars for 1962-63 of loan expenditure on works connected with the ordinary services and the business undertakings of local government authorities.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE, 1962-63
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
ORDINARY SERVICES							
Roads, bridges, streets, footpaths, drainage and sewerage ..	5,113	3,058	10,221	2,111	753	936	22,192
Council properties ..	(a) 3,117	(a) 1,869	} (a) 2,345	164	(a) 1,954	(a) 445	} 12,775
Parks, gardens and recreational reserves ..	891	923		209	574	284	
Other	(b) 807	389	421	4	137	266	2,024
Total	9,928	6,239	12,987	2,488	3,418	1,931	36,991
BUSINESS UNDERTAKINGS							
Water supply	2,697	85	3,382	..	..	935	7,099
Sewerage	1,253	..	..	..	4	719	1,976
Electricity and gas ..	13,697	1,644	1,885	53	294	..	17,573
Railways, tramways and omnibuses .. .. .	..	..	133	..	..	..	133
Abattoirs	760	103	..	..	..	21	884
Other .. .. .	..	..	63	4	..	..	67
Total	18,407	1,832	5,463	57	298	1,675	27,732
Grand Total	28,335	8,071	18,450	2,545	3,716	3,606	64,723

(a) Includes plant. (b) Includes advances for homes, £217,000.

NOTE.—For years to which particulars relate, see following table.

The following table shows the loan expenditure on works connected with local government ordinary services and business undertakings during the years 1958-59 to 1962-63.

LOCAL GOVERNMENT AUTHORITIES: LOAN EXPENDITURE
(£'000)

Year	N.S.W.(a)	Victoria(b)	Q'land(c)	S. Aust.(c)	W. Aust.	Tas.(c)	Total
ORDINARY SERVICES							
1959 ..	5,941	4,313	6,225	1,313	(d) 2,093	812	20,697
1960 ..	7,001	4,733	8,480	1,157	(d) 1,819	1,109	24,299
1961 ..	7,595	5,179	11,407	1,790	(d) 2,272	1,276	29,519
1962 ..	7,923	5,460	11,326	1,677	(c) 2,746	1,387	30,519
1963 ..	9,928	6,239	12,987	2,488	(c) 3,418	1,931	36,991
BUSINESS UNDERTAKINGS							
1959 ..	11,645	1,505	6,463	54	(d) 144	958	20,769
1960 ..	12,776	1,319	6,304	58	(d) 78	1,226	21,761
1961 ..	15,149	1,368	7,574	42	(d) 137	1,354	25,624
1962 ..	13,886	1,802	7,567	22	(c) 155	1,442	24,874
1963 ..	18,407	1,832	5,463	57	(c) 298	1,675	27,732

(a) Years ended previous 31st December. (b) Years ended 30th September. (c) Years ended 30th June. (d) Municipalities—years ended 31st October; Road Districts—years ended 30th June.

§ 3. Local Government and Semi-Governmental Authorities' Debt

1. **General.**—Statistics of local government and semi-governmental debt for 1958-59 to 1962-63 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 and Gas Supply, Fire Brigades, Banking and Grain Elevators. 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, and Housing.

Queensland. Water Supply and Sewerage, Irrigation and Drainage, Harbours, Electricity Supply, Fire Brigades, University, 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, Harbours, Transport, Electricity Supply, Fire Brigades, Marketing (Agency), Housing, University of Western Australia, and Miscellaneous.

Tasmania. Harbours, Electricity Supply, Fire Brigades, Transport, Housing, and Water Supply.

A detailed list of the authorities included is shown in *State, Territory and Local Government Authorities' Finance and Government Securities*, Bulletin No. 2, 1963-64.

2. **Local Government and Semi-Governmental Debt.**—The following table provides a summary of new money loan raisings, provisions for debt redemption, debt outstanding and interest payable by local government and semi-governmental authorities for the year 1962-63. For greater detail, see *State, Territory and Local Government Authorities' Finance and Government Securities*.

LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES: NEW MONEY LOAN RAISINGS, REDEMPTION, DEBT AND INTEREST PAYABLE, 1962-63

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
LOCAL GOVERNMENT AUTHORITIES							
New money loan raisings—							
From government ..	95	158	1,791	611	..	109	2,764
From public ..	16,599	12,200	14,843	1,947	3,784	2,517	51,890
<i>Total</i> ..	<i>16,694</i>	<i>12,358</i>	<i>16,634</i>	<i>2,558</i>	<i>3,784</i>	<i>2,626</i>	<i>54,654</i>
Funds provided for redemption—							
Government loans ..	138	58	842	444	..	53	1,535
Loans due to public ..	6,385	4,116	5,330	375	1,367	673	18,246
<i>Total</i> ..	<i>6,523</i>	<i>4,174</i>	<i>6,172</i>	<i>819</i>	<i>1,367</i>	<i>726</i>	<i>19,781</i>
Accumulated sinking fund balance ..	4,954	3,202	9,960	..	55	294	18,465
Debt—							
Due to government ..	1,979	3,437	15,589	1,900	9	910	23,824
Due to banks (net overdraft) ..	322	515	..	..	25	..	862
Due to public creditor(a) ..	96,406	59,319	120,661	9,413	17,942	16,227	319,968
<i>Total(a)</i> ..	<i>98,707</i>	<i>63,271</i>	<i>136,250</i>	<i>11,313</i>	<i>17,976</i>	<i>17,137</i>	<i>344,654</i>
Maturing overseas(a)(b) ..	1,250	..	2,878	..	..	..	4,128
Annual interest payable(a) ..	n.a.	3,328	6,968	548	970	914	n.a.
SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES							
New money loan raisings—							
From government ..	15,717	21,651	761	11,102	5,825	10,512	65,568
From public ..	30,614	55,584	14,952	5,769	3,611	2,044	112,574
<i>Total</i> ..	<i>46,331</i>	<i>77,235</i>	<i>15,713</i>	<i>16,871</i>	<i>9,436</i>	<i>12,556</i>	<i>178,142</i>
Funds provided for redemption—							
Government loans ..	3,012	2,166	499	1,355	1,053	971	9,056
Loans due to public ..	8,704	10,822	3,867	802	896	671	25,762
<i>Total</i> ..	<i>11,716</i>	<i>12,988</i>	<i>4,366</i>	<i>2,157</i>	<i>1,949</i>	<i>1,642</i>	<i>34,818</i>
Accumulated sinking fund balance ..	41,440	15,923	8,115	777	2,244	1,059	69,558
Debt—							
Due to government ..	221,848	258,725	20,781	144,492	96,568	109,088	851,502
Due to banks (net overdraft) ..	2,570	928	59	7	103	..	3,667
Due to public creditor(a) ..	336,615	563,858	99,646	46,425	25,540	21,619	1,093,703
<i>Total(a)</i> ..	<i>561,033</i>	<i>823,511</i>	<i>120,486</i>	<i>190,924</i>	<i>122,211</i>	<i>130,707</i>	<i>1,948,872</i>
Maturing overseas(a)(b) ..	6,250	5,372	..	..	..	..	11,622
Annual interest payable(a) ..	n.a.	40,560	6,227	8,699	5,290	5,923	n.a.

(a) Includes debt or interest payable in London and New York. Debt in London is payable in £ sterling which have been converted at the I.M.F. rate of £Stg.100 to £A.125; New York debt is payable in U.S. dollars which have been converted at the I.M.F. rate of \$2.24 to £A.1. (b) Included in debt figures above.

In 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 from the public 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 1958-59 to 1962-63. Figures for years before 1962-63 have been revised in this issue.

**LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITIES,
AUSTRALIA: NEW MONEY LOAN RAISINGS, REDEMPTION AND DEBT
(£'000)**

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
LOCAL GOVERNMENT AUTHORITIES					
New money loan raisings—					
From government	1,986	2,542	3,058	1,918	2,764
From public	29,669	34,148	35,641	45,485	51,890
<i>Total</i>	<i>31,655</i>	<i>36,690</i>	<i>38,699</i>	<i>47,403</i>	<i>54,654</i>
Funds provided for redemption—					
Government loans	1,478	1,518	1,585	1,549	1,535
Loans due to public	11,416	13,208	14,153	15,337	18,246
<i>Total</i>	<i>12,894</i>	<i>14,726</i>	<i>15,738</i>	<i>16,886</i>	<i>19,781</i>
Accumulated sinking fund balance	14,106	15,316	16,605	18,275	18,465
Debt—					
Due to government	18,568	19,530	21,074	22,659	23,824
Due to banks (net overdraft)	686	465	525	693	862
Due to public creditor(a)	213,733	235,676	257,660	289,163	319,968
<i>Total(a)</i>	<i>232,987</i>	<i>255,671</i>	<i>279,259</i>	<i>312,515</i>	<i>344,654</i>
Maturing overseas(a)(b)	6,140	5,962	5,501	5,322	4,128
SEMI-GOVERNMENTAL AND OTHER PUBLIC AUTHORITIES					
New money loan raisings—					
From government	54,242	57,574	62,148	63,053	65,568
From public	75,627	86,961	72,732	91,366	112,574
<i>Total</i>	<i>129,869</i>	<i>144,535</i>	<i>134,880</i>	<i>154,419</i>	<i>178,142</i>
Funds provided for redemption—					
Government loans	8,484	7,616	8,419	8,835	9,056
Loans due to public	13,457	16,053	18,078	19,770	25,762
<i>Total</i>	<i>21,941</i>	<i>23,669</i>	<i>26,497</i>	<i>28,605</i>	<i>34,818</i>
Accumulated sinking fund balance	41,882	49,447	57,557	63,524	69,558
Debt—					
Due to government	592,436	676,552	731,822	786,242	851,502
Due to banks (net overdraft)	6,410	4,415	6,093	5,844	3,667
Due to public creditor(a)	773,498	851,208	915,154	996,148	1,093,703
<i>Total(a)</i>	<i>1,372,344</i>	<i>1,532,175</i>	<i>1,653,069</i>	<i>1,788,234</i>	<i>1,948,872</i>
Maturing overseas(a)(b)	11,663	11,555	11,643	11,633	11,622

(a) See footnote (a) page 773.

(b) Included in debt figures above.

§ 4. Roads and Bridges

1. **Commonwealth Government Grants.**—The following table shows the allocation to the States under the several Commonwealth Aid Roads Acts for road construction, maintenance, repair and other works connected with transport for each of the years 1959–60 to 1963–64. After 1st July, 1959, when the *Commonwealth Aid Roads Act 1959* came into operation, the Commonwealth made separate provision for expenditure on strategic roads and the promotion of road safety practices. See also Chapter XXII. Public Finance, and Finance bulletins.

ROAD CONSTRUCTION, MAINTENANCE, ETC.: GRANTS UNDER THE COMMONWEALTH AID ROADS ACTS (£'000)

Year ended 30th June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
1960 ..	12,172	8,660	8,021	4,922	7,964	2,184	43,923
1961 ..	12,870	9,184	8,428	5,128	8,090	2,300	46,000
1962 ..	13,811	10,080	9,093	5,752	8,764	2,500	50,000
1963 ..	14,940	10,877	9,796	6,200	9,487	2,700	54,000
1964 ..	16,221	11,412	10,535	6,669	10,263	2,900	58,000

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. In 1932 the Main Roads administration was reorganized as a separate department under the control of a Commissioner. The activities of the Department of Main Roads include works on main, developmental and tourist 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 may be proclaimed by the Governor 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, (ii) developmental roads, which help to develop country districts, and (iii) tourist roads, which serve to make accessible areas or districts used by tourists.

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 $\frac{1}{4}$ d. 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. Alternatively, a Council's maximum contribution may be at a rate determined annually by the Commissioner of between 10 per cent. and 15 per cent. of Council's total rate income. 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 ordinary 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 and on tourist roads.

(ii) *Length of Roads.* (a) *Proclaimed Roads.* The total length of proclaimed roads in New South Wales at 30th June, 1964, was 25,572 miles classified as:—State highways, 6,533 miles; trunk roads, 4,163 miles; ordinary main roads, 11,590 miles; secondary roads, 132 miles; developmental roads, 3,018 miles; and tourist roads, 136 miles.

The length of main roads maintained by the Department of Main Roads at 30th June, 1964, was 5,792 miles (26 per cent.), while the length maintained by Councils was 16,494 miles (74 per cent.). These figures exclude secondary, developmental and tourist roads, and unclassified roads in the Western Division of the State. In the area outside the County of Cumberland (the metropolis and adjoining areas) the proportions of main roads maintained by the Department and Councils respectively were:—State highways, 69 per cent., 31 per cent.; and trunk and ordinary main roads, 5 per cent., 95 per cent. Unclassified roads in the Western Division of the State, totalling 1,030 miles, were maintained by the Department, while developmental roads, totalling 3,018 miles, were maintained by Councils. In the County of Cumberland the proportions of main roads maintained by the Department and Councils respectively were:—State highways, 99 per cent., 1 per cent.; and ordinary main roads, 54 per cent., 46 per cent. Secondary roads totalling 132 miles were maintained by Councils. The 136 miles of tourist roads throughout the State were maintained by Councils.

(b) *Surface of Roads.* In 1963, the total length of all roads in New South Wales was estimated at 131,140 miles. The lengths of roads, according to their surface, were as follows:—bitumen or concrete, 23,468 miles; gravel or stone, 45,513 miles; formed only, 28,660 miles; cleared only, 33,499 miles.

(iii) *Main Roads Department.* (a) *General.* Progress has continued with the implementation of the Department's plan for main roads development in the County of Cumberland. Most of the Department's proposals have been incorporated in the County of Cumberland Planning Scheme approved by Parliament under the Local Government (Amendment) Act, 1951.

The Department's proposals for the development of the main roads system in Newcastle and the surrounding districts have been largely incorporated in the Northumberland County District Planning Scheme, and some sections of the system have been constructed.

With some modifications, the Department's proposals for the planning of the main roads in the Wollongong-Port Kembla district have been incorporated in the planning scheme prepared by the Illawarra Planning Authority.

During 1963-64, 61 new bridges were constructed. In addition, 57 concrete box culverts each having a waterway width of 20 feet or more were completed. Major bridge works under construction included steel and/or concrete bridges over the Clarence River at Harwood on the Pacific Highway (length 2,918 feet); over the Clyde River at Nelligen (length 827 feet); over the Parramatta River at Gladesville (length 1,900 feet); over the Darling River at Louth (length 469 feet); over the George's River at Taren Point (length 1,662 feet); over the south arm of the Hunter River at Tourle Street, Newcastle (length 978 feet); over Salt Pan Creek connecting Peakhurst and Padstow (length 600 feet); over Jugiong Creek on the Hume Highway (length 395 feet); over the Peel River at Tamworth on the New England Highway (length 386 feet); over the Minnamurra River at Minnamurra on the Prince's Highway (length 371 feet); over the Yass River near Yass on the Hume Highway (length 336 feet); over the Orara River at Ramornie on the Gwydir Highway (length 735 feet); over Tarban Creek on the North-Western Expressway (length 300 feet); over the Hawthorne Canal, Haberfield (length 359 feet); and over the Murrumbidgee River at Jugiong (length 343 feet). Also under construction was an overpass (627 feet long) at Huntley's Point, Gladesville.

(b) *Revenue and Expenditure.* The funds of the Department of Main Roads are derived principally from motor vehicle taxation, charges on heavy commercial goods vehicles under the Road Maintenance (Contribution) Act, 1958, grants under Commonwealth Aid Roads Acts (see para. 1, p. 775 and Chapter XXII. Public Finance), other grants from the State or Commonwealth Governments, and proceeds of a levy on municipal and shire councils in the County of Cumberland in accordance with the Main Roads Act, 1924-1963. The State Government also makes repayable advances for Main Roads Department works.

Revenue and expenditure for the five years 1959-60 to 1963-64 are shown below.

**DEPARTMENT OF MAIN ROADS, NEW SOUTH WALES:
REVENUE AND EXPENDITURE
(£)**

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
REVENUE(a)					
Motor vehicle taxation, registration and licence fees	11,850,477	12,432,316	12,683,234	15,163,302	19,340,996
Commonwealth Aid Roads Act	7,719,608	8,239,061	8,936,462	9,539,785	10,308,711
State and Commonwealth grants	638,750	375,000	704,000	237,400	98,600
Contributions by other departments and bodies	360,978	382,689	237,572	171,010	162,997
Councils' contributions	1,649,122	1,858,878	2,269,553	2,367,351	2,881,593
Other	83,179	154,816	160,759	138,361	171,508
Total	22,302,114	23,442,760	24,991,580	27,617,209	32,964,405
EXPENDITURE(b)					
Roads and bridges—					
Construction	13,883,723	17,731,562	18,936,979	18,999,757	24,099,506
Maintenance	6,352,014	6,137,466	6,343,148	6,330,559	8,104,266
Administration	824,203	912,675	1,128,740	1,315,814	1,409,931
Interest, exchange, etc., on debt	202,439	227,238	252,649	282,872	493,133
Other(c)	351,394	542,127	531,783	620,891	687,888
Total	21,613,773	25,551,068	27,193,299	27,549,893	34,794,724

(a) Excludes repayable advances by the State Government and private loans (£800,000 in 1959-60, £575,000 in 1960-61, £635,000 in 1961-62, £890,000 in 1962-63, and £2,010,000 in 1963-64), and transfers from Sydney Harbour Bridge Account for Expressway construction (£362,000 in 1959-60, £768,000 in 1960-61, £1,822,000 in 1961-62, £2,081,000 in 1962-63 and £1,539,000 in 1963-64). Expenditure from these amounts is fully reflected in Expenditure. (b) Excludes debt redemption (£45,981 in 1959-60, £48,816 in 1960-61, £53,075 in 1961-62, £57,088 in 1962-63, and £61,996 in 1963-64) and repayment of government advances (£400,000 in 1960-61, £60,000 in 1962-63, and £60,000 in 1963-64). (c) Mainly purchase of assets not subject to annual depreciation charge. The purchase of other assets is omitted here because the depreciation charge for them is reflected each year in "Roads and bridges".

The figures shown above represent the aggregate revenue and expenditure of five funds—the County of Cumberland Main Roads General and Special Purposes Funds, the Country Main Roads General and Special Purposes Funds, and the Developmental Roads Fund.

(c) *Sydney Harbour Bridge.* The Sydney Harbour Bridge was opened for traffic on 19th March, 1932. The main span is 1,650 feet and clearance for shipping 170 feet from high water level. The deck, 160 feet wide, carries a roadway of eight traffic lanes and two railway tracks, and there is also a footway on each side. The capital cost of the bridge and associated roadways to 30th June, 1964, was £11,936,864, 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, almost £10,300,000, is repayable from toll income. Income for 1963-64 amounted to £2,007,000, including road tolls, £1,803,000, railway passenger tolls, £141,000, and omnibus passenger tolls, £15,000. Expenditure amounted to £1,146,000, including interest, exchange, flotation expenses, etc., £427,350, sinking fund, £146,720, maintenance, £318,387. The accumulated surpluses of the Bridge Account have been used to finance conversion of tram tracks to roadway and construction of city expressways. From 1958-59 to 1963-64 a total of £920,379 was expended on tram track conversion and £6,522,000 on city expressways. The account showed a deficiency of £931,513 at 30th June, 1964. During 1963-64, 35,353,591 road vehicles (excluding omnibuses and exempt vehicles), 25,798,000 rail travellers and 13,955,000 omnibus travellers crossed the bridge, contributing respectively 92 per cent., 7 per cent., and 1 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 which roads should be declared in the various classifications; to supervise the construction, reconstruction and maintenance of these roads; 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 communications or to improve the conditions of Traffic.

(ii) *Length of Roads.* (a) *Declared Roads.* The total length of roads in Victoria declared by the Country Roads Board at 30th June, 1964, was 14,502 miles, classified as follows:—State highways, 4,465 miles; main roads, 9,094 miles; by-pass roads, 37 miles; tourist roads, 445 miles; forest roads, 461 miles. The length of the surface sealed (bitumen or concrete) included in the foregoing mileage was 12,167 miles or 84 per cent. of the total.

(b) *Surface of Roads.* It is estimated that, in addition to the 14,502 miles of classified roads, there were approximately 87,000 miles of unclassified roads at 30th June, 1964. The latest detailed estimate of the length of roads and streets in Victoria (as at 30th September, 1963) provides the following information:—bitumen or concrete, 23,742 miles; gravel or stone, 31,510 miles; formed only, 21,318 miles; cleared only, 23,533 miles; total, 100,103 miles.

(iii) *Country Roads Board.* (a) *General.* During 1963–64, 2,088 miles of declared roads under the Board's control were treated with bitumen. In addition, 947 miles of undeclared roads, for which the Board contributed funds, were similarly treated. The total length of bitumen treatment carried out in 1963–64 was 3,147 miles (including 112 miles for other authorities). Of the work on the roads under the Board's control in 1963–64, 784 miles related to State highways and by-pass roads.

During 1963–64, 227 bridge projects of an estimated total value of £2,800,300 were initiated. Of these, 136, estimated to cost £886,300, were under municipal supervision.

(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' roads 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, 1964, loan receipts and payments each amounted to £333,000. The total loan expenditure to 30th June, 1964, was £16,089,295. 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.

COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS

(£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Motor vehicle registration fees(a) ..	8,941,256	9,282,073	9,529,594	10,289,728	11,334,589
Drivers' licence fees(a) ..	452,324	256,673	259,890	318,653	297,541
Drivers' licence testing fees ..	..	38,969	76,901	74,537	81,246
Municipalities' payments ..	723,803	788,663	777,667	881,920	789,714
Commonwealth Aid Roads Acts(b) ..	8,460,574	8,983,776	9,877,696	10,675,566	11,215,367
Loans from State Government ..	160,000	283,000	683,000	301,000	333,000
Commonwealth-State contribution for restoration of flood damage ..	5,124	966	..	..	..
Road charges Commercial Goods Vehicles Act ..	2,117,494	2,254,421	2,262,417	2,459,557	2,818,969
Other ..	43,994	50,223	(c)575,704	83,757	111,706
Total ..	20,904,569	21,938,764	24,042,869	25,084,718	26,982,132

NOTE.—See next page for footnotes.

COUNTRY ROADS BOARD, VICTORIA: RECEIPTS AND PAYMENTS—*continued*
(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
PAYMENTS					
Construction and maintenance of roads and bridges—					
State highways	5,852,042	6,880,998	6,836,437	6,605,006	9,575,353
Main roads	6,259,203	5,919,265	7,426,610	6,747,848	7,444,648
By-pass roads	266,880	1,096,742	682,635	431,434	1,320,502
Tourist roads	551,088	600,132	572,755	469,350	712,339
Forest roads	192,060	275,365	295,101	276,261	370,962
Unclassified roads	3,974,049	4,228,144	5,193,213	4,834,154	5,053,390
Other	124,589	88,612	69,295	69,317	43,511
Plant purchase	1,028,042	708,141	174,694	915,985	596,273
Interest, debt redemption, etc. ..	875,034	888,244	927,527	965,301	975,226
Office building, Kew—capital cost ..	452,275	528,123	19,554	270,833	188,896
Statutory payment to Tourists' Resorts Fund	151,737	187,872	191,554	197,328	213,658
Administration and other	1,122,756	1,177,903	1,651,472	1,906,301	1,884,299
Total	20,948,755	22,579,541	24,040,847	23,689,118	28,379,057

(a) After costs of collection. Since 1950, one half of the drivers' licence fees has been credited to the funds of the Country Roads Board while the remaining half has been credited to the Municipalities Assistance Fund. (b) Excludes portion of Commonwealth Aid Roads Acts advances drawn by the Public Works Department for expenditure on wharfs, jetties, etc.. (c) Includes £500,000 Special Grant from Commonwealth Government.

(iv) *Melbourne and Metropolitan Board of Works.* Since assuming responsibility for carrying-out planning scheme proposals relating to metropolitan highways and bridges, a tentative construction programme of urgent highway works throughout the metropolitan area of Melbourne has been adopted. Expenditure on these projects up to 30th June, 1964, was £2,791,590.

(v) *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. The Act provides for the payment into the Fund of one-third of all moneys received by way of additional motor registration fees (owner's certificates) and money provided under any other Act. The amount available for expenditure in 1963-64 was £424,456, consisting entirely of receipts from owners' certificates. Expenditure from the Fund amounted to £314,756, of which £253,632 was incurred by the Railways Department and £61,124 by the Country Roads Board, leaving a balance carried forward of £198,908.

4. *Queensland.*—(i) *General.* Under "The Main Roads Act of 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, and secondary roads; 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 may be 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, 1964, was 24,454 miles; comprising State highways, 6,323 miles; main roads, 5,199 miles; developmental roads, 4,374 miles; and secondary roads, 8,558 miles. By the amendments to the Main Roads Acts published in the Government Gazette of 6th April, 1959, mining access, farmers' and tourists roads became secondary roads, and the provisions relating to the declaration of tourist tracks were repealed.

(b) *Surface of Roads.* The total length of roads and streets in Queensland at 30th June, 1964 was:—bitumen or concrete, 12,798 miles; gravel or stone, 19,743 miles; formed only, 41,255 miles; cleared only, 45,245 miles; total, 119,041 miles.

(iii) *Department of Main Roads.* (a) *General.* During 1962–63 the Department completed 1,289 miles of roads, including new construction and stage construction. Bridges of all types to a length of 8,470 linear feet were constructed, bringing the total constructed by the Department at 30th June, 1963, to 231,055 feet. In addition, at 30th June, 1963, 7,246 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 during each of the years 1958–59 to 1962–63 are shown below.

DEPARTMENT OF MAIN ROADS, QUEENSLAND: RECEIPTS AND PAYMENTS
(£)

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
RECEIPTS					
Motor vehicle registration, Transport Acts collections, fees, etc. ..	5,036,414	5,404,547	5,568,994	5,813,480	6,169,594
Loans from State Government ..	621,865	..	..	909,939	833,905
Grants, advances, refunds, etc. from State Government	241,861	325,755	357,942	909,012	1,152,708
Commonwealth Aid Roads and Works Acts	7,353,215	7,912,040	8,268,742	9,601,704	10,426,811
Maintenance repayments—local authorities	648,882	707,813	723,187	746,796	777,280
Hire, rent, sales of plant, etc. ..	1,126,739	1,250,205	1,219,599	1,285,370	1,482,877
Other	548,287	601,415	523,413	608,554	637,732
Total	15,577,263	16,201,775	16,661,877	19,874,855	21,480,907
PAYMENTS					
Permanent road works and surveys(a)	8,680,460	11,380,919	10,826,353	13,185,284	14,423,333
Maintenance of roads	2,790,004	2,890,698	2,456,530	2,878,765	2,969,722
Plant, machinery, buildings, etc. (including plant maintenance) ..	1,000,793	1,345,167	1,394,807	1,519,674	1,286,595
Loans—Interest	198,098	156,542	107,490	84,058	59,813
Redemption	330,561	329,722	318,288	321,978	325,091
Administration and other	1,157,569	1,270,686	1,521,589	1,787,477	2,031,261
Total	14,157,485	17,373,734	16,625,057	19,777,236	21,095,815

(a) Includes grants to local authorities for road purposes.

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 principal roads of the State, allocate grants to councils for roadworks and supervise the expenditure of these grants, and assist Councils to purchase road-making plant and to defray the cost of roadworks. In addition, the Commissioner advises Councils on technical questions concerning the construction, maintenance or repair of roads.

(ii) *Source of Funds.* Funds of the Department are derived mainly from the Highways Fund, into which are paid the proceeds from motor vehicle registration and drivers' licences (less cost of collection), appropriations from loan funds, repayments of advances made to Councils and contributions by the Municipal Tramways Trust, and from 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, 1964, there were 8,156 miles of proclaimed main roads and approximately 79,160 miles of district roads, including roads and tracks outside local government areas, totalling 87,316 miles. Lengths of road classified by surface were estimated to be:—bitumen or concrete, 7,089 miles; gravel or stone, 11,770 miles; formed only, 10,380 miles; unformed, 58,077 miles.

(iv) *State Highways and Local Government Department, Receipts and Payments.* The following table shows particulars of receipts and payments, during the years 1959–60 to 1963–64, of funds controlled by the Highways and Local Government Department.

HIGHWAYS AND LOCAL GOVERNMENT DEPARTMENT, SOUTH AUSTRALIA: RECEIPTS AND PAYMENTS

(£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Motor vehicles registration, licences, fees	3,942,087	4,111,494	4,293,105	4,537,011	4,989,229
Commonwealth Aid Roads Acts	4,923,122	5,128,065	5,752,281	6,200,066	6,668,732
Loans from State Government	85,000	90,000	200,000	290,000	475,000
Other(a)	445,484	449,333	533,812	582,788	604,917
Total	9,395,693	9,778,892	10,779,198	11,609,865	12,737,878
PAYMENTS					
Construction and reconstruction of roads and bridges(b)	6,113,227	6,465,892	7,307,955	7,678,880	9,758,376
Maintenance(a)(b)	2,183,012	2,095,253	2,337,218	2,487,972	2,791,552
Recoups to Consolidated Revenue Fund—interest, debt redemption and exchange	213,631	215,539	227,041	242,766	256,243
Advances to local and semi-governmental authorities	301,929	702,718	420,157	580,879	825,169
Stores, plant, machinery, suspense accounts, etc.(c)	439,732	495,036	406,868	—71,974	269,190
Total	9,251,531	9,974,438	10,699,239	10,918,523	13,900,530

(a) Includes reimbursement works for Commonwealth Government. (b) Includes administration expenses. (c) Represents gross repayments less recoveries by charges to works on account of depreciation and materials used.

6. Western Australia.—(i) *General.* Work connected with road construction and maintenance and associated projects in Western Australia is undertaken by the State Government, through the Main Roads Department, and by local government authorities throughout the State.

Under the provisions of the Main Roads Act, the Main Roads Department was established in 1930 to replace the Main Roads Board originally constituted as a central road authority in 1926. The Department operates under the *Main Roads Act, 1930-1961*, and is administered by a Commissioner of Main Roads responsible to the Minister for Works. The Act makes provision for public roads in the categories of main roads, controlled-access roads and developmental roads. An additional category, that of important secondary roads, is used by the Department in determining its works programme.

Main roads are those which provide communication between a large producing area, either actual or potential, and its market or nearest port or railway station, between two or more such areas, between large centres of population, or between the capital city and a large producing area or a large centre of population. Controlled-access roads do not permit direct access from abutting property and may be entered and departed from only at certain selected road connexions located at points which are considered to serve best the traffic for which the controlled-access roads were designed. Developmental roads are those which serve to initiate or increase the development of an area. Important secondary roads are those which, though originally classified as developmental, have come to be used consistently by through traffic and therefore warrant a special allocation of funds by the Main Roads Department. The Act provides that, on the recommendation of the Commissioner, any road may be proclaimed a main road and any main road may cease to be a main road.

The construction and maintenance of main roads and controlled-access roads are the responsibility of the Main Roads Department. The Department also makes substantial financial provision for the construction and maintenance of important secondary roads and for the construction of developmental roads.

Within its own district, each local government authority is responsible for the provision and upkeep of roads other than those provided by the Main Roads Department. In addition, the local authority is required by the Main Roads Act to maintain any developmental road situated in its district.

(ii) *Length and Surface of Roads.* (a) *General.* The total length of roads and streets in Western Australia at 30th June, 1964, was made up as follows:—bitumen or concrete 11,286 miles; gravel or stone, 21,414 miles; formed only, 43,987 miles; natural state (cleared only), 28,160 miles; total, 104,847 miles.

(b) *Roads under Main Roads Act.* The total length of constructed roads for which financial provision was made by the Main Roads Department, at 30th June, 1964, was:—main roads, 3,463 miles, including 5 miles of controlled-access roads; important secondary roads, 7,989 miles; and developmental roads, 41,121 miles. In addition, there were 74 miles gazetted as controlled-access roadway as yet not constructed.

(iii) *Main Roads Department.* (a) *General.* During the year 1963-64 the activities of the Department included clearing, 2,351 miles; forming, 3,361 miles; gravelling, 1,871 miles; reconditioning, 7,099 miles; and stabilizing, 159 miles. In addition, 1,647 miles were primed and sealed (including widening) and 34 bridges constructed.

(b) *Receipts and Payments.* The funds of the Main Roads Department are derived principally from allocations made under the *Commonwealth Aid Roads Act, 1959*. In addition, financial assistance was given by the Commonwealth Government to the extent of £750,000 in 1963-64 for the improvement of roads used for the transport of beef cattle in the Kimberley District. The five-year period relating to these additional grants terminates on 30th June, 1966, with a total amount of £3,450,000 of Commonwealth funds matched by a corresponding State contribution. Other sources of income include one-half of the net amount of traffic fees collected in the Metropolitan Traffic Area and an allocation of Department of Transport funds. (Outside the Metropolitan Traffic Area, motor vehicle licence fees are collected and retained by the local authorities.) Receipts and payments for the years 1959-60 to 1963-64 are shown in the following table.

**MAIN ROADS DEPARTMENT, WESTERN AUSTRALIA:
RECEIPTS AND PAYMENTS**

(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
RECEIPTS					
Motor vehicle registration, licences, fees, etc. ..	539,459	486,948	486,948	486,948	486,948
Central Trust Fund(a)	351,604	707,569	1,060,511	1,399,567	1,873,642
Commonwealth Aid Roads Acts	7,687,130	7,428,808	7,752,996	8,128,436	8,493,561
Commonwealth Aid Roads Acts—matching grants(a)	351,591	703,533	1,051,647	1,405,521	1,769,481
Western Australia Grant (Beef Cattle Roads) Act ..	..	..	500,000	700,000	750,000
Commonwealth-State Grant to restoration of flood-damaged roads .. ..	..	..	320,000	..	..
Recoups from other authorities	183,106	217,196	246,920	370,003	561,781
Other	4,777	3,179	5,331	6,789	35,319
Total	9,117,667	9,547,233	11,424,353	12,497,264 (b)	13,970,732 (c)

PAYMENTS					
Construction and reconstruction of roads and bridges(d)	6,434,690	5,447,028	6,469,990	7,266,896	6,935,975
Maintenance of roads and bridges(d)	910,846	974,053	1,086,042	1,007,705	1,280,563
Grants to local authorities, etc.	1,182,255	1,263,722	1,436,651	1,272,822	1,470,000
Payments to local authorities from Central Road Trust Fund and Commonwealth matching grants ..	..	403,799	724,873	946,233	1,258,773
Transfer to State Consolidated Revenue	70,000	70,000	70,000	70,000	70,000
Plant, machinery, etc.	160,749	368,760	240,141	485,261	573,147
Other(d)	221,817	243,896	387,522	437,796	702,346
Total	8,980,357	8,771,258	10,415,219	11,486,713	12,290,804 (e)

(a) Includes amounts to be distributed to metropolitan and country local authorities early in the following year. (b) Excludes £700,000 advance from State Treasury. (c) Excludes £500,000 advance from State Treasury. (d) Includes administration and expenditure on hire and maintenance of road construction plant, etc., and on purchase of materials. (e) Excludes £700,000 being refund of advance from State Treasury.

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, tourist, 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 1963-64 on the construction and maintenance of roads, tracks and bridges amounted to £6,921,534, of which £4,241,145 was charged to road funds, £28,341 to revenue, £2,599,486 to loan and £52,562 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, 1964, were as follows:—State highways, 1,171 miles; main roads, 662 miles; secondary roads, 196 miles; tourist roads, 46 miles; and other roads, 135 miles. The total length of State roads in Tasmania was 2,210 miles and the length of all other roads, 10,051 miles. The mileages of sealed roads, and their proportions to the respective totals were:—State highways, 839 miles (72 per cent.); main roads, 417 miles (63 per cent.); and other roads, 79 miles (21 per cent.). The total length of State sealed roads was 1,335 miles (60 per cent.). The total length of non-State sealed roads was 1,100 miles (11 per cent.). The total length of all sealed roads in the State was 2,435 miles (20 per cent.).

(b) *Surface of Roads.* The length of all roads in Tasmania, including those with surfaces of lower grade, at 30th June, 1964, was as follows:—bitumen or concrete, 2,435 miles; gravel or stone, 8,484 miles; formed only and cleared only, 1,342 miles; total, 12,261 miles.

(iii) *Receipts and Payments—Combined Road Funds.* The table below shows particulars of the receipts and payments of the combined Road Funds for the years 1959–60 to 1963–64.

ROAD FUNDS, TASMANIA: RECEIPTS AND PAYMENTS

(£)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Motor vehicle taxation and registration, licences, fees, fines, etc. . .	1,112,674	1,162,869	1,254,327	1,416,371	1,509,372
Commonwealth Aid Roads and Works Acts	2,183,461	2,299,992	2,500,008	2,700,000	2,900,000
Recoups from local authorities, etc. . .	9,384	8,555	8,515	9,538	7,014
State Loan Fund	1,168,558	2,461,289	2,062,319	1,927,128	2,380,470
Hire of plant	1,273,535	1,393,102	1,452,402	1,474,373	1,582,455
Other	107,803	376,795	(a)496,033	(a)341,174	(a)232,467
Total	5,855,415	7,702,602	7,773,604	7,868,584	8,611,778

PAYMENTS

Construction and reconstruction of roads and bridges	3,052,787	4,565,047	4,591,019	4,900,631	5,619,710
Maintenance	1,325,329	1,306,922	1,258,856	1,283,598	1,292,987
Other works connected with transport	18,028	36,162	19,001	22,836	36,003
Grants to local authorities, etc. . .	9,195	14,265	(b)117,461	(b) 25,157	16,382
Purchase, hire and maintenance of plant	1,388,877	1,528,885	1,459,697	1,535,092	1,615,670
Other	313,189	365,194	85,881	73,482	110,082
Total	6,107,405	7,816,475	7,531,915	7,840,796	8,690,834

(a) Includes Commonwealth Employment Stimulation Grant (£366,956 in 1961–62, £253,777 in 1962–63, and £7,651 in 1963–64). (b) Includes grants under Commonwealth Employment Stimulation Grant (£103,456 in 1961–62, and £11,130 in 1962–63).

8. *Northern Territory.*—Information relating to the length of roads in the Northern Territory may be found in Chapter V. Territories, of this Year Book (see p. 104).

9. *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, 1964. The central road authority in each State assumes responsibility under the Act for the whole, or a proportion, of the cost of construction and/or maintenance of these roads, 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, 1964
(Miles)

Class of road	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
State highways	6,533	4,465	6,323	} 8,156	3,463	} 1,171	} 60,819
Trunk roads	4,163	} 9,094	5,199				
Ordinary main roads	11,590						
Total Main Roads	22,286	13,559	11,522	8,156	3,463	1,833	60,819
Secondary roads	(a) 132	..	(b) 8,558	..	7,989	196	16,875
Developmental roads	3,018	..	4,374	..	c 41,121	..	48,513
Tourist roads	136	445	..	..	..	46	627
Other roads .. ..	..	(d) 498	..	..	(e) 74	(f) 135	707
Total Other Roads	3,286	943	12,932	..	49,184	377	66,722
Grand Total	25,572	14,502	24,454	8,156	52,647	2,210	127,541

(a) Metropolitan only. (b) Includes mining access roads, farmers' roads and tourist tracks.
(c) Maintenance of these roads is the responsibility of the several local authorities. (d) Forest roads and by-pass roads. (e) Gazetted as controlled access roadway but not constructed. (f) Subsidized roads.

(ii) *Surface 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 surface groups. The figures in the table for the States are obtained from the Deputy Commonwealth Statistician in each State, and are derived mainly from local government sources.

ALL ROADS USED FOR GENERAL TRAFFIC: LENGTHS, 30th JUNE, 1964
(Miles)

Surface of roads	N.S.W. (a)	Vic. (b)	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Total
Bitumen or concrete ..	23,468	23,742	12,798	7,089	11,286	2,435	1,437	379	82,634
Gravel, crushed stone or other improved surface ..	45,513	31,510	19,743	11,770	21,414	} 8,484	{ 940	177	139,551
Formed only ..	28,660	21,318	41,255	10,380	43,987				
Cleared only ..	33,499	23,533	45,245	58,077	28,160	} 1,342	{ 1,539	86	344,392
Total ..	131,140	100,103	119,041	87,316	104,847					12,261	11,227	642	566,577

(a) 30th June, 1963. (b) 30th September, 1963.

10. **Aggregate Net Expenditure on Roads and Bridges in Australia.**—In most States there are three classes of authorities concerned with roads and bridges, the State Government, the central road authority and numerous local government bodies. The Commonwealth Government, in addition to the grants it makes to the States for road purposes, is concerned with roads in the Northern Territory and the Australian Capital Territory and roads of access to Commonwealth property in the various States. Some information relating to Commonwealth grants to the States for road purposes and particulars of the expenditure on roads and bridges by local government bodies and the central road authorities are given in preceding sections of this chapter.

Most of these authorities may expend money directly on road construction or indirectly by means of grants and payments to other authorities. These indirect payments, if included in an aggregate, would duplicate expenditure; this, together with the fact that some authorities are unable to supply separate information concerning their road expenditure, makes it difficult to compile precise statistics of aggregate expenditure on roads and bridges.

The information in the following table, which is partly estimated and which excludes the main indirect payments, provides an approximate measure of the aggregate net expenditure by all public authorities on roads and bridges in Australia during each of the years ended 30th June, 1960 to 1964. The figures cover expenditure from revenue and loan funds on the construction, reconstruction and maintenance of roads and bridges, and direct administration but not debt charges. Because of the difficulties associated with the indirect payments mentioned above, it is not possible to give separate net details for each authority.

PUBLIC AUTHORITY NET EXPENDITURE ON ROADS AND BRIDGES
(£ million)

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tasmania	Northern Territory and A.C.T.	Aust.
1959-60 ..	42	34	23	12	11	6	2	130
1960-61 ..	50	37	24	13	10	8	3	145
1961-62 ..	52	39	24	14	12	8	4	153
1962-63 ..	53	36	27	16	12	9	5	158
1963-64 ..	63	41	34	20	13	9	5	185

§ 5. Water Supply, Sewerage and Drainage

NOTE.—The information in this section relates primarily to the metropolitan areas and provincial cities and towns. For information on water supply and irrigation in rural areas see Chapter VIII. 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, Shellharbour, and Kiama, and (b) the Hunter District Water Board serving the Newcastle-Maitland-Cessnock areas. At Broken Hill and Cobar similar boards include representatives 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, 1964. (a) Metropolitan*. The storage reservoirs of the metropolitan system, with a combined available capacity of 577,122 million gallons, drain catchment areas of 3,860 square miles (Warragamba, 3,480 square miles, Upper Nepean, 347 square miles, and Woronora, 33 square miles). The development of a water supply system on the Warragamba River was completed with the official opening of the Warragamba Dam in October, 1960. This dam, constructed in concrete, has a storage capacity of 452,505 million gallons. Its safe net draught is estimated to be 285 million gallons a day. A hydro-electric power station at the dam generated 341 million kWh in 1963-64. At 30th June, 1964, there were 162 service reservoirs in use with a combined capacity of 635 million gallons. Rating for water for 1963-64 was 10d. in the £1 of assessed annual value and the charge for water measured by meters 2s. 9d. per 1,000 gallons.

(b) *Hunter District.* The water supply is drawn principally from two sources:—the Chichester Reservoir, with a storage capacity of about 5,000 million gallons and draining a catchment of 76 square miles, and the Tomago Sandbeds, which extend northerly along the coast towards Port Stephens. Two other sources of supply are being developed. Service reservoirs and tanks distributed throughout the Water Supply District have a total storage capacity of 120 million gallons. Water rating for 1963–64 was 1s. 5½d. in the £1 on assessed annual value for occupied properties and 1s. 2½d. in the £1 for unoccupied properties. The price of water to domestic and industrial consumers is 2s. 9d. per 1,000 gallons.

(c) *Water Supplied, etc.* The following tables show, for the Metropolitan and Hunter District systems, the number of properties, the estimated population supplied, and other details.

WATER SUPPLY, METROPOLITAN(a): SERVICES

Year	Improved properties for which water mains available	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of mains	Number of meters
					Per property	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	
1959–60 ..	598,893	2,264	200.9	73,529	335	88.7	6,450	382,180
1960–61 ..	620,944	2,341	219.1	79,988	353	93.6	6,664	411,731
1961–62 ..	634,139	2,481	220.7	80,556	348	89.0	6,945	430,588
1962–63 ..	653,674	2,544	233.6	85,282	357	91.8	7,173	438,585
1963–64 ..	669,948	2,600	255.0	93,211	381	98.0	7,397	457,215

(a) County of Cumberland, City of Greater Wollongong and Shellharbour and Kiama Municipalities.

WATER SUPPLY, HUNTER DISTRICT(a): SERVICES

Year	Properties supplied	Estimated population supplied	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains
					Per property	Per head of estimated population	
			Mill. gals.	Mill. gals.	Gallons	Gallons	Miles
1959–60.. ..	84,497	285,346	28.6	10,474	339	100.3	1,460
1960–61.. ..	86,032	290,530	29.7	10,854	346	102.4	1,483
1961–62.. ..	87,792	296,502	31.7	11,555	361	106.8	1,512
1962–63.. ..	89,283	301,580	36.6	13,352	410	121.3	1,551
1963–64.. ..	91,616	309,609	36.4	13,336	398	117.7	1,590

(a) Newcastle, Maitland and Cessnock areas.

(iii) *Sewerage and Drainage—to 30th June, 1964.* (a) *Metropolitan.* Sydney and suburbs are served by three major sewerage systems and seven minor systems, consisting of six outfalls discharging directly into the Pacific Ocean and four treatment works. In addition, seven centres outside the metropolitan area (Camden, Campbelltown, St. Mary's, Port Kembla, Richmond, Warragamba township 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, 1964, were 180 miles long. Sewerage rating for 1963–64 was 9½d. in the £1 of assessed annual value, and drainage rating 1½d. in the £1.

(b) *Hunter District.* The main sewerage system serves the City of Newcastle and discharges into the Pacific Ocean at Merewether Gulf. There are also local treatment works at Maitland, Cessnock and some of the outlying districts.

Sewerage rates for 1963–64 were 1s. 0½d. in the £1 of assessed annual value of occupied lands and 9½d. 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.

SEWERAGE AND DRAINAGE, METROPOLITAN(a): SERVICES

At 30th June—				Improved properties for which sewerage available	Estimated population served	Lengths of sewers	Length of stormwater channels
					'000	Miles	Miles
1960..	..	..	..	395,869	1,560	4,021	180
1961..	..	..	..	412,034	1,620	4,231	180
1962..	..	..	..	426,333	1,710	4,489	178
1963..	..	..	..	451,997	1,780	4,763	179
1964..	..	..	..	475,735	1,870	5,074	180

(a) County of Cumberland, City of Greater Wollongong, Shellharbour and Kiama Municipalities.

At 30th June, 1964, 66,510 premises had been connected to the Hunter District Water Board's sewerage system (Newcastle-Maitland-Cessnock areas). The total length of sewers under the Board's control was 930 miles, and the length of drains was 50 miles.

(iv) *Finances, Metropolitan and Hunter District 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 1963-64, and for the three services combined for the years 1959-60 to 1963-64.

WATER SUPPLY, SEWERAGE AND DRAINAGE, METROPOLITAN AND HUNTER DISTRICT: FINANCES

(£)

Year	Capital debt at 30th June	Revenue	Expenditure				Surplus
			Working expenses (a)	Interest and exchange	Debt redemption	Total	
METROPOLITAN(b)							
1963-64—							
Water ..	128,460,185	15,588,061	7,288,918	6,012,511	2,276,575	15,578,004	10,057
Sewerage ..	73,069,775	9,372,067	4,922,764	3,175,539	1,270,114	9,368,417	3,650
Drainage ..	2,072,517	469,941	354,753	86,464	25,933	467,150	2,791
Total, 1963-64	203,602,477	25,430,069	12,566,435	9,274,514	3,572,622	25,413,571	16,498
1962-63	187,888,210	22,095,309	10,484,862	8,418,877	3,177,286	22,081,025	14,284
1961-62	170,185,819	19,825,616	9,350,043	7,445,872	3,013,495	19,809,410	16,206
1960-61	155,122,228	17,247,400	8,094,170	6,572,955	2,568,320	17,235,445	11,955
1959-60	140,992,864	15,662,131	7,739,582	5,721,738	2,194,286	15,655,606	6,525
HUNTER DISTRICT(c)							
1963-64—							
Water ..	24,543,739	2,091,111	896,394	980,225	213,909	2,090,528	583
Sewerage ..	7,727,080	947,770	506,782	331,764	107,087	945,633	2,137
Drainage ..	355,940	63,512	41,817	14,730	2,898	59,445	4,067
Total, 1963-64	32,626,759	3,102,393	1,444,993	1,326,719	323,894	3,095,606	6,787
1962-63	29,965,556	2,906,377	1,319,991	1,215,641	361,200	2,896,832	9,545
1961-62	27,703,757	2,733,148	1,395,429	1,050,626	264,504	2,710,559	22,589
1960-61	25,336,784	2,378,860	1,265,923	866,746	236,432	2,369,101	9,759
1959-60	22,638,498	2,287,793	1,197,373	738,436	343,128	2,278,937	8,856

(a) Includes provision for renewals, long service leave, etc. of Greater Wollongong, Shellharbour and Kiama Municipalities areas.

(b) County of Cumberland, City of Newcastle-Maitland-Cessnock

(v) *Country Water Supply and Sewerage Systems.* (a) *Local Government.* At 31st December, 1962, country water supply services were conducted or under construction by 50 municipalities, 85 shires and 5 county councils, and country sewerage services by 50 municipalities and 36 shires. The capital indebtedness of these schemes was £34,669,485 at 31st December, 1962, namely, £24,122,334 for water and £10,547,151 for sewerage. Debt of the municipalities amounted to £18,023,887, shires to £12,122,281 and county councils to £4,523,317. Government advances amounting to £444,965 are included in these figures. Aggregate income and expenditure amounted to £5,920,192 and £4,541,205, respectively, in 1962.

(b) *Other.* 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, 1963, was £3,573,626. In 1963, income (excluding subsidies, State Government, £78,396 and mining companies, £225,855) amounted to £276,282 and expenditure (excluding debt redemption, £157,713) amounted to £419,420.

The Cobar Water Board was constituted in 1963-64. At 30th June, 1964, its capital indebtedness was £250,000.

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 direct to private consumers. The capital indebtedness of these systems was £7,306,297 at 31st December, 1963.

The Mulwala Water Supply and Sewerage Service was constructed as an urgent war-time 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 consists of a Chairman and 51 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 are:—to control and manage the metropolitan water supply system; to provide the metropolitan area with an efficient main and general sewerage system; to deal with main drains and main drainage works; to control and manage the rivers, creeks and watercourses within the metropolitan area; and to carry out the functions of a permanent planning authority.

(b) *Water Supply.* There are six storage reservoirs serving the metropolitan area—Yan Yean, 7,233 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; Silvan, 8,853 million gallons (8,823 million gallons); and Upper Yarra, 45,400 million gallons (44,120 million gallons); total 68,765 million gallons (65,452 million gallons). Service reservoirs number 36, with a total capacity of 363 million gallons.

The water rate levied by the Board in 1963-64 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 2s. 0d. per 1,000 gallons, would equal the assessed water rates on each property, was 2s. 0d. per 1,000 gallons. The following table shows particulars of Melbourne metropolitan water supply services for the years 1959-60 to 1963-64.

WATER SUPPLY, MELBOURNE: SERVICES

Year	Number of houses supplied	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of aqueducts, etc., mains and reticulation	Number of meters
					Per house	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	
1959-60	496,841	1,789	145.3	53,169	292	81.2	5,109	366,905
1960-61	510,078	1,836	152.9	55,822	300	83.3	5,245	392,396
1961-62	519,216	1,869	157.6	57,521	304	84.3	5,477	422,318
1962-63	547,123	1,981	151.3	55,225	277	76.4	5,622	460,866
1963-64	572,431	2,072	162.9	59,621	285	78.6	5,882	485,856

(c) *Sewerage and Drainage.* Particulars of sewerage and drainage services for 1959-60 to 1963-64 are shown below. The rate levied in 1963-64 in respect of sewerage was 1s. 2d. 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

Year	Number of houses for which sewers are provided	Estimated population for which sewers are provided	Average daily pumping	Total sewage pumped for the year	Average daily pumping		Length of sewers, etc.	Length of main drains
					Per house	Per head of estimated population		
		'000	Mill. gals.	Mill. gals.	Gallons	Gallons	Miles	Miles
1959-60 ..	384,844	1,308	83.2	30,459	216.2	63.6	3,458	181
1960-61 ..	395,109	1,331	88.1	32,159	223.0	66.2	3,550	193
1961-62 ..	399,890	1,361	83.0	30,308	207.6	61.0	3,665	198
1962-63 ..	422,899	1,402	84.9	30,997	200.8	60.6	3,769	205
1963-64 ..	443,291	1,446	89.7	32,833	202.4	62.0	3,932	211

The metropolitan sewerage system consists of the main system (serving an area of 92,231 acres) and five subsidiary systems—the Sunshine system (serving an area of 2,388 acres), the Laverton system (serving an area of 108 acres), the Kew system (serving an area of 112 acres), the South-eastern system (serving an area of 3,647 acres in Cheltenham, Parkdale, Mentone and Mordialloc), and the Maribyrnong system (serving an area of 167 acres). The Metropolitan Sewage Farm, 26,809 acres in extent and situated about 24 miles south-west of Melbourne beyond the township of Werribee, serves to purify and dispose of approximately 98 per cent. of the sewage flow of the metropolis before its discharge into Port Philip Bay. The total capital cost (less depreciation) of the farm to 30th June, 1964, was £4,524,888. Revenue during 1963-64 amounted to £236,795, cost of sewage disposal to £264,255, trading expenses to £143,250, interest to £244,100, and net cost of sewerage purification to £414,810. These financial particulars are included in the sewerage items of the summary below.

(d) *Finances.* The following table provides for the year 1963-64 a summary of the financial operations of the water supply, sewerage and drainage services conducted by the Melbourne and Metropolitan Board of Works, and of the combined services for the years 1959-60 to 1963-64.

MELBOURNE AND METROPOLITAN BOARD OF WORKS: FINANCES

(£)

Service, etc.	Capital cost of works and buildings at 30th June(a)	Revenue	Expenditure				Surplus(+) or deficit(-)
			Working expenses	Interest and exchange	Debt redemption	Total	
Water ..	65,240,949	5,837,043	1,899,313	3,350,209	..	5,249,522	+ 587,521
Sewerage ..	61,540,782	5,497,690	1,645,380	2,941,106	..	4,586,486	+ 911,204
Drainage ..	11,144,333	851,858	207,876	379,861	..	587,737	+ 264,121
General(b)	5,356,689	..	904,761	..	846,517	1,751,278	-1,751,278
Total, 1963-64	143,282,753	12,186,591	4,657,330	6,671,176	846,517	12,175,023	+ 11,568
1962-63	129,213,999	11,714,465	5,034,147	5,920,195	747,000	11,701,342	+ 13,123
1961-62	117,506,987	10,699,852	4,822,173	5,276,272	594,622	10,693,067	+ 6,785
1960-61	106,667,945	9,157,740	4,021,508	4,724,808	530,679	9,276,995	- 119,255
1959-60	98,098,322	8,463,843	3,845,137	4,221,253	526,802	8,593,192	- 129,349

(a) Total loan indebtedness—1963-64, £134,699,022. distributed over services.

(b) Statutory and general expenditure

(ii) *State Rivers and Water Supply Commission. (a) General.* Water supply and conservation throughout Victoria (except for the area controlled by the Melbourne and Metropolitan Board of Works) is the responsibility of the State Rivers and Water Supply Commission. The events leading to the establishment of the Commission, and its works in the spheres of irrigation, domestic and stock water supply to farms, drainage, flood protection and river improvement, have already been described in Chapter VIII.; this section is therefore confined to the Commission's functions in connexion with urban water supply and sewerage.

(b) *Water Supply.* At 30th June, 1964, the Commission provided a reticulated water supply from its own works to 136 cities and towns having a combined population of 192,000 persons.

The principal systems operated by the Commission serve part of the Mornington Peninsula—Dandenong area (about 77,000 people supplied); Bendigo, Castlemaine, etc. (56,000), and about 8,000 people in the Western District. In addition, 12,000 persons in a number of towns in the Bellarine Peninsula receive supply through a Commission-operated distributory system from headworks controlled by the Geelong Waterworks and Sewerage Trust. The Bendigo-Castlemaine supply also provides for the irrigation of 11,000 acres as well as urban requirements in the area.

Outside these areas the Commission supplies mainly small towns in the north of the State, in areas where it also supplies farms with water for irrigation or domestic and stock purposes.

Capital expenditure by the Commission on urban water supply at 30th June, 1964, was divided between the several systems as follows:—Mornington Peninsula, £10,125,000; Bendigo-Castlemaine, £4,450,000; Bellarine Peninsula, £1,125,000; Otway System (Western District), £1,125,000; other, £1,050,000; total, £17,875,000. This expenditure is net of redemption payments.

In addition to the towns supplied by the Commission, there are approximately 565,000 people in 210 cities and towns throughout the State who get a reticulated water supply from works operated by local authorities.

All these authorities operate under the supervision of the State Rivers and Water Supply Commission, largely because the Government subsidizes their capital expenditure. Most new works are financed from Government loan funds, but in recent years the Geelong Trust and some other local authorities borrowed money privately. In most cases, the local authority controls both headworks and distribution system, but a few large towns—serving about 50,000 people—draw their water from the State Rivers and Water Supply Commission and are concerned only with reticulation of the water. Together, therefore, the Commission and local authorities supply 346 urban centres containing more than 757,000 people. Very few towns of any importance are now without reticulated water supply.

The following table presents the financial position in respect of town water supply at 30th June, 1964.

TOWN WATER SUPPLY, VICTORIA: CAPITAL LIABILITY, 30TH JUNE, 1964
(£'000)

Particulars	Water supply provided by—		
	Local authorities	State Rivers and Water Supply Commission	Total
Government advances	24,275	18,075	42,350
Less redemption	1,800	200	2,000
Government Advances Outstanding ..	22,475	17,875	40,350
Borne by State	4,350	8,700	13,050
Borne locally	18,125	9,175	27,300

In addition, nearly £9,000,000 has been borrowed locally, mainly by the Geelong Waterworks and Sewerage Trust.

The proportion of loan capital borne by the State is much higher in the case of Commission undertakings than for towns supplied by local authorities. This is because most Commission undertakings have been developmental in nature. Besides meeting interest on capital borne by it, the State pays the difference between three per cent. and the actual rate paid on practically all the capital carried locally. The total annual subsidy on country town water supply is currently about £1,250,000.

(c) *Sewerage.* With the exception of the town of Eildon, whose sewerage system is controlled directly by the State Rivers and Water Supply Commission, the construction and management of sewerage works in Victoria's country cities and towns are the responsibility of local authorities supervised by the Commission. Except for the Geelong Waterworks and Sewerage Trust and the Latrobe Valley Water and Sewerage Board which have special Acts dealing with their activities, all sewerage authorities operate under the Sewerage Districts Acts.

At 30th June, 1964, there were 55 cities and towns with sewerage systems in operation. These contained about 516,000 persons, nearly one half of the total number of residents outside the metropolitan area.

Expenditure on sewerage in Victorian country towns at 30th June, 1964, was approximately £25,000,000, of which some £20,000,000 had been advanced by private lenders. The annual State subsidy on country sewerage in Victoria is currently about £400,000 provided mainly in the form of subsidies on interest rates paid along the same lines as for town water supply. Comparatively little capital is borne directly by the State.

(iii) *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 1909*. 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. The amount of loan money which may be raised is limited to £12,000,000 for water supply undertakings, and £5,000,000 for sewerage undertakings. The population supplied is estimated by the Trust at 106,021 persons. This and other general information relates to 30th June, 1964.

(b) *Water Supply.* The Trust operates two systems for gathering and storing water, the water in both systems being brought over fifty miles to Geelong. There are seven storage reservoirs and eleven service basins whose total storage capacity is 8,623 million gallons. The length of water mains and reticulation is 541.1 miles. The total expenditure on water supply to 30th June, 1964, was £6,938,675. General fund expenditure for 1963-64 comprised £173,593 for working expenses and £403,310 for interest, redemption and reserves, while revenue amounted to £584,225. The sinking fund appropriations at June, 1964, amounted to £380,455. The replacement and contingencies reserve amounted to £408,556. There is a water rate of 1s. 7d. 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 and 292.8 miles of main and reticulation sewers. The sewerage area is 11,851 acres, and the number of buildings connected within the sewered areas is 24,145. The total expenditure on sewerage works to 30th June, 1964, was £2,826,830. The revenue in 1963-64 amounted to £294,067, and the general fund expenditure comprised £101,939 on working expenses and £190,106 on interest, redemption and reserves. Sinking fund appropriations at June, 1964, were £226,273. Replacement and contingencies reserve amounted to £425,621. A general rate of 1s. 4d. in the £1 is levied on the net annual value of ratable properties.

(iv) *The Ballarat Water Commissioners and the Ballarat Sewerage Authority.* (a) *General.* The body known as the Ballarat Water Commissioners was constituted on 1st July, 1880, and the Ballarat Sewerage Authority on 30th November, 1920. The members of the Water Commissioners constitute the Sewerage Authority. The Commissioners number nine, three (one of whom is chairman) being appointed by the Government, four being elected by the Council of the City of Ballarat, one being elected by the Councils of the Borough of Sebastopol and the Shires of Buninyong and Grenville and one being elected by the Councils of the Shires of Bungaree and Ballarat. General and financial information given herein relates to the year ended 31st December, 1964.

(b) *Water Supply.* The water supply district comprises an area of about 65 square miles, containing a population of about 61,000. The total storage capacity of the seven reservoirs is 5,435 million gallons and the catchment area is 24,182 acres.

The capital cost on construction of the waterworks was £2,843,623 to 31st December, 1964. The liabilities amounted to £1,759,231 at 31st December, 1964, including loans due to the Government totalling £1,629,097. The revenue for the year 1964 was £199,301. Working expenses during 1964 amounted to £107,791 and interest and other charges to £87,930. A water rate of 1s. 0d. in the £1 on the net annual valuation is levied, with a minimum charge of £1 10s. per annum on any ratable property.

(c) *Sewerage.* The Ballarat sewerage district comprises the City of Ballarat and parts of the Shires of Ballarat, Bungaree and Grenville and the Borough of Sebastopol. There are more than 183 miles of sewers. The capital cost of sewerage construction works to 31st December, 1964, was £1,938,184. Two hundred and forty-eight sewered areas had been declared as at 31st December, 1964. Assessments in the sewerage district numbered 19,799, while those in sewered areas numbered 16,127. There were 13,860 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, 1964, amounted to £1,673,339; redemption payments at that date totalled £385,235. House connexions financed by the Authority numbered 4,085. Revenue during 1964 amounted to £196,354, and expenditure, which included £124,593 for interest and redemption, was £195,060.

A sewerage rate of 1s. 4d. in the £1 on the net annual valuation is levied, with a minimum charge of £3 on any ratable property.

(v) *Latrobe Valley Water and Sewerage Board.* (a) *General.* The Latrobe Valley Water and Sewerage Board was constituted on 1st July, 1954. The Board consists of seven members, namely:—two Government nominees (one of whom is Manager and also Board Chairman), three members elected by water supply, sewerage and river improvement authorities within the Latrobe Valley, and one representative each of the State Electricity Commission of Victoria and the Gas and Fuel Corporation of Victoria.

(b) *Water Supply.* The Board is empowered to construct water supply works within the Latrobe Valley, but at present its main construction activities are confined to the central industrialized areas, particularly around the towns of Morwell and Traralgon. With the completion of the Moondarra reservoir and pipeline, construction activities decreased during 1963–64, capital expenditure totalling £315,453 compared with £384,583 in 1962–63. The capital cost of construction of the waterworks was £4,983,258 to 30th June, 1964. Liabilities amounted to £5,515,726, including loans due to the Government totalling £5,287,840. Revenue for the year was £292,619. Working expenses during 1963–64 amounted to £77,356 and interest and other charges to £189,881. The Board does not strike a rate, but supplies consumers, including local water supply authorities, by measure. The quantity supplied during the year ended 30th June, 1964, was 9,850 million gallons.

(c) *Sewerage.* The sewerage system consists of a main outfall sewer, about 52 miles in length. Wastes conveyed consist mainly of industrial wastes, such as paper wastes and gasification wastes, together with small quantities of domestic sewage. The capital cost of the sewerage construction works to 30th June, 1964, was £2,658,939. Liabilities amounted to £3,105,531, including loans due to the Government totalling £2,747,032. Revenue in 1963–64 was £117,101 and expenditure comprised £53,669 working expenses and £70,812 interest and other charges. No sewerage rate is levied, but a charge is made by measure for wastes both from industries and public authorities.

(vi) *Other Sewerage Authorities.* At 30th June, 1964, 74 other sewerage authorities had been constituted under the provisions of the Sewerage Districts Acts and systems were in operation in 51 districts.

3. Queensland.—(i) *Brisbane City Council—to 30th June, 1964. (a) General.* This organization conducts the water supply and sewerage systems of the City of Brisbane, and also supplies, in bulk, the whole of the water used by the City of Ipswich and the major portion of that used by the City of Redcliffe. Redcliffe also supplements its supply from that of the Pine Rivers Shire Council.

(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 (5,720 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 18 service reservoirs with a capacity of approximately 43 million gallons. The Somerset reservoir 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 for the year ended 30th June, 1964, was 3d. in the £1 on the unimproved valuation of all ratable land, with a minimum charge of £8 for the year for each assessment. The following table is a summary of operations of the complete Brisbane City Council system (Brisbane, Ipswich and Redcliffe) for the years 1959–60 to 1963–64.

WATER SUPPLY, BRISBANE(a): SERVICES

Year	Services connected	Estimated population supplied	Average daily consumption	Total consumption for the year	Average daily consumption		Length of trunk and reticulation mains
					Per service	Per head of estimated population	
			Mill. gals.	Mill. gals.	Gallons	Gallons	Miles
1959–60	168,687	615,293	44.3	16,214	272	73.1	2,137
1960–61	171,820	626,470	46.8	17,100	273	74.8	2,196
1961–62	178,279	649,970	45.3	16,538	254	69.7	2,284
1962–63	182,804	665,479	48.3	17,644	264	72.6	2,378
1963–64	187,502	683,223	51.2	18,684	273	74.9	2,390

(a) Includes Ipswich and Redcliffe.

(c) *Sewerage.* The sewage treatment works is situated at Luggage Point at the entrance to the Brisbane River. Sewerage rating for the year ended 30th June, 1964, was 2½d. in the £1 on the unimproved valuation of each portion of land with a minimum charge of £8 10s. for the year. The following table is a summary of operations of the Brisbane sewerage scheme for the years 1959–60 to 1963–64.

SEWERAGE, BRISBANE: SERVICES

Year	Premises connected	Estimated population served	Total sewage pumped for the year	Length of main, branch, reticulation, etc., sewers
1959–60	58,942	218,185	5,626	803
1960–61	62,781	232,290	5,222	853
1961–62	67,407	249,406	5,808	906
1962–63	71,754	265,490	6,673	944
1963–64	75,964	281,067	6,959	1,042

(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 1959-60 to 1963-64.

WATER SUPPLY AND SEWERAGE, BRISBANE: FINANCES

(£)

Service and year	Gross capital cost to 30th June	Revenue	Expenditure			Surplus(+) or deficit(-)
			Working expenses	Interest, redemption, etc., charges	Total (a)	
Water supply—						
1959-60 ..	16,369,241	2,149,216	984,213	793,263	2,115,298	+ 33,918
1960-61 ..	18,437,170	2,315,102	1,044,524	879,712	2,308,682	+ 6,420
1961-62 ..	19,995,220	2,481,687	1,129,904	974,898	2,381,291	+ 100,396
1962-63 ..	21,529,419	2,824,839	1,167,228	1,084,244	2,608,922	+ 215,917
1963-64 ..	23,087,324	2,994,415	1,245,892	1,164,986	2,659,218	+ 335,197
Sewerage—						
1959-60 ..	15,556,266	907,148	252,211	460,896	839,761	+ 67,387
1960-61 ..	16,837,552	982,345	282,035	489,597	964,578	+ 17,767
1961-62 ..	17,953,552	1,035,872	296,234	564,903	1,045,578	- 9,706
1962-63 ..	19,926,939	1,262,379	296,083	651,779	1,167,970	+ 94,409
1963-64 ..	22,719,511	1,381,412	325,333	775,020	1,285,297	+ 96,115

(a) Total, including other expenditure.

(ii) *Country Towns.* (a) *Water Supply.* In addition to the City of Brisbane, there were at 30th June, 1963, 182 cities and towns in Queensland provided with water supply systems controlled by municipal and shire councils.

(b) *Sewerage Systems.* At 30th June, 1963, there were 38 cities or towns in addition to Brisbane with sewerage systems, and sewerage schemes were in course of construction at 5 other cities or towns.

(c) *Finances.* The receipts (other than loan and loan subsidy) of water undertakings controlled by the cities and towns referred to above amounted to £2,874,287 in 1962-63. Expenditure amounted to £2,895,306, including £1,282,298 for debt charges. In addition, expenditure from loans and loan subsidy amounted to £2,110,840. 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 mainly, and are maintained, by the Engineering and Water Supply Department, under the control of the Minister of Works. Works controlled by the Department are the Adelaide, Barossa, Beetaloo, Bundaleer, Moorook, Tod River, Warren, Yorke Peninsula and other country water districts systems, the Morgan-Whyalla water supply system, the metropolitan and country sewerage systems, the Metropolitan Flood Waters Scheme and works on the River Murray constructed under the River Murray Waters Agreement. Several water supply schemes on the Murray River are operated by the Department of Lands in conjunction with its irrigation works, and supplies to Woomera and Leigh Creek coalfield are controlled by the operating authorities. The following tables show particulars of metropolitan and country waterworks combined.

WATERWORKS, SOUTH AUSTRALIA: SERVICES

Year	Assessments(a)		Area of districts supplied (a)	Capacity of reservoirs, tanks, etc.	Length of mains	Number of meters
	Number	Annual value				
		£	Acres	Mill. gals.	Miles	
1959-60..	289,235	31,617,930	13,037,312	33,957	9,016	213,024
1960-61..	319,108	40,593,447	13,118,635	35,405	9,292	232,072
1961-62..	338,636	42,702,029	13,153,869	45,106	9,634	247,972
1962-63..	357,342	46,368,327	13,286,817	45,062	9,996	262,571
1963-64..	365,579	52,080,000	13,372,776	45,173	10,469	278,183

(a) Excludes Morgan-Whyalla Water Supply—water sold by measure.

WATERWORKS, SOUTH AUSTRALIA: FINANCES

(£)

Year	Invested capital at 30th June (a)	Revenue	Expenditure			Deficit
			Working expenses (b)	Interest	Total	
1959-60..	59,636,914	3,386,221	3,391,892	2,205,764	5,597,656	2,211,435
1960-61..	65,183,386	4,284,394	3,188,385	2,373,567	5,561,952	1,277,558
1961-62..	73,115,312	4,532,577	4,194,970	2,694,196	6,889,166	2,356,589
1962-63..	80,908,668	4,951,534	3,987,673	3,197,520	7,185,193	2,233,659
1963-64..	86,291,552	5,551,691	3,875,750	3,479,861	7,355,611	1,803,920

(a) After deduction of depreciation.

(b) Includes debt redemption.

(ii) *Adelaide Waterworks.* At 30th June, 1964, the Adelaide waterworks supplied a district of 215,093 acres. The capacity of reservoirs and storage tanks was 24,217 million gallons and there were 3,172 miles of mains. Water is also drawn from the 11,300 million gallon reservoir at South Para in the Barossa Water District.

The Mannum-Adelaide pipeline conveys water from the River Murray to Adelaide at a rate of up to 66 million gallons a day. Water is delivered to the River Torrens or, by further pumping, to the River Onkaparinga. With further development, the main will operate as a closed system connected to the metropolitan reticulation. The pipeline supplements the Warren system and other country areas.

ADELAIDE WATERWORKS: FINANCES

(£)

Year	Invested capital at 30th June (a)	Revenue	Expenditure			Surplus (+) or Deficit (-)
			Working expenses (b)	Interest	Total	
1959-60..	32,074,743	2,311,402	1,919,538	1,136,373	3,055,911	- 744,509
1960-61..	35,078,981	2,958,675	1,731,561	1,218,096	2,949,657	+ 9,018
1961-62..	38,627,084	3,151,125	2,377,181	1,368,822	3,746,003	- 594,878
1962-63..	41,730,576	3,436,759	2,071,396	1,689,793	3,761,189	- 324,430
1963-64..	43,345,788	3,935,945	1,968,102	1,804,978	3,773,080	+ 162,865

(a) After deduction of depreciation.

(b) Includes debt redemption.

(iii) *Adelaide Metropolitan Sewerage.* The Adelaide metropolitan sewerage system, comprising the Adelaide, Glenelg, Port Adelaide and Salisbury-Elizabeth areas of 153 square miles in all, includes a sewage farm, and treatment works at Glenelg and Port Adelaide. Construction of a large treatment works at Bolivar is in progress to supersede the sewage farm and carry the increased load due to metropolitan expansion. Financial and other particulars for 1959-60 to 1963-64 are shown hereunder.

ADELAIDE METROPOLITAN SEWERAGE: SUMMARY

Year	Length of sewers	Number of connexions	Invested capital at 30th June (a)	Revenue	Expenditure			Surplus
					Working expenses (b)	Interest	Total	
	miles		£	£	£	£	£	£
1959-60 ..	1,471	160,407	11,305,495	1,576,769	676,660	401,009	1,077,669	499,100
1960-61 ..	1,598	173,753	13,376,362	2,060,534	887,921	479,011	1,366,932	693,602
1961-62 ..	1,659	179,918	14,544,885	2,211,011	913,724	524,376	1,438,100	772,911
1962-63 ..	1,714	186,143	16,755,220	2,344,706	1,001,053	575,617	1,576,670	768,036
1963-64 ..	1,774	194,889	19,497,763	2,619,615	1,100,524	632,284	1,732,808	886,807

(a) After deduction of depreciation.

(b) Includes debt redemption.

(iv) *Country Sewerage Schemes.* Sewerage schemes are operating at Port Lincoln, Naracoorte, Nangwarry, Mount Burr, Myponga and Angaston. At Port Lincoln the sewers discharge to an ocean outfall, and treatment works are used on the other systems. There are 89 miles of sewers and 2,720 connexions in the country systems. A sewerage scheme for Mount Gambier is under construction.

(v) *Country Water Supply.* Water districts systems at 30th June, 1964, comprised an area of 13,156,585 acres. Supply came from reservoirs having a total capacity of 20,851 million gallons, from the River Murray, and from underground sources.

Apart from local supplies, water from the River Murray comes from branches of the Mannum-Adelaide main and from the Morgan-Whyalla main.

The principal areas of underground supplies are in the south-east of the State, where water from the Murray Basin can be had at moderate depths or from lakes, and from sand beds on Eyre Peninsula. In the year 1963-64 supplies made to Mount Gambier, Naracoorte and other towns amounted to 1,199 million gallons, and the Uley-Wanilla, Lincoln and Poldas Basins contributed 708 million gallons to the Tod River Water District.

COUNTRY WATERWORKS, SOUTH AUSTRALIA: FINANCES

(£)

Year	Invested capital at 30th June (a)	Revenue	Expenditure			Deficit
			Working expenses (b)	Interest	Total	
1959-60..	27,562,171	1,074,819	1,472,354	1,069,391	2,541,745	1,466,926
1960-61..	30,104,405	1,325,719	1,456,824	1,155,471	2,612,295	1,286,576
1961-62..	34,488,228	1,381,452	1,817,789	1,325,374	3,143,163	1,761,711
1962-63..	39,178,092	1,514,775	1,916,277	1,507,727	3,424,004	1,909,229
1963-64..	42,945,764	1,615,746	1,907,648	1,674,883	3,582,531	1,966,785

(a) After deduction of depreciation.

(b) Includes debt redemption.

(vi) *Morgan-Whyalla Water Supply Scheme.* This scheme, which has 223 miles of main, was officially opened on 31st March, 1944, the capital invested to 30th June, 1964, being £9,794,897. Particulars of the scheme, where applicable, are included in the tables of the combined waterworks in (i), p. 796. Apart from supplying Whyalla, the main has been used to allow expansion of reservoir supplies in the northern agricultural area of the State, and to meet new demands caused by industrial growth at Whyalla, duplication of the main is under way. During 1963-64 water used from the scheme amounted to 2,660 million gallons. Revenue was £617,028, working expenses £336,984, interest charges £321,884, and deficit £41,840.

5. *Western Australia.*—(i) *General.* The water supply, sewerage and drainage systems of Western Australia are principally under the management of two State Authorities, namely, the Metropolitan Water Supply, Sewerage and Drainage Board, having as its territory the area centred on Perth and extending to Kwinana and Serpentine in the south, Sorrento in the north and Swan View on the east, and the Public Works Department, which controls the Goldfields and Agricultural Water Supply and the Great Southern Towns Water Supply as well as supplies, from local sources, to 86 country towns not included in these schemes. Both Authorities come under the portfolio of the Minister for Works and Water Supplies. The former Metropolitan Water Supply, Sewerage and Drainage Department was replaced by the Board of the same name as the result of an amendment made in 1963 to the Metropolitan Water Supply, Sewerage and Drainage Act. The amendment, operative from the 1st July, 1964, made the Board the authority responsible, subject to the Minister, for the general administration of the Act. (See also Chapter VIII. Water Conservation and Irrigation, of this Year Book, pp. 252-3.)

(ii) *Metropolitan Water Supply, Sewerage and Drainage.* (a) *General.* The sources of the metropolitan water supply are the Serpentine Reservoir, the Canning Reservoir, the Serpentine Pipehead Reservoir, the Churchman Brook Reservoir, the Victoria Reservoir and the Wungong Brook Diversion Weir. The supply from these sources is supplemented as necessary from a number of artesian bores and from a pipeline link with Mundaring Weir. The largest reservoir, the Serpentine Reservoir, has a capacity of 39,000 million gallons. There are three treatment works included in the Board's sewerage system. The largest of these, Subiaco treatment works, services Perth and suburbs.

(b) *Water Supply.* The following table shows particulars of water supply services for 1959-60 to 1963-64.

METROPOLITAN WATER SUPPLY, WESTERN AUSTRALIA: SERVICES

Year	Number of services (a)	Estimated population supplied (a)	Average daily consumption	Total consumption for year	Average daily consumption		Length of mains	Number of meters
					Per service (b)	Per head of estimated population (b)		
			Mill. gals. (c)	Mill. gals. (c)	Gallons (c)	Gallons (c)	Miles	
1959-60	..	129,956	431,600	33.7	12,335	263	79.5	97,002
1960-61	..	133,647	446,000	49.3	18,035	374	112.3	103,969
1961-62	..	137,960	460,730	50.6	18,492	373	111.6	116,610
1962-63	..	142,246	476,000	47.1	17,214	336	100.5	123,364
1963-64	..	149,033	491,740	53.2	19,454	362	109.7	130,480

(a) Figures relate to 30th June. (b) Calculated from averages for the year. (c) Water restrictions in force for 180 days.

Water rating for 1963-64 was 1s. in the £1 on annual valuation on land used for residential purposes and 1s. 6d. in the £1 on annual valuation on land not so used.

(c) *Sewerage and Main Drainage.* Some particulars of the metropolitan sewerage and main drainage services for 1959-60 to 1963-64 are shown on the next page.

METROPOLITAN SEWERAGE AND MAIN DRAINAGE, WESTERN AUSTRALIA: SERVICES

Year			Services	Estimated population served	Length of sewers	Length of main drains
					Miles	Miles
1959-60	..	..	65,781	260,600	719	69
1960-61	..	..	66,664	264,000	724	72
1961-62	..	..	67,378	239,110	736	77
1962-63	..	..	68,223	240,700	751	81
1963-64	..	..	68,958	241,700	769	94

Sewerage rating for 1963-64 was 1s. 9d. in the £1 on annual valuation, while metropolitan main drainage rating was 4d. in the £1.

(d) *Finances.* The following table shows particulars of the finances of the Western Australian Metropolitan Water Supply, Sewerage and Drainage Board.

METROPOLITAN WATER SUPPLY, SEWERAGE AND MAIN DRAINAGE, WESTERN AUSTRALIA: FINANCES

(£)

Service and year	Capital cost to 30th June	Revenue	Expenditure			Surplus (+) or deficit (-)
			Working expenses	Interest and debt redemption	Total	
Water supply—						
1959-60 ..	18,715,358	1,206,823	671,009	794,160	1,465,169	- 258,346
1960-61 ..	20,256,673	1,730,433	839,876	879,902	1,719,778	+ 10,655
1961-62 ..	22,156,248	1,803,303	772,501	988,140	1,760,641	+ 42,662
1962-63 ..	24,244,492	1,852,414	752,497	1,087,635	1,840,132	+ 12,282
1963-64 ..	25,741,231	2,087,727	791,365	1,250,761	2,042,126	+ 45,601
Sewerage—						
1959-60 ..	6,915,604	772,012	420,391	319,817	740,208	+ 31,804
1960-61 ..	7,643,368	934,190	505,425	361,706	867,131	+ 67,059
1961-62 ..	8,301,678	938,372	525,136	446,718	971,854	- 33,482
1962-63 ..	9,059,279	1,130,598	550,885	509,364	1,060,249	+ 70,349
1963-64 ..	9,925,444	1,161,329	607,240	507,477	1,114,717	+ 46,612
Main drainage—						
1959-60 ..	1,616,772	93,013	48,867	69,831	118,698	- 25,685
1960-61 ..	1,771,641	113,805	49,970	78,822	128,792	- 14,987
1961-62 ..	1,974,787	120,190	63,075	90,251	153,326	- 33,136
1962-63 ..	2,191,431	148,215	75,362	99,929	175,291	- 27,076
1963-64 ..	2,499,073	155,017	76,461	108,376	184,837	- 29,820

(iii) *Country Water Supplies.* Information concerning country water supplies is included in Chapter VIII. Water Conservation and Irrigation, of this Year Book (see pp. 252-3).

6. *Tasmania.*—(i) *Waterworks.* At the end of 1963-64 there were 96 municipally operated waterworks in Tasmania. The capacity of the reservoirs was 2,292 million gallons, the estimated population served was 299,990 and the number of properties served was 95,445. A regional scheme is operated as a State concern, supplying bulk water to the Municipalities of George Town, Lilydale and St. Leonards. In addition, this same scheme supplies water direct to industry situated near the Tamar River.

The overall control of water supply in the greater Hobart area, comprising the Municipalities of Hobart, Clarence, Glenorchy and Kingborough, is now vested in the Metropolitan Water Board, but the Municipalities retain primary responsibility for

reticulation. The Board has undertaken the construction of a new bulk supply, with an ultimate daily capacity of 20 million gallons. This scheme is now virtually complete and the anticipated total cost is £2,568,000.

(ii) *Sewerage.* At the end of 1963-64 there were 21 municipal sewerage schemes in operation in Tasmania. They served an estimated population of 195,000 and the number of tenements served was 52,500.

7. *Northern Territory.*—Information relating to water supply in the Northern Territory may be found in Chapter VIII. Water Conservation and Irrigation (*see pp. 255-7*).

8. *Australian Capital Territory.*—The water supply, sewerage and drainage systems in the Australian Capital Territory are under the control of the Commonwealth Department of Works. The sources of the water supply are:—Cotter Dam (capacity 967 million gallons) and Bendora Dam (2,360 million gallons). Eight pumps are capable of pumping approximately 27 million gallons daily.

The total population served in the Australian Capital Territory, which during 1963-64 consumed 4,105 million gallons of water, was 81,670 (at 30th June, 1964). In addition, the Canberra water supply system supplied 334 million gallons of water to Queanbeyan, New South Wales.

The total number of water meters at 30th June, 1964, was 17,746 and the total length of water mains was 332 miles.

The sewerage system for Canberra and suburbs consists of a treatment works, 266 miles of sewerage reticulation and 5 miles of rising mains (at 30th June, 1964). There were also 261 miles of stormwater sewers.

§ 6. Harbour Boards and Trusts

NOTE.—The number and net tonnage of vessels which entered the major ports in each State during the years 1962-63 and 1963-64 are shown in Chapter XV. Transport and Communication (*see p. 542*). Particulars of oversea and interstate cargo discharged and shipped during 1963-64 are shown on page 544 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 seven Commissioners comprising three full-time members and four part-time members representing shipping and other maritime 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 ports of Sydney, Newcastle, and Botany Bay, the Board is also responsible for the provision of adequate wharfage and channels, and carries out all construction, maintenance and dredging work.

(b) *Finances.* The implementation of the Maritime Services (Amendment) Act, 1960, as from 1st May, 1961, resulted in some marked changes in the Board's accounting system. The amendment to the Act provided for a new fund known as the Maritime Services Board Fund to be established to replace the Sydney Harbour Trust Fund. All revenue earned by the Board at the ports of Sydney, Newcastle and Botany Bay, with the exception of that earned from pilotage and navigational services, is now credited to the Maritime Services Board Fund, and all revenue expenditure incurred at the three ports is drawn from that Fund.

The following table shows particulars of the finances of the Board in respect of the ports of Sydney, Newcastle and Botany Bay.

MARITIME SERVICES BOARD FUND: FINANCES OF THE PORTS OF SYDNEY, NEWCASTLE AND BOTANY BAY

(£)

Year	Revenue				Expenditure (a)			Surplus
	Wharfage and transhipment rates	Tonnage rates and berthing charges	Other charges	Total	Administration and maintenance	Interest, debt redemption, exchange, etc.	Total	
1960-61	3,130,441	631,432	927,729	4,689,602	2,565,141	2,081,110	4,646,251	43,351
1961-62	4,654,234	699,557	1,292,632	6,646,423	3,756,694	2,857,210	6,613,904	32,519
1962-63	4,846,617	790,676	1,218,885	6,856,178	3,771,424	3,028,183	6,799,607	56,571
1963-64	5,419,130	877,254	1,466,466	7,762,850	3,931,901	3,783,438	7,715,339	47,511

(a) Excludes capital expenditure but includes transfer to the Renewals Fund Reserve Account (£1,025,000 in 1960-61, £1,375,000 in 1961-62, £1,545,500 in 1962-63 and £2,389,000 in 1963-64).

(c) *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 four 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 42 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 close to the business centre of the city, about four or five miles from the Heads. At present there are two dolphin berths each 550 feet long, and 96 effective commercial cargo berths with a total length of 69,725 feet, controlled by the Board. Accommodation for harbour craft amounts to 3,335 feet, while the length of other berths, including oil and private wharves, totals 28,851 feet. Depth of water at wharves is up to 36 feet. Special facilities for the storage and handling of products such as wheat, wool, coal, 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 afloat. The Captain Cook Graving Dock ranks among the largest graving docks in the world, being 1,139 feet by 147 feet 7½ 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.

(d) *Port of Newcastle.* As from 1st May, 1961, the Maritime Services Board of New South Wales became the single authority for the port of Newcastle. This was brought about by the implementation of the Maritime Services (Amendment) Act, 1960, which resulted in the Board's jurisdiction being extended to include the operation of the coal loading equipment formerly vested in the Department of Railways and the dredging, together with the maintenance and construction of wharves and other port facilities, which had been the responsibility of the Department of Public Works.

An Advisory Committee consisting of eight members, appointed by the Governor, assists the Board in matters associated with the operation of the port. 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 harbour 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 26 feet at low water, is 350 feet wide. Wharfage accommodation amounts to approximately 15,000 feet, including about 2,600 feet of privately owned wharfage. There are also several dolphin berths available for tie-up purposes. A floating dock of 15,000 tons capacity is available at the port.

(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, near Sydney, and two berths are available as well as tanker mooring buoys. The entrance to the Bay is approximately $1\frac{1}{2}$ miles wide, with a minimum depth of about 36 feet in the dredged swinging basin.

(f) *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 9 members, appointed by the Governor, has been formed to assist the Board in the operation of the port. It has an area of approximately 340 acres, with depths ranging from 20 to 50 feet (low water ordinary spring tide), and wharfrage accommodation totalling 8,000 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 wharfrage for the steelworks in addition to modern general cargo berths; a coal loading plant capable of loading at the rate of 2,000 tons per hour is now available.

The first stage of the inner harbour basin was opened to shipping on 28th November, 1960. Present accommodation is 1,900 feet of wharfrage, with 36 feet (low water ordinary spring tide) of water alongside. Width in the entrance to the inner harbour basin is 400 feet.

(g) *Other Ports.* In addition to the ports of Sydney, Newcastle, Port Kembla and Botany Bay, the Board controls 29 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 Light-houses 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 £10,437,121 in 1963-64. This figure includes the revenue for the ports of Sydney, Newcastle and Botany Bay (see table on p. 801) and State navigation service collections, £2,674,271 (1963-64). Commonwealth Government revenue from light dues and navigation receipts for the whole of Australia amounted to £862,120 in 1962-63.

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, pages 970-2. The port of Melbourne comes under the control of the Melbourne Harbor Trust Commissioners, an independent autonomous statutory organization, with a full-time Chairman and five part-time Commissioners with specialized knowledge of the requirements of exports, primary producers, shipowners, imports and all aspects of port labour. The area of water and land under the control of the Trust is $10\frac{1}{2}$ square miles, with sheds available for cargo in transit totalling 22,928 feet in length and covering an area of $42\frac{3}{4}$ acres.

Three of the largest transit sheds on the Australian coast are now in operation at Appleton Dock. The sheds are 600 feet long by 150 feet wide, each with a cargo stacking area of 81,000 square feet. The berths are used for the general cargo trade and have both rail and crane facilities, and modern amenities for port workers. The total length of wharves, piers and jetties in the port is 61,550 feet, covering an area of $58\frac{3}{4}$ acres with 56,940 feet of effective berthing space.

During 1964 there was a continuation of major reconstruction and modernization of several cargo berths in the Port including 1-4 Victoria Dock and 19 South Wharf, as well as the construction of a new shipping control centre 74 feet above ground level, with radar and visual observation of the entire port area. Work completed during 1964 included additional amenities for waterside workers including change rooms and dining rooms. Also the specifications and design for the construction of a 250-ton dual purpose floating crane were begun.

The depth of water (low water ordinary spring tide) from the main channels to the principal wharves is 31 to 39 feet.

(b) *Finances.* The following table shows particulars of the financial operations of the Trust.

MELBOURNE HARBOR TRUST: FINANCES

(£)

Year	Gross loan indebtedness at 31st December	Revenue		Expenditure			Surplus (+) or deficit (-)	
		Wharfage and tonnage rates	Total	Administration and maintenance (a)	Interest, debt redemption, exchange, etc.	Depreciation, renewals and insurance account		Total
1960 ..	14,199,060	2,492,139	3,948,187	2,464,557	766,532	641,175	3,872,264	+ 75,923
1961 ..	14,240,702	2,303,586	3,791,495	2,711,386	910,713	203,909	3,826,008	- 34,513
1962 ..	14,875,017	2,441,432	3,978,831	2,587,788	893,765	484,292	3,965,845	+ 12,986
1963 ..	14,917,524	2,729,596	4,484,579	2,705,730	948,921	772,942	4,427,593	+ 56,986
1964 ..	14,886,337	3,572,616	5,656,206	3,343,573	1,316,179	906,170	5,565,922	+ 90,284

(a) Includes statutory payments to Consolidated Revenue and Geelong Harbor Trust (£502,447 in 1960, £464,729 in 1961, £492,318 in 1962, £549,919 in 1963, and £718,523 in 1964). Excludes capital expenditure (£1,280,529 in 1960, £1,348,846 in 1961, £1,309,072 in 1962, £1,207,824 in 1963, and £1,410,258 in 1964).

(ii) *Geelong Harbor Trust.* The Geelong Harbor Trust, constituted in 1905, is under the control of three Commissioners appointed from time to time by the Governor-in-Council.

At the end of 1963 there were 17 effective berths in the port, plus two berths at the Commonwealth Explosives Pier, Pt. Wilson, owned and operated by the Commonwealth. Two major wharf projects will be completed by the end of 1965—new Corio Quay South No. 1 berth (general cargo) and an alumina discharging berth at Point Henry. The construction of a modern dry bulk berth with an initial discharge rate of 1,000 tons per hour will commence this year. Eight berths have a depth of 36 feet at low water, while all other berths (except Commonwealth Explosives Pier, Pt. Wilson, 30 feet) have a depth of 32 feet at low water.

Revenue for the year 1963 was £1,416,283 and expenditure from revenue totalled £811,658. At 31st December, 1963, the value of the Trust's fixed assets was £9,306,710 and loans outstanding amounted to £3,056,845.

(iii) *Portland Harbor Trust.* Construction of an all weather deep-sea port of three berths with a low water depth of 36 feet was completed to operational standards in 1960. A new oil tanker berth was brought into commission during 1963, from which petroleum products will be pumped to bulk terminals at North Portland, and the completion of a bulk grain terminal now provides in-transit storage for one million bushels of grain awaiting overseas shipment.

Operating revenue for the year ended 30th June, 1964, was £132,288 and revenue expenditure was £104,042. The value of the Trust's fixed assets, less depreciation, was £7,166,352 at 30th June, 1964, and loans and advances outstanding amounted to £7,522,320.

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. Adequate dry-docking facilities are available. The finances of Brisbane Harbour for the years 1958-59 to 1962-63 are shown below.

BRISBANE HARBOUR: FINANCES
(£'000)

Year	Loan indebtedness at 30th June	Receipts		Payments	
		Harbour dues	Total	Working expenses(a)	Total
1958-59	2,702	709	1,097	664	883
1959-60	2,512	772	1,059	731	953
1960-61	2,813	763	1,164	679	901
1961-62	2,716	742	1,084	628	849
1962-63	2,648	820	1,257	887	1,073

(a) Excludes interest and redemption included in total.

In addition to Brisbane harbour, the Department of Harbours and Marine also controls the Brisbane Dry Dock, the Cairncross Dock, and nine smaller harbours not administered by harbour boards.

(iii) *Harbour Boards.* Harbour boards control the ports of Bowen, Bundaberg, Cairns, Gladstone, Mackay, Rockhampton and Townsville. Finances for each port for the year ended 30th June, 1963, are shown below, together with a summary for the years ended 30th June, 1959 to 1963.

HARBOUR BOARDS, QUEENSLAND: FINANCES
(£)

Harbour board	Loan indebtedness at 30th June	Revenue		Expenditure (excluding loan)		Surplus(+) or deficit(-)
		Wharfage and harbour dues	Total	Working expenses	Total (including interest and redemption)(a)	
Bowen	269,107	8,556	13,079	7,555	13,822	-- 743
Bundaberg	2,862,529	289,927	404,907	105,062	361,009	+ 43,898
Cairns	816,455	210,838	282,102	114,776	154,218	+ 127,884
Gladstone	1,022,126	74,814	118,625	25,446	130,717	- 12,092
Mackay	1,672,385	191,435	478,419	125,149	462,012	+ 16,407
Rockhampton	946,864	35,400	49,577	19,420	42,381	+ 7,196
Townsville	3,719,825	278,712	712,589	204,310	701,344	+ 11,245
Total, 1962-63	11,309,291	1,089,682	2,059,298	601,718	1,865,503	+ 193,795
1961-62	9,840,952	941,652	1,785,308	498,631	1,624,147	+ 161,161
1960-61	9,395,347	862,187	1,683,169	547,390	1,625,273	+ 57,896
1959-60	8,430,437	908,911	1,807,041	561,425	1,526,770	+ 280,271
1958-59	7,099,197	898,822	1,602,409	602,391	1,696,390	- 93,981

(a) 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 re-appointment. 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 at Whyalla, Ardrossan and Rapid Bay, all of which are controlled by the Broken Hill Pty. Co. Ltd. Port Augusta is controlled by the Commonwealth Railways on behalf of the Commonwealth Government. Maximum depths of water (low water) at the wharves of the main ports range from 24 feet at Port Pirie to 35 feet at Port Adelaide (Outer Harbour). The following table shows the finances of the Board for 1959-60 to 1963-64.

THE SOUTH AUSTRALIAN HARBORS BOARD: FINANCES

(£)

Year	Capital at 30th June (a)	Revenue	Expenditure from revenue			Surplus
			Working expenses	Interest	Total	
1959-60.. ..	16,324,529	2,314,999	1,574,774	612,711	2,187,485	127,514
1960-61.. ..	17,432,015	2,714,743	1,684,618	658,269	2,342,887	371,856
1961-62.. ..	18,555,851	2,576,697	1,676,407	701,032	2,377,439	199,258
1962-63.. ..	19,483,967	2,548,777	1,672,186	765,725	2,437,911	110,866
1963-64.. ..	20,498,021	3,056,808	1,795,274	790,647	2,585,921	470,887

(a) State Treasurer's funds and reserve employed.

5. *Western Australia.*—(i) *Fremantle Port Authority.* The Port of Fremantle is operated and controlled by a body corporate administered by a Board of five Commissioners appointed triennially by the Governor. The port covers an extensive water area of some 180 square miles and comprises an inner and an outer harbour. The inner harbour includes 18 deep water land-backed berths, providing 703,850 sq. ft. of covered storage space and 11,148 feet of wharf berth accommodation. All inner harbour berths are dredged to a low water depth of 36 feet. The outer harbour includes three main anchorages, Gage Roads, Owen Anchorage and Cockburn Sound. Deep water jetties, including the oil refinery jetty in Cockburn Sound, are available in the outer harbour. Ocean going deep draft ships enter the Sound by means of channels dredged through Success and Parmelia Banks to a low water depth of 38 feet and a bottom width of 500 feet. In the outer harbour there are three tanker berths each with a low water depth of 44 feet at the Kwinana oil refinery, one berth at the nearby steelworks jetty with a low water depth of 30 feet, and one berth at the alumina works jetty with a low water depth of 40 feet. There are also special berths for the off-loading of cattle and the handling of explosives.

Gross earnings for the year 1963-64 amounted to £3,320,786, working expenses to £2,581,475, interest charges on loan capital £329,331, sinking fund contributions £88,850 and capital and other funds employed totalled £8,732,672.

(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 entrance channel is 33 feet, at one arm of the jetty 31 feet and at the other arm 33 feet. In the approaches to wharf berths the depth is 33 feet. Wharf accommodation consists of 1,115 feet, and in addition the Deepwater Jetty has 2,500 feet of accommodation. Gross earnings for the year 1963-64 amounted to £136,417, working expenses £68,757, interest and sinking fund charges £99,626, and capital account totalled £1,910,252.

(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 30 feet and berthing accommodation is 4,300 feet. Gross earnings for the year 1963-64 amounted to £220,906, working expenses £101,157, interest and sinking fund charges £128,799, and capital account totalled £2,971,402.

(iv) *Other Ports.* The following ports are controlled by the State Government Harbour and Light Department:—Broome, Busselton, Carnarvon, Derby, Esperance, Geraldton, Onslow, Point Samson, Port Hedland, Wyndham and Yampi.

6. *Tasmania*.—There are eight marine boards and one harbour trust in Tasmania. The marine boards control the ports of Hobart, Launceston, Stanley (Circular Head), Burnie and Wynyard (Table Cape), Devonport and Ulverstone, Strahan, Currie (King Island), and Whitemark (Flinders Island), and the harbour trust controls the port of Smithton. Aggregate receipts of revenue accounts of all these authorities during the year 1963–64 were £2,084,199, and expenditures £1,512,672, including loan charges £549,845. All amounts referred to in this section exclude transfers between accounts of the same authority.

The total receipts of the Hobart Marine Board on revenue account during 1963–64 were £624,911, and total expenditure on revenue account was £404,873, of which £127,081 was spent on loan charges. Launceston Marine Board receipts on revenue account during 1963–64 amounted to £531,205, and expenditure on revenue account was £424,079, of which £85,705 was spent on loan charges. Devonport Marine Board (which is now responsible for running the facilities formerly provided by the Ulverstone Harbour Trust) had receipts of £380,784 on revenue accounts and spent £304,989 on revenue account, including £139,550 on loan charges. The total receipts on revenue account for Burnie Marine Board were £469,093 and expenditure on revenue account items totalled £301,823, of which loan charges accounted for £182,822.

The total loan indebtedness of all marine boards and the harbour trust at 30th June, 1964, amounted to £7,368,410. Of this sum, £1,432,931 was in respect of Hobart (including Port Huon), £1,107,691 in respect of Launceston, £2,991,965 in respect of Burnie, and £1,707,278 in respect of Devonport (including Ulverstone). The total of new loans raised during 1963–64 by the harbour trust and all the marine boards was £1,315,500, of which Hobart raised £200,000, Burnie £500,000 and Devonport £300,000.

Hobart, Launceston, Burnie and Devonport are the principal ports of Tasmania. In addition to their interstate and intra-state traffic, there is also considerable overseas 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 appointed by the State Government (President) and one each representing insurance companies, local government authorities, volunteer firemen, and permanent firemen, operates under the Fire Brigades Act, 1909–1958, and 157 fire districts had been constituted at the end of 1964. The cost of maintenance of fire brigades is borne in proportions of local councils and the Government each one-eighth, and the insurance companies three-quarters. The Board's borrowing power is limited to £1,000,000.

At 31st December, 1964, the authorized strength of the Fire Brigade throughout the fire districts of New South Wales was 421 officers and 1,296 permanent and 2,676 volunteer firemen. Corresponding figures for the Sydney Fire District were 344, 1,151 and 292. The revenue for the year 1964 was £3,769,660, made up as follows:—from the Government, £466,920; municipal and shires, £466,920; fire insurance companies and firms, £2,801,520; and from other sources, £34,300. The disbursements for the year were £3,993,456. The Board of Fire Commissioners provides the fire protection services for Canberra, in the Australian Capital Territory, and the cost of these services is reimbursed by the Commonwealth Government.

Under the Bush Fires Act, 1949–1963, a Bush Fire Fighting Fund exists from which finance is provided for the prevention and fighting of bush fires. Contributions to the Fund by the Government, councils and insurance companies are in the proportion of one quarter, one quarter and one-half, respectively. At 30th June, 1964, Volunteer Brigades equipped by means of this fund numbered 2,500 with an active membership of about 100,000 persons. The approved expenditure from the Fund for equipment, up to 30th June, 1965, amounted to £2,793,629.

2. **Victoria.**—(i) *General.* In Victoria, fire brigades are controlled by the Metropolitan Fire Brigades Board consisting of ten members, including an employees' representative, and the Country Fire Authority also consisting of ten members.

(ii) *Metropolitan Fire Brigades Board.* The Metropolitan Fire Brigades Board receives contributions from the municipalities and the insurance companies in the proportion of one-third and two-thirds respectively. On 30th June, 1964, the Board had under its control 45 stations, 1,052 permanent staff, 223 special service and clerical, etc., staff, and 13 part-time firemen. The total receipts for 1963-64 were £2,428,687, comprising contributions, £1,940,100, receipts for services, £232,564, and interest and sundries, £256,023. The expenditure was £2,348,094.

(iii) *Country Fire Authority.* This authority 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 25 fire control regions, four of which (Ballarat, Bendigo, Geelong and the Dandenong, Chelsea and Frankston areas) are wholly urban and the remainder mixed urban and rural. The Country Fire Authority receives contributions in the proportion of two-thirds from insurance companies and one-third from the Treasury. At 30th June, 1964, the Country Fire Authority Act applied to 206 insurance companies, and 205 urban and 1,040 rural fire brigades. The effective registered strength of the brigades was 109,420 members.

Income for the year 1963-64 amounted to £815,421. Total expenditure other than loan amounted to £744,626.

3. **Queensland.**—(i) *General.* Fire Districts are constituted under the Acts of 1920-1956. 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:—Treasury one-seventh, insurance companies five-sevenths, and local authorities one-seventh. The insurance companies' contribution is paid to the State Government and thence to fire brigades.

(ii) *Fire Brigade Boards.* At 30th June, 1963, there were 82 Fire Brigade Boards. The total number of stations was 147 and full-time staff numbered 865, including 20 administrative, 187 officers and 658 firemen. Volunteers numbered 77. Part-time staff numbered 1,124, including 86 administrative, 125 officers and 913 firemen. The total revenue for the year 1962-63 was £1,602,603, received mainly from the following sources:—Government £218,524, local authorities £218,524, insurance companies £1,092,622. Loan receipts (Government and other) were £343,240. The total expenditure for the year was £1,498,280, the chief items being salaries and wages £1,091,056, and interest and redemption of loans £138,594.

4. **South Australia.**—The Fire Brigades Act, 1936-1958 provides for a board of five members, and the expenses and maintenance of brigades are divided in the proportion of two-ninths by the Treasury, five-ninths by insurance companies and two-ninths by the municipalities concerned. When the Treasury proportion exceeds its statutory contribution of approximately £13,000, the excess is borne five-sevenths by insurance companies and two-sevenths by the municipalities. At 30th June, 1964, there were altogether 36 fire brigade stations, of which 12 were metropolitan and 24 country.

The strength of the permanent staff at 31st December, 1964, was 409, including 282 officers and men, 93 country auxiliary firemen and 34 other employees (including maintenance workers). The total revenue for the year 1963-64 was £582,396, including contributions of £484,632 made up as follows:—insurance companies £291,629, Treasury £76,351 and municipalities £116,652. The Treasury contribution includes an additional grant of £63,457.

5. **Western Australia.**—By the provisions of the *Fire Brigades Act, 1942-1961*, certain local government areas and parts of local government areas are constituted fire districts under the control of the Western Australian Fire Brigades Board. There were 48 fire districts at 30th September, 1964. 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 66 and 162 respectively. The brigades, throughout the State, controlled by the Western Australian Fire Brigades Board at 30th September, 1964, numbered 65, with a staff of 1,550, including 307 permanent officers and firemen and 1,243 volunteer brigade officers and firemen. The revenue for the year ended 30th September, 1964 was £718,767 and the expenditure £718,155.

Under the *Bush Fires Act, 1954-1964*, a Bush Fires Board, consisting of 13 members, 6 of whom are nominated by the Country Shire Councils 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 1,973 at 30th June, 1964, and the establishment of bush fire brigades, 857 at 30th June, 1964. Many individual brigades are large organizations with numerous self-contained sections.

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 brigade boards, while leaving the responsibility for individual control and management with the boards. The Commission consists of two persons nominated by the Minister, one person elected by the City or Municipal Councils representatives and three persons elected by the insurance representatives of the Fire Brigades Boards. Contributions towards the cost of operations are on the basis of one quarter each from the Treasury and the municipalities and one half from the insurance companies concerned. The cost for the year 1963-64 amounted to £219,856. There were, at 30th June, 1964, 23 boards controlling 36 stations, and their aggregate staffs numbered 554, including 114 permanent officers, 370 part-time firemen, including officers, and 70 volunteers.

CHAPTER XXI

PRIVATE FINANCE

NOTE.—Further information on the subjects dealt with in this chapter is contained in the annual bulletins *Banking and Currency* and *Insurance and Other Private Finance* published by this Bureau. Current information is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics* (monthly), and the monthly mimeographed statements *Australian Banking Statistics* (bulletin and preliminary statement), *Australian Savings Bank Statistics* (bulletin and preliminary statement) and *Australian Life Insurance Statistics* (bulletin). The annual mimeographed bulletin *Australian Fire, Marine and General Insurance Statistics* contains the most recent information available on this subject. Other relevant mimeographed statements are:—*Instalment Credit for Retail Sales*; *Unit Trusts, Land Trusts, and Mutual Funds*; *New Capital Raisings by Companies in Australia*; and *Capital and Maintenance Expenditure by Private Business in Australia* (quarterly); *Oversea Investment in Companies in Australia* (annual); *Survey of Private Pension and Retiring Allowance Schemes, 1961–62*; *Survey of Selected Large Private Pension Funds, 1963–64*; and *Registered Building Societies, 1962–63*. Preliminary monthly statements *Instalment Credit for Retail Sales* and preliminary estimates of New Capital Raisings and of Oversea Investment are issued also.

CURRENCY

§ 1. Decimal Currency

1. **Developments prior to Currency Act 1963.**—The Decimal Currency Committee was appointed by the Commonwealth Government in February, 1959, to investigate the advantages and disadvantages of a decimal currency; if a decimal currency was favoured, to make recommendations concerning the unit of account and denominations of subsidiary currency most appropriate for Australia and the method of introduction and the cost involved. The Committee presented its report in August, 1960, and the Summary of Conclusions and Recommendations contained therein appeared in Year Book No. 49, pages 835–7.

In April, 1963, the Government announced that, in accordance with the recommendations of the Decimal Currency Committee:

- (a) a system of decimal currency was to be introduced into Australia;
- (b) the tentative changeover date was set for February, 1966;
- (c) the new system would be based on a major unit (subsequently named the dollar) equal to the present ten shillings;
- (d) the minor unit (subsequently named the cent) of the new system would be one hundredth part of the major unit, and would thus be equal in value to 1.2d. in the existing currency system; and
- (e) no fractions of the minor unit would be introduced.

The Government also announced that it would pay reasonable compensation to owners of a large proportion of monetary machines which would require conversion in order to be used under the new decimal system.

2. **Currency Act 1963.**—The *Currency Act 1963* (No. 67 of 1963), which was assented to on the 30th October, 1963, is the first of a number of Acts necessary to give effect to the Government's decision. Briefly, the Act provides for the new currency and establishes the relationship between it and the existing system of pounds, shillings and pence, and specifies the denominations and minting and legal tender arrangements for the new decimal coins. The Act also furnishes the Treasurer with certain powers for the purpose of facilitating the transition from the existing to the decimal currency system, and establishes the Decimal Currency Board.

Those parts of the Act which establish the new currency and provide for the decimal coins and the legal tender arrangements will come into operation on a date to be proclaimed; this date, referred to as C-day, has now been set for 14th February, 1966.

The arrangements for the introduction of a decimal currency presuppose a transition period of one-and-a-half to two years following C-day. The *Currency Act 1963* does not cover the special requirements of this transition period, and further legislation will be introduced for this purpose. Among other things, it will cover the concurrent use of both currencies and the legal tender arrangements during the transition period.

Under section 29 of the *Currency Act 1963* the functions of the Decimal Currency Board are:

- (a) to make recommendations to the Treasurer on matters relating to the changeover to decimal currency and, in particular, on the compensation arrangements for monetary machines;
- (b) to exercise such powers as are authorized by the Treasurer; and
- (c) such other functions in relation to the introduction of decimal currency as the Treasurer determines.

Recommendations already made to the Treasurer, and subsequently incorporated into Government policy, concern particularly assistance to owners of monetary machines. The Board has also, following consultation with the Treasurer, issued advice and guidance on such matters as conversion tables and notation in decimal currency.

3. **Commonwealth Assistance.**—In accordance with the Government's original decision, assistance will be made available to owners of a large proportion of those monetary machines which require conversion or adaptation for decimal currency operation. The Government has already announced the machines which will qualify. These are: cash registers, adding machines, accounting machines, punched card tabulators and electronic computers, price-computing scales, price-computing fabric measuring machines, postal franking machines and electric petrol pump computers. For some, the assistance will take the form of conversion to decimal operation at Government expense as part of a conversion programme planned and supervised by the Decimal Currency Board; for others, it will take the form of a payment of cash compensation to the machine owner.

Most policy decisions on Government assistance have been taken, and the categories of machines which will be eligible for Government assistance have been decided. Detailed arrangements for most machines had either been announced by May, 1965, or were being settled.

The Government will not provide assistance in respect of changeover expenditure other than that involved in the conversion of monetary machines.

4. **Conversion of £ s. d. amounts to Dollars and Cents.**—Part II of the *Currency Act 1963* establishes the relationship between the present and the proposed currencies, and therefore provides the basis for conversion of amounts of £ s. d. to dollars and cents.

Although the pound converts exactly to two dollars and the shilling to ten cents, conversion problems can arise because there is a difference in value between the minor units (the penny and the cent) in the two currency systems. Part II of the Act provides the equivalents of £ s. d. currency in dollars and cents and set out certain circumstances in which an exact conversion must be made.

Part II also provides the following whole-cent conversion of amounts of pence:

Pence	Whole cents
1	1
2	2
3	2
4	3
5	4
6	5
7	6
8	7
9	8
10	8
11	9

Under the *Currency Act 1963*, this whole-cent conversion has the force of law where an amount of £ s. d., payable before C-day, is paid in dollars and cents after C-day. Other circumstances in which whole-cent conversions might be used will be covered by the supplementary legislation for the transition period.

Using the relationships established in the *Currency Act 1963*, the Decimal Currency Board has published three conversion tables:

- (a) an Exact Equivalents Table;
- (b) a Banking and Accounting Table; and
- (c) a Comprehensive Conversion Table.

The Exact Equivalents Table converts amounts of £ s. d. to their exact values in dollars and cents. This table is for use wherever it is necessary to obtain the exact equivalent of an amount of £ s. d. in the new currency.

The Banking and Accounting Table converts amounts of £ s. d. to the nearest whole-cent. This table would be used where it is practicable only to convert to whole-cents. The Comprehensive Conversion Table converts amounts ending in halfpence to the nearest whole-cent.

Neither of the Board's whole-cent conversion tables are in any sense designed to give direction as to how prices in £ s. d. should be converted to dollars and cents. The Board has no authority to fix prices or other charges.

5. Notation in Decimal Currency.—The Board has made certain recommendations on the method of writing amounts in decimal currency.

It is not considered practicable to prescribe, for all purposes, exact symbols for dollars and cents, or precise methods of expressing dollars and cents in words or figures. Considerable latitude is to be allowed to the public in this area, just as at present, in this and other countries, there are several acceptable methods by which amounts of money may be expressed.

The main requirements are that the methods should be unambiguous and, in the case of cheques and other similar instruments, that the figures should be difficult to alter fraudulently. Also the symbols chosen to express dollars and cents should involve the minimum change to existing printing and other equipment.

Guiding rules on the expression of monetary amounts in Australian decimal currency have been issued by the Board. The most important recommendations are:

- (a) the symbol for the dollar is \$—a capital S with two vertical strokes; acceptable alternatives may be used, for example, an S crossed by one vertical stroke;
- (b) the symbol for the cent is a small letter c; again acceptable alternatives may be used, for example, a c with a stroke through it or some stylized version of the c;
- (c) where it is necessary to distinguish the Australian dollar from overseas currencies, the letter A should be placed immediately after the dollar sign—\$A;
- (d) when using the dollar symbol and writing amounts of cents only, a nought should be placed between the symbol and the decimal point (for example, \$0.25);
- (e) when using the dollar symbol and writing amounts involving cents, there should always be two figures (where necessary, one of them a nought) following the decimal point (for example, \$26.09); and
- (f) in line with a strong preference expressed by the Australian banks, a hyphen should be used, instead of a decimal point, to separate the figures for dollars and cents in an amount hand-written on a cheque (for example, \$26-09).

6. Public Education Campaign.—Since decimal currency will affect all members of the community of school age and above, there is need for a wide and penetrating public education programme. This has been seen from the outset as one of the Decimal Currency Board's principal functions, and the Treasurer made special reference to it when announcing the appointment of the Board.

The Board has plans for a comprehensive publicity programme. All the main media—television, radio, press and delivery, by the Post Office, of an explanatory brochure to every household in Australia—will be used. This programme will ensure that information on the new currency and the changeover arrangements will be available to all who require it.

§ 2. The Present Australian Monetary System

The Australian monetary system (to 13th February, 1966) is based on the British system, of which the unit is the pound (£) 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 $1\frac{1}{12}$ 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.

§ 3. Australian Coinage

1. **Powers under Constitution.**—The Constitution in 1901 gave the Commonwealth Parliament power to make laws with respect to coinage and in 1909 the Coinage Act was passed prescribing the standard weight and fineness of coins. The first coins exclusively for circulation in Australia—silver (925 fine) florins, shillings, sixpences and three pences—were minted in 1910, by the Royal Mint, London, followed by bronze coins in 1911. The Melbourne Branch of the Royal Mint produced in 1916 the first Commonwealth coins (pence) minted in Australia. The Sydney Branch of the Royal Mint commenced production of halfpennies in 1919 and in 1922 the Perth Branch minted its first pennies.

2. **Pre-Federation Coinage.**—Prior to Federation, the coins circulating throughout Australia were many and varied. On 19th November, 1800, a Proclamation in the following terms was issued by Governor King.

“Whereas representations of the Want of small Money experienced here have induced His Majesty to take into His gracious Consideration, the immediate Relief from this great inconvenience to all classes of His Subjects in this Colony; a quantity of Copper Coin has been received in His Majesty's Armed Vessel Porpoise, and will be circulated by being paid for Grain, and Animal Food supplied His Majesty's Stores.

These are therefore to Give Notice, That, a Copper Coin weighing one English Ounce, and stamped with the Profile of His Majesty on the one side, and of Britannia on the other, will be issued as above, at the rate of Two pence for each Copper; and that the same shall pass current in the Colony; and is to circulate at the aforesaid rate of Two pence.

And, that no one may plead ignorance of the rate of legality of this, or any other of the Coins circulated in this Colony, of which it does not appear that any regular Proclamation has ever collectively been issued, I have judged it most expedient herewith to publish the following Table of all the Specie legally circulating in this Colony, with the rates affixed to each, of which they shall be considered and be a legal Tender, in all payments or Transactions in this Colony.

Table of Specie

	£	s.	d.
A Guinea	1	2	0
A Johanna	4	0	0
An Half Johanna	2	0	0
A Ducat		9	6
A Gold Mohur	1	17	6
A Pagoda		8	0
A Spanish Dollar		5	0
A Rupee		2	6
A Dutch Guilder		2	0
An English Shilling		1	1
A Copper Coin of One Ounce			2

When a sufficient quantity of Copper Coin is received in the Colony, of which Notice will be given, no private Notes or Cards will be allowed to circulate.

This supply of Copper having been sent to relieve the inconvenience of Persons requiring to make small payments; No persons are to collect the same for the purpose of making large payments; Nor shall it be deemed a legal Tender to offer the same in payment for any Sum exceeding Five pounds.

And it is hereby declared, that the exportation or importation except from His Majesty's Treasury, of any sum in Copper exceeding five pounds, shall be punished by Fine of Treble the Value, and forfeiture of the sum exported or imported."

On 3rd July, 1813, the following Proclamation by Governor Macquarie appeared in The Sydney Gazette.

"Whereas it has been deemed expedient to send a Quantity of Dollars to this Colony, for the purpose of assisting and improving the Circulating Medium thereof, to be issued in such Manner, for such Value, and under such Regulations as in the Discretion of HIS EXCELLENCY the GOVERNOR will be best calculated to effect the above-mentioned Purposes:

And whereas HIS EXCELLENCY the GOVERNOR hath therefore thought proper to direct that a small circular Piece of Silver shall be struck out of the centre of every such Dollar, which, together with the remaining Part of every such Dollar, is intended to be issued and circulated at the Value and under the Regulations herein after described; And whereas such Directions are now carrying into effect, and such Silver Money will shortly be ready for Issue: It is therefore hereby ordered and directed, that each and every such small circular Piece of Silver, on one Side of which is impressed the Figure of a Crown, with the Words "New South Wales", above such Impression, and the Figures "1813" beneath the same, and on the other or reverse Side thereof are impressed the Words "Fifteen Pence", and having the Edges thereof grained, shall be Current within this Territory for the Sum of Fifteen Pence of lawful Money of the United Kingdom of Great Britain and Ireland, of English Value and Currency.

And it is hereby, and by the Authority aforesaid, further ordered and directed, that every such larger Piece of Silver, being the remaining Part of every such Dollar, on the upper Part of one Side of which are impressed at its inner Rim the Words "Five Shillings", and at the lower Part of the said Rim, on the same Side, is also impressed the Figure of a Branch of Laurel, and on the reverse Side of which, at the upper Part of the said inner Rim, are impressed the Words "New South Wales", and at the lower Part of the same Rim, the Figures "1813", the Edges of the said inner Rim being grained on both Sides, shall be current within this Territory, and every Part thereof, for the Sum of Five Shillings and lawful Money of the United Kingdom of Great Britain and Ireland, of English Value and Currency."

These two coins, which were to become known as 'holey dollars' and 'dumps', continued to be legal tender, together with later importations of dollars. However, they were reduced in value after 1822, to three-quarter and quarter dollars respectively. The volume of Spanish dollars in the Colony continued to grow until, by 1822, dollars valued at five shillings each were being used extensively for cash transactions and accounting, and there was considerable local agitation for the adoption of the dollar as the official currency.

Meanwhile, in 1825, the British Government issued an Order-in-Council with the objective of bringing the dual-currency to an end and of insisting on the sole use of English currency in the Colony. The adoption of sterling nomenclature and of English coins proceeded gradually and special efforts were made to assure an adequate supply of the official coins. These were imported in sufficient quantity to have displaced dollars and other foreign coins by the 1830's (in Tasmania by the 1840's) and from then on English gold, silver and bronze coins, including gold sovereigns and half-sovereigns minted in Australia after 1855, were in use as the official currency until early in the present century.

3. Post-Federation Coinage.—After Federation in 1901 the only coins which were legal tender within Australia until 1909 were English coins.

The Commonwealth Treasury administers the Coinage Act and all coins produced under authority of that Act have been ordered by the Treasury, mainly from the Royal Mint, London, and its Branches in Melbourne, Sydney and Perth, but some orders were filled by Mints in the United States of America and in India. A total of some 2,600 million coins were issued, of which it is estimated that at least 1,500 million are still in circulation.

In 1946 the silver content of Australian coins was changed to 500 fine from 925 fine and over the years the pre-1946 coins, other than threepences, have been gradually withdrawn for melting down. It is now fairly rare to see silver coins, other than threepences, bearing dates earlier than 1946 in circulation.

4. Royal Mint Branches in Australia.—The first Royal Mint Branch in Australia was opened in Sydney in 1855. Branches were also opened in Melbourne in 1872, and in Perth in 1899. (See also pp. 815–6.) Established in the three main gold-producing colonies to refine and assay gold, the Branches were soon also minting sovereigns and half-sovereigns for the British Government. The Commonwealth Government exercised no control over the operations of these mints. Its role has been that of a commercial customer concerned with the quality and cost of the coin produced to its orders.

5. Royal Australian Mint, Canberra.—The construction of the Royal Australian Mint in Canberra provided the Commonwealth Government for the first time with facilities for minting its own coinage. The opening, of the Mint on 22nd February, 1965, by His Royal Highness the Duke of Edinburgh, began a new era in Australia's history.

Construction of the Administrative Building commenced in February, 1963. It is a long wing of two floors and a basement and houses the Controller of the Mint and his administrative staff, extensive modern laboratories, the engraving section and the coin museum. It is faced with white sandstone and marble; terrazzo columns from ground to roof line support the wide eaves.

The massive Process Building is 100 yards square; it is faced with black basalt and white sandstone and, together with other areas, is floodlit at night. The coinage metals move anti-clockwise through the various processes: make-up of alloys, melting, rolling, annealing, blanking, burnishing, coining and packaging for issue. Production is 300 million coins yearly on the basis of one eight-hour shift daily. The Mint will produce only decimal coins which will be stored for issue on the changeover to decimal currency in February, 1966.

The total cost of the project was around £4,500,000 which includes machinery and equipment costing £2,000,000.

§ 4. Pre-decimal Coinage

1. Coins in Circulation.—Brief historical notes relating to the Australian pre-decimal coinage are given in Year Book No. 37, pages 557 and 558. For weight, metal, composition, etc., of Australian pre-decimal coins in circulation see Year Book No. 39, page 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, 1917 and 1918 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 from 1940 to the present time.

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, 1964, are as follows:—Melbourne, £57,726,000; Perth, £2,261,000; Sydney, £488,000; United Kingdom Mints, £3,016,000; United States Mints, £6,000,000; Indian Mints, £169,000; total, £69,660,000.

2. **Net Issues of Australian Coins.**—The net issues of Australian silver and bronze coins from 1910 to 30th June, 1964, were:—Crown (5s.), £276,000; Florin (2s.), £23,625,000; Shilling (1s.), £10,770,000; Sixpence (6d.), £7,278,000; Threepence (3d.), £7,371,000; total silver coin, £49,261,000; Penny (1d.), £3,206,000; Half-penny (½d.), £883,000; total bronze coin, £4,089,000. Except in the total, no allowance has been made for £59,000 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 1959-60 to 1963-64.

AUSTRALIAN SILVER AND BRONZE COINS: PROFITS FROM ISSUE
(£)

Year	Face value of coin issued (a)	Cost of bullion	Gross profit	Cost of minting and sundry charges	Net profit
SILVER COIN					
1959-60	2,157,682	1,505,128	652,554	182,558	469,996
1960-61	2,262,622	1,591,878	670,744	258,002	412,742
1961-62	3,672,543	2,658,758	1,013,785	267,921	745,864
1962-63	2,757,600	2,268,179	489,421	262,753	226,668
1963-64	2,095,545	2,071,214	24,331	167,712	— 143,381
BRONZE COIN					
1959-60	121,354	87,422	33,932	88,988	— 55,056
1960-61	145,125	110,101	35,024	126,598	— 91,574
1961-62	143,289	101,810	41,479	197,939	— 156,460
1962-63	170,105	120,860	49,245	170,039	— 120,794
1963-64	433,796	305,318	128,478	341,302	— 212,824
TOTAL					
1959-60	2,279,036	1,592,550	686,486	271,546	414,940
1960-61	2,407,747	1,701,979	705,768	384,600	321,168
1961-62	3,815,832	2,760,568	1,055,264	465,860	589,404
1962-63	2,927,705	2,389,039	538,666	432,792	105,874
1963-64	2,529,341	2,376,532	152,809	509,014	— 356,205

(a) Includes selected and proof pieces.

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.

A new mint, the Royal Australian Mint, has been built in Canberra. It will be engaged in the production of coins of the new decimal currency (*see pp. 809-11*).

(ii) *Gold Receipts and Issues.* (a) *Receipts.* The receipts of gold at Australian mints during 1963 and 1964 amounted to 909,993 and 809,468 fine ounces respectively (Melbourne, 110,960 and 69,197 fine ounces respectively, Perth, 799,033 and 740,271 fine ounces respectively).

(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 Reserve Bank, and the export and use of gold have 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. The issues from Australian mints during 1963 and 1964 amounted to 910,377 and 813,075 fine ounces respectively (Melbourne, 111,035 and 72,606 fine ounces respectively, Perth, 799,342 and 740,469 fine ounces respectively).

5. *Price of Gold.*—The following table shows the average prices of gold, the average values of the sovereign's gold content in London, and the sovereign's Reserve Bank buying price in Australia for the years 1959-60 to 1963-64. The average price of gold in Australia is based on the Reserve Bank's buying price for gold lodged with the mints.

PRICE OF GOLD: LONDON AND AUSTRALIA

Period	London		Australia		
	Average price per fine oz.	Average value of sovereign's gold content	Average price per fine oz.	Sovereign	
				Reserve Bank buying price	Equivalent to a premium on mint par value of—
	£Stg. s. d.	£Stg. s. d.	£A. s. d.	£A. s. d.	%
1959-60.. ..	12 10 3	2 18 11	15 12 6	3 12 6	267.8
1960-61.. ..	12 11 9	2 19 3	15 12 6	3 12 6	267.8
1961-62.. ..	12 10 1	2 18 10	15 12 6	3 12 6	267.8
1962-63.. ..	12 10 6	2 19 0	15 12 6	3 12 6	267.8
1963-64.. ..	12 10 9	2 19 1	15 12 6	3 12 6	267.8

In December, 1951, arrangements were made whereby producers could sell a proportion of newly-mined gold for industrial purposes on overseas premium markets. Under these arrangements, gold is acquired by the Reserve 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 Reserve 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 ($\frac{17}{12}$ ths).

The average prices per fine ounce in Australian currency obtained for gold exported under this scheme for each month during 1963-64 for which there were sales were:—July and August, £15 13s. 0½d.; September and November, £15 13s. 1½d.; October, £15 13s. 2d.; December, £15 13s. 4½d.; January and March, £15 13s. 3½d.; February, £15 13s. 2½d.; May, £15 13s. 3½d.; and June, £15 13s. 3d.

§ 5. Pre-decimal Notes System

1. **General.**—Brief historical notes relating to the circulation and issue of notes in Australia are given in Year Book No. 37, pages 561 and 562. The issue of notes intended for circulation as money other than by the Reserve Bank of Australia is prohibited.

2. **The Australian Note Issue.**—(i) *General.* Notes in circulation in Australia are issued by the Reserve 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 Reserve 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. Under the *Reserve Bank Act 1959*, the profits of the Note Issue Department are paid to the Commonwealth.

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 1959–60 to 1963–64 are given in the following table.

AUSTRALIAN NOTE ISSUE (£'000)

Denomination	Average of monthly statements(a) for year—				
	1959–60	1960–61	1961–62	1962–63	1963–64
10s.	11,919	12,236	12,526	13,088	13,608
£1	69,638	69,983	69,298	70,259	70,911
£5	186,144	192,789	192,392	197,196	198,240
£10	146,393	152,302	153,613	157,878	156,547
£20	3	2	2	2	2
£50	34	32	30	30	28
£100	38	37	36	34	31
£1,000	2,330	2,856	3,511	3,110	2,996
<i>Held by Banks</i>	53,084	57,111	59,695	62,480	65,549
<i>Held by Public</i>	363,415	373,126	371,713	379,117	376,814
Total	416,499	430,237	431,408	441,597	442,363

(a) Last Wednesday in month.

(iii) *Reserve Bank—Note Issue Department.* The following statement shows particulars of liabilities and assets of the Note Issue Department of the Reserve Bank as at 30th June, 1963 and 1964.

RESERVE BANK OF AUSTRALIA: NOTE ISSUE DEPARTMENT— LIABILITIES AND ASSETS, 30th JUNE (£'000)

Liabilities	1963	1964	Assets	1963	1964
Notes on issue(a) ..	430,155	428,042	Gold and balances held abroad (including money at short call)	250,024	273,110
Special reserve— Premium on gold sold ..	4,755	4,755	Other overseas securities ..	15,946	38,545
Other liabilities(a) ..	10,456	10,569	Government securities (including Commonwealth Treasury bills)	179,353	131,661
			Other assets ..	43	50
Total	445,366	443,366	Total	445,366	443,366

(a) Notes of a denomination not exceeding one pound which have been on issue for more than 20 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 1963–64 the net profits of the Note Issue Department amounted to £13,491,000 and were paid to the Commonwealth of Australia.

BANKING

§ 1. General

1. **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 interests 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 Year Book No. 31, page 1010.

2. **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 as follows.

(a) The *Reserve Bank Act* 1959, which provides for the constitution and management of the Reserve Bank of Australia and the management of the Australian note issue.

(b) The *Banking Act* 1959, which provides for the regulation of banking and for the protection of the currency and the public credit of the Commonwealth. This Act which replaced the *Banking Act* 1945–1953, was assented to on 23rd April, 1959, and came into operation on 14th January, 1960. It applies to all banks, including savings banks, operating in Australia or the Territories of the Commonwealth except State banks trading in their own State. 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 Reserve 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. 46, pages 759–60.

(c) The *Commonwealth Banks Act* 1959–1961, which provides for the constitution and management of the Commonwealth Banking Corporation, Commonwealth Trading Bank of Australia, Commonwealth Savings Bank of Australia and Commonwealth Development Bank of Australia.

The Commonwealth Banking Corporation came into being on the 14th January, 1960. It is the controlling body for the Commonwealth Trading Bank, Commonwealth Savings Bank and Commonwealth Development Bank. Under the *Banking Act* 1959, the Corporation and its constituent banks are subject to the same central banking controls as are the private trading banks.

The Board of the Corporation consists of the Managing Director of the Corporation, the Deputy Managing Director, the Secretary to the Treasury and eight other members appointed by the Governor-General of whom one is Chairman and another Deputy Chairman. In addition, there is an Executive Committee of the Board for each of the three separate banks. These Executive Committees are appointed by the Treasurer, after consultation with the Board, and are charged with taking such action as is necessary to ensure that effect is given by the respective banks to the policies laid down for them and to any directions given by the Board in relation to their affairs. Under the Board, the Corporation is managed by the Managing Director and the Deputy Managing Director. Each of the three constituent banks of the Corporation has its own statutory functions and responsibilities and its separate identity within the framework of the Corporation. Each bank is managed by a General Manager under the Managing Director of the Corporation.

In §3, pages 823–4, details are given of the assets and liabilities of the Commonwealth Development Bank. Details for the Commonwealth Savings Bank are shown in §5, pages 846–51. Details for the Commonwealth Trading Bank are included in statistics of all cheque-paying banks—Major Trading Banks, §4 of this division, pages 824–45.

(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. State Savings Banks, constituted under State Acts, transacting savings bank business, are The State Savings Bank of Victoria and The Savings Bank of South Australia (*see* §5, pp. 845-55).

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 the following four groups and a separate series is presented for each.

- (i) *The Reserve Bank of Australia.* Formerly the Commonwealth Bank, this bank is the Central Bank. It also provides special banking facilities through the Rural Credits Department. Statistics of the Central Banking Business, the Note Issue Department, and the Rural Credits Department are shown separately (*see* §2, pp. 819-23).
- (ii) *The Commonwealth Development Bank of Australia.* This bank, which commenced operations on 14th January, 1960, under the control of the Commonwealth Banking Corporation, was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Its prime purpose is to assist in the development of worthwhile enterprises in the field of both primary and secondary industries which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. (*See* §3, pp. 823-4.)
- (iii) *Cheque-paying Banks.* (a) *Major Trading Banks.* These comprise the Commonwealth Trading Bank, Australia and New Zealand Bank Ltd., the Bank of Adelaide, 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., The National Bank of Australasia Ltd. (*See* §4., paras. 1 and 2, pp. 824-9.)

(b) *All Cheque-paying Banks.* These comprise the major trading banks and the following banks—The Bank of China, Bank of New Zealand, The Brisbane Permanent Building and Banking Co. Ltd., Comptoir National d'Escompte de Paris, The General Bank Department of the Rural Bank of New South Wales, the General Banking Department of the State Bank of South Australia and the Rural Department of the Rural and Industries Bank of Western Australia. (*See* §4., para. 3, pp. 830-1.)

“Australian cheque-paying banks” (*see* §4, para. 2, pp. 825-9) comprises the banks in groups (a) above and those in group (b) *except* The Bank of China, Bank of New Zealand and Comptoir National d'Escompte de Paris.

- (iv) *Savings Banks.* Savings banks operating at 30th June, 1964, were—the Commonwealth Savings Bank, the Australian and New Zealand Savings Bank Ltd., the Bank of New South Wales Savings Bank Ltd. and the National Bank Savings Bank Ltd., (in all States and Territories within and without Australia), The Bank of Adelaide Savings Bank Ltd. (all States except Tasmania), The Commercial Savings Bank of Australia Ltd. and the E.S. and A. Savings Bank Ltd. (in all States and Territories within Australia), the C.B.C. Savings Bank Ltd. (in all States and in the Australian Capital Territory), The State Savings Bank of Victoria, The Savings Bank of South Australia, the Savings Bank Division of The Rural and Industries Bank of Western Australia, and the two trustee banks, The Hobart Savings Bank and Launceston Bank for Savings. (*See* §5, pp. 845-55.)

§ 2. The Reserve Bank of Australia

1. **General.**—The Reserve Bank of Australia, established under the *Reserve Bank Act* 1959, which came into operation on 14th January, 1960, continued in existence the body corporate known as the Commonwealth Bank of Australia. An account of the progress and development of that bank is given in earlier issues of the Year Book (*see* No. 37, pp. 570-2, and No. 45, pp. 735-7).

The general functions of the Reserve Bank are set out in Section 10 of the *Reserve Bank Act 1959*, which states:—

“ It is the duty of the Board, within the limits of its powers, to ensure that the monetary and banking policy of the Bank is directed to the greatest advantage of the people of Australia and that the powers of the Bank under this Act, the *Banking Act 1959*, and regulations under that Act are exercised in such a manner as, in the opinion of the Board, 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, provides special banking facilities through the Rural Credits Department, and acts as banker to the Commonwealth and some of the States.

Prior to its reconstitution as the Reserve Bank, the Commonwealth Bank also provided general banking facilities through a General Banking Division up to 3rd December, 1953, when that business was taken over by the Commonwealth Trading Bank, and special banking facilities through the Mortgage Bank and Industrial Finance Departments. In addition, the Board of the Commonwealth Bank was responsible for the policy and administration of the Commonwealth Trading Bank and Commonwealth Savings Bank. On 14th January, 1960, on its reconstitution as the Reserve Bank, the Mortgage Bank and Industrial Finance Departments were amalgamated to form the Commonwealth Development Bank, and that institution, together with the Commonwealth Trading Bank and the Commonwealth Savings Bank, was placed under the control of the Commonwealth Banking Corporation, an organization established under the *Commonwealth Banks Act 1959* and entirely separate from the Reserve Bank.

2. Management.—The Commonwealth Bank was managed between 1911 and 1924 by a Governor, from 1924 to August, 1945, by a Board of Directors, from August, 1945, to August, 1951, by a Governor, assisted by an Advisory Council, and since August, 1951, by a Board of Directors.

Under the provisions of the *Reserve Bank Act 1959* the policy of the Reserve Bank is determined by a 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 Board and with any directions of the Board. The Bank is required to inform the Government of the monetary and banking policy of the Board. In the event 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.

3. 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 gradually assumed the functions of a Central Bank. Part III. of the *Commonwealth Bank Act 1945* formally constituted the Bank as a Central Bank and granted the necessary powers to carry on the business of a Central Bank, and these powers were carried through into the present Act constituting the Reserve Bank. Under the provisions of the *Reserve Bank Act 1959*, the capital for the Central Banking Business is the capital of the Commonwealth Bank for Central Banking purposes immediately prior to 14th January, 1960, and such other sums as are transferred from the Reserve Bank Reserve Fund. The profits of the Bank are distributed as follows: (a) such sums as the Treasurer, after consultation with the Bank, determines shall be placed to the credit of the Reserve Bank Reserve Fund and (b) the remainder shall be paid to the Commonwealth.

4. Note Issue Department.—The Note Issue Department, established in 1920 when the control of the Australian note issue was transferred from the Commonwealth Treasury to the Commonwealth Bank, was maintained in the same form under the *Reserve Bank Act 1959*. The Reserve Bank may, through this Department, issue, re-issue and cancel Australian notes. Under the *Reserve Bank Act 1959* the profits of the Note Issue Department are paid to the Commonwealth.

5. **Rural Credits Department.** The Rural Credits Department, established in 1925 for the purpose of making short-term credit available for the orderly marketing of primary produce, was continued in the same form under the *Reserve Bank Act 1959*. The Reserve 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 a State or Territory of the Commonwealth or other bodies specified by proclamation. The period of the advance shall not exceed one year. Under the provisions of the *Reserve Bank Act 1959*, the capital of the Rural Credits Department is the capital of the Rural Credits Department of the Commonwealth Bank immediately prior to 14th January, 1960, and £2,000,000 provided by the Reserve Bank. The profits of the Rural Credits Department are dealt with as follows: (a) one half shall be placed to the credit of the Rural Credits Department Reserve Fund and (b) one half shall be placed to the credit of the Rural Credits Development Fund.

6. **Liabilities and Assets—All Departments.** Liabilities and assets of each Department of the Reserve Bank at 30th June, 1960 to 1964, are shown in the following table.

RESERVE BANK OF AUSTRALIA: LIABILITIES

(£'000)

30th June—	Capital and reserve funds	Develop- ment fund	Special reserve— premium on gold sold	Australian notes on issue	Deposits of trading banks		Other depo- sits, bills payable and other liabilities	Total
					Statutory reserve deposit accounts	Other		

CENTRAL BANKING BUSINESS

1960 ..	18,562	..	..	..	303,125	33,133	270,207	625,027
1961 ..	21,915	..	..	..	233,053	38,989	360,667	654,624
1962 ..	24,101	..	..	..	193,943	87,516	317,868	623,428
1963 ..	25,777	..	..	..	222,608	51,463	351,011	650,859
1964 ..	28,268	..	..	..	338,149	50,907	380,080	797,404

NOTE ISSUE DEPARTMENT

1960 ..	..	..	4,755	419,112	..	..	9,683	433,550
1961 ..	..	..	4,755	415,783	..	..	10,328	430,866
1962 ..	..	..	4,755	424,223	..	..	10,389	439,367
1963 ..	..	..	4,755	430,155	..	..	10,456	445,366
1964 ..	..	..	4,755	428,042	..	..	10,569	443,366

RURAL CREDITS DEPARTMENT

1960 ..	6,205	201	..	..	..	..	68,742	75,148
1961 ..	6,422	246	..	..	..	..	75,525	82,193
1962 ..	6,657	261	..	..	..	..	52,586	59,504
1963 ..	6,879	268	..	..	..	..	98,136	105,283
1964 ..	7,125	291	..	..	..	..	58,042	65,458

TOTAL(a)

1960 ..	24,767	201	4,755	419,112	303,125	33,133	285,059	1,070,152
1961 ..	28,337	246	4,755	415,783	233,053	38,989	376,159	1,097,322
1962 ..	30,758	261	4,755	424,223	193,943	87,516	336,052	1,077,508
1963 ..	32,656	268	4,755	430,155	222,608	51,463	366,966	1,108,871
1964 ..	35,393	291	4,755	428,042	338,149	50,907	396,944	1,254,481

(a) Inter-departmental accounts have been offset.

RESERVE BANK OF AUSTRALIA: ASSETS
(£'000)

30th June—	Gold and balances held abroad (including money at short call)	Other overseas securities	Australian notes, coin	Australian Government securities (including Treasury bills and Treasury notes(a))	Loans, advances, bills dis- counted, and other assets(b)	Bills receivable and remittances in transit	All other assets	Total
CENTRAL BANKING BUSINESS								
1960 ..	245,450	24,948	3,096	257,942	81,066	8,040	4,485	625,027
1961 ..	289,171	17,956	4,123	248,906	75,849	13,468	5,151	654,624
1962 ..	273,566	18,871	5,703	261,516	50,667	7,772	5,333	623,428
1963 ..	296,328	17,761	6,997	215,819	101,794	4,894	7,266	650,859
1964 ..	433,047	61,279	6,352	205,818	65,776	14,822	10,310	797,404
NOTE ISSUE DEPARTMENT								
1960 ..	198,457	19,991	..	215,042	60	..	..	433,550
1961 ..	175,379	15,997	..	239,431	59	..	..	430,866
1962 ..	221,360	14,995	..	202,963	49	..	..	439,367
1963 ..	250,024	15,946	..	179,353	43	..	..	445,366
1964 ..	273,110	38,545	..	131,661	50	..	..	443,366
RURAL CREDITS DEPARTMENT								
1960 ..	..	..	..	..	75,148	..	..	75,148
1961 ..	..	..	..	..	82,193	..	..	82,193
1962 ..	..	..	..	..	59,504	..	..	59,504
1963 ..	..	..	..	..	105,283	..	..	105,283
1964 ..	..	..	..	..	65,458	..	..	65,458
TOTAL(c)								
1960 ..	443,907	44,939	3,096	472,984	92,701	8,040	4,485	1,070,152
1961 ..	464,550	33,953	4,123	488,337	87,740	13,468	5,151	1,097,322
1962 ..	494,926	33,866	5,703	464,479	65,429	7,772	5,333	1,077,508
1963 ..	546,352	33,707	6,997	395,172	114,483	4,894	7,266	1,108,871
1964 ..	706,157	99,824	6,352	337,479	79,537	14,822	10,310	1,254,481

(a) Prior to July, 1962, Treasury bills and seasonal securities, the latter securities being replaced by Treasury notes. (b) After deducting provision for debts considered bad or doubtful. (c) Inter-departmental accounts have been offset.

7. Profits.—Net profits of the various Departments of the Reserve Bank for the years ended 30th June, 1960 to 1964, were as follows.

RESERVE BANK OF AUSTRALIA(a): NET PROFITS
(£'000)

Year	Central Banking Business	Note Issue Depart- ment	Rural Credits Depart- ment	Total
1959-60 ..	..	..	..	..
1960-61 ..	5,381	10,516	322	16,219
1961-62 ..	6,705	12,930	434	20,069
1962-63 ..	6,673	15,751	469	22,893
1963-64 ..	3,351	12,781	444	16,576
1964-64 ..	4,983	13,491	493	18,967

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia.

The distribution of these profits for the years ended 30th June, 1960 to 1964, is given in the following table.

RESERVE BANK OF AUSTRALIA(a): DISTRIBUTION OF PROFITS
(£'000)

Year	Total net profits	Distributed to—			
		Commonwealth of Australia	Reserve Bank Reserve fund	Rural Credits Department	
				Reserve fund	Development fund
1959-60	16,219	13,206	2,691	161	161
1960-61	20,069	16,283	3,352	217	217
1961-62	22,893	20,238	2,186	235	234
1962-63	16,576	14,456	1,676	222	222
1963-64	18,967	15,983	2,491	247	246

(a) Prior to 14th January, 1960, Commonwealth Bank of Australia.

§ 3. The Commonwealth Development Bank of Australia

1. *General.*—The Commonwealth Development Bank of Australia was established by the *Commonwealth Banks Act* 1959 and commenced operations on 14th January, 1960. It was formed basically from an amalgamation of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank. Under the Act the Bank is authorized to provide assistance for the development of worthwhile enterprises in the fields of primary and secondary industries which would otherwise be unable to obtain the necessary finance on reasonable and suitable terms and conditions. The Commonwealth Development Bank is managed by a *General Manager under the Managing Director of the Commonwealth Banking Corporation*, and its policy is determined by the Board of that Corporation. The capital of the Development Bank consists of the capital of the Mortgage Bank and Industrial Finance Departments of the Commonwealth Bank immediately prior to 14th January, 1960, £5,000,000 provided by the Reserve Bank, £10,000,000 provided by the Commonwealth Government in the 1961-62 Budget and £5,000,000 in the 1963-64 Budget, and such other sums as are provided from the Commonwealth Development Bank Reserve Fund. The net profits of the Bank are paid to the Commonwealth Development Bank Reserve Fund.

2. *Liabilities and Assets.*—The liabilities and assets of the Commonwealth Development Bank at 30th June, 1960 to 1964, are shown in the following tables.

COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA(a): LIABILITIES
(£'000)

30th June—	Capital	Reserve fund	Balances due to other banks	Deposits, bills payable and all other liabilities	Total liabilities
1960	15,857	5,262	15,758	7,716	44,593
1961	15,857	5,873	15,120	8,349	45,199
1962	25,857	6,557	14,561	9,232	56,207
1963	25,857	7,448	14,085	10,091	57,481
1964	30,857	8,416	13,598	11,453	64,324

(a) Prior to 14th January, 1960, Industrial Finance and Mortgage Bank Departments of Commonwealth Bank.

**COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA(a): ASSETS
(£'000)**

30th June—	Coin, bullion, notes and cash at bankers	Australian public securities (including Treasury bills)	Other securities	Loans to authorized dealers in the short-term money market	Cheques and bills of other banks	Loans, advances and bills discounted	All other assets	Total assets
1960 ..	558	9,639	422	100	147	33,579	148	44,593
1961 ..	491	4,339	411	200	208	39,438	112	45,199
1962 ..	370	6,406	325	500	299	48,141	166	56,207
1963 ..	401	2,643	217	200	415	53,451	154	57,481
1964 ..	321	1,502	187	..	438	61,691	185	64,324

(a) Prior to 14th January, 1960, Industrial Finance and Mortgage Bank Departments of Commonwealth Bank.

3. **Profit and Loss.**—The profit and loss of the Commonwealth Development Bank for the years ended 30th June, 1960 to 1964, is shown in the following table. The net profit was appropriated to the Commonwealth Development Bank Reserve Fund.

**COMMONWEALTH DEVELOPMENT BANK OF AUSTRALIA(a):
PROFIT AND LOSS
(£'000)**

Year—	Discount and interest earned, net exchange commissions and other items (including transfers from contingencies accounts(b))	Expenses(c)	Taxes and payments in lieu of taxes	Net profit(d)	Total
1959-60	2,066	1,473	11	582	2,066
1960-61	2,277	1,651	15	611	2,277
1961-62	2,616	1,913	19	684	2,616
1962-63	2,808	1,897	20	891	2,808
1963-64	3,063	2,072	23	968	3,063

(a) Prior to 14th January, 1960, Industrial Finance and Mortgage Bank Departments of Commonwealth Bank. (b) After deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets and losses on realization of assets and transfers to the credit of contingencies accounts (out of which accounts provision for all bad and doubtful debts has been made). (c) Includes proportion of expenses of Commonwealth Banking Corporation attributable to the Development Bank. (d) Appropriated to Commonwealth Development Bank Reserve Fund.

§ 4. Cheque-Paying Banks

1. **Banks Transacting Business in Australia.**—*Number of Branches.* At 30th June, 1964, the 15 banks operating in Australia transacted all classes of banking business at 4,255 branches and 1,735 agencies. The major trading banks have branches throughout Australia. 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, have branches only in their respective States. The Brisbane Permanent Building and Banking Co. Ltd. transacts business only in Brisbane. The remaining three banks are branches of overseas banks.

CHEQUE-PAYING BANKS: NUMBER OF BRANCHES(a), 30th JUNE, 1964

Banks	New South Wales	Victoria	Q'land	South Aust.	West. Aust.	Tasmania	Nor. Terr.	Aust. Cap. Terr.	Australia
Major Trading Banks ..	1,451	1,120	638	368	316	98	11	21	4,023
Other cheque-paying banks	147	2	1	35	47	..	..	..	232
All Cheque-paying Banks—									
Metropolitan areas ..	705	606	181	180	160	26	..	..	1,858
Elsewhere ..	893	516	458	223	203	72	11	21	2,397
Total	1,598	1,122	639	403	363	98	11	21	4,255

(a) Includes head offices. Excludes 1,735 agencies.

2. Australian Cheque-paying Banks.—(i) *Balance Sheets, 1963 and 1964.* Liabilities and assets of individual Australian cheque-paying banks at balance dates in 1964 (and corresponding totals for these banks in 1963) are shown in the following tables. The information for the Major Trading Banks and the Brisbane Permanent Building and Banking Co. Ltd. has been obtained from the annual returns lodged with the Commonwealth Statistician under Section 52 of the *Banking Act 1959*, whereas that for the other banks has been compiled from information published in their annual reports.

AUSTRALIAN CHEQUE-PAYING BANKS: LIABILITIES(a)
(£'000)

Bank	Paid-up capital	Reserve funds (used in business of bank)	Final dividend proposed	Balance of profit and loss account	Total shareholders funds or total capital and reserve funds	Balances due to other banks	Deposits, bills payable and other liabilities including provision for contingencies	Total liabilities
1964—								
Major Trading Banks—								
Commonwealth Trading Bank of Australia ..	(b) 7,429	5,192	..	..	12,621	820	483,451	496,892
Australia and New Zealand Bank Ltd. ..	17,570	14,225	861	1,903	34,559	25,829	529,225	589,613
The Bank of Adelaide ..	1,750	2,000	88	245	4,083	1,069	46,852	52,004
Bank of New South Wales	21,950	16,250	1,098	1,706	41,004	7,105	727,088	775,197
The Commercial Bank of Australia Ltd. ..	8,829	5,275	370	608	15,082	9	282,380	297,471
The Commercial Banking Co. of Sydney Ltd. ..	8,500	7,014	425	568	16,507	9,971	260,362	286,840
The English, Scottish and Australian Bank Ltd. ..	8,785	5,836	323	552	15,496	483	206,762	222,741
The National Bank of Australasia Ltd. ..	12,611	9,000	588	933	23,132	584	400,969	424,685
The Queensland National Bank Ltd. (in vol. liq.)(c)	..	..	..	30	30	..	72	102
<i>Total, Major Trading Banks ..</i>	<i>87,424</i>	<i>64,792</i>	<i>3,753</i>	<i>6,545</i>	<i>162,514</i>	<i>45,870</i>	<i>2,937,161</i>	<i>3,145,545</i>
Other Banks—								
The Brisbane Permanent Building and Banking Co. Ltd. ..	1,250	463	50	66	1,829	..	4,178	6,007
The Rural Bank of New South Wales (General Bank Department) ..	(d) 11,530	(e) 14,362	..	..	25,892	..	f 107,406	133,298
State Bank of South Australia (General Banking Department)(g) ..	(h) 6,056	2,379	..	..	8,435	..	fi 34,921	43,356
The Rural and Industries Bank of Western Australia (Rural Department) ..	(j) 11,083	796	..	..	11,879	..	fk 31,566	43,445
<i>Total, Other Banks ..</i>	<i>29,919</i>	<i>18,000</i>	<i>50</i>	<i>66</i>	<i>48,035</i>	<i>..</i>	<i>178,071</i>	<i>226,106</i>
Total, All Banks, 1964	117,343	82,792	3,803	6,611	210,549	45,870	3,115,232	3,371,651
.. 1963	107,694	75,462	3,071	5,800	192,027	44,000	2,742,958	2,978,985

(a) For dates of balance-sheets see table on p. 828. (b) Amount specified as capital in the *Commonwealth Banks Act 1959*. (c) This bank is in the process of liquidation consequent upon the amalgamation of its business with The National Bank of Australasia Ltd. (d) Inscribed stock and debentures issued for capital purposes. (e) Includes special reserve built up from share of profits of the Commonwealth Savings Bank in New South Wales. (f) Includes balances of Government Agency Departments and Government deposits for specific purposes. (g) Comprises General Banking, *Crédit Foncier* and Advances to Primary Producers Departments. (h) Capital provided by State Government of South Australia. (i) Includes £17,742,742 of advances by State Treasurer to Home Builders' Fund. (j) Capital provided by State Government of Western Australia. The Sinking Fund established for redemption of capital has been deducted. (k) Includes Savings Bank Deposits, £14,381,522.

AUSTRALIAN CHEQUE-PAYING BANKS: ASSETS(a)

(£'000)

Bank	Coin, bullion, notes and cash at bankers	Money at short call overseas	Australian public securities			Other public securities	Other securities	Loans to authorized dealers in the short-term money market
			Commonwealth Government		Local and semi-governmental authorities			
			Treasury bills and Treasury notes	Other securities				
1964—								
Major Trading Banks—								
Commonwealth Trading Bank of Australia	16,169	1,978	7,112	88,647	4,240	324	3,966	5,159
Australia and New Zealand Bank Ltd.	36,632	6,965	12,103	40,805	10	16,226	2,469	8,845
The Bank of Adelaide	2,068	256	725	6,689	..	..	1,725	1,990
Bank of New South Wales	38,349	6,500	15,300	112,583	124	4,191	9,110	8,137
The Commercial Bank of Australia Ltd.	15,497	3,569	1,500	36,861	453	1,187	3,702	2,020
The Commercial Banking Co. of Sydney Ltd.	9,893	1,125	3,731	50,138	..	..	3,812	8,700
The English, Scottish and Australian Bank Ltd.	10,618	..	1,500	32,624	..	702	3,568	3,865
The National Bank of Australia Ltd.	11,076	625	4,340	66,496	79	1,573	4,336	8,500
The Queensland National Bank Ltd. (in voluntary liquidation.) (c) .. ..	..	..	..	..	..	..	..	..
<i>Total, Major Trading Banks</i>	<i>140,302</i>	<i>21,018</i>	<i>46,311</i>	<i>434,843</i>	<i>4,906</i>	<i>24,203</i>	<i>32,688</i>	<i>47,216</i>
Other Banks—								
The Brisbane Permanent Building and Banking Co. Ltd. ..	93	..	..	333	2	..	267	200
The Rural Bank of New South Wales (General Bank Department)	6,234	..	..	21,030	461	..	..	7,774
State Bank of South Australia (General Banking Department) (f)	565	..	..	4,940	..	..	..	2,767
The Rural and Industries Bank of Western Australia (Rural Department) (h)	(f) 5,166	..	..	14,321	3,236	..	..	..
<i>Total, Other Banks</i>	<i>12,058</i>		<i>..</i>	<i>40,624</i>	<i>3,699</i>	<i>..</i>	<i>267</i>	<i>10,741</i>
Total All Banks, 1964	152,360	21,018	46,311	475,467	8,605	24,203	32,955	57,957
” ” ” 1963	130,372	28,220	39,070	421,930	7,927	24,416	27,974	42,318

For footnotes see page 827.

AUSTRALIAN CHEQUE-PAYING BANKS: ASSETS(a)—continued
(£'000)

Bank	Statutory reserve deposit account with Reserve Bank	Cheques and bills of other banks and balances with and due from other banks	Loans(b) advances and bills discounted (after deducting provision for debts bad or doubtful)	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total assets
1964—							
Major Trading Banks—							
Commonwealth Trading Bank of Australia	57,506	22,048	190,205	4,135	92,451	2,952	496,892
Australia and New Zealand Bank Ltd.	44,935	30,531	276,185	13,398	99,555	954	589,613
The Bank of Adelaide	5,957	2,856	23,781	1,789	3,666	502	52,004
Bank of New South Wales	78,108	23,436	339,117	13,300	124,960	1,982	775,197
The Commercial Bank of Australia Ltd.	32,960	13,314	149,487	7,195	28,696	1,030	297,471
The Commercial Banking Co. of Sydney Ltd.	34,842	12,833	120,002	6,809	31,521	3,434	286,840
The English, Scottish and Australian Bank Ltd.	26,761	10,210	90,123	6,500	35,394	876	222,741
The National Bank of Australasia Ltd.	49,993	20,187	175,666	11,304	62,944	7,566	424,685
The Queensland National Bank Ltd. (in voluntary liquidation)(c) .. .. .	..	(d) 98	4	..	..	..	102
<i>Total, Major Trading Banks ..</i>	<i>331,062</i>	<i>135,513</i>	<i>1,364,570</i>	<i>64,430</i>	<i>479,187</i>	<i>19,296</i>	<i>3,145,545</i>
Other Banks—							
The Brisbane Permanent Building and Banking Co. Ltd.	67	745	4,234	47	..	19	6,007
The Rural Bank of New South Wales (General Bank Department) .. .. .	..	3,866	83,684	5,885	(e)	4,364	133,298
State Bank of South Australia (General Banking Department)(f) .. .. .	..	558	(g)31,956	590	1,500	480	43,356
The Rural and Industries Bank of Western Australia (Rural Department)(h) .. .. .	..	(j)	18,347	1,536	839	..	43,445
<i>Total, Other Banks ..</i>	<i>67</i>	<i>5,169</i>	<i>138,221</i>	<i>8,058</i>	<i>2,339</i>	<i>4,863</i>	<i>226,106</i>
<i>Total, All Banks, 1964 ..</i>	<i>331,129</i>	<i>140,682</i>	<i>1,502,791</i>	<i>72,488</i>	<i>481,526</i>	<i>24,159</i>	<i>3,371,651</i>
<i>.. .. . 1963 ..</i>	<i>214,479</i>	<i>148,544</i>	<i>1,374,295</i>	<i>70,040</i>	<i>429,026</i>	<i>20,374</i>	<i>2,978,985</i>

(a) For dates of balance-sheets see table on page 828. (b) Excludes Loans to authorized dealers in the short-term money market. (c) See footnote (c), on page 825. (d) Inter-bank balance with The National Bank of Australasia Ltd. (e) Included with Loans, advances, etc. (f) See footnote (g), to table on page 825. (g) Includes £17,735,000 advances under extended terms—Home Builders' Fund. (h) Includes assets held against Savings Bank Deposits of £14,382,000. (i) Includes accounts with State Treasury. (j) Included with Coin, bullion, notes and cash at Bankers.

(ii) *Profit and Loss Accounts, 1963 and 1964.* Details of the profit and loss accounts, and the appropriation of profits, of individual Australian cheque-paying banks for 1964 are shown below (with corresponding totals for 1963).

AUSTRALIAN CHEQUE-PAYING BANKS: PROFIT AND LOSS
(£'000)

Bank	Year ended	Net earnings (a)	Expenses (b)	Income, land and other taxes and payments in lieu of taxes	Net profit
1964—					
Major Trading Banks—					
Commonwealth Trading Bank of Australia ..	30. 6. 64	17,541	15,314	1,072	1,155
Australia and New Zealand Bank Ltd.	30. 9. 64	23,478	17,837	3,778	1,863
The Bank of Adelaide	30. 9. 64	2,265	1,869	135	261
Bank of New South Wales	30. 9. 64	29,534	22,471	3,536	3,527
The Commercial Bank of Australia Ltd. ..	30. 6. 64	10,802	8,927	1,095	780
The Commercial Banking Co. of Sydney Ltd. ..	30. 6. 64	9,332	7,207	1,029	1,096
The English, Scottish and Australian Bank Ltd. ..	30. 6. 64	10,182	8,185	1,412	585
The National Bank of Australasia Ltd.	30. 9. 64	14,113	11,674	1,162	1,277
The Queensland National Bank Ltd. (in voluntary liquidation)	30. 9. 64	..	..	..	..
<i>Total, Major Trading Banks</i>		<i>117,247</i>	<i>93,484</i>	<i>13,219</i>	<i>10,544</i>
Other Banks—					
The Brisbane Permanent Building and Banking Co. Ltd.	31. 8. 64	325	108	90	127
The Rural Bank of New South Wales (General Bank Department)(<i>ij</i>)	30. 6. 64	5,265	4,991	(<i>k</i>)	274
State Bank of South Australia (General Banking Department)(<i>il</i>)	30. 6. 64	1,942	1,697	(<i>k</i>)	245
The (Rural and Industries Bank of Western Australia Rural Department) (<i>im</i>)	31. 3. 64	2,317	2,211	(<i>k</i>)	106
<i>Total, Other Banks</i>	..	<i>9,849</i>	<i>9,007</i>	<i>90</i>	<i>752</i>
Total All Banks, 1964 .. .. .	..	127,096	102,491	13,309	11,296
.. .. . 1963 .. .. .	..	114,085	92,292	11,718	10,075

For footnotes see page 829.

AUSTRALIAN CHEQUE-PAYING BANKS: APPROPRIATION OF PROFITS
 (£'000)

Bank	Reserve funds (c)	Writing-off bank pre-mises	Other appropriations	Dividends(d)		
				Gross	British income taxes payable by bank and recouped from shareholders	Net	Rate per annum (per cent.)
1964—						
Major Trading Banks—						
Commonwealth Trading Bank of Australia	495	166	(e) 494			
Australia and New Zealand Bank Ltd.	251	..	..	2,108	(f) 439	1,292 (g) 12.0
The Bank of Adelaide	..	..	..	175	..	175 10.0
Bank of New South Wales	500	559	..	2,195	..	2,195 10.0
The Commercial Bank of Australia Ltd.	..	75	..	617	..	617 (h)
The Commercial Banking Co. of Sydney Ltd.	..	75	..	850	..	850 10.0
The English, Scottish and Australian Bank Ltd.	..	..	..	879	(f) 205	538 (g) 10.0
The National Bank of Australasia Ltd.	369	..	..	1,093	..	1,093 10.0
The Queensland National Bank Ltd. (in voluntary liquidation)	..	..	..	..	..	..
Total, Major Trading Banks	1,615	875	494	7,917	644	6,760 ..
Other Banks—						
The Brisbane Permanent Building and Banking Co. Ltd.	25	..	..	90	..	90 8.0
The Rural Bank of New South Wales (General Bank Department)(j)	274	..	..	..	..	..
State Bank of South Australia (General Banking Department)(l)	245	..	..	..	..	..
The Rural and Industries Bank of Western Australia (Rural Department)(m)	106	..	..	..	..	..
Total, Other Banks	650	..	..	90	..	90 ..
Total, All Banks, 1964	2,265	875	494	8,007	644	6,850 ..
.. 1963	1,823	802	537	7,234	509	6,256 ..

(a) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts) after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets and losses on realization of assets, and transfers to the credit of contingencies accounts (out of which accounts provision for all bad and doubtful debts has been made). (b) Includes directors' fees. (c) Excludes accumulated profits and profit and loss accounts. (d) Dividends paid or payable out of profits earned during the year. (e) Commonwealth of Australia. (f) Calculated at the net rate of United Kingdom Income Tax payable by the bank (after taking double taxation relief into account) on the gross amount of dividends, viz.: Australia and New Zealand Bank Ltd., 4s. 2d. in the £ on £2,108,000; The English, Scottish and Australian Bank Ltd., 4s. 8d. in the £ on £879,000; United Kingdom Income Tax Relief to shareholders is limited to this rate. In addition to the taxes stated above the banks deducted the following further sums of United Kingdom Income Tax in accordance with the provisions of the Finance (No. 2) Act 1945, which authorizes deductions of tax from dividends at the full standard rate of United Kingdom Income Tax (7s. 9d. in the £); Australia and New Zealand Bank Ltd., £378,000; and the English, Scottish and Australian Bank Ltd., £135,000. (g) Gross dividend before deductions of United Kingdom Income Tax at standard rate of 7s. 9d. in the £. The gross return to shareholders based on the sum of United Kingdom Income Taxes payable by the bank and recouped from shareholders and the net dividend was:—Australia and New Zealand Bank Ltd. 9.85 per cent.; The English, Scottish and Australian Bank Ltd., 8.4583 per cent. The net return to shareholders based on the net dividend was:—Australia and New Zealand Bank Ltd., 7.35 per cent., and the English, Scottish and Australian Bank Ltd., 6.1250 per cent. (h) 4 per cent. on Preference shares and 10 per cent. on Ordinary shares. (i) Earnings represent gross earnings; expenses include interest paid, management expenses and provisions for contingencies. (j) Comprises the General Bank Department, Rural Bank Division, Advances for Homes Division and Personal Loans Division. (k) Not available. (l) Includes General Banking Department, *Crédit Foncier* and Advances to Primary Producers Departments. (m) Includes profit and loss on account of Savings Bank business.

3. All Cheque-Paying Banks.—(i) *Average Liabilities and Assets within Australia, June, 1964.* Particulars of the average liabilities and assets within Australia for all cheque-paying banks in Australia for the month of June, 1964 are shown in the following tables. The details in these tables relate only to liabilities and assets within Australia and include the overseas banks, the Bank of China, Bank of New Zealand and Comptoir National d'Escompte de Paris. The tables in paragraph 2, Australian Cheque-Paying Banks, pages 825–7, relate to liabilities and assets both inside and outside Australia, and exclude the overseas banks.

**ALL CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA(a),
MONTH OF JUNE, 1964**

(£'000)

Bank	Deposits repayable in Australia				Balances due to other banks	Bills payable and all other liabilities to the public	Total
	Fixed	Current		Total			
		Bearing interest	Not bearing interest				
Major Trading Banks—							
Commonwealth Trading Bank of Australia	138,621	20,845	215,663	375,129	573	3,949	379,651
Australia and New Zealand Bank Ltd.	96,142	13,220	191,951	301,313	3,037	3,953	308,303
The Bank of Adelaide	14,791	1,498	23,722	40,011	1,017	345	41,373
Bank of New South Wales	175,114	33,555	312,756	521,425	1,238	8,111	530,774
The Commercial Bank of Australia Ltd.	69,284	9,556	134,264	213,104	2,111	3,543	218,758
The Commercial Banking Co. of Sydney Ltd.	76,498	15,858	134,543	226,899	2,103	12,242	241,244
The English, Scottish and Australian Bank Ltd.	49,282	12,106	113,289	174,677	457	7,953	183,087
The National Bank of Australasia Ltd., and The Queensland National Bank Ltd. (in voluntary liquidation)(b)	129,820	23,459	183,260	336,539	1,017	2,444	340,000
<i>Total, Major Trading Banks</i>	<i>749,552</i>	<i>130,097</i>	<i>1,309,448</i>	<i>2,189,097</i>	<i>11,553</i>	<i>42,540</i>	<i>2,243,190</i>
Other Banks—							
Bank of China	4	..	23	27	..	10	37
Bank of New Zealand	543	48	3,307	3,898	115	199	4,212
The Brisbane Permanent Building and Banking Co. Ltd.	502	2,759	..	3,261	20	396	3,677
Comptoir National d'Escompte de Paris	321	545	1,175	2,041	856	75	2,972
The Rural Bank of New South Wales (General Bank Department)	42,158	18,176	37,709	98,043	783	12,091	110,917
State Bank of South Australia (General Banking Department)	5,829	879	9,280	15,988	6	22,733	38,727
The Rural and Industries Bank of Western Australia (Rural Department)	3,505	139	8,651	12,295	15	12,229	24,539
<i>Total, Other Banks</i>	<i>52,862</i>	<i>22,546</i>	<i>60,145</i>	<i>135,553</i>	<i>1,795</i>	<i>47,733</i>	<i>185,081</i>
Total, All Banks	802,414	152,643	1,369,593	2,324,650	13,348	90,273	2,428,271

(a) Includes Papua and New Guinea. (b) Combined balances of The National Bank of Australasia Ltd. and The Queensland National Bank Ltd. Inter-bank balances resulting from amalgamation have been excluded.

ALL CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA(a),
MONTH OF JUNE, 1964

(£'000)

Bank	Cash and cash balances	Government securities		Loans to authorized dealers in the short-term money market	Statutory reserve deposit account with Reserve Bank	Loans(b), advances and bills discounted	All other assets (c)	Total
		Treasury bills and Treasury notes	Other securities					
Major Trading Banks—								
Commonwealth Trading Bank of Australia ..	12,060	8,866	90,335	956	57,346	185,061	28,184	382,808
Australia and New Zealand Bank Ltd. ..	11,494	4,759	44,762	2,631	46,806	173,489	19,824	303,765
The Bank of Adelaide ..	1,356	..	7,131	1,630	6,356	19,987	5,162	41,622
Bank of New South Wales	13,153	2,013	105,042	8,087	81,034	291,114	34,363	534,806
The Commercial Bank of Australia Ltd. ..	6,872	..	37,359	4,148	33,114	119,680	17,457	218,630
The Commercial Banking Co. of Sydney Ltd. ..	6,804	5,082	49,851	4,452	35,086	114,217	20,783	236,275
The English, Scottish and Australian Bank Ltd.	5,913	1,000	32,537	1,589	26,802	89,910	16,606	174,357
The National Bank of Australasia Ltd. and The Queensland National Bank Ltd. (in voluntary liquidation) (d)	10,403	3,500	65,616	4,785	52,297	173,124	31,587	341,312
<i>Total, Major Trading Banks ..</i>	<i>68,055</i>	<i>25,220</i>	<i>432,633</i>	<i>28,278</i>	<i>338,841</i>	<i>1,166,582</i>	<i>173,966</i>	<i>2,233,575</i>
Other Banks—								
Bank of China ..	77	..	..	..	1	20	14	112
Bank of New Zealand ..	141	1,486	884	512	395	2,050	1,626	7,094
The Brisbane Permanent Building and Banking Co. Ltd. ..	29	..	230	..	66	4,123	1,092	5,540
Comptoir National d'Escompte de Paris ..	89	..	400	..	84	2,231	833	3,637
The Rural Bank of New South Wales (General Bank Department) ..	2,578	..	32,763	4,343	..	82,270	7,989	129,943
State Bank of South Australia (General Banking Department) ..	685	..	3,942	..	..	32,010	4,673	41,310
The Rural and Industries Bank of Western Australia (Rural Department) ..	348	..	8,688	500	..	15,650	1,597	26,783
<i>Total, Other Banks</i>	<i>3,947</i>	<i>1,486</i>	<i>46,907</i>	<i>5,355</i>	<i>546</i>	<i>138,354</i>	<i>17,824</i>	<i>214,419</i>
Total, All Banks ..	72,002	26,706	479,540	33,633	339,387	1,304,936	191,790	2,447,994

(a) Includes Papua and New Guinea. (b) Excludes Loans to authorized dealers in the short-term money market. (c) Includes local government and semi-governmental securities. (d) See footnote (b) to table on previous page.

(ii) *Average Liabilities and Assets Within Australia, 1960 to 1964.* The average liabilities and assets within Australia in the month of June, 1960 to 1964, are shown in the following tables for the Major Trading Banks and all cheque-paying banks in Australia.

ALL CHEQUE-PAYING BANKS: AVERAGE LIABILITIES WITHIN AUSTRALIA(a)
(£'000)

June—	Deposits repayable in Australia			Total	Balances due to other banks	Bills payable and all other liabilities to the public	Total
	Fixed	Current					
		Bearing interest	Not bearing interest				
1960	362,067	104,186	1,264,876	1,731,129	12,730	32,877	1,776,736
1961	471,208	99,324	1,144,623	1,715,155	9,675	29,920	1,754,750
1962	551,317	105,261	1,167,573	1,824,151	9,628	33,346	1,867,125
1963	613,779	117,792	1,191,875	1,923,446	12,331	37,464	1,973,241
1964	749,552	130,097	1,309,448	2,189,097	11,553	42,540	2,243,190

MAJOR TRADING BANKS

1960	362,067	104,186	1,264,876	1,731,129	12,730	32,877	1,776,736
1961	471,208	99,324	1,144,623	1,715,155	9,675	29,920	1,754,750
1962	551,317	105,261	1,167,573	1,824,151	9,628	33,346	1,867,125
1963	613,779	117,792	1,191,875	1,923,446	12,331	37,464	1,973,241
1964	749,552	130,097	1,309,448	2,189,097	11,553	42,540	2,243,190

ALL CHEQUE-PAYING BANKS

1960	372,723	122,239	1,310,610	1,805,572	13,582	57,057	1,876,211
1961	488,788	122,410	1,188,813	1,800,011	10,813	55,512	1,866,336
1962	577,706	125,026	1,215,656	1,918,388	11,053	71,269	2,000,710
1963	647,731	139,694	1,244,736	2,032,161	14,006	81,067	2,127,234
1964	802,414	152,643	1,369,593	2,324,650	13,348	90,273	2,428,271

(a) Includes Papua and New Guinea.

ALL CHEQUE-PAYING BANKS: AVERAGE ASSETS WITHIN AUSTRALIA(a)
(£'000)

June—	Cash and cash balances	Government securities		Loans to authorized dealers in the short-term money market	Statutory reserve deposit account with Reserve Bank	Loans(b), advances and bills discounted	All other assets (d)	Total
		Treasury bills and Treasury notes(c)	Other securities					
1960	71,396	13,750	242,282	19,542	303,687	1,015,047	138,905	1,804,609
1961	68,965	19,683	243,766	28,358	259,734	1,020,067	131,276	1,771,849
1962	70,107	12,405	364,372	26,509	194,553	1,031,370	194,812	1,894,128
1963	65,457	26,628	366,920	26,810	223,189	1,101,168	173,499	1,983,671
1964	68,055	25,220	432,633	28,278	338,841	1,166,582	173,966	2,233,575

MAJOR TRADING BANKS

1960	71,396	13,750	242,282	19,542	303,687	1,015,047	138,905	1,804,609
1961	68,965	19,683	243,766	28,358	259,734	1,020,067	131,276	1,771,849
1962	70,107	12,405	364,372	26,509	194,553	1,031,370	194,812	1,894,128
1963	65,457	26,628	366,920	26,810	223,189	1,101,168	173,499	1,983,671
1964	68,055	25,220	432,633	28,278	338,841	1,166,582	173,966	2,233,575

ALL CHEQUE-PAYING BANKS

1960	74,238	14,250	258,782	27,164	304,230	1,105,543	151,986	1,936,193
1961	72,227	20,058	263,842	34,396	260,289	1,118,978	146,269	1,916,059
1962	77,462	12,405	385,857	27,877	195,003	1,143,382	210,785	2,052,771
1963	69,255	29,376	392,282	29,001	223,636	1,232,405	189,994	2,165,949
1964	72,002	26,706	479,540	33,633	339,387	1,304,936	191,790	2,447,994

(a) Includes Papua and New Guinea. (b) Excludes loans to authorized dealers in the short-term money market. (c) Prior to July, 1962, seasonal securities. (d) Includes local government and semi-governmental securities.

(iii) *Ratios of Assets and Liabilities to Total Deposits.* The following table shows, for the Major Trading Banks and for all cheque-paying banks, the ratios of selected assets and liabilities to total deposits for the month of June, 1960 to 1964. The ratios are based on the average liabilities and assets for the month of June in the years shown.

ALL CHEQUE-PAYING BANKS: RATIOS OF SELECTED AVERAGE ASSETS AND LIABILITIES TO AVERAGE TOTAL DEPOSITS(a)
(Per cent.)

June—	Cash and cash balances(b)	Commonwealth and State Government securities		Statutory reserve deposit account with Reserve Bank	Loans(d), advances and bills discounted	Deposits not bearing interest
		Treasury bills and Treasury notes(c)	Other			
MAJOR TRADING BANKS						
1960	4.1	0.8	14.0	17.5	58.6	73.1
1961	4.0	1.2	14.2	15.1	59.5	66.7
1962	3.8	0.7	20.0	10.7	56.5	64.0
1963	3.4	1.4	19.1	11.6	57.2	62.0
1964	3.1	1.2	19.8	15.5	53.3	59.8
ALL CHEQUE-PAYING BANKS						
1960	4.1	0.8	14.3	16.8	61.2	72.6
1961	4.0	1.1	14.7	14.5	62.2	66.0
1962	4.1	0.6	20.1	10.2	59.6	63.4
1963	3.4	1.5	19.3	11.0	60.6	61.3
1964	3.1	1.2	20.6	14.6	56.1	58.9

(a) Based on deposits and assets within Australia and excludes London Funds. (b) Coin, bullion, Australian notes and cash with Reserve Bank on current account. (c) Prior to July, 1962, seasonal securities. (d) Excludes loans to authorized dealers in short-term money market.

(iv) *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 Major Trading Banks and with all cheque-paying banks for the month of June, 1960 to 1964. The ratios are based on the average deposits for the month of June in the years shown.

ALL CHEQUE-PAYING BANKS: PROPORTION OF NON-INTEREST BEARING DEPOSITS TO TOTAL DEPOSITS
(Per cent.)

June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.(a)
MAJOR TRADING BANKS									
1960	74.0	72.1	75.1	67.6	71.5	77.2	77.8	77.0	73.1
1961	67.2	66.2	67.8	62.7	67.2	71.0	71.7	73.1	66.7
1962	65.0	63.2	63.3	60.8	65.6	67.6	71.5	72.9	64.0
1963	62.7	60.9	61.8	59.2	63.3	66.7	64.0	70.6	62.0
1964	60.5	58.6	60.7	56.7	59.6	65.2	64.2	68.2	59.8
ALL CHEQUE-PAYING BANKS									
1960	73.0	72.1	74.2	67.1	72.7	77.2	77.8	77.0	72.6
1961	65.6	66.2	67.0	62.5	68.4	71.0	71.7	73.1	66.0
1962	63.5	63.2	62.7	60.2	65.6	68.0	71.5	72.9	63.4
1963	61.1	61.0	61.0	58.6	64.4	66.7	64.0	70.6	61.3
1964	58.3	58.7	60.0	56.8	60.7	65.2	64.2	68.2	58.9

(a) Includes Papua and New Guinea.

(v) *Ratio of Advances to Total Deposits.* The ratio of advances to total deposits for each State for the Major Trading Banks and for all cheque-paying banks for the month of June, 1960 to 1964 is shown in the following table. The ratios are based on the averages of deposits and advances for the month of June in the years shown.

ALL CHEQUE-PAYING BANKS: RATIO OF ADVANCES TO TOTAL DEPOSITS

(Per cent.)

June—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.(a)
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MAJOR TRADING BANKS

1960	62.2	51.9	64.8	52.5	72.4	57.7	36.4	41.7	58.6
1961	63.4	54.7	63.7	49.2	68.1	62.8	35.0	26.5	59.5
1962	60.1	51.3	61.6	49.3	64.0	59.4	29.3	26.0	56.5
1963	60.5	52.7	59.5	50.8	65.4	64.0	31.7	30.7	57.2
1964	57.6	47.4	54.9	47.4	64.1	58.0	35.1	31.0	53.3

ALL CHEQUE-PAYING BANKS

1960	65.8	52.2	65.6	58.6	79.2	57.7	36.4	41.7	61.2
1961	67.0	55.1	64.6	56.7	74.6	62.8	35.0	26.5	62.2
1962	64.3	51.6	62.4	59.6	70.3	59.4	29.3	26.0	59.6
1963	65.1	52.9	60.3	63.9	71.7	64.0	31.7	30.7	60.6
1964	60.3	47.4	55.7	62.5	70.5	58.0	35.1	31.0	56.1

(a) Includes Papua and New Guinea.

4. *Classification of Bank Advances within Australia—Major Trading Banks.—(i) States, July, 1964.* A classification of bank advances of the Major Trading Banks outstanding at 8th July, 1964, is shown in the following table.

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 the 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 individual members, any income of the organization being used for the purposes of the organization or for the benefit of the community.

Any discrepancies between totals and sums of components in the tables on pages 835 to 837 are due to rounding.

MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a), 8th JULY, 1964

Classification	N.S.W. (b) £ mill.	Vic. £ mill.	Old (a) £ mill.	S.A. (c) £ mill.	W.A. £ mill.	Tas. £ mill.	Australia (a) £ mill.	Proportion of total (per cent.)	Term loan component £ mill.
RESIDENT BORROWERS									
Business advances classified according to main industry of borrower—									
Agriculture, dairying and grazing ..	91.7	50.1	64.5	20.2	25.0	5.7	257.2	21.6	21.6
Manufacturing ..	93.2	81.7	21.1	9.5	5.3	5.7	216.5	18.2	26.0
Transport, storage and communication ..	6.2	8.1	3.0	1.2	1.2	0.7	20.4	1.7	2.6
Finance—									
Building and housing societies ..	10.5	10.1	1.1	0.1	0.1	0.1	22.0	1.9	..
Other ..	21.6	15.8	3.6	3.3	1.1	1.3	46.7	3.9	0.1
Total, Finance ..	32.1	25.9	4.7	3.4	1.2	1.4	68.7	5.8	0.1
Commerce—									
Retail trade ..	48.9	28.2	19.8	8.1	7.1	4.2	116.3	9.8	1.6
Wholesale trade(d) ..	66.0	34.9	6.2	8.8	6.9	1.5	124.3	10.5	3.5
Total, Commerce ..	114.9	63.1	26.0	16.9	14.0	5.7	240.6	20.3	5.1
Building and construction ..	14.4	10.1	5.7	2.3	2.8	1.1	36.4	3.1	1.1
Other business ..	39.2	26.4	19.6	5.6	6.2	1.9	98.9	8.3	4.4
Unclassified ..	2.7	2.8	1.2	2.2	0.5	0.3	9.7	0.8	0.3
Total Business Advances—									
Companies(e) ..	255.1	176.6	46.6	33.5	19.6	12.2	543.6	45.7	40.7
Other(e) ..	139.3	91.6	99.2	27.8	36.6	10.3	404.8	34.1	20.5
Total ..	394.4	268.2	145.8	61.3	56.2	22.5	948.4	79.8	61.2
Advances to public authorities(f) ..	2.6	5.2	0.4	0.2	0.7	0.1	9.2	0.8	..
Personal advances—									
Building or purchasing own home (individuals) ..	50.9	25.0	14.4	5.7	7.4	2.0	105.4	8.9	..
All other (including personal loans) ..	43.6	28.2	13.6	5.8	6.4	2.5	100.1	8.4	0.1
Total, Personal ..	94.5	53.2	28.0	11.5	13.8	4.5	205.5	17.3	0.1
Advances to non-profit organizations ..	12.2	5.4	4.0	1.0	1.7	0.5	24.8	2.1	..
Total Advances to Resident Borrowers ..	503.7	332.0	178.2	74.0	72.4	27.6	1,187.9	100.0	61.3

NON-RESIDENT BORROWERS

Advances to Non-resident Borrowers ..	0.2	0.2	0.1	0.5
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TOTAL ADVANCES TO ALL BORROWERS

Grand Total ..	503.9	332.2	178.3	74.0	72.4	27.6	1,188.4	100.0	61.3
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(a) Includes Papua and New Guinea. (b) Includes Australian Capital Territory. (c) Includes Northern Territory. (d) Includes temporary advances to woolbuyers. (e) The combined advances for these two groups are distributed over the industries above. (f) Includes local government and semi-governmental bodies.

(ii) Australia, July, 1961, to July, 1964. The following table provides a classification of advances within Australia (including Papua and New Guinea) for July, 1961, to July, 1964.

MAJOR TRADING BANKS: CLASSIFICATION OF ADVANCES WITHIN AUSTRALIA(a)

Classification	July—							
	1961		1962		1963		1964	
	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.
RESIDENT BORROWERS								
Business advances classified according to main industry of borrower—								
Agriculture, dairying and grazing	225.3	21.7	239.6	22.5	247.4	22.1	257.2	21.6
Manufacturing	228.1	22.0	209.5	19.7	217.7	19.5	216.5	18.2
Transport, storage and communication	14.3	1.4	14.0	1.3	16.0	1.4	20.5	1.7
Finance—								
Building and housing societies	25.8	2.5	23.4	2.2	22.3	2.0	22.0	1.9
Other	46.4	4.4	42.6	4.0	34.2	3.1	46.7	3.9
Total, Finance	72.2	6.9	66.0	6.2	56.6	5.1	68.7	5.8
Commerce—								
Retail trade	107.4	10.3	111.4	10.4	115.0	10.3	116.3	9.8
Wholesale trade(b)	109.9	10.6	105.2	9.9	111.1	9.9	124.3	10.5
Total, Commerce	217.4	20.9	216.6	20.3	226.1	20.2	240.6	20.3
Building and construction	25.3	2.4	30.6	2.8	32.9	2.9	36.4	3.1
Other businesses	72.1	6.9	77.7	7.3	92.6	8.3	98.9	8.3
Unclassified	5.7	0.6	8.4	0.8	9.3	0.9	9.7	0.8
Total, Business Advances—								
Companies(c)	505.1	48.6	481.9	45.2	505.6	45.2	543.6	45.7
Other(c)	355.3	34.2	380.5	35.7	393.1	35.2	404.8	34.1
Total	860.4	82.8	862.4	80.9	898.7	80.4	948.4	79.8
Advances to public authorities(d)	14.1	1.3	12.6	1.2	7.9	0.7	9.2	0.8
Personal advances classified according to main purpose of advance—								
Building or purchasing own home (individuals)	85.1	8.2	95.4	8.9	101.3	9.0	105.4	8.9
All other (including personal loans)	60.0	5.8	74.3	7.0	86.6	7.8	100.1	8.4
Total, Personal	145.1	14.0	169.6	15.9	187.9	16.8	205.5	17.3
Advances to non-profit organizations	19.3	1.9	20.9	2.0	23.1	2.1	24.8	2.1
<i>Total Advances to Resident Borrowers</i>	<i>1,038.8</i>	<i>100.0</i>	<i>1,065.6</i>	<i>100.0</i>	<i>1,117.5</i>	<i>100.0</i>	<i>1,187.9</i>	<i>100.0</i>
NON-RESIDENT BORROWERS								
Advances to Non-resident Borrowers	0.3	..	0.3	..	0.3	..	0.5	..
TOTAL ADVANCES TO ALL BORROWERS								
Grand Total	1,039.1	100.0	1,065.9	100.0	1,117.8	100.0	1,188.4	100.0

(a) Includes Papua and New Guinea. (b) Includes temporary advances to woolbuyers. (c) The combined advances for these two groups are distributed over the industries above. (d) Includes local government and semi-governmental bodies.

5. Classification of Bank Deposits within Australia—Major Trading Banks.—A classification of bank deposits (excluding deposits of Commonwealth and State Governments) of the Major Trading Banks for July, 1961, to July, 1964, is given in the following table. The classification is similar to that used for advances (for details see page 834).

MAJOR TRADING BANKS: CLASSIFICATION OF DEPOSITS^(a) WITHIN AUSTRALIA^(b): AMOUNT AND PROPORTION OF EACH CLASS TO TOTAL

Classification	July—							
	1961		1962		1963		1964	
	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.	Amount (£ mill.)	Per cent.

RESIDENT DEPOSITORS

Business deposits classified according to main industry of depositor—								
Agriculture, grazing, dairying ..	327.6	20.2	332.6	18.9	356.5	19.2	407.5	19.4
Manufacturing ..	120.8	7.4	130.0	7.4	127.3	6.9	155.9	7.4
Transport, storage and communication ..	29.7	1.8	30.1	1.7	30.2	1.6	35.3	1.7
Finance ..	123.8	7.6	140.4	8.0	141.7	7.7	154.0	7.3
Commerce ..	142.0	8.7	158.5	9.0	163.1	8.8	180.3	8.6
Building and construction ..	48.3	3.0	52.2	3.0	51.7	2.8	62.0	2.9
Other businesses ..	185.0	11.4	203.5	11.6	214.9	11.6	247.9	11.8
Unclassified ..	13.5	0.8	15.0	0.8	18.8	1.0	21.0	1.0
Total, Business Deposits—								
Companies ^(c) ..	337.2	20.7	406.8	23.1	406.9	22.0	499.2	23.8
Other ^(c) ..	653.5	40.2	655.5	37.3	697.3	37.6	763.7	36.3
Total ..	990.7	60.9	1,062.3	60.4	1,104.2	59.6	1,262.9	60.1
Deposits of public authorities ..	81.8	5.0	96.1	5.5	108.5	5.9	119.4	5.7
Personal deposits ..	481.4	29.6	518.8	29.5	550.9	29.7	615.8	29.3
Deposits of non-profit organizations ..	59.0	3.7	67.2	3.8	72.3	3.9	84.7	4.1
Total, Resident Depositors ..	1,612.9	99.2	1,744.4	99.2	1,835.9	99.1	2,082.8	99.2

NON-RESIDENT DEPOSITORS

Total, Non-resident Depositors ..	12.8	0.8	14.7	0.8	15.8	0.9	17.4	0.8
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TOTAL—ALL DEPOSITORS

Grand Total ..	1,625.7	100.0	1,759.1	100.0	1,851.7	100.0	2,100.2	100.0
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(a) Excludes deposits of Commonwealth and State Governments. (b) Includes Papua and New Guinea. (c) The combined deposits of these two groups are distributed over the industries above.

6. **New and Increased Lending Commitments and Overdraft Limits—Major Trading Banks.**—Particulars of new and increased lending commitments and overdraft limits of the Major Trading Banks are shown hereunder.

The figures represent gross new lending commitments of banks and do not take account of cancellations and reductions of existing limits. Figures for cancellations and reductions of existing limits can be obtained from this series (after deducting term loan component and adjusting the weekly averages to a monthly basis) in conjunction with that of overdraft limits shown in the following table. However, these derived figures should be regarded as an approximation only, since there are unavoidable differences in the basis of compilation of the two series.

MAJOR TRADING BANKS: NEW AND INCREASED LENDING COMMITMENTS AND OVERDRAFT LIMITS

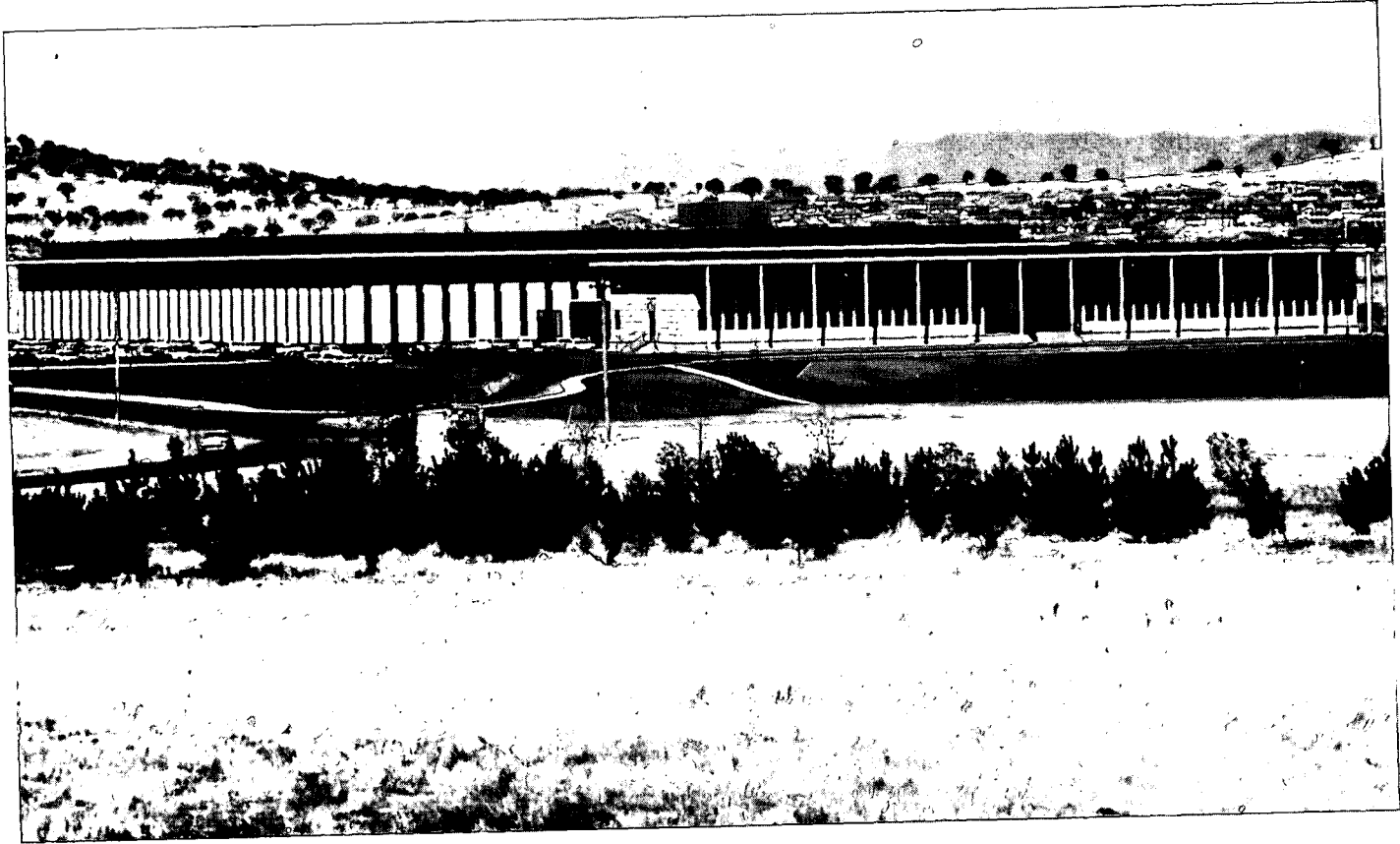
Source: Reserve Bank of Australia

(£ million)

New and increased lending commitment, (a)					Overdraft limits(b)		
For period ending second Wednesday of—	Weekly average		Term loan component	At second Wednesday of—		Total outstanding	
	Aggregate						
1961–62(c)	10.0	..	..	1962, July .. ..	..	1,732.8
1962–63(c)	11.0	0.9	0.9	1963 „ .. ..	..	1,821.4
1963–64(c)	11.2	0.8	0.8	1964 „ .. ..	..	1,900.5
1963—				1963—			
July	13.6	1.0	1.0	July .. ..	..	1,821.4
August	10.8	1.0	1.0	August .. ..	..	1,833.7
September	11.3	0.7	0.7	September .. ..	..	1,845.2
October	12.0	0.7	0.7	October .. ..	..	1,861.2
November	10.4	0.5	0.5	November .. ..	..	1,873.7
December	10.8	0.7	0.7	December .. ..	..	1,881.2
1964—				1964—			
January	9.4	0.6	0.6	January .. ..	..	1,863.5
February	10.4	0.9	0.9	February .. ..	..	1,868.5
March	12.9	1.0	1.0	March .. ..	..	1,878.3
April	10.8	0.6	0.6	April .. ..	..	1,882.3
May	12.4	1.2	1.2	May .. ..	..	1,896.7
June	12.4	0.7	0.7	June .. ..	..	1,907.4
July	11.1	1.3	1.3	July .. ..	..	1,900.5
August	11.7	0.8	0.8	August .. ..	..	1,912.4
September	11.6	0.8	0.8	September .. ..	..	1,923.1
October	10.7	0.8	0.8	October .. ..	..	1,936.4
November	10.0	0.6	0.6	November .. ..	..	1,937.1
December	11.4	0.8	0.8	December .. ..	..	1,943.5

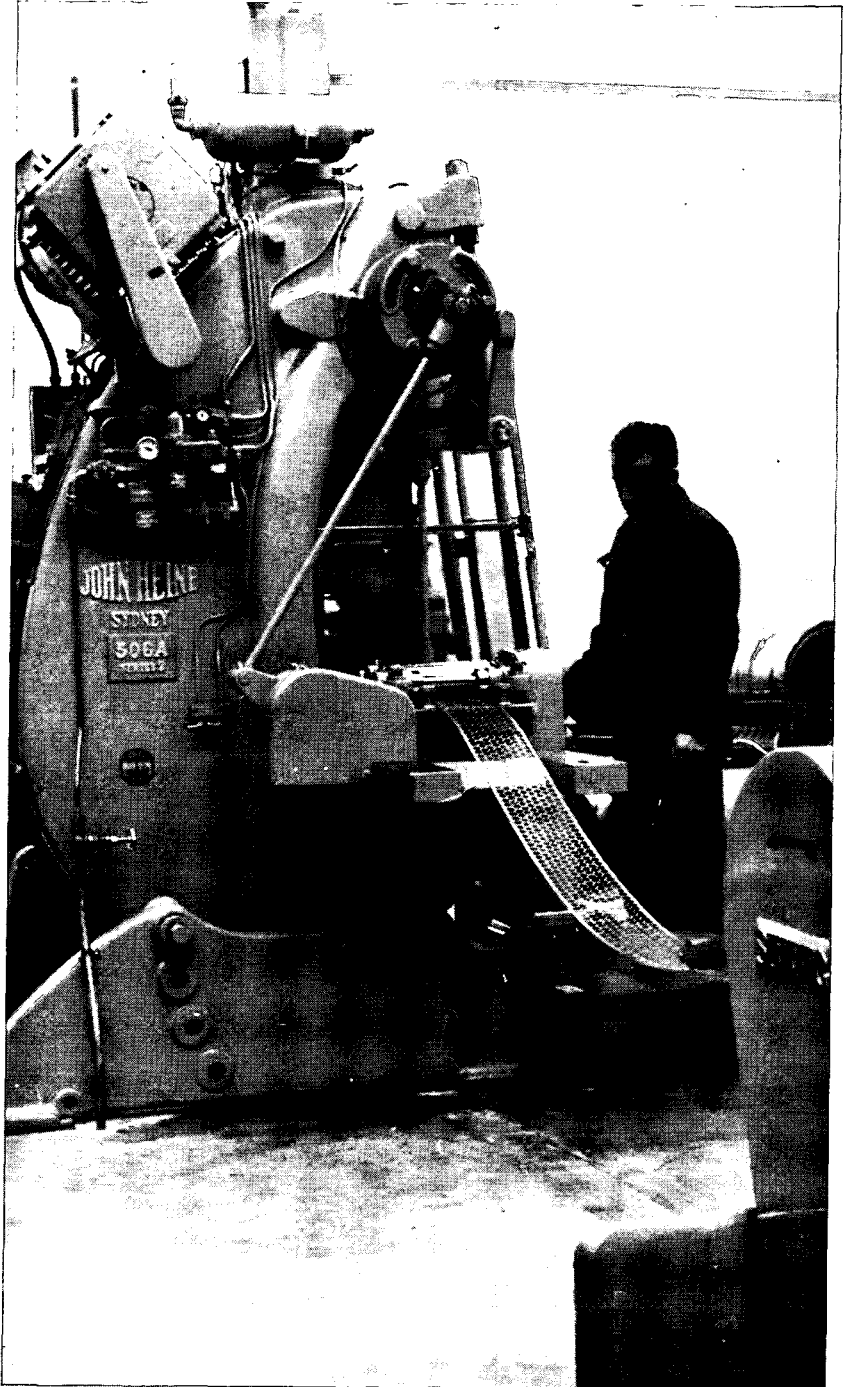
(a) Excludes commitments in respect of temporary advances to woolbuyers. (b) Excludes limits in respect of temporary advances to woolbuyers and term loans. (c) Year ended second Wednesday of July.

7. **Classifications of New and Increased Lending Commitments and Overdraft Limits—Major Trading Banks.**—(i) *New and Increased Lending Commitments.* The following table shows new and increased lending commitments in respect of the Major Trading Banks to selected industrial groups for January, 1962, to July, 1964. The classification is an abridgement of that used for bank advances (see page 834).



Royal Australian Mint, Canberra

Photography by courtesy of National Capital Development Commission



Royal Australian Mint, Canberra. Strip emerging from blanking press after blanks have been cut for coins. The scrap chopper in the right foreground chops blanked strip into fine pieces which are returned to the furnace. Rolls of strip for passing through the blanking press can be seen in right background

Photography by courtesy of Australian News and Information Bureau

The table indicates the sources of demand for new lending. If taken in conjunction with the classification of overdraft limits outstanding (see page 838), it also shows the approximate rate of cancellations and reductions of limits in the main industrial groups.

Any discrepancies between totals and sums of components in the tables on pages 841 and 843 are due to rounding.

MAJOR TRADING BANKS: NEW AND INCREASED LENDING COMMITMENTS TO SELECTED INDUSTRIAL GROUPS^(a)

Source: Reserve Bank of Australia

(£ million)

Classification	Six months ended second Wednesday of—										
	Jan., 1962 (b)	July, 1962		Jan., 1963		July, 1963		Jan., 1964		July, 1964	
		Aggre- gate	Term loan com- ponent	Aggre- gate	Term loan com- ponent	Aggre- gate	Term loan com- ponent	Aggre- gate	Term loan com- ponent	Aggre- gate	Term loan com- ponent
Business—											
Agriculture, grazing and dairying ..	34.5	49.5	2.0	44.2	6.9	53.8	6.8	51.7	7.3	60.1	9.0
Manufacturing ..	50.3	48.7	4.3	51.5	7.9	62.8	16.6	48.2	7.2	55.3	10.7
Finance ..	16.1	16.8	..	17.6	..	16.9	..	13.0	0.1	11.3	0.1
Commerce ^(a) ..	42.5	44.8	0.5	48.4	3.5	51.2	3.0	47.3	1.4	45.1	1.3
Building and construction ..	10.5	13.4	0.2	11.8	0.3	12.6	0.3	14.5	0.5	15.1	0.5
Persons—											
Advances for building or purchase of own home (to individuals) ..	28.1	35.6	..	30.4	..	35.8	..	34.2	..	35.3	..
All other (including personal loans) ..	19.6	28.7	..	24.1	..	30.5	..	30.6	..	36.8	..
All other ..	44.0	45.0	0.6	40.8	2.7	41.2	1.5	41.1	1.9	44.1	2.9
Total ..	245.7	282.4	7.5	268.7	21.2	304.8	28.2	280.5	18.3	303.1	24.6

(a) Excludes commitments in respect of temporary advances to woolbuyers. (b) Overdraft commitments only; term lending commenced in April, 1962.

(ii) *Overdraft Limits Outstanding.* The following table shows the classification of overdraft limits outstanding in respect of the Major Trading Banks, for July, 1961, to July, 1964. The classification is similar to that used for advances (see p. 834).

The table shows the trend of net new lending classified by industry. If used in conjunction with the classification of bank advances, it shows the range of limits usage by industry, and if used in conjunction with the classification of new and increased lending commitments (see above), it shows the approximate rate of cancellations and reductions of limits by industry.

**MAJOR TRADING BANKS: CLASSIFICATION OF OVERDRAFT LIMITS
OUTSTANDING(a)**

Source: Reserve Bank of Australia

(£ million)

Classification	At second Wednesday of—						
	July, 1961	Jan., 1962	July, 1962	Jan., 1963	July, 1963	Jan., 1964	July, 1964
RESIDENT BORROWERS							
Business overdraft limits classified according to main industry of borrower—							
Agriculture, grazing and dairying—							
Mainly sheep grazing	136.9	139.9	144.8	144.9	145.2	145.0	141.9
Mainly wheat growing	23.4	24.9	26.9	28.8	28.2	31.0	31.4
Mainly dairying and pig raising	49.0	48.7	51.6	51.5	52.7	52.8	53.2
Other	69.2	71.2	76.4	78.6	80.9	83.1	86.9
Total, Agriculture, etc.	278.5	284.7	299.8	303.8	306.9	311.9	313.5
Manufacturing	411.5	433.0	445.1	447.9	445.9	457.3	462.2
Transport, storage and communication	25.2	27.0	27.9	29.0	32.8	31.2	31.9
Finance—							
Building and housing societies	33.0	32.0	32.4	32.2	31.1	30.3	30.5
Pastoral finance companies	41.5	39.0	42.9	40.2	44.8	43.9	44.5
Hire purchase and other finance companies	35.9	33.8	35.3	41.4	44.3	42.9	42.8
Other	24.5	32.8	37.1	40.1	39.8	41.4	39.8
Total, Finance	134.8	137.7	147.7	153.8	160.1	158.4	157.6
Commerce—							
Retail trade	158.8	163.6	172.3	174.1	181.3	181.7	183.4
Wholesale trade	132.6	138.1	135.6	133.6	139.4	142.4	142.9
Total, Commerce	291.4	301.7	307.9	307.7	320.7	324.0	326.4
Building and construction	40.3	44.5	47.6	49.1	53.6	55.4	58.8
Other businesses—							
Mining	10.1	12.3	15.1	15.2	17.2	17.3	17.7
Other	96.8	101.6	110.6	113.6	123.4	128.0	140.6
Total, Other Businesses	106.9	113.9	125.7	128.8	140.6	145.3	158.3
Unclassified	5.6	6.5	9.6	9.8	10.3	11.1	11.0
Total Business Overdraft Limits	1,294.3	1,349.0	1,411.2	1,429.9	1,471.0	1,494.6	1,519.7
Overdraft limits of public authorities	54.2	66.3	59.0	60.5	58.0	63.2	63.0
Personal overdraft limits—							
Building and purchasing own home	104.1	108.9	119.5	122.8	128.5	132.0	134.2
Other	81.9	86.8	100.1	104.4	115.9	123.5	133.2
Total Personal Overdraft Limits	186.0	195.7	219.7	227.1	244.4	255.5	267.4
Overdraft limits of non-profit organizations	36.2	39.5	42.1	44.3	47.6	49.3	49.3
<i>Total Overdraft Limits of Resident Borrowers</i>	<i>1,570.6</i>	<i>1,650.6</i>	<i>1,731.9</i>	<i>1,761.8</i>	<i>1,821.0</i>	<i>1,862.7</i>	<i>1,899.4</i>

(a) Excludes limits in respect of temporary advances to woolbuyers and term loans.

MAJOR TRADING BANKS: CLASSIFICATION OF OVERDRAFT LIMITS
OUTSTANDING—*continued*

Classification	At second Wednesday of—						
	July, 1961	Jan., 1962	July, 1962	Jan., 1963	July, 1963	Jan., 1964	July, 1964

NON-RESIDENT BORROWERS

<i>Overdraft Limits of Non-Resident Borrowers</i>	0.9	0.8	0.8	0.9	0.4	0.9	1.1
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TOTAL OVERDRAFT LIMITS

Grand Total	1,571.5	1,651.4	1,732.8	1,762.7	1,821.4	1,863.5	1,900.5
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8. Bank Advances and Fixed Deposits, by Rate of Interest—Major Trading Banks.—
(i) *Classification of Advances by Rate of Interest.* The following table shows the proportions of total advances at each rate of interest at the end of June, 1961, to June, 1964.

MAJOR TRADING BANKS: ADVANCES BY RATE OF INTEREST(a)

Source: Reserve Bank of Australia

(Proportion at each Rate to Total—Per cent.)

Interest rate per annum	At end of—			
	June, 1961	June, 1962	June, 1963	June, 1964
5 per cent. and less	10.3	10.8	11.7	10.9
More than 5 per cent. but less than 5½ per cent. ..	9.1	9.8	10.9	2.4
5½ per cent.	6.8	6.3	7.9	8.0
More than 5½ per cent. but less than 6 per cent. ..	9.9	9.1	10.6	6.4
6 per cent.	19.6	17.9	22.3	12.3
More than 6 per cent. but less than 6½ per cent. ..	5.2	4.7	7.6	6.9
6½ per cent.	17.4	18.0	29.0	21.4
More than 6½ per cent. but less than 7 per cent. ..	3.7	3.4	..	4.9
7 per cent.	18.0	20.0	..	26.7
Total	100.0	100.0	100.0	100.0

(a) Excludes term loans.

NOTE.—On 17th November, 1960, the maximum rate chargeable on advances was increased to 7 per cent., but the average rate of interest on all advances was not to exceed 6 per cent. The maximum average rate requirement was discontinued on 13th April, 1962. The maximum rate chargeable on advances was reduced from 7 per cent. per annum to 6½ per cent. per annum on 1st April, 1963, and was raised to 7 per cent. per annum on 27th April, 1964.

(ii) *Classification of Fixed Deposits by Rate of Interest.* The following table shows the proportions of total fixed deposits at each rate of interest at the end of June, 1961, to June, 1964.

MAJOR TRADING BANKS: FIXED DEPOSITS(a), BY RATE OF INTEREST

Source: Reserve Bank of Australia

(Proportion at each Rate to Total—Per cent.)

Interest rate per annum	At end of—			
	June, 1961	June, 1962	June, 1963	June, 1964
2½	2.2	..	..	..
3 .. .. .	..	..	..	0.2
3½ .. .. .	..	..	17.6	5.6
3¾	34.2	7.2	20.5	51.1
4 .. .. .	..	17.1	4.0	20.7
4½	21.6	26.5	57.9	22.4
4¾ .. .. .	..	47.9	..	..
4⅞	42.0	1.3	..	..
Total	100.0	100.0	100.0	100.0

(a) Excludes Commonwealth and State Government fixed deposits.

9. Interest on Deposits: Rates—Cheque-paying Banks.—Particulars of interest rates since 1956 for cheque-paying bank fixed deposits are shown in the following table.

CHEQUE-PAYING BANK FIXED DEPOSIT RATES: AUSTRALIA

(Per cent. per annum)

Date from which operative	Deposits for—			
	Three months	Six months	Twelve months	Twenty-four months
15th March, 1956	2½	2½	2½	3
4th December, 1956	2½	2½	2½	3½
17th November, 1960	4(a)		4½	(b)
1st July, 1961	4(a)		4½	(b)
13th April, 1962	3¾(a)		4	(b)
1st April, 1963	3½(a)		3½(c)	(c)
8th April, 1964	3¾(d)		4	(c)
29th September, 1964	3¾(d)		4(e)	4½(f)
3rd March, 1965	4½(d)		4½(e)	4½(f)

(a) Three months but less than twelve months. (b) The maximum period for fixed deposits was 12 months. (c) From 10th September, 1962, banks were permitted to accept fixed deposits for periods up to 15 months at 3½ per cent. (d) From 8th April, 1964, banks were permitted to accept fixed deposits in excess of £50,000 only, for periods of 30 days but less than 3 months at rates not exceeding 3½ per cent.; from 3rd March, 1965, 4½ per cent. (e) As from 29th September, 1964, banks were permitted to accept fixed deposits for periods from 12 to 18 months. (f) Over 18 months to 24 months.

10. Debits to Customers' Accounts—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 (including the Rural Credits Department of the Reserve Bank and the Commonwealth Development Bank) are shown for each State for the years 1959–60 to 1963–64. 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.

CHEQUE-PAYING BANKS: AVERAGE WEEKLY DEBITS TO CUSTOMERS' ACCOUNTS

(Excluding debits to Commonwealth and State Government accounts in capital cities)
(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1959-60 ..	296,295	264,561	79,172	53,374	34,852	15,483	942	2,678	747,357
1960-61 ..	322,466	282,936	81,901	58,011	37,839	16,236	1,020	3,363	803,772
1961-62 ..	326,995	295,018	82,181	58,088	40,178	16,040	1,105	3,951	823,556
1962-63 ..	356,556	325,271	92,569	65,803	44,118	17,534	1,250	5,086	908,187
1963-64 ..	412,389	366,595	106,600	77,539	48,192	18,531	1,388	5,731	1,036,965

11. **Trading Bank Charges.**—As from October, 1962, the trading banks instituted a system of charges on current accounts, and abolished the interstate exchange rates obtaining prior to this date. Details of interstate exchange rates prior to October, 1962, may be found in Year Book No. 48, page 785.

Charges on current account comprise a basic maintenance fee, a ledger activity fee and a cheque collection fee, each calculated on a quarterly basis and debited as a composite item to accounts four times a year. Details of these charges are shown below.

Quarterly Charge.

- (a) *Basic maintenance current account fee, 5s. quarterly (non-rebatable).*
- (b) *Ledger activity fee.* Up to $\frac{1}{2}$ folio (20 entries), 2s. 6d.; over $\frac{1}{2}$ folio to 1 folio, 7s. 6d.; over 1 folio to 2 folios, £1; over 2 folios to 3 folios, £2 5s.; over 3 folios to 4 folios, £3 10s.; over 4 folios to 5 folios, £4 15s.; over 5 folios to 6 folios, £6; over 6 folios to 7 folios, £7; over 7 folios to 15 folios, £7 plus 17s. 6d. per folio or part thereof exceeding 7; over 15 folios to 35 folios, £14 plus 15s. per folio or part thereof exceeding 15; over 35 folios, £29 plus 10s. per folio or part thereof exceeding 35. Rebates will be allowed for minimum quarterly credit balances as follows:—£300, 1 free folio; £600, 2 free folios; £1,000, 3 free folios; £1,600, 4 free folios; £2,500, 5 free folios; thereafter 1 additional free folio for each £500 minimum credit balance. Where rebates are applicable, the number of free folios will be deducted before the activity fee is calculated.
- (c) *Collection fee on cheques, etc., deposited.* Up to 20 cheques per quarter, free; 21 to 100, 5s. plus 2s. 6d. per ten cheques or part thereof exceeding 20; 101 to 500, £1 5s. plus 12s. 6d. per each 50 or part thereof exceeding 100; 501 to 1,000, £6 5s. plus £1 5s. for each 100 or part thereof exceeding 500; 1,001 to 10,000, £12 10s. plus £6 per each 500 or part thereof exceeding 1,000; 10,001 to 50,000, £120 plus £7 10s. per each 1,000 or part thereof exceeding 10,000; 50,001 to 100,000, £425 plus £25 per each 5,000 or part thereof exceeding 50,000; 100,001 to 150,000, £675 plus £40 per each 10,000 or part thereof exceeding 100,000; over 150,000, £875 plus £30 per each 20,000 or part thereof exceeding 150,000.

§ 5. Savings Banks

1. **Savings Banks in Australia.**—(i) *General.* For information on the origin of savings banks in Australia and the facilities currently available, see Year Book No. 46, page 779 and earlier issues.

All savings banks, including trustee savings banks, but not State savings banks, are subject to the *Banking Act 1959*. Details of this Act and the special provisions applying to savings banks are given in Year Book No. 46, pages 759-60.

(ii) *Commonwealth Savings Bank*. The Commonwealth Savings Bank of Australia was established as a separate institution on 9th June, 1928, having functioned previously as a department of the Commonwealth Bank (for particulars of the origin of the Savings Bank Department and the extension of its services see Year Book No. 46, page 782, and earlier issues). 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. Under the provisions of the *Commonwealth Banks Act 1959-61*, which came into operation on 14th January, 1960, the Commonwealth Savings Bank was maintained in the same form, but was placed under the control of the Commonwealth Banking Corporation (see also para. 2 (i) (c), p, 818).

(iii) *State Savings Banks*. 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 Savings Bank Division of The Rural and Industries Bank of Western Australia (1956).

(iv) *Trustee Savings Banks*. Two trustee savings banks, The Hobart Savings Bank and Launceston Bank for Savings, operate within Tasmania. These banks commenced business in 1845 and 1835 respectively.

(v) *Private Savings Banks*. The Bank of New South Wales Savings Bank Ltd. and the Australia and New Zealand Savings Bank Ltd. commenced business on 19th January, 1956, the C.B.C. Savings Bank Ltd. on 16th July, 1956, the E.S. and A. Savings Bank Ltd. on 29th September, 1961, the Bank of Adelaide Savings Bank Ltd. and The National Bank Savings Bank Ltd. on 31st May, 1962, and The Commercial Savings Bank of Australia Ltd. on 2nd July, 1962.

2. Branches and Agencies.—The number of branches and agencies in Australia of the various savings banks at 30th June, 1964, are given in the following table.

SAVINGS BANKS: NUMBER OF BRANCHES AND AGENCIES AT 30th JUNE, 1964

Bank	Branches	Agencies
Commonwealth Savings Bank	870	7,889
Australia and New Zealand Savings Bank Ltd.	538	684
The Bank of Adelaide Savings Bank Ltd.	89	93
Bank of New South Wales Savings Bank Ltd.	809	3,015
The Commercial Savings Bank of Australia Ltd.	450	290
C.B.C. Savings Bank Ltd.	428	93
E.S. & A. Savings Bank Ltd.	381	122
The National Bank Savings Bank Ltd.	670	301
The State Savings Bank of Victoria	461	664
The Savings Bank of South Australia	121	739
The Rural and Industries Bank of Western Australia	47	250
Launceston Bank for Savings	22	50
The Hobart Savings Bank	20	20
Total	4,906	14,210

3. Balance-Sheets.—Liabilities and assets of individual savings banks at balance dates in 1964 and for all savings banks in 1963 are shown in the following tables. The information for the Commonwealth Savings Bank, the trustee savings banks and the private savings banks has been obtained from the annual returns lodged with the Commonwealth Statistician under section 53 of the *Banking Act 1959*, whereas that for State savings banks has been compiled from information published in their annual reports.

SAVINGS BANKS: LIABILITIES(a)

(£'000)

Bank	Paid-up capital	Reserve funds (used in the business of the bank)	Balance of profit and loss account	Total shareholders' funds	Depositors' balances	Balances due to other banks	Bills payable and all other liabilities including provisions for contingencies	Total liabilities
1964—								
Commonwealth Savings Bank of Australia ..	..	13,703	..	b 13,703	1,031,316	1,138	36,991	1,083,148
State Savings Banks(c)—								
The State Savings Bank of Victoria(d) ..	..	12,239	616	b 12,855	389,934	..	19,107	421,896
The Savings Bank of South Australia ..	..	10,590	166	b 10,756	152,136	1,189	140	164,221
<i>Total, State Savings Banks</i>	..	22,829	782	b 23,611	542,070	1,189	19,247	586,117
Trustee Savings Banks—								
The Hobart Savings Bank	..	900	58	b 958	18,743	..	75	19,776
Launceston Bank for Savings .. ..	..	910	54	b 964	15,631	8	104	16,707
<i>Total, Trustee Savings Banks</i>	..	1,810	112	b 1,922	34,374	8	179	36,483
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd.	2,008	1,400	254	3,662	140,315	..	4,981	148,958
The Bank of Adelaide Savings Bank Ltd. ..	500	50	27	577	7,591	..	131	8,299
Bank of New South Wales Savings Bank Ltd. ..	2,500	2,250	632	5,382	289,825	..	8,550	303,757
Commercial Savings Bank of Australia Ltd. ..	1,000	75	89	1,164	36,562	..	380	38,106
C.B.C. Savings Bank Ltd.	1,000	925	99	2,024	84,951	..	1,932	88,907
E.S. & A. Savings Bank Ltd.	500	250	57	807	39,313	..	671	40,791
The National Bank Savings Bank Ltd. ..	1,000	100	198	1,298	64,677	..	980	66,955
<i>Total, Private Savings Banks</i>	8,508	5,050	1,356	14,914	663,234	..	17,625	695,773
<i>Total, All Savings Banks, 1964</i>	8,508	43,392	2,250	54,150	2,270,994	2,335	74,042	2,401,521
<i>Total, All Savings Banks, 1963</i>	8,508	38,617	1,637	48,762	2,002,296	1,490	60,051	2,112,599

(a) At various balance-sheet dates during 1964—see table on p. 850.

(b) Total reserve funds.

(c) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia.

(d) Includes Crédit Foncier Department.

SAVINGS BANKS: ASSETS(a)

(£'000)

Bank	Coin, bullion and notes	Deposits with Reserve Bank	Deposits in Australia with trading banks	Money at short call overseas	Australian public securities			Other public securities
					Commonwealth and States		Local and semi-governmental authorities	
					Treasury bills and Treasury notes	Other securities		
1964—								
Commonwealth Savings Bank of Australia	1,650	119,755	17,217	..	4,544	554,776	123,823	555
State Savings Banks(b)—								
The State Savings Bank of Victoria(c)	2,216	24,237	22,134	..	..	109,505	131,081	..
The Savings Bank of South Australia ..	(d)	(d)	17,302	..	..	63,250	28,839	..
<i>Total, State Savings Banks ..</i>	<i>2,216</i>	<i>24,237</i>	<i>39,436</i>	<i>..</i>	<i>..</i>	<i>172,755</i>	<i>159,920</i>	<i>..</i>
Trustee Savings Banks—								
The Hobart Savings Bank ..	48	200	1,346	..	..	3,500	8,663	..
Launceston Bank for Savings ..	31	50	1,451	..	..	4,299	4,871	..
<i>Total, Trustee Savings Banks..</i>	<i>79</i>	<i>250</i>	<i>2,797</i>	<i>..</i>	<i>..</i>	<i>7,799</i>	<i>13,534</i>	<i>..</i>
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd. ..	..	14,075	2,767	..	..	46,801	47,629	209
The Bank of Adelaide Savings Bank Ltd. ..	..	775	141	..	..	2,922	1,342	..
Bank of New South Wales Savings Bank Ltd.	1,000	29,000	3,947	..	250	109,136	77,399	757
Commercial Savings Bank of Australia Ltd. ....	..	3,700	658	..	..	15,068	9,612	..
C.B.C. Savings Bank Ltd. ....	..	8,409	1,453	..	300	43,612	16,961	..
E.S. & A. Savings Bank Ltd.	4	4,135	1,325	..	..	15,867	10,744	..
The National Bank Savings Bank Ltd. ..	..	6,700	1,754	..	..	27,022	19,785	..
<i>Total, Private Savings Banks..</i>	<i>1,004</i>	<i>66,794</i>	<i>12,045</i>	<i>..</i>	<i>550</i>	<i>260,428</i>	<i>183,472</i>	<i>966</i>
<i>Total, All Savings Banks, 1964 ..</i>	<i>4,949</i>	<i>211,036</i>	<i>71,495</i>	<i>..</i>	<i>5,094</i>	<i>995,758</i>	<i>480,749</i>	<i>1,521</i>
<i>Total, All Savings Banks, 1963 ..</i>	<i>4,398</i>	<i>182,026</i>	<i>64,640</i>	<i>..</i>	<i>1,655</i>	<i>919,956</i>	<i>424,054</i>	<i>1,412</i>

Table continued on next page.

(a) For dates of balance-sheets see table on p. 850. (b) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (c) Includes Crédit Foncier Department. (d) Not available. Included in Deposits in Australia with trading banks.

SAVINGS BANKS: ASSETS(a)—continued

(£'000)

Bank	Other securities	Loans to authorized dealers in the short-term money market	Cheques and bills of other banks and balances with and due from other banks	Loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted (after deducting provisions for debts considered bad or doubtful)	Bank premises, furniture and sites	Bills receivable and remittances in transit	All other assets	Total assets
1964—								
Commonwealth Savings Bank of Australia ..	..	6,654	483	226,237	16,999	78	10,377	1,083,148
State Savings Banks(b)—								
The State Savings Bank of Victoria(c)	..	3,655	..	117,543	6,100	..	5,425	421,896
The Savings Bank of South Australia ..	..	2,650	..	48,468	2,217	(d)	1,495	164,221
<i>Total, State Savings Banks</i> ..	..	6,305	..	166,011	8,317	..	6,920	586,117
Trustee Savings Banks—								
The Hobart Savings Bank ..	..	940	42	4,343	407	1	286	19,776
Launceston Bank for Savings ..	..	825	16	4,552	400	..	212	16,707
<i>Total, Trustee Savings Banks</i> ..	..	1,765	58	8,895	807	1	498	36,483
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd. ..	2,050	1,503	231	32,402	..	..	1,294	148,958
The Bank of Adelaide Savings Bank Ltd. ..	..	500	..	2,320	240	..	59	8,299
Bank of New South Wales Savings Bank Ltd. ..	..	2,900	3,124	71,749	1,750	..	2,745	303,757
Commercial Savings Bank of Australia Ltd. ..	..	450	..	8,269	..	..	349	38,106
C.B.C. Savings Bank Ltd. ..	..	..	..	17,621	..	..	551	88,907
E.S. & A. Savings Bank Ltd. ..	..	300	..	7,937	81	..	398	40,791
The National Bank Savings Bank Ltd. ..	..	800	..	10,336	..	..	558	66,955
<i>Total, Private Savings Banks</i> ..	2,050	6,450	3,355	150,634	2,071	..	5,954	695,773
<i>Total, All Savings Banks, 1964</i> ..	2,050	21,174	3,896	551,777	28,194	79	23,749	2,401,521
<i>Total, All Savings Banks, 1963</i> ..	1,450	21,559	3,064	440,588	25,621	472	21,704	2,112,599

(a) For dates of balance-sheets see table on p. 850. (b) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (c) Includes Crédit Foncier Department. (d) Not available. Included in All other assets.

4. Profit and Loss Accounts.—Details of the profit and loss accounts of all savings banks are given below for the years 1963 and 1964.

SAVINGS BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS AND DIVIDENDS

(£'000)

Bank	Year ended	Profit and loss			
		Net earnings (a)	Expenses (b)	Income, land and other taxes and payments in lieu of taxes	Net profit
1964—					
Commonwealth Savings Bank of Australia ..	30.6.64	17,968	13,578	199	4,191
State Savings Banks(c)—					
The State Savings Bank of Victoria(d) ..	30.6.64	8,841	6,758	n.a.	2,083
The Savings Bank of South Australia ..	30.6.64	2,239	1,693	n.a.	546
<i>Total, State Savings Banks</i> .. ..	..	11,080	8,451	n.a.	2,629
Trustee Savings Banks—					
The Hobart Savings Bank	31.8.64	329	211	10	108
Launceston Bank for Savings	31.8.64	287	193	7	87
<i>Total, Trustee Savings Banks</i> .. ..	..	616	404	17	195
Private Savings Banks—					
Australia and New Zealand Savings Bank Ltd. ..	30.9.64	2,482	1,362	575	545
The Bank of Adelaide Savings Bank Ltd. ..	30.9.64	133	75	13	45
Bank of New South Wales Savings Bank Ltd. ..	30.9.64	5,416	3,455	865	1,096
Commercial Savings Bank of Australia Ltd. ..	30.6.64	558	354	88	116
C.B.C. Savings Bank Ltd.	30.6.64	1,576	808	356	412
E.S. & A. Savings Bank Ltd.	30.6.64	688	358	156	174
The National Bank Savings Bank Ltd. ..	30.9.64	1,107	757	170	180
<i>Total, Private Savings Banks</i> .. ..	..	11,960	7,169	2,223	2,568
Total, All Savings Banks, 1964 .. ..	..	41,624	29,602	2,439	9,583
.. 1963(e) .. ..	..	33,604	24,983	1,546	7,075

Table continued on next page.

(a) Discount and interest earned, net exchange, commissions and other items (including transfers from contingencies accounts), after deducting interest paid and accrued on deposits, rebate on bills current at balance date, amounts written off assets, and losses on realization of assets and transfers to the credit of contingencies accounts (out of which accounts provisions for all bad and doubtful debts have been made). (b) Includes directors' fees. (c) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (d) Includes Crédit Foncier Department. (e) Balancing dates as in 1964.

SAVINGS BANKS: PROFIT AND LOSS, APPROPRIATION OF PROFITS AND DIVIDENDS—continued

(£'000)

Bank	Year ended	Profits appropriated to—						
		Reserve funds (a)	Written off bank premises	Other appropriations	Dividends(b)			
					Gross	British income taxes payable by bank and recouped from shareholders	Net	Rate per annum per cent.
1964—								
Commonwealth Savings Bank of Australia	30.6.64	1,239	508	(c)2,445	..	..	..	..
State Savings Banks(d)—								
The State Savings Bank of Victoria(e)	30.6.64	1,442	413	..	..	..	..	..
The Savings Bank of South Australia	30.6.64	550	(f)	..	..	..	..	..
<i>Total, State Savings Banks ..</i>	..	1,992	413	..	..	..	..	..
Trustee Savings Banks—								
The Hobart Savings Bank ..	31.8.64	75	19	15	..	..	..	..
Launceston Bank for Savings ..	31.8.64	40	45	2	..	..	..	..
<i>Total, Trustee Savings Banks ..</i>	..	115	64	17	..	..	..	..
Private Savings Banks—								
Australia and New Zealand Savings Bank Ltd.	30.9.64	284	..	..	241	..	241	12.0
The Bank of Adelaide Savings Bank Ltd.	30.9.64	25	..	..	..	..	..	..
Bank of New South Wales Savings Bank Ltd.	30.9.64	500	152	..	250	..	250	10.0
Commercial Savings Bank of Australia Ltd.	30.6.64	75	..	..	..	..	..	..
C.B.C. Savings Bank Ltd. ..	30.6.64	300	..	..	100	..	100	10.0
E.S. & A. Savings Bank Ltd. ..	30.6.64	150	..	..	..	..	..	..
The National Bank Savings Bank Ltd.	30.9.64	100	..	..	..	..	..	..
<i>Total, Private Savings Banks ..</i>	..	1,434	152	..	591	..	591	..
Total, All Savings Banks, 1964	..	4,780	1,137	2,462	591	..	591	..
" " " " 1963(g)	..	3,242	919	1,420	401	46	323	..

(a) Excludes accumulated profits and profit and loss accounts. (b) Dividends paid or payable out of profits earned during year. (c) Provisions for settlements under Savings Bank Amalgamation Agreements, £1,206,000 and Commonwealth of Australia, £1,239,000. Under the terms of the Savings Bank Amalgamation Agreements relating to the absorption of the State savings banks by the Commonwealth Bank, the profits of the Commonwealth Savings Bank in New South Wales and Queensland are equally divided between the Bank and the former controlling authorities in those States. (d) Excludes Savings Bank Division of the Rural and Industries Bank of Western Australia. (e) Includes Crédit Foncier Department. (f) Included in expenses. (g) Balancing dates as in 1964.

5. **Number of Operative Accounts.**—The following table shows the number of operative savings bank accounts in existence at the end of June, 1963 and 1964. It should be noted that these figures relate to the number of accounts and not necessarily to the number of depositors.

SAVINGS BANKS: NUMBER OF OPERATIVE ACCOUNTS(a)

State or Territory	End of June(b)—	
	1963	1964
New South Wales	3,562,105	3,817,406
Victoria	3,202,956	3,417,611
Queensland	1,344,538	1,447,600
South Australia	1,104,406	1,181,512
Western Australia	683,417	736,009
Tasmania	349,676	362,999
Northern Territory	21,989	25,338
Australian Capital Territory	53,980	62,887
Australia	10,323,067	11,051,362

(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. (b) Private savings banks at last Wednesday in June, Launceston Bank for Savings at last Monday in June, other savings banks at end of June.

6. **Business Transacted.**—The following table shows details of the business transacted in Australia by savings banks during the years ended 30th June, 1963 and 1964.

SAVINGS BANKS: BUSINESS TRANSACTED IN AUSTRALIA

(£'000)

State or Territory	1962-63(a)				1963-64(a)			
	Deposits during year	Withdrawals during year (b)	Interest added to accounts during year (b)	De-positors' balances at end of June, 1963	Deposits during year	Withdrawals during year (b)	Interest added to accounts during year (b)	De-positors' balances at end of June, 1964
New South Wales	832,615	774,819	21,181	703,998	954,863	887,908	20,653	791,606
Victoria	791,289	731,548	18,441	649,031	930,416	858,117	18,154	739,484
Queensland	274,342	252,087	7,069	235,176	323,855	294,904	7,049	271,176
South Australia	245,078	224,446	6,456	208,078	289,817	266,327	6,334	237,902
Western Australia	129,066	118,216	3,028	104,406	153,071	140,661	3,067	119,883
Tasmania	54,844	51,465	1,819	56,428	62,658	58,466	1,765	62,385
Northern Territory	5,593	5,281	99	3,496	6,536	6,086	98	4,044
Australian Capital Territory	15,664	14,019	257	9,233	20,240	18,112	283	11,644
Australia	2,348,491	2,171,881	58,350	1,969,846	2,741,456	2,530,581	57,403	2,238,124

(a) See footnote (b) to table above.

(b) Includes inter-branch transfers.

7. **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, 1960 to 1964, are shown in the following table. Deposit stock and non-interest bearing cheque accounts at the State Savings Bank of Victoria and the Savings Bank of South Australia and fixed deposit accounts at the Trustee Savings Banks in Tasmania are included in the depositors' balances shown below. Separate details are not available.

SAVINGS BANKS: DEPOSITORS' BALANCES IN AUSTRALIA

End of June— (a)	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	A.C.T.	Australia
AMOUNT (£'000)									
1960..	541,572	499,592	182,586	165,998	78,623	46,355	2,582	5,396	1,522,704
1961..	569,151	517,468	187,131	166,743	80,712	47,388	2,726	6,132	1,577,451
1962..	625,021	570,849	205,852	180,990	90,528	51,230	3,085	7,331	1,734,886
1963..	703,998	649,031	235,176	208,078	104,406	56,428	3,496	9,233	1,969,846
1964..	791,606	739,484	271,176	237,902	119,883	62,385	4,044	11,644	2,238,124

PER HEAD OF POPULATION

(£)									
1960..	141.3	174.8	122.1	175.6	108.9	134.8	101.0	103.1	148.2
1961..	145.3	176.6	123.2	172.0	109.6	135.3	100.6	104.2	150.1
1962..	157.2	190.8	133.4	182.9	120.0	143.5	111.0	111.6	162.1
1963..	173.9	212.4	150.2	206.2	135.2	156.2	118.8	125.7	180.5
1964..	192.3	236.2	170.7	230.6	151.8	171.1	125.1	144.8	201.0

(a) See footnote (b) to table in para. 5, p. 852.

8. **Cheque Accounts.**—At most savings banks, cheque accounts are available to non-profit organizations such as friendly, co-operative and charitable societies. Similar facilities are also available to other depositors at the State Savings Bank of Victoria and the Savings Bank of South Australia. Details of the transactions on these accounts during the year ended June, 1964 (excluding the Savings Bank of South Australia), together with the number of operative accounts and the amount on deposit at the end of June, 1964, were as follows:—deposits during the year, £573.3 million; withdrawals during the year £568.0 million; interest added during the year, £1.0 million; amount on deposit at end of year, £61.1 million; number of operative accounts at the end of year, 270,132. These figures are included in the statistics in previous paragraphs.

9. **School Banking.**—With the object of encouraging principles of thrift among children, agencies of the savings banks have been established at most of the schools throughout Australia. Particulars of operative accounts within Australia at the end of June, 1960 to 1964, appear below.

SCHOOL SAVINGS BANKS: AUSTRALIA

End of June(a)—	Number of school agencies	Number of operative accounts	Deposits	Deposits per operative account
			£	£
1960..	8,154,973	7.3
1961..	8,658,753	7.4
1962..	9,224,645	7.6
1963..	9,665,287	7.7
1964..	10,186,878	7.9

(a) See footnote (b) to table in para. 5, p. 852.

10. Assets.—The assets within Australia of all savings banks at the end of June, 1963 and 1964 are shown in the following table. In the table in paragraph 3, pages 848-9, assets are shown at balance-sheet dates which are not in June for some banks. In addition, the table on pages 848-9 excludes statistics for the Savings Bank Division of the Rural and Industries Bank of Western Australia, which are included in the table below.

SAVINGS BANKS: ASSETS WITHIN AUSTRALIA(a)

(£'000)

Particulars	End of June (b)—	
	1963	1964
Coin, bullion and Australian notes	4,736	5,064
Deposits with Reserve Bank	183,116	215,102
Deposits in Australia with trading banks	59,517	61,534
Australian public securities—		
Commonwealth and States (including Treasury bills and Treasury notes)	913,596	997,173
Local government and semi-governmental authorities	417,761	477,779
Other securities	1,126	1,700
Loans to authorized dealers in the short-term money market	19,505	17,104
Cheques and bills of other banks and balances with and due from other banks	180	278
Loans, advances and bills discounted—		
Housing	396,970	498,906
Other	40,352	48,002
Bank premises, furniture and sites	26,055	28,607
Bills receivable and all other assets	6,894	7,708
Total	2,069,808	2,358,957

(a) Includes assets in Papua, New Guinea and Norfolk Island.
para. 5, p. 852.

(b) See footnote (b) to table

11. 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 the classification at 30th June, 1960 to 1964, of the combined deposits for The State Savings Bank of Victoria and The Savings Bank of South Australia is shown below.

STATE SAVINGS BANKS: CLASSIFICATION OF DEPOSITS

(Per cent.)

30th June—					£500 and under	£501-£1,000	Over £1,000
1960					36.43	24.24	39.33
1961					(a)	(b) 59.66	40.34
1962					(a)	(b) 57.31	42.69
1963					(a)	(b) 54.41	45.59
1964					(a)	(b) 51.89	48.11

(a) Not available separately.

(b) £1-£1,000.

12. Rates of Interest on Deposits.—The following table shows the rates of interest allowed by savings banks at 30th June, 1960 to 1964.

SAVINGS BANKS: INTEREST RATES ON DEPOSITS(a)
(Per cent. per annum)

Size of account	Interest rates at 30th June—				
	1960	1961	1962	1963	1964
Ordinary accounts(b)—					
£1 to £1,000	3	3½	3½	3	3½
£1,001 to £1,500	3	3½	3½	3	3½
£1,501 to £2,000	3	3½	3½	3	3½
£2,001 to £2,500 .. .. .	..	3½	3½	3	3½
£2,501 to £3,000 .. .. .	..	..	3½	3	3½
Friendly and other society accounts—					
£1 to £2,000	3	3½	3½	3	3½
£2,001 to £2,500	1½	3½	3½	3	3½
£2,501 to £3,000	1½	1½	3½	3	3½
£3,001 and over	1½	1½	2	1½	1½

(a) Rates allowed by the Commonwealth Savings Bank, private savings banks and The State Savings Bank of Victoria. Trustee savings banks and The Savings Bank of South Australia allow slightly higher rates of interest. (b) No interest is payable on amounts in excess of the maximum amount shown.

The rate for ordinary accounts was increased to 3½ per cent. from 1st April, 1965. This applies also to friendly and other society accounts up to the maximum of £3,000; over that the rate of 1½ per cent. is still applicable.

13. 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 Year Book (see No. 37, page 586), were discontinued after 31st January, 1949, except for some sales made to wind up savings groups, etc. The total value of war savings and savings certificates outstanding at 30th June in each of the last five years was:—1960, £8,205,000; 1961, £5,989,000; 1962, £2,529,000; 1963, £1,796,000; 1964, £1,385,000.

§ 6. Rates of Exchange

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 overseas countries are shown. Generally, the averages, which are averages of daily quotations, are based on rates quoted by the Commonwealth Trading Bank. Where these were not available, rates used by the Department of Customs and Excise in converting import values to £A. for purposes of calculating customs duty are shown.

OVERSEA EXCHANGE RATES: PAR OF EXCHANGE AND AVERAGE TELEGRAPHIC TRANSFER SELLING RATES FOR SYDNEY ON OVERSEA COUNTRIES

Country	Basis of quotation	Par of exchange (a)	Selling rate, 1963-64	Country	Basis of quotation	Par of exchange (a)	Selling rate, 1963-64
Belgium ..	Francs to £A.1 ..	112.000	110.510	Netherlands ..	Guilders to £A.1	8.109	8.000
Canada ..	Dollars to £A.1 ..	2.422	2.405	New Zealand ..	£A. to £NZ.100 ..	124.147	124.538
Ceylon ..	Pence A. to Rupee	22.500	22.790	Norway ..	Kroner to £A.1 ..	16.000	15.850
Denmark ..	Kroner to £A.1 ..	15.472	15.310	Pakistan ..	Pence A. to Rupee	22.500	22.710
Fiji ..	£A. to £F.100 ..	112.613	113.000	Portugal ..	Escudos to £A.1	64.400	63.880
Finland ..	Markkas to £A.1	(b)7.168	7.164	Singapore ..	Pence A. to Dollar	35.000	35.216
France ..	New Francs to £A.1	11.059	10.876	South Africa ..	Rands to £A.1 ..	1.600	1.590
French Oceania	Francs to £A.1 ..	201.073	196.000	Sweden ..	Kroner to £A.1 ..	11.588	11.468
Germany, Fed.	Deutsche Marks to			Switzerland ..	Francs to £A.1 ..	(d)	9.594
Rep. of ..	£A.1 ..	8.960	8.821	United Arab			
Hong Kong ..	Pence A. to Dollar	18.750	18.923	Republic ..	£E. to £A.1 ..	0.780	0.956
India ..	Pence A. to Rupee	22.500	22.710	United Kingdom	£A. to £Stg.100	125.000	125.500
Indonesia ..	Rupiahs to £A.1	(c)	99.600	United States of			
Italy ..	Lire to £A.1 ..	1,400.000	1,380.000	America ..	Dollars to £A.1 ..	2.240	2.227
Japan ..	Yen to £A.1 ..	806.399	803.200	U.S.S.R. ..	Roubles to £A.1 ..	(d)	2.008

(a) As at 30th June, 1964, established under International Monetary Fund Agreement. (b) On 1st January, 1963, the Markka was revalued on basis of 1 new Markka = 100 old Markkas. (c) No par value established. (d) Not a member of International Monetary Fund.

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 1932–1960* requiring the lodgment of deposits by insurance companies, and the *Life Insurance Act 1945–1961* generally regulating life insurance business in Australia. The *Marine Insurance Act 1909* and the *Insurance Act 1932–1960* have limited application, and, except for life insurance business, which is regulated by the *Life Insurance Act 1945–1961*, insurance business is conducted almost entirely under State laws.

2. **Insurance Act 1932–1960.**—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 business under the Act:—

Staff superannuation schemes; schemes of religious organizations solely for insurance of their property; 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 1945–1961*, ceased to apply to life insurance business.

3. **Life Insurance Act 1945–1961.**—The objects of this Act are:—(a) to replace all State legislation on the subject of life insurance, except that relating to the life insurance operations of State insurance offices within the State concerned, 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 insurance 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 Year Book No. 37, pages 595–7.

The provisions of the Act relating to the establishment of a Commonwealth Government Insurance Office were repealed under the *Life Insurance Act 1953*.

4. **Deposits under Insurance Acts.**—Deposits lodged under the Insurance Acts at 30th June, 1964, totalled £15,272,095, comprising £1,925,950 held by the Commonwealth in respect of life insurance, and £13,336,115 held by the Commonwealth and £10,030 held by the State of New South Wales in respect of other forms of insurance. The deposits consisted of Commonwealth Government securities £9,391,290, United Kingdom Government securities £558,050, fixed deposits £129,870, bank guarantees and undertakings £3,848,000, corporation debentures and stock £397,660, titles and mortgages £897,225, and cash £50,000.

§ 2. Life Insurance

1. **General.**—Since 1947 returns lodged under the *Life Insurance Act 1945–1961* have been used to compile life insurance statistics. Except where otherwise indicated, the figures in the succeeding paragraphs refer only to Australian business. Business in the Territories of Papua and New Guinea is, however, included in the Australian figures.

The information shown has been compiled from returns of life insurance business submitted in the financial years which ended during the year stated.

2. **Offices Transacting Business.**—The number of offices which transacted life insurance business in Australia during 1963 was 43, including 12 overseas companies. Of the 31 Australian offices, 6 are purely mutual, including one which transacts general business in respect of which share capital is used, 23 are public companies, and 2 are State Government institutions. Of the total offices, 30 transacted ordinary business only and the remainder both ordinary and industrial business. Where possible, ordinary, industrial and superannuation business have been kept separate in the following tables.

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 1963.

LIFE INSURANCE: POLICIES EXISTING IN AUSTRALIA, 1963

State or Territory(a)	Insurance and endowment policies				Annuity policies		
	Number of policies	Sum insured (£'000)	Bonus additions (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)

ORDINARY BUSINESS

New South Wales ..	1,231,922	1,292,030	128,063	36,920	989	182	2
Victoria ..	1,002,610	1,183,040	109,978	32,451	884	158	4
Queensland(b) ..	671,983	675,275	67,820	17,452	227	32	..
South Australia(c) ..	412,348	422,661	38,158	11,980	203	26	..
Western Australia ..	284,088	287,794	27,593	8,337	146	22	1
Tasmania ..	129,229	138,006	12,969	3,694	83	15	..
Australian Capital Territory ..	61,970	189,675	10,123	4,061	86	41	..
Australia(b) ..	3,794,150	4,188,481	394,704	114,895	2,618	476	7

INDUSTRIAL BUSINESS

New South Wales ..	1,102,222	150,274	8,281	6,585	..	..	..
Victoria ..	897,899	118,382	6,766	5,125	..	..	..
Queensland(b) ..	370,861	47,687	2,526	2,104	..	..	..
South Australia(c) ..	312,765	36,741	2,033	1,620	..	..	..
Western Australia ..	183,623	23,991	1,310	1,045	..	..	..
Tasmania ..	68,789	8,619	491	371	..	..	..
Australian Capital Territory ..	16,649	2,837	156	125	..	..	..
Australia(b) ..	2,952,808	388,531	21,563	16,975	..	..	..

SUPERANNUATION BUSINESS

New South Wales ..	274,296	220,232	17,752	7,453	358	1,558	456
Victoria ..	120,975	462,019	22,392	10,477	941	3,317	1,258
Queensland(b) ..	61,172	76,907	6,139	2,823	22	53	12
South Australia(c) ..	42,449	68,793	6,204	2,599	50	59	10
Western Australia ..	33,698	51,786	3,415	1,633	26	42	8
Tasmania ..	16,628	33,569	3,129	1,089	33	19	4
Australian Capital Territory ..	58,079	403,069	10,955	6,483	327	7,616	1,413
Australia(b) ..	607,297	1,316,375	69,986	32,557	1,757	12,664	3,161

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

(c) Includes Northern Territory.

The following table shows particulars of policies existing at the end of the years 1959 to 1963 inclusive.

LIFE INSURANCE: POLICIES EXISTING IN AUSTRALIA

At end of year—	Insurance and endowment policies				Annuity policies	
	Number of policies	Sum insured (£'000)	Average sum insured per policy (£)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)
ORDINARY BUSINESS						
1959(a)	3,710,479	3,285,710	886	99,997	5,673	9,762
1960(a)	4,110,289	3,845,171	935	112,280	4,354	10,528
1961	3,580,643	3,373,178	942	97,621	2,754	461
1962	3,690,996	3,771,742	1,022	105,993	2,606	448
1963	3,794,150	4,188,481	1,104	114,895	2,618	476
INDUSTRIAL BUSINESS						
1959	3,443,168	332,539	97	15,532	..	..
1960	3,340,003	342,964	103	15,826	..	..
1961	3,198,822	353,395	110	16,056	..	..
1962	3,075,967	371,740	121	16,563	..	..
1963	2,952,808	388,531	132	16,975	..	..
SUPERANNUATION BUSINESS						
1961	620,848	998,534	1,608	25,584	1,582	11,082
1962	599,514	1,155,113	1,927	29,022	1,689	12,026
1963	607,297	1,316,375	2,168	32,557	1,757	12,664

(a) Includes particulars of superannuation business, available separately commencing 1961.

4. New Policies issued in Australia.—In the following table details are given of new policies issued in each State and the Australian Capital Territory during 1963 for each class of business.

LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1963

State or Territory(a)	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
ORDINARY BUSINESS								
New South Wales ..	107,310	203,831	164	4,898	42	12	92	..
Victoria	89,156	191,920	652	4,359	37	20	122	..
Queensland(b) ..	53,938	102,009	36	2,269	9	4	19	..
South Australia(c) ..	40,457	68,357	29	1,672	9	2	10	..
Western Australia ..	28,475	49,700	13	1,211	8	1	11	1
Tasmania	13,179	21,749	7	520	5	3	17	..
Australian Capital Territory ..	10,935	44,626	10	874	9	6	78	..
Australia(b) ..	343,450	682,192	911	15,803	119	48	349	1

(a) Location of register of policies. (b) Includes Papua and New Guinea. (c) Includes Northern Territory.

LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA, 1963—*continued*

State or Territory(a)	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
INDUSTRIAL BUSINESS								
New South Wales ..	51,491	22,017	..	877	..	..	..	..
Victoria ..	36,007	15,090	..	588	..	..	..	..
Queensland(b) ..	17,624	6,426	..	265	..	..	..	..
South Australia(c) ..	13,444	4,588	..	190	..	..	..	..
Western Australia ..	7,723	3,081	..	124	..	..	..	..
Tasmania ..	3,479	1,307	..	54	..	..	..	..
Australian Capital Territory ..	913	476	..	18	..	..	..	..
Australia(b) ..	130,681	52,985	..	2,116	..	..	..	..
SUPERANNUATION BUSINESS								
New South Wales ..	32,777	38,352	84	1,194	4	190	49	135
Victoria ..	16,119	94,645	815	1,853	117	565	431	166
Queensland(b) ..	7,425	16,186	29	535	..	7	..	1
South Australia(c) ..	4,733	12,944	29	446	1	7	20	1
Western Australia ..	4,780	12,037	27	376	1	4	..	1
Tasmania ..	2,536	5,696	14	169	1	5	..	1
Australian Capital Territory ..	10,929	100,080	610	1,682	31	1,352	40	244
Australia(b) ..	79,299	279,940	1,608	6,255	155	2,130	540	549

(a) Location of register of policies. (b) Includes Papua and New Guinea. (c) Includes Northern Territory.

New policies issued in Australia during each of the years 1959 to 1963 were as shown in the following table.

LIFE INSURANCE: NEW POLICIES ISSUED IN AUSTRALIA

Year	Insurance and endowment policies				Annuity policies			
	Number of policies	Sum insured (£'000)	Premiums		Number of policies	Annuities per annum (£'000)	Premiums	
			Single (£'000)	Annual (£'000)			Single (£'000)	Annual (£'000)
ORDINARY BUSINESS								
1959(a) ..	341,332	598,239	728	15,507	547	1,383	493	422
1960(a) ..	454,018	802,261	903	19,311	(b) -218	2,247	608	660
1961 ..	354,671	603,460	361	14,658	201	53	339	3
1962 ..	334,072	643,078	228	14,990	95	31	251	..
1963 ..	343,450	682,192	911	15,803	119	48	349	1
INDUSTRIAL BUSINESS								
1959 ..	192,524	32,796	..	1,543	..	..	..	..
1960 ..	187,150	39,394	..	1,777	..	..	..	..
1961 ..	176,389	44,106	..	1,906	..	..	..	..
1962 ..	156,316	52,254	..	2,152	..	..	..	..
1963 ..	130,681	52,985	..	2,116	..	..	..	..
SUPERANNUATION BUSINESS								
1961 ..	79,503	225,892	2,857	5,135	52	1,969	865	491
1962 ..	75,459	242,920	922	5,544	161	1,950	604	508
1963 ..	79,299	279,940	1,608	6,255	155	2,130	540	549

(a) Includes particulars of superannuation business, available separately commencing 1961. (b) Net decrease due to cancellation of individual policies and issue of blanket policies.

5. Policies Discontinued or Reduced in Australia.—In the following table, details are given of ordinary, industrial and superannuation life insurance policies discontinued or reduced in each State and the Australian Capital Territory during the year 1963.

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED
IN AUSTRALIA, 1963(a)**

State or Territory(b)	Insurance and endowment policies			Annuity policies		
	Number of policies	Sum insured (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)
ORDINARY BUSINESS						
New South Wales	85,020	99,150	2,657	33	9	..
Victoria	63,301	78,183	1,955	25	7	2
Queensland(c)	38,149	36,193	927	5	..	3
South Australia(d)	26,717	26,530	715	18	2	..
Western Australia	19,813	17,873	473	19	2	..
Tasmania	9,556	10,141	261	8	1	..
Australian Capital Territory	- 2,260	- 2,617	- 87	- 1	..	..
Australia(c)	240,296	265,453	6,901	107	21	5
INDUSTRIAL BUSINESS						
New South Wales	97,467	15,039	706	..	..	..
Victoria	76,501	10,175	481	..	..	..
Queensland(c)	29,406	4,176	194	..	..	..
South Australia(d)	26,983	3,223	156	..	..	..
Western Australia	16,061	2,466	116	..	..	..
Tasmania	6,884	959	44	..	..	..
Australian Capital Territory	538	157	7	..	..	..
Australia(c)	253,840	36,195	1,704	..	..	..
SUPERANNUATION BUSINESS						
New South Wales	24,992	28,674	884	16	273	122
Victoria	28,027	44,818	1,024	36	270	95
Queensland(c)	4,925	5,926	214	2	6	1
South Australia(d)	6,464	5,653	220	6	8	2
Western Australia	4,814	3,229	111	3	4	..
Tasmania	2,720	3,505	97	1	2	..
Australian Capital Territory	- 426	26,873	170	23	930	206
Australia(c)	71,516	118,678	2,720	87	1,493	426

(a) Includes matured, surrendered, forfeited, transfers to other State registers, conversions to other classes of business, etc. (b) Location of register of policies. (c) Includes Papua and New Guinea. (d) Includes Northern Territory.

NOTE.—Minus sign (-) denotes an increase in existing business in the registers concerned due to an excess of transfers from other States, or of conversions from other classes of business over discontinuances in those registers.

Policies discontinued or reduced in Australia during each of the years 1959 to 1963 are shown in the following table.

**LIFE INSURANCE: POLICIES DISCONTINUED OR REDUCED
IN AUSTRALIA(a)**

Year	Insurance and endowment policies			Annuity policies		
	Number of policies	Sum insured (£'000)	Annual premiums (£'000)	Number of policies	Annuities per annum (£'000)	Annual premiums (£'000)
ORDINARY BUSINESS						
1959(b)	207,796	185,917	6,260	6,890	1,106	330
1960(b)	287,031	242,800	7,028	1,267	1,481	486
1961	234,698	240,189	6,959	480	53	1
1962	223,719	244,514	6,618	243	44	3
1963	240,296	265,453	6,901	107	21	5
INDUSTRIAL BUSINESS						
1959	280,182	28,886	1,504	..	..	..
1960	290,315	28,969	1,482	..	..	..
1961	317,570	33,675	1,676	..	..	..
1962	279,171	33,909	1,645	..	..	..
1963	253,840	36,195	1,704	..	..	..
SUPERANNUATION BUSINESS						
1961	108,274	62,622	1,909	(c) - 209	953	267
1962	96,793	86,341	2,106	54	1,007	521
1963	71,516	118,678	2,720	87	1,493	426

(a) See footnote (a) to preceding table. (b) Includes particulars of superannuation business, available separately commencing 1961. (c) Negative amount denotes excess of conversions from other classes of businesses over discontinuances.

The number of policies and sums insured, excluding annuities, discontinued during the years 1959 to 1963 and the causes for discontinuance are given in the following table.

**LIFE INSURANCE POLICIES(a) DISCONTINUED OR REDUCED IN AUSTRALIA:
CAUSE OF DISCONTINUANCE OR REDUCTION(b)**

Year	Death or maturity	Surrender	Forfeiture	Other	Total
Ordinary Business					
NUMBER OF POLICIES					
1959(c)	62,251	92,030	45,413	8,102	207,796
1960(c)	70,539	122,201	58,767	35,524	287,031
1961	64,123	83,834	69,038	17,703	234,698
1962	68,027	81,132	71,538	3,022	223,719
1963	71,274	90,858	71,070	7,094	240,296
SUM INSURED (£'000)					
1959(c)	23,018	77,059	60,150	25,690	185,917
1960(c)	25,989	99,166	77,789	39,856	242,800
1961	23,284	69,393	102,760	44,752	240,189
1962	25,853	72,340	108,344	37,977	244,514
1963	28,064	92,576	114,570	30,243	265,453

NOTE.—For footnotes see next page.

LIFE INSURANCE POLICIES(a) DISCONTINUED OR REDUCED IN AUSTRALIA:
CAUSE OF DISCONTINUANCE OR REDUCTION(b)—*continued*

Year	Death or maturity	Surrender	Forfeiture	Other	Total
Industrial Business					
NUMBER OF POLICIES					
1959	155,108	74,069	50,865	140	280,182
1960	172,026	71,178	47,041	70	290,315
1961	192,833	77,143	47,547	47	317,570
1962	161,387	75,028	41,205	1,551	279,171
1963	139,268	74,481	38,930	1,161	253,840
SUM INSURED (£'000)					
1959	8,200	10,600	10,023	63	28,886
1960	8,996	10,561	9,363	49	28,969
1961	10,593	12,031	11,040	11	33,675
1962	9,103	12,226	12,435	145	33,909
1963	8,236	12,957	14,922	80	36,195
Superannuation Business					
NUMBER OF POLICIES					
1961	9,419	68,415	587	29,853	108,274
1962	9,517	32,848	972	53,456	96,793
1963	9,624	33,544	3,773	24,575	71,516
SUM INSURED (£'000)					
1961	5,822	68,058	2,814	-14,072	62,622
1962	6,583	65,829	3,187	10,742	86,341
1963	7,359	69,067	6,946	35,306	118,678

(a) Excludes annuities. (b) See footnote (a) on p. 860. (c) Includes particulars of superannuation business, available separately commencing 1961.

NOTE.—Minus sign (—) denotes an increase in existing business due to an excess of transfers from overseas registers to Australian registers, or of conversions from other classes of business over discontinuances.

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 1963.

ORDINARY LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS,
1963
(£'000)

State or Territory(a)	Insurance and endowment premiums		Consideration for annuities		Total
	Single premiums	Other premiums	Single premiums	Other premiums	
New South Wales	163	36,574	94	2	36,833
Victoria	713	32,292	124	13	33,142
Queensland(b)	38	17,162	19	..	17,219
South Australia(c)	31	11,889	9	1	11,930
Western Australia	13	8,247	11	1	8,272
Tasmania	6	3,615	17	..	3,638
Australian Capital Territory ..	10	3,736	78	..	3,824
Australia(b)	974	113,515	352	17	114,858

(a) Location of register of policies. (b) Includes Papua and New Guinea. (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 1963.

INDUSTRIAL LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS, 1963

(£'000)

State or Territory(a)	Insurance and endowment premiums		Total
	Single premiums	Other premiums	
New South Wales	6,339	6,339
Victoria	4,995	4,995
Queensland(b)	2,033	2,033
South Australia(c)	1,573	1,573
Western Australia	1,017	1,017
Tasmania	357	357
Australian Capital Territory	116	116
Australia(b)	16,430	16,430

(a) Location of register of policies.

(b) Includes Papua and New Guinea.

(c) Includes Northern Territory.

(c) *Superannuation Business.* Details of revenue from premiums in respect of the superannuation 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 1963.

SUPERANNUATION BUSINESS(a): AUSTRALIAN REVENUE FROM PREMIUMS, 1963

(£'000)

State or Territory(b)	Insurance and endowment premiums		Consideration for annuities		Total
	Single premiums	Other premiums	Single premiums	Other premiums	
New South Wales	104	8,470	62	426	9,062
Victoria	817	11,680	401	1,400	14,298
Queensland(c)	32	2,603	..	13	2,648
South Australia(d)	28	2,553	20	11	2,612
Western Australia	27	1,693	..	21	1,741
Tasmania	14	1,130	..	3	1,147
Australian Capital Territory	655	8,748	30	1,876	11,309
Australia(c)	1,677	36,877	513	3,750	42,817

(a) Prior to 1962, included with ordinary business.

(b) Location of register of policies.

(c) Includes Papua and New Guinea.

(d) Includes Northern Territory.

(d) *Ordinary, Industrial and Superannuation Business.* The following table shows, for each of the years 1959 to 1963, the total Australian income from premiums in respect of ordinary, industrial and superannuation business of all offices doing business in Australia

LIFE INSURANCE: AUSTRALIAN REVENUE FROM PREMIUMS
(£'000)

Year	Ordinary business(a)		Industrial business	Superannuation business		Total all businesses combined
	Insurance and endowment premiums	Con-sideration for annuities		Insurance and endowment premiums	Con-sideration for annuities	
1959	101,749	3,593	15,264	(b)		120,606
1960	113,504	4,133	15,448			133,085
1961	129,184	4,564	15,682	33,645 4,133		149,430
1962	104,736	262	16,142			38,554 4,263	158,918
1963	114,489	369	16,430			174,105

(a) Prior to 1962, includes superannuation business. (b) Included with Ordinary business.

(ii) *Claims, etc., Paid.* Details of the claims, etc., paid on policies in each State and the Australian Capital Territory during the year 1963 are shown in the following table.

LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA, 1963
(£'000)

State or Territory(a)	Claims		Sur- renders	Annuities	Cash bonuses	Total
	Death or disability	Maturity				

ORDINARY BUSINESS

New South Wales	6,135	6,564	5,153	164	161	18,177
Victoria	5,180	5,322	3,657	120	56	14,335
Queensland(b)	2,852	2,499	2,076	27	27	7,481
South Australia(c)	1,741	1,888	1,378	23	22	5,052
Western Australia	1,221	1,229	875	18	20	3,363
Tasmania	537	482	526	12	11	1,568
Australian Capital Territory	571	125	271	29	4	1,000
Australia(b)	18,237	18,109	13,936	393	301	50,976

INDUSTRIAL BUSINESS

New South Wales	434	2,944	1,127	..	..	4,505
Victoria	352	2,958	767	..	..	4,077
Queensland(b)	133	890	351	..	..	1,374
South Australia(c)	106	953	259	..	..	1,318
Western Australia	62	517	184	..	..	763
Tasmania	20	220	82	..	..	322
Australian Capital Territory	3	26	17	..	..	46
Australia(b)	1,110	8,508	2,787	..	..	12,405

(a) Location of register of policies.
Northern Territory.

(b) Includes Papua and New Guinea.

(c) Includes

LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS
IN AUSTRALIA, 1963—*continued*
(£'000)

State or Territory(a)	Claims		Surrenders	Annuities	Cash bonuses	Total
	Death or disability	Maturity				
SUPERANNUATION BUSINESS						
New South Wales	796	952	1,285	80	17	3,130
Victoria	1,513	1,543	2,771	191	277	6,295
Queensland(b)	230	279	400	4	1	914
South Australia(c)	256	383	297	5	..	941
Western Australia	142	166	214	8	1	531
Tasmania	164	99	160	3	..	426
Australian Capital Territory	1,020	682	2,127	313	82	4,224
Australia(b)	4,121	4,104	7,254	604	378	16,461

(a) Location of register of policies. (b) Includes Papua and New Guinea. (c) Includes Northern Territory.

In the following table details are given of claims, etc., paid on policies in Australia for each of the years 1959 to 1963.

LIFE INSURANCE: PAYMENTS TO POLICY-HOLDERS IN AUSTRALIA
(£'000)

Year	Claims	Surrenders	Annuities	Cash bonuses	Total
ORDINARY BUSINESS(a)					
1959	28,527	11,495	578	370	40,970
1960	32,516	24,092	638	280	57,526
1961	36,446	21,017	698	589	58,750
1962	33,151	12,103	379	195	45,828
1963	36,346	13,936	393	301	50,976
INDUSTRIAL BUSINESS					
1959	9,050	1,848	..	..	10,898
1960	10,022	1,964	..	..	11,986
1961	11,899	2,345	..	..	14,244
1962	10,430	2,515	..	..	12,945
1963	9,618	2,787	..	..	12,405
SUPERANNUATION BUSINESS(b)					
1962	7,500	7,094	447	244	15,285
1963	8,225	7,254	604	378	16,461

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

7. Total Revenue and Expenditure.—(i) *Total Revenue*. The following table shows particulars of the total life insurance revenue derived by life insurance offices from sources within and beyond Australia during each of the years 1959 to 1963.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:
TOTAL REVENUE
(£'000)**

Year	Insurance and endowment premiums	Con-sideration for annuities granted	Net interest, dividends and rents	All other revenue	Total revenue	
					Inside Australia	Outside Australia
ORDINARY BUSINESS(a)						
1959	138,168	5,591	49,678	2,433	195,870	
1960	152,798	6,406	56,313	5,836	161,948	59,405
1961	171,790	8,452	64,562	18,916	197,625	66,095
1962	148,291	10,300	62,636	5,291	151,774	74,744
1963	161,559	3,563	70,285	7,735	168,984	74,158
INDUSTRIAL BUSINESS						
1959	17,746	..	6,787	406	24,939	
1960	17,897	..	7,190	446	21,984	3,549
1961	18,104	..	7,648	320	22,491	3,581
1962	18,598	..	8,116	472	23,539	3,647
1963	18,893	..	8,629	888	24,167	4,243
SUPERANNUATION BUSINESS(b)						
1962	36,743	4,621	13,204	3,189	52,843	4,914
1963	41,918	4,903	15,540	2,288	59,307	5,342

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

(ii) *Total Expenditure.* The next table supplies details of the total expenditure, both within and beyond Australia, of life insurance offices during each of the years 1959 to 1963.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:
TOTAL EXPENDITURE
(£'000)**

Year	Claims and annuities paid	Surrenders	Cash bonuses paid to policy-holders	Com-mission	Salaries and directors' fees	All other expenditure	Total expenditure	
							Inside Australia	Outside Australia
ORDINARY BUSINESS(a)								
1959	44,827	16,209	559	11,045	8,044	9,391	90,075	
1960	50,378	28,875	489	13,128	9,335	12,631	83,348	31,488
1961	56,316	26,474	821	14,169	10,422	14,756	88,390	34,568
1962	53,856	17,390	434	14,309	9,578	13,872	73,452	35,987
1963	59,915	19,436	501	15,460	10,472	14,842	80,480	40,146
INDUSTRIAL BUSINESS								
1959	10,932	2,066	..	2,495	1,896	1,977	19,366	
1960	12,150	2,194	..	2,579	2,209	1,923	17,834	3,221
1961	14,461	2,593	..	2,685	2,246	1,907	20,136	3,756
1962	12,844	2,809	..	2,752	2,309	1,825	18,917	3,622
1963	11,858	3,087	..	2,679	2,337	2,424	18,941	3,444
SUPERANNUATION BUSINESS(b)								
1962	8,718	7,772	264	1,699	1,855	3,577	21,743	2,142
1963	9,749	8,021	426	1,990	2,067	3,845	23,610	2,488

(a) Prior to 1962, includes superannuation business.

(b) See footnote (a).

8. *Liabilities and Assets.*—(i) *General.* The liabilities of the Australian offices consist mainly of their insurance 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 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 insurance 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 other eleven overseas companies operating in Australia. For various reasons, several offices do not attempt the dissection of liabilities and assets according to type of business, and, therefore, the figures in the following tables relate to all types of business combined. Details of the total liabilities of life insurance offices for the year 1963 are given in the following table.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:
TOTAL LIABILITIES, 1963
(£'000)**

Particulars	Life insurance business	Other classes of business	Total liabilities
Shareholders' Capital—			
Authorized .. .. .	..	28,275	28,275
Less unissued .. .. .	..	16,373	16,373
Subscribed Capital .. .. .	..	11,902	11,902
Paid-up—			
In money .. .. .	..	9,124	9,124
Otherwise than in money .. .. .	..	2,310	2,310
Total .. .. .	..	11,434	11,434
Life Insurance Statutory Funds—			
Ordinary business	1,368,113	..	1,368,113
Industrial business	164,017	..	164,017
Superannuation business	288,391	..	288,391
Total	1,820,521	..	1,820,521
Funds in respect of other classes of business .. .. .	..	6,728	6,728
General reserves	22,530	5,876	28,406
Profit and loss account balance .. .. .	..	472	472
<i>Total, Shareholders' Capital, Insurance Funds and Reserves</i>	1,843,051	24,510	1,867,561
Other liabilities—			
Deposits	14,228	7,359	21,587
Staff provident and superannuation funds	829	391	1,220
Claims admitted or intimated but not paid	19,244	3,404	22,648
Premiums paid in advance and in suspense	1,529	25	1,554
Sundry creditors	10,336	820	11,156
Bank overdraft	10,148	173	10,321
Reserves and provisions for taxation	12,738	1,518	14,256
All other liabilities	996	2,171	3,167
Grand Total	1,913,099	40,371	1,953,470

The following table furnishes details of the total assets of life insurance offices for the year 1963.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE:
TOTAL ASSETS, 1963
(£'000)**

Particulars	Life insurance business	Other classes of business	Total	Amount of assets held in Australia		
				Life insurance business	Other classes of business	Total
Fixed assets—						
Freehold and leasehold property, office premises	143,700	2,125	145,825	105,632	2,125	107,757
Furniture, etc.	2,355	525	2,880	1,712	525	2,237
<i>Total</i>	<i>146,055</i>	<i>2,650</i>	<i>148,705</i>	<i>107,344</i>	<i>2,650</i>	<i>109,994</i>
Loans—						
On mortgage	572,405	3,932	576,337	403,695	3,932	407,627
On policies of the company	66,600	..	66,600	50,756	..	50,756
Other loans	22,908	1,026	23,934	22,292	1,026	23,318
<i>Total</i>	<i>661,913</i>	<i>4,958</i>	<i>666,871</i>	<i>476,743</i>	<i>4,958</i>	<i>481,701</i>
Investments—						
Government securities—						
Australia	358,218	2,324	360,542	339,619	2,150	341,769
Other	111,129	693	111,822	92	..	92
Securities of local and semi-governmental bodies	186,303	1,759	188,062	133,728	1,021	134,749
Other investments	390,436	22,803	413,239	313,859	21,926	335,785
<i>Total</i>	<i>1,046,086</i>	<i>27,579</i>	<i>1,073,665</i>	<i>787,298</i>	<i>25,097</i>	<i>812,395</i>
Cash on deposit, current account and in hand	3,384	1,220	4,604	2,399	1,115	3,514
Other assets(a)	55,661	3,964	59,625	42,571	3,924	46,495
Grand Total	1,913,099	40,371	1,953,470	1,416,355	37,744	1,454,099

(a) Includes advances of premiums.

(iii) *Assets held in Australia.* Details of assets held in Australia for the years 1959 to 1963 are set out in the following table.

**ORDINARY, INDUSTRIAL AND SUPERANNUATION LIFE INSURANCE(a):
ASSETS HELD IN AUSTRALIA
(£'000)**

Particulars	1959	1960	1961	1962	1963
Freehold and leasehold property	51,566	58,833	72,358	85,415	107,757
Government and municipal securities	359,172	356,836	388,556	434,988	476,610
Other investments	148,849	200,858	234,391	267,056	335,785
Loans on mortgage	319,442	353,060	374,955	392,032	407,627
Loans on companies' policies	42,078	37,739	44,959	48,782	50,756
Other loans	34,232	26,598	26,161	24,713	23,318
All other assets	19,914	33,929	38,472	45,400	52,246
Total	975,253	1,067,853	1,179,852	1,298,386	1,454,099

(a) Life insurance and other classes of business.

9. **Loans.**—In the following table, details are given of new loans paid over by life insurance companies during each of the years ended 31st December, 1960 to 1964. The information has been compiled from monthly returns furnished by each company. New loans paid over 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 INSURANCE COMPANIES: NEW LOANS PAID OVER
(£'000)

Particulars	1960	1961	1962	1963	1964
CLASS OF SECURITY					
Mortgage of real estate ..	67,680	51,111	47,446	59,873	69,381
Companies' policies ..	10,080	12,796	10,722	11,747	12,182
Other	4,531	2,190	1,024	962	1,624
Total	82,291	66,097	59,192	72,582	83,187
STATE OR TERRITORY(a)					
New South Wales	35,065	26,835	27,814	32,920	33,552
Victoria	24,775	21,649	15,557	21,890	29,511
Queensland(b)	7,567	5,689	5,227	5,737	6,945
South Australia(c)	6,935	5,179	4,803	5,556	4,981
Western Australia	4,453	3,861	2,856	4,075	5,272
Tasmania	3,191	2,472	1,836	1,726	2,223
Australian Capital Territory	305	412	1,099	678	703
Total(b)	82,291	66,097	59,192	72,582	83,187

(a) State or Territory of location of mortgage, registration of policy, or residence of borrower.

(b) Includes Papua and New Guinea.

(c) Includes the 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 figures relate to selected items of statistics and are not construable as "Profit and Loss" statements or "Revenue Accounts".

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 1963-64 revenue from premiums amounted to £246 million, and that from net interest on investments, etc., to £14.9 million, a total of £260.9 million. Expenditure on claims amounted to £160.8 million, contributions to fire brigades £6.1 million, commission and agents' charges £22.3 million, expenses of management £40.8 million, and taxation £6.6 million, a total of £236.6 million.

2. **States.**—The following table shows, for each State, the aggregate premium income less returns, rebates and bonuses, and claims or losses less amounts recoverable, for all classes of insurance other than life for the years 1959-60 to 1963-64.

FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS
(£'000)

State	1959-60	1960-61	1961-62	1962-63	1963-64
GROSS PREMIUMS, LESS RETURNS, REBATES AND BONUSES					
New South Wales(a)	71,419	79,773	84,131	92,746	101,409
Victoria	58,119	62,424	64,851	67,744	72,916
Queensland	22,154	24,017	25,945	27,290	30,481
South Australia	13,836	15,979	16,671	18,475	20,601
Western Australia	10,785	11,791	12,511	13,660	14,430
Tasmania	4,567	4,923	5,106	5,714	6,124
Total	180,880	198,907	209,215	225,629	245,961

GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE					
New South Wales(a)	44,688	56,513	57,450	59,627	70,740
Victoria	33,417	38,680	39,095	41,125	44,488
Queensland	13,702	15,778	16,050	17,604	22,094
South Australia	7,127	8,342	8,413	9,662	10,494
Western Australia	6,327	7,439	7,292	8,914	9,666
Tasmania	2,701	2,760	2,747	2,975	3,332
Total	107,962	129,512	131,047	139,907	160,814

(a) 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 1959-60 to 1963-64.

FIRE, MARINE AND GENERAL INSURANCE: PREMIUMS AND CLAIMS—
PRINCIPAL CLASSES OF RISK, AUSTRALIA
(£'000)

Class of risk	1959-60	1960-61	1961-62	1962-63	1963-64
GROSS PREMIUMS, LESS RETURNS, REBATES AND BONUSES					
Fire	31,813	33,842	35,536	36,923	39,441
Householders' comprehensive	9,447	10,815	11,924	13,380	14,913
Workers' compensation(a) ..	38,876	43,825	43,629	44,006	47,892
Motor vehicle—					
Compulsory third party ..	19,831	23,094	25,900	30,699	33,612
Other	48,939	52,662	56,480	60,218	67,120
Marine	8,033	8,839	8,579	9,577	10,601
Personal accident	6,151	6,875	7,170	7,950	7,868
All other	17,790	18,955	19,997	22,876	24,514
Total	180,880	198,907	209,215	225,629	245,961

GROSS CLAIMS OR LOSSES, LESS AMOUNTS RECOVERABLE					
Fire	10,104	12,007	12,465	13,203	16,487
Householders' comprehensive	1,929	2,285	3,135	3,362	3,651
Workers' compensation(a) ..	29,154	31,871	33,926	35,005	38,003
Motor vehicle—					
Compulsory third party ..	18,848	22,920	25,218	27,325	32,455
Other	32,416	38,875	37,761	41,315	48,876
Marine	3,311	4,204	4,099	4,452	5,255
Personal accident	2,831	3,390	3,562	3,738	3,612
All other	9,369	13,960	10,881	11,507	12,475
Total	107,962	129,512	131,047	139,907	160,814

(a) Excludes workers' compensation insurance in coal-mining industry in New South Wales.

§ 4. The Export Payments Insurance Corporation

The Export Payments Insurance Corporation was established under the *Export Payments Insurance Corporation Act 1956* to provide exporters with insurance against risks associated with overseas trade which are not usually acceptable to commercial insurers. The Corporation commenced business in 1957. Where the Corporation is not in a position to accept business on its commercial account it may be authorized under its statute to provide insurance facilities on the Commonwealth Government's account in the national interest. See also Chapter XIV. Oversea Trade, page 498.

EXPORT PAYMENTS INSURANCE CORPORATION

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Commercial business—					
Number of policy holders ..	127	199	298	373	436
	£'000	£'000	£'000	£'000	£'000
Face value of policies current	26,430	26,049	32,952	44,478	63,746
Maximum contingent liability	12,115	14,082	17,561	23,096	33,336
Premium income ..	47	60	93	119	165
Operating costs ..	62	69	79	83	100
Claims paid (gross) ..	..	15	22	38	45
Recoveries ..	..	8	5	13	12
Underwriting reserve ..	116	152	205	280	376
National interest business—					
Number of policy holders ..	..	..	..	..	1
	£'000	£'000	£'000	£'000	£'000
Face value of policies current	..	..	..	..	1,297
Maximum contingent liability	..	..	..	..	1,071

INSTALMENT CREDIT FOR RETAIL SALES

1. General.—Information relating to instalment credit for retail sales in Australia is given in the following tables. Information in more detail may be found in the annual bulletin *Insurance and Other Private Finance* and in the monthly and quarterly statements relating to instalment credit for retail sales issued by this Bureau (see NOTE at beginning of this chapter).

The statistics cover operations of all types of instalment credit schemes which relate primarily to the financing of retail sales of goods, whether the credit is advanced by a retail business or by a non-retail finance business. In general, the term "instalment credit" is defined as relating to schemes in which repayment is made by regular pre-determined instalments. Types of schemes covered include hire purchase, time payment, budget account, and personal loan schemes which relate primarily to the financing of retail sales of goods. In these statistics, the term "retail sales" relates not only to retail sales by retail establishments coming within the scope of the Censuses of Retail Establishments conducted periodically by this Bureau, but includes also other sales of goods to final purchasers (e.g. plant and machinery).

Figures for amounts financed *exclude* interest, hiring charges, insurance, etc. Figures for balances outstanding and collections *include* interest, hiring charges, insurance, etc. Details are not available of these charges or of other items (e.g. rebates allowed for early payments, late payment charges, bad debts written off) which affect the reconciliation of the three main instalment credit series—amounts financed, collections, and balances outstanding.

Statistics of amounts financed are classified by type of goods, defined as follows:—*motor vehicles* (new and used separately)—motor cars and motor cycles, commercial vehicles, tractors, caravans, trailers, motor parts and accessories, etc.; *plant and machinery*—farm machinery and implements, earth-moving equipment, aircraft, industrial plant and machinery, business machines and equipment (including commercial refrigeration equipment), etc.; *household and personal goods*—furniture, furnishings and floor coverings, domestic refrigerators, electrical goods, radios, television, musical instruments, bicycles, motor mowers, clothing, etc.

Further explanatory detail on these series may be found in the bulletin and statements referred to on page 871.

Any discrepancies between totals and sums of components in the tables on pages 872-5 are due to rounding.

2. Total Instalment Credit Classified by Type of Business.—The following table gives separate particulars of the instalment credit transactions of retail businesses and non-retail finance businesses for the years 1959-60 to 1963-64.

INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF BUSINESS: AMOUNT FINANCED, BY COMMODITY GROUPS, COLLECTIONS, AND BALANCES OUTSTANDING—AUSTRALIA

(£ million)

Year	Amount financed during year				Collections during year	Balances outstanding at end of year	
	Motor vehicles, etc.		Plant and machinery	Household and personal goods			Total
	New	Used					
RETAIL BUSINESSES							
1959-60	16.3		2.8	128.9	148.0	n.a.	171.7
1960-61	13.6		2.9	132.6	149.1	n.a.	199.2
1961-62	4.7	5.5	1.4	133.8	145.3	161.1	206.5
1962-63	4.7	5.8	1.8	140.9	153.2	177.6	212.6
1963-64	5.7	5.9	1.6	150.3	163.4	190.8	208.9
NON-RETAIL FINANCE BUSINESSES							
1959-60	218.2		18.5	65.9	302.6	317.0	406.8
1960-61	185.9		21.1	53.2	260.2	340.4	401.7
1961-62	88.3	84.8	20.8	42.4	236.4	324.2	378.2
1962-63	107.0	114.5	23.5	43.1	288.1	327.2	415.8
1963-64	126.7	126.6	26.2	41.6	321.0	350.7	468.5
ALL BUSINESSES							
1959-60	234.5		21.3	194.8	450.6	n.a.	578.5
1960-61	199.5		24.0	185.8	409.2	n.a.	601.0
1961-62	93.0	90.4	22.2	176.2	381.7	485.3	584.7
1962-63	111.7	120.3	25.3	183.9	441.2	504.8	628.4
1963-64	132.3	132.4	27.8	191.9	484.5	541.5	677.3

3. Total Instalment Credit Classified by Type of Credit.—In the following table particulars are given for retail businesses and non-retail finance businesses combined, classified by type of instalment credit, for the years 1959–60 to 1963–64.

INSTALMENT CREDIT FOR RETAIL SALES, BY TYPE OF CREDIT: AMOUNT FINANCED, BY COMMODITY GROUPS, AND BALANCES OUTSTANDING—AUSTRALIA

(£ million)

Year	Amount financed during year				Balances outstanding at end of year	
	Motor vehicles, etc.	Plant and machinery	Household and personal goods	Total		
HIRE PURCHASE						
1959–60	225.0	20.8	124.8	370.6	510.5	
1960–61	191.3	23.6	102.5	317.4	510.5	
1961–62	173.1	21.7	86.8	281.5	476.3	
1962–63	214.3	25.0	88.5	327.8	501.2	
1963–64	231.0	27.3	86.3	344.6	531.1	
OTHER INSTALMENT CREDIT						
1959–60	9.4	0.5	70.0	80.0	68.0	
1960–61	8.2	0.4	83.3	91.9	90.5	
1961–62	10.3	0.5	89.4	100.1	108.4	
1962–63	17.6	0.4	95.4	113.4	127.2	
1963–64	33.7	0.5	105.6	139.8	146.2	
TOTAL INSTALMENT CREDIT						
1959–60	234.5	21.3	194.8	450.6	578.5	
1960–61	199.5	24.0	185.8	409.2	601.0	
1961–62	183.3	22.2	176.2	381.7	584.7	
1962–63	232.0	25.3	183.9	441.2	628.4	
1963–64	264.8	27.8	191.9	484.5	677.3	

4. New Retail Agreements.—Classifications of amount financed on new retail agreements, by type of instalment credit and by State, are given in the following tables.

INSTALMENT CREDIT FOR RETAIL SALES: AMOUNT FINANCED ON NEW AGREEMENTS BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES

(£ million)

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.(b)	W. Aust.	Tas.	Aust.
HIRE PURCHASE							
1959–60	135.1	106.2	53.8	39.0	27.1	9.4	370.6
1960–61	120.0	87.3	44.3	31.9	24.7	9.4	317.4
1961–62	112.0	74.3	39.6	21.8	24.6	9.3	281.5
1962–63	130.0	82.1	49.2	26.1	29.3	11.2	327.8
1963–64	141.0	75.3	58.0	28.2	30.6	11.7	344.6
OTHER INSTALMENT CREDIT							
1959–60	36.1	20.0	8.3	6.6	6.3	2.7	80.0
1960–61	40.3	23.5	8.6	8.9	7.7	2.8	91.9
1961–62	45.6	23.0	10.8	10.7	7.4	2.7	100.1
1962–63	49.8	29.2	12.9	11.7	7.0	2.9	113.4
1963–64	59.6	41.2	16.3	13.0	7.3	2.5	139.8
TOTAL INSTALMENT CREDIT							
1959–60	171.2	126.2	62.1	45.6	33.4	12.1	450.6
1960–61	160.3	110.8	52.9	40.7	32.3	12.2	409.2
1961–62	157.6	97.3	50.3	32.5	32.0	12.0	381.7
1962–63	179.8	111.3	62.1	37.7	36.3	14.1	441.2
1963–64	200.6	116.4	74.3	41.1	37.9	14.2	484.5

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

5. New Retail Agreements, Classified by Commodity Groups.—The details shown for 1963–64 in the preceding table are classified by commodity groups below.

INSTALMENT CREDIT FOR RETAIL SALES: AMOUNT FINANCED ON NEW AGREEMENTS BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES: COMMODITY GROUPS, 1963-64

(£ million)

Commodity group	N.S.W. (a)	Vic.	Q'land	S. Aust. (b)	W. Aus ^a .	Tas.	Aust.
HIRE PURCHASE							
Motor vehicles, tractors, etc.	99.3	44.3	36.3	19.9	22.3	8.9	231.0
Plant and machinery ..	10.1	6.8	4.7	2.0	2.9	0.7	27.3
Household and personal goods	31.5	24.2	16.9	6.3	5.3	2.1	86.3
Total	141.0	75.3	58.0	28.2	30.6	11.7	344.6

OTHER INSTALMENT CREDIT							
Motor vehicles, tractors, etc.	1.7	20.6	4.8	4.0	2.5	0.1	33.7
Plant and machinery ..	0.1	0.2	..	..	0.1	..	0.5
Household and personal goods	57.8	20.3	11.4	8.9	4.7	2.5	105.6
Total	59.6	41.2	16.3	13.0	7.3	2.5	139.8

TOTAL INSTALMENT CREDIT							
Motor vehicles, tractors, etc.	101.0	64.9	41.1	23.9	24.8	9.0	264.8
Plant and machinery ..	10.3	7.0	4.8	2.0	3.0	0.7	27.8
Household and personal goods	89.3	44.5	28.4	15.2	10.1	4.5	191.9
Total	200.6	116.4	74.3	41.1	37.9	14.2	484.5

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

The following are some additional particulars relating to new hire purchase agreements made during 1963–64.

NEW HIRE PURCHASE AGREEMENTS, COMMODITY GROUPS: AVERAGE VALUE AND AMOUNT AND PROPORTION FINANCED, AUSTRALIA, 1963-64

Commodity group	Average value of goods purchased per agreement	Average amount financed per agreement	Average proportion financed
	£	£	Per cent.
Motor vehicles, tractors, etc.	747	492	66
Plant and machinery	917	612	67
Household and personal goods	84	70	83
All Groups	284	197	69

6. Balances Outstanding on Retail Agreements.—Details of the balances outstanding on retail agreements at 30th June, 1960 to 1964, are given below.

INSTALMENT CREDIT FOR RETAIL SALES: BALANCES OUTSTANDING ON AGREEMENTS MADE BY RETAIL BUSINESSES AND NON-RETAIL FINANCE BUSINESSES

(£ million)

30th June—	N.S.W.(a)	Vic.	Q'land	S. Aust.(b)	W. Aust.	Tas.	Aust.
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HIRE PURCHASE

1960	200.0	143.7	68.5	50.9	35.1	12.3	510.5
1961	201.2	137.4	68.6	51.4	38.5	13.4	510.5
1962	..	..	193.9	122.9	64.4	42.9	38.5	13.8	476.3
1963	..	..	205.1	124.0	70.7	42.2	43.3	15.9	501.2
1964	..	..	219.7	119.9	84.4	43.8	46.1	17.2	531.1

OTHER INSTALMENT CREDIT

1960	..	..	29.3	18.2	7.6	5.9	4.3	2.7	68.0
1961	..	..	37.1	25.0	8.7	9.8	6.1	3.8	90.5
1962	..	..	44.5	28.4	10.8	12.5	8.1	4.1	108.4
1963	..	..	50.3	35.0	13.3	15.5	8.8	4.3	127.2
1964	..	..	53.1	46.7	16.8	17.2	8.4	4.0	146.2

TOTAL INSTALMENT CREDIT

1960	..	..	229.3	161.9	76.1	56.8	39.3	15.1	578.5
1961	..	..	238.3	162.4	77.3	61.2	44.6	17.1	601.0
1962	..	..	238.4	151.3	75.2	55.4	46.6	17.8	584.7
1963	..	..	255.4	159.0	84.1	57.6	52.1	20.2	628.4
1964	..	..	272.8	166.6	101.2	61.0	54.5	21.2	677.3

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

NEW CAPITAL RAISINGS BY COMPANIES IN AUSTRALIA

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 *Insurance and Other Private Finance* and in quarterly bulletins dealing with capital raisings (see NOTE at beginning of this chapter).

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 companies listed on stock exchanges, 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. Totally unsecured loans are included in the case of listed companies, but are excluded in the case of unlisted companies.

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 overseas companies, if incorporated in Australia, are included. The statistics of new capital raised through issues of debentures, notes, etc., and the acceptance of deposits, include, in addition to capital raised by Australian companies, capital raised in this way from Australian sources by overseas 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 and life insurance companies (except when subscribing to issues by associated 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 inter-company 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. **Companies Listed on Stock Exchanges.**—Details of new capital raised through issues of shares, debentures, or registered notes, or through accepting deposits, are given in the following table for each of the years 1959–60 to 1963–64.

LISTED AUSTRALIAN COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES, DEBENTURES, OR REGISTERED NOTES, ETC.(b), OR ACCEPTING DEPOSITS(c)

(£ million)

Year	Share capital					New money	Debentures, registered notes and deposits		
	Value of issues commenced	Non-cash issues commenced (d)	Cash issues commenced	Cash raised during period (e)	Amounts not involving new money		Total amount raised (f)	Amounts not involving new money (f)	New money
1959–60 ..	158.6	96.6	62.0	62.2	14.3	47.9	414.3	213.9	200.4
1960–61 ..	263.6	127.3	136.3	127.2	28.7	98.5	435.3	314.9	120.4
1961–62 ..	191.5	72.9	118.6	94.9	18.7	76.2	381.2	281.6	99.6
1962–63 ..	138.1	72.1	66.0	75.1	22.7	52.4	419.4	304.6	114.8
1963–64 ..	130.6	59.1	71.5	85.6	21.1	64.5	465.1	383.7	81.4

(a) Includes companies incorporated in the Australian Territories. (b) Includes convertible notes. (c) Deposits accepted by banks, life insurance companies, pastoral companies, building societies and loans to authorized dealers in the short-term money market are not included. (d) Includes bonus issues, conversion issues, 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 conversions, renewals, etc.

3. **Companies not listed on Stock Exchanges.**—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 1959–60 to 1963–64.

UNLISTED COMPANIES(a): NEW CAPITAL RAISED THROUGH ISSUES OF SHARES AND LOANS SECURED BY CHARGES OVER THE COMPANIES' ENTIRE ASSETS

(£ million)

Year	Share capital						Loans secured by charges over the companies' entire assets		
	Value of issues commenced	Non-cash issues commenced (b)	Cash issues commenced	Cash raised during period (c)	Amounts not involving new money	New money	Total amount raised (d)	Amounts not involving new money (d)	New money
1959-60 ..	224.7	107.6	117.1	104.9	69.4	35.5	29.2	17.6	11.6
1960-61 ..	319.6	203.1	116.5	113.4	81.2	32.2	24.6	15.3	9.3
1961-62 ..	253.1	135.2	117.9	108.9	81.4	27.5	24.0	17.1	6.9
1962-63 ..	206.2	109.3	96.9	102.3	79.6	22.7	29.4	22.7	6.7
1963-64 ..	216.1	111.3	104.8	105.8	81.6	24.2	45.5	34.5	11.0

(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 conversions, renewals, etc.

4. Listed and Unlisted Companies, New Money Raised, Classified by Industry Group.—A summary of new money raised by listed and unlisted companies during each of the years 1959-60 to 1963-64, as shown in the preceding tables, is given below, together with a classification by industry groups of the amounts raised.

LISTED AND UNLISTED COMPANIES: NEW MONEY RAISED, INDUSTRY GROUPS
(£ million)

Year	Companies listed on stock exchanges			Companies not listed on stock exchanges			Grand total
	Share capital (a)	Debentures, registered notes and deposits (b)	Total	Share capital (a)	Secured loans (c)	Total	
MANUFACTURING							
1959-60 ..	17.9	24.5	42.4	(d)	(d)	13.2	55.6
1960-61 ..	37.9	24.9	62.8	5.8	3.4	9.2	72.0
1961-62 ..	42.1	29.4	71.5	5.5	1.5	7.0	78.5
1962-63 ..	20.2	13.8	34.0	5.2	1.8	7.0	41.0
1963-64 ..	16.9	6.6	23.5	5.0	9.1	14.1	37.6
FINANCE AND PROPERTY(b)							
1959-60 ..	9.5	140.2	149.7	10.3	2.6	12.9	162.6
1960-61 ..	20.2	61.4	81.6	9.8	3.7	13.5	95.1
1961-62 ..	6.0	45.1	51.1	8.1	2.7	10.8	61.9
1962-63 ..	5.9	76.5	82.4	6.4	1.8	8.2	90.6
1963-64 ..	11.0	45.3	56.3	7.7	1.0	8.7	65.0
COMMERCE							
1959-60 ..	9.6	24.4	34.0	7.2	0.8	8.0	42.0
1960-61 ..	21.6	22.6	44.2	5.9	1.0	6.9	51.1
1961-62 ..	13.7	13.6	27.3	5.1	0.7	5.8	33.1
1962-63 ..	11.5	17.0	28.5	4.0	1.2	5.2	33.7
1963-64 ..	22.1	24.6	46.7	4.1	0.2	4.3	51.0
OTHER INDUSTRIES							
1959-60 ..	10.9	11.3	22.2	(d)	(d)	11.3	33.5
1960-61 ..	18.8	11.5	30.3	9.0	1.2	10.2	40.5
1961-62 ..	14.4	11.5	25.9	7.3	2.0	9.3	35.2
1962-63 ..	14.8	7.5	22.3	5.7	1.9	7.6	29.9
1963-64 ..	14.5	4.9	19.4	5.8	0.7	6.5	25.9
TOTAL, ALL INDUSTRIES							
1959-60 ..	47.9	200.4	248.3	(e)	11.6	(e)	(e)
1960-61 ..	98.5	120.4	218.9	32.2	9.3	41.5	260.4
1961-62 ..	76.2	99.6	175.8	27.5	6.9	34.4	210.2
1962-63 ..	52.4	114.8	167.2	22.7	6.7	29.4	196.6
1963-64 ..	64.5	81.4	145.9	24.2	11.0	35.2	181.1

(a) Includes preference shares. (b) Excludes deposits accepted by banks, insurance companies, pastoral companies and building societies, and loans to authorized dealers in the short-term money market. (c) Includes only loans which are secured by charges over the company's entire assets. (d) Not available for publication. (e) Small share issues of less than £1,000 for which returns have not been collected have not been included in the industrial classification but are included in Total, All Industries.

OVERSEA INVESTMENT BY PRIVATE INVESTORS

1. **General.**—A Survey of Oversea Investment has been conducted since 1947–48 to obtain particulars of certain types of private capital flows to and from Australia. The survey, when supplemented by other information, provides statistics of oversea investment in companies in Australia and in Australian public authority securities domiciled in Australia, and statistics of Australian investment in companies overseas and in foreign government securities. Particulars of investment income from most of those classes of investment are also obtained from the survey.

Certain types of private oversea investment are not included in the statistics which follow. Investment in real estate (except when made through companies), investment by means of bank deposits and advances, and loans between Australian individuals and non-resident individuals are not covered. Nor are changes in short-term liabilities between exporters and importers in Australia and overseas covered, except in so far as they arise from exports and imports between branches or subsidiaries and their home offices—in this case they are included in the figures of investment in branches or subsidiaries.

In some cases the capital invested in a company in Australia may be received from a company in one oversea country even though the ultimate ownership and control of that capital may rest with a parent company in a second oversea country. In the tables which classify investment in Australia according to country of origin, the investment is shown as an inflow from the country which is the immediate source of the capital rather than from the country in which the parent company with ultimate ownership and control is domiciled. Income payable overseas is classified on a similar basis, i.e., it is classified to the country to which it is directly payable.

Remittances between Australia and overseas by Australian life insurance companies are regarded as capital transactions made to bring assets located in oversea countries into line with commitments in those countries, and are shown as a flow of investment between Australia and overseas in the tables in para. 4, pp. 883–4. Similar considerations apply to oversea life insurance companies with branches in Australia.

The following are some explanatory notes relating to terms used in the tables.

Overseas. For the purpose of these statistics, “overseas” includes Papua and New Guinea.

Companies. In these statistics the term “companies” relates to both incorporated and unincorporated businesses.

Subsidiary. For the purpose of these statistics, this term is applied to all companies in which there is a “direct” holding, irrespective of the degree of control, if any, which is actually exercised. A holding is treated as “direct” when there is ownership of 25 per cent. or more of a company’s ordinary shares (or voting stock) by one company or a number of companies incorporated in one country, or ownership of 50 per cent. or more of a company’s ordinary shares (or voting stock) by individuals or companies in one country.

Portfolio Investment. Investment in company shares, debentures, etc., other than direct investment in such securities of a subsidiary company.

Unremitted profits. For these statistics this represents the net earnings of branches during the year, after tax, less remittances by the branches to their home offices during the year of net earnings and interest (irrespective of the period to which the earnings and interest relate). “Net earnings” of Australian branches of oversea companies is, in general, based on the value of their income for taxation purposes.

Undistributed profits. This term refers, in the case of Australian subsidiaries, to the equity of the oversea parent in the net earnings of the Australian company, less tax (or tax provision) and less dividends declared. “Net earnings” of Australian subsidiaries of oversea companies is, in general, based on the value of their income for taxation purposes. In the case of oversea subsidiaries of Australian companies, this term represents the equity of the Australian parent in the book value of the net earnings of the subsidiary after tax, less dividends paid or payable.

The annual bulletin *Insurance and Other Private Finance* and the *Annual Bulletin of Oversea Investment: Australia* contain additional figures relating to oversea investment, including a longer range of years covered, and also more detailed description of the figures.

2. **Private Oversea Investment in Companies in Australia and Investment Income Payable Overseas by Companies in Australia.**—The inflow of private overseas investment in companies in Australia since 1958–59, and a classification by country of origin, are shown in the following two tables.

ANNUAL INFLOW OF PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA, BY TYPE OF COMPANY IN WHICH CAPITAL INVESTED^(a)
(£A. million)

Year	Direct investment				Total direct investment	Portfolio investment ^(b)	Annual inflow of overseas investment in companies
	Australian branches		Australian subsidiaries				
	Unremitted profits	Other investment	Undistributed profits	Other investment			
1958–59 ..	11.6	9.8	51.0	33.0	105.4	19.8	125.2
1959–60 ..	9.5	22.3	58.7	70.1	160.6	33.9	194.5
1960–61 ..	2.8	24.9	54.2	104.9	186.8	48.5	235.3
1961–62 ..	4.4	22.6	28.6	55.4	111.0	37.9	148.9
1962–63 ..	8.2	3.1	46.0	123.0	180.3	42.2	222.5

(a) Increases in investment by some overseas investors are offset against withdrawals of investment by other overseas investors. (b) Partly estimated.

ANNUAL INFLOW OF PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA, BY DOMICILE OF INVESTOR AND CATEGORY OF INVESTMENT^(a)
(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Annual inflow of overseas investment in companies
UNDISTRIBUTED INCOME ^(b)					
1958–59 ..	27.6	0.9	31.5	2.6	62.6
1959–60 ..	30.6	0.2	34.8	2.6	68.2
1960–61 ..	19.7	1.3	30.7	5.3	57.0
1961–62 ..	21.6	1.4	8.0	2.0	33.0
1962–63 ..	35.9	0.6	13.8	3.9	54.2
OTHER INVESTMENT					
1958–59 ..	38.4	–1.4	15.2	10.4	62.6
1959–60 ..	75.0	7.7	28.3	15.3	126.3
1960–61 ..	93.5	1.6	56.6	26.6	178.3
1961–62 ..	41.9	3.6	63.2	7.2	115.9
1962–63 ..	68.4	2.8	77.1	20.1	168.3
TOTAL ANNUAL INFLOW					
1958–59 ..	66.0	–0.5	46.7	13.0	125.2
1959–60 ..	105.6	7.9	63.1	17.9	194.5
1960–61 ..	113.2	2.9	87.3	31.9	235.3
1961–62 ..	63.5	5.0	71.2	9.2	148.9
1962–63 ..	104.3	3.4	90.9	23.9	222.5

(a) See footnote (a) to preceding table. (b) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

NOTE.—Minus sign (–) denotes outflow.

The next two tables show investment income payable overseas by companies in Australia, and the countries to which it is payable.

**INVESTMENT INCOME^(a) PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA,
BY TYPE OF COMPANIES**

(£A. million)

Year	Income payable on direct investment				Total income payable on direct investment	Income payable on portfolio investment (b)	Total
	Australian branches		Australian subsidiaries				
	Unremitted profits (net)	Remitted profits	Undistributed profits (net)	Dividends declared			
1958-59 ..	11.6	14.8	51.0	27.8	105.2	9.5	114.7
1959-60 ..	9.5	17.7	58.7	27.3	113.2	9.3	122.5
1960-61 ..	2.8	21.3	54.2	28.6	106.9	10.1	117.0
1961-62 ..	4.4	18.4	28.6	36.1	87.5	10.1	97.6
1962-63 ..	8.2	19.6	46.0	40.7	114.5	13.3	127.8

(a) Excludes interest payable overseas. The amount payable by Australian companies (excluding branches of overseas companies) was £1.0 m. in 1958-59, £1.8 m. in 1959-60, £2.8 m. in 1960-61, £2.7 m. in 1961-62, and £3.5 m. in 1962-63. (b) Because of certain differences in scope, these figures differ from those in the category "Other" in item 12, Table 2, in *Balance of Payments* and in the table on p. 531 of this Year Book.

**INVESTMENT INCOME PAYABLE^(a) OVERSEAS BY COMPANIES IN AUSTRALIA,
BY COUNTRY TO WHICH PAYABLE AND CATEGORY OF INCOME**

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Total
UNDISTRIBUTED INCOME^(b)					
1958-59.. ..	27.6	0.9	31.5	2.6	62.6
1959-60.. ..	30.6	0.2	34.8	2.6	68.2
1960-61.. ..	19.7	1.3	30.7	5.3	57.0
1961-62.. ..	21.6	1.4	8.0	2.0	33.0
1962-63.. ..	35.9	0.6	13.8	3.9	54.2
OTHER INCOME^(c)					
1958-59.. ..	28.4	4.8	16.5	2.4	52.1
1959-60.. ..	31.3	3.8	17.0	2.2	54.3
1960-61.. ..	35.1	3.5	19.0	2.4	60.0
1961-62.. ..	29.3	3.2	29.1	3.0	64.6
1962-63.. ..	34.9	4.1	31.8	2.8	73.6
TOTAL INCOME PAYABLE OVERSEAS					
1958-59.. ..	56.0	5.7	48.0	5.0	114.7
1959-60.. ..	61.9	4.0	51.8	4.8	122.5
1960-61.. ..	54.8	4.8	49.7	7.7	117.0
1961-62.. ..	50.9	4.6	37.1	5.0	97.6
1962-63.. ..	70.8	4.7	45.6	6.7	127.8

(a) See footnote (a) to preceding table.
undistributed profits of Australian subsidiaries.

(b) Unremitted profits of Australian branches plus
(c) See footnote (b) to preceding table.

A classification by broad industry groups of the inflow of direct investment and the income payable overseas on direct investment in 1962-63 is shown in the following table.

INFLOW OF DIRECT PRIVATE OVERSEA INVESTMENT IN COMPANIES IN AUSTRALIA AND INCOME FROM DIRECT INVESTMENT PAYABLE OVERSEAS BY COMPANIES IN AUSTRALIA, BY INDUSTRY IN WHICH CAPITAL INVESTED, 1962-63

(£A. million)

Category of investment or income	Primary production and mining	Manufacturing	Other industries	Total
Inflow of direct investment—				
Undistributed income(a)	1.9	35.9	16.4	54.2
Other direct investment	5.4	88.0	32.7	126.1
<i>Total Inflow of Direct Investment</i> ..	<i>7.3</i>	<i>123.9</i>	<i>49.1</i>	<i>180.3</i>
Income from direct investment payable overseas—				
Undistributed income(a)	1.9	35.9	16.4	54.2
Other income from direct investment ..	3.2	40.1	17.0	60.3
<i>Total Income from Direct Investment</i>	<i>5.1</i>	<i>76.0</i>	<i>33.4</i>	<i>114.5</i>

(a) See footnote (b) to preceding table.

3. Australian Investment in Companies Overseas and Investment Income receivable from Companies Overseas.—The outflow of Australian investment in companies since 1958-59 and a classification by country in which the capital was invested, are shown in the following two tables.

ANNUAL OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS, BY TYPE OF COMPANY IN WHICH CAPITAL INVESTED(a)

(£A. million)

Year	Direct investment					Portfolio investment	Annual outflow of Australian investment in companies overseas
	Oversea branches		Oversea subsidiaries		Total direct investment		
	Unremitted profits	Other	Undistributed profits	Other			
1958-59 ..	1.1	5.0	1.4	4.7	12.2	-1.4	10.8
1959-60 ..	-0.1	0.9	3.2	2.8	6.8	-4.4	2.4
1960-61 ..	0.9	2.8	2.6	2.5	8.8	-4.4	4.4
1961-62 ..	0.5	3.5	3.9	1.8	9.7	-2.2	7.5
1962-63 ..	0.2	-2.2	4.2	3.6	5.8	-2.8	3.0

(a) Increases in investment by some Australian investors are offset against withdrawals of investment by other Australian investors.

NOTE.—Minus sign (-) denotes inflow.

ANNUAL OUTFLOW OF AUSTRALIAN INVESTMENT IN COMPANIES OVERSEAS,
BY COUNTRY IN WHICH CAPITAL INVESTED AND CATEGORY OF
INVESTMENT(a)

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Annual outflow of Australian investment in companies overseas
UNDISTRIBUTED INCOME(b)					
1958-59.. ..	0.2	2.3	..	..	2.5
1959-60.. ..	0.1	2.0	-0.1	1.1	3.1
1960-61.. ..	0.9	1.7	..	0.9	3.5
1961-62.. ..	0.3	1.7	-0.1	2.5	4.4
1962-63.. ..	-0.3	1.7	..	3.0	4.4
OTHER INVESTMENT					
1958-59.. ..	1.1	3.5	-0.4	4.1	8.3
1959-60.. ..	-2.9	1.3	-0.4	1.3	-0.7
1960-61.. ..	-1.3	1.1	0.6	0.5	0.9
1961-62.. ..	-0.5	1.5	-0.3	2.4	3.1
1962-63.. ..	0.3	3.6	..	-5.3	-1.4
TOTAL INVESTMENT					
1958-59.. ..	1.3	5.8	-0.4	4.1	10.8
1959-60.. ..	-2.8	3.3	-0.5	2.4	2.4
1960-61.. ..	-0.4	2.8	0.6	1.4	4.4
1961-62.. ..	-0.2	3.2	-0.4	4.9	7.5
1962-63.. ..	..	5.3	..	-2.3	3.0

(a) See footnote (a) to preceding table. (b) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

NOTE.—Minus sign (-) denotes inflow.

The next two tables show income from direct investments payable to Australia by companies overseas, and countries from which it is receivable.

INCOME FROM DIRECT INVESTMENTS PAYABLE TO AUSTRALIA BY
COMPANIES OVERSEAS, BY TYPE OF COMPANY

(£A. million)

Year	Overseas branches		Overseas subsidiaries		Total income from direct investments
	Unremitted profits	Remitted profits	Undistributed profits	Dividends declared	
1958-59.. ..	1.1	2.1	1.4	4.6	9.2
1959-60.. ..	-0.1	2.4	3.2	2.9	8.4
1960-61.. ..	0.9	2.4	2.6	3.6	9.5
1961-62.. ..	0.5	2.4	3.9	4.0	10.8
1962-63.. ..	0.2	4.6	4.2	5.6	14.6

INCOME FROM DIRECT INVESTMENTS PAYABLE TO AUSTRALIA BY COMPANIES OVERSEAS, BY COUNTRY FROM WHICH RECEIVABLE AND CATEGORY OF INCOME

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	Other	Total
UNDISTRIBUTED INCOME(a)					
1958-59.. ..	0.2	2.3	..	..	2.5
1959-60.. ..	0.1	2.0	-0.1	1.1	3.1
1960-61.. ..	0.9	1.7	..	0.9	3.5
1961-62.. ..	0.3	1.7	-0.1	2.5	4.4
1962-63.. ..	-0.3	1.7	..	3.0	4.4
OTHER INCOME					
1958-59.. ..	0.4	1.9	..	4.4	6.7
1959-60.. ..	0.3	2.3	..	2.7	5.3
1960-61.. ..	0.5	2.7	..	2.8	6.0
1961-62.. ..	0.6	3.2	..	2.6	6.4
1962-63.. ..	1.0	4.2	..	5.0	10.2
TOTAL					
1958-59.. ..	0.6	4.2	..	4.4	9.2
1959-60.. ..	0.4	4.3	-0.1	3.8	8.4
1960-61.. ..	1.4	4.4	..	3.7	9.5
1961-62.. ..	0.9	4.9	-0.1	5.1	10.8
1962-63.. ..	0.7	5.9	..	8.0	14.6

(a) Unremitted profits of Australian branches plus undistributed profits of Australian subsidiaries.

4. **Net Annual Flow of Investment.**—The net annual flow of investment between Australia and overseas, and its classification by country, are shown in the following two tables. The annual inflow of investment in Australian public authority debt domiciled overseas and net overseas remittances by insurance companies have been incorporated into both tables.

NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA AND OVERSEA COUNTRIES(a)

(£A. million)

Year	Annual inflow of investment	Annual outflow of investment	Net annual flow of investment to Australia
1958-59	155.5	15.8	139.7
1959-60	227.0	4.8	222.2
1960-61	244.8	4.6	240.2
1961-62	153.8	7.1	146.7
1962-63	264.3	3.1	261.2

(a) Increases in investment by some overseas investors are offset against withdrawals of investment by other investors.

NET ANNUAL FLOW OF INVESTMENT BETWEEN AUSTRALIA AND OVERSEA COUNTRIES, BY REGION

(£A. million)

Year	United Kingdom	New Zealand	U.S.A. and Canada	I.B.R.D. (a)	Other	Net annual flow of investment to Australia
1958-59 ..	78.6	-11.5	63.1	7.3	2.2	139.7
1959-60 ..	118.8	4.0	86.0	20.6	-7.2	222.2
1960-61 ..	110.1	0.1	101.9	35.6	-7.5	240.2
1961-62 ..	62.7	0.8	81.8	9.3	-7.9	146.7
1962-63 ..	112.0	-2.8	121.1	25.0	5.9	261.2

(a) No particulars are available of the domicile of securities issued to the International Bank of Reconstruction and Development.

NOTE.—Minus sign (-) denotes outflow.

UNIT TRUSTS, LAND TRUSTS, AND MUTUAL FUNDS

1. **General.**—Statistics relating to operations in Australia of unit trusts, land trusts and mutual funds have been collected quarterly since March, 1961, and are shown in the following tables. The figures do not include details of superannuation funds conducted by unit trusts management companies.

2. **Transactions of Trusts and Funds.**—Particulars of cash transactions in trust units and fund shares and of purchases and sales of investments by trusts and funds are given below.

TRANSACTIONS OF TRUSTS AND FUNDS

(£ million)

Period	Cash transactions in respect of trust units and fund shares		Purchases and sales of investments (a)	
	Total amount received for trust units and fund shares issued (b)	Total amount paid for trust units and fund shares repurchased (c)	Purchases (d)	Sales (e)
Year—				
1961-62	17.5	6.9	11.7	3.5
1962-63	15.9	6.9	13.7	4.8
1963-64	22.5	10.3	17.7	5.3
Quarter—				
September, 1963	4.2	2.0	4.1	1.3
December, 1963	6.3	2.6	4.1	1.2
March, 1964	5.5	2.9	3.8	1.4
June, 1964	6.5	2.8	5.7	1.4
September, 1964	5.1	3.2	4.4	2.5
December, 1964	5.2	3.4	4.6	3.2

(a) Commonwealth Government, local authority and semi-governmental securities, shares, debentures, unsecured notes, loans, deposits on term or notice of three months or longer, land and buildings, etc. (b) Includes re-issues and new issues. Includes fees and expenses. (c) Includes those units and fund shares intended for re-issue. (d) Payments for assets acquired during period. Includes brokerage and stamp duty. (e) Receipts for assets sold or redeemed during period. Excludes brokerage and stamp duty.

3. Analysis of Purchases and Sales of Investments.—Details of purchases and sales of investments by trusts and funds for the years 1961–62 to 1963–64 are given in the following table.

ANALYSIS OF PURCHASES AND SALES OF INVESTMENTS BY TRUSTS AND FUNDS
(£ million)

Year	Shares (including preference shares)	Debentures, unsecured notes, deposits (a)	Common- wealth Government, local authority, and semi- governmental securities	Other (b)	Total
PURCHASES					
1961–62	9.1	1.4	0.1	1.1	11.7
1962–63	9.5	2.6	0.1	1.5	13.7
1963–64	12.5	3.4	0.1	1.7	17.7
SALES					
1961–62	2.7	0.2	0.2	0.4	3.5
1962–63	3.2	0.3	0.3	1.0	4.8
1963–64	3.8	1.0	..	0.5	5.3

(a) Excludes cash on hand and at bank, loans to authorized dealers in the short-term money market, and other deposits under three months term or notice. (b) Includes land and buildings, mortgages on land and buildings, and other investments.

4. Market Value of Trusts and Funds, and Cash and Short-term Deposits of Trusts and Funds.—The total market value of trusts and funds and the cash and short-term deposits of trusts and funds are shown in the following table.

TOTAL MARKET VALUE OF TRUSTS AND FUNDS, AND CASH AND SHORT-TERM DEPOSITS OF TRUSTS AND FUNDS
(£ million)

At—	Total market value of trusts and funds(a)	Cash and short-term deposits		
		Cash(b)	Short-term deposits(c)	Total
30th June, 1961	84.0	0.6	3.2	3.8
30th June, 1962	91.7	0.6	3.6	4.2
30th June, 1963	103.8	1.0	2.9	3.9
30th September, 1963	111.3	0.6	2.7	3.3
31st December, 1963	119.2	0.8	3.0	3.8
31st March, 1964	122.9	1.4	3.1	4.5
30th June, 1964	124.9	0.8	3.2	4.0
30th September, 1964	125.5	0.8	3.3	4.1
31st December, 1964	126.4	1.0	3.3	4.3

(a) Includes value of land trusts at valuation. (b) Includes cash on hand and at bank. (c) Includes loans to authorized dealers in the short-term money market, and other deposits under three months term or notice.

PASTORAL FINANCE COMPANIES

NOTE.—Any discrepancies between totals and sums of components in the following tables are due to rounding.

1. Rural Advances.—The following table is derived from returns supplied to the Reserve Bank by major pastoral finance companies, and shows the total rural advances outstanding at the end of June, 1959 to 1963, and of subsequent quarters to December, 1964.

RURAL ADVANCES OF PASTORAL FINANCE COMPANIES(a)

(Source: Reserve Bank of Australia)

(£ million)

End of—	New South Wales	Victoria	Queensland	South Australia	Western Australia and Tasmania	Total
June, 1959 ..	26.5	16.0	21.2	13.4	14.2	91.3
„ 1960 ..	29.6	17.7	24.3	14.9	15.4	101.9
„ 1961 ..	29.8	19.9	23.4	17.4	15.9	106.4
„ 1962 ..	29.4	16.4	24.3	17.4	16.5	104.0
„ 1963 ..	30.7	17.8	25.0	16.5	16.9	106.9
September, 1963 ..	33.0	20.7	26.2	17.7	16.6	114.1
December, 1963 ..	30.7	22.1	25.9	18.2	15.1	111.9
March, 1964 ..	30.4	21.1	25.5	16.2	16.7	109.7
June, 1964 ..	32.0	19.5	25.9	18.2	18.5	114.2
September, 1964 ..	36.4	23.5	27.0	19.0	20.3	126.2
December, 1964 ..	35.7	26.3	28.8	20.7	22.6	134.1

(a) Compiled from returns supplied by major pastoral finance companies. Advances are classified according to the location of the branch holding the advance, which in some cases may differ from the State of residence of the borrower. The statistics refer to the total advances outstanding at the end of the month shown.

2. Liabilities and Assets.—The following table gives details of the liabilities and assets of pastoral finance companies at the end of June, 1962, and subsequent quarters to December, 1964.

LIABILITIES AND ASSETS OF PASTORAL FINANCE COMPANIES(a)

(Source: Reserve Bank of Australia)

(£ million)

LIABILITIES

End of—	Balances due to banks	Clients' credit balances	Debentures, notes and deposits		Other outside liabilities	Shareholders' funds	Overseas liabilities	Total liabilities, assets
			Maturing within 12 months	Other				
June, 1962 ..	25.4	19.4	13.5	6.5	38.8	53.5	54.4	211.5
„ 1963 ..	24.0	23.2	9.5	7.8	44.3	56.0	52.4	217.3
September, 1963	27.1	25.0	12.3	8.9	51.6	57.5	50.8	233.2
December, 1963	28.4	29.2	9.6	10.9	48.0	66.1	53.1	245.2
March, 1964 ..	24.4	29.6	10.8	10.6	52.8	68.1	55.3	251.7
June, 1964 ..	24.8	25.8	9.4	10.0	49.1	65.2	53.6	237.9
September, 1964	34.0	27.2	10.3	10.8	55.5	66.2	54.7	258.5
December, 1964	35.3	27.0	13.1	10.7	52.2	69.0	57.6	264.8

(a) Compiled from returns supplied by major pastoral finance companies.

LIABILITIES AND ASSETS OF PASTORAL FINANCE COMPANIES—*continued*
(£'000)

ASSETS

End of—	Cash and deposits with banks	Loans to authorized money market dealers	Other short-term assets (excluding Commonwealth Government securities)	Commonwealth Government securities	Advances and sundry debtors		Stocks	Fixed assets	Other assets
					Rural	Other			
June, 1962 ..	2.6	..	4.3	6.9	104.0	10.2	14.1	58.0	11.3
„ 1963 ..	2.8	1.1	5.1	7.3	106.9	11.3	14.6	58.7	9.6
September, 1963	5.2	1.0	6.9	9.5	114.1	12.4	14.4	60.3	9.4
December, 1963	7.1	3.1	10.3	11.3	111.9	15.1	14.5	60.9	11.0
March, 1964 ..	8.5	5.2	12.7	12.8	109.7	13.3	14.4	62.0	13.1
June, 1964 ..	5.3	0.9	4.4	10.0	114.2	11.8	16.1	62.3	12.9
September, 1964	5.6	..	6.2	11.6	126.2	15.6	16.6	63.8	12.9
December, 1964	5.4	0.1	5.5	7.7	134.1	17.1	16.8	65.4	12.9

(a) Compiled from returns supplied by major pastoral finance companies.

SHORT-TERM MONEY MARKET

1. General.—For some years prior to 1959 leading stockbrokers had been actively engaged in the acceptance of short-term funds against the security of government securities, but their operations were limited by the absence of suitable short-term securities and their liquidity requirements,

In February, 1959, the Commonwealth Bank (now the Reserve Bank) gave official status to the market by announcing that under certain conditions it would act as lender of last resort to authorized dealers in the short-term money market.

The form of organization at March, 1965, consisted of nine companies whose functions were—

- (i) to accept loans overnight, at call or for fixed periods, in minimum amounts of £25,000, and to invest these funds in Commonwealth Government securities with currencies not exceeding three years and, since March, 1965, in commercial bills that had been accepted or endorsed by a trading bank; and
- (ii) to engage as traders in the buying and selling of these specific classes of securities.

Dealers are required to have a minimum paid-up capital of £200,000, and a level of shareholders' funds sufficient to permit the lodgment of " margins " with the Reserve Bank, in the form of Commonwealth Government securities, as general backing for their operations.

These securities lodged as margins are required to be, on market values, equivalent to at least—

- (a) one-half per cent. of the dealer's holding of Treasury Notes;
- (b) one per cent. of the dealer's holding of Commonwealth Government securities and commercial bills maturing within one year;
- (c) two per cent. of the dealer's holding of Commonwealth Government securities maturing within one to two years; and
- (d) four per cent. of the dealer's holding of Commonwealth Government securities maturing within two to three years.

The total amount of loans a dealer may accept is determined by the Reserve Bank in relation to the level of the dealer's shareholders' funds. Under the lender of last resort arrangements, the dealer may borrow from the Reserve Bank against the lodgment of securities.

Any discrepancies between totals and sums of components in the tables on pages 888-9 are due to rounding.

2. Selected Assets and Liabilities of Authorized Dealers and Rates of Interest on Loans Accepted.—In the following table, details of selected assets and liabilities of authorized dealers and the interest rates on loans accepted by dealers are given for June, 1959 to 1963, and for each month January to December, 1964.

SHORT-TERM MONEY MARKET: SELECTED LIABILITIES AND ASSETS AND INTEREST RATES OF AUTHORIZED DEALERS

(Source: Reserve Bank of Australia)

Month	Liabilities to clients			Holdings of Commonwealth Government securities (at face value)	Interest rates on loans accepted during month				Weighted average interest rate on loans outstanding (a) per cent. per annum
	All cheque-paying banks	Other clients	Total		At call		For fixed periods		
					Minimum per cent. per annum	Maximum per cent. per annum	Minimum per cent. per annum	Maximum per cent. per annum	
	Average of weekly figures—£ million								
June, 1959 ..	28.3	19.8	48.1	50.4	2.94	3.13	3.00	3.50	3.11
.. 1960 ..	27.2	52.7	79.9	82.3	2.75	3.50	3.00	3.50	3.25
.. 1961 ..	34.4	62.7	97.1	100.4	2.50	4.88	3.50	4.83	4.17
.. 1962 ..	27.9	88.5	116.4	121.2	2.00	4.00	3.00	3.88	3.45
.. 1963 ..	29.0	104.5	133.5	143.4	2.00	4.25	3.13	4.25	3.75
1964—									
January ..	45.8	106.5	152.3	158.8	1.00	3.63	2.50	3.88	3.02
February ..	32.0	120.0	152.0	160.7	1.50	3.88	3.00	4.00	3.18
March ..	34.0	138.2	172.2	180.1	1.75	3.88	3.25	3.94	3.38
April ..	31.2	135.7	166.9	177.3	2.00	4.25	2.00	4.25	3.55
May ..	36.5	126.2	162.7	173.1	1.00	4.51	3.25	4.63	3.64
June ..	33.6	126.8	160.4	170.6	1.50	4.50	3.38	4.50	3.71
July ..	38.7	128.0	166.7	173.2	2.00	4.50	3.38	4.50	3.77
August ..	41.9	120.9	162.8	172.3	2.00	4.75	3.38	4.75	3.74
September ..	46.2	126.5	172.7	180.5	2.00	4.63	3.00	4.75	3.74
October ..	37.0	133.6	170.6	181.6	2.00	4.69	3.63	4.81	3.83
November ..	41.6	129.5	171.1	181.1	1.00	4.63	3.25	4.65	3.69
December(b)	46.9	120.7	167.6	180.5	0.75	4.63	2.25	4.50	3.46

(a) Average of weekly figures commencing October, 1963; previously as at last Wednesday.
 (b) Excludes one Wednesday in December.

3. *Authorized Dealers' Liabilities classified by Type of Client.*—The following table shows a classification of authorized dealers' liabilities by type of client, as at 30th June, 1963, and 1964.

**SHORT-TERM MONEY MARKET: AUTHORIZED DEALERS' LIABILITIES,
TYPE OF CLIENT^(a)**

(Source: Reserve Bank of Australia)

(£ million)

Clients	30th June, 1963	30th June, 1964
All cheque-paying banks	40.1	55.3
Savings banks	19.7	17.2
Insurance offices	4.8	3.7
Superannuation, pension and provident funds	0.8	6.3
Hire purchase and other instalment credit companies	0.6	1.4
Companies (not elsewhere included)	32.7	34.9
Commonwealth and State Governments	16.7	21.1
Local government and semi-governmental authorities (not elsewhere included)	22.0	22.8
All other lenders (including marketing boards and trustee companies)	5.0	6.0
Total	142.5	168.7

(a) Compiled from returns supplied by authorized dealers in the short-term money market. Liabilities to Reserve Bank as lender of last resort are excluded.

**FRIENDLY SOCIETIES, REGISTERED BUILDING SOCIETIES AND
CO-OPERATIVE SOCIETIES**

§ 1. Friendly Societies

1. *General.*—The total membership of friendly societies in Australia is about 430,000, 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., revenue and expenditure, and funds of registered societies for the year. More detailed information is available in the bulletin *Insurance and Other Private Finance*, and issue No. 2, 1963–64, contains particulars for the year 1962–63.

FRIENDLY SOCIETIES(a), 1962-63

Particulars	New South Wales (b)	Victoria (c)	Queensland	South Australia	Western Australia	Tasmania (c)	Total
Registered societies	48	135	21	14	12	11	241
Branches	1,859	1,181	435	567	257	119	4,418
Benefit members at end of year ..	148,123	158,629	54,402	50,765	17,488	6,364	435,771
Average benefit members during year ..	145,051	156,676	53,402	50,982	17,693	6,590	430,394
Members who received sick pay ..	n.a.	24,769	8,400	8,880	2,924	1,303	n.a.
Total weeks sick pay granted ..	n.a.	452,850	131,448	166,806	55,273	23,357	n.a.
Average weeks per member sick ..	n.a.	18.3	15.6	18.8	18.9	17.9	n.a.
Deaths of benefit members ..	n.a.	2,482	1,113	1,033	312	264	n.a.
Proportion of deaths per 1,000 members (average) ..	n.a.	15.8	20.8	20.3	17.6	40.1	n.a.
Revenue—	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Entrance fees, levies and members' contributions	3,879	3,096	904	1,766	676	20	10,341
Interest, dividends and rents	492	681	277	310	57	39	2,698
All other revenue	484	139		188	23	8	
<i>Total</i>	<i>4,855</i>	<i>3,916</i>	<i>1,181</i>	<i>2,264</i>	<i>756</i>	<i>67</i>	<i>13,039</i>
Expenditure—							
Sick pay	215	278	87	5	23	10	698
Medical attendance and medicine ..	2,754	2,031	632	706	574	2	6,699
Sums payable at death	191	106	65	59	19	22	462
Administration	791	707	242	330	65	17	2,152
All other expenditure	136	292	2	827	46	4	1,307
<i>Total</i>	<i>4,087</i>	<i>3,414</i>	<i>1,028</i>	<i>2,007</i>	<i>727</i>	<i>55</i>	<i>11,318</i>
Funds—Total	10,933	13,323	3,743	6,174	1,855	708	36,736

(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 the Australian Capital Territory. (c) Year 1963.

§ 2. Registered Building Societies

1. Summary.—During 1961-62 and 1962-63 returns were received from 2,598 and 2,838 societies respectively, 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 in each State for the year 1962-63 and to the combined States for 1961-62.

REGISTERED BUILDING SOCIETIES: SUMMARY

Particulars	1962-63(a)							1961-62 (a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total	Total
Societies making returns—								
Permanent	49	30	13	5	10	8	115	113
Starr-Bowkett	98	1	2	21	1		123	120
Terminating	1,621	(b) 740	165	..	27	47	2,600	2,365
<i>Total</i>	<i>1,768</i>	<i>771</i>	<i>180</i>	<i>26</i>	<i>38</i>	<i>55</i>	<i>2,838</i>	<i>2,598</i>
Shareholders	159,904	56,408	37,156	24,260	29,289	11,248	318,265	307,520
Borrowers	n.a.	62,397	21,446	5,633	9,114	4,397	n.a.	n.a.
Working expenses £'000	2,074	1,685	224	70	109	57	4,219	3,951
Loans granted £'000	26,723	14,921	6,582	1,417	4,452	2,024	56,119	50,910

(a) Year ended December, for Permanent and Starr-Bowkett Societies in Victoria, and year ended April, for Co-operative Housing Societies in Victoria. (b) Co-operative Housing Societies.

2. **Liabilities and Assets.**—Particulars of liabilities and assets in 1962–63 of the societies mentioned in the previous paragraph are shown below, with totals for 1961–62.

REGISTERED BUILDING SOCIETIES: LIABILITIES

(£'000)

State	1962–63(a)						1961–62(a)
	Investing members' funds	Borrowing members' funds	Deposits	Loans due to government	Bank overdrafts and other liabilities	Total liabilities	Total liabilities
New South Wales ..	34,928	41,608	1,998	26,912	101,860	207,306	190,200
Victoria(b) ..	6,221	18,124	7,342	20,888	62,479	115,054	105,651
Queensland ..	12,464	1,680	491	5,695	7,179	27,509	23,114
South Australia ..	3,805	..	784	2,071	31	6,691	5,951
Western Australia ..	6,281	200	3,035	5,407	1,553	16,476	13,126
Tasmania ..	2,795	111	3,018	1,218	802	7,944	6,730
Total ..	66,494	61,723	16,668	62,191	173,904	380,980	344,772

(a) Year ended December, for Permanent and Starr-Bowkett Societies in Victoria, and year ended April, for Co-operative Housing Societies in Victoria. (b) Includes statistics for Co-operative Housing Societies in Victoria.

REGISTERED BUILDING SOCIETIES: ASSETS

(£'000)

State	1962–63(a)			1961–62(a)
	Advances on mortgage (b)	Other assets	Total assets	Total assets
New South Wales ..	200,219	7,087	207,306	190,200
Victoria(c) ..	112,857	2,197	115,054	105,651
Queensland ..	26,068	1,441	27,509	23,114
South Australia ..	6,266	425	6,691	5,951
Western Australia ..	15,820	656	16,476	13,126
Tasmania ..	7,344	600	7,944	6,730
Total ..	368,574	12,406	380,980	344,772

(a) See footnote (a) to table above. (b) Includes advances on mortgage of terminating societies which are on a gross basis. Net advances may be derived by subtracting borrowing members' funds. See table above. (c) Includes statistics for Co-operative Housing Societies in Victoria.

§ 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-operation Act, 1923-1954. A summary of the business of all co-operative societies for the years 1962-63 or 1963 for all States except Western Australia is given in the following tables. Separate particulars for each of the three types of Co-operative Societies are given in the annual bulletin *Insurance and Other Private Finance*, and issue No. 2, 1963-64 contains details for 1962-63.

CO-OPERATIVE SOCIETIES

Particulars	N.S.W. 1962-63	Victoria 1962-63	Queensland 1962-63	S. Australia 1963	Tasmania 1962-63
SUMMARY					
Societies	323	139	160	69	17
Branches	n.a.	n.a.	115	n.a.	13
Members	266,498	92,437	135,994	108,283	4,944
	£'000	£'000	£'000	£'000	£'000
Gross turnover (sales)	129,612	44,894	68,111	20,282	3,856
Other income	928	1,133	3,186	1,503	331
<i>Total Income</i>	<i>130,540</i>	<i>46,027</i>	<i>71,297</i>	<i>21,785</i>	<i>4,187</i>
Total purchases	126,434	35,307	53,814	15,665	2,952
Other expenditure		9,165	13,100	4,899	1,148
<i>Total Expenditure</i>	<i>126,434</i>	<i>44,472</i>	<i>66,914</i>	<i>20,564</i>	<i>4,100</i>
Rebates and bonuses	3,185	341	1,568	1,555	19
Dividends on share capital	628	336	307	142	5

LIABILITIES
(£'000)

Paid-up capital	14,093	6,242	8,650	2,697	631
Loan capital .. .. .	..	1,522	5,852	4,418	572
Bank overdrafts	8,806	4,420	6,583	1,551	343
Accumulated profits	10,478	922	2,308	685	106
Reserve funds		5,642	8,852	2,210	62
Sundry creditors	17,057	4,745	11,552	1,473	312
Other liabilities		1,158	1,357	2,498	274
Total	50,434	24,651	45,154	15,532	2,300

ASSETS
(£'000)

Land and buildings	22,312	12,234	7,553	3,560	547	
Machinery, plant and other fixed assets			11,768	2,022	237	
Stocks	15,169	3,581	4,392	4,207	467	
Sundry debtors	9,635	6,697	16,730	2,261	841	
Cash in hand and on deposit	3,318	489	1,246	273	16	
Profit and loss account			119	101	58	22
Other assets			1,531	3,364	3,151	170
Total	50,434	24,651	45,154	15,532	2,300	

LOTTERIES AND BETTING

§ 1. Lotteries

State Governments operate lotteries in New South Wales, Queensland and Western Australia. Tattersall Lotteries are operated under government licence in Victoria and also sell tickets under government licence in Tasmania and New Zealand. The statistics of sales of tickets and prizes for Victoria include sales and allotments of prizes in Tasmania and New Zealand by Tattersall of Victoria, and Tasmanian Lotteries were operated under government licence until 30th September, 1961, when they surrendered their licence. In general, revenue derived by the State Governments from these lotteries is used directly or indirectly to provide funds for expenditure on hospitals, charities, etc. For information as to the origin, purpose and method of payment of proceeds or taxes to State revenues see Year Book No. 46, page 808 and earlier issues.

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 1959-60 to 1963-1964, are given in the following table.

LOTTERIES: VALUE OF TICKET SALES, PRIZES ALLOTTED, TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES (£'000)

Year	New South Wales	Victoria (a)	Queensland	Western Australia	Tasmania	Total (a)
TICKET SALES						
1959-60.. ..	14,505	9,635	6,510	1,263	490	32,403
1960-61.. ..	16,670	10,772	6,480	1,350	105	35,377
1961-62.. ..	19,298	9,988	6,690	1,625	(b)	37,601
1962-63.. ..	22,215	10,342	6,800	1,950	(b)	41,307
1963-64.. ..	23,563	10,670	7,090	1,962	(b)	43,285
PRIZES ALLOTTED						
1959-60.. ..	9,292	5,781	4,149	698	299	20,219
1960-61.. ..	10,659	6,463	4,130	758	64	22,074
1961-62.. ..	12,349	5,932	4,262	920	(b)	23,463
1962-63.. ..	14,217	6,205	4,333	1,118	(b)	25,873
1963-64.. ..	15,126	6,402	4,520	1,129	(b)	27,177
TAXES PAID AND OTHER NET CONTRIBUTIONS TO STATE GOVERNMENT REVENUES(c)						
1959-60.. ..	4,661	2,966	1,774	392	143	9,936
1960-61.. ..	5,380	3,257	1,744	407	32	10,820
1961-62.. ..	6,307	3,175	1,813	484	(b)	11,779
1962-63.. ..	7,367	3,202	1,840	573	(b)	12,982
1963-64.. ..	7,775	3,304	1,909	569	(b)	13,557

(a) Figures revised to include operations of Tattersall Lotteries in Tasmania and New Zealand.
 (b) Licence surrendered 30th September, 1961.
 (c) Includes grants to Tasmanian and New Zealand governments by Tattersall Lotteries in Victoria.

§ 2. Betting

Estimates of totalizator investments and investments with licensed bookmakers for the years 1959-60 to 1963-64 are given in the following table.

TOTALIZATOR INVESTMENTS AND INVESTMENTS WITH LICENSED BOOKMAKERS

(£'000)

Year	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Total
TOTALIZATOR INVESTMENTS(a)							
1959-60	14,691	13,198	2,623	2,294	2,263	793	35,862
1960-61	13,677	15,298	2,912	2,361	2,484	750	37,482
1961-62	13,880	27,129	2,851	2,506	9,296	711	56,373
1962-63	14,072	40,129	7,021	2,291	13,527	641	77,681
1963-64	14,300	54,622	12,292	2,374	16,035	630	100,253

INVESTMENTS WITH LICENSED BOOKMAKERS(b)

1959-60	110,792	71,600	n.a.	27,269	25,032	11,884	n.a.
1960-61	111,911	78,585	n.a.	28,922	21,751	13,158	n.a.
1961-62	113,543	75,824	n.a.	28,442	14,167	12,975	n.a.
1962-63	118,669	75,542	53,169	28,006	11,334	13,302	300,022
1963-64	119,469	77,223	53,985	28,721	10,494	14,219	304,111

(a) Estimated from taxes on totalizators.
bookmakers.

(b) Estimated from taxes on betting with licensed

PENSION AND SUPERANNUATION SCHEMES

§ 1. Government, Local Government and Semi-governmental Pension and Superannuation Schemes

1. General.—The Commonwealth and all State Governments have established pension and superannuation schemes for their employees. These schemes are operated through funds to which both the Governments and the employees make contributions.

Employees of local government and semi-governmental authorities are covered either by the Commonwealth and State Government schemes or by a separate scheme of the authority which is operated either through a separately constituted fund or through a life insurance office.

2. Schemes operated through Separately Constituted Funds.—The following table gives particulars of schemes operated through separately constituted funds. The names of the funds and authorities included were given in previous issues of this Year Book (see pp. 897–8, Year Book No. 50), also the annual bulletin *Insurance and Other Private Finance*.

GOVERNMENT, LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL PENSION AND SUPERANNUATION SCHEMES OPERATED THROUGH SEPARATELY CONSTITUTED FUNDS, 1962–63

Particulars	C'with	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
	£'000	£'000	£'000	£'000	£'000	£'000	£'000	£'000
Income—								
Contributions—								
Employees ..	13,112	7,228	5,086	1,372	1,367	915	641	29,721
Employing authorities ..	9,839	13,564	7,389	1,593	1,474	1,184	591	35,634
Interest, dividends and rent ..	6,025	6,742	4,513	814	971	479	384	19,928
Other income ..	4	294	85	6	14	25	95	523
Total ..	28,980	27,828	17,073	3,785	3,826	2,603	1,711	85,806
Expenditure—								
Pensions ..	10,939	11,784	7,303	878	1,887	1,329	647	34,767
Lump sum payments—								
On retirement ..	986	2,280	820	74	58	27	52	4,297
On resignation(a) ..	1,555	354	706	132	169	124	114	3,154
Gratuities ..	727	55	25	..	..	..	..	807
Other expenditure ..	..	544	166	13	99	14	7	843
Total ..	14,207	15,017	9,020	1,097	2,213	1,494	820	43,868
Assets at end of year—								
Cash—								
Deposits with Treasury ..	374	581	259	11,125	411	17	4	12,771
Other deposits and cash ..	39	503	315	99	277	62	107	1,402
Commonwealth Govt. securities	33,568	1,917	9,903	..	4,255	171	1,540	51,354
Local and semi-govt. securities..	89,774	92,133	70,996	6,531	7,156	9,851	3,883	280,324
Mortgages ..	2,189	923	117	..	8,060	8	2,012	13,309
Loans to building societies ..	185	5,953	890	122	..	12	..	7,162
Company shares, debentures and notes ..	84	27,687	1,500	..	2	..	18	29,291
Other assets ..	1,968	1,139	(b) 9,000	..	189	141	96	12,533
Total ..	128,181	130,836	92,980	17,877	20,350	10,262	7,660	408,146
Contributors at end of year—	No.	No.	No.	No.	No.	No.	No.	No.
Males ..	148,709	} 132,372	} 80,851	{ 14,972	{ 18,651	} 14,164	} 8,025	} 445,701
Females ..	18,475							
Pensions at end of year—								
Ex-employees—								
Males ..	13,870	} 23,251	{ 10,341	} 1,426	} 3,049	} 2,789	} 1,017	} 59,925
Females ..	1,140							
Widows ..	7,993	3,766	7,382	513	2,517	1,900	733	24,804
Children ..	2,123	472	1,016	136	250	170	123	4,290

(a) Includes refunds of contributions to continuing members and refunds of contributions to members withdrawing from the scheme. (b) Includes amounts previously classified as "Local and semi-government securities" but more appropriately included in "Other assets".

3. Schemes operated through Life Insurance Offices.—The table below gives particulars of schemes operated through life insurance offices. The names of the funds and authorities included were given in previous issues of this Year Book (see p. 899, Year Book No. 50), also the annual bulletin *Insurance and Other Private Finance*.

LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL PENSIONS AND SUPER-ANNUATION SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES, 1962-63

Particulars	Amount
Income—	£'000
Contributions—	
Employees	2,082
Employing authorities	2,476
Surrenders	343
Death claims	161
Matured policies	525
Other income	83
<i>Total</i>	5,670
Expenditure—	
Premiums paid to insurance companies	4,526
Benefits—	
On death or retirement	563
On resignation or dismissal	305
Other expenditure (a)	122
<i>Total</i>	5,516
Contributors at end of year	No. 51,119

(a) Includes transfers to other funds.

§ 2. Parliamentary Pension and Superannuation Schemes

Pensions and superannuation schemes have been established for members of the Commonwealth and State Parliaments. Details of these schemes, except for Tasmania, are given in pages 91 to 99 of Year Book No. 38. Details of the Tasmanian scheme are given on page 72 of Year Book No. 44. All the schemes are operated through funds to which the members of Parliament and the Commonwealth or State Governments contribute

PARLIAMENTARY PENSION AND SUPERANNUATION SCHEMES, 1962-63

Particulars	C'with	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
	£	£	£	£	£	£	£	£
Income—								
Contributions—								
Members	47,742	33,487	20,358	15,870	8,575	16,796	16,276	159,104
Government	63,949	22,403	b157,227	15,870	18,574	16,640	1,496	296,159
Interest	22,922	9,642	..	21,455	7,570	6,386	1,164	69,139
<i>Total</i>	<i>134,613</i>	<i>65,532</i>	<i>177,585</i>	<i>53,195</i>	<i>34,719</i>	<i>39,822</i>	<i>18,936</i>	<i>524,402</i>
Expenditure—								
Pension payments(a) ..	92,627	39,245	51,537	14,046	16,111	18,037	12,554	244,157
Other .. ..	..	..	..	2,214	1,431	..	208	3,853
<i>Total</i>	<i>92,627</i>	<i>39,245</i>	<i>51,537</i>	<i>16,260</i>	<i>17,542</i>	<i>18,037</i>	<i>12,762</i>	<i>248,010</i>
Assets at end of year—								
Cash—								
Deposits with Treasury	9,934	9,912	126,048	..	3,227	5,561	..	154,682
Other deposits and cash .. ..	..	..	..	..	..	..	997	997
Commonwealth Government securities ..	438,401	39,076	..	..	81,700	22,500	28,905	610,582
Local government and semi-governmental securities	66,909	155,450	..	410,246	77,500	103,738	1,900	815,743
Other assets .. ..	..	15,514	..	4,155	2,131	1,514	180	23,494
<i>Total</i>	<i>515,244</i>	<i>219,952</i>	<i>126,048</i>	<i>414,401</i>	<i>164,558</i>	<i>133,313</i>	<i>31,982</i>	<i>1,605,498</i>
Contributors at end of year—	No.	No.	No.	No.	No.	No.	No.	No.
Males	180	93	100	75	57	79	51	635
Females	4	..	..	..	2	1	3	10
Pensioners at end of year—								
Ex-members	62	38	39	21	12	22	11	205
Widows	26	23	31	14	13	20	5	132

(a) Includes lump sum payments.

(b) Includes a non-recurring item.

§ 3. Coal and Oil-Shale Mine Workers Superannuation Schemes

In all States except South Australia superannuation schemes have been established for coal and oil-shale mine workers. These schemes are operated through funds to which mine workers, mine owners and the State Governments contribute.

COAL AND OIL-SHALE MINE WORKERS SUPERANNUATION SCHEMES, 1962-63

Particulars	Amount
	£'000
Income—	
Contributions—	
Mine workers	383
Mine owners	1,682
State Governments	178
Interest, dividends and rent	437
<i>Total</i>	2,680
Expenditure—	
Pension payments	2,216
Lump sum payments	3
Refunds of contributions	3
Administration	57
<i>Total</i>	2,279
Assets at end of year—	
Deposits with Treasury	104
Other deposits and cash	54
Commonwealth Government securities	59
Local government and semi-governmental securities	8,445
Other assets	190
<i>Total</i>	8,852
Contributors at end of year—	No.
Males	15,700
Females	15
Pensioners at end of year—	
Former employees—	
Males	6,693
Females	2
Widows	4,216
Children	34

§ 4. Private Superannuation, Pension and Retiring Allowance Schemes

1. **General.**—In this section details are given of the results of a survey of private superannuation, pension and retiring allowance schemes conducted by private businesses, for the benefit of their employees, during the year ended June, 1963, or the accounting period nearest to that year. Similar surveys were conducted in 1960-61 and 1961-62.

Separate information was requested for the following:—

- (a) Schemes operated through life insurance offices, friendly societies, unit trusts, etc.;
- (b) Superannuation, pension and retiring allowance funds; and
- (c) Direct payments by the employer of pensions and/or retiring allowances.

The survey was based upon a sample of all businesses with an average monthly payroll in excess of approximately £860. Commonwealth Government airlines and banks were included, if contributing to their own separate funds rather than to State or Commonwealth superannuation funds, but other government businesses were excluded. Also excluded were rural industries, private domestic services, certain professions such as accountants or engineers, and statutory coal miners' pension funds.

The figures shown in this statement are estimates 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 approximately 77 per cent. of all employees in private employment, excluding those employed in rural industries and private domestic service.

2. **Types of Private Superannuation, Pension and Retiring Allowance Schemes.**—The survey showed that some type of scheme was operated by 52 per cent. of businesses (State branches and subsidiary companies being treated as separate businesses). Ninety-six per cent. of large businesses (monthly pay-roll over £20,000) operated schemes; 72 per cent. of medium businesses (monthly pay-roll £3,000 to £20,000); and 43 per cent. of small businesses (monthly pay-roll £860 to £3,000). Of the businesses which operated schemes, 57 per cent. operated a life insurance scheme but no superannuation, etc., fund; 22 per cent. operated both a life insurance scheme and superannuation, etc., fund; 20 per cent. operated a superannuation, etc., fund but no life insurance scheme; and one per cent. operated only direct payments. The percentage of businesses using a life insurance scheme without a superannuation, etc., scheme was greater among small businesses than among large.

3. **Financial Operations of Private Superannuation, Pension and Retiring Allowance Schemes.**—(i) *Operated through Life Insurance Offices, etc.* The following table shows details of the contributions to these schemes during 1962–63, together with comparative information for previous surveys.

PRIVATE SUPERANNUATION, ETC. SCHEMES OPERATED THROUGH LIFE INSURANCE OFFICES, ETC.(a): AMOUNTS CONTRIBUTED

(£ million)

Year	Contributions		
	Employee	Employer	Total
1960–61	10.1	16.7	26.8
1961–62	10.6	17.3	27.9
1962–63	11.2	18.6	29.8

(a) Includes schemes operated partly through life insurance offices, etc.

(ii) *Superannuation, Pension and Retiring Allowance Funds. (a) Income and Expenditure.* The following table shows particulars of the income and expenditure of these funds during 1962–63 together with comparative information for previous surveys.

SUPERANNUATION, PENSION AND RETIRING ALLOWANCE FUNDS: INCOME AND EXPENDITURE

(£ million)

Year	Income				Expenditure			
	Contributions		Other	Total	Pensions paid	Lump sum payments	Other (a)	Total
	Em- ployee	Em- ployer						
1960–61	10.2	20.8	17.8	48.8	4.4	7.7	1.9	14.0
1961–62	11.8	24.1	21.7	57.6	5.1	9.4	2.4	16.9
1962–63	12.6	25.0	25.5	63.1	6.0	11.4	3.0	20.4

(a) Includes administrative expenses payable from funds, loss on sale of investments, life insurance premiums paid, etc.

(b) *Assets of Funds.* In 1962-63, the assets of superannuation, pension and retiring allowance funds totalled £381.6 million. Liabilities to sundry creditors amounted to £4.1 million, leaving £377.5 million as the amount of funds in existence at the end of 1962-63. The composition of the assets is shown below, together with comparative information for previous surveys.

BOOK VALUE OF SUPERANNUATION, PENSION AND RETIRING ALLOWANCE FUNDS, BY TYPE OF ASSET

(Per cent.)

Survey	Cash and bank balances	Commonwealth Government securities	Local government and semi-governmental securities	Shares in companies, debentures, loans, etc.	Other	Total
1960-61.. ..	3	16	25	46	10	100
1961-62.. ..	2	16	25	47	10	100
1962-63.. ..	2	16	25	48	9	100

(iii) *Direct Payments of Pensions and, or, Retiring Allowances by the Employer.* Some businesses make direct payments of pensions and retiring allowances, either instead of, or in addition to, operating a scheme through a life insurance office, or a superannuation, pension and retiring allowance fund. In 1962-63, 10,500 direct payments of pensions were made, totalling £2.6 million, and 3,500 retiring allowances were paid, totalling £1.9 million. Payments per head of recipient in 1962-63 were:—Pensions, £248; retiring allowances, £543. Corresponding figures in 1961-62 were £275 and £550, and in 1960-61, £275 and £658.

PROBATES AND LETTERS OF ADMINISTRATION

The following table gives some particulars 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

Particulars	New South Wales 1962-63 (a)	Victoria 1963	Queensland 1962-63	South Australia 1963	Western Australia 1963	Tasmania 1963 (b)
Probates—						
Estates No.	21,681	n.a.	n.a.	3,408	2,099	1,448
Gross value £'000	n.a.	n.a.	n.a.	26,644	15,710	11,379
Net value £'000	136,480	n.a.	n.a.	24,400	14,189	10,876
Letters of Administration—						
Estates No.	n.a.	n.a.	n.a.	719	259	209
Gross value £'000	n.a.	n.a.	n.a.	1,948	1,055	701
Net value £'000	n.a.	n.a.	n.a.	1,684	923	585
Total—						
Estates No.	n.a.	17,544	n.a.	4,127	2,358	1,657
Gross Value £'000	n.a.	124,142	n.a.	28,592	16,765	12,080
Net Value £'000	n.a.	114,149	n.a.	26,084	15,112	11,461

(a) Total estates of deceased persons assessed for death duty. Taxation Department.

(b) Estates dealt with by the

CHAPTER XXII

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' Securities 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 such securities. In view of this, it is convenient to deal with the Commonwealth and State Government Securities on Issue in a separate division of this chapter (p. 946).

The subject of income taxes is also dealt with in a separate division at the end of this chapter.

For further detailed information on the subjects covered by this chapter, see the annual bulletins *Commonwealth Finance; State, Territory and Local Government Authorities' Finance and Government Securities*; and *Commonwealth Taxation Assessments*. Current information in summarized form is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, and the *Digest of Current Economic Statistics*.

COMMONWEALTH FINANCE

§ 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. Sections 87 and 96 deal with the financial relations between the Commonwealth and the States. These matters have been treated in previous issues of the Year Book, and on pages 917–24 of this issue a summary is given of the present provisions for Commonwealth financial assistance to the States.

The *Audit Act* 1901–1961 lays down the procedure which must be followed in accounting for the receipt and disbursement of public funds. The general administration of Commonwealth finances is the responsibility of the Treasurer of the Commonwealth.

§ 2. Commonwealth Public Account

1. **Nature of Account.**—The Commonwealth Public Account includes the Consolidated Revenue Fund, the Trust Fund and the Loan Fund. Ordinary revenues from taxation and other sources are paid into the Consolidated Revenue Fund, from which the main expenditures are for defence, war and repatriation services, social services, payments to the States, Commonwealth business undertakings (mostly postal, telephone and telegraph) and administration. The Trust Fund covers special transactions outside the ordinary operations of departmental expenditures, such as pension funds and moneys held for expenditure by the Commonwealth at some future time. The Loan Fund receives its funds from the sale of Commonwealth securities, and expenditures from the Fund are made in accordance with the purpose of issue of each loan. The main disbursements from the Loan Fund are to the States, either by way of distribution of the proceeds of loans raised by the Commonwealth on their behalf or in accordance with the provisions of the Commonwealth and State Housing Agreements, and the remaining disbursements are for Commonwealth purposes such as defence or war service land settlement.

2. **Summary of Receipts and Expenditure.**—A summary of transactions on the Commonwealth Public Account for 1963–64 and the four preceding years is given in the table which follows. The transactions are recorded on a cash basis.

COMMONWEALTH PUBLIC ACCOUNT: SUMMARY OF TRANSACTIONS

(£ million)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Expenditure—					
Consolidated Revenue Fund(a) ..	1,396.9	1,495.7	1,619.4	1,659.0	(b)1,871.8
Loan Fund—					
Defence services	12.0		23.6	66.1	38.7
State works and housing programmes ..	214.9	225.6	244.6	249.1	262.0
War service land settlement	6.9	2.0	1.6	0.6	4.3
Mount Isa Railway Agreement .. .. .	..	..	3.8	5.9	6.0
Snowy Mountains Hydro-electric Authority .. .. .	..	..	..	13.1	11.7
<i>Total Expenditure</i>	<i>1,630.7</i>	<i>1,723.3</i>	<i>1,893.0</i>	<i>1,993.8</i>	<i>2,194.5</i>
Receipts—					
Consolidated Revenue Fund	1,438.3	1,638.3	1,641.5	1,685.4	1,904.7
National Debt Sinking Fund	71.1	73.8	76.7	81.8	89.5
Net movement in cash balances of other Trust Funds	2.9	-12.0	2.2	15.2	2.5
<i>Total Receipts</i>	<i>1,512.3</i>	<i>1,700.1</i>	<i>1,720.4</i>	<i>1,782.4</i>	<i>1,996.7</i>
<i>Excess of Expenditure over Receipts to be met from Borrowings</i>	<i>118.4</i>	<i>23.2</i>	<i>172.6</i>	<i>211.4</i>	<i>197.8</i>
Add Redemptions—					
Loan Fund .. .. .	..	5.0	..	32.0	20.2
National Debt Sinking Fund	95.2	96.3	94.6	57.6	72.0
<i>Total Call on Borrowings</i>	<i>213.6</i>	<i>124.5</i>	<i>267.2</i>	<i>301.0</i>	<i>290.0</i>
Borrowings—					
Public loan proceeds—					
Australia	142.6	114.9	224.0	251.5	281.0
Overseas	42.1	25.4	16.2	65.6	36.7
Increase in temporary borrowings ..	30.0	-15.0	22.0	-15.5	-27.2
Reduction in cash balances	-1.1	-0.8	5.0	-0.6	-0.5
<i>Total Borrowings</i>	<i>213.6</i>	<i>124.5</i>	<i>267.2</i>	<i>301.0</i>	<i>290.0</i>

(a) Excludes payments to Loan Consolidation and Investment Reserve:—1959-60, £41.4 million; 1960-61, £142.6 million; 1961-62, £22.2 million; 1962-63, £26.4 million; 1963-64, £14.9 million.

(b) Excludes expenditure of £18.0 million on the redemption of Treasury Bills.

§ 3. Commonwealth Consolidated Revenue Fund

REVENUE

1. Sources of Revenue.—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 1959-60 to 1963-64. Taxation constitutes the main sources of Commonwealth revenue, accounting for 84.5 per cent. in 1963-64.

COMMONWEALTH CONSOLIDATED REVENUE FUND: SOURCES OF REVENUE (£'000)

Source	1959-60	1960-61	1961-62	1962-63	1963-64
Taxation	1,249,790	1,425,239	1,416,524	1,440,459	1,609,420
Per head of population	£122.96	£137.15	£133.56	£133.23	£145.96
Business undertakings	137,238	153,867	158,389	171,200	187,889
Per head of population	£13.50	£14.81	£14.93	£15.84	£17.04
Territories	4,198	5,455	5,996	7,732	9,519
Per head of population	£0.41	£0.55	£0.57	£0.72	£0.86
Other revenue—					
Interest	13,276	14,588	17,069	22,122	24,096
Dividends or payments in the nature of a dividend	2,642	1,991	2,053	1,914	2,539
Repayments	1,263	1,025	2,412	3,839	5,616
Coinage	415	321	589	106	..
Defence	5,832	5,827	4,806	4,409	14,224
Air navigation charges	717	1,031	1,393	1,483	1,877
Quarantine and other health services ..	106	119	111	155	69
Patents, trade marks, etc.	399	476	582	606	640
Bankruptcy	113	143	169	181	202
Net profit on Australian note issue ..	10,516	12,930	15,751	12,780	13,491
Unrequired balances of trust accounts ..	5,674	2,053	3,525	4,700	12,591
Australian Aluminium Production Commission .. .. .	..	2,500	250	..	250
Reserve Bank Reserve Fund .. .. .	..	2,691	3,352	4,487	1,676
Commonwealth Banking Corporation ..	..	756	921	717	1,145
Other	6,107	7,267	7,650	8,246	19,444
<i>Total, Other Revenue</i>	<i>47,060</i>	<i>53,718</i>	<i>60,633</i>	<i>65,995</i>	<i>97,860</i>
<i>Per head of population</i>	<i>£4.63</i>	<i>£5.18</i>	<i>£5.72</i>	<i>£6.11</i>	<i>£8.88</i>
Grand Total	1,438,286	1,638,279	1,641,542	1,685,386	1,904,688
Per head of population	£141.50	£157.67	£154.78	£155.90	£172.74

A graphical representation of the revenue and expenditure of the Commonwealth Consolidated Revenue Fund appears on page 937.

2. Taxation.—(i) *Total Collections.* (a) *Amount.* Collections under each heading for the years 1959–60 to 1963–64 are shown below.

COMMONWEALTH TAXATION: TOTAL NET COLLECTIONS

(£'000)

Type of tax	1959–60	1960–61	1961–62	1962–63	1963–64
Income tax—					
Individuals	442,164	518,744	537,345	541,711	636,144
Companies	229,130	282,562	282,688	259,914	293,130
Dividend (withholding) .. ..	..	5,960	8,117	8,965	7,968
Customs	84,381	101,785	85,160	105,101	116,286
Excise	252,111	257,409	265,645	274,402	291,232
Sales tax	164,185	173,040	148,824	156,531	162,595
Pay-roll tax	55,162	61,260	60,971	63,255	68,222
Estate duty	13,753	14,807	17,029	17,850	19,936
Gift duty	2,435	2,783	2,797	3,164	3,244
Special industry taxes(a)	6,469	6,889	7,948	9,566	10,663
Total Taxation	1,249,790	1,425,239	1,416,524	1,440,459	1,609,420

(a) Used for purposes of industries concerned. The taxes are as follows:—Wheat Tax, Wool Tax, Wheat Export Charge, Miscellaneous Export Charges, Stevedoring Industry Charge, Tobacco Charge, Dairy Produce Levy, Canning Fruit Charge, Cattle Slaughter Levy, and Honey Levy.

(b) *Proportion of each Class to Total Collections.* The following table shows the proportion of the total collections represented by returns from each class of taxation for the years 1959–60 to 1963–64.

COMMONWEALTH TAXATION: PROPORTION OF EACH CLASS TO TOTAL NET COLLECTIONS

(Per cent.)

Type of tax	1959–60	1960–61	1961–62	1962–63	1963–64
Income taxes	53.7	56.6	58.5	56.3	58.3
Customs	6.8	7.2	6.0	7.3	7.2
Excise	20.2	18.1	18.8	19.0	18.1
Sales tax	13.1	12.1	10.5	10.9	10.1
Pay-roll tax	4.4	4.3	4.3	4.4	4.2
Estate duty	1.1	1.0	1.2	1.2	1.2
Gift duty	0.2	0.2	0.2	0.2	0.2
Special industry taxes(a)	0.5	0.5	0.5	0.7	0.7
Total Taxation	100.0	100.0	100.0	100.0	100.0

(a) See footnote (a) to previous table.

(ii) *Customs Revenue.* The following table gives details of net customs receipts for the years 1959-60 to 1963-64.

**COMMONWEALTH CUSTOMS REVENUE: CLASSIFICATION OF
NET RECEIPTS**
(£'000)

Class	1959-60	1960-61	1961-62	1962-63	1963-64
Foodstuffs of animal origin	473	677	515	599	732
Foodstuffs of vegetable origin	1,784	2,100	2,063	2,080	2,455
Spirituos and alcoholic liquors	4,762	5,202	5,847	5,478	6,335
Tobacco, cigars and cigarettes	13,034	13,352	11,997	12,759	13,200
Animal substances (not foodstuffs)	7	8	5	5	6
Vegetable substances and fibres	259	168	247	321	299
Yarns, textiles and apparel	12,176	15,573	12,863	14,944	16,791
Oils, fats and waxes	10,970	12,430	9,149	11,367	10,848
Pigments, paints and varnishes	219	317	284	405	382
Rocks and minerals	56	46	62	113	118
Metals, metal manufactures and machinery ..	23,036	28,655	20,836	32,505	37,037
Rubber and leather and manufactures thereof	606	939	838	1,318	1,751
Wood and wicker, raw and manufactured ..	1,802	2,353	1,514	1,623	2,189
Earthenware, cement, china, glass and stone- ware	2,233	3,002	2,673	2,952	2,977
Pulp, paper and board, paper manufactures and stationery	1,426	2,361	2,404	2,778	2,804
Sporting materials, toys, fancy goods, jewellery and timepieces	2,825	3,526	3,237	3,600	3,758
Optical, surgical and scientific instruments, photographic goods	1,404	1,683	1,592	1,677	1,918
Chemicals, pharmaceutical products, essential oils and fertilizers	1,690	1,806	2,131	2,220	3,033
Miscellaneous goods	3,047	5,045	4,762	6,068	6,952
Primage	1,939	2,298	1,840	2,152	2,319
Other receipts	633	244	301	137	382
Total	84,381	101,785	85,160	105,101	116,286

(iii) *Excise Revenue.* Net excise receipts for the years 1959-60 to 1963-64 were as follows.

COMMONWEALTH EXCISE REVENUE: CLASSIFICATION OF NET RECEIPTS
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Beer	109,724	111,740	113,504	117,263	123,584
Spirits	8,683	8,586	8,418	8,582	9,153
Tobacco	14,366	13,389	11,898	10,541	9,355
Cigars and cigarettes	61,459	64,969	67,488	70,186	73,100
Cigarette papers	770	716	640	571	506
Petrol	49,255	51,952	57,904	61,014	67,987
Diesel fuel	2,179	2,299	2,253	2,576	3,833
Matches	1,125	1,105	1,095	1,126	1,144
Playing cards	52	50	53	49	52
Coal	418	389	290	280	293
Cathode ray tubes	2,850	1,961	2,056	2,106	1,955
Canned fruit					201
Miscellaneous(a)	1,230	253	46	108	69
Total	252,111	257,409	265,645	274,402	291,232

(a) Includes net collections of diesel fuel taxation credited to miscellaneous receipts of the Department of Customs and Excise.

(iv) *Other Taxation.* (a) *General.* Taxes other than customs and excise and the various export charges are, in general, assessed and collected by the Commissioner of Taxation. The organization comprises a Head Office in Canberra, an office in each State assessing the returns of taxpayers whose interests are restricted to that State, and a Central Office situated in Melbourne assessing taxpayers whose interests are in more than one State.

For detailed statistics relating to Commonwealth income taxes, estate duty, gift duty and sales tax, see the annual bulletin *Commonwealth Taxation Assessments*.

(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 12th August, 1964.

A general rate of tax is levied on all goods other than those specified in the schedules to the *Sales Tax (Exemptions and Classifications) Act 1935-1964*. These schedules set out details of goods exempt from sales tax and those subject to special rates. The following are the general and special rates which operated from 7th August, 1952.

Period	General rate	Special rates
10th September, 1953, to 18th August, 1954 ..	12½ per cent. ..	16½ per cent.
19th August, 1954, to 14th March, 1956 ..	12½ per cent. ..	10 and 16½ per cent.
15th March, 1956, to 3rd September, 1957 ..	12½ per cent. ..	10, 16½, 25 and 30 per cent.
4th September, 1957, to 15th November, 1960 ..	12½ per cent. ..	8½, 16½, 25 and 30 per cent.
16th November, 1960, to 21st February, 1961 ..	12½ per cent. ..	8½, 16½, 25 and 40 per cent.
22nd February, 1961, to 15th August, 1961 ..	12½ per cent. ..	8½, 16½, 25 and 30 per cent.
16th August, 1961, to 6th February, 1962 ..	12½ per cent. ..	2½, 16½, 25 and 30 per cent.
7th February, 1962, to 11th August, 1964 ..	12½ per cent. ..	2½, 22½ and 25 per cent.
From 12th August, 1964	12½ per cent. ..	2½ and 25 per cent.

Particulars of the net amount of sales tax payable and the sales of taxable and exempt goods in each State for 1963-64 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 page 903 because the latter include some adjustments in respect of earlier tax years and relate to 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, 1963-64

(£'000)

Particulars	N.S.W. (a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N. Terr.	Australia
Net sales on which sales tax was payable at—								
2½ per cent. ..	90,306	78,055	29,657	20,687	13,295	4,884	74	236,958
12½ per cent. ..	245,989	175,612	78,684	52,423	37,104	11,079	675	601,566
22½ per cent. ..	90,396	77,030	36,385	26,012	18,325	3,591	108	251,867
25 per cent. ..	47,853	31,923	11,885	7,496	4,905	1,913	54	106,029
Total ..	474,544	362,640	156,611	106,618	73,629	21,467	911	1,196,420
Sales of exempt goods by registered persons ..	1,220,061	902,892	401,678	243,549	194,350	90,009	5,672	3,058,211
Total sales of Taxable and Exempt Goods ..	1,694,605	1,265,532	558,289	350,167	267,979	111,476	6,583	4,254,631
Sales tax payable ..	65,308	49,220	21,735	14,797	10,320	2,793	124	164,297

(a) Includes Australian Capital Territory.

Sales of taxable and exempt goods and sales tax payable for Australia as a whole are shown in the following table for the years 1959-60 to 1963-64.

SALES TAX AND AMOUNT OF SALES

(£'000)

Year of sale				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
1959-60	..	..	..	1,020,033	2,354,204	3,374,237	167,839
1960-61	..	..	..	1,040,552	2,447,126	3,487,678	171,584
1961-62	..	..	..	1,049,841	2,415,896	3,465,737	148,565
1962-63	..	..	..	1,151,338	2,627,091	3,778,429	157,132
1963-64	..	..	..	1,196,420	3,058,211	4,254,631	164,297

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 1935-1964*. The figures shown do not represent the total sales of all commodities, as vendors trading only in exempt goods 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.

(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 a 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. However, the collections now form part of the general revenues of the Commonwealth. For particulars of the present method of financing the National Welfare Fund, out of which Child Endowment is paid, see para. 5, pages 914-15. The exemption was increased to £80 a week (£4,160 per annum) from 1st October, 1953, to £120 a week (£6,240 per annum) from 1st September, 1954, and to £200 a week (£10,400 per annum) from 1st September, 1957. Employers whose export sales have increased above the annual average of export sales effected during a base period of two years ended 30th June, 1960, are entitled under the Commonwealth Government's export incentive scheme to a rebate of pay-roll tax of twelve and one half times the percentage increase in export sales.

(e) *Income Taxes*. Details of taxes on income are given in the division, Taxes on Income at the end of this chapter.

(f) *Wool Sales Deduction*. The Wool Sales Deduction scheme operated from 2nd December, 1950, until 17th November, 1951. For particulars, see Year Book No. 46, page 819.

(g) *Estate Duty*. Commonwealth Estate Duty was first levied in 1914. Under the *Estate Duty Assessment Act 1914-1963*, 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 £10,000 decreasing by £1 for every £4 by which the value exceeds £10,000 and ceasing to apply at £50,000; (b) where no part of the estate passes to the widow, children or grand-children,

the sum of £5,000 decreasing by £1 for every £4 by which the value exceeds £5,000 and ceasing to apply at £25,000; and (c) where only part 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.; £500,001 and over 27.9 per cent.

Particulars of the number and value of estates and duty assessed, for each of the assessment years 1958-59 to 1962-63, are given in the following table.

ESTATE DUTY ASSESSMENTS

Particulars	1958-59	1959-60	1960-61	1961-62	1962-63
Number of estates	11,794	13,978	14,196	16,449	16,634
Gross value assessed £'000	202,899	233,560	244,976	279,382	294,153
Deductions £'000	35,589	40,453	45,683	47,725	53,366
Statutory exemption £'000	26,555	31,597	33,051	37,180	37,255
Dutiable value £'000	140,755	161,510	166,241	194,477	203,532
Duty payable £'000	13,013	14,116	15,589	17,164	18,994
Average dutiable value £	11,934	11,555	11,710	11,823	12,236
Average duty per estate £	1,103	1,010	1,098	1,043	1,142

(h) *Gift Duty.* The *Gift Duty Act 1941-1947* and the *Gift Duty Assessment Act 1941-1963* impose a gift duty on all gifts made after 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 shall not exceed one-half of the amount by which the value of the gift exceeds £2,000.

(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 Year Book (see No. 40, pp. 672-3).

(j) *Wool Tax.* 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 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, 1953. The *Wool Tax Acts (Nos. 1 and 2)* of 1952 provided for the payment of a levy of four shillings a bale until 30th June, 1953, after which date the rate of tax could be varied within prescribed limits. There was no variation until 1st July, 1957, when the rate was increased to six shillings a bale. On 1st August, 1960, the rate prescribed was raised to seven shillings a bale which was retained until 28th August, 1961, when a rate of twelve shillings a bale was introduced; the latter rate continued in force until 30th June, 1964. The purpose of the tax is to provide funds for wool promotion and research previously provided by the Wool Contributory Charge. Collections during 1959-60, 1960-61, 1961-62, 1962-63 and 1963-64 were £1,542,000, £1,655,000, £2,854,000, £2,955,000 and £3,179,000 respectively.

The *Wool Tax Act (No. 1) 1963* and *Wool Tax Act (No. 2) 1963* and the *Wool Tax Assessment Act 1963* were repealed, ceasing to operate on 30th June, 1964. They were replaced by *Wool Tax Acts (Nos. 1 to 5) 1964* and *Wool Tax Administration Act 1964*, which, as from 1st July, 1964, imposed the woolgrowers' levy for promotion and research as a percentage of the gross sale value of wool, in contrast to the previous levy of a unit charge per bale of wool produced. The new legislation provided for a maximum levy of 2 per cent. and for prescribing the operative rate by regulation, after the Minister has received a recommendation on the rate from the Australian Wool Industry Conference (see Chapter XXIII. Rural Industry).

The rate prescribed for 1964–65 was $1\frac{3}{4}$ per cent., which incorporated an increase in the woolgrowers' combined levy for promotion and research from 12s. a bale under the old legislation to the equivalent of about 29s. a bale (see Chapter XXIII. Rural Industry).

(k) *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 Year Book (see No. 40, p. 675).

The various *Wool (Contributory Charge) Acts* were repealed by the *Wool Tax Assessment Act 1952* and the charge superseded by the wool levy.

(l) *Wheat Export Charge and Wheat Tax.* A summary of the provisions of the *Wheat Export Charge Acts 1946, 1948, 1952* and 1954 is contained in previous issues of the Year Book (see No. 40, p. 676, No. 41, p. 604 and No. 46, p. 820).

The *Wheat Export Charge Act 1963* repealed the *Wheat Export Charge Act 1958* and provided for an export charge on wheat and wheat products for the seasons 1963–64 to 1967–68 inclusive. The charge which may be levied is the excess of the export price over the cost of production or 1s. 6d. per bushel, whichever is the less. Under the *Wheat Industry Stabilization Act 1963* to which the *Wheat Export Charge Act* is complementary, the Commonwealth Government guarantees a return to wheat-growers of the ascertained cost of production of up to 150 million bushels of wheat harvested each season exported from Australia. 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.

As the return from exports has been below the guaranteed price, there have been no collections of the wheat export charge since the 1956–57 (No. 20) Pool when £1,589,000 was collected.

The *Wheat Tax Act 1957* imposed a tax of $\frac{1}{4}$ d. for each bushel of wheat—

- (a) which has been delivered to the Wheat Board on or after the first day of October, 1956, and before the date of commencement of the Act; or
- (b) which is delivered to the Wheat Board on or after that date.

The Act also provided that where, before the commencement of the Act, a person delivering to the Board wheat upon which tax is imposed by the Act authorized the Board to deduct an amount from the moneys payable to him and to pay the amounts so deducted to a person, authority or association for the purposes of soil fertility research or other research likely to benefit the wheat industry. and the Board did so, the tax otherwise payable upon that wheat is to be reduced by the amount so deducted.

The *Wheat Research Act 1957* provided for the establishment of a *Wheat Research Trust Account* to receive moneys payable under the *Wheat Act 1957*, and for the setting up of a *Wheat Industry Research Council* to direct the expenditure of moneys from that Trust Account for research, etc., to benefit the wheat industry.

Collections of *Wheat Tax* amounted to £187,000 in 1959–60, £261,000 in 1960–61, £234,000 in 1961–62, £297,000 in 1962–63 and £319,000 in 1963–64 and were paid to the *Wheat Research Trust Account*.

(m) *Miscellaneous Export Charges.* These consist of charges levied on exports of apples and pears (*Apple and Pear Export Charges Act 1938–1960*), canned fruits (*Canned Fruits Export Charges Act 1962–1963*), dairy produce (*Dairy Produce Export Charge Act 1924–1962*), dried fruits (*Dried Fruits Export Charges Act 1924–1929*), eggs (*Eggs Export Charges Act 1947*) and meat (*Meat Export Charges Act 1935–1954*), and on grapes used in the manufacture of wine (*Wine Grapes Charges Act 1929–1957*). The collections are paid into special 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:—1959–60, £540,000; 1960–61, £529,000; 1961–62, £618,000; 1962–63, £826,000; and 1963–64, £923,000.

(n) *Stevedoring Industry Charge*. The *Stevedoring Industry Charge Act 1947* and the *Stevedoring Industry Charge Assessment Act 1947* imposed a charge of 4½d. a man-hour 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.

Further amendments under the Stevedoring Industry Charge Acts of 1958 and 1962 provided for an increase of the charge to 3s. a man-hour from 1st April, 1958, until 1st July, 1959, a reduction to 2s. 6d. a man-hour between 1st July, 1959 and 1st April, 1962, and an increase to 3s. 4d. a man-hour on or after 1st April, 1962.

Collections during the years 1959–60 to 1963–64 were as follows:—1959–60, £3,717,000; 1960–61, £3,844,000; 1961–62, £3,433,000; 1962–63, £4,493,000; and 1963–64, £5,161,000.

(o) *Tobacco 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. a 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 Acts 1955* and 1962 are 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 1959–60, 1960–61, 1961–62, 1962–63 and 1963–64 amounted to £112,000, £136,000, £164,000, £120,000 and £174,000 respectively.

(p) *Dairy Produce Levy*. The *Dairy Produce Levy Act 1958* imposed a levy on the manufacture of butter and cheese for the purpose of financing a research and sales promotion scheme for the dairy industry. The maximum rates of the levy are fixed at three-sixteenths of a penny a pound on butter and three-thirty-seconds of a penny on cheese. In 1959–60, 1960–61, 1961–62, 1962–63, and 1963–64 collections amounted to £334,000, £350,000, £390,000, £395,000 and £396,000 respectively.

(q) *Canning Fruit Charge*. The *Canning Fruit Charge Act 1959* imposed a levy on apricots, peaches and pears accepted by canneries as of canning quality or for use in the production of canned fruit, for the purpose of promoting the sale of Australian canned fruits both overseas and in Australia. The rate of the charge was ten shillings per ton of fruit delivered to canneries or such lesser rate as may be prescribed from time to time. Rates applied during 1963–64 were 7s. 6d. per ton to 30th November, 1963 and 5s. per ton from 1st December, 1963, to 30th June, 1964. In 1959–60, 1960–61, 1961–62, 1962–63 and 1963–64 collections amounted to £35,000, £30,000, £45,000, £71,000 and £30,000 respectively.

(r) *Cattle Slaughter Levy*. The *Cattle Slaughter Levy Act 1960* imposed a levy upon the slaughter of cattle for human consumption at rates to be prescribed from time to time but not exceeding two shillings per head of cattle slaughtered. The proceeds of this levy may be expended on purposes associated with scientific, economic, or technical research related to the raising of cattle or the production or distribution of beef and other products of the slaughter of cattle. In 1960–61, 1961–62, 1962–63 and 1963–64 collections amounted to £84,000, £210,000, £406,000 and £440,000, respectively.

(s) *Honey Levy.* The *Honey Levy Act 1962* imposed a levy on honey sold for domestic consumption in Australia at the initial operative rate of one halfpenny a pound and provided for a maximum rate of one penny a pound. The proceeds of this levy may be expended on the regulation of Australian exports of honey and on associated promotional and research activities. In 1962-63 and 1963-64 collections amounted to £3,000 and £41,000, respectively.

3. *Business Undertakings.*—(i) *Postmaster-General's Department.* Particulars of net receipts for each of the financial years 1959-60 to 1963-64 are given in the following table.

POSTMASTER-GENERAL'S DEPARTMENT: NET RECEIPTS
(£'000)

Particulars	1959-60	1960-61	1961-62 (a)	1962-63	1963-64
Postal	40,531	44,211	47,104	49,427	52,977
Telegraph	6,804	7,275	7,448	7,919	8,627
Telephone	71,209	81,114	85,166	92,315	102,782
Miscellaneous	3,087	3,565	96	1,028	1,046
Total	121,631	136,165	139,814	150,689	165,432

(a) Owing to changes in accounting practices, exact comparisons cannot be made with previous years.

(ii) *Broadcasting and Television Services.* Following the amendment of the *Australian Broadcasting Act 1942-1946* by Act No. 64 of 1948, the Australian Broadcasting Control Board was set up on 15th March, 1949. (See also Chapter XV. Transport and Communication, pp. 594-602).

Details of net receipts for the years 1959-60 to 1963-64 are shown in the following table.

BROADCASTING AND TELEVISION SERVICES: NET RECEIPTS
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Listeners' licence fees	5,656	5,536	5,413	5,434	5,520
Broadcasting station licence fees	88	104	97	107	118
Television viewers' licence fees	4,624	5,781	6,626	7,778	8,677
Television station licence fees	38	65	91	91	116
Wireless telegraphy fees .. .. .	..	..	43	61	67
Miscellaneous	54	67	83	103	129
Total	10,460	11,553	12,353	13,574	14,627

(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 1959-60 to 1963-64.

COMMONWEALTH RAILWAYS REVENUE
(£'000)

Railway	1959-60	1960-61	1961-62	1962-63	1963-64
Trans-Australian	3,249	4,091	4,187	4,493	5,220
Central Australia	1,601	1,867	1,821	2,251	2,369
North Australia	272	149	155	148	182
Australian Capital Territory	25	42	59	45	59
Total	5,147	6,149	6,222	6,937	7,830

Further particulars to 1963-64 are given in Chapter XV. *Transport and Communication* (see pp. 555-6 and 558-9).

4. **Other Sources of Revenue.**—Revenue derived by the Consolidated Revenue Fund from the Territories of the Commonwealth during 1963-64 amounted to £9,519,000 (Australian Capital Territory, £7,043,000; Northern Territory, £2,472,000; Cocos (Keeling) Islands, £4,000). Of other sources of revenue, amounting to £97,860,000, the following are noteworthy:—interest, £24,096,000; defence, £14,224,000; net profit on Australian note issue, £13,491,000.

For details of the revenue of the Territories see Chapter V. of this Year Book.

EXPENDITURE

1. **Details of Expenditure from Consolidated Revenue.**—The following table shows details of expenditure from the Consolidated Revenue Fund during the years 1959-60 to 1963-64 classified by function and economic type. This presentation, which represents a re-classification of Commonwealth Consolidated Revenue Fund expenditure in National Accounts form, has replaced previous forms of presentation which summarized Treasury accounting statements.

CONSOLIDATED REVENUE FUND: EXPENDITURE, BY FUNCTION AND ECONOMIC TYPE
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Health and welfare—					
Cash benefits to persons	299,664	330,405	365,534	379,467	416,546
Other(a)	12,375	13,743	16,273	18,023	18,886
Defence—					
Total	193,556	199,437	203,713	215,044	257,607
Less Amounts charged to Loan Fund	11,987	..	23,641	66,070	38,715
	181,569	199,437	180,072	148,974	218,892
Repatriation(b)—					
Cash benefits to persons	66,066	74,719	78,654	82,903	91,269
Other (a)	20,400	22,134	24,470	26,680	28,983
Housing—					
Advances	36,637	37,520	37,748	40,841	38,884
Other(a)	6,249	6,004	5,489	5,862	5,620
Other functions—					
Expenses of business undertakings	124,883	129,510	137,022	131,235	143,479
Current expenditure on goods and services	97,271	99,553	109,581	118,721	151,856
Capital expenditure on goods and services—					
Business undertakings(c)	45,169	46,254	52,808	69,374	76,268
Other	19,975	25,860	30,428	31,926	36,705
Subsidies	22,583	25,809	38,369	37,079	51,712
Cash benefits to persons	4,087	4,096	4,727	4,766	5,278
Grants to the States—					
Current	19,346	21,596	23,289	24,917	26,864
Capital	52,325	56,720	62,957	67,900	71,332
Grants to overseas governments and organizations(d)	18,933	22,510	25,964	31,854	36,354
Advances—					
To Snowy Mountains Hydro-electric Authority	28,250	18,500	16,010	9,266	11,829
To overseas governments and organizations	14,742	3,380	5,420	15,574	4,035
To the States	1,111	1,415	1,484	3,356	5,377
Other	1,624	3,502	13,345	4,196	7,171
Expenditure not allocated to function—					
Grants to the States	252,826	278,612	313,371	333,071	349,434
Debt charges(e)—					
Interest	46,617	43,489	43,039	40,441	40,175
Payment to National Debt Sinking Fund	19,190	23,104	25,109	27,243	28,765
Loan Consolidation and Investment Reserve	41,382	142,561	22,155	26,378	14,875
Redemption of Treasury Bills .. .. .	..	..	..	..	18,000
Other	5,012	7,846	8,224	5,339	6,099
Grand Total	1,438,286	1,638,279	1,641,542	1,685,386	1,904,688

(a) Includes capital expenditure on goods and services (see table on page 917). (b) Excludes War Service Homes, included in Housing. (c) Includes expenses of undertakings in Northern Territory and Australian Capital Territory. (d) Includes grant to Administration of Papua and New Guinea and grants under Colombo Plan, United Nations Technical Assistance Administration, etc. (e) Excludes loan management expenses included in other functions.

Further details of the expenditure in each section are given in paragraphs 2 to 11 following.

2. Defence Services.—Details of the expenditure on defence services, including works and services, but excluding debt charges, etc., by the Departments of Defence, Navy, Army, Air and Supply are shown in the following table. This table covers expenditure from Consolidated Revenue and Loan Funds by the service and associated departments only, and includes the cost of maintaining forces in oversea posts. In recent years there has been no expenditure on defence services from Trust Funds. Re-allocation of items has caused revision to some of the figures which appeared in previous issues.

DEFENCE SERVICES(a): COMMONWEALTH EXPENDITURE FROM REVENUE AND LOAN FUNDS
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Department of Defence—					
Administrative and general expenses ..	1,142	1,219	1,313	1,522	1,733
Buildings, works, etc. ..	63	48	314	1,245	71
Maintenance and rent ..	26	36	33	50	39
<i>Total</i>	<i>1,231</i>	<i>1,303</i>	<i>1,660</i>	<i>2,817</i>	<i>1,843</i>
Department of the Navy—					
Naval Forces—pay, maintenance, etc. ..	32,235	31,863	33,054	31,365	35,779
Naval construction and additions to the fleet ..	5,557	7,898	6,469	7,402	11,882
Ships, aircraft and aircraft engines ..	1,937	2,151	5,078	7,466	4,851
Buildings, works, etc. ..	1,165	1,745	1,721	1,781	1,640
Maintenance and rent ..	1,095	1,108	1,066	1,050	1,209
Retirement benefits ..	235	419	395	419	512
<i>Total</i>	<i>42,224</i>	<i>45,184</i>	<i>47,783</i>	<i>49,483</i>	<i>55,873</i>
Department of the Army—					
Military Forces—pay, maintenance, etc. . .	41,717	39,315	40,078	40,864	44,144
Special units serving abroad—maintenance	2,328	2,532	2,095	1,829	2,013
Arms, armament and equipment ..	15,924	17,333	16,846	18,479	24,216
Buildings, works, etc. ..	3,142	3,350	2,631	2,741	3,275
Maintenance and rent ..	2,063	2,237	2,230	2,325	2,722
Retirement benefits ..	613	1,059	929	1,101	1,334
<i>Total</i>	<i>65,787</i>	<i>65,826</i>	<i>64,809</i>	<i>67,339</i>	<i>77,704</i>
Department of Air—					
Air Force—pay, maintenance, etc. ..	27,674	29,305	30,486	30,758	32,099
R.A.A.F. squadrons overseas ..	2,032	2,347	2,279	2,578	2,785
Aircraft, equipment and stores ..	26,011	25,064	26,091	27,782	48,159
Buildings, works, etc. ..	3,650	3,833	3,266	3,072	2,808
Maintenance and rent ..	2,084	2,123	2,376	2,640	2,662
Retirement benefits ..	388	1,014	852	869	998
<i>Total</i>	<i>61,839</i>	<i>63,686</i>	<i>65,350</i>	<i>67,699</i>	<i>89,511</i>
Department of Supply—					
Administrative and general expenses ..	2,575	2,620	2,834	2,981	3,304
Defence Standards Laboratories	1,010	1,083	1,160	1,209	1,344
Government factories—maintenance of production capacity ..	1,797	1,281	1,445	1,476	1,545
Transport and storage services ..	945	1,135	1,133	2,089	2,284
Miscellaneous expenditure ..	236	176	190	432	—1,460
Weapons Research Establishment ..	9,500	9,490	9,510	7,628	14,506
Defence research and development ..	1,321	1,383	1,520	2,669	3,302
Munitions factories—working capital ..	..	150	120	330	82
Machinery, plant equipment, etc. ..	1,669	1,708	1,638	2,040	2,325
Buildings, works, etc. ..	1,083	1,240	1,214	1,301	1,093
Maintenance and rent ..	664	716	879	899	969
<i>Total</i>	<i>20,800</i>	<i>20,982</i>	<i>21,643</i>	<i>23,054</i>	<i>29,294</i>
Economic assistance to support defence programme of S.E.A.T.O. member countries ..	684	776	577	1,248	944
Security Intelligence Organization ..	578	669	661	705	858
Civil defence ..	105	112	222	273	321
Recruiting campaign ..	302	474	481	500	741
Aid to India ..	..	..	..	1,446	642
Other ..	6	425	527	480	—124
Total, Defence Services—					
Consolidated Revenue Fund ..	181,569	199,437	180,072	148,974	218,892
Loan Fund ..	11,987	..	23,641	66,070	38,715
Grand Total	193,556	199,437	203,713	215,044	257,607

(a) Excludes expenditure on debt charges, audit charges, pension and superannuation payments and Defence Division of the Department of the Treasury.

NOTE.—Minus sign (—) denotes an excess of receipts over expenditure.

3. **War and Repatriation Services.**—Expenditure from Consolidated Revenue and Loan Funds for war and repatriation services (excluding debt charges) in relation to both the 1914–18 and 1939–45 Wars is shown in the following table for the years 1959–60 to 1963–64. Expenditure on the maintenance of forces in oversea posts and the cost of arms and equipment is included in Defence Services. Re-allocation of items has caused revision to some of the figures which appeared in previous issues.

**WAR AND REPATRIATION SERVICES: COMMONWEALTH EXPENDITURE
FROM CONSOLIDATED REVENUE AND LOAN FUNDS**

(£'000)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Cash benefits to persons—					
War and service pensions and allowances	65,823	73,673	77,270	81,347	89,525
Other	243	1,046	1,383	1,556	1,744
Total	66,066	74,719	78,653	82,903	91,269
Advances—					
War service homes(a)	35,000	35,000	35,000	37,500	35,000
War service land settlement	6,938	2,027	1,577	607	4,262
Total	41,938	37,027	36,577	38,107	39,262
Other expenditure—					
Medical, etc., services	6,427	7,919	9,758	11,621	12,403
Repatriation hospitals and other institutions	7,182	7,441	7,524	8,254	9,643
Financial assistance to States in connexion with war service land settlement	1,521	1,643	1,972	1,563	711
Other	5,270	5,131	5,217	5,242	6,226
Total, War and Repatriation Services—					
Consolidated Revenue Fund	121,466	131,853	138,124	147,083	155,252
Loan Fund	6,938	2,027	1,577	607	(b) 4,262
Grand Total	128,404	133,880	139,701	147,690	159,514

(a) Included in Housing in table on p. 911. (b) In this year repayments amounting to £4,222,000 were credited to Consolidated Revenue receipts; in previous years corresponding credits were made to Loan Fund expenditure.

4. **Subsidies and Bounties.**—The following table shows details of Commonwealth expenditure from revenue on assistance to primary producers, subsidies and bounties for the years 1959–60 to 1963–64. Expenditure on special relief such as drought, frost, flood and bush fire, etc., is not included here (included as cash benefits to persons in table, p. 911), 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 11, p. 926). Payments to the States for Cattle Tick Control, Dairy Industry Extension and Agricultural Advisory Services are also not included under this heading, but under the heading Grants to the States (see para. 10, pp. 917–24).

Further information relating to assistance to primary producers is given in Chapter XXIII. Rural Industry. Details of price stabilization subsidies and of various forms of assistance to primary producers for earlier years may be found on pages 414 and 1014–15, respectively, of Year Book No. 38.

**SUBSIDIES AND BOUNTIES: COMMONWEALTH EXPENDITURE
FROM CONSOLIDATED REVENUE FUND**

(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Dairy industry(a)	13,500	13,500	13,500	13,500	13,500
Wheat prices stabilization	2	..	11,906	7,288	11,317
Phosphate fertilizers .. .. .	..	..	..	..	9,403
Oil search	360	1,399	2,543	5,000	4,717
Stevedoring industry	1,246	2,083	2,173	2,109	2,421
Ship construction	1,842	3,000	1,553	1,800	2,219
Maintenance of migrant families	1,065	1,050	1,567	1,502	1,660
Sulphuric acid	1,481	1,353	1,009	1,094	1,158
Tractor	621	941	877	963	1,007
Copper	408	405	687	699	695
Gold mining industry	838	699	659	791	669
Pyrites .. .. .	..	86	397	398	614
Air services	500	500	500	500	500
Cotton	214	374	315	287	473
Processed milk products .. .. .	..	..	..	284	400
Sulphate of ammonia .. .. .	..	..	..	180	159
South American shipping service .. .. .	..	..	50	111	152
Coastal shipping service—					
Tasmania	49	..	13	..	..
Papua and New Guinea	100	100	112	150	150
Vinyl resin .. .. .	..	..	..	..	114
Cellulose acetate flake	128	127	69	101	109
Copper and brass strip .. .. .	..	..	..	19	62
Flax fibre	83	5	12	18	2
Rayon yarns	72	72	69	135	..
Meat agreement deficiency payments .. .. .	..	..	264	53	..
Other	74	115	94	97	211
Total	22,583	25,809	38,369	37,079	51,712

(a) Dairy products.

5. Health and Welfare—Cash Benefits to Persons.—(i) *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 contribution 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 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 1959-60 to 1963-64. For a detailed account of the establishment of the National Welfare Fund, the services provided and the numbers and amounts of benefits paid, see Chapter XVI, Welfare Services.

NATIONAL WELFARE FUND: RECEIPTS, EXPENDITURE AND BALANCES
(£'000)

Year	Income			Expenditure	Balance in fund at end of year
	Contribution from Consolidated Revenue	Interest on investments	Total		
1959-60	299,363	2,002	301,365	299,363	200,999
1960-61	330,604	2,017	332,621	330,604	203,016
1961-62	365,191	2,037	367,228	365,191	205,053
1962-63	379,295	2,059	381,354	379,294	207,113
1963-64	416,348	2,078	418,426	416,348	209,191

Contributions to rental losses under the Commonwealth and States Housing Agreement amounting to £352,000 in 1960-61, £65,000 in 1961-62, £19,000 in 1962-63 and £23,000 in 1963-64 are included in the figures above but are classified in the table on page 911 to Housing.

(ii) *Other Cash Benefits.* Other items classified to this function include annual appropriations for general welfare services in the Northern Territory and special Commonwealth payments provided from time to time to assist State schemes for the relief of personal hardship and distress caused by serious floods, cyclones or bush fires in the States and for restoration of damaged public assets such as roads and bridges.

6. *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 on issue on account of the Commonwealth.

Payments from the Consolidated Revenue Fund were made as follows:—1959-60, £41,382,000; 1960-61, £142,561,000; 1961-62, £22,155,000; 1962-63, £26,378,000; and 1963-64, £14,875,000. Expenditure from the Trust Account on repurchase of securities was £79,885,000 in 1959-60; £30,899,000 in 1960-61; £67,847,000 in 1961-62; £103,782,000 in 1962-63; and £28,070,000 in 1963-64. The major portion of the balance of the Trust Account at 30th June, 1964, was invested in Commonwealth securities in special loans to finance Commonwealth and State works programmes.

7. *Business Undertakings.*—(i) *Postmaster-General's Department.* Details of the expenditure of this Department for the years 1959-60 to 1963-64 are given in the following table.

POSTMASTER-GENERAL'S DEPARTMENT: EXPENDITURE FROM
CONSOLIDATED REVENUE FUND
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Works services	39,937	42,145	47,939	65,593	70,283
Mail services (by outside agencies)	9,637	10,376	10,885	11,518	12,076
Engineering services (other than works services)	40,604	41,006	43,185	34,406	38,675
Other	57,536	58,754	60,702	60,978	65,173
Grand Total	147,714	152,281	162,711	172,495	186,207

Further details of the Postmaster-General's Department expenditure for 1963-64 appear in Chapter XV. Transport and Communication, of this Year Book (see p. 586).

(ii) *Broadcasting and Television Services.* Details of expenditure for the years 1959-60 to 1963-64 are shown in the following table. Further details of broadcasting and television services appear in Chapter XV. Transport and Communication of this Year Book (see pp. 594-602).

**COMMONWEALTH BROADCASTING AND TELEVISION SERVICES:
EXPENDITURE FROM CONSOLIDATED REVENUE FUND
(£'000)**

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Works services	3,551	1,429	2,847	3,833	3,431
Australian Broadcasting Control Board ..	258	301	319	348	382
Australian Broadcasting Commission— salaries, general and programme expenses	7,238	8,460	9,300	10,302	11,650
Technical and other services—Postmaster- General—					
Sound broadcasting	2,181	2,196	2,590	2,627	2,809
Television	275	386	517	687	1,036
Repairs, maintenance, etc.	31	29	74	91	97
Grand Total	13,534	12,801	15,647	17,888	19,405

(iii) *Railways.* The expenditure on railways for the years 1959-60 to 1963-64 is shown below.

**COMMONWEALTH RAILWAYS: EXPENDITURE FROM
CONSOLIDATED REVENUE FUND
(£'000)**

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Works services	1,091	1,248	1,697	2,208	2,939
Other—					
Trans-Australian	2,610	3,047	3,379	3,508	3,956
Central Australia	1,185	1,288	1,561	1,487	1,599
North Australia	202	170	183	208	223
Australian Capital Territory	52	59	61	67	68
Other	39	52	38	45	49
Grand Total	5,179	5,864	6,919	7,523	8,834

Additional details of the financial operations of the Commonwealth Railways to 1963-64 are given in Chapter XV. Transport and Communications (*see pp. 555 and 557-9*).

8. *Territories.*—The following table shows the expenditure on account of Commonwealth Territories for the years 1959-60 to 1963-64. 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 Chapter V. The Territories of Australia, of this Year Book.

**COMMONWEALTH TERRITORIES: EXPENDITURE FROM
CONSOLIDATED REVENUE FUND
(£'000)**

Territory	1959-60	1960-61	1961-62	1962-63	1963-64
Administration and main- tenance of services—					
Aust. Capital Territory(a) ..	4,301	4,805	5,020	5,825	6,653
Northern Territory(a) ..	6,245	6,853	7,758	8,769	10,242
Papua and New Guinea ..	12,951	15,094	17,477	20,197	25,466
Norfolk Island	32	32	38	46	41
Cocos (Keeling) Islands ..	30	55	35	37	39
Total	23,559	26,839	30,328	34,874	42,441
Works services—					
Aust. Capital Territory(a) ..	12,433	13,157	13,811	16,474	18,366
Northern Territory(a) ..	3,874	4,531	6,380	7,179	7,272
Papua and New Guinea ..	591	532	569	682	376
Cocos (Keeling) Islands ..	3	9	4	5	2
Total	16,901	18,229	20,764	24,340	26,016

(a) Excludes Railways, *see para. 7 (iii), above.*

9. **Capital Expenditure on Goods and Services.**—In the following table, details are given of capital expenditure on goods and services during each of the years 1959–60 to 1963–64. The table covers capital expenditure on goods and services for purposes other than defence and repatriation services (previously included) from the Consolidated Revenue Fund. In earlier issues of the Year Book, tables on works services expenditure also covered expenditure from Trust and Loan Funds.

**GOODS AND SERVICES: CAPITAL EXPENDITURE FROM
CONSOLIDATED REVENUE FUND
(£'000)**

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Business undertakings—					
Cultural and recreational facilities ..	3,551	1,429	2,847	3,833	3,431
Transport and communication—					
Postmaster-General's Department ..	39,937	42,145	46,939	61,973	68,447
Railways	1,104	1,291	1,696	2,208	2,939
Other	67	80	244	194	294
Other	510	1,309	1,082	1,166	1,157
Total	45,169	46,254	52,808	69,374	76,268
Education—					
Australian National University ..	623	1,044	2,020	1,449	2,339
Australian Capital Territory ..	1,118	1,605	1,542	1,675	1,097
Total	1,741	2,649	3,562	3,124	3,436
Health and welfare—					
Australian Capital Territory ..	140	295	358	804	1,074
Other	975	1,051	770	311	516
Total	1,115	1,346	1,128	1,115	1,590
Development of resources and assistance to industry—					
Atomic Energy Commission	1,500	1,329	969	763	532
Australian Capital Territory	1,837	1,570	758	896	1,059
Commonwealth Scientific and Industrial Research Organization	910	1,320	1,027	967	1,804
Other development, etc.	303	511	755	963	1,080
Total	4,550	4,730	3,509	3,589	4,475
Civil aviation	4,937	5,845	4,398	4,844	5,945
Roads—					
Australian Capital Territory	1,829	2,159	3,030	2,966	2,629
Other	197	202	1,083	1,965	1,832
Total, Roads	2,026	2,361	4,113	4,931	4,461
Other transport	196	381	1,430	1,246	1,139
Other functions—					
Australian Capital Territory	7,483	7,034	7,068	8,679	10,668
Northern Territory	3,510	4,499	4,754	4,687	4,949
Papua and New Guinea	29	55	21	40	24
Other	866	2,517	5,652	5,182	5,363
Total, Other Functions	11,888	14,105	17,495	18,588	21,004
Grand Total	71,622	77,671	88,443	106,811	118,318

10. **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 Year Book (*see* No. 37, pp. 633 to 638).

A distinction is made for the first time in this Year Book between (a) direct Commonwealth financial assistance to the States in the form of grants to provide revenue for general and specific purposes, and (b) those forms of assistance for developmental and other specific purposes which include, in part or in total, payments made in the form of repayable advances. Some items such as natural disaster payments, tuberculosis hospital maintenance, and coal mining industry long service leave, previously treated as payments to or for the States and accordingly included in the following tables, have now been reclassified to other functions and excluded from the tables. The following paragraphs refer to the existing arrangements, both as to grants and repayable advances.

(ii) *Grants.* (a) *Year 1963–64.* 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 (pp. 920–4).

GRANTS TO THE STATES FROM CONSOLIDATED REVENUE FUND, 1963-64
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Total
General revenue grants—							
Financial assistance grants	107,856	79,741	47,411	36,365	32,798	13,813	317,984
Special grants .. ..	..	..	..	..	6,072	5,378	11,450
Specific purpose payments—Current—							
Payments under Financial Agreement—							
Interest on State debts	2,917	2,127	1,096	704	474	267	7,585
Sinking fund on State debts	2,683	1,850	984	1,038	759	531	7,845
Universities	4,470	2,458	1,311	1,183	798	320	10,540
Cattle tick control	259	..	..	..	..	..	259
Expansion of agricultural advisory services	75	60	57	27	27	16	262
Dairy industry extension services	89	89	90	25	25	19	337
Tobacco industry extension services	3	8	13	..	..	..	24
Housekeeper services	6	4	..	..	1	1	12
Specific purpose payments—Capital—							
Commonwealth Aid Roads	16,221	11,412	10,535	6,669	10,263	2,900	58,000
Universities	1,880	2,505	575	642	580	208	6,390
Railway projects .. ..	..	..	..	1,041	1,549	..	2,590
Cattle roads .. ..	..	..	1,048	..	750	..	1,798
Western Australia northern development .. ..	..	..	..	..	908	..	908
Mental institutions—Capital	491	..	54	86	166	..	797
Tuberculosis hospitals—Capital	76	25	141	15	22	20	299
Flood mitigation	200	..	..	..	..	..	200
Replacement of Derby jetty .. ..	..	..	..	..	175	..	175
Gordon River road .. ..	..	..	..	..	..	135	135
Coal loading works .. ..	..	..	40	..	..	..	40
Additional assistance grants	6,408	5,140	2,400	2,762	1,882	1,408	20,000
Total	143,634	105,419	65,755	50,557	57,249	25,016	447,630

(b) 1959-60 to 1963-64. The following table shows particulars of grants by the Commonwealth to the States during each of these years.

GRANTS TO THE STATES FROM CONSOLIDATED REVENUE FUND
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
General revenue grants—					
Financial assistance grants	244,500	269,994	292,140	304,320	317,984
Special grants	8,326	8,618	11,231	11,251	11,450
Specific purpose payments—Current—					
Payments under Financial Agreement—					
Interest on State debts	7,585	7,585	7,585	7,585	7,585
Sinking fund on State debts	5,942	6,274	6,739	7,248	7,845
Universities	4,865	6,677	8,118	9,273	10,540
Cattle tick control	477	541	330	268	259
Expansion of agricultural advisory services	218	264	260	263	262
Dairy industry extension services	247	243	245	244	337
Other	12	12	12	36	36
Specific purpose payments—Capital—					
Commonwealth Aid Roads	43,923	46,000	50,000	54,000	58,000
Universities	2,763	4,550	6,043	6,436	6,390
Railway projects	2,612	3,301	2,782	2,842	2,590
Cattle roads .. ..	..	..	1,150	1,700	1,798
Western Australia northern development	484	1,208	1,705	1,432	908
Mental institutions—Capital	1,147	727	824	795	797
Tuberculosis hospitals—Capital	781	410	387	492	299
Flood mitigation .. ..	..	..	..	..	200
Replacement of Derby jetty .. ..	..	..	..	150	175
Gordon River road .. ..	..	..	..	..	135
Coal loading works .. ..	..	..	..	..	40
Cattle dip chemicals .. ..	..	..	..	53	..
Western Australia—Waterworks	609	517	61	..	..
Encouragement of meat production	6	7	5	..	..
Additional assistance grants .. ..	..	..	10,000	17,500	20,000
Total	324,497	356,928	399,617	425,888	447,630

(c) To 30th June, 1964. The following table shows particulars of grants by the Commonwealth to each of the States to 30th June, 1964.

GRANTS TO THE STATES FROM CONSOLIDATED REVENUE FUND TO
30th JUNE, 1964(a)

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Section 87 of Constitution, 1900-01 to 1909-10	27,732	19,988	8,921	6,193	8,758	2,612	74,204
Surplus Revenue Acts, 1910-11 to 1926-27	41,508	31,168	15,158	9,879	9,757	4,357	111,827
Financial agreements, 1927-28 to 1963-64	145,485	100,862	53,647	39,035	27,933	15,190	382,152
Special grants(b) .. .. .	..	..	..	78,096	125,473	60,556	264,125
Income tax reimbursement grants, 1942-43 to 1945-46(c)	55,419	24,330	22,212	9,038	9,492	3,409	123,900
Income tax reimbursement special grants, 1945-46 to 1946-47(c) .. .. .	..	..	..	1,654	913	119	2,686
Entertainments tax reimbursement grants, 1942-43 to 1945-46(d)	603	1,399	..	364	368	138	2,872
Tax reimbursement grants, 1947-48 to 1958-59(e)	525,633	336,069	215,973	120,052	108,474	45,635	1,351,836
Additional tax reimbursement grants(f)	2,027	1,160	814	429	410	160	5,000
Special financial assistance(g)	80,419	55,320	31,388	17,345	15,603	6,799	206,874
Additional assistance(h)	1,989	1,061	1,125	368	315	142	5,000
Non-recurring grants from excess receipts, 1934-35 to 1936-37	1,188	827	433	265	201	86	3,000
Financial assistance grants(i)	485,864	356,886	213,008	162,768	147,562	62,850	1,428,938
Additional financial assistance(j)	13,294	10,667	9,980	5,735	3,906	3,918	47,500
Special assistance(k)	14,306	7,042	7,641	3,463	15,469	1,027	48,948
Grants for road construction 1922-23 to 1963-64(l)	150,393	101,432	101,254	60,996	100,478	27,075	541,628
Payments to Commonwealth Aid Roads (Supplementary) Trust Account(m) .. .. .	..	..	..	..	..	..	5,000
Tuberculosis Act 1948—reimbursement of capital expenditure	5,245	1,751	5,441	766	2,294	323	15,820
Mental institutions—contribution to capital expenditure	3,692	2,740	720	718	462	355	8,687
Encouragement of meat production .. .. .	..	..	1,326	..	835	..	2,161
Grants to universities	33,886	22,126	9,668	8,972	6,705	3,870	85,227
Railways projects(n)	121	11,874	..	5,515	2,440	..	19,950
Total	1,588,804	1,086,702	698,709	531,651	587,848	238,621	4,732,335

(a) Includes non-recurring grants from excess receipts, but excludes payments on account of the Morgan-Whyalla Waterworks, amounts provided for relief of wheat-growers and other primary producers, and other payments for medical research, social services, etc. (b) Under various States Grants Acts. (c) Under States Grants (Income Tax Reimbursement) Act 1942. (d) Under States Grants (Entertainments Tax Reimbursement) Act 1942. (e) Under States Grants (Tax Reimbursement) Act 1946-1948. (f) Under States Grants (Additional Tax Reimbursement) Act 1950. (g) Under States Grants (Special Financial Assistance) Acts 1951 and 1952. (h) Under States Grants (Additional Assistance) Act 1958. (i) Under States Grants Acts 1959 and 1962. (j) Under States Grants (Additional Assistance) Act 1962. (k) Includes payments for unemployment relief, metalliferous mining, forestry, local public works, grants for price control reimbursement, coal strike emergency grant, grants for imported houses, Port Augusta-Port Pirie railway, Western Australian waterworks, cattle tick control, dairy industry extension, agricultural advisory services, cattle roads, coal-loading works, eradication of house borers, brigalow lands, cattle dip chemicals, tobacco industry extension services, etc. (l) Under Main Roads Development, Federal Aid Roads, Federal Aid Roads and Works and Commonwealth Aid Roads Acts. (m) Expenditure not allocable between States. (n) Under the Railway Standardization (South Australia) Agreement Act 1949, the Railway Standardization (New South Wales and Victoria) Agreement Act 1958, the Railway Equipment Agreement (South Australia) Act 1961 and the Railway Agreement (Western Australia) Act 1961.

(iii) *Repayable Advances.* (a) Year 1963-64. The table below shows particulars of the amounts paid to each of the States as repayable advances for the several purposes referred to in subsequent paragraphs (pp. 920-4).

ADVANCES TO THE STATES FROM CONSOLIDATED REVENUE FUND, 1963-64
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Railway projects .. ..	..	..	..	447	2,213	..	2,660
Beef cattle roads .. ..	..	..	999	..	..	..	999
Brigalow lands development .. ..	..	..	800	..	..	..	800
Blowering reservoir	420	..	..	..	..	..	420
Derby jetty .. ..	..	..	..	..	175	..	175
Western Australian northern development .. ..	..	..	..	..	175	..	175
Coal loading works	58	..	40	..	..	..	98
Chowilla reservoir	50	..	..	..	..	..	50
Total	528	..	1,839	447	2,563	..	5,377

(b) Years 1959-60 to 1963-64. The following table shows particulars of repayable advances by the Commonwealth to the States during each of these years.

ADVANCES TO THE STATES FROM CONSOLIDATED REVENUE FUND
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Railway projects	1,111	1,415	1,200	2,108	2,660
Beef cattle roads .. ..	..	..	..	..	999
Brigalow lands development .. ..	..	..	..	600	800
Blowering reservoir .. ..	..	..	..	..	420
Derby jetty .. ..	..	..	..	150	175
Western Australia northern development .. ..	..	..	..	..	175
Coal loading works .. ..	..	..	284	498	98
Chowilla reservoir .. ..	..	..	..	..	50
Total	1,111	1,415	1,484	3,356	5,377

(c) To 30th June, 1964. The following table shows particulars of repayable advances by the Commonwealth to each of the States.

ADVANCES TO THE STATES FROM CONSOLIDATED REVENUE FUND
TO 30th JUNE, 1964
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Railway projects	52	4,669	..	1,925	3,486	..	10,132
Coal loading works	840	..	40	..	..	..	880
Brigalow lands .. ..	..	..	1,400	..	..	..	1,400
Derby jetty .. ..	..	..	..	..	325	..	325
Cattle roads .. ..	..	..	999	..	..	..	999
Chowilla reservoir	50	..	..	..	..	..	50
Blowering reservoir	420	..	..	..	..	..	420
Total	1,362	4,669	2,439	1,925	3,811	..	14,206

The figures in the tables above represent gross advances, and take no account of repayments made by the States.

(iv) *Financial Agreement.* Details of the Financial Agreement between the Commonwealth and the States are given in Year Book No. 37, pages 685-90. Under this Agreement the Commonwealth undertook to contribute £7,584,912 per annum towards interest payable on the State loan securities for a period of 58 years from 1st July, 1927. This amount is distributed among 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 loan securities. Details of these are given on pages 967-8 of this chapter.

(v) *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 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 1960-61 to 1964-65 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 1964-65 include an estimate of the indispensable need of the claimant State for 1964-65 and an adjustment to the estimated grant for 1962-63. South Australia agreed with the Commonwealth not to apply for special grants in other than exceptional circumstances after 1st July, 1959, when new financial arrangements under the *State Grants Act 1959* came into operation (*see* sub-para. (vi) below).

COMMONWEALTH GRANTS COMMISSION: GRANTS RECOMMENDED
(£'000)

Particulars	1960-61	1961-62	1962-63	1963-64	1964-65
Western Australia—					
Estimated grant	3,700	5,200	5,900	5,900	7,900
Adjustment(a)	609	956	310	172	660
<i>Net grant recommended</i> ..	<u>4,309</u>	<u>6,156</u>	<u>6,210</u>	<u>6,072</u>	<u>8,560</u>
Tasmania—					
Estimated grant	3,400	4,100	4,900	5,100	6,809
Adjustment(a)	909	975	141	278	491
<i>Net grant recommended</i> ..	<u>4,309</u>	<u>5,075</u>	<u>5,041</u>	<u>5,378</u>	<u>7,300</u>
Grand Total	8,618	11,231	11,251	11,450	15,860

(a) Adjustment to estimated grant paid two years previously.

(vi) *Financial Assistance Grants.* The *States Grants Act 1959* repealed the *States Grants (Tax Reimbursement) Acts* of 1946, 1947 and 1948, and provided for payment of financial assistance to the States in 1959-60 amounting to £244,500,000 to be distributed among the States as follows:—New South Wales, £83,450,000; Victoria, £60,625,000; Queensland, £36,375,000; South Australia, £27,675,000; Western Australia, £25,462,000; Tasmania, £10,913,000. In subsequent years the financial assistance grant payable to each State has been determined by increasing its grant for 1959-60 in accordance with a formula which takes into account movements in population in each State and the increases (if any) in the level of average wages per person employed as shown in returns submitted under the *Pay-roll Tax Assessment Act 1941-1963*.

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 Year Book (*see* No. 37, pp. 635-7). 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* which expired after 1958-59. *See* Year Book No. 46, pages 837-8.

(vii) *Special Financial Assistance Grants.* During the years 1954–55 to 1958–59 special assistance grants amounting to £19,902,000, £15,348,000, £19,405,000, £24,145,000 and £30,437,000, respectively, were made to assist the States in meeting their increasing financial needs. For details of amounts paid to each State see earlier issues of the Year Book or the annual bulletin *Commonwealth Finance*.

(viii) *Additional Financial Assistance.* The *States Grants (Additional Assistance) Act 1958* provided for the payment of £5,000,000 from the Consolidated Revenue Fund for financial assistance to the States.

During 1961–62, 1962–63, and 1963–64 additional assistance grants of £10,000,000, £17,500,000 and £20,000,000, respectively, were provided for the States on a non-repayable basis under the authority of the *States Grants (Additional Assistance) Acts 1962* and 1963 for expenditure on employment-giving activities, mainly in the works field.

(ix) *Grants for Road Construction.* (a) *Main Roads Development Act 1923–1925, Federal Aid Roads Acts 1926, 1931 and 1936, Federal Aid Roads and Works Act 1937, Commonwealth Aid Roads and Works Act 1947–1949, Commonwealth Aid Roads Act 1950, Commonwealth Aid Roads Act 1954, and Commonwealth Aid Roads (Special Assistance) Act 1957.* Details of these Acts are given in earlier issues of the Year Book (see No. 38, pp. 787–8, No. 41, p. 62, and No. 46, p. 838) and in the annual bulletin *Commonwealth Finance*.

(b) *Commonwealth Aid Roads Act 1959.* A new scheme of Commonwealth assistance to the States for roads was established by the *Commonwealth Aid Roads Act 1959*. Under this Act, which is to operate for a period of five years from 1st July, 1959, the Commonwealth has undertaken to make available up to £250,000,000 to the States for the construction, reconstruction, maintenance and repair of roads.

Of this amount, a total of £220,000,000 will be paid to the States as basic grants for roads over five years. The basic grants are fixed annual amounts which rise progressively by £2,000,000 a year from £40,000,000 in 1959–60 to £48,000,000 in 1963–64. In each year the grants will be distributed between the States on the basis of 5 per cent. of the total to Tasmania and the balance shared between the other five States, one-third in proportion to their respective populations at the date of the last preceding Census, one-third in proportion to their respective areas, and one-third in proportion to the respective number of motor vehicles registered in these States at 31st December preceding the year of payment.

The balance of up to £30,000,000 over the five years will be made available to the States as matching assistance for roads. The total amounts of matching assistance increased by £2,000,000 a year from £2,000,000 in 1959–60 to £10,000,000 in 1963–64. Up to the limit of its share of the total matching assistance available in any year, each State qualifies for £1 of matching assistance from the Commonwealth for each £1 by which the amount it allocates in that year from its own resources for expenditure on roads exceeds the amount so allocated in 1958–59. The share of each State in the total matching assistance available in any year is determined by the same formula as is used to determine its share of the basic grant in that year.

The full amount of the matching assistance available to each State in any year is being paid during that year on the understanding that the road grants to the State in the following year will be adjusted if it is subsequently found that the State did not qualify in full for the matching assistance paid to it in that year.

The legislation relating to the years 1947–48 to 1958–59 provided for annual allocations to the Commonwealth for expenditure on strategic roads and the promotion of road safety practices. No such provisions are contained in the legislation current at 30th June, 1964, as the Commonwealth makes separate provision for these purposes.

(x) *Tuberculosis Act 1948.* The *Tuberculosis Act 1948* provided for the reimbursement by the Commonwealth of capital and maintenance expenditure incurred by the States in the provision of facilities for the diagnosis, treatment and control of tuberculosis.

Re-imbursments from the National Welfare Fund of maintenance expenditure on tuberculosis hospitals are classified as cash benefits under Health and Welfare expenditure, and they equal the amounts by which such expenditures of the States in any financial year exceed those for the year 1947–48. As from 1st July, 1948, the States have also been reimbursed from annual appropriations of the Department of Health for all their capital expenditure on buildings, furnishings, equipment and plant.

(xi) *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 made on or after 1st July, 1955, on buildings or equipment of a mental institution.

(xii) *Other Payments. (a) Encouragement of Meat Production.* To develop meat production in Queensland and Western Australia, grants were 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 was limited to £150,000 in Queensland and £50,000 in Western Australia.

(b) *Grants to Universities.* Payments to the States for universities were first introduced in 1951-52 under the *States Grants (Universities) Act 1951*, and were continued under similar legislation passed in 1953, 1955, 1956 and 1957. Following on the Government's acceptance of the main recommendations of the Committee on Australian Universities, the provisions of the 1957 Act relating to financial assistance for 1958 were superseded by the *States Grants (Universities) Act 1958*, which operated from 1st January, 1958.

This legislation authorized the Commonwealth to make payments to the States for universities of up to £21,400,000 over the three calendar years 1958 to 1960, inclusive, where certain conditions have been satisfied. These payments include increased contributions towards the running expenses of universities, new grants for capital works and equipment and new emergency grants.

Under the *States Grants (Universities) Act 1960*, which carried on the principle of grants for capital works and equipment introduced in the 1958 legislation, payments of up to £42,000,000 over the three calendar years 1961, 1962 and 1963 were made to the States. The *Universities (Financial Assistance) Act 1963* provides for financial assistance to the States, for universities, of £58,400,000 over the three calendar years 1964, 1965 and 1966. (See also Chapter XIX. Education, Cultural Activities, and Research, pp. 719-23.)

(c) *Railway Projects.* Under the *Railway Standardization (South Australia) Agreement Act 1949* the Commonwealth is providing funds for the conversion of lines in the south-eastern division of the State as an initial step towards eventual standardization to 4' 8½" gauge. The State is to repay three-tenths of the cost of this work over a period of 50 years and is to bear the full cost of subsequent conversion from broad to standard gauge. Similar conditions apply to expenditures under the *Railway Equipment Agreement (South Australia) Act 1961*.

Under the *Railway Standardization (New South Wales and Victoria) Agreement Act 1958* the Commonwealth provided funds for the construction of the standard gauge rail link between Albury and Melbourne on the basis that the States of Victoria and New South Wales will each bear 15 per cent. of the cost by instalments over a period of 50 years.

The total expenditure on railway standardization (the 30 per cent. advances to the States and the 70 per cent. grants to the States) is charged to the works services vote of the Department of Shipping and Transport.

Under the *Railway Agreement (Western Australia) Act 1961* the Commonwealth is providing financial assistance for the construction of a standard gauge railway from Kwinana to iron ore deposits of Koolyanobbing and to Kalgoorlie.

(d) *Cattle Tick Control.* Since 1926-27 the Commonwealth has subsidized the cost of eradication and control of cattle tick in New South Wales. From 1950-51 the subsidy was increased on a £1 for £1 basis up to an agreed maximum.

(e) *Expansion of Agricultural Advisory Services.* These payments were introduced in 1952-53 to encourage expansion of agricultural advisory services by the State Departments of Agriculture and to promote increased farm efficiency.

(f) *Dairy Industry Extension Grant.* The Commonwealth provides financial assistance, with a maximum annual limit of £250,000, to promote improved farm practices in the dairy industry.

(g) *Cattle Roads Grants.* The *Queensland Grant (Beef Cattle Roads) Act 1961* provides for a grant of £5,000,000 to be paid to Queensland over the five-year period commencing 1st July, 1961, for expenditure on approved roads for the transport of beef cattle. Under the *Western Australia Grant (Beef Cattle Roads) Act 1961*, special grants were made to Western Australia for certain work on roads and bridges in the north of the State.

(h) *Western Australia Northern Development.* The Commonwealth provides financial assistance of up to £5,000,000 to the State of Western Australia under the *Western Australia Grant (Northern Development) Act 1958-1959* in respect of developmental expenditure by the State in the area of Western Australia north of the twentieth parallel of latitude during the period of five years commencing on 1st July, 1958. Under the scheme, Commonwealth assistance is provided in respect of projects, nominated by the State, which the Commonwealth is satisfied will contribute to the development of the area and which could not reasonably be expected to be carried out during the period of five years without the grant of Commonwealth assistance.

(i) *Western Australian Waterworks.* The *Western Australia Grant (Water Supply) Act 1948-1957* provides for grants to Western Australia not exceeding an aggregate of £5,000,000 for the development of the Agricultural Areas, Great Southern Towns and Goldfields Water Supply schemes. The amount provided by the Commonwealth was limited to half the total expenditure on the scheme. (See also pp. 252-3.)

(j) *Coal Loading Works—New South Wales.* Under the *Coal Loading Works Agreement (New South Wales) Act 1961*, the Commonwealth is providing financial assistance to New South Wales of up to £2,650,000, partly by way of repayable advances from the Consolidated Revenue Fund and partly by grants from the Coal Industry Fund of the Joint Coal Board, for improvements to coal loading facilities at Newcastle, Port Kembla and Balmain. In 1962-63 repayable advances amounted to £498,000 and grants to £302,000.

Queensland. Under the *Coal Loading Works Agreement (Queensland) Act 1962*, the Commonwealth agreed to assist the Queensland Government up to the amount of £200,000 to expedite improvements to coal loading facilities at the port of Gladstone. Assistance is to be by way of a repayable long-term advance of up to £100,000 and a grant of up to £100,000.

(k) *Brigalow Lands.* Under the *Brigalow Lands Agreement Act 1962* Commonwealth advances to the State of Queensland for specified works associated with the production of beef cattle and other primary products in the Fitzroy River Basin and the supply of beef for export were limited to £7,250,000 during the period of five years ending 30th June, 1967. Repayments over a twenty year period are to commence in 1968.

(l) *Flood Mitigation, New South Wales.* Commonwealth payments under the *New South Wales Grant (Flood Mitigation) Act 1964* are limited to £2,750,000 in respect of flood mitigation works on the Macleay, Clarence, Richmond, Tweed, Shoalhaven and Hunter Rivers. The Commonwealth grants will match State expenditure which, in turn, will be in a prescribed ratio to local authority expenditure on flood mitigation works.

(m) *Gordon River Road, Tasmania.* Under the *Tasmania Grant (Gordon River Road) Act 1964* the Commonwealth is authorized to grant financial assistance of up to £2,500,000 to Tasmania for the construction of a developmental road into the Gordon River region of that State, primarily for the purpose of enabling detailed investigations to be made of a further stage of the Tasmanian hydro-electric scheme.

(n) *Blowering Reservoir, New South Wales.* The Blowering Reservoir is to be constructed at the expense of the State of New South Wales mainly by the Snowy Mountains Hydro-electric Authority, and the Commonwealth will finance one half of the cost in the form of repayable interest-bearing loans to that State.

(o) *Chowilla Reservoir, New South Wales.* The Chowilla Reservoir is to be constructed as an approved work under the River Murray Waters Agreement, and the Commonwealth advances to New South Wales are to assist in the financing of that State's one-quarter contribution of the cost of construction.

11. *Other Functions.*—(a) *Current Expenditure on Goods and Services.* This table gives details of expenditure on items included under this general heading in the table in paragraph 1, page 911, and in the main includes expenditure on administrative services and other activities (i.e. what might be termed "running expenses") and therefore *excludes* expenditure on capital works (see table on p. 917).

Information on the functions of departments and the Acts administered by the Ministers of Departments may be found on pages 87-98 of Year Book No. 49.

**OTHER FUNCTIONS: CURRENT EXPENDITURE ON GOODS AND SERVICES
FROM CONSOLIDATED REVENUE FUND**

(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Law, order and public safety—					
Crown Solicitor's Office	413	420	439	480	572
High Court	148	158	169	166	170
Bankruptcy administration	197	214	242	261	288
Other	1,264	1,536	1,360	1,562	2,211
<i>Total</i>	<i>2,022</i>	<i>2,328</i>	<i>2,210</i>	<i>2,469</i>	<i>3,241</i>
Education—					
Australian National University	1,684	2,389	3,200	3,510	4,320
Australian Universities Commission	23	28	29	44	61
Office of Education	385	412	521	652	741
Other	1,312	1,461	1,550	1,808	2,066
<i>Total</i>	<i>3,404</i>	<i>4,290</i>	<i>5,300</i>	<i>6,014</i>	<i>7,188</i>
Development of resources and assistance to industry—					
Bureau of Meteorology	1,655	1,727	1,861	1,996	2,214
Forestry branch	190	195	234	225	197
Commercial intelligence services abroad	694	871	1,016	1,188	1,363
Primary production—Research and sales promotion, export funds, etc.	3,839	4,053	5,631	6,157	7,176
Division of Agricultural Economics	157	172	188	186	222
Bureau of Mineral Resources	1,027	1,346	1,683	2,010	2,465
Division of National Mapping	415	417	577	673	707
Atomic Energy Commission	2,233	2,379	2,804	3,259	3,797
Commonwealth Scientific and Industrial Research Organization	7,216	7,738	8,582	9,494	10,704
Other	6,361	6,651	6,863	7,492	8,550
<i>Total</i>	<i>23,787</i>	<i>25,549</i>	<i>29,439</i>	<i>32,680</i>	<i>37,395</i>
Civil aviation—					
Maintenance and development of civil aviation	7,594	7,528	7,613	8,164	9,236
Meteorological services	776	828	895	960	1,070
Other	2,648	2,152	2,453	3,114	3,739
<i>Total</i>	<i>10,418</i>	<i>10,508</i>	<i>10,961</i>	<i>12,238</i>	<i>14,045</i>
Legislature and general administration—					
Parliament	2,081	2,120	2,074	2,139	2,207
Governor-General	164	148	171	172	179
Audit	709	725	771	846	975
Public Service Board	755	829	868	919	1,067
Taxation Branch and Boards of Review	9,822	10,200	10,987	11,314	12,700
Bureau of Census and Statistics	1,841	2,188	3,324	2,786	3,138
Commonwealth Superannuation Board	108	127	144	181	211
Electoral Branch	702	694	1,110	784	1,265
News and Information Bureau	453	479	529	620	698
Other	15,414	16,112	17,290	18,478	25,848
<i>Total</i>	<i>32,049</i>	<i>33,622</i>	<i>37,268</i>	<i>38,239</i>	<i>48,288</i>
Immigration—					
Assisted migration	7,567	7,348	5,984	7,209	9,306
Other migration activities	1,811	1,994	2,578	2,466	2,596
Other	1,298	1,379	934	1,108	1,169
<i>Total</i>	<i>10,676</i>	<i>10,721</i>	<i>9,496</i>	<i>10,783</i>	<i>13,071</i>

OTHER FUNCTIONS: CURRENT EXPENDITURE ON GOODS AND SERVICES
FROM CONSOLIDATED REVENUE FUND—*continued*
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Regulation of trade and industry—					
Conciliation and Arbitration Commission,					
Industrial Court and Registrar	281	318	352	367	408
Patents, trade marks and designs	475	476	520	589	665
Inspection of goods for export	1,321	1,360	1,446	1,593	1,835
Other	1,523	610	120	1,611	1,934
<i>Total</i>	<i>3,600</i>	<i>2,764</i>	<i>2,438</i>	<i>4,160</i>	<i>4,842</i>
Other functions—					
National Library	280	353	463	517	687
High Commissioner's Office, United Kingdom	928	966	1,083	1,165	1,281
Other oversea representation	1,983	2,320	2,690	3,072	3,376
United Nations and allied organizations	993	1,264	2,737	1,198	1,923
Antarctic Division	738	764	731	814	834
Other	6,393	4,104	4,765	5,372	15,685
<i>Total</i>	<i>11,315</i>	<i>9,771</i>	<i>12,469</i>	<i>12,138</i>	<i>23,786</i>
Grand Total	97,271	99,553	109,581	118,721	151,856

(b) *Primary Production—Research and Sales Promotion, Export Funds, etc.* Expenditure under this item is classified above to development of resources and assistance to industry as it includes 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. Information relating to the taxes levied is given in sub-section Revenue of this section (see pp. 907-10). Some details of expenditure from the trust funds are included in § 4, Commonwealth Trust Funds. Details of expenditure from the Consolidated Revenue Fund during the last five years are given in the following table.

PRIMARY PRODUCTION—RESEARCH AND SALES PROMOTION, EXPORT FUNDS, ETC.: EXPENDITURE FROM COMMONWEALTH CONSOLIDATED REVENUE FUND
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Research and sales promotion—					
Canned fruit (sales promotion)	35	27	53	42	51
Cattle and beef research .. .. .	..	82	170	504	716
Dairy produce research	162	198	277	262	295
Dairy produce sales promotion	207	222	262	263	262
Tobacco industry research	112	125	169	92	201
Wheat research	187	262	234	297	319
Wool industry research .. .. .	..	..	..	..	797
Wool research	1,542	1,455	1,507	1,463	802
Wool use promotion	1,028	1,168	2,346	2,438	2,643
Export funds—					
Apple and pear	45	81	102	84	122
Canned fruits	76	59	66	65	92
Canned fruits excise .. .. .	..	..	..	..	139
Dairy produce	100	81	104	206	265
Dried fruits	43	34	54	44	51
Egg	36	60	34	18	29
Honey .. .. .	..	..	..	2	37
Meat	131	100	139	216	242
Wine	109	93	112	160	113
Other—					
Fisheries development	9	1	..	..	..
Other	17	5	2	1	..
Total	3,839	4,053	5,631	6,157	7,176

§ 4. Commonwealth Trust Funds

1. Receipts, Expenditure and Balances, 1963-64.—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, 1964.

COMMONWEALTH TRUST FUNDS: RECEIPTS, EXPENDITURE AND BALANCES, 1963-64

(£'000)

Fund	Balance at 30th June, 1963	Year ended 30th June, 1964		Balance at 30th June, 1964
		Receipts	Expenditure	
Canadian Loan	7,377	293	177	7,493
Coal Mining Industry Long Service Leave Coinage	1,799	387	455	1,731
Defence Forces Retirement Benefits	22,481	8,006	4,234	26,253
Insurance Deposits	10,992	1,253	881	11,364
Imperial Pensions	495	5,860	5,928	427
International Development and Relief	236	338	406	168
Korean Operations Pool	11,464	8,963	20,427	..
Lend-Lease Settlement	329	20	43	306
Loan Consolidation and Investment Reserve	232,322	25,043	28,110	229,255
National Debt Sinking Fund	167,461	89,516	71,421	185,556
National Welfare	207,113	418,426	416,348	209,191
Parliamentary Retiring Allowances	515	138	93	560
Post Office Stores and Services	670	64,291	60,811	4,150
Superannuation	102,689	26,069	12,893	115,865
Swiss Loan	16,258	558	..	16,816
Temple Society	697	22	3	716
Tobacco Industry	76	261	222	115
War Service Homes .. .. .	..	36,442	36,442	..
War Service Homes—Insurance	831	328	310	849
Wheat Prices Stabilization .. .. .	..	11,317	11,317	..
Wheat Research	852	590	555	887
Wine Research	428	19	20	427
Wool Research	7,820	2,067	2,926	6,961
Other	13,805	69,930	72,148	11,587
Total	806,710	773,023	749,056	830,677

2. Summary, 1959-60 to 1963-64.—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	1959-60	1960-61	1961-62	1962-63	1963-64
Balances brought forward	810,099	767,830	874,117	827,473	806,710
Receipts	915,830	1,059,621	715,831	721,702	773,023
Expenditure	958,099	953,334	762,475	742,465	749,056
Balance carried forward	767,830	874,117	827,473	806,710	830,677

§ 5. Commonwealth Loan Fund

1. **General.**—Brief historical notes relating to the Commonwealth Loan Fund are given in earlier issues of the Year Book (see No. 37, p. 640). The following tables show details for the years 1959–60 to 1963–64 of receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for both Commonwealth and State Governments. Information relating to the Commonwealth Government securities on issue is given in the Division, Government Securities on Issue, Commonwealth and States, of this chapter.

2. **Loans raised for the Commonwealth.**—The following table shows the receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for the Commonwealth Government during the years 1959–60 to 1963–64.

COMMONWEALTH LOAN FUND: LOANS RAISED FOR THE COMMONWEALTH (£'000)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Balance from 30th June	493	167	79	98	49
Loans raised in Australia—					
Stocks and bonds	24,677	29,808	41,000	28,915	71,959
Special bonds	4,797	6,733	10,528	19,486	13,176
Advance loan subscriptions	<i>Dr.</i> 85	<i>Dr.</i> 785	1,374	11,407	<i>Dr.</i> 10,780
Treasury bills—Public (net)	30,000	<i>Dr.</i> 15,000	36,600	<i>Dr.</i> 58,700	<i>Dr.</i> 1,200
Treasury bills—Internal (investment of Trusi Fund) (net)	<i>Dr.</i> 18,087	17,600	2,700	38,900	19,700
Treasury notes .. ..	..	..	..	69,490	6,795
Peace savings certificates	2	2	1	1	1
Loans raised overseas—					
London—Stock and bonds	14,895	14,635	1	2,707	10,318
New York—Bonds	12,581	1,763	6,997	17,465	..
Loan—Qantas Empire Airways Limited ..	4,646	1,573	11,827	2,067	2,016
Loan—Australian National Airlines Commission .. ..	..	892	..	560	561
International Bank dollar loan .. ..	..	..	..	14,236	12,116
Canadian bonds .. ..	..	1,439	..	..	..
Swiss loan	6,117	1,005	..	..	..
Netherlands loan .. ..	..	..	886	..	..
Total, Loans Raised	79,543	59,665	111,914	146,534	124,662
Deduct—					
Expenses of flotation—					
Loans raised in Australia	502	<i>Cr.</i> 196	<i>Cr.</i> 159	902	<i>Cr.</i> 316
London loans	<i>Cr.</i> 183	525	<i>Cr.</i> 526	42	159
New York loans	345	33	60	455	..
Canadian loans .. ..	..	33	<i>Cr.</i> 3	..	..
Swiss loans	347	62	..	..	..
Netherlands loan .. ..	..	..	42	..	..
Total, Deductions	1,011	457	<i>Cr.</i> 586	1,399	<i>Cr.</i> 157
Total, Loan Raisings less Expenses of Flotation	78,532	59,208	112,500	145,135	124,819
Grand Total	79,025	59,375	112,579	145,233	124,868
EXPENDITURE					
Financial assistance to States for housing—					
New South Wales	12,350	13,000	17,003	16,300	16,500
Victoria	10,300	10,300	13,527	12,850	13,250
Queensland	3,480	3,100	4,200	3,900	4,300
South Australia	5,000	5,800	9,036	9,491	9,700
Western Australia	3,000	3,000	3,706	3,470	3,400
Tasmania	1,950	2,000	2,928	2,600	3,000
Total	36,080	37,200	50,400	48,611	50,150
Defence services	11,987	..	23,641	66,070	38,715
War and repatriation services	6,937	2,027	1,577	607	4,262
Loan—Qantas	4,646	1,573	11,827	2,067	2,016
Loan—Australian National Airlines Commission .. ..	..	892	..	560	561
Mount Isa Railway Agreement .. ..	..	..	3,750	5,959	6,050
Snowy Mountains Hydro-electric Authority Works and other purposes—Repayments ..	..	..	..	13,100	11,701
Redemptions—					
Treasury bills—Internal	18,013	..	12,900	..	..
Stock and bonds—Australia	4	4	3	4,649	4,542
Stock and bonds—London .. ..	..	14,636	..	..	7,090
Bonds—New York .. ..	..	..	5,055	..	..
Special bonds	1,234	3,016	3,358	3,578	..
Balance at 30th June	167	79	98	49	63
Grand Total	79,025	59,375	112,579	145,233	124,868

3. Loans raised for the States.—The following table shows the receipts by, and expenditure from, Commonwealth Loan Fund in respect of loans raised for the State Governments during the years 1959–60 to 1963–64.

COMMONWEALTH LOAN FUND: LOANS RAISED FOR THE STATES

(£'000)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
RECEIPTS					
Balance from 30th June	36	..	..	..	..
Loans raised in Australia—					
Stock and bonds	150,387	163,839	168,628	180,811	181,944
Special bonds	21,380	12,364	16,841	19,596	32,604
Loans raised overseas—					
London—Stock and bonds .. ..	..	14,747	..	16,110	14,381
New York—Bonds	9,067	9,134	17,011	19,644	..
Canadian bonds .. ..	..	7,459	..	..	..
Swiss bonds .. ..	..	5,206	..	..	..
Netherlands bonds .. ..	..	..	4,071	..	..
Total	180,870	212,749	206,551	236,161	228,929

EXPENDITURE

Payments of loan proceeds to the States—					
New South Wales	58,140	60,694	62,298	65,404	70,010
Victoria	46,086	48,619	49,545	52,680	55,864
Queensland	18,629	21,075	23,150	21,288	21,206
South Australia	25,385	25,967	25,148	25,729	27,592
Western Australia	17,684	18,640	19,581	20,522	22,003
Tasmania	12,928	13,445	14,498	14,884	15,159
Total	178,852	188,440	194,220	200,507	211,834
Redemptions—					
Stock and bonds—Australia .. ..	..	4,981	..	27,310	12,192
Special bonds	1,981	4,581	4,239	4,271	4,903
London	37	14,747	..	4,073	..
New York .. ..	..	..	8,092	..	..
Balance at 30th June .. ..	..	..	..	..	..
Grand Total	180,870	212,749	206,551	236,161	228,929

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 delegated to local government 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 is needed, therefore, in making comparisons, and the particulars contained in this chapter should be read with those contained in Chapter XX. 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 with 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 concerned mainly 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 authority of an annual Appropriation Act passed by the legislature, or by a permanent appropriation under a special Act.

Figures in § 2 below relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These undertakings are:—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 eliminate duplications caused by inter-fund payments. 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 Year Book No. 22, pages 379–80. 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 Year Book from year to year.

§ 2. State Consolidated Revenue Funds

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) interest on advances; (e) payments by the Commonwealth Government under the *Financial Agreements*, *Special Grants* and *Financial Assistance Acts*, etc.; (f) Commonwealth National Welfare Fund payments; and (g) miscellaneous sources, comprising fines, fees, etc.

Of these sources, that yielding the largest revenue to the Consolidated Revenue Funds for the States as a whole in the year 1963–64 was Commonwealth payments under financial assistance and other grants (39.1 per cent. of the total revenue). Next in magnitude was the group of business undertakings (29.6 per cent.), the principal contributors being the Government railways and tramways, followed by taxation receipts (17.5 per cent.). More than one-quarter of the total State taxation collections are not paid into Consolidated Revenue Funds, however, but into special funds (*see* para. 3 (ii) (b) following). Of the remaining sources of revenue, interest (n.e.i.) constituted 4.0 per cent., land revenue 2.1 per cent., and National Welfare Fund payments 1.0 per cent.

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 1959–60 to 1963–64.

STATE CONSOLIDATED REVENUE

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
TOTAL REVENUE (£'000)							
1959-60 ..	262,533	168,310	103,103	76,077	64,388	25,099	699,510
1960-61 ..	282,364	185,101	108,817	81,979	69,333	27,795	755,389
1961-62 ..	295,612	196,309	117,325	89,102	74,926	31,293	804,567
1962-63 ..	312,630	207,076	123,491	93,684	78,591	31,659	847,131
1963-64 ..	342,268	222,185	130,448	101,503	83,944	34,196	914,544

PER HEAD OF POPULATION
(£)

1959-60 ..	69.15	59.69	69.75	81.49	89.76	72.94	69.33
1960-61 ..	72.85	63.98	72.37	85.65	95.01	79.40	73.27
1961-62 ..	74.87	66.34	76.84	90.91	100.46	87.73	76.50
1962-63 ..	77.86	68.53	79.60	93.78	102.81	87.43	79.07
1963-64 ..	83.76	71.88	82.91	99.50	107.32	93.38	83.75

(a) See § 1, para. 2, p. 930, for transactions included.

3. Sources of Revenue.—(i) *General.* Classifying the revenue of the several States in the manner indicated in para. 1, p. 930, particulars for the year 1963-64 were as follows.

STATE CONSOLIDATED REVENUE: SOURCES, 1963-64

Source of revenue	N.S.W. (a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas. (b)	Total
TOTAL REVENUE (£'000)							
Taxation(c) ..	60,551	50,757	19,194	14,913	9,115	5,033	159,563
Business undertakings ..	121,412	57,858	40,562	27,452	23,587	118	270,989
Lands ..	7,399	3,449	4,827	1,004	1,875	685	19,239
Interest, n.e.i. ..	3,131	8,644	6,338	8,640	4,032	5,958	36,743
Commonwealth grants(d)—							
Financial assistance ..	107,856	79,741	47,411	36,364	32,798	13,813	317,983
Other(e) ..	9,620	7,267	4,756	5,313	6,696	5,367	39,019
Commonwealth National Welfare Fund payments(f) ..	5,478	1,594	659	1,121	82	332	9,266
Miscellaneous ..	26,821	12,875	6,701	6,696	5,759	2,890	61,742
Total ..	342,268	222,185	130,448	101,503	83,944	34,196	914,544

PER HEAD OF POPULATION
(£)

Taxation(c) ..	14.82	16.42	12.20	14.62	11.65	13.74	14.61
Business undertakings ..	29.71	18.72	25.78	26.91	30.15	0.32	24.82
Lands ..	1.81	1.11	3.07	0.98	2.40	1.87	1.76
Interest, n.e.i. ..	0.77	2.79	4.03	8.47	5.15	16.27	3.36
Commonwealth grants(d)—							
Financial assistance ..	26.39	25.80	30.13	35.65	41.93	37.72	29.12
Other(e) ..	2.36	2.35	3.02	5.21	8.56	14.66	3.57
Commonwealth National Welfare Fund payments(f) ..	1.34	0.52	0.42	1.10	0.11	0.91	0.85
Miscellaneous ..	6.56	4.17	4.26	6.56	7.37	7.89	5.66
Total ..	83.76	71.88	82.91	99.50	107.32	93.38	83.75

(a) See § 1, para. 2, p. 930.

(b) Tasmanian transport services are under the separate control of

semi-governmental authorities.

(c) In all States certain taxation collections are not paid into

Consolidated Revenue Fund. For total collections see next page. (d) Excludes Commonwealth

payments paid to trust funds. (e) Includes payments under Financial Agreement, special grants,

additional financial assistance, grants to universities, etc. (f) Consolidated Revenue Fund receipts

only. Excludes payments to Trust Funds.

(ii) *Revenue from Taxation.* (a) *General.* In the tables on taxation collections in these paragraphs 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 instead of under Stamp duties and Licences respectively.

Prior to federation customs and excise duties were the principal source of revenue from taxation. Thereafter, until the introduction of the uniform income tax scheme in 1942-43, the highest yields from the State taxation were drawn from the various income taxes which, in 1941-42, included unemployment relief, State development, and hospital taxes. From 1942-43 to 1958-59 the States were reimbursed by the Commonwealth for the revenue lost by the discontinuance of these taxes. Commencing with 1959-60, however, a new scheme for the payment of financial assistance to the States was instituted (for details see para. 10 (vi), p. 921). Information relating to the State income taxes which were levied prior to 1942-43 may be found in earlier issues of the Year Book.

(b) *Net Collections, 1963-64.* The following tables show, for the year 1963-64, details of the collections in each State from the various types of tax in operation, 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 present a comprehensive statement of all taxation collections by the Government in each State.

STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS(a), 1963-64
(£'000)

Tax	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Total
Motor—							
Registration fees and taxes	17,075	11,874	6,832	4,821	3,441	1,576	45,619
Drivers', etc., licences	3,256	595	372	435	394	123	5,175
Other	8,069	5,172	3,730	70	368	154	17,563
Total	28,400	17,641	10,934	5,326	4,203	1,853	68,357
Probate and succession duties	19,786	14,726	5,340	3,080	1,545	1,068	45,545
Stamp duties, n.e.i.	18,776	14,588	5,828	2,691	3,562	1,095	46,540
Land	12,050	9,133	1,807	2,450	1,350	777	27,567
Liquor	5,110	3,502	1,706	373	906	295	11,892
Lotteries .. .. .	.. .. .	3,304	350	.. .. .	.. .. .	.. .. .	3,654
Racing	2,998	4,507	1,458	1,131	1,159	428	11,681
Entertainments .. .. .	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	26	26
Poker machine licence fees	5,634	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	5,634
Licences, n.e.i.	199	477	143	103	261	13	1,196
Other	6	.. .. .	2,725	156	371	.. .. .	3,258
Grand Total	92,959	67,878	30,291	15,310	13,357	5,555	225,350

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue Fund or to other funds.

Of the total taxation collections detailed above, the following were paid into special funds.

STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS,
1963-64
(£'000)

Tax	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Total
Motor	26,774	16,600	8,326	.. .. .	3,871	343	55,914
Stamp duties, n.e.i. .. .. .	.. .. .	254	.. .. .	.. .. .	.. .. .	.. .. .	254
Liquor .. .. .	.. .. .	183	87	.. .. .	.. .. .	.. .. .	270
Racing .. .. .	.. .. .	.. .. .	164	397	.. .. .	179	740
Poker machine licence fees	5,634	.. .. .	.. .. .	.. .. .	.. .. .	.. .. .	5,634
Other .. .. .	.. .. .	84	2,520	.. .. .	371	.. .. .	2,975
Total	32,408	17,121	11,097	397	4,242	522	65,787

The table hereunder shows, for the year 1963-64, the proportions of collections under individual classes of tax to total taxation revenue.

STATE REVENUE FROM TAXATION: PROPORTIONS OF INDIVIDUAL TAXES TO TOTAL, 1963-64

(Per cent.)

Tax	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Motor	28.80	25.99	36.10	34.79	31.47	33.35	30.34
Probate and succession duties	21.28	21.70	17.63	20.12	11.57	19.22	20.21
Stamp duties, n.e.i. ..	21.95	21.49	19.24	17.58	26.67	19.72	20.66
Land	12.96	13.45	5.97	16.00	10.11	13.99	12.23
Liquor	5.50	5.16	5.63	2.44	6.78	5.31	5.28
Lotteries .. .. .	..	4.87	1.16	..	..	..	1.62
Racing	3.23	6.64	4.81	7.39	8.68	7.69	5.19
Entertainments .. .. .	..	..	..	..	..	0.48	..
Poker machine licence fees	6.06	..	..	..	..	..	2.50
Licences, n.e.i.	0.21	0.70	0.47	0.67	1.95	0.24	0.53
Other	0.01	..	8.99	1.01	2.77	..	1.44
Grand Total ..	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(c) *Net Collections, 1959-60 to 1963-64.* 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 1959-60 to 1963-64, are shown in the following table.

STATE REVENUE FROM TAXATION: TOTAL NET COLLECTIONS

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
TOTAL NET COLLECTIONS							
(£'000)							
1959-60 ..	61,451	51,713	22,913	11,522	9,014	4,428	161,041
1960-61 ..	63,580	55,946	22,701	12,102	9,518	4,581	168,428
1961-62 ..	67,433	57,819	24,274	12,951	10,200	4,804	177,481
1962-63 ..	78,091	60,982	27,023	13,845	11,498	5,092	196,531
1963-64 ..	92,959	67,878	30,291	15,310	13,357	5,555	225,350

PER HEAD OF POPULATION

(£)

1959-60 ..	16.19	18.34	15.50	12.34	12.57	12.87	15.96
1960-61 ..	16.40	19.34	15.10	12.64	13.04	13.09	16.34
1961-62 ..	17.08	19.54	15.90	13.21	13.68	13.47	16.88
1962-63 ..	19.45	20.18	17.42	13.86	15.04	14.06	18.34
1963-64 ..	22.75	21.96	19.25	15.01	17.07	15.17	20.63

The following table shows, for the years 1959-60 to 1963-64, 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	1959-60	1960-61	1961-62	1962-63	1963-64
Motor	46,527	48,926	51,609	57,759	68,357
Probate and succession duties	33,991	33,878	37,583	40,014	45,545
Stamp duties, n.e.i.	36,901	37,887	36,528	40,878	46,540
Land	17,220	19,914	22,660	24,705	27,567
Liquor	8,623	9,052	9,861	11,102	11,892
Lotteries	3,444	3,610	3,509	3,545	3,654
Racing	8,262	8,526	9,115	10,599	11,681
Entertainments	1,609	1,421	1,090	470	26
Poker machine licence fees	1,265	1,677	1,772	3,279	5,634
Licences, n.e.i., and all other	3,199	3,537	3,754	4,180	4,454
Total	161,041	168,428	177,481	196,531	225,350

(a) From all sources of taxation irrespective of whether paid to Consolidated Revenue or to other funds.

Details of taxation collections paid into special funds and included in the table above are shown below.

STATE REVENUE FROM TAXATION: PAYMENTS INTO SPECIAL FUNDS
(£'000)

Tax	1959-60	1960-61	1961-62	1962-63	1963-64
Motor	39,604	41,131	43,060	48,436	55,914
Stamp duties, n.e.i.	225	209	200	242	254
Liquor	193	182	170	232	270
Lotteries	10	..	..	..	..
Racing	544	571	549	678	740
Poker machine licence fees	1,265	1,677	1,772	3,279	5,634
Other	2,093	2,407	2,540	2,764	2,975
Total	43,934	46,177	48,291	55,631	65,787

(iii) *Business Undertakings.* (a) 1963-64. A considerable proportion of State gross revenue is made up of receipts from business undertakings under the control of the Governments. The most important 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 1963-64 the revenue from these sources was £270,989,000 or 29.6 per cent. of the revenue from all sources. Details of revenue are as follows.

STATE REVENUE FROM BUSINESS UNDERTAKINGS, 1963-64
(£'000)

Source	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.(a)	Total
Railways(b)	101,244	46,188	40,562	14,914	17,464	..	220,372
Tramways and omnibuses	12,405	..	..	..	..	..	12,405
Harbours, rivers, lights	7,763	(c) 872	..	3,066	829	..	12,530
Water supply, sewerage, irrigation and drainage .. .. .	..	5,574	..	8,713	4,984	4	19,275
Electricity supply .. .. .	..	4,667	..	..	..	..	4,667
Other .. .. .	..	557	..	759	310	114	1,740
Total	121,412	57,858	40,562	27,452	23,587	118	270,989

(a) Tasmanian transport services are under the separate control of semi-governmental authorities.
(b) The following contributions to railways revenue from Consolidated Revenue Fund are excluded—New South Wales, £800,000; South Australia, £4,000,000. (c) Includes Harbour Trust Fund contribution, £580,000.

(b) 1959-60 to 1963-64. 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.	Vic.	Q'land	S. Aust.	W. Aust.	Tas. (a)	Total
TOTAL REVENUE (£'000)							
1959-60 ..	99,850	47,518	34,846	20,690	19,891	58	222,853
1960-61 ..	107,126	51,995	35,398	22,939	21,075	48	238,581
1961-62 ..	107,540	53,225	35,072	24,449	22,038	112	242,436
1962-63 ..	110,482	54,201	36,633	24,964	22,551	81	248,912
1963-64 ..	121,412	57,858	40,562	27,452	23,587	118	270,989

PER HEAD OF POPULATION
(£)

1959-60 ..	26.30	16.85	23.58	22.16	27.73	0.17	22.09
1960-61 ..	27.64	17.97	23.54	23.97	28.88	0.14	23.14
1961-62 ..	27.24	17.99	22.97	24.95	29.55	0.31	23.05
1962-63 ..	27.51	17.94	23.61	24.99	29.50	0.23	23.23
1963-64 ..	29.71	18.72	25.78	26.91	30.15	0.32	24.82

(a) Tasmanian transport services are under the separate control of semi-governmental authorities.

In the table below particulars of total State revenue from business undertakings for the various types of undertakings are shown for the years 1959-60 to 1963-64.

STATE REVENUE FROM BUSINESS UNDERTAKINGS
(£'000)

Source	1959-60	1960-61	1961-62	1962-63	1963-64
Railways, tramways and omnibuses	198,709	210,123	209,855	214,816	232,777
Harbour services	6,736	8,703	10,670	10,740	12,530
Water supply, sewerage, irrigation and drainage ..	12,922	14,995	16,383	17,400	19,275
Other	4,486	4,760	5,528	5,956	6,407
Total	222,853	238,581	242,436	248,912	270,989

For further information on the finances of the various types of business undertakings in the States, see Chapters XV. Transport and Communication and XX. Local Government of this Year Book.

(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 1963-64.

STATE LAND REVENUE, 1963-64

(£'000)

Source	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Sales ..	868	211	510	207	105	22	1,923
Conditional purchases ..	235	..	..	10	215	..	460
Rentals(a) ..	4,702	657	3,987	357	383	51	10,137
Forestry ..	1,456	2,352	..	..	1,172	606	5,586
Other ..	138	229	330	430	..	6	1,133
Total ..	7,399	3,449	4,827	1,004	1,875	685	19,239

(a) Includes mining royalties, rents, etc.

The total land revenue for all States for the years 1959-60 to 1963-64 respectively was:—£14,324,000, £15,269,000, £15,785,000, £16,363,000 and £19,239,000.

(v) *Commonwealth Grants.* Commonwealth grants to the States represent a very large proportion of the States' revenue. In 1963-64 the total amount (excluding sundry minor items) paid to the Consolidated Revenue Funds of the States was £357,002,000 (39.1 per cent.). Details were as follows:—contribution towards interest on States' debts under the Financial Agreement, £7,585,000; special grants to the States of Western Australia and Tasmania, £11,322,000; financial assistance, £317,983,000; additional assistance, £16,710,000; grants to universities, £3,086,000; and other grants, £316,000.

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 to the sinking fund on States' debts (£7,846,000 in 1963-64) paid to the National Debt Sinking Fund, grants for Commonwealth Aid Roads (£58,000,000 in 1963-64), and grants for universities (£13,844,000 in 1963-64) paid to State trust funds.

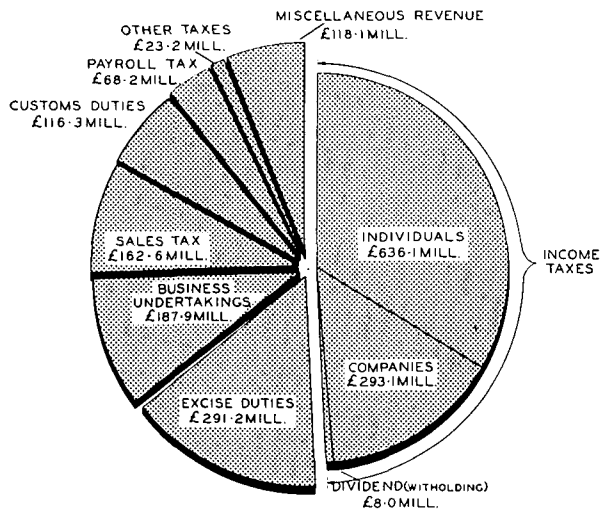
More detailed information concerning Commonwealth grants to the States is given on pages 917-24.

(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 1963-64 the total amount paid to State Consolidated Revenue Funds was £9,266,000 (1.0 per cent.). This amount was made up of hospital benefits, £1,359,000; pharmaceutical benefits, £2,202,000; milk for school children, £1,332,000; tuberculosis—reimbursement of maintenance expenditure, £4,229,000; other, £144,000.

(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. Interest, mainly from loans to local governing bodies, on public account balances, and for soldier land settlement amounted to £36,743,000 in 1963-64, while miscellaneous revenue, which includes fines of the courts and fees for services, amounted to £61,742,000 in 1963-64.

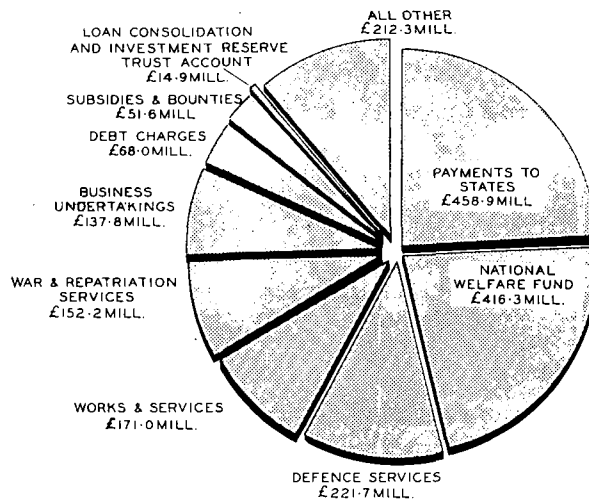
COMMONWEALTH CONSOLIDATED REVENUE FUND, YEAR ENDED 30TH JUNE, 1964

REVENUE



TOTAL REVENUE
£1,904.7 MILLION

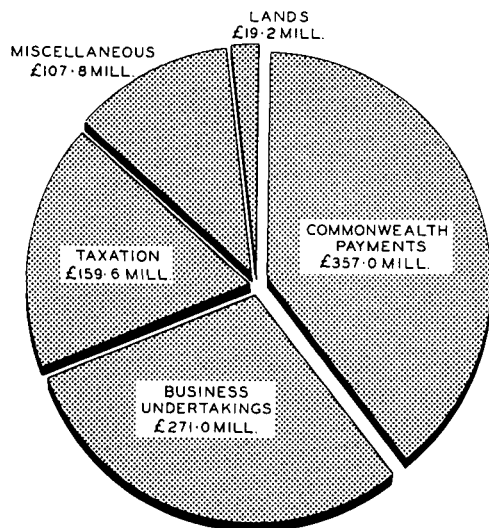
EXPENDITURE



TOTAL EXPENDITURE
£1,904.7 MILLION

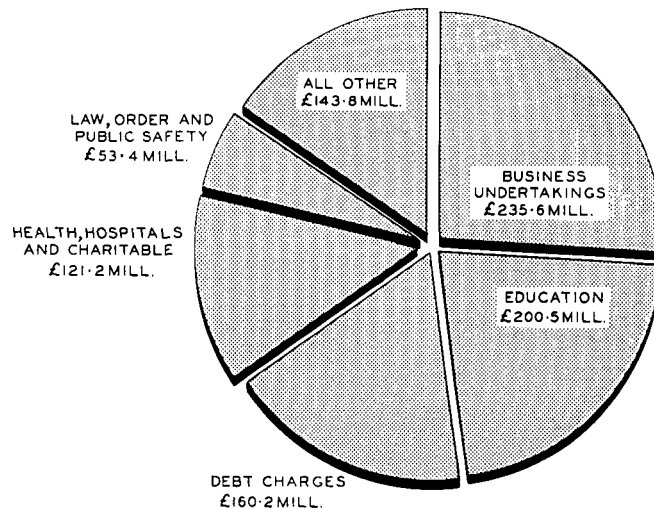
STATE CONSOLIDATED REVENUE FUNDS, YEAR ENDED 30TH JUNE, 1964

REVENUE



TOTAL REVENUE
£914.6 MILLION

EXPENDITURE



TOTAL EXPENDITURE
£914.7 MILLION

EXPENDITURE

1. **General.**—The principal heads of State expenditure from Consolidated Revenue Funds are:—(a) interest, exchange and debt redemption charges in connexion with debt; (b) working expenses of business undertakings; (c) education; (d) health and charitable expenditure; (e) justice; (f) police; (g) penal establishments; and (h) all other expenditure, including expenditure on public works, lands and surveys, agriculture and forestry, legislative and general administration, pensions, and miscellaneous.

The working expenses of railways and tramways are the largest item of State Government expenditure. In 1963–64 the working expenses of the railways, tramways and omnibuses were 23.0 per cent. of the total expenditure from the State Consolidated Revenue Funds; next in magnitude were education, 21.9 per cent.; debt charges, 17.5 per cent.; charitable, public health and hospitals, 13.1 per cent.; and law, order and public safety, 5.8 per cent.

As stated at the beginning of this division, figures relating to New South Wales represent the transactions of the Consolidated Revenue Fund and the business undertakings included in the annual budget papers. These undertakings are:—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 eliminate duplications caused by inter-fund payments. Particulars for all other States relate to the transactions of the Consolidated Revenue Fund.

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 1959–60 to 1963–64 are shown in the following table.

STATE EXPENDITURE: CONSOLIDATED REVENUE FUNDS

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
TOTAL EXPENDITURE							
(£'000)							
1959–60 ..	262,463	167,997	103,267	76,389	65,794	26,131	702,041
1960–61 ..	282,701	184,932	109,435	80,791	70,537	27,993	756,389
1961–62 ..	298,745	196,298	117,215	88,596	75,890	31,651	808,395
1962–63 ..	312,444	207,075	123,464	93,394	79,344	32,150	847,871
1963–64 ..	341,996	222,437	130,227	99,878	85,341	34,788	914,667
PER HEAD OF POPULATION							
(£)							
1959–60 ..	69.13	59.58	69.86	81.82	91.72	75.94	69.58
1960–61 ..	72.94	63.91	72.78	84.41	96.66	79.96	73.36
1961–62 ..	75.66	66.34	76.76	90.39	101.76	88.74	76.86
1962–63 ..	77.81	68.53	79.59	93.49	103.80	88.78	79.14
1963–64 ..	83.69	71.96	82.77	97.91	109.10	95.00	83.77

(a) See para. 1, above, for transactions included.

3. Details of Expenditure.—(i) 1963-64. The following tables show the total expenditure and expenditure per head of population for each of the principal items.

STATE EXPENDITURE: DETAILS, 1963-64

Particulars	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.(b)	Total
TOTAL EXPENDITURE							
(£'000)							
Debt (interest, exchange, debt redemption, etc.) ..	45,433	41,419	21,596	24,019	16,576	11,158	160,201
Railways	80,156	43,158	40,389	14,039	17,701	1,198	196,641
Tramways and omnibuses ..	12,852	..	..	..	459	340	13,651
Harbours and rivers, etc. ..	6,339	671	..	1,545	944	19	9,518
Water supply, sewerage, irrigation and drainage ..	..	4,168	..	4,672	4,011	305	13,156
Other business and industrial undertakings ..	..	617	21	232	1,679	45	2,594
Education	75,570	56,802	23,469	21,206	15,625	7,833	200,505
Health and charitable ..	41,960	30,590	17,931	12,464	11,972	4,667	119,584
Justice	5,150	2,277	1,731	699	652	365	10,874
Police	12,602	9,523	5,299	2,934	2,382	1,263	34,004
Penal establishments ..	2,870	1,406	616	722	611	303	6,528
Public safety	789	34	680	162	212	91	1,967
All other expenditure ..	58,275	31,772	18,495	17,184	12,517	7,201	145,444
Total	341,996	222,437	130,227	99,878	85,341	34,788	914,667

PER HEAD OF POPULATION

(£)

Debt (interest, exchange, debt redemption, etc.) ..	11.12	13.40	13.73	23.55	21.19	30.47	14.67
Railways	19.62	13.96	25.67	13.76	22.63	3.27	18.01
Tramways and omnibuses ..	3.15	..	..	..	0.59	0.93	1.25
Harbours and rivers, etc. ..	1.55	0.22	..	1.51	1.21	0.05	0.87
Water supply, sewerage, irrigation and drainage ..	..	1.35	..	4.58	5.13	0.83	1.20
Other business and industrial undertakings ..	..	0.20	..	0.23	2.15	0.12	0.24
Education	18.49	18.37	14.92	20.79	19.98	21.39	18.36
Health and charitable ..	10.27	9.90	11.40	12.22	15.30	12.74	10.95
Justice	1.26	0.74	1.10	0.69	0.83	1.00	1.00
Police	3.08	3.08	3.37	2.88	3.04	3.45	3.12
Penal establishments ..	0.70	0.45	0.39	0.70	0.78	0.83	0.60
Public safety	0.19	0.01	0.43	0.16	0.27	0.25	0.18
All other expenditure ..	14.26	10.28	11.76	16.84	16.00	19.67	13.32
Total	83.69	71.96	82.77	97.91	109.10	95.00	83.77

(a) See para. 1, p. 939 for transactions included. (b) Tasmanian transport services are under the separate control of semi-governmental authorities. Figures shown for relevant items represent payments to the authorities.

For further information on the finances of the various types of business undertakings in the States, see Chapters XV. Transport and Communication and XX. Local Government of this Year Book.

(ii) 1959-60 to 1963-64. Combined expenditure by the several States for these years on each of the principal items is shown in the following table.

STATE EXPENDITURE
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Debt (interest, exchange, debt redemption, etc.)	116,850	125,217	137,455	150,862	160,201
Railways, tramways and omnibuses (working expenses)	193,282	198,779	200,182	198,971	210,292
Harbours and rivers, etc. ..	4,786	6,313	7,922	7,993	9,518
Water supply, sewerage, irrigation, and drainage	10,976	11,211	12,640	12,853	13,156
Other business and industrial undertakings	2,688	2,764	2,739	2,744	2,594
Education	130,641	149,348	163,929	179,528	200,505
Health and charitable	99,406	105,994	114,360	115,526	119,584
Justice	8,435	9,449	10,011	9,955	10,874
Police	25,904	28,139	29,804	31,481	34,004
Penal establishments	4,676	5,311	5,857	6,111	6,528
Public safety	1,262	1,418	1,672	1,887	1,967
All other expenditure	103,135	112,446	121,824	129,960	145,444
Total	702,041	756,389	808,395	847,871	914,667

SURPLUS REVENUE

The following table shows for each of the years 1959-60 to 1963-64 the total amount and amount per head of population of the surplus or deficit of each State.

STATE SURPLUS REVENUE

Year	N.S.W.(a)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
TOTAL AMOUNT (£'000)							
1959-60 ..	70	313	- 164	- 312	-1,406	-1,032	-2,531
1960-61 ..	- 337	169	- 618	1,188	-1,204	- 198	-1,000
1961-62 ..	-3,133	11	110	506	- 964	- 358	-3,828
1962-63 ..	186	1	27	290	- 753	- 491	- 740
1963-64 ..	272	-252	221	1,625	-1,397	- 592	- 123

PER HEAD OF POPULATION
(£)

1959-60 ..	0.02	0.11	-0.11	-0.33	-1.96	-3.00	-0.25
1960-61 ..	-0.09	0.07	-0.41	1.24	-1.65	-0.56	-0.10
1961-62 ..	-0.79	..	0.08	0.52	-1.30	-1.01	-0.36
1962-63 ..	0.05	..	0.01	0.29	-0.99	-1.35	-0.07
1963-64 ..	0.07	-0.08	0.14	1.59	-1.78	-1.62	-0.02

(a) See para. 1, p. 939.

NOTE.—Minus sign (-) indicates deficit.

§ 3. State Loan Funds

1. **General.**—State public borrowing is due mainly to the fact that the State Governments, in addition to ordinary administrative duties, undertake functions, such as the construction and operation of the railway systems, which in other countries are usually entrusted to local authorities or left to private enterprise. Loan moneys have also been used largely for improvements to harbours and rivers, and for the construction of roads, water supply and sewerage works. The State debt thus consists chiefly of moneys raised and expended with the object of assisting the development of the resources of the country, and is 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 the annual bulletin *State, Territory and Local Government Authorities' Finance and Government Securities*. Such moneys are credited to the Loan Fund in the year of repayment irrespective of when the advance was made.

2. **Gross Loan Expenditure.**—(i) 1963-64. Particulars of gross loan expenditure on works, services, etc., are shown in the following table.

STATE GROSS LOAN EXPENDITURE ON WORKS, SERVICES, ETC., 1963-64
(£'000)

Particulars	N.S.W.	Vic.(a)	Q'land	S. Aust.	W. Aust.	Tas.	Total
Public Works and Services—							
Railways	8,150	7,810	5,843	2,514	4,878	243	29,438
Tramways and omnibuses					60	93	153
Roads	1,337	542	395	475			
Bridges							
Harbours and rivers	5,809	590	723	1,220	1,515	2,380	14,196
Lights and lighthouses							
Water supply	9,594	8,633	5,274	7,618	3,297	668	30,059
Sewerage		605		4,100	818		
Electricity supply	7,600	8,000	2,255	2,750	14	7,100	27,719
Gas supply		30					30
Public buildings	30,341	26,028	11,549	8,529	8,287	4,609	89,343
Loans and grants to local bodies	354	856	9,913		217		11,423
Housing(b)	35	819	2,798	300	1,691	10	5,653
Other public works, etc.	355	308		416	750	870	2,699
Primary Production—							
Soldier settlement	19	93					112
Land for settlement	692	1,136	51	2		50	1,931
Advances to settlers		120		56	82	300	558
Water conservation, irrigation and drainage	7,921		2,897	683	935		12,436
Vermin-proof fencing			2	(c)	27		29
Agriculture	400				90		490
Agricultural Bank			2,084		165		2,249
Forestry	700	1,013	2,241	1,045	175	643	5,817
Mines and mineral resources	512	62	152	182	334		1,242
Other	629	1,167	25	514	56	3	2,344
Other purposes		(d) 1,063	10	1,344	244	442	3,103
Total, Public Works, Services, etc.	74,448	58,875	34,824	31,748	23,635	17,494	241,024
Per head of population	£18.22	£19.05	£22.13	£31.12	£30.22	£47.77	£22.07

(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) Included in item Advances to settlers. (d) Includes Rural Finance and Settlement Commission, for advances to rural industries, £671,000.

NOTE.—The negative amounts shown for Queensland represent transfers of liability on account of expenditure incurred in earlier years. The amounts involved have been debited against the item Loans and grants to local bodies, and included in the expenditure shown for 1963-64.

(ii) 1959-60 to 1963-64. 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.	Vic.(a)	Q'land	S. Aust.	W. Aust.	Tas.	Total
GROSS LOAN EXPENDITURE (£'000)							
1959-60 ..	63,651	49,491	29,362	28,245	18,016	14,470	203,235
1960-61 ..	65,182	51,705	29,686	31,385	19,353	16,767	214,078
1961-62 ..	67,520	53,417	30,688	30,655	20,773	16,095	219,148
1962-63 ..	70,331	55,332	31,431	29,801	22,155	16,457	225,507
1963-64 ..	74,448	58,875	34,824	31,748	23,635	17,494	241,024

PER HEAD OF POPULATION

	(£)						
1959-60 ..	16.77	17.55	19.87	30.25	25.12	42.05	20.14
1960-61 ..	16.82	17.87	19.74	32.79	26.52	47.90	20.76
1961-62 ..	17.10	18.05	20.10	31.28	27.85	45.12	20.84
1962-63 ..	17.52	18.31	20.26	29.83	28.98	45.45	21.05
1963-64 ..	18.22	19.05	22.13	31.12	30.22	47.77	22.07

(a) See footnote (a) to previous table.

The tables above 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 1961-62 to 1963-64 are shown in the next paragraph.

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, 1961-62 to 1963-64.

STATE LOAN EXPENDITURE: SUMMARY

(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
1961-62							
Works and services—							
Gross expenditure ..	67,520	53,417	30,688	30,655	20,773	16,095	219,148
Net expenditure ..	62,198	50,461	24,831	26,282	18,876	14,950	197,598
Repayments ..	5,322	2,956	5,857	4,373	1,897	1,145	21,550
Other than works, etc.(a)—							
Gross expenditure ..	-1,410	-1,144	..	33	181	165	-2,175
Net expenditure ..	-1,410	-1,144	670	-695	128	94	-2,357
Repayments ..	..	..	-670	728	53	71	182
Total Loan Expenditure—							
Gross ..	66,110	52,273	30,688	30,688	20,954	16,260	216,973
Net ..	60,788	49,317	25,501	25,587	19,004	15,044	195,241
Repayments ..	5,322	2,956	5,187	5,101	1,950	1,216	21,732

For footnotes, see next page.

STATE LOAN EXPENDITURE: SUMMARY—*continued*
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
1962-63							
Works and services—							
Gross expenditure ..	70,331	55,332	31,431	29,801	22,155	16,457	225,507
Net expenditure ..	64,739	52,341	26,006	25,005	19,447	15,100	202,638
Repayments ..	5,592	2,991	5,425	4,796	2,708	1,357	22,869
Other than works, etc.(a)—							
Gross expenditure ..	-3,147	796	..	40	-120	150	-2,281
Net expenditure ..	-3,147	796	700	..	-174	155	-1,670
Repayments ..	..	..	-700	40	(b) 54	-5	-611
Total Loan Expenditure—							
Gross ..	67,184	56,128	31,431	29,841	22,035	16,607	223,226
Net ..	61,592	53,137	26,706	25,005	19,273	15,255	200,968
Repayments ..	5,592	2,991	4,725	4,836	2,762	1,352	22,258
1963-64							
Works and services—							
Gross expenditure ..	74,448	58,875	34,824	31,748	23,635	17,494	241,024
Net expenditure ..	69,634	55,748	29,347	26,424	21,550	16,356	219,059
Repayments ..	4,814	3,127	5,477	5,324	2,085	1,138	21,965
Other than works, etc.(a)—							
Gross expenditure ..	-320	500	750	50	312	117	1,409
Net expenditure ..	-320	500	750	..	260	96	1,286
Repayments ..	..	..	..	50	(b) 52	21	123
Total Loan Expenditure—							
Gross ..	74,128	59,375	35,574	31,798	23,947	17,611	242,433
Net ..	69,314	56,248	30,097	26,424	21,810	16,452	220,345
Repayments ..	4,814	3,127	5,477	5,374	2,137	1,159	22,088

(a) Includes exchange, discounts and flotation expenses, revenue and general cash deficits.
(b) From Consolidated Revenue Fund.

NOTE.—Minus sign (–) indicates excess of repayments to loan fund.

Information relating to the government securities on issue on behalf of the States is given in the division on Government Securities on Issue: Commonwealth and States (*see* p. 946).

COMMONWEALTH AND STATE FINANCE

1. **Consolidated Revenue Fund Revenue and Expenditure.**—The following table shows the aggregate revenue and expenditure of the Consolidated Revenue Funds of the Commonwealth and States for each of the years 1959-60 to 1963-64. In the table 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 financial assistance grants in 1959-60 to 1963-64, interest under the Financial Agreement, special grants, special financial assistance, grants to universities, cattle tick control, Tuberculosis Act 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

Year ended 30th June—	Revenue			Expenditure		
	Commonwealth	States	Total	Commonwealth	States	Total
	£'000	£'000	£m.	£'000	£'000	£m.
1960	1,438,286	699,510	1,857.3	1,438,286	702,041	1,859.8
1961	1,638,279	755,389	2,085.3	1,638,279	756,389	2,086.3
1962	1,641,542	804,567	2,102.6	1,641,542	808,395	2,106.4
1963	1,685,386	847,131	2,173.0	1,685,386	847,871	2,173.8
1964	1,904,688	914,544	2,443.3	1,904,688	914,667	2,443.4

2. Taxation.—The following table shows the combined Commonwealth and State taxation collections, and the amount per head of population, for the years 1959–60 to 1963–64. Taxation collections by the State Governments which are not paid into the Consolidated Revenue Funds are included.

COMMONWEALTH AND STATE TAXATION: TOTAL NET COLLECTIONS(a)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
NET COLLECTIONS (£'000)					
Income taxes	671,302	807,273	828,150	810,590	937,242
Customs and excise duties	336,492	359,194	350,805	379,503	407,518
Sales tax	164,185	173,040	148,824	156,531	162,595
Land tax	17,220	19,914	22,660	24,705	27,567
Pay-roll tax	55,162	61,260	60,972	63,255	68,222
Estate, probate and succession duties	47,744	48,685	54,612	57,864	65,481
Stamp duties, n.e.i.	36,901	37,887	36,528	40,878	46,540
Motor taxes	46,527	48,926	51,609	57,759	68,357
Liquor taxes	8,623	9,052	9,861	11,102	11,892
Racing	8,262	8,526	9,115	10,599	11,681
Entertainments tax	1,609	1,421	1,090	470	26
Licences, n.e.i., and other taxes	16,804	18,489	19,779	23,734	27,649
Total—					
Commonwealth	1,249,790	1,425,239	1,416,524	1,440,459	1,609,420
States	161,041	168,428	177,481	196,531	225,350
Grand Total	1,410,831	1,593,667	1,594,005	1,636,990	1,834,770

PER HEAD OF POPULATION
(£)

Income taxes	66.05	77.69	78.08	74.98	84.99
Customs and excise duties	33.11	34.56	33.07	35.10	36.96
Sales tax	16.15	16.65	14.03	14.48	14.75
Land tax	1.70	1.92	2.14	2.29	2.50
Pay-roll tax	5.43	5.90	5.75	5.85	6.19
Estate, probate and succession duties	4.70	4.69	5.15	5.35	5.94
Stamp duties, n.e.i.	3.63	3.65	3.44	3.78	4.22
Motor taxes	4.57	4.71	4.87	5.34	6.20
Liquor taxes	0.85	0.87	0.93	1.03	1.08
Racing	0.81	0.82	0.86	0.98	1.06
Entertainments tax	0.16	0.13	0.10	0.04	..
Licences, n.e.i., and other taxes	1.65	1.77	1.87	2.20	2.50
Total—					
Commonwealth	122.96	137.15	133.56	133.23	145.96
States	15.96	16.34	16.88	18.34	20.63
Grand Total	138.81	153.36	150.29	151.42	166.39

(a) For separate details of Commonwealth and State taxation collections, see pp. 903 and 932–4.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES

NOTE.—For the following reasons, Government Securities on Issue, as set out in the tables in this division, may not be aggregated without adjustment to indicate what is sometimes described as the “public debt” or “net public debt” of the Commonwealth and State Governments.

There are forms of debt not evidenced by the issue of securities. Again, some of the securities included in the tables are held by the Governments themselves. For example, a State Government may hold temporarily, or even for long periods, securities issued by the Commonwealth Government. The Commonwealth Government itself, through such institutions as the National Debt Commission, or through the Trust Funds, holds large investments in securities issued, either directly by itself or on behalf of the States. In addition, some of the securities issued on behalf of the States and held by the Commonwealth Government represent the proceeds of oversea loans, securities for which were issued directly by the Commonwealth Government. From the point of view of the aggregate net debt of the Commonwealth and the States, it would thus involve duplication if the sum of the securities on issue were to be regarded as representing the “net public debt”.

§ 1. General

Under the Financial Agreement between the Commonwealth and the States in 1927, the Commonwealth Government accepted responsibility for the securities of the State Governments then on issue, and was empowered to arrange for all future borrowings on behalf of the Commonwealth and the States and to issue Commonwealth securities for all money borrowed. The Commonwealth is reimbursed by the States for interest, exchange, etc., paid on their behalf, and the securities are redeemed from the National Debt Sinking Fund to which both the Commonwealth and State Governments make contributions.

In the statistical tables relating to Government securities, details of securities on issue, annual interest liability and average rate of interest liability, except in § 2, paras. 3 and 4, are shown in the currencies in which they are repayable or payable respectively. Australian currency equivalents for oversea loans have been calculated using International Monetary Fund par rates of exchange (and the calculated equivalent for Swiss francs) ruling at 30th June in each year shown. Rates of exchange to £A. at 30th June, 1964, were as follows:—£Sterling, 0.8000; United States dollars, 2.2400; Canadian dollars, 2.4216; Swiss francs, 9.7955; Netherlands guilders, 8.1088; German Deutsche marks, 8.9600.

The full text of the original Financial Agreement between the Commonwealth and the States was given in Year Book No. 31, page 21, a summary of the original Agreement as affected by the subsequent Agreements in later issues up to No. 37 (*see pp. 685–90*), and a summary of the main provisions in further issues up to No. 50 (*see pp. 952–3*).

§ 2. Government Securities on Issue: Commonwealth and States

1. Government Securities on Issue, Annual Interest Payable and Average Rate of Interest, 30th June, 1964.—In the following tables details are given of government securities on issue on account of the Commonwealth and States, annual interest payable and average rate of interest at 30th June, 1964.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES,
30th JUNE, 1964

Particulars	Currency in which repayable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
For Commonwealth purposes ..	1,284,357	79,393	351,347	50,376	194,288	7,150	37,901	1,586,198
On account of States—								
New South Wales	954,146	115,528	85,454	5,058	15,833	10,383	..	1,141,691
Victoria	705,795	46,060	48,120	4,067	12,732	8,346	..	788,861
Queensland	355,312	46,893	34,585	2,041	6,391	4,250	..	431,387
South Australia	380,025	34,026	23,727	2,164	6,774	4,191	..	435,252
Western Australia	275,181	33,426	17,682	1,553	4,863	3,264	..	326,398
Tasmania	204,362	8,862	11,398	1,182	3,703	2,416	..	221,692
<i>Total, States</i>	<i>2,874,821</i>	<i>284,795</i>	<i>220,966</i>	<i>16,065</i>	<i>50,296</i>	<i>32,850</i>	..	<i>3,345,281</i>
Total Commonwealth and States—								
Stock and bonds	3,660,826	358,880	334,310	30,435	240,000	40,000	..	4,300,673
Treasury Bills, Internal	299,500	..	..	..	..	..	..	299,500
Treasury Notes	76,285	..	..	..	..	..	..	76,285
Treasury Bills, Public	89,000	..	..	..	..	..	..	89,000
International Bank Loans .. .. .	..	..	207,978	36,006	4,584	..	37,901	112,414
Commonwealth notes .. .. .	..	..	30,025	..	..	..	..	13,404
Debentures	29,523	..	..	..	..	..	..	29,523
Balance of securities of States taken over by Commonwealth and still represented by State securities .. .. .	..	4,241	..	..	..	..	..	5,302
Other	4,044	(b) 1,067	..	..	..	..	..	5,378
Grand Total— Currencies in which Re- payable	4,159,178	364,188	572,313	66,441	244,584	40,000	37,901	..
Australian Currency Equi- valents(a)	£A.'000 4,159,178	455,235	255,497	27,437	24,969	4,933	4,230	4,931,479

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946. (b) State securities issued by the Government of Western Australia to meet the costs of acquisition of the Midland Railway Company of Western Australia Ltd.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—
ANNUAL INTEREST PAYABLE, 30th JUNE, 1964

Particulars	Currency in which payable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
For Commonwealth purposes ..	44,702	3,714	17,334	2,327	7,982	357	2,116	59,140
On account of States—								
New South Wales	42,160	5,088	4,173	291	712	519	..	50,640
Victoria	31,681	1,981	2,422	234	573	417	..	35,445
Queensland	15,439	1,750	1,635	117	287	213	..	18,460
South Australia	16,909	1,207	1,189	125	305	210	..	19,057
Western Australia	12,235	1,147	881	89	219	163	..	14,142
Tasmania	9,128	356	589	68	167	121	..	9,895
<i>Total, States</i>	<i>127,552</i>	<i>11,529</i>	<i>10,889</i>	<i>924</i>	<i>2,263</i>	<i>1,643</i>	..	<i>147,639</i>
Grand Total— Currencies in which Re- payable	172,254	15,243	28,223	3,251	10,245	2,000	2,116	..
Australian Currency Equi- valents(a)	£A.'000 172,254	19,054	12,600	1,342	1,046	247	236	206,779

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

**GOVERNMENT SECURITIES ON ISSUE : COMMONWEALTH AND STATES—
ANNUAL INTEREST PAYABLE, 30TH JUNE, 1964—continued**

Particulars	Currency in which payable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
AVERAGE RATE OF INTEREST LIABILITY								
(Per cent.)								
For Commonwealth purposes ..	3.48	4.68	4.93	4.62	4.11	5.00	4.58	3.73
On account of States—								
New South Wales ..	4.42	4.40	4.88	5.75	4.50	5.00	..	4.44
Victoria ..	4.49	4.30	5.03	5.75	4.50	5.00	..	4.49
Queensland ..	4.35	3.73	4.73	5.75	4.50	5.00	..	4.28
South Australia ..	4.45	3.55	5.01	5.75	4.50	5.00	..	4.38
Western Australia ..	4.45	3.43	4.99	5.75	4.50	5.00	..	4.33
Tasmania ..	4.47	4.01	5.16	5.75	4.50	5.00	..	4.46
Total, States ..	4.44	4.05	4.93	5.75	4.50	5.00	..	4.41
Grand Total ..	4.14	4.19	4.93	4.89	4.19	5.00	4.58	4.19

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

2. Government Securities on Issue, Annual Interest Payable and Average Rate of Interest 30th June, 1960 to 1964.—The following tables give details of government securities on issue and annual interest payable, including the average rate of interest, at 30th June, 1960 to 1964.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES

Particulars	30th June—				
	1960	1961	1962	1963	1964
For Commonwealth purposes—					
Australian currency .. £A.'000	1,378,574	1,326,454	1,280,474	1,259,364	1,284,357
Sterling .. £Stg.'000	75,820	75,339	75,188	77,327	79,393
United States dollars U.S. \$'000	333,049	317,812	315,617	362,025	351,347
Canadian dollars Can. \$'000	50,328	51,933	51,627	50,948	50,376
Swiss francs .. Sw. fr.'000	205,794	210,657	209,658	196,556	194,288
Netherlands guilders .. f.'000	..	..	7,150	7,150	7,150
German Deutsche marks D.M.'000	8,369	6,355	6,355	6,355	37,901
Total, Commonwealth—Australian Currency Equivalents(a) £A.'000	1,666,863	1,607,328	1,559,675	1,560,336	1,586,198
On account of States—					
Australian currency .. £A.'000	2,244,605	2,389,864	2,548,700	2,696,670	2,874,821
Sterling .. £Stg.'000	267,105	266,691	266,161	273,843	284,795
United States dollars U.S. \$'000	161,538	178,256	187,701	227,930	220,966
Canadian dollars Can. \$'000	..	16,765	16,765	16,668	16,065
Swiss francs .. Sw. fr.'000	..	50,296	50,296	50,296	50,296
Netherlands guilders .. f.'000	..	..	32,850	32,850	32,850
Total, States—Australian Currency Equivalents(a) £A.'000	2,650,601	2,815,240	2,981,305	3,156,798	3,345,281
Total, Commonwealth and States— Australian Currency Equivalents(a) £A.'000	4,317,464	4,422,568	4,540,980	4,717,134	4,931,479

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—
ANNUAL INTEREST PAYABLE

Particulars	30th June—				
	1960	1961	1962	1963	1964
AMOUNT					
For Commonwealth purposes—					
Australian currency .. £A.'000	43,556	43,277	42,645	41,275	44,702
Sterling .. £Stg.'000	2,980	3,395	3,386	3,504	3,714
United States dollars U.S. \$'000	15,184	14,570	15,053	17,711	17,334
Canadian dollars Can. \$'000	2,279	2,388	2,380	2,352	2,327
Swiss francs .. Sw. fr.'000	8,514	8,723	8,675	8,080	7,982
Netherlands guilders .. f.'000	..	..	357	357	357
German Deutsche marks D.M.'000	398	302	302	302	2,116
Total, Commonwealth—Australian Currency Equivalents(a) £A.'000	56,009	55,987	55,545	55,435	59,140
On account of States—					
Australian currency .. £A.'000	93,252	104,072	112,943	119,064	127,552
Sterling .. £Stg.'000	9,832	10,355	10,328	10,917	11,529
United States dollars U.S. \$'000	6,989	7,900	8,976	11,227	10,889
Canadian dollars Can. \$'000	..	964	964	959	924
Swiss francs .. Sw. fr.'000	..	2,263	2,263	2,263	2,263
Netherlands guilders .. f.'000	..	..	1,643	1,643	1,643
Total, States—Australian Currency Equivalents(a) £A.'000	108,662	121,194	130,663	138,553	147,639
Total, Commonwealth and States— Australian Currency Equivalents(a) £A.'000	164,671	177,181	186,208	193,988	206,779

AVERAGE RATE (PER CENT.) OF INTEREST PAYABLE

For Commonwealth purposes—					
Australian currency	3.16	3.26	3.33	3.36	3.48
Sterling	3.93	4.51	4.50	4.53	4.68
United States dollars	4.56	4.58	4.77	4.89	4.93
Canadian dollars	4.53	4.60	4.61	4.62	4.62
Swiss francs	4.14	4.14	4.14	4.11	4.11
Netherlands guilders .. ..	..	..	5.00	5.00	5.00
German Deutsche marks	4.75	4.75	4.75	4.75	4.58
Total, Commonwealth—Australian Currency Equivalents(a)	3.36	3.48	3.56	3.62	3.73
On account of States—					
Australian currency	4.15	4.35	4.43	4.42	4.44
Sterling	3.68	3.88	3.88	3.99	4.05
United States dollars	4.33	4.43	4.79	4.93	4.93
Canadian dollars .. ..	..	5.75	5.75	5.75	5.75
Swiss francs .. ..	..	4.50	4.50	4.50	4.50
Netherlands guilders .. ..	..	..	5.00	5.00	5.00
Total, States—Australian Currency Equivalents(a)	4.10	4.30	4.38	4.39	4.41
Total, Commonwealth and States— Australian Currency Equivalents(a)	3.81	4.01	4.10	4.13	4.19

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

3. Government Securities on Issue and Annual Interest Payable, 30th June, 1964—
Australian Currency.—In the following tables, details, including per capita figures, are
shown in Australian currency equivalents calculated at rates of exchange ruling at 30th
June, 1964.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES,
30th JUNE, 1964—AUSTRALIAN CURRENCY**

Particulars	Currency in which repayable							Total
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
AMOUNT (£A.'000)								
For Commonwealth pur- poses—								
Treasury Bills, Internal	299,500	..	..	..	..	..	..	299,500
Other short-term	165,285	..	..	..	..	..	..	165,285
Other	819,572	99,241	156,851	20,803	19,834	882	4,230	1,121,413
Total, Commonwealth	1,284,357	99,241	156,851	20,803	19,834	882	4,230	1,586,198
On account of States—								
New South Wales	954,146	144,410	38,150	2,089	1,616	1,280	..	1,141,691
Victoria	705,795	57,575	21,482	1,680	1,300	1,029	..	788,861
Queensland	355,312	58,616	15,440	842	653	524	..	431,387
South Australia	380,025	42,533	10,592	893	692	517	..	435,252
Western Australia	275,181	41,782	7,894	642	496	403	..	326,398
Tasmania	204,362	11,078	5,088	488	378	298	..	221,692
Total, States	2,874,821	355,994	98,646	6,634	5,135	4,051	..	3,345,281
Total, Commonwealth and States—								
Treasury Bills, Internal	299,500	..	..	..	..	..	..	299,500
Other short-term	165,285	..	..	..	..	..	..	165,285
Other	3,694,393	455,235	255,497	27,437	24,969	4,933	4,230	4,466,694
Grand Total	4,159,178	455,235	255,497	27,437	24,969	4,933	4,230	4,931,479

PER HEAD OF POPULATION

(£A.)

For Commonwealth pur- poses	115.33	8.91	14.09	1.87	1.78	0.08	0.38	142.44
On account of States—								
New South Wales	231.77	35.08	9.27	0.51	0.39	0.31	..	277.33
Victoria	225.42	18.39	6.86	0.54	0.42	0.33	..	251.96
Queensland	223.61	36.88	9.72	0.53	0.41	0.33	..	271.48
South Australia	368.38	41.22	10.27	0.87	0.67	0.50	..	421.91
Western Australia	348.37	52.89	9.99	0.82	0.63	0.51	..	413.21
Tasmania	560.56	30.38	13.96	1.34	1.04	0.82	..	608.10
Total, States	260.81	32.30	8.95	0.60	0.47	0.37	..	303.50
Total, Common- wealth and States	373.51	40.89	22.94	2.46	2.24	0.44	0.38	442.86

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—
ANNUAL INTEREST PAYABLE, 30th JUNE, 1964—AUSTRALIAN CURRENCY**

Particulars	Currency in which repayable—							Total
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
AMOUNT (£A.'000)								
For Commonwealth purposes	44,702	4,643	7,739	961	815	44	236	59,140
On account of States—								
New South Wales	42,160	6,360	1,863	120	73	64	..	50,640
Victoria	31,681	2,476	1,081	96	59	52	..	35,445
Queensland	15,439	2,188	730	48	29	26	..	18,460
South Australia	16,909	1,509	531	51	31	26	..	19,057
Western Australia	12,235	1,433	394	38	22	20	..	14,142
Tasmania	9,128	445	262	28	17	15	..	9,895
<i>Total, States</i>	<i>127,552</i>	<i>14,411</i>	<i>4,861</i>	<i>381</i>	<i>231</i>	<i>203</i>	<i>..</i>	<i>147,639</i>
Total, Commonwealth and States	172,254	19,054	12,600	1,342	1,046	247	236	206,779

PER HEAD OF POPULATION

(£A.)

For Commonwealth purposes	4.02	0.42	0.69	0.09	0.07	..	0.02	5.31
On account of States—								
New South Wales	10.24	1.54	0.45	0.03	0.02	0.02	..	12.30
Victoria	10.12	0.78	0.35	0.03	0.02	0.02	..	11.32
Queensland	9.72	1.37	0.46	0.03	0.02	0.02	..	11.62
South Australia	16.39	1.46	0.51	0.05	0.03	0.03	..	18.47
Western Australia	15.49	1.80	0.50	0.05	0.03	0.03	..	17.90
Tasmania	25.03	1.22	0.72	0.08	0.05	0.04	..	27.14
<i>Total, States</i>	<i>11.57</i>	<i>1.31</i>	<i>0.44</i>	<i>0.03</i>	<i>0.02</i>	<i>0.02</i>	<i>..</i>	<i>13.39</i>
Total, Commonwealth and States	15.47	1.72	1.13	0.12	0.09	0.02	0.02	18.57

4. Government Securities on Issue and Annual Interest Payable, 30th June, 1960 to 1964.—In the following table, particulars of government securities on issue and annual interest payable thereon are shown in Australian currency equivalents calculated at rates of exchange ruling at 30th June in each year.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES—
SECURITIES ON ISSUE AND ANNUAL INTEREST PAYABLE—AUSTRALIAN
CURRENCY**
(£A.'000)

Particulars	30th June—				
	1960	1961	1962	1963	1964
SECURITIES ON ISSUE					
For Commonwealth purposes—					
Treasury Bills, Internal	233,500	251,100	240,900	279,800	299,500
Other short-term	201,000	186,000	208,000	192,538	165,285
Other	1,232,363	1,170,228	1,110,775	1,087,998	1,121,413
<i>Total, Commonwealth</i>	<i>1,666,863</i>	<i>1,607,328</i>	<i>1,559,675</i>	<i>1,560,336</i>	<i>1,586,198</i>
On account of States—					
New South Wales	924,707	976,284	1,028,308	1,083,506	1,141,691
Victoria	612,003	653,756	696,270	741,130	788,861
Queensland	340,118	361,154	382,885	405,637	431,387
South Australia	347,914	369,749	390,323	412,093	435,252
Western Australia	257,047	272,878	289,380	306,698	326,398
Tasmania	168,812	181,419	194,139	207,734	221,692
<i>Total, States</i>	<i>2,650,601</i>	<i>2,815,240</i>	<i>2,981,305</i>	<i>3,156,798</i>	<i>3,345,281</i>
Total, Commonwealth and States—					
Treasury Bills, Internal	233,500	251,100	240,900	279,800	299,500
Other short-term	201,000	186,000	208,000	192,538	165,285
Other	3,882,964	3,985,468	4,092,080	4,244,796	4,466,694
Grand Total	4,317,464	4,422,568	4,540,980	4,717,134	4,931,479

ANNUAL INTEREST LIABILITY

For Commonwealth purposes	56,009	55,987	55,545	55,435	59,140
On account of States—					
New South Wales	37,827	42,126	45,042	47,657	50,640
Victoria	25,798	28,812	31,211	33,175	35,445
Queensland	13,427	15,025	16,335	17,262	18,460
South Australia	14,290	15,890	17,086	17,987	19,057
Western Australia	10,318	11,479	12,457	13,210	14,142
Tasmania	7,002	7,862	8,532	9,262	9,895
<i>Total, States</i>	<i>108,662</i>	<i>121,194</i>	<i>130,663</i>	<i>138,553</i>	<i>147,639</i>
Total, Commonwealth and States	164,671	177,181	186,208	193,988	206,779

5. Government Securities on Issue at Each Rate of Interest.—(i) *Commonwealth*. The following table shows particulars of the securities on issue for Commonwealth purposes at 30th June, 1964, at each rate of interest.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH—AMOUNTS AT EACH RATE OF INTEREST, 30th JUNE, 1964

Rate of interest per annum (per cent.)	Currency in which repayable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
6.0 .. .. .	..	15,592	..	..	..	..	..	19,490
5.75 .. .. .	..	..	68,630	3,100	..	..	31,546	35,439
5.5 .. .. .	..	31,854	47,607	..	..	..	..	61,070
5.375	36,671	..	..	..	..	..	..	36,671
5.25	21,192	..	13,897	..	..	..	..	27,396
5.0	329,429	..	37,945	..	..	7,150	..	347,251
4.75	85,579	..	76,576	30,406	..	..	6,355	133,030
4.625	6,379	..	25,742	4,259	7	..	..	19,631
4.5	111,101	..	970	..	69,704	..	..	118,650
4.2625	14	..	..	..	..	..	..	14
4.25	67,858	..	64,023	1,341	4,577	..	..	97,461
4.0	4,208	..	..	11,270	60,000	..	..	14,987
3.875	30	..	..	..	..	..	..	30
3.75	47,657	..	11,133	..	60,000	..	..	58,752
3.745	61,267	..	..	..	..	..	..	61,267
3.5 .. .. .	..	5,177	4,824	..	..	..	..	8,624
3.4375	12,914	..	..	..	..	..	..	12,914
3.25 .. .. .	..	17,000	..	..	..	..	..	21,250
3.233	2,104	..	..	..	..	..	..	2,104
3.125	27,993	..	..	..	..	..	..	27,993
3.0 .. .. .	..	9,770	..	..	..	..	..	12,213
1.0	388,500	..	..	..	..	..	..	388,500
Overdue	3,026	..	..	..	..	..	..	3,026
Special bonds	75,652	..	..	..	..	..	..	75,652
Advance Loan Subscriptions	2,783	..	..	..	..	..	..	2,783
Total—								
Currencies in which Repayable	1,284,357	79,393	351,347	50,376	194,288	7,150	37,901	..
Australian Currency Equivalents (a) £A.'000	1,284,357	99,241	156,851	20,803	19,834	882	4,230	1,586,198

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

(ii) States. The following table shows particulars of the securities on issue for State purposes at 30th June, 1964, at each rate of interest.

GOVERNMENT SECURITIES ON ISSUE: STATES—AMOUNTS AT EACH RATE OF INTEREST, 30th JUNE, 1964

Rate of interest per annum (per cent.)	Currency in which repayable						Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	
	£A. '000	£Stg. '000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f. '000	£A. '000
6.0 .. .. .	..	43,913	..	..	..	..	54,891
5.75 .. .. .	..	..	..	16,065	..	..	6,634
5.5 .. .. .	..	53,960	83,343	..	..	..	104,659
5.375	126,742	..	..	..	..	..	126,742
5.25	56,259	..	37,893	..	..	..	73,175
5.0	687,603	1	27,366	..	..	32,850	703,872
4.75	248,241	..	17,569	..	..	..	256,084
4.625	27,108	..	..	..	..	..	27,108
4.5	622,064	..	18,085	..	50,296	..	635,272
4.3125	425	..	..	..	..	..	425
4.25	373,912	..	..	..	..	..	373,912
4.1875	906	..	..	..	..	..	906
4.125	9,120	..	..	..	..	..	9,120
4.0	112,576	21,664	..	..	..	..	139,656
3.875	703	..	..	..	..	..	703
3.75	176,111	..	5,611	..	..	..	178,616
3.625	107	..	..	..	..	..	107
3.5	4,445	24,455	31,099	..	..	..	48,897
3.4875	2	..	..	..	..	..	2
3.25	10,802	50,306	..	..	..	..	73,685
3.125	212,579	..	..	..	..	..	212,579
3.1	1,594	..	..	..	..	..	1,594
3.0	20,331	55,784	..	..	..	..	90,061
2.75 .. .. .	..	15,795	..	..	..	..	19,744
2.7125	307	..	..	..	..	..	307
2.5	1	18,441	..	..	..	..	23,052
2.325	1,379	..	..	..	..	..	1,379
1.5	2,851	..	..	..	..	..	2,851
1.0	29,523	..	..	..	..	..	29,523
Overdue .. .. .	..	476	..	..	..	..	595
Special Bonds	149,130	..	..	..	..	..	149,130
Total—							
Currencies in which Repayable	2,874,821	284,795	220,966	16,065	50,296	32,850	..
Australian Currency Equiva- lents(a)	2,874,821	355,994	98,646	6,634	5,135	4,051	3,345,281

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

6. Government Securities on Issue at Dates of Maturity.—(i) *Commonwealth*. In the following tables, government securities on issue on account of the Commonwealth at 30th June, 1964, are classified according to the earliest and latest years of maturity.

GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1964: COMMONWEALTH—
BY EARLIEST YEAR OF MATURITY

Particulars	Currency in which repayable							Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German deutsche marks	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	£A.'000
Before 30th June, 1964 ..	3,255	5,177	197,000	47,276	4,584	..	6,355	118,372
1964-65	521,778	122	4,500	..	60,000	..	..	530,064
1965-66	24,367	16,878	2,500	..	60,000	..	..	52,705
1966-67	96,433	..	55,607	..	..	..	31,546	124,779
1967-68	42,066	..	3,493	..	..	7,150	..	44,507
1968-69	39,422	..	3,268	..	..	..	..	40,881
1969-70	8,720	..	25,281	..	60,000	..	..	26,131
1970-71	31,203	6,951	3,716	3,100	9,704	..	..	43,822
1971-72	18,028	..	15,884	..	..	..	..	25,119
1972-73	33,780	..	40,098	..	..	..	..	51,681
1973-74	29,415	..	..	..	..	..	..	29,415
1974-75	65,122	..	..	..	..	..	..	65,122
1975-76	46,809	22,184	..	..	..	..	..	74,539
1976-77 .. ..	..	11,910	..	..	..	..	..	14,888
1978-79	66,710	..	..	..	..	..	..	66,710
1980-81	9,110	8,355	..	..	..	..	..	19,554
1981-82	61,948	7,816	..	..	..	..	..	71,718
1982-83	32,845	..	..	..	..	..	..	32,845
1983-84	6,379	..	..	..	..	..	..	6,379
1984-85	18,479	..	..	..	..	..	..	18,479
1985-86	15,810	..	..	..	..	..	..	15,810
1986-87	31,169	..	..	..	..	..	..	31,169
Special bonds	75,652	..	..	..	..	..	..	75,652
Overdue	3,026	..	..	..	..	..	..	3,026
Half-yearly instalments ..	19	..	..	..	..	..	..	19
Peace savings certificates	29	..	..	..	..	..	..	29
Advance Loan Subscrip- tions	2,783	..	..	..	..	..	..	2,783
Total—								
Currencies in which Repayable	1,284,357	79,393	351,347	50,376	194,288	7,150	37,901	..
Australian Currency Equivalents (a) £A.'000	1,284,357	99,241	156,851	20,803	19,834	882	4,230	1,586,198

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1964: COMMONWEALTH—
BY LATEST YEAR OF MATURITY**

Particulars	Currency in which repayable							Total— Aus- trian currency equiva- lents (a)
	Aus- trian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	German Deutsche marks	
	£A. '000	£Stg. '000	U.S. \$ '000	Can. \$ '000	Sw. fr. '000	f.'000	D.M. '000	
1964-65	525,033	..	1,300	..	..	..	..	525,613
1965-66	24,367	..	600	..	..	..	..	24,635
1966-67	96,433	5,177	13,824	..	..	..	..	109,075
1967-68	42,066	..	4,025	..	..	..	..	43,863
1968-69	39,422	..	33,326	8,988	60,000	..	..	64,137
1969-70	8,720	16,878	36,875	4,259	60,007	..	..	54,164
1970-71	31,203	..	970	11,270	..	..	..	36,290
1971-72	18,028	..	39,619	2,243	..	..	6,355	37,350
1972-73	33,780	6,951	17,608	19,175	..	..	..	58,248
1973-74	29,415	..	..	..	60,000	..	..	35,540
1974-75	65,122	122	..	..	..	..	..	65,274
1975-76	46,809	7,776	64,023	1,341	14,281	..	..	87,123
1977-78 .. ..	..	11,943	..	..	..	..	..	14,929
1978-79	66,710	2,465	3,268	..	..	..	..	71,250
1979-80 .. ..	..	11,910	25,281	..	..	..	..	26,174
1980-81	9,110	..	3,716	3,100	..	..	..	12,049
1981-82	61,948	8,355	15,884	..	..	7,150	..	80,365
1982-83	32,845	..	40,098	..	..	..	..	50,746
1983-84	6,379	7,816	..	..	..	..	..	16,149
1984-85	18,479	..	..	..	..	..	..	18,479
1985-86	15,810	..	..	..	..	..	..	15,810
1986-87	31,169	..	50,930	..	..	..	31,546	57,426
Special bonds	75,652	..	..	..	..	..	..	75,652
Overdue	3,026	..	..	..	..	..	..	3,026
Half-yearly instalments ..	19	..	..	..	..	..	..	19
Peace savings certificates	29	..	..	..	..	..	..	29
Advance Loan Subscrip- tions	2,783	..	..	..	..	..	..	2,783
Total—								
Currencies in which Repayable	1,284,357	79,393	351,347	50,376	194,288	7,150	37,901	..
Australian Currency Equivalents (a) £A. '000	1,284,357	99,241	156,851	20,803	19,834	882	4,230	1,586,198

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

(ii) *States.* Particulars of government securities on issue on account of the States at 30th June, 1964, are classified in the following tables according to the earliest and latest years of maturity.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1964: STATES—
BY EARLIEST YEAR OF MATURITY**

Particulars	Currency in which repayable						Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss frances	Nether- lands guilders	
	£A.'000	£Stg.'000	U.S. \$ '000	Can. \$ '000	Sw.fr. '000	f.'000	£A.'000
Before 30th June, 1964	101,824	55,830	54,795	..	..	..	196,073
1964-65	293,425	13,683	..	..	..	..	310,529
1965-66	287,401	63,074	..	..	..	..	366,244
1966-67	269,456	..	11,469	..	..	..	274,576
1967-68	168,383	15,795	17,569	..	..	32,850	200,021
1968-69	205,951	..	15,897	..	..	..	213,048
1969-70	70,762	20,282	18,639	..	..	..	104,436
1970-71	103,573	..	19,254	16,065	50,296	..	123,938
1971-72	98,223	22,175	38,441	..	..	..	143,103
1972-73	182,924	10,000	44,902	..	..	..	215,470
1973-74	83,250	..	..	..	..	..	83,250
1974-75	73,503	15,850	..	..	..	..	93,316
1975-76	90,115	38,082	..	..	..	..	137,718
1976-77	6,481	..	..	..	..	..	6,481
1977-78	6,607	13,845	..	..	..	..	23,913
1978-79	8,758	..	..	..	..	..	8,758
1979-80	106,473	..	..	..	..	..	106,473
1980-81	86,151	11,645	..	..	..	..	100,707
1981-82	105,002	2,134	..	..	..	..	107,669
1982-83	37,328	..	..	..	..	..	37,328
1983-84	29,574	..	..	..	..	..	29,574
1984-85	53,633	..	..	..	..	..	53,633
1985-86	141,210	..	..	..	..	..	141,210
1986-87	79,004	..	..	..	..	..	79,004
1987-88	4,224	..	..	..	..	..	4,224
1988-89	7,072	..	..	..	..	..	7,072
Special bonds	149,130	..	..	..	..	..	149,130
Overdue .. ..	..	2	..	..	..	..	2
Half-yearly instalments	15,919	..	..	..	..	..	15,919
Indefinite	9,465	..	..	..	..	..	9,465
Interminable .. ..	..	1	..	..	..	..	1
Treasurer's option .. ..	..	2,397	..	..	..	..	2,996
Total—							
Currencies in which Repayable	2,874,821	284,795	220,966	16,065	50,296	32,850	..
Australian Currency Equiva- lents(a) £A.'000	2,874,821	355,994	98,646	6,634	5,135	4,051	3,345,281

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

**GOVERNMENT SECURITIES ON ISSUE, 30th JUNE, 1964: STATES—
BY LATEST YEAR OF MATURITY**

Particulars	Currency in which repayable						Total— Aus- tralian currency equiva- lents(a)
	Aus- tralian currency	Sterling	United States dollars	Can- adian dollars	Swiss francs	Nether- lands guilders	
	£A.'000	£ Stg. '000	U.S. \$ '000	Can. \$ '000	Sw. Fr. '000	f.'000		£A.'000
1964-65	395,249	12,655	..	..	..	..	411,068
1965-66	287,401	9,590	..	..	..	..	299,389
1966-67	269,456	22,614	31,099	..	..	..	311,607
1967-68	168,383	25,384	..	..	..	..	200,113
1968-69	205,951	..	..	..	..	..	205,951
1969-70	70,762	39,531	5,611	..	..	..	122,681
1970-71	103,573	10,970	18,085	..	..	..	125,360
1971-72	98,223	25,795	11,469	..	..	..	135,587
1972-73	182,924	10,000	17,569	..	..	..	203,267
1973-74	83,250	12,175	..	..	..	..	98,469
1974-75	73,503	31,058	..	..	..	..	112,325
1975-76	90,115	2,084	..	..	50,296	..	97,855
1976-77	6,481	15,850	..	..	..	..	26,294
1977-78	6,607	13,973	..	..	..	..	24,073
1978-79	8,758	22,025	15,897	..	..	..	43,386
1979-80	106,473	474	18,639	..	..	..	115,386
1980-81	86,151	13,845	19,254	16,065	..	..	118,687
1981-82	105,002	11,645	38,441	..	..	32,850	140,770
1982-83	37,328	2,727	44,902	..	..	..	60,783
1983-84	29,574	..	..	..	..	..	29,574
1984-85	53,633	..	..	..	..	..	53,633
1985-86	141,210	..	..	..	..	..	141,210
1986-87	79,004	..	..	..	..	..	79,004
1987-88	4,224	..	..	..	..	..	4,224
1988-89	7,072	..	..	..	..	..	7,072
Special bonds	149,130	..	..	..	..	..	149,130
Overdue	..	2	..	..	..	..	2
Half-yearly instalments	15,919	..	..	..	..	..	15,919
Indefinite	9,465	..	..	..	..	..	9,465
Interminable	..	1	..	..	..	..	1
Treasurer's option	..	2,397	..	..	..	..	2,996
Total—							
Currencies in which Repayable	2,874,821	284,795	220,966	16,065	50,296	32,850	..
Australian Currency Equiva- lents(a) .. £A.'000	2,874,821	355,994	98,646	6,634	5,135	4,051	3,345,281

(a) For rates of exchange to £A. ruling at 30th June, 1964, see p. 946.

7. **Short-term Securities on Issue.**—Particulars of the short-term securities (Treasury bills, Treasury notes and seasonal securities) of the Commonwealth and States in Australia at intervals from 30th June, 1960, to 30th June, 1964, are shown in the following table. These securities are included in the government securities on issue as shown elsewhere. No short-term securities have been raised overseas since September, 1956, when all such securities held in London were expatriated to Australia.

GOVERNMENT SHORT-TERM SECURITIES ON ISSUE(a): COMMONWEALTH AND STATES

**MATURING IN AUSTRALIA
(£A.'000)**

Date	Commonwealth		States(b)	Total
	Treasury bills	Treasury notes		
30th June, 1960	201,000	..	..	201,000
.. .. 1961	186,000	..	..	186,000
.. .. 1962	208,000	..	..	208,000
30th September, 1962	187,000	59,966	2,000	248,966
31st December, 1962	265,000	70,989	4,000	339,989
31st March, 1963	142,000	142,862	2,000	286,862
30th June, 1963	123,000	69,538	..	192,538
30th September, 1963	128,000	102,934	3,000	233,934
31st December, 1963	178,000	147,489	10,000	335,489
31st March, 1964	153,000	148,514	6,000	307,514
30th June, 1964	89,000	76,285	..	165,285

(a) Excludes overdrafts and internal Treasury bills.

(b) Treasury bills.

The Treasury bill discount rate in Australia has remained at 1 per cent. since 29th July, 1952.

In 1962–63 daily issues of Treasury notes replaced those of seasonal securities which had, during the three previous financial years, all matured in the course of the same financial year in which they were issued. Treasury notes with a currency of thirteen weeks were issued in multiples of £1,000 over the minimum subscription of £5,000 and increases in value were subject to the usual income tax rebate of two shillings in the pound. In 1963–64 the issue prices of Treasury notes were £99.20 from July to April, £99.15 from April to May, and £99.13 from May to June, and the yields accordingly varied from £3.23 per cent. to £3.44 per cent. and £3.75 per cent.

8. **Government Securities on Issue on Account of the States; Local Government and Semi-governmental Authority Securities on Issue.**—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 borrowing on their own behalf, while in other States these services are controlled by the central government. Direct comparisons between States of the securities on issue on account of the several States should therefore be made with caution. The table following shows for 1958–59 to 1962–63 particulars of the securities on issue on account of the States, the securities on issue by local government and semi-governmental authorities, and the aggregates of these.

**GOVERNMENT SECURITIES ON ISSUE ON ACCOUNT OF THE STATES;
LOCAL GOVERNMENT AND SEMI-GOVERNMENTAL AUTHORITY SECURITIES
ON ISSUE**

Particulars	State	Local government (a)	Semi-gov- ernmental (a)	Total
SECURITIES ON ISSUE				
(£A.'000)(b)				
30th June, 1963				
New South Wales	1,083,506	96,728	339,185	1,519,419
Victoria	741,130	59,834	564,786	1,365,750
Queensland	405,637	120,661	99,705	626,003
South Australia	412,093	9,413	46,432	467,938
Western Australia	306,698	17,967	25,643	350,308
Tasmania	207,734	16,227	21,619	245,580
Total, 30th June, 1963	3,156,798	320,830	1,097,370	4,574,998
1962	2,981,305	289,856	1,001,992	4,273,153
1961	2,815,240	258,185	921,247	3,994,672
1960	2,650,601	236,141	855,623	3,742,365
1959	2,493,766	214,419	779,908	3,488,093

PER HEAD OF POPULATION
(£A.)(b)

30th June, 1963

New South Wales	267.63	23.89	83.78	375.30
Victoria	242.54	19.58	184.83	446.95
Queensland	258.99	77.04	63.66	399.69
South Australia	408.42	9.33	46.02	463.77
Western Australia	397.01	23.26	33.20	453.47
Tasmania	574.93	44.91	59.83	679.67
Total, 30th June, 1963	291.93	29.67	101.48	423.08
1962	280.95	27.31	94.42	402.68
1961	270.12	24.77	88.39	383.28
1960	259.94	23.15	83.91	367.00
1959	249.72	21.47	78.10	349.29

(a) Excludes amounts due to the central government. Includes bank overdrafts. (b) Oversea holdings have been converted to Australian currency at the rates of exchange current at 30th June of each year shown.

§ 3. 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 either by the Commonwealth or by 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, 1961-62 to 1963-64.**—(i) *Australia.* The following table shows details of new loans raised in Australia by the Commonwealth during the three years 1961-62 to 1963-64.

COMMONWEALTH NEW LOANS(a) RAISED IN AUSTRALIA

Month of raising	Amount invited	Amount subscribed	Rate of interest per annum	Year of maturity	Price of issue	Allocation of loan		
						Commonwealth		States
						War (1939-45) etc.	Other purposes	
£'000	£'000	Per cent.	Per cent.	£'000	£'000	£'000		
1961-62—								
September (Loan No. 130) ..	40,000	{ 28,376 9,438 35,685 47,787	{ 4½ 5½ 5½ 4½	{ 1964 1970 1982 1964	{ 100 100 100 99½	..	5	73,494
February (Loan No. 132) ..	55,000	{ 17,404 25,495 14,824	{ 4½ 5 4½	{ 1971 1984 1965	{ 99½ 100 99½	..	27,758	62,928
May (Loan No. 134) ..	40,000	{ 2,750 21,004	{ 4½ 5	{ 1971 1984	{ 99½ 100	..	6,131	32,447
June (Loan No. 136) (b) ..	7,000	{ 2,000 5,000	{ 4½ 5	{ 1971 1984	{ 98½ 100	..	7,000	..
July-June (Special bonds) (c) ..	..	20,312	4½-5½	{ 1968 1969	{ 100	385	7,325	12,602
1962-63—								
September (Loan No. 137) ..	50,000	{ 28,953 10,464 40,745	{ 4½ 4½ 5	{ 1965 1972 1985	{ 99½ 100 100	..	14,718	65,444
February (Loan No. 139) ..	60,000	{ 43,161 11,665 71,858	{ 4½ 4½ 5	{ 1966 1972 1985	{ 100 99 100	..	38,457	88,227
July-June (Special bonds) (c) ..	..	31,233	4-5	{ 1969 1970	{ 100	3,590	12,318	15,325
1963-64—								
July (Loan No. 142) ..	45,000	{ 33,466 25,176 15,876	{ 3½ 4½ 4½	{ 1966 1973 1986	{ 99½ 99 99½	..	13,661	60,857
October (Loan No. 143) ..	60,000	{ 21,276 24,982 23,132	{ 3½ 4½ 4½	{ 1966 1973 1986	{ 99½ 99½ 100	..	21,754	47,636
February (Loan No. 145) ..	70,000	{ 36,274 18,692 22,491	{ 3½ 4½ 4½	{ 1967 1974 1987	{ 99½ 99½ 100	..	41,766	35,691
May (Loan No. 147) ..	40,000	{ 4,844 7,954 20,877	{ 4½ 4½ 4½	{ 1967 1975 1984	{ 100 100 99	..	7,380	26,295
July-June (Special bonds) (c) ..	..	36,080	3½-4½	1971	100	2,156	6,224	27,700

(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 p. 965).
 (b) Special issue. For details see following paragraph. (c) Special bonds open for continuous subscription, redeemable at prices commencing at par and increasing to a premium of £3 per cent. if held until maturity in 1966-69. Interest increases from 4 per cent. to 5 per cent. over period of currency.

The loan of £7,000,000, raised in June, 1962, was 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 £247,500,000 in 1961-62, £255,000,000 in 1962-63 and £272,000,000 in 1963-64. The subscription to the special loan in 1961-62 came from the Loan Consolidation and Investment Reserve Trust Account.

Finance for the approved Loan Council programmes from 1961-62 to 1963-64 was provided from the following sources.

LOAN COUNCIL PROGRAMME: SOURCE OF FINANCE
(£'000)

Source	1961-62	1962-63	1963-64
Public loans, domestic raisings, etc.	225,100	203,147	254,391
Oversea loans and special Commonwealth assistance	22,400	51,853	17,609
Total	247,500	255,000	272,000

In addition to the new loans raised as shown in the table on the previous page and the redemption and conversion loans shown in paragraph 3 below, there were other miscellaneous loan operations in Australia (see p. 965).

(ii) *London.* A loan of £Stg.12,000,000, 5½ per cent. interest, price of issue £Stg.98 per £Stg.100, maturing 1978, was raised in London during 1962-63 and a further loan of £Stg.20,000,000, 5½ per cent. interest, price of issue £Stg.98½ per £Stg.100, maturing 1982, was raised in 1963-64.

(iii) *New York.* The following table gives details of the loans raised during the period 1961-62 to 1963-64.

COMMONWEALTH NEW LOANS RAISED IN NEW YORK

Month of raising	Amount of loan	Rate of interest per annum	Price of issue	Year of maturity	Allocation of loan	
					Commonwealth	States
	\$'000	Per cent.	Per cent.		\$'000	\$'000
1961-62—						
July	25,000	5½	97	1981	4,469	20,531
July-June ..	26,483	5½	100	1962-68	(a) 26,483	..
1962-63—						
July	30,000	5½	97½	1982	5,508	24,492
October	25,000	5½	99	1982	4,590	20,410
April	30,000	5	97½	1983	30,000	..
July-June ..	4,600	5½	100	1967	(a) 4,600	..
July-June ..	1,250	4½-4¾	100	1971	(b) 1,250	..
1963-64—						
July-June ..	2,000	4½-4¾	100	1965-71	(a) 2,000	..
July-June ..	2,500	4¾-5½	100	1966-72	(a) 2,500	..
July-June ..	1,250	4½-4¾	100	1971	(b) 1,250	..

(a) Proceeds used for Qantas Empire Airways Loan.

(b) Proceeds used for Australian National Airlines Commission Loan.

3. Conversion and Redemption Loans, 1961-62 to 1963-64.—(i) *Australia.* Particulars of conversion loans raised in Australia during the three years 1961-62 to 1963-64 are given in the following table.

COMMONWEALTH CONVERSION AND REDEMPTION LOANS RAISED IN AUSTRALIA

Month of raising	Old loan		New loan				Increase in annual liability for interest
	Amount	Rate of interest per annum	Amount	Rate of interest per annum	Price of issue	Year of maturity	
	£A.'000	Per cent.	£A.'000	Per cent.	Per cent.		£A.'000
1961-62— September ..	{ 123,517 24,397	3½	{ 34,205 26,783	4½	100	1964	198
		4½	{ 37,616 (a)5,743	5½	100	1970	
February ..	60,594	4	{ 35,036 9,447	4½	99½	1964	- 4
			{ 8,343 (a)1,440	5	100	1971	
May ..	{ 48,484 29,831	4	{ 31,552 21,676	4½	99½	1964	-341
		4½	{ 8,994 (a)1,052	5	100	1971	
July-June (Special bonds) ..	7,057	4-5½	7,057	4½-5½	100	{ 1968 1969	18
1962-63— September ..	{ 76,573 101,044	3½	{ 50,397 49,707	4½	99½	1965	-204
		4½	{ 39,725 (a)5,801	5	100	1972	
February ..	39,986	4	{ 21,483 12,707	4½	100	1966	19
			{ 2,153 (a) 596	5	99	1972	
April ..	{ 62,892 179,786	5	{ 99,790 91,539	4	100	1966	-4,061
		5½	{ (a)15,084	4½	98½	1972	
July-June (Special bonds) ..	7,849	4-5½	7,849	4-5	100	{ 1970 1970	..
1963-64— October ..	144,335	3½	{ 28,095 30,418	3½	99½	1966	130
			{ 42,210 (a)9,883	4½	100	1973	
February ..	49,596	4½	{ 33,771 8,790	4½	99½	1966	-587
			{ 2,141 (a) 874	3½-4½	100	1974	
May ..	82,826	4½	{ 33,554 15,764	4½	100	1967	-798
			{ 12,610 (a) 101	4½	99	1975	
July-June (Special bonds) ..	9,699	4-5½	9,699	3½-4½	100	{ 1971 1970	-24

(a) Special bonds.

NOTE.—Minus sign (-) indicates reduction in liability for interest.

(ii) London. The following table shows particulars of loans raised in London during the years 1960-61, 1962-63 and 1963-64 for the purpose of redeeming and converting London loans. None was raised during 1961-62.

COMMONWEALTH LOANS RAISED FOR THE CONVERSION AND REDEMPTION OF LOANS MATURING IN LONDON

Month of raising	Old loan		New loan				Increase in annual liability for interest and exchange		
	Amount	Rate of interest per annum	Amount raised in—		Rate of interest per annum	Price of issue	Year of maturity		
			Australia	London				£Stg.'000	£A.'000
	£Stg.'000	Per cent.	£A.'000	£Stg.'000	Per cent.	Per cent.		£Stg.'000	£A.'000
1960-61— July ..	13,925	3	..	13,925	6	98	1977-80	418	523
January ..	20,579	3½	..	20,000	6	97½	{ 1975 1981-83	531	664
1962-63— July ..	11,790	4	..	10,000	6	97	1972	128	160
1963-64— October ..	5,655	4	..	5,741	5½	98½	1982	90	112

(a) No account has been taken of the cost of issuing the conversion loans at a discount. Exchange calculated at £A.125 = £Stg. 100 (the International Monetary Fund par rate of exchange in the years shown).

(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 loan raised in New York for this purpose in March, 1957, amounted to \$17,114,000, at 5 per cent. interest, issued at par, maturing in 1972. No loans were raised for the purpose of redeeming loans which became due for redemption or which the Commonwealth had the option of redeeming during 1957–58 to 1960–61 or in 1962–63 and 1963–64. In 1961–62, a re-financing loan of \$30,000,000 was raised at 5½ per cent. interest, issued at £98½, maturing in 1982.

Drawings from cash loans, for which Commonwealth notes were issued in New York between 1956 and 1964, were used to finance the purchase of aircraft and equipment by Qantas Empire Airways from November, 1956, and to finance aircraft purchases by Trans-Australia Airlines from September, 1958. At 30th June, 1964, outstanding notes which are subject to interest rates varying between 4½ per cent. and 5½ per cent. and which are all repayable before 1st January, 1972, amounted to \$30,025,000.

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 or Canada, the Commonwealth Government arranged five loans from the International Bank for Reconstruction and Development between August, 1950, and December, 1956, amounting to \$308,500,000, repayable over periods of from 10 to 25 years, at rates of interest of from 4½ to 4¾ per cent. The proceeds of the latest of these loans were finally drawn in March, 1959.

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. The goods are imported and distributed through normal channels and payment made through the Australian banking system.

The loan on behalf of Qantas Empire Airways of \$9,230,000 at 4½ per cent. maturing in 1966–87 was finally drawn at the end of July, 1958, and in 1962–63 and 1963–64 respectively drawings of \$31,851,000 and \$27,018,000 were made from the loan (at 5½ per cent. maturing in 1966–87) raised for the purposes of the Snowy Mountains Hydro-electric Authority.

Drawings from International Bank loans have been made mainly in United States dollars and partly in Canadian dollars, Swiss francs and German Deutsche marks.

5. Swiss Loans.—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, February, 1955, March, 1960, and March, 1961, of four 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 loans 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 Commonwealth 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 loan was for a period of 15 years with an option to redeem after 10 years. The rate of interest was 3¾ per cent. and the issue price £99 10s. Bonds and interest are payable only in Swiss francs. The third loan was for a period of fifteen years with an option to redeem after 10 years. The rate of interest was 4½ per cent. and the issue price £99. The fourth loan was issued at par in March, 1961, at the rate of 4½ per cent. maturing in April, 1976. Payments of interest and repayments of principal are to be made only in Swiss francs.

The loans were fully subscribed, and Swiss franc proceeds, after deducting borrowing expenses, were sold by the Commonwealth Government to the Reserve Bank in return for an equivalent amount of Australian currency.

6. Canadian Loans.—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 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. A second loan, of 20,000,000 Canadian dollars, was raised in March, 1961, on the security of the Commonwealth of Australia, 5½ per cent. twenty-year bonds being issued at the rate of \$98½ per cent. Bonds and interest are payable in Canadian dollars in each case.

The loans were fully subscribed, and the net Canadian dollar proceeds were sold to the Reserve Bank for Australian currency.

7. **Netherlands Loan.**—In 1961 the Commonwealth arranged for a public flotation in the Netherlands of a loan of 40,000,000 Netherlands guilders at par, with an interest rate of 5 per cent. per annum. The proceeds were used to assist the loan programmes of the Commonwealth and States.

The loan is to be repaid in fifteen annual instalments from 1967 to 1981, but, at the Commonwealth's option, an earlier redemption date may be negotiated on and after 15th December, 1971.

8. **Summary of Loan Transactions, 1959-60 to 1963-64.**—The following table contains a summary of loan transactions on behalf of the Commonwealth and State Governments during the five years 1959-60 to 1963-64.

COMMONWEALTH LOAN TRANSACTIONS: SUMMARY

Details	1959-60	1960-61	1961-62	1962-63	1963-64
New loans(a) raised in—					
Australia £A.'000	198,462	203,881	230,075	238,079	291,120
London £Stg.'000	12,000	..	..	12,000	21,067
New York(b) \$'000	60,400	30,517	51,483	122,701	32,768
Switzerland francs '000	60,000	60,000	..	..	..
Canada \$'000	..	20,000	..	..	..
Netherlands guilders '000	..	..	40,000	..	..
Miscellaneous debt in Australia(c) £A.'000	5,224	3,676	4,465	17,397	-27
Net change in short-term debt—					
Australia—Public £A.'000	30,000	-15,000	22,000	-85,000	-34,000
Internal £A.'000	-36,100	17,600	-10,200	38,900	19,700
Treasury Notes £A.'000	..	..	..	69,538	6,747
Loans raised for conversion or redemption of existing securities maturing in—					
Australia £A.'000	229,732	281,387	228,944	396,831	227,910
London £Stg.'000	..	33,925	..	10,000	5,741
New York \$'000	..	..	30,000	..	..

(a) Includes loans raised for redemption of Treasury Bills. (b) Includes proceeds of \$31,851,000 and \$27,018,000 in 1962-63 and 1963-64 from International Bank for Reconstruction and Development loan used for the purposes of the Snowy Mountains Hydro-Electric Authority. (c) Advance loan subscriptions (net change), "over the counter sales" (instalment stock and inscribed stock and bonds issued by State Governments) and Peace Savings Certificates (interest credited).

NOTE.—Minus sign (-) denotes a decrease in debt.

9. **Government Securities on Issue maturing in Australia, Classified by Holder.**—The following table shows details of government securities maturing in Australia classified according to holder as at the 30th June, 1963 and 1964.

**GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATE—
MATURING IN AUSTRALIA, BY HOLDER(a)**

(Source: Reserve Bank of Australia Statistical Bulletin)

Holder	30th June—			
	1963		1964	
	Amount	Proportion of total	Amount	Proportion of total
	£ million	Per cent.	£ million	Per cent.
Reserve Bank of Australia	394	10.0	338	8.1
Trading banks	419	10.6	482	11.6
Savings banks	916	23.2	999	24.0
Life insurance offices	311	7.9	343	8.3
Fire, marine and general insurance offices	42	1.1	45	1.1
Other private financial institutions—				
Pension and provident funds	45	1.1	52	1.2
Friendly societies, hospitals and medical funds	9	0.2	8	0.2
Trustee companies	70	1.8	74	1.8
Pastoral finance companies	7	0.2	10	0.2
Money market dealers	148	3.7	178	4.3
Miscellaneous	12	0.3	12	0.3
Government financial institutions—				
Insurance offices and funds	41	1.0	43	1.0
Pension and provident funds	66	1.7	73	1.8
Public trustees	16	0.4	20	0.5
Stabilization funds .. ..	..	..	..	..
All other(b)	6	0.1	6	0.1
Public authorities (excluding finance)—				
Commonwealth Government (including Commonwealth semi-government) ..	669	16.9	675	16.2
State Government	30	0.8	23	0.6
Local government and State semi-government	96	2.4	108	2.6
Companies (excluding finance)	96	2.4	101	2.4
Other holders—				
Marketing boards	4	0.1	3	0.1
Farmers	67	1.7	63	1.5
Non-profit organizations	26	0.6	26	0.6
All other	466	11.8	477	11.5
Total	3,956	100.0	4,159	100.0

(a) Total stock inscribed, bonds in circulation, amounts paid up on outstanding applications, in transit claims and advance applications, Commonwealth Treasury Bills, debentures, and Savings Certificates. (b) Includes securities held by Commonwealth Development Bank of Australia.

§ 4. National Debt Sinking Fund

1. Securities on Issue on behalf of the Commonwealth.—Particulars relating to the creation of sinking funds are included in issues of the 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 1959–60 to 1963–64 are as follows.

NATIONAL DEBT SINKING FUND: COMMONWEALTH ACCOUNT
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Receipts—					
From Consolidated Revenue	19,533	23,092	25,161	27,230	28,869
Loans and advances repaid	3,398	3,751	3,834	3,992	4,403
War Service Homes money repaid ..	9,589	9,808	9,422	11,087	13,566
Half net profit Commonwealth Bank ..	2,808	(a)	(a)	(a)	(a)
Reparation moneys	43	16	8		
Interest on investments	(b) 8,303	(b) 7,830	(b) 6,617	(b) 6,041	(b) 6,436
Total, Receipts	43,674	44,497	45,042	48,350	53,274
Expenditure—					
Securities repurchased and redeemed in—					
Australia	59,357	58,539	52,525	15,654	24,655
London	218	594	170	82	754
New York	(c) 7,969	(c) 8,062	(c) 10,331	(c) 9,675	(c) 10,167
Canada .. ..	..	..	..	8	49
Total, Expenditure	67,544	67,195	63,026	25,419	35,625
Balance at 30th June	182,882	160,184	142,200	165,131	182,781
Face value of securities repurchased and redeemed in—					
Australia	59,556	59,354	52,686	15,639	24,440
London	220	481	150	65	634
New York	(c) 3,681	(c) 3,720	(c) 4,767	(c) 4,457	(c) 4,665
Canada .. ..	..	..	..	4	24
Total, Face Value	63,457	63,555	57,603	20,165	29,763

(a) Amounts of £3,352,000 in 1960-61, £4,487,000 in 1961-62, £1,676,000 in 1962-63 and £2,491,000 in 1963-64 were transferred to the Commonwealth Consolidated Revenue Fund from the profits of the central banking business of the Reserve Bank. (b) Includes interest received under *National Debt Sinking Fund (Special Payment) Act 1951*:—£3,082,000 in 1959-60, £2,799,000 in 1960-61, £1,906,000 in 1961-62, £1,732,000 in 1962-63 and £1,732,000 in 1963-64. (c) Includes instalment repayments of loans from International Bank for Reconstruction and Development:—1959-60, net cost, £7,235,000, face value, £3,326,000; 1960-61, net cost, £7,563,000, face value, £3,481,000; 1961-62, net cost, £7,910,000, face value, £3,643,000; 1962-63, net cost, £8,289,000, face value, £3,812,000; 1963-64, net cost £8,703,000, face value, £3,991,000.

2. **Securities on Issue on behalf of States.**—(i) *States, 1963-64.* A sinking fund for the redemption of the securities on issue on behalf of States was established under the Financial Agreement.

Particulars of the transactions of the National Debt Sinking Fund (States' Account) for each State during the year 1963-64 are shown below.

NATIONAL DEBT SINKING FUND: STATES' ACCOUNT, 1963-64
(£'000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Total
Receipts—							
Contributions under Financial Agreement—							
Commonwealth	2,683	1,850	984	1,038	759	531	7,845
States	9,211	7,131	3,483	3,525	2,924	1,561	27,835
Interest from States on cancelled securities	7	7	5	2	1	1	23
Special contributions by States	407	51	15	10	3	1	487
Interest on investments, etc.	19	12	5	8	6	3	53
Total, Receipts	12,327	9,051	4,492	4,583	3,693	2,097	36,243
Expenditure—							
Securities repurchased and redeemed in—							
Australia	10,233	7,644	3,537	3,876	3,212	1,893	30,395
London	632	505	446	237	191	26	2,037
New York	1,124	720	426	381	286	177	3,114
Canada	78	63	32	33	25	19	250
Total, Expenditure	12,067	8,932	4,441	4,527	3,714	2,115	35,796
Balance at 30th June, 1964	997	624	372	393	221	169	2,776
Face value of securities repurchased and redeemed in—							
Australia	10,236	7,649	3,537	3,876	3,212	1,893	30,403
London	562	422	372	211	170	23	1,760
New York	516	331	196	175	132	81	1,431
Canada	39	31	16	17	12	9	124
Total, Face Value	11,353	8,433	4,121	4,279	3,526	2,006	33,718

(ii) *All States, 1959-60 to 1963-64.* The following table is a summary of the transactions of the National Debt Sinking Fund (States' Account) for the years 1959-60 to 1963-64.

NATIONAL DEBT SINKING FUND: STATES' ACCOUNT
(£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Receipts—					
Contributions under Financial Agreement—					
Commonwealth	5,942	6,274	6,739	7,250	7,845
States	21,280	22,808	24,658	26,053	27,835
Interest from States on cancelled securities	14	17	15	33	23
Special contributions by States	227	238	193	172	487
Interest on investments, etc. .. .. .	..	19	4	-40	53
Total, Receipts	27,463	29,356	31,609	33,468	36,243
Expenditure (net cost)—					
Securities repurchased and redeemed in—					
Australia	24,570	26,291	25,891	27,034	30,395
London	797	944	624	3,034	2,037
New York	2,342	1,840	5,057	2,069	3,114
Canada .. .. .	..	..	..	40	250
Total, Expenditure	27,709	29,075	31,572	32,177	35,796
Balance at 30th June	721	1,002	1,039	2,330	2,776
Face values of securities repurchased and redeemed in—					
Australia	24,617	26,420	25,726	27,058	30,403
London	761	414	530	2,115	1,760
New York	1,103	871	2,278	960	1,431
Canada .. .. .	..	..	..	20	124
Total, Face Value	26,481	27,705	28,534	30,153	33,718

TAXES ON INCOME

1. **General.**—A description of the development of income taxes in Australia appeared in Year Book No. 35, page 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 1936-1964* and the *Income Tax and Social Services Contribution Act 1964*. The latter Act is an annual measure and its primary purpose is to declare the rates of tax payable for the fiscal year. The rates for the fiscal year are levied, in the case of individuals, on the income of that year, and in the case of companies, on the income of the preceding year. Thus tax for the fiscal year 1964-65 is levied on the income of individuals in 1964-65 and on the income of companies in 1963-64.

2. **Present Taxes.**—Income Tax and Social Services Contribution is a combined levy commonly known as Income Tax. It is not possible to distinguish any amounts as contribution, in assessments or in Government accounts. Both individuals and companies are liable for income tax. In addition to the primary Income Tax, 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 1947–1963* 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.

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, £270 plus an amount equal to one half of the total deductions allowable to the taxpayer for the maintenance of dependants; and Zone B, £45 plus an amount equal to one twelfth of the deductions allowable to the taxpayer for the maintenance of dependants. A deduction equal to the deduction allowed to residents of Zone A 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. The boundaries of Zones A and B are as defined in the Second Schedule, *Income Tax and Social Services Assessment Act 1936–1964*.

Income Tax is levied on the taxable income remaining after making these deductions and the concessional deductions to which reference is made in the following paragraph.

4. **Concessional Deductions.**—Concessional allowances for dependants, medical expenses, life insurance and superannuation contribution, etc., are made by way of a deduction from income. The maximum deduction allowed for each dependant or for a housekeeper employed by the taxpayer, for the income year 1964–65, is shown in the following table.

CONCESSIONAL DEDUCTIONS FOR DEPENDANTS, ETC.(a)

(£)

Dependant, etc. (resident)	Maximum deduction
Spouse	143
Daughter-housekeeper (b)	143
Housekeeper(c)	143
Parent or parent-in-law	143
One child under 16 years of age	91
Other children under 16 years of age	65
Invalid relative (d)	91
Child 16 to 21 years receiving full-time education	91

(a) These deductions are allowed only if the dependant 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) Caring for a spouse in receipt of an invalid pension, or caring for children under 16 years of age of a widower or widow. (d) Child, step-child, brother or sister over 16 years of age.

When the dependant maintained derives separate income, the amount of the concessional deduction is reduced by £1 for every £1 by which the separate net income exceeds £65. Separate net income includes age and invalid pensions but not child endowment. Scholarships are excluded except insofar as they relate to maintenance.

For the 1964-65 income year, medical expenses paid by a taxpayer who is a resident, in respect of himself or dependants, including children under 21 years of age, are allowed as a concessional deduction. Medical expenses include payments made to a legally qualified medical practitioner, nurse or chemist, or to a hospital, in respect of an illness or operation, payments for dental services, payments for therapeutic treatment and eye tests, expenditure on medical or surgical appliances, artificial limbs or eyes, hearing aids and spectacles, the remuneration of an attendant of a person who is blind or confined to bed or invalid chair, and payments for the maintenance of a trained dog used for the guidance of a blind person.

Other concessional deductions allowed to resident taxpayers include (i) payments of life insurance premiums and contributions to superannuation funds and friendly societies, not exceeding an aggregate of £400, (ii) payments to medical or hospital benefits funds, (iii) funeral expenses of a dependant not exceeding £50 and (iv) expenditure incurred for the full-time education of children or dependants who are less than 21 years of age (maximum £150 per child or dependant).

In addition to concessional deductions, all taxpayers (resident and non-resident) 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. Resident taxpayers only are allowed a deduction from income of the full amount paid as calls and as application and allotment moneys to certain companies engaged in the search for oil in Australia and New Guinea.

5. **Effective Exemption from Tax.**—For the income years 1950-51 to 1962-63, taxpayers without dependants were exempt from Income Tax if their income did not exceed £104. For 1963-64 and 1964-65 this exemption was £208. The effect of the deductions for dependants was to exempt resident taxpayers up to the incomes shown hereunder.

RESIDENT TAXPAYERS: EFFECTIVE EXEMPTIONS FROM TAX

(£)

Taxpayer with—	Income Years		
	1951-54 to 1956-57	1957-58 to 1962-63	1963-64 and 1964-65
No dependants	104	104	208
Wife	234	247	351
Wife and one child	312	338	442
" " two children	364	403	507
" " three children	416	468	572
" " four children	468	533	637

For the 1964-65 income 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 if his net income (i.e., gross income less expenses of earning that income) does not exceed £494. An aged person who contributes to the maintenance of his spouse is exempt from tax if the combined net incomes of the taxpayer and his spouse do not exceed £936.

6. **Rates of Income Tax on Individuals.**—The following table shows the rates of income tax for the income years 1953-54 to 1964-65.

INCOME TAX—INDIVIDUALS: RATES OF INCOME TAX, 1953-54 TO 1964-65

Total taxable income		1953-54		1954-55 to 1964-65 ^(a)	
Column 1	Column 2	Tax on amount in column 1	Tax on each £1 of balance of income	Tax on amount in column 1	Tax on each £1 of balance of income
Exceeding—	Not exceeding—				
£	£	£ 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	9 7 6	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

(a) For the 1959-60, 1961-62, 1962-63 and 1963-64 income year a rebate of 5 per cent, was allowable on the tax calculated from this schedule.

For primary producers the rate of Income Tax 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 the ordinary rates applicable to that part. 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 are subject to a rebate of 2s. for each £1 included in the taxable income.

The minimum amount of Income Tax payable is 10s. and the amounts payable and rebates are calculated to the nearest shilling.

7. The Income Tax (International Agreements) Act 1953-1963.—This Act provided relief from double taxation of income flowing between Australia and the United Kingdom, the United States of America, Canada, and New Zealand.

8. Taxes on Specified Incomes.—The following table shows the Income Tax payable by taxpayers, with various incomes and numbers of dependants, on income derived in each year from 1957-58 to 1964-65.

INCOME TAX ON SPECIFIED INCOMES

(£)

Income(a)	1957-58 and 1958-59	1959-60	1960-61	1961-62 and 1962-63	1963-64	1964-65
TAXPAYER WITH NO DEPENDANTS						
150	1.05	1.00	1.05	1.00	..	..
200	2.50	2.40	2.50	2.40	..	..
250	4.80	4.55	4.80	4.55	4.55	4.80
300	7.90	7.50	7.90	7.50	7.50	7.90
350	12.10	11.50	12.10	11.50	11.50	12.10
400	16.25	15.45	16.25	15.45	15.45	16.25
500	27.10	25.75	27.10	25.75	25.75	27.10
600	39.60	37.60	39.60	37.60	37.60	39.60
800	69.60	66.10	69.60	66.10	66.10	69.60
1,000	106.25	100.95	106.25	100.95	100.95	106.25
1,500	225.85	214.55	225.85	214.55	214.55	225.85
2,000	376.25	357.45	376.25	357.45	357.45	376.25
3,000	753.75	716.05	753.75	716.05	716.05	753.75
5,000	1,701.25	1,616.20	1,701.25	1,616.20	1,616.20	1,701.25

(a) Income remaining after allowing all deductions other than deductions for dependants.

INCOME TAX ON SPECIFIED INCOMES—continued

(£)

Income(a)	1957-58 and 1958-59	1959-60	1960-61	1961-62 and 1962-63	1963-64	1964-65
TAXPAYER WITH DEPENDENT WIFE						
150 .. ..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..
250	0.50	0.50	0.50	0.50	..	..
300	1.25	1.20	1.25	1.20	..	..
350	2.80	2.65	2.80	2.65	..	..
400	5.25	5.00	5.25	5.00	5.00	5.25
500	12.65	12.00	12.65	12.00	12.00	12.65
600	22.40	21.30	22.40	21.30	21.30	22.40
800	47.65	45.25	47.65	45.25	45.25	47.65
1,000	79.55	75.55	79.55	75.55	75.55	79.55
1,500	188.20	178.80	188.20	178.80	178.80	188.20
2,000	330.35	313.85	330.35	313.85	313.85	330.35
3,000	694.75	660.00	694.75	660.00	660.00	694.75
5,000	1,627.35	1,546.00	1,627.35	1,546.00	1,546.00	1,627.35
TAXPAYER WITH DEPENDENT WIFE AND ONE CHILD						
150 .. ..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..
250 .. ..	..	..	..	..	..	..
300 .. ..	..	..	..	..	..	..
350	0.60	0.55	0.60	0.55	..	..
400	1.50	1.45	1.50	1.45	..	..
500	5.80	5.50	5.80	5.50	5.50	5.80
600	13.40	12.75	13.40	12.75	12.75	13.40
800	35.35	33.60	35.35	33.60	33.60	35.35
1,000	64.20	61.00	64.20	61.00	61.00	64.20
1,500	165.80	157.50	165.80	157.50	157.50	165.80
2,000	302.00	286.90	302.00	286.90	286.90	302.00
3,000	658.20	625.30	658.20	625.30	625.30	658.20
5,000	1,580.35	1,501.35	1,580.35	1,501.35	1,501.35	1,580.35
TAXPAYER WITH DEPENDENT WIFE AND TWO CHILDREN						
150 .. ..	..	..	..	..	..	..
200 .. ..	..	..	..	..	..	..
250 .. ..	..	..	..	..	..	..
300 .. ..	..	..	..	..	..	..
350 .. ..	..	..	..	..	..	..
400 .. ..	..	..	..	..	..	..
500	2.55	2.40	2.55	2.40	..	..
600	8.00	7.60	8.00	7.60	7.60	8.00
800	27.20	25.85	27.20	25.85	25.85	27.20
1,000	53.90	51.20	53.90	51.20	51.20	53.90
1,500	149.85	142.35	149.85	142.35	142.35	149.85
2,000	282.80	268.65	282.80	268.65	268.65	282.80
3,000	633.30	601.65	633.30	601.65	601.65	633.30
5,000	1,546.75	1,469.40	1,546.75	1,469.40	1,469.40	1,546.75

(a) Income remaining after allowing all deductions other than deductions for dependants.

9. *Pay-as-you-earn.*—(i) *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 from each payment of wages or 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.

(ii) *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 for the current year is made at the same time as collection and assessment for the previous year are adjusted. The notice of assessment shows an amount of provisional tax for the current year. This provisional amount is an approximation to the tax 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 paid in the previous year as a credit against the tax assessed on the basis of the return for that year. On receipt of his assessment, the taxpayer may elect to substitute his own 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.

An employee with income of £100 or more from sources other than salaries or wages is 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 £208 are required to lodge returns by 31st July each year (31st August for business incomes). The Income Tax payable is assessed, and assessment notices showing the amounts payable are issued during the year following the year of income. 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 paid 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 tax assessed on a taxable income ascertained on 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 for companies, and Additional Tax for private companies, applicable to the income years 1956-57 to 1963-64 are shown in the table below.

Super Tax and Undistributed Income Tax ceased to be levied on public companies from the 1950-51 income year and Additional Income Tax ceased from the 1952-53 income year. For details, see Year Book No. 39, page 846 and No. 40, page 743.

RATES OF TAX: COMPANIES, 1956-57 TO 1963-64 INCOME YEARS

(Pence per £)

Type of company	Rate of Income Tax for income years—						Rate of Additional Tax on undistributed income
	1956-57 to 1958-59		1959-60 to 1962-63		1963-64		1956-57 to 1963-64
	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	Undistributed amount—additional tax
Private	54	78	60	84	66	90	120
Co-operative	66	90	72	96	78	102	..
Non-profit(a)(h)—							
Friendly society dispensaries	66	66	72	72	78	78	..
Other	66	90	72	96	78	102	..
Life insurance—							
Mutual	54	78	60	84	66	90	..
Other—							
(1) Mutual income	54	78	60	84	66	90	..
(2) Other income(c)	(d) 78	90	(d) 84	96	(d) 90	102	..
Other	(d) 78	90	(d) 84	96	(d) 90	102	..
Interest paid to a non-resident(e)	90	90	96	96	102	102	..

(a) Incomes not exceeding £104 (1956-57 to 1961-62) or £208 (1962-63 and 1963-64) are exempt from tax. (b) Where the taxable income does not exceed £231 (1956-57 to 1958-59), £260 (1959-60 to 1961-62), £520 (1962-63), or £594 (1963-64), the tax may not exceed one-half of the amount by which the taxable income exceeds £104 (1956-57 to 1961-62), or £208 (1962-63 and 1963-64). (c) The rate of 90d. (1963-64), 84d. (1959-60 to 1962-63) or 78d. (1956-57 to 1958-59), is levied on the amount of £5,000 less the mutual income. (d) For non-resident companies, dividends included in this part of taxable income are taxed at 78d. (1963-64), 72d. (1959-60 to 1962-63), or 66d. per £1 (1956-57 to 1958-59) (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 (1956-57 to 1961-62), or £208 (1962-63 and 1963-64).

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 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 income years 1952-53 to 1957-58 the retention allowance was 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 10 per cent. of distributable income from property, except dividends from other private companies.

For 1958-59 to 1961-62 the minimum retention allowance from business profits was 35 per cent. The rates were:—on the first £1,000 or part, 50 per cent.; on the next £1,000 or part, 40 per cent.; on the balance, 35 per cent.; and 10 per cent. of distributable income from property, except dividends from other private companies.

For 1962-63 and 1963-64 the minimum retention allowance from business profits is 40 per cent. The rates are:—on the first £5,000 or part, 50 per cent.; on the next £5,000 or part, 45 per cent.; on the balance, 40 per cent.; and 10 per cent. of distributable income from property, except dividends from other private companies.

For the income years 1952-53 to 1963-64 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 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 amounts of taxes collected in the years 1959-60 to 1963-64.

INCOME TAX COLLECTIONS
(£'000)

Tax	Collection Year				
	1959-60	1960-61	1961-62	1962-63	1963-64
Individuals	442,164	518,744	537,345	541,704	636,079
Companies	229,130	282,562	282,688	259,914	293,130
Superannuation Funds .. ..	..	..	..	7	65
Dividend (Withholding) .. ..	..	5,960	8,117	8,965	7,968
State Income Tax(a)	8	7	..	..	..
Total	671,302	807,273	828,150	810,590	937,242

(a) Amounts shown are arrears of State income taxes existing prior to the introduction of the uniform tax arrangement.

(ii) *Income Tax Assessed.* The amounts of income tax covered by statistical analyses of assessments for recent years are shown in the following table. The amounts are shown under the year of income of the taxpayer. Tax is usually paid by companies in the year following the year of income. Individuals pay tax in the year of income, but there is usually an adjustment in the following year. Tax assessed after the close of the normal assessing period is not included.

INCOME TAXES ASSESSED
(£'000)

Tax	Income Year				
	1957-58	1958-59	1959-60	1960-61	1961-62
Individuals	363,025	378,219	426,476	486,701	478,487
Companies—					
Primary Tax	214,683	231,610	292,856	276,477	268,168
Additional Tax on Undistributed Income of Private Companies	1,835	1,274	1,460	1,301	988
Total	579,543	611,103	720,792	764,479	747,643

13. *Income Tax Assessments.*—(i) *1961-62 Income Year.* The following tables show, for the 1961-62 income year, the number of taxpayers, income, and net income tax assessed for individuals and resident and non-resident companies. For further information of this nature, see the annual bulletin *Commonwealth Taxation Assessments* issued by this Bureau.

COMMONWEALTH INCOME TAX ASSESSMENTS(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b), TAXABLE INCOME(c) AND NET TAX ASSESSED—INDIVIDUALS

(Income derived in the year 1961-62)

Grade of actual income(b) and State or Territory of assessment		Number of taxpayers			Actual income (b)	Taxable income (c)			Net Income Tax assessed
		Males	Females	Total	Total	Salary and wages	Other income	Total	
£	£	No.	No.	No.	£'000	£'000	£'000	£'000	£'000
105- 199 ..	56,021	103,871	159,892	24,777	19,372	4,254	23,626	186	
200- 299 ..	61,133	120,312	181,445	45,128	33,205	8,312	41,517	707	
300- 399 ..	78,100	129,896	207,996	72,965	53,238	12,378	65,616	1,915	
400- 499 ..	94,605	145,897	250,502	108,267	79,000	17,117	96,117	3,872	
500- 599 ..	101,870	154,045	255,915	140,642	98,569	24,561	123,130	6,265	
600- 699 ..	109,617	178,500	287,667	187,066	134,143	28,010	162,153	9,810	
700- 799 ..	126,275	159,508	285,783	214,194	150,305	31,982	182,287	12,528	
800- 899 ..	182,968	112,848	295,816	251,680	169,435	35,453	204,888	15,351	
900- 999 ..	264,512	74,163	338,675	321,831	214,460	37,454	251,914	20,203	
1,000-1,099 ..	312,714	49,307	362,021	380,028	250,204	39,016	289,220	24,854	
1,100-1,199 ..	297,628	31,282	328,910	377,514	245,569	38,543	284,112	26,186	
1,200-1,299 ..	253,297	22,269	275,566	343,768	219,488	37,687	257,175	25,220	
1,300-1,399 ..	205,930	16,993	222,923	300,111	187,308	36,199	223,507	23,270	
1,400-1,499 ..	158,887	13,333	172,220	249,261	152,710	34,095	186,805	20,698	
1,500-1,999 ..	410,612	37,740	448,352	761,689	431,951	141,307	573,258	72,574	
2,000-2,999 ..	200,229	26,077	226,306	535,365	241,670	175,472	417,142	69,538	
3,000-3,999 ..	50,694	8,077	58,771	200,596	65,655	99,055	164,710	36,335	
4,000-4,999 ..	21,157	3,495	24,652	109,244	29,418	62,938	92,356	24,494	
5,000-9,999 ..	23,453	3,701	27,154	176,325	37,655	116,356	154,011	53,244	
10,000-14,999 ..	2,683	429	3,112	36,935	7,293	25,883	33,176	14,836	
15,000 and over	1,209	221	1,430	35,459	5,091	25,108	30,199	16,005	
Central Office ..	8,701	6,127	14,828	44,696	9,018	28,056	37,074	11,313	
New South Wales	1,133,189	526,944	1,660,133	1,877,881	1,142,420	353,873	1,496,293	186,988	
Victoria ..	848,549	429,014	1,277,563	1,412,672	831,725	297,499	1,129,224	141,160	
Queensland ..	410,073	164,755	574,828	599,796	315,008	144,373	459,381	53,613	
South Australia	282,292	127,163	409,455	429,460	242,418	96,711	339,129	38,420	
Western Australia	207,742	86,035	293,777	317,092	169,464	78,957	248,421	29,354	
Tasmania ..	96,424	39,854	136,278	141,361	83,349	25,723	109,072	12,200	
Nor. Territory ..	6,864	2,310	9,174	12,702	6,952	1,403	8,355	1,045	
Aust. Cap. Ter.	19,760	9,312	29,072	37,185	25,385	4,585	29,970	4,178	
Total, Residents	3,013,594	1,391,514	4,405,108	4,872,845	2,825,739	1,031,180	3,856,919	478,091	
<i>Total, Non-residents ..</i>	<i>1,031</i>	<i>489</i>	<i>1,520</i>	<i>2,139</i>	<i>1,088</i>	<i>958</i>	<i>2,046</i>	<i>396</i>	
Total, Residents and Non-residents ..	3,014,625	1,392,003	4,406,628	4,874,984	2,826,827	1,032,138	3,858,965	478,487	

(a) Assessments in respect of 1961-62 incomes issued to 30th September, 1963. 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". (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

COMMONWEALTH INCOME TAX ASSESSMENTS(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b), TAXABLE INCOME(c) AND NET TAX ASSESSED—RESIDENT AND NON-RESIDENT COMPANIES

(Income derived in the year 1961-62)

Grade of taxable income(c) and State or Territory of assessment		Number of taxpayers	Actual income(b)	Taxable income(c)	Net tax assessed(d)
£	£	No.	£'000	£'000	£'000
1- 999 ..	..	18,412	10,178	6,465	1,601
1,000- 4,999 ..	..	21,181	64,194	56,528	13,378
5,000- 9,999 ..	..	8,302	60,526	57,278	14,884
10,000- 19,999 ..	..	4,182	61,365	58,346	16,671
20,000- 49,999 ..	..	2,805	96,776	86,647	26,195
50,000- 99,999 ..	..	1,103	79,885	79,885	23,345
100,000-199,999 ..	..	611	89,921	86,249	26,268
200,000-499,999 ..	..	351	110,788	107,254	31,715
500,000-999,999 ..	..	92	64,149	61,858	18,974
1,000,000 and over	..	103	345,599	292,302	95,137

For footnotes see end of table.

COMMONWEALTH INCOME TAX ASSESSMENTS(a): NUMBER OF TAXPAYERS, ACTUAL INCOME(b), TAXABLE INCOME(c) AND NET TAX ASSESSED—RESIDENT AND NON-RESIDENT COMPANIES—continued

Grade of taxable income(c) and State or Territory of assessment	Number of taxpayers	Actual income(b)	Taxable income(c)	Net tax assessed(d)
		£'000	£'000	£'000
Central Office	No. 3,217	472,208	402,787	130,308
New South Wales	23,122	208,532	199,807	56,586
Victoria	16,494	152,627	146,483	39,636
Queensland	4,614	51,772	47,668	15,234
South Australia	5,268	43,450	41,840	12,017
Western Australia	2,087	26,836	24,290	7,917
Tasmania	1,122	12,091	11,795	3,593
Northern Territory	131	1,948	1,397	430
Australian Capital Territory	1,087	13,917	13,104	2,447
Total	57,142	983,381	889,171	268,168

(a) Assessments in respect of 1961-62 incomes issued to 31st December, 1963. 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". (c) Taxable income is the income remaining after deducting from assessable income all allowable deductions. (d) Excludes additional tax levied on the undistributed income of private companies, £988,000.

(ii) *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 is the year of income of the taxpayer. Assessments issued after the normal assessing period are not included.

COMMONWEALTH INCOME TAX ASSESSMENTS: NUMBER OF TAXPAYERS AND NET TAX ASSESSED—RESIDENT INDIVIDUALS

Grade of actual income	Income Year							
	1958-59		1959-60		1960-61		1961-62	
	No. of taxpayers	Net tax assessed	No. of taxpayers	Net tax assessed	No. of taxpayers	Net tax assessed	No. of taxpayers	Net tax assessed
£	£	£'000	£'000	£'000	£'000	£'000	£'000	£'000
105-199 ..	157,786	194	159,479	187	159,541	197	159,892	186
200-299 ..	185,069	786	183,675	732	185,229	770	181,445	707
300-399 ..	225,492	2,208	215,557	1,999	215,468	2,100	207,996	1,915
400-499 ..	250,645	4,245	237,864	3,818	244,387	4,134	240,502	3,872
500-599 ..	296,189	7,774	261,256	6,468	265,398	6,903	255,915	6,265
600-699 ..	297,370	10,500	288,149	9,849	291,960	10,486	287,667	9,810
700-799 ..	303,738	13,066	284,299	12,187	281,872	12,853	285,783	12,528
800-899 ..	376,967	18,902	321,739	16,069	302,744	16,285	295,816	15,351
900-999 ..	395,366	23,259	360,892	20,933	342,070	21,267	338,675	20,203
1,000-1,099 ..	346,733	23,456	355,821	24,046	353,179	25,277	362,021	24,854
1,100-1,199 ..	266,226	21,424	307,052	24,193	312,243	25,688	328,910	26,186
1,200-1,299 ..	198,622	18,526	247,214	22,453	266,540	25,518	275,566	25,220
1,300-1,399 ..	149,980	16,100	191,397	19,921	216,529	23,821	222,923	23,270
1,400-1,499 ..	110,477	13,701	146,275	17,480	167,256	21,009	172,220	20,698
1,500-1,999 ..	265,013	45,733	364,735	59,128	433,488	74,346	448,352	72,574
2,000-2,999 ..	127,985	43,667	171,906	53,831	208,536	67,925	226,306	69,538
3,000-3,999 ..	38,367	26,194	48,000	30,186	55,817	36,715	58,771	36,335
4,000-4,999 ..	17,297	18,706	21,205	21,464	23,664	24,841	24,652	24,494
5,000-9,999 ..	19,669	41,973	24,441	48,805	26,167	54,685	27,154	53,244
10,000-14,999 ..	2,487	12,721	3,100	15,038	3,014	15,245	3,112	14,836
15,000-29,999 ..	971	9,337	1,169	11,424	1,237	11,396	1,208	10,883
30,000-49,999 ..	123	2,384	144	2,808	152	2,944	153	2,665
50,000 and over	43	2,020	57	2,395	52	1,848	69	2,757
Total ..	4,032,615	376,876	4,195,526	425,414	4,356,380	486,224	4,405,108	478,091

(a) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income".

CHAPTER XXIII

RURAL INDUSTRY

NOTE.—This chapter is divided into four major parts:—

- Introduction, dealing with general rural activity in Australia;
- Agricultural Production;
- Pastoral Production; and
- Other Rural Industries, which includes the dairying, poultry and bee industries.

For greater detail on the subjects dealt with in this chapter, see the annual bulletins *Rural Industries, Non-Rural Primary Industries and Value of Production, and Secondary Industries* (regarding butter, cheese, etc., factories) issued by this Bureau. Current information on commodities produced is obtainable in the *Quarterly Summary of Australian Statistics, Monthly Review of Business Statistics, Monthly Bulletin of Production Statistics* and *Digest of Current Economic Statistics* (monthly). The series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959-60*, shows particulars of rural holdings classified by size, nature and area of crops, and numbers of livestock, and also according to main type of activity. The mimeographed annual *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia* contains details of the production and utilization of foodstuffs. The following mimeographed publications also contain considerable detail on the particular subjects dealt with.

General.—*Value of Production and Indexes of Price and Quantum of Farm Production* (annual), *Value of Primary Production (Preliminary Statement)* (annual), *Farm Machinery on Rural Holdings* (annual), *Tractors on Rural Holdings, 31st March, 1963* (detailed information). *New Tractors: Receipts, Sales and Stocks* (quarterly), and *New Agricultural Machinery* (quarterly).

Agricultural Production.—*Rural Land Use and Crop Production* (annual), *Agricultural Statistics (Preliminary Statement)* (annual), *The Wheat Industry* (two a year), *The Fruit Growing Industry* (annual), and *Fruit Statistics (Preliminary Statement)* (annual).

Pastoral Production.—*Livestock Statistics* (annual), *Livestock Numbers* (annual), *The Meat Industry* (monthly), *Wool Production* (annual), and *Wool Production and Utilization* (annual).

Other Rural Production.—*The Dairying Industry* (monthly and half-yearly), *Livestock Statistics* (annual), *Livestock Numbers* (annual), *Manufacturing Industries No. 20.—Bacon Curing and No. 21.—Butter, Cheese and Condensed, Concentrated, etc., Milk* (annual), *Production Summaries No. 36.—Preserved Milk Products and No. 55.—Butter and Cheese* (monthly), and *Bee-farming* (annual).

Values of Australian overseas trade shown throughout this chapter are expressed as £A. f.o.b. port of shipment.

INTRODUCTION: RURAL ACTIVITY.

§ 1. Number and Area of Rural 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 prevent comparisons. For the purpose of these statistics, a holding has been defined as land of one acre or more in extent, used in the production of agricultural produce or for the raising of livestock and the production of livestock products.

There are considerable fluctuations from time to time in the 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 for extensive grazing 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 1959-60 to 1963-64.

RURAL HOLDINGS: NUMBER AND AREA

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
NUMBER OF RURAL HOLDINGS									
1959-60 ..	77,499	69,778	42,912	28,527	21,832	11,202	269	224	252,243
1960-61 ..	76,871	69,623	43,155	28,711	21,922	11,201	275	224	251,982
1961-62 ..	76,949	69,866	43,287	28,886	22,082	11,117	284	217	252,688
1962-63 ..	76,294	69,700	43,284	28,922	22,554	10,974	281	217	252,226
1963-64 ..	77,339	69,775	43,183	28,711	22,770	10,949	299	214	253,240
TOTAL AREA OF RURAL HOLDINGS (*000 acres)									
1959-60 ..	172,721	37,737	371,794	155,437	244,619	6,511	158,806	382	1,148,007
1960-61 ..	172,697	37,934	373,995	156,456	247,737	6,510	161,099	374	1,156,802
1961-62 ..	172,327	37,754	374,501	156,898	252,783	6,551	171,244	377	1,172,435
1962-63 ..	172,038	37,709	376,788	156,697	262,660	6,422	164,955	376	1,177,645
1963-64 ..	172,076	37,798	376,687	158,905	266,556	6,377	165,734	373	1,184,506

2. Land Utilization of Rural Holdings.—The following table shows the purposes for which the land on the rural holdings referred to in the preceding paragraph was used.

RURAL HOLDINGS: LAND UTILIZATION

(*000 acres)

Season	Area used for crops(a)	Land lying fallow(b)	Area under sown grasses and clovers(c)	Balance of holdings(d)	Total area of holdings
1959-60	25,025	7,025	33,289	1,082,668	1,148,007
1960-61	27,101	7,438	35,589	1,086,674	1,156,802
1961-62	27,907	8,049	39,063	1,097,416	1,172,435
1962-63	30,056	8,719	40,991	1,097,879	1,177,645
1963-64—					
New South Wales ..	8,670	2,440	10,625	150,342	172,076
Victoria	4,900	2,525	14,064	16,310	37,798
Queensland	3,582	638	3,292	369,175	376,687
South Australia ..	5,838	1,114	5,116	146,837	158,905
Western Australia ..	6,706	1,712	9,510	248,629	266,556
Tasmania	244	78	1,511	4,545	6,377
Northern Territory ..	2	..	11	165,721	165,734
Australian Capital Territory	7	2	83	280	373
Australia	29,948	8,510	44,211	1,101,837	1,184,506

(a) Excludes (i) duplication on account of area double cropped, except for New South Wales and South Australia, and (ii) clovers and grasses cut for hay and seed which have been included in "Area under sown grasses and clovers", and differs therefore from crop area figures shown later in this chapter.
 (b) Excludes short or summer fallow. (c) Includes paspalum. (d) Used for grazing, lying idle, etc.

3. Classification by Size and Type of Activity.—Some of the information obtained from the 1959-60 Agricultural and Pastoral Census was classified by size of principal characteristics (area of holdings, area of sown grasses and clovers, area of selected crops and numbers of livestock). In addition, all holdings were classified according to type of activity. Tables showing this information, for statistical divisions and States, and an outline of the methods used have been published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959-60*. Similar information on size classification for each State was published in a series of bulletins for the year 1955-56.

§ 2. Employment on Rural Holdings

1. Persons Engaged.—The following table shows, for each State except Victoria, the recorded number of males working on rural holdings. Particulars for females are not available except for New South Wales. Additional particulars relating to the number of males employed in agriculture up to 1941-42 are shown in Year Book No. 36, page 852, and previous issues. Similar details for later years are not available.

MALES(a) ENGAGED ON RURAL HOLDINGS AT 31st MARCH, 1964

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(b)	A.C.T.	Aust.
Permanent—									
Owners, lessees or share-farmers	63,045	(c)	44,353	23,553	20,548	7,685	226	169	} n.a.
Relatives of owner, lessee or share-farmer over 14 years of age, not receiving wages or salary	3,359		2,987	1,396	1,317	40	33	10	
Employees, including managers and relatives working for wages or salary	28,851		18,870	8,268	8,607	4,038	620	135	
Total, Permanent Males	95,255		66,210	33,217	30,472	11,763	879	314	
Temporary	24,184		10,207	12,496	3,568	5,733	1,564	45	
Total, Males	119,439		76,417	45,713	34,040	17,496	2,443	359	

(a) Details for females not available except for New South Wales. (b) Includes 1,374 male full-blood Aborigines employed as temporary employees. (c) Not available; subject to investigation.

Information regarding the number of persons working full-time on rural holdings in Australia at 31st March of years to 1958 appears in Year Book No. 50, page 987, and in earlier Year Books. Data for subsequent years are the subject of investigation and are not available at this stage.

2. Salaries and Wages Paid.—Particulars of salaries and wages paid to employees (including amounts paid to contractors) working full-time on rural holdings are shown below for the year 1963-64. Data for New South Wales and Victoria, and hence Australia, are not available.

EMPLOYEES ON RURAL HOLDINGS: SALARIES AND WAGES(a) PAID,
1963-64
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Permanent—Males ..	(b)	(b)	15,769	6,418	7,326	3,381	564	186	} n.a.
Females ..			1,052	251						72	53	18
Temporary(c)—Males ..			21,623	4,533	5,081	1,771	322	71	
Females ..				476		369		3	
Total			38,444	11,678	12,407	5,593	939	278	

(a) Includes value of keep. (b) Not available; subject to investigation. (c) Includes amounts paid to contractors.

Similar information for Australia for years up to 1957-58 is given in Year Book No. 50, page 988, and in earlier Year Books. Particulars for subsequent years are the subject of investigation and are not available at this stage.

3. **Persons Residing Permanently on Holdings.**—Particulars of persons (of all ages) residing permanently on rural holdings at 31st March, 1964, are shown below.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS,
31st MARCH, 1964**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Males ..	158,216	141,868	104,790	58,510	50,093	26,148	1,292	477	541,394
Females ..	136,922	125,335	86,005	51,854	41,295	23,478	691	410	465,990
Total ..	295,138	267,203	190,795	110,364	91,388	49,626	1,983	887	1,007,384

Similar particulars for Australia as a whole for the years 1960 to 1964 are shown below.

**PERSONS (OF ALL AGES) RESIDING PERMANENTLY ON RURAL HOLDINGS,
AUSTRALIA**

Particulars	31st March—				
	1960	1961	1962	1963	1964
Males	551,800	547,594	544,709	540,893	541,394
Females	469,601	467,539	465,238	464,048	465,990
Total	1,021,401	1,015,133	1,009,947	1,004,941	1,007,384

§ 3. Technical Aspects of Rural Industry

1. **Farm Machinery on Rural Holdings.**—The history of the development of large-scale field crops and sown pastures in Australia is essentially also the history of the mechanization of the rural industries. This may be divided into four phases.

The first phase extended from initial settlement to the mid-nineteenth century, when agriculture was primarily local and non-commercial, and confined by hand methods to small areas and low production per farm worker.

The invention of an effective wheat stripper in South Australia in 1843, and the extension of its use into Victoria and New South Wales, however, greatly increased the area which could be harvested in a season. This initiated the second phase, which continued with the development of stump-jump implements in the 1870's, and the scrub roller and mullenizer in the 1890's. These later developments made possible an extension of the wheat belt into the drier mallee lands of Victoria and South Australia. By the turn of the century, machinery had thus been developed to conduct all cropping operations on an extensive basis.

The third major change in farm machinery followed the 1914-18 War, when tractor power became increasingly available in a variety of models and sizes. The increase in numbers of tractors on rural holdings and higher operating speeds led in turn to new and improved types of farm machinery drawn by tractors. These trends were interrupted by the economic depression of the 1930's.

After the 1939-45 War there was a widespread expansion of labour-saving machinery and devices in all sectors of rural industry. Clearing methods were extended with the bulldozer, log, chain and hi-ball units, and cultivation was improved by means of large disc ploughs and disc harrows, and seeding and harvesting machinery. These methods

were extended to crops for which methods involving greater use of manpower (manual labour) had previously been employed. Milking machines almost entirely replaced hand milking on dairy farms, and labour-saving machinery was introduced into farm and station development and maintenance operations. These operations included fencing, bulk transport of grain and fodder, pasture treatment, fodder conservation, and pasture improvement.

The table below shows data for the principal types of farm machinery on rural holdings in the several States and Territories at 31st March, 1964. A more detailed analysis of tractors on rural holdings according to horse-power, type of fuel used, and age of tractor was published in the Statistical Bulletin *Tractors on Rural Holdings—Australia, 31st March, 1963*, issued on 11th May, 1965.

FARM MACHINERY ON RURAL HOLDINGS, 31st MARCH, 1964

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cultivating—									
Mouldboard ploughs ..	30,500	29,015	16,727	12,557	5,551	7,764		114	b 102,228
Disc implements (including disc ploughs, disc cultivators, disc tillers and disc harrows) ..	59,246	58,138	58,701	20,641	23,261	9,686	(a)	145	b 229,818
Tyne implements—									
Chisel ploughs, scarifiers, cultivators and rippers ..	50,441	39,509	45,822	18,558	14,386	7,102		110	b 175,928
Tyne harrows (number of leaves) ..	140,156	122,061	94,371	89,277	40,889	24,317	n.a.	27	b 511,346
Rotary hoes and rotary tillers—									
Self-contained power unit ..									
Tractor-drawn ..	13,688	{ 6,422 3,783 }	{ 3,630 n.a. }	{ 4,121 1,139 }	{ 1,515 1,249 }	{ 1,218 681 }	68	{ 36 11 }	c 37,561
Seeding and planting—									
Grain drills—									
Combine type ..	27,071	19,905	11,640	15,284	13,198	1,343	..	67	88,508
Other types ..	5,626	8,880	2,009	5,074	4,473	2,659	..	42	28,763
Maize and cotton planters ..	7,737	n.a.	6,861	..	..	..	32	5	(c) 14,635
Fertilizer distributors and broadcasters ..	21,066	28,757	11,670	8,413	8,873	5,425	n.a.	116	(b) 84,320
Harvesting—									
Grain and seed headers, strippers and harvesters ..	19,252	14,131	6,968	12,652	11,069	637	..	28	64,737
Mowers—									
Power-driven ..	n.a.	n.a.	{ 8,884 5,073 }	n.a.	{ 6,908 n.a. }	{ 4,703 1,294 }	n.a.	n.a.	n.a.
Ground-drive ..									
Hay rakes—									
Side delivery ..	n.a.	n.a.	{ 3,365 3,101 }	n.a.	n.a.	{ 2,198 1,034 }	n.a.	n.a.	n.a.
Buck ..									
Dump ..									
Hay presses and balers—									
Stationary hay presses ..	n.a.	n.a.	344	n.a.	n.a.	n.a.	n.a.	{ n.a. 40 }	{ n.a. b 30,411 }
Pick-up balers ..	8,748	10,789	1,975	4,149	3,216	1,494	..	n.a.	n.a.
Potato diggers ..	n.a.	n.a.	1,125	n.a.	n.a.	1,002	..	n.a.	n.a.
Forage harvesters ..	1,912	1,454	874	660	534	231	n.a.	14	(b) 5,679
Peanut pickers ..	n.a.	n.a.	266	..	..	..	n.a.	..	n.a.
Corn pickers ..	n.a.	n.a.	890	..	..	..	..	..	n.a.
Other—									
Shearing machines (number of stands) ..	68,859	39,433	18,950	28,149	20,293	4,371	18	297	180,370
Milking machines (number of units) ..	42,970	98,151	45,072	19,057	10,157	13,382	n.a.	83	b 228,872
Tractors—									
Wheel ..	76,166	{ 68,954 2,451 }	{ 60,749 6,477 }	{ 29,841 3,390 }	30,879	{ 9,831 1,073 }	{ 151 55 }	201	{ 283,748 7 }
Crawler ..									
Hammer mills ..	n.a.	n.a.	6,477	n.a.	n.a.	415	..	n.a.	n.a.

(a) 206 ploughs of all types (including cultivator ploughs) were reported. (b) Excludes Northern Territory. (c) Incomplete.

The next table shows particulars of farm machinery on rural holdings in Australia at 31st March, 1960 to 1964.

FARM MACHINERY ON RURAL HOLDINGS: AUSTRALIA

Particulars	31st March—				
	1960	1961	1962	1963	1964
Cultivating(a)—					
Mouldboard ploughs		(b)			102,228
Disc implements (including disc ploughs, disc cultivators, disc tillers and disc harrows) ..	n.a.	(b)	n.a.	n.a.	229,818
Tyne implements—		(b)			175,928
Chisel ploughs, scarifiers, cultivators and rippers ..		n.a.			511,346
Tyne harrows (number of leaves)					
Rotary hoes and rotary tillers ..	(c) 34,159	(c) 36,896	(c) 38,868	(c) 38,896	(d) 37,561
Seeding and planting—					
Grain drills—					
Combine type	81,795	82,277	84,743	86,437	88,508
Other types	29,394	28,776	29,191	19,877	28,763
Maize and cotton planters ..	17,081	(e) 15,567	(e) 16,050	(e) 15,509	(e) 14,635
Fertilizer distributors and broadcasters	78,181	80,654	82,821	83,499	84,320
Harvesting—					
Grain and seed headers, strippers and harvesters	64,070	63,158	64,891	65,628	64,737
Mowers(a)—					
Power-driven	n.a.	n.a.	{ 71,585	n.a.	n.a.
Ground drive			{ 23,076		
Hay rakes(a)—					
Side delivery	n.a.	n.a.	{ 35,777	n.a.	n.a.
Buck			{ 12,347		
Dump			{ 20,267		
Hay presses and balers—					
Stationary hay presses	7,769	7,411	6,611	n.a.	n.a.
Pick-up balers	22,496	25,264	26,647	28,725	30,411
Potato diggers(a)			6,223	n.a.	n.a.
Forage harvesters	n.a.	n.a.	4,073	5,083	5,679
Peanut pickers(a)			255	n.a.	n.a.
Corn pickers(a)			1,264	n.a.	n.a.
Other—					
Shearing machines (number of stands)	170,847	172,697	177,579	178,805	180,370
Milking machines (number of units)	221,260	223,815	228,228	229,270	228,872
Tractors—					
Wheel	221,886	} 253,515	264,069	{ 249,795	} 283,748
Crawler	20,462				
Hammer mills(a)	n.a.	n.a.	17,508	n.a.	n.a.

(a) Details for all States are collected at triennial intervals only. (b) Particulars of ploughs only were collected in 1961 and details (excluding Northern Territory, which reported 154 ploughs of all types) are as follows:—mouldboard ploughs, 103,403; disc ploughs (including disc cultivators), 173,205; ploughs of all other types (chisel, stubble, mulch, blade, etc.), 46,841. (c) Rotary hoes, all types. (d) Incomplete; excludes tractor-drawn rotary hoes and rotary rillers in Queensland. (e) Incomplete; particulars for Victoria are not available.

2. Fertilizers.—(i) *General.* In the early days of settlement in Australia the principles of scientific cultivation were little understood. It was common for the land to be cropped continuously until the natural fertility was almost exhausted. More scientific methods have been adopted in recent decades, much of the improvement in this regard being due to the assistance and guidance offered to farmers by various State and Commonwealth departments and authorities.

Fertilizer is generally applied to pastures at the time of sowing, and periodical (usually annual) top-dressings are carried out afterwards to keep the pastures in good condition. 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 brought into production. With the rapid increase in the area of sown pastures, particularly since the 1939-45 War, large quantities of artificial fertilizers have been used. In addition, increasing areas of native pastures have been top-dressed. The utilization of aircraft, in particular, has enabled the fertilizing of some areas which would otherwise be inaccessible. In 1963-64 pastures (sown and native) accounted for over 60 per cent. of both the total area fertilized and the total quantity of fertilizer used.

(ii) *Local Production.* The Australian output of prepared fertilizers is derived chiefly from imported rock phosphate. 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 1963-64 was 48, made up as follows:—New South Wales, 12; Victoria, 6; Queensland, 5; South Australia, 9; Western Australia, 8; and Tasmania, 8. The production of superphosphate in Australia during 1963-64 amounted to 3,346,903 tons.

(iii) *Quantities Used Locally.* Information regarding the area treated with artificial fertilizers and the quantity of artificial fertilizers (superphosphate, bonedust, nitrates, etc.) used in each State during the 1963-64 season is given in the following table.

AREA FERTILIZED AND QUANTITY OF ARTIFICIAL FERTILIZERS USED, 1963-64

State or Territory	Crops			Pastures			Total		
	Area fertilized	Super-phosphate used	Other artificial fertilizers used	Area fertilized	Super-phosphate used	Other artificial fertilizers used	Area fertilized	Super-phosphate used	Other artificial fertilizers used
	'000 acres	tons	tons	'000 acres	tons	tons	'000 acres	tons	tons
New South Wales	4,415	158,530	36,064	9,108	482,639	6,735	13,523	641,169	42,799
Victoria ..	4,478	182,177	43,004	10,525	620,322	35,438	15,003	802,499	78,442
Queensland ..	723	25,522	153,303	44	3,330	1,171	767	28,852	154,474
South Australia ..	4,788	227,124	11,781	3,993	224,911	1,767	8,781	452,035	13,548
Western Australia ..	6,680	325,460	25,594	7,447	362,831	7,038	14,127	688,291	32,652
Tasmania ..	235	23,307	9,975	1,291	102,930	5,295	1,526	126,237	15,270
Northern Territory	2	88	99	2	83	35	4	171	134
Australian Capital Territory ..	6	379	41	89	4,685	108	95	5,064	149
Australia ..	21,327	942,587	279,861	32,499	1,801,731	57,607	53,826	2,744,318	337,468

Particulars of the quantity of artificial fertilizers used in each State and Territory during each of the seasons 1959-60 to 1963-64 are shown in the next table. These details include the quantity used for 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.	Aust.
1959-60 ..	400,701	740,035	101,642	391,628	581,230	105,966	205	2,533	2,323,940
1960-61 ..	497,492	745,522	108,220	399,091	621,435	107,027	209	3,798	2,482,794
1961-62 ..	512,201	777,429	126,301	404,233	649,323	112,785	216	4,492	2,586,980
1962-63 ..	576,561	822,488	135,896	430,561	713,067	124,523	226	4,501	2,807,823
1963-64 ..	683,968	880,941	183,326	465,583	720,943	141,507	305	5,213	3,081,786

(iv) *Imports and Exports.* The chief sources of Australia's supplies of rock phosphate are Nauru, Christmas Island (Indian Ocean) and the Gilbert and Ellice Islands. Sodium nitrate is obtained chiefly from Chile.

The imports of artificial fertilizers during the five years ended 1963-64 are shown in the following table.

ARTIFICIAL FERTILIZERS: IMPORTS INTO AUSTRALIA

Fertilizer	1959-60	1960-61	1961-62	1962-63	1963-64
QUANTITY (Tons)					
Ammonium fertilizers	11	110	18,636	37,458	117,592
Potassium fertilizers	36,204	52,212	74,789	58,327	96,724
Rock phosphate	1,322,173	1,647,928	1,950,834	1,694,916	1,989,413
Sodium nitrate	6,837	5,670	7,709	7,193	9,673
Other	17,282	26,361	37,888	35,001	25,888
VALUE (£A. '000 f.o.b.)					
Ammonium fertilizers	(a)	3	381	622	1,773
Potassium fertilizers	499	756	1,277	924	1,428
Rock phosphate	3,654	4,315	4,975	4,937	6,243
Sodium nitrate	139	134	155	168	239
Other	519	745	1,048	921	740
Total	4,811	5,953	7,836	7,572	10,423

(a) Less than £500.

Exports of fertilizers (practically all of which were manufactured locally) amounted to 4,794 tons valued at £134,595 in 1963-64 compared with 7,345 tons valued at £150,942 in 1962-63.

3. **Aerial Agriculture.**—During recent years, an increasing use has been made of aircraft for top-dressing and seeding, for spraying and dusting of crops and pastures, and for pest and vermin extermination. For 1956-57 (the first year for which data are available) the total area treated was 1,466,000 acres; in 1963-64 the total area treated was 12,788,000 acres; almost nine times as great.

The following table shows details of area treated and materials used for each State for the year ended 31st March, 1964.

AERIAL AGRICULTURE: OPERATIONS DURING 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Top-dressing and seeding—							
Area treated with—							
Superphosphate alone .. acres	7,022,856	1,069,093	5,033	963,227	433,005	40,030	9,533,244
Seed alone	371,217	7,000	335,561	19,524	4,915	..	738,217
Superphosphate and seed together	99,625	87,840	..	..	39,354	28,996	255,815
Gypsum	379,250	..	..	..	1,865	..	381,115
Other	75,173	1,250	872	2,240	51,494	..	131,029
Total(a)	7,574,871	1,165,183	341,466	984,991	530,168	69,026	10,665,705
Materials used—							
Superphosphate	350,189	71,382	270	52,305	25,860	5,805	505,811
Seed on—							
Pasture	998,542	39,190	413,286	145,202	73,118	31,260	1,700,598
Other	94,940	..	63,462	138,400	..	..	296,802
Spraying and dusting—							
Area treated—							
Pasture	30,372	59,634	11,928	36,077	14,360	905	153,276
Crops	450,648	221,622	141,441	160,281	858,457	17,855	1,850,304
Other	33,497	75	3,748	..	30	..	37,350
Total Area Treated(a)	8,083,748	1,512,819	497,518	1,181,349	1,424,479	87,786	12,787,699
	(b)	(c)			(d)		(e)

(a) Where an area has been treated with a mixture of materials or more than one material, the area treated is included in the line relating to each of the various materials but is counted in the total once only. (b) Includes 1,750 acres baited for rabbit destruction, etc. (c) Includes 66,305 acres baited for rabbit destruction, etc. (d) Includes 21,464 acres baited for rabbit destruction, etc. (e) Includes 89,519 acres baited for rabbit destruction, etc. See footnotes (b), (c) and (d).

NOTE.—The information contained in this table was collected by the Department of Civil Aviation.

4. **Pasture Improvement.**—An article on pasture improvement, which includes notes on indigenous and introduced species of grasses, and which traced the development of pasture research in Australia, appears on pp. 1001–2 of Year Book No. 49.

5. **Soil Conservation.**—Year Book No. 49 contains an article (pp. 1003–4) on soil conservation which deals with the following matters: land use and soil erosion, agents of erosion, prevention and control, and the activities of various Commonwealth and State authorities which promote and co-ordinate research into the problems of soil erosion and the initiation of preventive measures.

AGRICULTURAL PRODUCTION

NOTE.—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. The latest figures available are those for the year 1963–64. The returns are collected on a substantially uniform basis in all States at 31st March each year, and relate, in the main, to crops sown 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 conjunction 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 30th June.

For more detailed information on period covered and details of the weights and measures used in recording production of agricultural commodities see introductory notes to the bulletin *Rural Industries*.

§ 1. Progress, Assistance and Control

1. **Early Development.**—The coastal districts of southern Australia are characterized to a large degree by leached soils of low fertility, with limited areas suitable for intensive crop cultivation. This, combined with an unfamiliar climate and problems associated with the clearance of scrub-land, severely checked early attempts to establish crops.

A brief reference to these 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 Year Book. (See No. 22, p. 670.)

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.

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 bulk of the arable land in this part of the colony was devoted to the extensive grazing of sheep.

The gold discoveries of 1851 (at Bathurst in New South Wales and later at Ballarat and Bendigo in Victoria) had at first a very disturbing effect on agricultural progress. The area of crops declined from 491,000 acres in 1850 to 458,000 acres in 1854, as landowners and rural labourers joined in the various gold rushes. 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. There was still a shortage of rural labour, and the increased acreage was due largely to the increasing mechanization of crop operations.

2. **Progress of Cultivation.**—The following table shows the area of crops in each of the States and Territories of Australia at ten-yearly intervals since 1860-61 and during each of the ten seasons 1954-55 to 1963-64. On page 1003 of this Year Book 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	246	387	4	359	25	153	..	..	1,174
1870-71	385	693	52	802	55	157	..	..	2,144
1880-81	606	1,549	114	2,087	64	141	..	..	4,561
1890-91	853	2,032	225	2,093	70	157	..	..	5,430
1900-01	2,447	3,114	458	2,370	201	224	..	..	8,814
1910-11	3,386	3,952	667	2,747	855	287	..	..	11,894
1920-21	4,465	4,490	780	3,231	1,805	297	..	2	15,070
1930-31	6,811	6,716	1,144	3,426	4,792	268	2	5	25,164
1940-41	6,375	4,467	1,734	4,255	4,027	254	..	5	21,118
1950-51	4,761	4,537	2,077	3,812	4,650	290	n.a.	6	20,133
1954-55	5,394	4,704	2,593	4,229	5,112	301	1	5	22,339
1955-56	5,660	4,812	2,604	4,220	5,342	327	1	7	22,973
1956-57	3,789	3,904	2,469	4,273	5,233	288	1	5	19,962
1957-58	5,000	4,431	2,600	4,233	5,615	292	1	5	22,177
1958-59	6,820	5,040	2,852	4,436	6,135	339	1	8	25,631
1959-60	7,137	4,817	2,926	4,400	6,495	322	1	7	26,105
1960-61	8,044	5,838	3,057	5,399	6,871	357	2	8	29,576
1961-62	8,288	5,626	3,216	5,024	7,112	364	2	7	29,639
1962-63	8,903	6,318	3,490	5,495	7,482	395	2	7	32,092
1963-64	8,997	6,102	3,665	5,975	6,915	380	3	8	32,045

The progress of agriculture was practically uninterrupted from 1860-61 to 1915-16, when, as the result of a special effort to increase wheat production during the 1914-18 War, 18.5 million acres were cultivated in Australia. There was a temporary setback in later war years, but after the end of the war the area continued to expand, and increased steadily to the record area of 25.2 million acres in 1930-31. In the following years the slump in wheat prices seriously depressed incomes in the agricultural industry, and the area of crops decreased to just under 20 million acres in 1935-36.

By 1938-39 the industry was recovering 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 that year production gradually increased again until, in 1947-48, 22.5 million acres were sown to crops. This upward trend was reversed after 1948-49, largely because many primary producers transferred from wheat to wool production as a result of the high prices of wool. Since 1951-52, however, when the area sown was 20.0 million acres, the area under crops has increased steadily except for 1956-57 when excessively wet conditions caused reductions in the area sown to wheat. Subsequent to that year the area of all crops showed an upward trend until 1962-63, when a record level of 32.1 million acres was reached. There was a slight decrease from this figure in 1963-64. As the area under wheat in Australia constitutes a large proportion of the total area cropped (49 per cent. during the five years ended 1963-64), fluctuations in the former have been largely responsible for year to year variation in total crop area.

3. **Control and Assistance by Governmental Authorities.**—(i) *General.* The influence of governmental and semi-governmental authorities on Australian rural industry is most apparent in the fields of guaranteed prices, subsidies and controlled marketing. Many of these aspects of intervention at the national level take place indirectly through the Australian Agricultural Council.

(ii) *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 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:—the promotion of the welfare and development of agricultural industries generally;

the exchange of information on agricultural production and marketing; the improvement of the quality of agricultural products and the maintenance of high grade standards; to ensure, as far as possible, balance between production and available markets; and organized marketing.

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.

The Standing Committee on Agriculture comprises the permanent heads of the State Departments of Agriculture, the Secretary, Department of Primary Industry and a representative each from the Commonwealth Departments of the Treasury, Health, Trade and Industry, and Territories, and from the Commonwealth Scientific and Industrial Research Organization.

(iii) *Bounties paid to Producers.* 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.

(a) *Cotton Bounty.* The *Cotton Bounty Act 1951-1958* providing for payment of a bounty on seed cotton of a grade higher than "strict good ordinary" expired on 31st December, 1963. Under the *Raw Cotton Bounty Act 1963* which came into effect from 1st January, 1964, to operate for a period of five years, the Commonwealth will pay a bounty on raw cotton produced and sold for use in Australia. The level of bounty is 16.125d. per lb. for Middling 1st White raw cotton with premiums and discounts for grades and staple lengths above and below Middling 1st White. There is a ceiling on bounty payments of £2,000,000 in any one year.

(b) *Flax Fibre Bounty.* The period covered by this bounty terminated on 31st October, 1960. (See Year Book No. 47, p. 939, and previous issues, for details of the bounty.)

(iv) *Other Financial Assistance.* Other forms of assistance to producers include payments for cattle tick control, the Commonwealth Dairy Industry Extension Grant, Commonwealth Extension Services Grant, flood, drought and bush fire relief, fisheries research and farm mechanization research.

Over recent years, legislative research schemes, financed by matching contributions from the Commonwealth and industry and/or States, have been initiated in regard to wheat, wool, tobacco, dairy produce, beef cattle and wine. Non-legislative schemes, on a similar financial basis, have been operative in relation to brown rot, Australian plague locusts, tractor testing, apple and pear spray residue research, aerial seeding research, barley research, banana research, and fruit fly research.

For further information on these matters, see Chapter XXII. Public Finance, pages 913-14 and 917-24 and 926.

(v) *Agricultural Training and Research.* Agricultural colleges have been established in all States except Tasmania. The primary function of these colleges is the training of students in the various phases of agriculture 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 region 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 services of the State Departments of Agriculture.

The Commonwealth Scientific and Industrial Research Organization has field stations in many parts of Australia, and sometimes undertakes research jointly with the appropriate State authorities. It also has regional laboratories in several States, conducting research into agronomic and livestock problems as they occur in each particular region (see also Chapter XIX. Education, Cultural Activities and Research). The State Departments of Agriculture study problems of particular significance within their own boundaries. In addition, the universities carry out valuable work in their laboratories and on their experimental farms.

§ 2. Distribution, Production and Value of Crops

1. **Distribution.**—(i) *General.* The wide range of climatic and soil conditions over the agricultural regions of Australia has resulted in a diversity of crops being grown throughout the Commonwealth. Generally, cereal crops (excluding rice and sorghum) are grown in all States over wide areas, while industrial crops are confined to specific locations in a few States.

(ii) *Area of Crops in States and Territories.* The following table shows the areas in the several States and Territories of each of the crops for the season 1963–64.

AREA OF CROPS, 1963–64

(Acres)

Crop	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2-row	126,865	179,827	157,748	1,077,279	65,730	13,525	..	..	1,620,974
6-row	84,692	10,310	18,115	45,825	233,125	265	..	..	392,332
Maize—Hybrid ..	38,422	3,108	130,117	..	(a)	..	..	..	(b)171,647
Other	6,257	291	36,481	(c)	85	..	..	..	(b) 43,114
Oats	794,069	910,063	31,014	500,650	1,124,890	30,344	..	1,132	3,392,162
Panicum, millet and setaria	649	2,899	64,056	..	..	..	(c)	..	(b) 67,604
Rice	59,398	..	..	..	(c)	..	(d)	..	(b) 59,398
Rye	1,782	15,275	143	31,345	9,040	122	..	..	57,707
Sorghum	61,203	121	303,857	..	..	..	527	..	365,708
Wheat	4,963,811	3,109,044	937,606	2,802,258	4,640,434	17,562	..	2,824	16,473,539
Hay	583,637	1,138,484	80,084	357,592	288,657	149,640	993	2,582	2,601,669
Green fodder ..	1,973,637	430,781	1,010,570	971,594	417,519	71,004	422	1,261	4,876,788
Other stock fodder ..	6,495	32,347	6,329	32,017	3,911	37,745	4	..	118,848
Grass seed—									
Lucerne	7,993	(e)	328	23,308	8	..	173	..	(b) 31,810
Clover	24,268	6,414	30	4,728	50,735	881	..	..	87,056
Other	14,036	23,516	22,611	10,186	27,011	(f) 2,853	..	143	(b)100,356
Industrial crops—									
Broom millet ..	2,044	337	354	..	..	..	..	..	2,735
Canary seed ..	1,139	..	36,873	(c)	..	..	..	..	(b) 38,012
Cotton	10,947	..	28,465	..	1,526	..	..	..	40,938
Flax—									
For fibre .. ..	..	..	..	..	171	..	..	..	171
For linseed ..	15,335	16,240	83,336	1,002	1,588	..	..	..	117,501
Hops	(g)	625	..	..	(c)	(g) 1,549	..	..	(b) 2,174
Peanuts	478	..	44,482	..	(c)	..	(c)	..	(b) 44,960
Sugar cane—									
For crushing ..	15,508	..	402,060	..	..	..	..	..	417,568
Stand-over and cut for plants ..	14,798	..	106,354	..	..	..	..	..	121,152
Sunflower seed ..	(c)	54	9,212	(c)	..	..	..	..	(b) 9,266
Tobacco	2,927	10,519	15,579	..	..	..	..	..	29,025
Other	113	690	18,416	..	1,125	347	..	..	20,691
Vegetables for human consumption—									
Onions	682	3,756	3,317	930	446	91	(h)	(h)	(b) 9,222
Potatoes	24,352	39,626	15,886	5,459	5,835	10,806	(h)	23	(b)101,987
Other	41,552	41,368	44,825	10,124	7,965	19,554	133	110	165,631
Vineyards—									
Bearing	16,707	43,485	2,867	53,123	7,725	..	..	..	123,907
Not bearing ..	2,008	3,016	409	5,556	904	..	..	..	11,893
Fruit—									
Bearing	78,517	56,606	31,060	28,466	18,762	19,638	83	44	233,176
Not bearing ..	20,153	20,190	13,621	13,220	6,908	2,496	66	10	76,664
Nurseries and cut flowers	996	2,260	524	247	282	113	..	10	4,432
All other crops ..	1,575	865	8,503	187	796	1,263	88	8	13,285
Total Area ..	8,997,045	6,102,117	3,665,232	5,975,096	6,915,178	379,798	2,489	8,147	32,045,102

(a) Included in Other maize. (b) Incomplete; see footnotes to individual States. (c) Not available for publication. Included in All other crops. (d) Not available for publication. Excluded from totals. (e) Not available separately. Included in All other crops. (f) Excludes area sown simultaneously to oats. (g) Includes 36 acres not bearing in Victoria and 87 acres not bearing in Tasmania. (h) Not available for publication. Included with Other vegetables.

(iii) *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 1963-64 is shown in the next table

RELATIVE AREAS OF CROPS, 1963-64

(Per cent.)

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Wheat (grain) ..	55.2	51.0	25.6	46.9	67.1	4.6	..	34.7	51.4
Green fodder ..	21.9	7.1	27.6	16.3	6.0	18.7	17.0	15.5	15.2
Oats (grain) ..	8.8	14.9	0.8	8.4	16.3	8.0	..	13.9	10.6
Hay ..	6.5	18.7	2.2	6.0	4.2	39.4	39.9	31.7	8.1
Barley (grain) ..	2.4	3.1	4.8	18.8	4.3	3.6	..	..	6.3
Sugar cane for crushing	0.2	..	11.0	..	..	..	..	..	1.3
Sorghum ..	0.7	(a)	8.3	..	..	..	21.2	..	1.1
Fruit ..	1.1	1.3	1.2	0.7	0.4	5.8	6.0	0.7	1.0
Maize (grain) ..	0.5	0.6	4.5	(b)	(a)	..	..	..	^c 0.7
Vineyards ..	0.2	0.8	0.1	1.0	0.1	..	..	..	0.4
Potatoes ..	0.3	0.6	0.4	0.1	0.1	2.8	(b)	0.3	^c 0.3
All other ..	2.2	1.9	13.5	1.8	1.5	17.1	15.9	3.2	3.6
Total ..	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

(a) Less than 0.05 per cent. (b) Not available for publication. Included in All other. (c) Incomplete; see footnotes to individual States.

(iv) *Area of Crops in Australia.* The area of crops during each of the five seasons ended 1963-64 is shown hereunder.

AREA OF CROPS: AUSTRALIA

('000 acres)

Crop	1959-60	1960-61	1961-62	1962-63	1963-64
Cereals for grain—					
Barley, 2- and 6- row ..	2,379	2,830	2,383	2,027	2,013
Maize—Hybrid ..	185	185	211	161	172
Other ..						48	43
Oats ..	3,030	3,637	3,097	3,292	3,392
Rice ..	49	46	50	55	59
Wheat ..	12,172	13,439	14,723	16,469	16,474
Hay ..	2,105	2,973	2,274	2,720	2,602
Green fodder ..	4,094	4,408	4,702	4,952	4,877
Industrial crops—					
Cotton ..	20	37	29	38	41
Hops ..	2	2	2	2	2
Sugar cane ..	487	475	499	506	539
Tobacco ..	20	29	27	29	29
Vegetables for human consumption—					
Onions ..	9	9	9	11	9
Potatoes ..	108	92	94	114	102
Other vegetables ..	147	155	163	163	166
Vineyards ..	130	131	133	134	136
Fruit ..	289	289	294	305	310
All other crops ..	879	839	949	1,066	1,079
Total ..	26,105	29,576	29,639	32,092	32,045

(v) *Size Classification of Principal Crops.* In Australia there is, in many cases, a close correlation between the type of crop and the size of holdings upon which it is usually grown. A special series of tabulations relating to rural holdings in Australia was compiled for 1959-60 and has been published in full detail in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959-60.* Tables in these bulletins show a classification by area of holding and area of crop for wheat, oats and barley by States and statistical divisions. These tables thus provide a guide to the regional distribution of the holdings growing the major crops, sown grasses and clovers. Classifications of holdings according to major crops grown, livestock carried and type of activity are also shown.

2. *Production.*—(i) *Production of Crops in States and Territories.* The following table shows production of crops in the various States and Territories for the season 1963-64.

PRODUCTION OF CROPS, 1963-64

Crop	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Cereals for grain—									
Barley—									
2-row '000 bus.	3,195	3,833	4,675	23,420	935	406	..	..	36,464
6-row " "	2,156	192	516	917	3,142	8	..	..	6,931
Maize—									
Hybrid " "	1,868	195	3,529	..	(a)	..	..	..	(b) 5,592
Other " "	221	9	899	(c)	1	..	..	..	(b) 1,130
Oats " "	19,811	19,885	673	9,149	17,850	844	..	22	68,234
Panicum, millet and setaria " "	14	51	901	..	..	..	(c)	..	(b) 966
Rice " "	7,455	..	..	..	(c)	..	(c)	..	(b) 7,455
Rye " "	30	95	3	153	70	3	..	..	354
Sorghum " "	1,269	2	6,612	..	..	..	6	..	7,889
Wheat " "	122,472	76,302	22,275	53,971	52,340	483	..	69	327,912
Hay '000 tons	1,006	1,947	184	488	389	249	1	5	4,269
Grass seed—									
Lucerne cwt.	6,022	n.a.	319	30,010	7	..	440	..	(b) 36,798
Clover " "	53,877	8,975	2	6,501	110,625	484	..	..	180,464
Other " "	9,932	32,392	11,265	10,776	44,742	6,879	..	28	116,014
Industrial crops—									
Broom millet—									
Fibre cwt.	11,298	1,845	981	..	..	..	..	..	14,124
Grain bushels	18,048	728	n.a.	..	..	..	..	..	(b) 18,776
Canary seed '000 bus.	17	..	363	(c)	..	..	..	..	(b) 380
Cotton, unginned '000 lb.	8,167	..	7,943	..	2,113	..	..	..	18,223
Flax—									
Fibre tons	..	..	..	..	318	..	..	..	318
Linseed " "	3,722	4,758	20,342	283	411	..	..	..	29,516
Hops (dry weight) cwt.	..	5,751	..	..	(c)	14,107	..	..	(b) 19,858
Peanuts " "	4,744	..	455,982	..	(c)	..	(c)	..	(b) 460,726
Sugar cane for crushing '000 tons	617	..	11,501	..	..	..	..	..	12,118
Sunflower seed cwt.	(c)	540	42,671	(c)	..	..	..	..	(b) 43,211
Tobacco, dried leaf '000 lb.	2,652	14,459	17,231	..	..	..	..	..	34,342
Vegetables for human consumption—									
Onions tons	4,998	17,946	20,412	8,736	6,814	372	(c)	(c)	(b) 59,278
Potatoes " "	98,308	200,384	90,201	51,195	55,402	66,420	(c)	122	(b) 562,032
Vineyards—									
Grapes—									
For drying " "	52,736	284,411	..	70,768	9,148	..	..	..	417,063
„ table " "	7,012	8,216	3,925	969	2,367	..	..	..	22,489
„ wine " "	39,080	21,068	176	148,828	5,879	..	..	..	215,031

(a) Included in Other maize. publication.

(b) Incomplete; see footnotes to individual States.

(c) Not available for

(ii) *Production of Principal Crops in Australia.* The following table shows the production of the principal crops for the five years ended 1963-64.

PRODUCTION OF PRINCIPAL CROPS: AUSTRALIA

Crop	1959-60	1960-61	1961-62	1962-63	1963-64
Cereals for grain—					
Barley, 2- and 6-row '000 bus.	34,179	67,970	41,504	39,579	43,395
Maize—Hybrid "	6,725	6,245	7,307	6,064	5,592
Other "				1,393	1,130
Oats "	46,841	76,107	55,130	68,809	68,234
Rice "	6,732	6,001	7,045	7,129	7,455
Wheat "	198,501	273,716	247,178	306,912	327,912
Hay '000 tons	3,177	5,079	3,693	4,717	4,269
Industrial crops—					
Cotton unginned '000 lb.	9,463	15,544	10,948	15,762	18,223
Hops (dry weight) cwt.	31,790	33,099	32,936	33,629	19,858
Sugar cane for crushing .. '000 tons	9,002	9,166	9,577	12,736	12,118
Tobacco (dried leaf) '000 lb.	19,357	29,862	22,578	27,148	34,342
Vegetables for human consumption—					
Onions '000 tons	57	54	58	68	59
Potatoes "	579	451	526	667	562
Vineyards—					
Grapes "	445	527	628	471	655
Wine made(a) '000 gals.	28,401	33,762	41,736	29,893	37,536
Dried vine fruits '000 tons	70	82	96	71	104

(a) Net factory and farm production of beverage and distillation wine. This excludes the liquid gallonage of spirits added in wine fortifying.

(iii) *Yield per Acre of Principal Crops in Australia.* The following table shows the yield per acre of the principal crops for Australia during the five years ended 1963-64.

YIELD PER ACRE OF PRINCIPAL CROPS: AUSTRALIA

Crop	1959-60	1960-61	1961-62	1962-63	1963-64
Cereals for grain—					
Barley, 2- and 6-row bushels	14.3	24.0	17.4	19.5	21.6
Maize—Hybrid "	36.4	33.8	34.7	37.7	32.6
Other "				28.7	26.2
Oats "	15.5	20.9	17.8	20.9	20.1
Rice "	138	130	140	130	126
Wheat "	16.3	20.4	16.8	18.6	19.9
Hay tons	1.51	1.71	1.62	1.73	1.64
Industrial crops—					
Cotton, unginned lb.	468	420	380	418	445
Hops (dry weight) (a) cwt.	16.7	17.8	17.1	16.8	9.7
Sugar cane for crushing(a) tons	28.7	26.9	24.8	31.7	29.0
Tobacco (dried leaf) lb.	985	1,022	848	924	1,183
Vegetables for human consumption—					
Onions tons	6.10	5.87	6.20	6.34	6.43
Potatoes "	5.34	4.91	5.57	5.86	5.51
Vineyards—					
Grapes(a) "	3.62	4.32	5.14	3.86	5.28

(a) Per acre of productive crops.

3. Value of Agricultural Production.—(i) *Gross Value of Agricultural Production in Australia.* The following table shows the gross value of principal crops and of total agricultural production in Australia for the five years ended 1963-64.

Further reference to the value of production of agriculture and other industries in Australia as well as a brief explanation of the terms used may be found in Chapter XXX. Miscellaneous.

GROSS VALUE(a) OF AGRICULTURAL PRODUCTION: AUSTRALIA
(£'000)

Crop	1959-60	1960-61	1961-62	1962-63	1963-64
Cereals for grain—					
Barley	16,623	31,072	21,933	21,328	23,742
Maize	4,029	5,264	5,285	4,762	5,182
Oats	18,396	25,535	20,001	25,629	24,833
Rice	4,450	4,125	3,832	3,838	3,956
Wheat	137,762	195,678	186,172	224,532	233,716
Hay	34,433	50,181	37,746	46,479	43,731
Green fodder	7,572	9,647	8,743	9,612	10,495
Industrial crops—					
Cotton, unginned	556	917	647	938	1,106
Hops	1,159	1,179	1,242	1,285	767
Sugar cane	44,774	50,580	49,608	65,519	81,440
Tobacco (dried leaf)	11,215	13,051	12,122	15,011	16,704
Vegetables for human consumption—					
Onions	2,841	1,833	2,547	1,814	2,048
Potatoes	13,460	19,365	20,697	13,980	16,613
Other vegetables for human consumption	26,611	29,718	28,743	28,776	33,257
Grapes	14,698	17,368	19,815	16,024	23,208
Fruit and nuts	51,763	59,773	63,363	64,430	67,565
All other crops	20,012	19,895	21,676	24,356	25,879
Total	410,354	535,681	504,172	568,313	614,242

(a) Includes amounts paid as bounty, relief, etc.

(ii) *Gross, Local and Net Values in States and Territories.* Values of agricultural production in the various States and Territories are shown for 1963-64 in the following table.

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.

GROSS, LOCAL AND NET VALUES OF AGRICULTURAL PRODUCTION, 1963-64
(£'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Local value of production	Value of materials used in process of production	Net value of production (a)
New South Wales	165,417	32,663	132,754	(b) 9,801	122,953
Victoria	136,404	16,435	119,969	10,901	109,068
Queensland	147,217	15,646	131,571	20,386	111,185
South Australia	82,817	9,134	73,683	11,093	62,590
Western Australia	61,671	8,031	53,640	13,830	39,810
Tasmania	20,474	4,483	15,991	3,127	12,864
Northern Territory	84	n.a.	84	n.a.	84
Australian Capital Territory	158	13	145	7	138
Australia	614,242	86,405	527,837	69,145	458,692

(a) No deduction has been made for depreciation and maintenance.

(b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(iii) *Net Value of Agricultural Production, 1959-60 to 1963-64.* 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 1959-60 to 1963-64.

NET VALUE OF AGRICULTURAL PRODUCTION(a)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
NET VALUE (£'000)									
1959-60	78,518	68,912	65,357	24,246	44,044	10,645	79	150	291,951
1960-61	98,171	104,031	73,471	58,323	46,708	10,939	80	138	391,861
1961-62	93,858	88,245	75,076	45,467	51,325	12,345	75	112	366,503
1962-63	113,036	96,986	92,864	46,679	54,253	11,156	84	149	415,207
1963-64	122,953	109,068	111,185	62,590	39,810	12,864	84	138	458,692

NET VALUE PER HEAD OF POPULATION (£)

1959-60	20.7	24.4	44.2	26.0	61.4	30.9	3.2	3.0	28.7
1960-61	25.4	36.0	48.9	60.9	64.0	31.2	3.1	2.5	37.7
1961-62	23.8	29.8	49.1	46.4	68.8	34.6	2.8	1.8	34.6
1962-63	28.2	32.1	59.9	46.7	71.0	30.8	3.0	2.2	38.4
1963-64	30.1	35.3	70.6	61.4	50.9	35.1	2.8	1.8	41.6

(a) No deduction has been made for depreciation and maintenance.

4. *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, etc., 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	1959-60	1960-61	1961-62	1962-63	1963-64
Quantum Produced—					
Wheat	121	166	150	186	199
Other crops	152	184	171	194	194
<i>Total, All Crops</i>	<i>140</i>	<i>177</i>	<i>163</i>	<i>191</i>	<i>196</i>
<i>Per head of population</i>	<i>95</i>	<i>117</i>	<i>106</i>	<i>121</i>	<i>122</i>
Price—					
Wheat	350	355	380	366	356
Other crops	313	344	323	309	348
<i>Total, All Crops</i>	<i>329</i>	<i>349</i>	<i>348</i>	<i>334</i>	<i>351</i>

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of the base years (1936-37 to 1938-39).

§ 3. Cereal Crops

1. **Wheat.**—(i) *General.* Wheat is grown on a large scale in all States except Tasmania, and is the most important crop in Australia in terms of area, production and exports. The present limits of the wheat belt have been established after considerable fluctuation over the last four decades.

In January, 1934, a Royal Commission was appointed to inquire into and report upon the economic condition of the growing, handling and marketing of wheat, and the manufacturing, distributing and selling of flour and bread. The Report of this Royal Commission provides an authoritative description of all aspects of the industry up to that time.

Two of the aspects of governmental and semi-governmental assistance and control which have contributed to the development of the industry are the organization of oversea marketing and of research.

(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, and to 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.

Details of the operations of the Wheat Stabilization Board in licensing wheat grown during the seasons 1941–42 to 1948–49 will be found in Year Book No. 38, pages 940–1. The Board ceased to function on 31st December, 1948.

Under the *Wheat Industry Stabilization Act* 1948, the Australian Wheat Board was reconstituted for five years to administer the first stabilization plan and was given powers similar to those held under the National Security Regulations. The new Board commenced to function on 18th December, 1948. The Board has been continued in existence by the *Wheat Industry Stabilization Acts* 1954, 1958 and 1963 for the purpose of administering the second, third and fourth five-year stabilization plans.

(iii) *Marketing of Wheat.* (a) *Stabilized Marketing.* As a large proportion of the Australian wheat crop is normally exported, the marketing of wheat occupies an important part in the industry. 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, is given in the Appendix to Year Book No. 37, pages 1295–9.

Details of more recent plans were published in Year Book No. 40, pages 841 and 842 (1947–48 to 1952–53 Plan), No. 44, page 861 (1953–54 to 1957–58), and No. 48, pages 903 and 904 (1958–59 to 1962–63).

(b) *Fourth Post-war Wheat Industry Stabilization Plan.* Following negotiations during 1962 and 1963, the fourth post-war Wheat Industry Stabilization Plan was enacted by the Commonwealth and States towards the end of 1963. The new plan operates on very much the same lines as the previous ones. However, there are some important changes in detail to which reference is made in the main features of the plan set out below.

Period of the Plan. The plan operates for five years. It commenced with the 1963–64 wheat crop and will end with the marketing of the 1967–68 crop.

Commonwealth Guarantee. The Commonwealth has guaranteed a return of 14s. 5d. per bushel bulk basis f.o.r. ports to growers on up to 150 million bushels (previously 100 million bushels) of wheat exported from the crop in the first year of the plan. The guaranteed return of 14s. 5d. was based on the findings of a survey of the economic structure of the wheat industry conducted by the Bureau of Agricultural Economics. It is subject to adjustment in each of the following years of the plan in accordance with the movements in costs based on a cost index established from the survey. The guaranteed return for the second year of the plan (1964–65 season) is 14s. 7d. per bushel.

Australian Wheat Board. The Australian Wheat Board is retained as the sole constituted authority for the marketing of wheat within Australia and for the marketing of wheat and flour for export from Australia for the period of the plan.

Stabilization Fund.

Export Tax. Wheat exported is subject to a tax equivalent to the excess of the returns from export sales over the guaranteed return. However, the maximum rate of export tax is 1s. 6d. per bushel.

Size of Fund. The ceiling of the Stabilization Fund is established at £30 million; any excess beyond this figure is returned to growers on the "first-in-first-out" principle.

Use of the Stabilization Fund. When the average export realizations fall below the guaranteed return, the deficiency is made up first by drawing upon the stabilization fund in respect of up to 150 million bushels of wheat from each crop. When the fund is exhausted, the Commonwealth meets its obligations under the guarantee.

Home Consumption Price. The home consumption base price for 1963-64, the first year of the new plan, was established at 14s. 5d. per bushel, bulk basis, f.o.r. ports plus 2d. per bushel loading to cover the cost of transporting wheat to Tasmania as outlined below. There is provision in the plan for annual adjustments in the following years in accordance with the guaranteed price as outlined on p. 996. The home consumption price for the 1964-65 season is 14s. 7d. per bushel plus 1d. per bushel to cover freight on wheat to Tasmania.

Freight on Wheat to Tasmania. Provision is made for a loading on the price of all wheat sold for consumption in Australia to the extent necessary to cover the cost of transporting wheat from the mainland to Tasmania in each season of the plan.

Premium on Western Australian Wheat. A premium is paid from export realizations on wheat grown in Western Australia and exported from that State, in recognition of the natural freight advantage enjoyed by Western Australia owing to its proximity to the principal overseas markets for wheat. The premium is the amount of the actual freight advantage enjoyed by Western Australia up to a maximum of 3d. per bushel.

(c) *Cost of Production.* The cost of production of wheat for the first season of the current Wheat Stabilization Plan, 1963-64, was fixed at 14s. 5d. a bushel by the legislation. The guaranteed price for the season 1963-64 was therefore 14s. 5d. a bushel, while the home consumption price was 14s. 7d. a bushel (*see above*). The guaranteed price for 1963-64 was a reduction of 1s. 5d. a bushel compared with the guaranteed price of 15s. 10d. for the 1962-63 season, the last year of the previous wheat stabilization plan. The cost of production and guaranteed price for the 1964-65 season have been established at 14s. 7d. a bushel.

(d) *F.A.Q. Standard of Wheat.* Sales and shipments of grain in bulk overseas are generally made on a "fair average quality" (f.a.q.) basis. Samples of wheat are obtained each year from the different wheat districts and mixed to give a representative sample of the whole crop in each State. From this representative sample the f.a.q. weight for each State is determined by the use of the Schopper 1-litre scale chondrometer. This standard is used as a basis for sales of each crop and it varies from year to year and from State to State. F.a.q. is an Australian term, and the method of selling 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. method does not, however, take protein quantity and quality into account, and it gives no indication therefore of the baking strength of the resulting flour.

There are two classifications of Australian wheat in addition to the f.a.q. standard, namely, "semi-hard" and "premium". The former applies to wheat segregated as such in New South Wales and South Australia, and the latter to higher-protein wheat of northern New South Wales and Queensland of a guaranteed minimum protein content. Both wheats sell at a premium above f.a.q.

The f.a.q. weight of a bushel of wheat in each of the four main wheat-producing States for the 1963-64 season's crop was as follows:—New South Wales, north (predominantly semi-hard), 63½ lb., south and west (predominantly soft), 64½ lb.; Victoria, 65½ lb.; South Australia, semi-hard, 64½ lb., soft, 64½ lb.; and Western Australia, 62½ lb.

(e) *Bulk Handling and Storage of Wheat.* A detailed description of the bulk handling system, including its advantages and disadvantages compared with other methods of handling, appears on pages 954-8 of Year Book No. 39.

New South Wales, Victoria and Western Australia have operated bulk handling systems for a number of years, and in more recent years other States have also introduced bulk systems. The bodies concerned with the administration of bulk handling in the various States are:—Grain Elevators Board of New South Wales, Victorian Grain Elevators Board, State Wheat Board (Queensland), South Australian Co-operative Bulk Handling Ltd., Co-operative Bulk Handling Ltd. (Western Australia), and the Tasmanian Grain Elevators Board.

The table below sets out the bulk handling capacities of the several States for the years 1960-61 to 1964-65.

WHEAT: TOTAL CAPACITY OF BULK HANDLING FACILITIES(a)
(*000 bushels)

State	1960-61	1961-62	1962-63	1963-64	1964-65
New South Wales	73,440	75,270	79,486	87,046	93,727
Victoria(b)	72,206	72,808	76,969	86,253	90,247
Queensland	6,216	7,486	9,525	11,081	13,178
South Australia	14,290	17,380	23,220	28,370	35,483
Western Australia	94,257	97,356	98,734	99,535	115,438
Tasmania	960	960	960	960	960
Australia	261,369	271,260	288,894	313,245	349,033

(a) At 30th November of first year shown in heading. Includes terminals, sub-terminals, country installations, and temporary storage. (b) Includes storage in southern New South Wales operated by the Victorian Grain Elevators Board.

Particulars of the operation of the bulk handling and storage systems in each State are set out on pages 916 and 917 of Year Book No. 48.

(f) *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 Year Book No. 42 (see pp. 840-1) and previous issues. Details of the third and fourth International Wheat Agreements which covered the period from 1st August, 1956, to 31st July, 1959, and 1st August, 1959, to 31st July, 1962, were published in Year Books Nos. 43 (p. 836) and 48 (p. 906), respectively.

A fifth International Wheat Agreement, ratified by the required number of wheat exporting and importing countries, came into force on 1st August, 1962. This was intended to cover the three-year period from 1st August, 1962, to 31st July, 1965, but at a special meeting held in February, 1965, the International Wheat Council adopted the text of a protocol providing for the prolongation of the agreement, without amendment, to 31st July, 1966. The council stated that it recognized the need for the maintenance of institutional arrangements to provide for continuing international co-operation in wheat matters, and that, following its decision to recommend a one-year extension of the existing agreement, it had given immediate consideration to preparatory work designed to ensure effective arrangements to follow the expiry of the term of the protocol.

The current Agreement, negotiated at an international conference convened by the United Nations, continues the basic arrangements covered by previous Agreements. The Agreement seeks to obtain an element of stability in world wheat marketing by providing that a significant proportion of wheat entering international trade will be bought and sold at prices within a prescribed price range. The maximum and minimum prices fixed under the 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 as at 1st March, 1949". Member exporting countries compete to supply at prices within the prescribed range, which is from 202.5 cents or about 18s. 3½d. Australian currency to 162.5 cents, or about 14s. 6d. per bushel. The maximum of the range is based on the price of Canada's No. 1 Northern Manitoba wheat in bulk in store at Fort William/Port Arthur. The minimum f.o.b. price for each exporter is the equivalent of the c. and f. price in the United Kingdom of the minimum price of Canada's No. 1 Northern Manitoba wheat in bulk in store at Fort William/Port Arthur, using currently prevailing transportation costs and exchange rates and making such allowance for differences in quality as may be agreed between the exporting and importing countries concerned.

Member importing countries have undertaken to buy each year from member exporting countries a stated percentage of their total commercial requirements at prices within the agreed range. For their part, exporting countries are obliged to make wheat available for purchase by importing countries in any crop year at prices within the price range in quantities sufficient to satisfy the commercial requirements of those countries; if the price goes to the maximum, exporters have undertaken to make available, at that maximum price, specified (datum) quantities based on their past trading record with member importers.

The current Agreement empowers the International Wheat Council to make an annual review of the world wheat situation, including the international implications of national policies in respect of wheat production, stocks and marketing, and the disposal of wheat surpluses on non-commercial terms.

Provision has also been made for the right of appeal against excessive discounts from the minimum price on the basis of differences in quality between the basic wheat—Canada's No. 1 Northern Manitoba wheat—and the wheat supplied by other member importing countries.

Member countries of the fifth International Wheat Agreement are as follows.

Exporters. Argentina, Australia, Canada, France, Italy, Mexico, Spain, Sweden, Union of Soviet Socialist Republics and United States of America.

Importers. Austria, Belgium and Luxembourg, Brazil, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Federal Republic of Germany, Finland, Greece, Guatemala, Iceland, India, Indonesia, Ireland, Israel, Japan, Liberia, Libya, the Netherlands, New Zealand, Nigeria, Norway, Peru, Philippines, Portugal, Republic of Korea, Saudi Arabia, Sierra Leone, South Africa, Switzerland, Tunisia, United Arab Republic, United Kingdom, Vatican City, Venezuela, and Western Samoa.

(iv) *Research into the Wheat Industry.* The extension and growth of the wheat industry in the past has been made possible to a large extent through research into new varieties of seed, crop rotation and fertilizer treatments by governmental, university and private research organizations. In recent years, there has been a growing awareness of the value of this research, and funds are being raised by a direct levy on the growers' returns.

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 being spent by the Wheat Industry Research Committees set up in the wheat-growing States. These Committees, which consist of representatives of wheatgrowers, universities and State Departments of Agriculture, also received a total of £284,000 under the provisions of the *Wheat Acquisition (Undistributed Moneys) Act 1958*.

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, at its inaugural meeting in February, 1958, 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.

Up to the end of June, 1964, the Council and the State Committees have spent £2,408,354, including grants to the Commonwealth Scientific and Industrial Research Organization, State Departments of Agriculture, universities and agricultural colleges.

(v) *Wheat Farms: Number and Classification by Activity.* (a) *Number.* Particulars of the number of farms growing 20 acres and upwards of wheat for grain during each of the years 1959-60 to 1963-64 are shown in the following table. A farm worked on the share system or as a partnership is included as one holding only.

NUMBER OF FARMS GROWING 20 ACRES AND UPWARDS OF WHEAT FOR GRAIN

State or Territory	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	16,798	16,959	17,489	18,286	17,753
Victoria	10,555	10,625	11,648	12,166	11,370
Queensland	4,526	4,257	4,483	5,095	4,927
South Australia	7,895	8,913	9,434	9,881	9,902
Western Australia	8,444	8,614	8,722	8,966	8,983
Tasmania	154	121	222	243	251
Australian Capital Territory	23	14	25	27	29
Australia	48,395	49,503	52,023	54,664	53,215

(b) *Size Classification of Wheat Holdings.* There is in Australia a widespread combination of wheat growing with other rural activities. This is illustrated, for the 1959-60 season, by a table on pages 1016 and 1017 of Year Book No. 49. The table, which provides a classification of rural holdings by the area of wheat grown and by type of activity, was derived from information published in the bulletin *Classification of Rural Holdings by Size and Type of Activity, 1959-60, No. 7*.

(vi) *Varieties of Wheat Sown.* (a) *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 followed him have proved of immense benefit to the industry. Their efforts have resulted in the development of disease-resistant varieties, better average yields, and 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 in any one season is restricted to about 45.

(b) *States, 1963-64.* The principal varieties of wheat sown and the percentage of each to the total area sown in the five main wheat-producing States of Australia in 1963-64 were as follows:—New South Wales, Heron (14.3), Mengavi (10.9), Olympic (8.8); Victoria, Insignia (51.9), Pinnacle (18.7), Olympic (17.9); Queensland, Spica (34.3), Festival (15.0), Mengavi (15.0); South Australia, Insignia (38.4), Gabo (18.8), Sabre (11.9); and Western Australia, Gabo (38.5), Insignia (16.1), Insignia 49 (12.4). A detailed table of wheat varieties sown appears in the annual bulletin *The Wheat Industry*, No. 106, February, 1965.

(vii) *Area, Production and Yield per Acre.* (a) *Summary.* Prominent factors in the 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 of wheat 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 1959-60 to 1963-64 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

WHEAT FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938-39	4,366	2,609	366	3,100	3,005	18	2	13,466
1948-49	4,519	3,241	439	2,319	2,685	7	4	13,214
1958-59	2,392	1,737	508	1,392	3,005	5	1	9,040
Year—								
1959-60	3,950	2,261	683	1,549	3,719	8	2	12,172
1960-61	4,076	2,672	693	1,969	4,021	7	1	13,439
1961-62	4,498	2,849	750	2,229	4,380	16	1	14,723
1962-63	5,008	3,125	919	2,595	4,804	15	3	16,469
1963-64	4,964	3,109	938	2,802	4,640	18	3	16,474
PRODUCTION ('000 BUSHELLS)(a)								
Average for three years ended—								
1938-39	56,890	36,374	4,783	34,606	31,539	434	45	164,671
1948-49	58,537	48,332	8,569	28,856	31,517	138	78	176,027
1958-59	35,178	36,705	9,938	26,126	40,950	135	15	149,047
Year—								
1959-60	75,358	38,793	13,522	11,929	58,670	182	47	198,501
1960-61	84,657	67,587	10,999	46,395	63,900	148	30	273,716
1961-62	78,350	56,879	12,018	33,854	65,700	345	32	247,178
1962-63	109,002	67,899	18,683	38,339	72,500	419	70	306,912
1963-64	122,472	76,302	22,275	53,971	52,340	483	69	327,912
YIELD PER ACRE (BUSHELLS) (a)								
Average for three years ended—								
1938-39	13.0	13.9	13.1	11.2	10.5	24.1	22.5	12.2
1948-49	13.0	14.9	19.5	12.4	11.7	19.7	19.5	13.3
1958-59	14.7	21.1	19.6	18.8	13.6	24.7	15.0	16.5
Year—								
1959-60	19.1	17.2	19.8	7.7	15.8	22.0	26.8	16.3
1960-61	20.8	25.3	15.9	23.6	15.9	21.4	28.5	20.4
1961-62	17.4	20.0	16.0	15.2	15.0	22.2	22.7	16.8
1962-63	21.8	21.7	20.3	14.8	15.1	27.3	29.3	18.6
1963-64	24.7	24.5	23.8	19.3	11.3	27.5	24.6	19.9

(a) 60 lb. per bushel.

A graph showing the area sown to wheat for grain in Australia since 1900-1 appears on p. 1003 of this Year Book, and a map showing the distribution of areas growing wheat for grain throughout Australia in 1962-63 appears on page 1013 of Year Book No. 50. Similar maps showing the distribution of wheat areas in 1924-25, 1938-39, 1947-48 and 1954-55 appeared respectively in Year Books No. 22, page 695, No. 34, page 451, No. 39, pages 977-8, and No. 43, page 883.

(b) *Production.* Apart from the variations in the area sown, the size of the wheat harvest in Australia is determined largely by the nature of the season, resulting in considerable year-to-year fluctuations in 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 exports flour made from local wheat which is particularly suitable for biscuits.

Production of wheat in 1963-64, 327,912,000 bushels, was a record, exceeding the previous record harvest of 1962-63 by 21,000,000 bushels (7 per cent.). Compared with the previous season, the highest absolute increases were recorded in South Australia, 15,632,000 bushels (41 per cent.) and New South Wales, 13,470,000 bushels (12 per cent.). All States except Western Australia and Tasmania had record harvests.

(c) *Yield per Acre.* Short-term variations in yield per acre are due chiefly to seasonal influences. High yields per acre for Australia in recent years were obtained in 1958-59, 20.7 bushels (a record), and in 1960-61, 20.4 bushels. The yield per acre in 1963-64 was 19.9 bushels.

(d) *Decennial Averages, 1861-70 to 1951-60.* The following table shows the average area, production and yield per acre for decennial periods since 1861 together with similar details for the latest season, 1963-64. Repeated cropping and short rotations (mainly in the eastern States) are believed to have led to the decline in yield to 1900, while fallowing and the widespread use of artificial fertilizers contributed to the increased yields in the decade following. The increase in yield since 1950 has been generally ascribed to the impact of improved pastures and ley-farming (broadly, the alternation of crops and pastures) upon soil fertility in wheat-growing areas.

WHEAT FOR GRAIN: AVERAGE AREA AND PRODUCTION, AUSTRALIA

Period	Area	Production	Yield per acre
	'000 acres	'000 bushels	bushels
Yearly average—			
1861-70	831	10,622	12.8
1871-80	1,646	17,711	10.8
1881-90	3,258	26,992	8.3
1891-1900	4,087	29,934	7.3
1901-10	5,711	56,058	9.8
1911-20	8,928	95,480	10.7
1921-30	11,291	135,400	12.0
1931-40	14,176	177,758	12.5
1941-50	11,358	145,599	12.8
1951-60	10,164	173,622	17.1
Year—			
1963-64	16,474	327,912	19.9

(viii) *Price of Wheat.* (a) *Home Consumption.* The prices 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 were as follows:—year ended 30th November, 1961, 15s. 4d.; 1962, 15s. 10d.; 1963, 15s. 11½d.; 1964, 14s. 7d.; and 1965, 14s. 8d. These prices include a loading to meet freight charges incurred on wheat shipped to Tasmania (2d. in 1961; 1d. in 1962; 1½d. in 1963; 2d. in 1964; and 1d. in 1965).

(b) *Export Wheat Prices.* The Wheat Board's monthly basic export selling prices for f.a.q. bulk wheat f.o.b. basis, both for wheat sold under the International Wheat Agreement and for "free" wheat sold on the open market, fell in the following ranges:—season ended 31st July, 1961, 13s. 5d. to 13s. 9d.; 1962, 13s. 10d. to 14s. 10½d.; 1963, 14s. 2d. to 14s. 10½d.; and 1964, 14s. 4d. to 15s. 10d. Actual selling prices have been lower than the basic prices in some cases, particularly where other exporting countries enjoy a geographical freight advantage.

The 1959 International Wheat Agreement set the maximum price at 200 cents a bushel and the minimum at 150 cents for f.a.q. wheat sold under the Agreement. Under the current 1962 Agreement operative from 1st August, 1962 (see paragraph 1 (iii) (f), p. 998), the agreed price range is between 202.5 cents and 162.5 cents. Directly converted into Australian currency these limits are approximately 18s. 3½d. and 14s. 6d. a bushel respectively.

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 Year Book No. 40, pages 849-50, and in the statistical bulletin *The Wheat Industry, Australia*, No. 99, March, 1961, and in previous issues of these publications.

(ix) *Value of the Wheat Crop.* The estimated gross value of the wheat crop in each State and in Australia during the season 1963-64 and the value per acre are shown below.

WHEAT FOR GRAIN: VALUE OF CROPS(a), 1963-64

Particulars		N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value	£'000	87,076	54,249	15,974	38,830	37,194	346	47	233,716
Value per acre	£	17.5	17.4	17.0	13.9	8.0	19.7	16.6	14.2

(a) Gross value of total crop, including wheat used for seed and for stock feed on farms. Also includes payment of £941,000 by the Commonwealth Government.

(x) *Production and Disposal of Wheat in Australia.* In the following tables details are given of Australian Wheat Board transactions and of total production and disposal of wheat during each of the years ended 30th November, 1960 to 1964. (For particulars of production and yield from 1935-36 see graphs, p. 1004 of this Year Book.)

(a) *Wheat Acquired.* Particulars of wheat acquired by the Australian Wheat Board from the 1959-60 to 1963-64 harvests are shown in the following table.

AUSTRALIAN WHEAT BOARD: WHEAT ACQUIRED (^{'000} bushels)

Pool	Harvest	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
23	1959-60	67,073	37,099	11,832	9,112	54,132	91	179,339
24	1960-61	72,984	66,881	8,821	43,706	59,012	63	251,467
25	1961-62	67,784	55,121	9,981	30,737	60,459	208	224,290
26	1962-63	98,677	67,215	17,537	35,120	66,898	275	285,722
27	1963-64	110,721	77,724	20,330	51,660	47,071	325	307,831

(b) *Stocks of Wheat and Flour.* Stocks of wheat (including flour in terms of wheat) held by the Australian Wheat Board in each State at 30th November for the years 1960 to 1964 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.

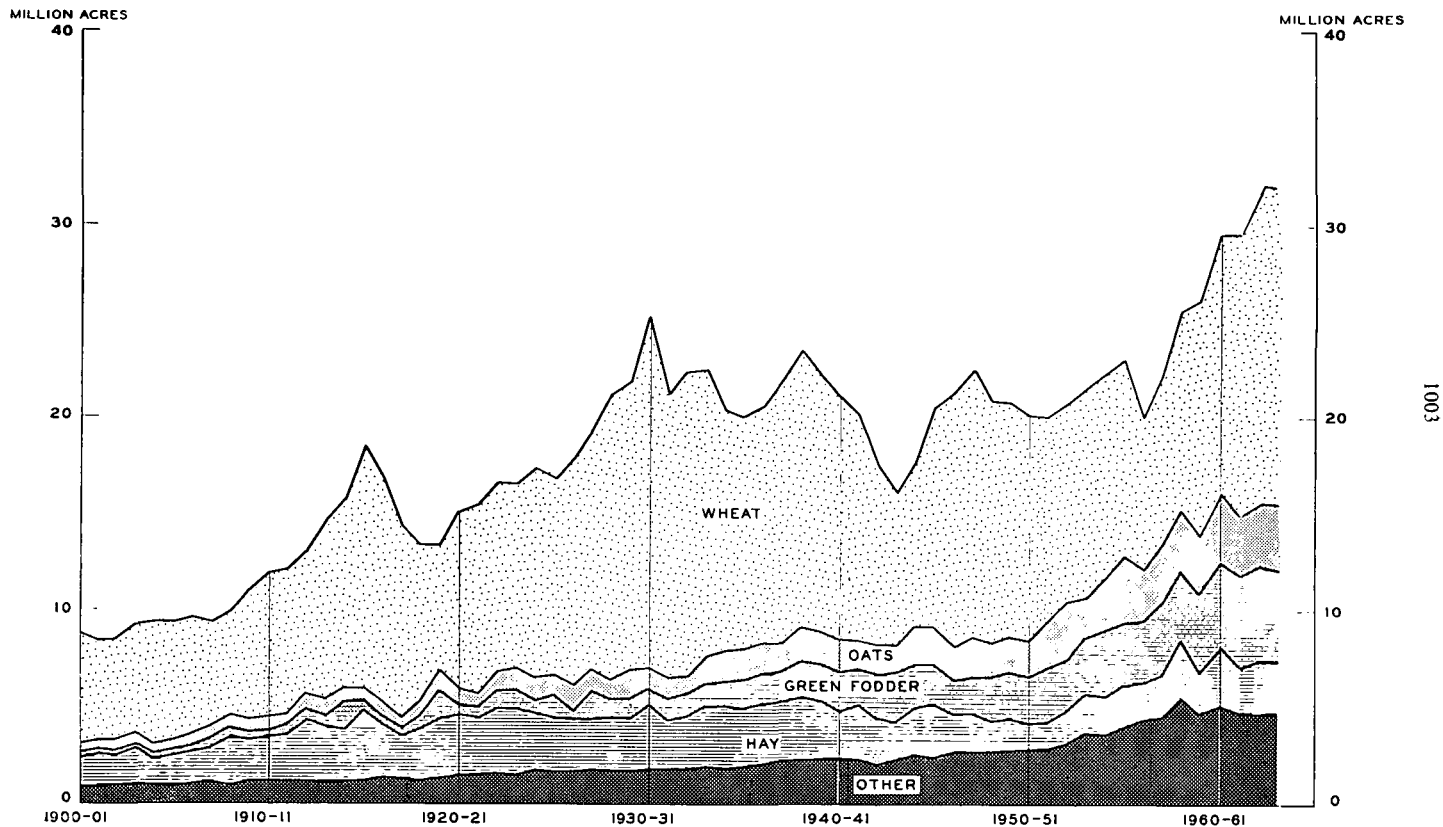
AUSTRALIAN WHEAT BOARD: STOCKS(a) OF WHEAT (INCLUDING FLOUR IN TERMS OF WHEAT), 30th NOVEMBER (^{'000} bushels)

Year	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Australia
1960	19,878	16,639	451	2,203	20,995	535	60,701
1961	7,701	8,780	965	3,122	3,338	452	24,358
1962	5,574	6,021	1,333	1,831	2,449	491	17,699
1963	10,879	7,000	775	1,775	2,221	625	23,275
1964	7,340	7,490	806	3,048	1,257	472	20,413

(a) Held at mills, sidings, ports and depots. Excludes new season's wheat received from growers prior to 30th November of years shown.

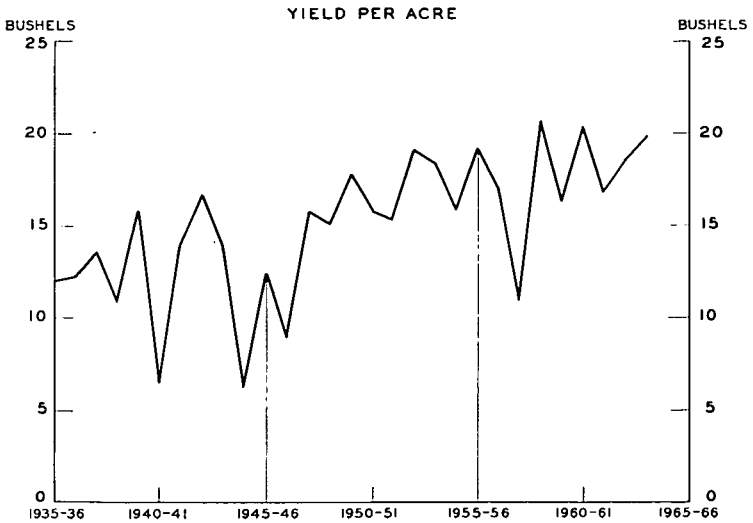
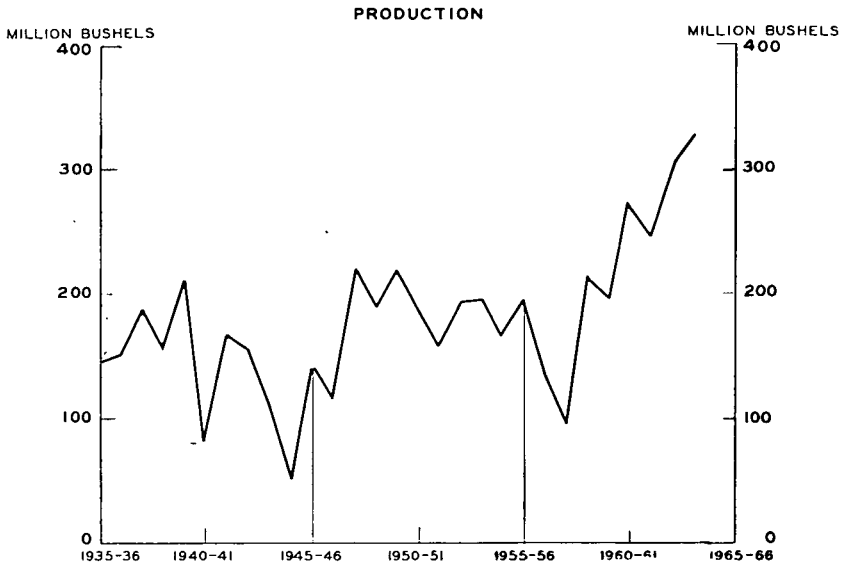
NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

AREA OF CROPS: AUSTRALIA, 1900-01 TO 1963-64



WHEAT FOR GRAIN

AUSTRALIA, 1935-36 TO 1962-63



(c) *Wheat Disposal.* Particulars of the disposal of wheat during the years ended 30th November, 1960 to 1964, as recorded by the Australian Wheat Board, are shown in the following table.

AUSTRALIAN WHEAT BOARD: DISPOSAL OF WHEAT
(’000 bushels)

Particulars	Year ended 30th November—				
	1960	1961	1962	1963	1964
Exported as wheat	97,645	202,027	152,818	203,703	221,530
Exported as flour(a)	26,147	29,438	25,123	24,903	31,798
Sold for local consumption as flour	42,713	39,814	40,736	40,389	42,954
Sold for other purposes	16,635	15,107	11,635	10,791	13,658

(a) Includes wheat equivalent of manufactured wheat products exported.

(d) *Production and Disposal.* A summary of all transactions in wheat for Australia, as distinct from those recorded for the Wheat Board above, appears in the following table.

WHEAT: PRODUCTION AND DISPOSAL, AUSTRALIA
(million bushels)

Particulars	Year ended 30th November—				
	1960	1961	1962	1963	1964
Opening stocks (including flour)(a)(b) ..	65.4	60.7	24.4	17.7	23.3
Production	198.5	273.7	247.2	306.9	327.9
<i>Total Available Supplies</i> ..	<i>263.9</i>	<i>334.4</i>	<i>271.6</i>	<i>324.6</i>	<i>351.2</i>
Exports—					
Wheat	98.1	205.1	154.7	200.4	221.6
Flour(a)	26.7	31.6	26.6	25.1	34.4
Breakfast foods and other products(a)(c)	0.6	0.5	0.6	0.7	0.7
Local consumption—					
Flour(a)(c)	41.3	41.2	40.7	40.4	43.0
Breakfast foods and other products(a)(c)	1.9	1.9	1.6	1.7	1.7
Stock feed wheat sales(c)	14.7	13.2	10.0	9.1	12.0
Seed	12.6	13.8	15.4	15.4	16.3
Retained on farm (excluding seed) ..	6.6	8.4	7.4	5.8	3.8
Closing stocks (including flour)(a)(b) ..	60.7	24.4	17.7	23.3	20.4
<i>Total Disposals</i>	<i>263.2</i>	<i>340.1</i>	<i>274.7</i>	<i>321.9</i>	<i>353.9</i>
Excess (+) or deficiency (–) of disposals in relation to available supplies(d) ..	–0.7	+5.7	+3.1	–2.7	+2.7

(a) In terms of wheat. (b) Held at ports, depots, mills and sidings. (c) Source: Australian Wheat Board. (d) Includes allowance for unrecorded movements in stocks, gain or loss in out-turn, etc.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(e) *Finance.* The *Wheat Industry Stabilization Act 1948* empowered the Minister to arrange with the Commonwealth Bank for advances to the Board, the advances being guaranteed by the Commonwealth Government. These provisions have been continued in the subsequent legislation, with the exception that advances are now arranged through the Reserve Bank.

AUSTRALIAN WHEAT BOARD: FINANCIAL OPERATIONS, POOLS Nos. 23 to 27
(£'000)

Particulars	No. 23 Pool	No. 24 Pool	No. 25 Pool	No. 26 Pool	No. 27 Pool(a)
	(1959-60 Harvest)	(1960-61 Harvest)	(1961-62 Harvest)	(1962-63 Harvest)	(1963-64 Harvest)
Paid to growers	108,641	152,685	144,207	175,986	159,022
Rail freight	12,999	18,715	16,943	22,679	24,670
Expenses	9,384	9,326	8,360	10,276	9,078
<i>Total Payments</i>	<i>131,024</i>	<i>180,726</i>	<i>169,510</i>	<i>208,941</i>	<i>192,770</i>
Value of sales delivered ..	(b) 123,187	(c) 172,103	(d) 162,455	(e) 197,921	(f) 218,584

(a) Incomplete. (b) Subject to additional £8,024,000 (of which the Commonwealth Government provided £3,022,000) withdrawn from Wheat Prices Stabilization Fund and payment of £187,000 to Wheat Industry Research Fund. (c) Subject to additional £8,884,000 provided by the Commonwealth Government and payment of £261,000 to Wheat Industry Research Fund. (d) Subject to additional £7,288,000 provided by the Commonwealth Government and payment of £233,000 to Wheat Industry Research Fund. (e) Subject to additional £11,317,000 provided by the Commonwealth Government and payment of £297,000 to Wheat Industry Research Fund. (f) Subject to additional £941,000 provided by the Commonwealth Government and payment of £320,000 to Wheat Industry Research Fund.

NOTE.—Details of earlier pools will be found in previous issues of the Year Book.

(xi) *Imports of Wheat.* Wheat and flour have been imported in substantial quantities on three occasions since 1900; in 1902-3, the wheat harvest was only 12,378,000 bushels, and wheat and flour equivalent to 12,468,000 bushels of wheat were imported. An equivalent of 7,279,000 bushels was imported in 1914-15 to supplement the yield of 25 million bushels produced in that season. Owing to drought conditions in 1957-58 wheat supplies were insufficient for local requirements and, as a result, 1,485,000 bushels were imported from Canada in 1958. No wheat has since been imported.

(xii) *Exports of Wheat and Flour.* Statistics in this sub-paragraph relate to years ended 30th June. Export figures relate to the exports of Australian produce only.

(a) *Quantity and Value.* The following table shows particulars of the exports of wheat and flour and the total of both, in terms of wheat, for each of the years 1959-60 to 1963-64.

WHEAT AND FLOUR: EXPORTS FROM AUSTRALIA

Year	Quantity				Value		
	Wheat	Flour		Total (in terms of wheat)	Wheat	Flour(a)	Total
		As flour (a)	In terms of wheat				
'000 bushels	short tons	'000 bushels	'000 bushels	£A.'000 f.o.b.	£A.'000 f.o.b.	£A.'000 f.o.b.	
1959-60	91,252	558,127	25,841	117,093	61,680	15,811	77,491
1960-61	152,995	679,179	31,446	184,441	102,426	19,637	122,063
1961-62	203,155	602,665	27,903	231,058	142,446	18,164	160,610
1962-63	151,971	544,441	25,208	177,179	108,452	16,330	124,782
1963-64	253,724	714,939	33,102	286,826	181,009	21,879	202,888

(a) White flour (plain and self-raising), sharps and wheatmeal for baking.

NOTE.—One short ton (2,000 lb.) of flour is taken to be equivalent to 46.3 bushels of wheat.

(b) *Destination of Wheat.* The following table shows the exports of wheat to various countries for each of the years 1959-60 to 1963-64.

WHEAT: EXPORTS FROM AUSTRALIA

(^{'000} bushels)

Country to which exported	1959-60	1960-61	1961-62	1962-63	1963-64
China (Mainland) .. .. .	..	40,297	71,760	76,230	93,440
U.S.S.R. (Europe and Asia) .. .. .	..	..	..	23	51,045
United Kingdom	20,985	27,410	23,282	16,317	28,146
Japan	13,909	13,110	15,698	12,673	18,800
Germany, Federal Republic of	4,230	4,426	11,154	2,012	8,304
India	11,706	4,910	21,166	7,144	7,572
New Zealand	7,903	6,108	6,252	6,088	6,687
Lebanon	957	1,463	4,052	3,131	5,274
Iraq	8,809	9,852	790	..	4,876
Other	22,753	45,419	49,001	28,353	29,580
Total	91,252	152,995	203,155	151,971	253,724

(c) *Destination of Flour.* The following table shows the exports of flour to various countries for each of the years 1959-60 to 1963-64. The figures relate to exports of white flour (plain and self-raising), sharps and wheatmeal for baking.

FLOUR: EXPORTS FROM AUSTRALIA

(Short tons)

Country to which exported	1959-60	1960-61	1961-62	1962-63	1963-64
U.S.S.R. (Europe and Asia) .. .. .	..	..	..	168	133,920
Ceylon	142,354	117,590	178,538	103,503	115,273
Malaya	112,564	107,319	83,089	84,805	85,851
Philippines	3,802	1,831	2,639	10,335	51,738
United Kingdom	46,369	56,136	66,560	66,641	48,744
Singapore	36,664	41,810	52,872	51,780	47,242
Arabia, South	25,773	32,874	34,997	38,914	40,675
Fiji	28,051	28,102	30,240	29,554	37,993
Mauritius	17,686	23,738	13,468	14,011	21,279
Other	144,864	269,779	140,262	144,730	132,224
Total	558,127	679,179	602,665	544,441	714,939

(xiii) *World Area and Production of Wheat.* The figures in the following table of the world area and production of wheat by principal countries and by continents have been compiled from the statistics published by the International Wheat Council. Harvests in the northern hemisphere occur in the first of the two years mentioned in each column heading, and in the southern hemisphere at the end of that year and the beginning of the next. Harvests of the northern hemisphere countries are thus combined with those of the southern hemisphere which immediately follow; e.g., the crop harvested in the northern hemisphere in 1963 is combined with the southern hemisphere harvests which began late in 1963 and ended early in 1964.

WHEAT: AREA, PRODUCTION AND YIELD PER ACRE IN VARIOUS COUNTRIES

(Source for countries other than Australia: *World Wheat Statistics*—International Wheat Council)

Continent and country	Area			Production			Yield per acre		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
	'000 acres	'000 acres	'000 acres	mill. bus.	mill. bus.	mill. bus.	bus.	bus.	bus.
U.S.S.R. (Europe and Asia)	155,701	166,549	159,630	2,443	2,600	1,826	15.7	15.6	11.4
Europe—									
France	9,877	11,293	9,504	352	516	377	35.6	45.7	39.9
Italy	10,737	11,258	10,858	305	349	299	28.4	31.0	27.5
Spain	9,587	10,534	10,495	126	177	179	13.2	16.8	17.0
<i>Total, Europe(a)</i> ..	67,732	72,221	68,522	1,882	2,270	2,016	27.8	31.4	29.4
North and Central America—									
United States ..	51,551	43,541	45,256	1,235	1,094	1,142	23.9	25.1	25.2
Canada	25,316	26,817	27,566	283	566	723	11.2	21.1	26.2
<i>Total, North and Central America(a)</i>	79,024	72,253	74,922	1,571	1,716	1,932	19.9	23.7	25.8
Asia—									
China (Mainland)(b) ..	n.a.	60,294	59,799	661	735	801	n.a.	12.2	13.4
India	32,047	33,409	33,747	404	442	398	12.6	13.2	11.8
Turkey	19,388	19,595	19,724	262	315	372	13.5	16.1	18.9
Pakistan	11,604	12,311	12,592	141	149	155	12.2	12.1	12.3
<i>Total, Asia(a)</i> ..	c 86,289	150,166	150,659	1,805	1,999	2,015	(c) 13.3	13.3	13.4
South America—									
Argentina	10,373	8,495	13,358	187	184	298	18.1	21.7	22.3
<i>Total, South America(a)</i>	17,198	14,579	19,348	266	275	378	15.5	18.9	19.5
Oceania—									
Australia	14,723	16,469	16,474	247	307	328	16.8	18.6	19.9
<i>Total, Oceania(a)</i> ..	14,908	16,694	16,677	255	316	338	17.1	18.9	20.3
Africa	16,679	16,877	18,780	159	221	234	9.6	13.1	12.5
<i>World Total(a)</i> ..	(c) 437,531	509,339	508,538	8,381	9,397	8,739	(c) 17.6	19.3	17.7

(a) Includes allowances for any missing data for countries shown and for other producing countries not shown. (b) International Wheat Council estimate. (c) Excludes Mainland China.

(xiv) *Principal Exporting and Importing Countries.* The following table shows world exports of wheat and wheat flour (in terms of wheat) by the major wheat exporting countries, according to continents and countries of primary destination, based on statistics recently published by the International Wheat Council.

While Australia's production of wheat averages about 4 per cent. of the world's total, its exports account for a much higher proportion of the total quantities shipped. In 1963-64, for example, Australia's share of world wheat exports amounted to 14.0 per cent.

WORLD EXPORTS OF WHEAT AND WHEAT FLOUR IN TERMS OF WHEAT

(Source: World Wheat Statistics—International Wheat Council)

(Million bushels)

Year and country of primary destination	Exporting country—							Total
	United States of America	Canada	Australia	Argentina	France	Germany, Federal Republic of	Other	
1959-60	508.6	276.6	116.3	78.8	65.1	29.0	276.0	1,350.4
1960-61	660.9	342.0	183.7	71.5	57.3	30.3	223.6	1,569.3
1961-62	717.8	365.2	230.6	87.3	67.4	43.3	232.5	1,744.1
1962-63	636.8	331.2	175.9	66.4	109.4	23.1	256.1	1,598.9
1963-64(a)—								
Asia(b)—								
China (Mainland) ..	..	36.9	93.4	36.3	8.2	..	16.2	191.0
India	163.1	0.7	7.6	..	..	..	..	171.4
Japan	76.3	48.1	18.8	..	..	..	..	143.2
Pakistan	58.9	0.4	2.0	..	..	..	..	61.3
Korea, Republic of ..	25.9	0.5	1.5	..	..	..	..	27.9
Other	64.6	14.6	40.7	..	2.3	2.9	10.8	135.9
Total, Asia	388.8	101.2	164.0	36.3	10.5	2.9	27.0	730.7
Europe(b)—								
United Kingdom ..	19.2	88.3	30.1	3.2	20.2	4.6	10.1	175.7
Germany, Federal Republic of ..	14.7	36.2	8.3	9.3	5.9	..	3.6	78.0
Poland	40.5	11.9	..	0.4	13.0	1.1	4.5	71.4
Netherlands	29.9	3.6	(c)	3.5	2.6	(c)	2.2	41.8
Belgium-Luxembourg ..	8.2	15.8	..	1.1	6.8	(c)	0.8	32.7
Germany, East	4.4	..	..	0.7	1.8	..	19.8	26.7
Czechoslovakia	1.3	6.6	..	1.7	0.5	2.1	12.6	24.8
France	11.2	5.4	..	2.8	..	(c)	5.3	24.7
Switzerland	9.2	7.4	(c)	0.2	4.7	0.6	0.2	22.3
Other	47.4	28.3	9.5	7.1	13.7	12.0	14.8	132.8
Total, Europe	186.0	203.5	47.9	30.0	69.2	20.4	73.9	630.9
U.S.S.R.	63.2	208.9	56.5	0.3	5.5	14.8	19.9	369.1
Africa—								
United Arab Republic ..	68.5	..	0.4	..	..	0.8	..	69.7
Other	43.6	4.6	7.0	..	9.5	2.3	3.5	70.5
Total, Africa	112.1	4.6	7.4	..	9.5	3.1	3.5	140.2
South America—								
Brazil	46.0	..	..	25.3	..	..	5.0	76.3
Other	35.3	9.1	0.1	10.1	0.4	0.2	0.8	56.0
Total, South America ..	81.3	9.1	0.1	35.4	0.4	0.2	5.8	132.3
North and Central America	16.3	26.7	0.8	..	2.8	1.1	4.8	52.5
Oceania	0.1	0.4	9.6	..	0.6	..	..	10.7
All Other	0.9	..	0.8	..	..	..	3.9	5.6
Total, 1963-64	848.7	554.4	287.1	102.0	98.5	42.5	138.8	2,072.0

(a) Subject to revision.

(b) Excludes U.S.S.R., details for which are shown separately.

(c) Less than 50,000 bushels.

NOTE.—These particulars are based on customs clearances of the exporting countries, and relate to years ended 30th June. There is a small difference between Australian exports as shown above and those on pages 1006-7 since a slightly different factor was used by the International Wheat Council to convert flour to wheat equivalent.

2. Oats.—(i) *General.* This cereal is widely grown in all agricultural areas which have autumn, winter, and spring rainfall; it is tolerant of wet conditions and heavy soils. It has excellent feed value, and produces a higher yielding crop than other winter cereals. It needs less cultivation, but requires ample fertilizer. Oats has a variety of uses—as a pasture plant when rough sown into stubble or heavy clover pastures, as silage if cut before maturity, as a hay crop when mown and baled or cut for chaff, or as a grain when stripped (the stubble then being grazed off). The grain is sold on a “fair average quality” basis through voluntary pools in Victoria, South Australia, and Western Australia. Excessive bulk in the husk and a fluctuating export price limit the extent of oversea trade.

(ii) *Area, Production and Yield per Acre.* Oats is usually next in importance to wheat among the grain crops cultivated in Australia. However, while wheat grown for grain in 1963–64 accounted for 51 per cent. of the area of all crops, oats grown for grain represented only 11 per cent. The area, production and yield per acre of oats in each State are shown below for the years 1959–60 to 1963–64 in comparison with the averages for the three-year periods ended 1938–39, 1948–49 and 1958–59.

OATS FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938–39	297	478	8	338	425	26	(a)	1,572
1948–49	515	548	21	282	484	17	1	1,868
1958–59	756	735	29	445	1,178	20	(a)	3,163
Year—								
1959–60	567	673	22	506	1,240	22	(a)	3,030
1960–61	917	835	19	512	1,330	23	1	3,637
1961–62	713	774	27	324	1,231	27	1	3,097
1962–63	708	932	27	416	1,177	31	1	3,292
1963–64	794	910	31	501	1,125	30	1	3,392

PRODUCTION ('000 BUSHELS) (b)

Average for three years ended—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1938–39	4,065	4,781	65	2,575	4,159	810	6	16,461
1948–49	7,166	9,757	324	3,606	5,355	406	7	26,621
1958–59	12,619	14,140	547	7,911	15,606	409	10	51,242
Year—								
1959–60	11,125	12,701	394	2,504	19,599	512	6	46,841
1960–61	21,466	20,666	285	11,478	21,810	391	11	76,107
1961–62	13,225	16,312	412	4,391	20,187	587	16	55,130
1962–63	16,035	27,042	545	5,770	18,572	828	17	68,809
1963–64	19,811	19,885	673	9,149	17,850	844	22	68,234

YIELD PER ACRE (BUSHELS) (b)

Average for three years ended—	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
1938–39	13.7	10.0	8.1	7.6	9.8	3.1	24.3	10.5
1948–49	13.9	17.8	15.4	12.8	11.1	2.4	11.8	14.3
1958–59	16.7	19.2	18.9	17.8	13.3	20.5	22.5	16.2
Year—								
1959–60	19.6	18.9	18.4	5.0	15.8	23.2	24.8	15.5
1960–61	23.5	24.7	15.0	22.4	16.4	16.8	20.9	20.9
1961–62	18.5	21.1	15.4	13.6	16.4	21.8	18.7	17.8
1962–63	22.7	29.0	20.0	13.9	15.8	26.6	25.6	20.9
1963–64	24.9	21.8	21.7	18.3	15.9	27.8	19.8	20.1

(a) Less than 500 acres.

(b) 40 lb. per bushel.

Graphs showing the area sown to oats and production of oats in Australia appear on pages 993 and 995 of Year Book No. 49, and a map showing the distribution of areas growing oats for grain throughout Australia in 1962-63 appears on page 1015 of Year Book No. 50.

The area sown to oats from 1900-01 is shown in the graph on page 1003.

In 1963-64 the production of oats was 68,234,000 bushels, 18,671,000 bushels (22 per cent.) below the record harvest of 86,905,000 bushels in 1958-59.

The yield per acre in 1963-64 was 20.1 bushels, compared with the record yield of 21.9 bushels per acre established in 1958-59. The lowest yield recorded was 4.4 bushels per acre in the abnormally dry season of 1944-45.

(iii) *Price of Oats.* The average wholesale price in the Melbourne market for oats of good milling quality was 7s. 6d. a bushel in 1963-64, compared with 7s. 7½d. in 1962-63.

(iv) *Value of Oat Crop.* The estimated gross value of the oat crop in each State for the 1963-64 season and the value per acre were as follows.

OATS: VALUE OF CROP, 1963-64

Particulars	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value £'000	8,090	6,924	336	2,609	6,546	320	8	24,833
Value per acre .. £	10.2	7.6	10.8	5.2	5.8	10.5	7.1	7.3

(v) *Exports.* The production of oats in Australia is sufficient to allow for an export trade which fluctuates with the incentive offered by overseas prices. The quantities and values of Australian-produced oats exported from Australia during the years 1959-60 to 1963-64 are shown below.

OATS: EXPORTS, AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Quantity '000 bus.	11,969	19,005	19,064	17,744	16,673
Value £A.'000 f.o.b.	5,031	6,854	7,479	7,076	6,311

In 1963-64 the principal countries of destination were China (Mainland) (5,515,000 bushels), the Federal Republic of Germany (4,732,000 bushels), the Netherlands (3,351,000 bushels), and Italy (766,000 bushels). Imports of oats into Australia are not recorded separately.

(vi) *Oatmeal and Other Oat Products.* In 1963-64 the production of oatmeal was 14,948 tons for porridge and 26,074 tons for other purposes. This was equivalent to about 4,594,000 bushels of oats.

(vii) *World Production.* The world's production of oats for the year 1963, according to figures issued by the United States Department of Agriculture, amounted to 3,200 million bushels, harvested from 78.6 million acres, resulting in an average yield of 40.7 bushels an acre. This compared with an estimated production in the previous year of 3,375 million bushels from an area of 83.5 million acres and an average yield of 40.4 bushels an acre.

3. **Barley.**—(i) *General.* This cereal contains two main groups of varieties: 2-row and 6-row. The former is generally, but not exclusively, preferred for malting purposes.

Barley was formerly stubble-sown, but is now grown principally on pasture land worked up early in the year of sowing. In this way it forms an important phase in the rotation of the land. Like oats, it may also be sown for fodder production or for grain. When sown for fodder, sowing may take place either early or late in the season, as it has a short growing period. It may thus provide grazing or fodder supplies when other sources are not available. Barley grain may be crushed to meal for stock (especially pigs) or sold for malting. Crops sown for malting purposes require well-worked, weed-free paddocks of even soil, and are thus restricted to specific districts.

The main barley-growing areas in Australia are situated in Victoria (Mallee, North Wimmera, and Geelong) and South Australia (Murry-Mallee, Eyre and Yorke Peninsulas). In Western Australia it is grown in the higher rainfall areas on the western edge of the wheat belt.

(ii) *Barley Boards.* The bulk of the barley crop in the various States is acquired and marketed by grower-controlled boards. Pooled returns from sales are distributed to growers at standard rates for the individual grades and varieties delivered. The Victorian and South Australian crops are marketed by the Australian Barley Board (a joint board established by the two State Governments), and the Queensland and Western Australian Barley Boards handle the crops of their respective States.

(iii) *Australian Barley Board Operations.* Particulars of the proportion of barley production which was received by the Australian Barley Board (for Victoria and South Australia), together with details of quantity sold, advances and total payments to growers, are presented 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
			s.	d.	
	'000 bushels	'000 bushels			£'000
No. 21 (1959-60 Crop)	11,773	11,797	10	0 51	4,904
" 22 (1960-61 ")	44,624	44,680	9	3 26	16,989
" 23 (1961-62 ")	20,081	20,059	11	7 28	9,707
" 24 (1962-63 ")	17,195	17,285	11	6 76	8,333
" 25 (1963-64 ")	23,145	23,189	(b) 11	0 00	10,248

(a) Includes surplus or shortage in out-turn, except for No. 25 Pool for which the surplus has not yet been ascertained. (b) As at 31st January, 1965. At that date it was estimated that the amount still to be paid to growers was 8.026d. per bushel.

(iv) *Area, Production and Yield per Acre.* There was a substantial increase in the area of barley sown for grain (particularly in Western Australia and Queensland) in the years up to 1960-61, and in that year the area sown reached the record level of 2,830,000 acres. However, the area sown in 1963-64, 2,013,000 acres, was 29 per cent. less than the area in 1960-61. The production of barley for grain in 1963-64, 43,395,000 bushels, although 10 per cent. more than production in 1962-63, was 36 per cent. less than the record production of 67,970,000 bushels in 1960-61. The area, production and yield per acre of barley for grain in the several States for the years 1959-60 to 1963-64, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

BARLEY FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA ('000 ACRES)								
Average for three years ended—								
1938-39 ..	13	138	10	391	53	8	(a)	613
1948-49 ..	23	166	18	587	65	7	(a)	866
1958-59 ..	73	354	184	1,255	324	8	..	2,198
Year—								
1959-60 ..	118	278	260	1,290	421	12	..	2,379
1960-61 ..	190	309	219	1,556	541	15	..	2,830
1961-62 ..	201	225	177	1,271	490	19	..	2,383
1962-63 ..	221	194	150	1,053	390	19	..	2,027
1963-64—								
2-row ..	127	180	158	1,077	66	13	..	1,621
6-row ..	85	10	18	46	233	(a)	..	392
Total ..	212	190	176	1,123	299	13	..	2,013

PRODUCTION ('000 BUSHELS)(b)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
PRODUCTION ('000 BUSHELS)(b)								
Average for three years ended—								
1938-39 ..	197	2,174	135	6,816	660	252	(c)	10,234
1948-49 ..	316	3,149	375	11,964	748	194	(c)	16,746
1958-59 ..	1,463	7,192	4,673	29,740	4,239	267	..	47,574
Year—								
1959-60 ..	2,581	5,593	6,650	11,857	7,080	418	..	34,179
1960-61 ..	4,786	7,718	4,393	42,233	8,496	344	..	67,970
1961-62 ..	4,137	4,654	3,532	21,292	7,282	607	..	41,504
1962-63 ..	5,331	5,469	4,088	18,004	6,056	631	..	39,579
1963-64—								
2-row ..	3,195	3,833	4,675	23,420	935	406	..	36,464
6-row ..	2,156	192	516	917	3,142	8	..	6,931
Total ..	5,351	4,025	5,191	24,337	4,077	414	..	43,395

YIELD PER ACRE (BUSHELS)(b)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
YIELD PER ACRE (BUSHELS)(b)								
Average for three years ended—								
1938-39 ..	15.2	15.7	13.5	17.4	12.5	31.5	52.3	16.7
1948-49 ..	13.7	19.0	20.8	20.4	11.5	27.7	19.5	19.3
1958-59 ..	20.0	20.3	25.4	23.7	13.1	33.4	..	20.7
Year—								
1959-60 ..	21.8	20.1	25.6	9.2	16.8	33.8	..	14.3
1960-61 ..	25.3	25.0	20.0	27.1	15.7	22.5	..	24.0
1961-62 ..	20.6	20.6	20.0	16.8	14.8	32.4	..	17.4
1962-63 ..	24.2	28.1	27.3	17.1	15.5	31.9	..	19.5
1963-64—								
2-row ..	25.2	21.3	29.6	21.7	14.2	30.0	..	22.5
6-row ..	25.5	18.7	28.5	20.0	13.5	30.7	..	17.7
Total ..	25.3	21.2	29.5	21.7	13.6	30.0	..	21.6

(a) Less than 500 acres.

(b) 50 lb. per bushel.

(c) Less than 500 bushels.

For Australia, 81 per cent. of the area of barley for grain in 1963-64 was sown with 2-row barley, while the remainder consisted of 6-row varieties. The proportion, however, varied considerably in the several States. The utilization of barley during the season ended November, 1964, was as follows:—exports, 17,263,000 bushels; malting and distilling, 10,500,000 bushels; pearl barley, 136,000 bushels; seed and stock feed, 12,080,000 bushels.

The following table sets out the acreage and production of 2- and 6-row barley in Australia during the seasons 1959-60 to 1963-64 and the averages for the three years ended 1938-39, 1948-49 and 1958-59.

BARLEY, 2- AND 6-ROW: AREA AND PRODUCTION, AUSTRALIA

Period	Area ('000 acres)			Production ('000 bushels)(a)			Yield per acre (bushels)(a)		
	2-row	6-row	Total	2-row	6-row	Total	2-row	6-row	Total
Average for three years ended—									
1938-39 ..	523	90	613	8,963	1,271	10,234	17.1	14.1	16.7
1948-49 ..	769	97	866	15,142	1,604	16,746	19.7	16.5	19.3
1958-59 ..	1,809	389	2,198	41,633	5,941	47,574	23.0	15.3	20.7
Year—									
1959-60 ..	(b)1,868	(b) 499	2,379	b 25,676	(b)8,085	34,179	(b) 13.7	(b) 16.2	14.3
1960-61 ..	(b)2,157	(b) 658	2,830	b 55,691	b 11,935	67,970	(b) 25.8	(b) 18.1	24.0
1961-62 ..	(b)1,777	(b) 587	2,383	b 31,739	(b)9,158	41,504	(b) 17.9	(b) 15.6	17.4
1962-63 ..	1,553	474	2,027	31,370	8,209	39,579	20.2	17.3	19.5
1963-64 ..	1,621	392	2,013	36,464	6,931	43,395	22.5	17.7	21.6

(a) 50 lb. per bushel.

(b) Excludes Tasmania.

A graph showing the production of barley in Australia since 1935-36 appears on page 995 of Year Book No. 49, and a map showing the distribution of barley growing areas throughout Australia in 1962-63 appears on page 1014 of Year Book No. 50.

(v) *Prices.* The average wholesale price for 2-row English malting barley in the Melbourne market during 1962-63 and 1963-64 was 15s. 1d.

(vi) *Value of Barley Crop.* The estimated gross value of the barley crop in each State for the 1963-64 season and the value per acre are shown in the following table.

BARLEY FOR GRAIN: VALUE OF CROP, 1963-64

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value ..	£'000	3,320	1,901	2,838	13,199	2,188	296	23,742
Value per acre ..	£	15.7	10.0	16.1	11.8	7.3	21.5	11.8

(vii) *Exports.* South Australia was the principal exporting State in 1963-64, and Japan, the United Kingdom, the Netherlands, Italy and the United States of America were the principal countries to which barley was shipped. Particulars of exports of Australian produced barley for the years 1959-60 to 1963-64 are shown in the following table.

BARLEY: EXPORTS, AUSTRALIA

Particulars		1959-60	1960-61	1961-62	1962-63	1963-64
Quantity ..	'000 bus.	25,013	33,900	31,435	10,322	17,756
Value ..	£A.'000 f.o.b.	11,541	14,329	14,954	5,229	9,149

Imports of barley into Australia are not recorded separately, but are considered to be negligible.

In addition to exports of barley grain, there are also exports of Australian pearl and Scotch barley, the total for 1963-64 amounting to 355,770 lb., valued at £9,294, the main country of consignment being Malaya.

(viii) *Malt.* (a) *Production.* Details of the quantity of grain used and the production of barley malt in the years 1959-60 to 1963-64 are given in the following table.

BARLEY MALT: GRAIN USED AND MALT PRODUCED, AUSTRALIA

Particulars		1959-60	1960-61	1961-62	1962-63	1963-64
Grain used ..	'000 bus.(a)	8,535	9,017	10,301	10,338	12,067
Malt produced ..	'000 bus.(b)	8,435	9,015	10,207	10,429	11,989

(a) 50 lb. per bushel.

(b) 40 lb. per bushel.

(b) *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 of Australian produce amounting to 2,980,000 bushels (value £2,883,000) and 4,076,000 bushels (value £3,904,000) were recorded in 1962-63 and 1963-64 respectively.

(ix) *World Production.* In comparison with the barley production of other countries that of Australia is extremely small. The main producers in 1963 were the United States of America, France, and the United Kingdom. China is also normally a major producer, but details for 1963 are not available. Australian production in that year was approximately one per cent. of the world total.

According to estimates made by the United States Department of Agriculture, world production of barley in the year 1963 amounted to 4,070 million bushels harvested from 163.0 million acres, equivalent to a yield per acre of 25.0 bushels. This compared with the production of 3,910 million bushels in the previous year from 148.2 million acres, and a yield per acre of 26.4 bushels.

4. *Sorghum for Grain.*—Grain sorghum is a summer-growing annual palatable to stock, and more drought- and frost-resistant than maize. It requires a summer rainfall. The growing of this crop for grain on an extensive scale is a comparatively recent development in Australia and, as with other cereals, operations are highly mechanized.

The climatic conditions of Queensland and northern New South Wales are particularly suited to the growing of sorghum, and development has so far been restricted mainly to these areas, more particularly to Queensland. The grain produced is fed to livestock and has become an important source for supplementing other coarse grains for this purpose. 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).

In Queensland the growing of grain sorghum is concentrated in the Burnett, Dawson-Callide areas and in the central highlands. In New South Wales the north western slopes and Murrumbidgee Irrigation Area are the main areas. This crop is also suitable for the semi-tropical areas of the Northern Territory and the Kimberleys.

Particulars of the area and production of sorghum grown for grain in recent years are given in the following table.

GRAIN SORGHUM: AREA, PRODUCTION AND YIELD PER ACRE

Season	Area			Production(a)			Yield per acre(a)		
	N.S.W.	Q'land	Aust. (b)	N.S.W.	Q'land	Aust. (b)	N.S.W.	Q'land	Aust. (b)
	acres	acres	acres	'000 bushels	'000 bushels	'000 bushels	bushels	bushels	bushels
1959-60 ..	51,195	220,094	271,553	1,452	6,630	8,086	28.4	30.1	29.8
1960-61 ..	41,145	213,761	255,109	577	5,418	5,996	14.0	25.3	23.5
1961-62 ..	70,134	292,397	362,666	1,308	8,054	9,361	18.6	27.5	25.8
1962-63 ..	80,255	311,068	391,334	1,891	8,361	10,252	23.6	26.9	26.2
1963-64 ..	61,203	303,857	365,708	1,269	6,612	7,889	20.7	21.8	21.6

(a) 60 lb. per bushel.

(b) Includes small areas sown and quantities produced in other States.

5. *Maize for Grain.*—(i) *General.* Like sorghum, maize is a summer cereal demanding specific soil and climatic conditions. It is grown for grain, chiefly in the south-east and Atherton Tablelands of Queensland and the north coast and northern tablelands of New South Wales. The area so cropped in these States during the 1963-64 season was 98 per cent. of the total for Australia. On the Atherton Tablelands in Queensland, and generally in New South Wales and Victoria, it provides a stock feed for dairy cattle, fat stock and pigs. In times of drought it is also used as a sheep feed. In all States except South Australia, however, this crop is grown to some extent for green fodder and silage, particularly in connexion with the dairying industry. There is practically no difference between grain and fodder varieties.

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 has led to a parallel development in the specialized industry of growing hybrid strains for seed.

(ii) *Area, Production and Yield per Acre.* The area, production and yield per acre of maize for grain in each State for the years 1959-60 to 1963-64 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are given in the following table. Separate details for hybrid and other varieties are shown for all States except Western Australia for 1963-64.

MAIZE FOR GRAIN: AREA, PRODUCTION AND YIELD PER ACRE

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
AREA (ACRES)								
Average for three years ended—								
1938-39 ..	121,178	19,826	179,641	20	16	..	6	320,687
1948-49 ..	91,612	7,511	122,263	1	87	..	1	221,481
1958-59 ..	57,662	3,629	120,417	(a)	13	6	2	(b)181,724
Year—								
1959-60 ..	51,738	3,383	129,803	(a)	4	..	..	(b)184,928
1960-61 ..	49,269	2,985	132,382	(a)	6	..	..	(b)184,642
1961-62 ..	51,434	3,309	155,780	..	17	..	..	210,540
1962-63 ..	46,537	3,634	159,285	(a)	34	..	..	(b)209,490
1963-64—								
Hybrid ..	38,422	3,108	130,117	..	(c)	..	..	(b)171,647
Other ..	6,257	291	36,481	(a)	85	..	..	(b) 43,114
Total ..	44,679	3,399	166,598	(a)	85	..	..	(b)214,761

PRODUCTION ('000 BUSHEL)(d)								
Average for three years ended—								
1938-39 ..	3,204	665	3,170	1	(e)	..	(e)	7,040
1948-49 ..	2,446	314	2,960	(e)	1	(e)	(e)	5,721
1958-59 ..	2,347	175	3,428	(a)	(e)	(e)	(e)	(b) 5,950
Year—								
1959-60 ..	2,485	180	4,060	(a)	(e)	..	..	(b) 6,725
1960-61 ..	2,227	171	3,847	(a)	(e)	..	..	(b) 6,245
1961-62 ..	2,349	192	4,766	..	(e)	..	..	7,307
1962-63 ..	2,145	216	5,096	(a)	(e)	..	..	(b) 7,457
1963-64—								
Hybrid ..	1,868	195	3,529	..	(c)	..	..	(b) 5,592
Other ..	221	9	899	(a)	1	..	..	(b) 1,130
Total ..	2,089	204	4,428	(a)	1	..	..	(b) 6,722

YIELD PER ACRE (BUSHEL)(d)								
Average for three years ended—								
1938-39 ..	26.4	33.5	17.6	43.7	12.3	..	10.2	22.0
1948-49 ..	26.7	41.8	24.2	6.7	7.2	14.8	13.7	25.8
1958-59 ..	40.7	48.2	28.5	(a)	16.8	30.0	..	(b) 32.7
Year—								
1959-60 ..	48.0	53.3	31.3	(a)	25.5	..	..	(b) 36.4
1960-61 ..	45.2	57.3	29.1	(a)	1.0	..	..	(b) 33.8
1961-62 ..	45.7	58.0	30.6	..	21.9	..	..	34.7
1962-63 ..	46.1	59.5	32.0	(a)	12.2	..	..	(b) 35.6
1963-64—								
Hybrid ..	48.6	62.6	27.1	..	(c)	..	..	(b) 32.6
Other ..	35.3	30.3	24.6	(a)	18.5	..	..	(b) 26.2
Total ..	46.8	59.8	26.6	(a)	18.5	..	..	(b) 31.3

(a) Not available for publication. (b) Incomplete; see footnote (a). (c) Included in Other maize. (d) 56 lb. per bushel. (e) Less than 500 bushels.

The average yield for Australia for the five-year period ended 1963-64 was 34.3 bushels per acre. Among principal producing countries, the United States of America averaged 67.3 bushels per acre and Italy 49.3 bushels for 1963.

(iii) *Price of Maize.* The average wholesale price of maize in the Melbourne market in 1963-64 was 18s. 9d. a bushel compared with 16s. 10½d. in 1962-63.

(iv) *Value of Crop.* The estimated gross value of the crop in each State for the 1963-64 season and the value per acre were as follows.

MAIZE FOR GRAIN: VALUE OF CROP, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Aggregate value .. £'000	1,793	136	3,252	(a)	1	..	5,182
Value per acre .. £	40.1	40.0	19.5	(a)	11.8	..	24.1

(a) Not available for publication.

(v) *Exports of Maize and Maize Products.* Details of exports of Australian-produced maize for the five years ended 1963-64 are shown on the next page.

MAIZE: EXPORTS, AUSTRALIA

Particulars			1959-60	1960-61	1961-62	1962-63	1963-64
Quantity	..	.. '000 bus.	22	3	2	552	14
Value	..	.. £A.'000 f.o.b.	15	4	3	240	14

The increase in exports of maize in 1962-63 was due principally to the shipment of 474,000 bushels to Japan, a country to which there had been no previous exports.

Imports of maize into Australia are not recorded separately, but are considered to be negligible.

(vi) *World Production.* According to figures issued by the United States Department of Agriculture, world production of maize in the year 1963 amounted to 8,055 million bushels, harvested from 247 million acres, giving an average yield per acre of 32.6 bushels. This compared with production in the previous year of 7,510 million bushels from 241 million acres, and an average yield of 31.2 bushels per acre.

The United States of America is the most important maize-producing country in the world, and during the three years ended 1963 the area sown to maize in that country averaged 59 million acres or 24 per cent. of the world total. During the same period production averaged 3,781 million bushels or about 50 per cent. of the world total.

6. Rice.—(i) *General.* The principal rice-growing areas of the world are confined almost entirely to Asia, although limited quantities are grown 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 surplus became available for export. The acreage sown in this area is controlled, as the quantity of water available is limited.

Until recent years rice-growing in Australia was practically confined to the Murrumbidgee Irrigation Area in New South Wales. However, there is now some experimental rice-growing in Western Australia and the Northern Territory, but particulars are not available for publication. Small quantities have also been produced in Queensland in some years.

(ii) *Area, Production and Exports.* Details relating to area, production, and Australian-produced exports for the years 1959-60 to 1963-64 are shown in the following table.

RICE: AREA, PRODUCTION AND EXPORTS, AUSTRALIA(a)

Season	No. of holdings growing rice(b)	Area	Production (paddy rice)		Average yield (paddy) per acre	Exports(c)	
			Quantity	Gross value(d)		Un-cleaned	Cleaned
			'000 bushels (e)	£'000		bushels	cwt.	cwt.
1959-60 ..	852	48,950	6,732	4,450	137.5	265,449	1,055,821
1960-61 ..	787	46,117	6,001	4,125	130.1	359,440	876,175
1961-62 ..	878	50,185	7,045	3,832	140.4	280,540	748,920
1962-63 ..	956	54,929	7,129	3,838	129.8	239,820	905,580
1963-64 ..	1,033	59,398	7,455	3,956	125.5	198,820	918,340

(a) Particulars of area and production for Western Australia and Northern Territory are not available for publication, and are excluded. (b) Twenty acres or more in area. (c) Imports into Australia are not recorded separately, but are considered to be negligible. (d) Excludes the value of straw. (e) 42 lb. per bushel.

The bulk of Australia's exports of rice in 1963-64 was shipped to Papua and New Guinea, the Pacific Islands and the United Kingdom.

§ 4. Fodder Crops

1. Hay.—(i) *General.* Because of the comparatively unreliable nature of rainfall in Australian agricultural and pastoral areas, hay as a fodder crop occupies a position of importance. In 1963-64 hay represented 8 per cent. of the total area of crops.

Up to 1946-47 hay, in terms of area, was second only to wheat for grain, but in more recent years it has been supplanted by green fodder (for feeding-off) and oats for grain.

Hay is generally considered to include cereal hay, meadow hay and lucerne hay. Cereal crops cut early for hay contain a higher level of protein than those cut late.

In most European countries hay is made almost entirely from meadow pastures, but in Australia a very large proportion is made from cereals and lucerne, the hay being stored loose, in sheaves or baled. Because of its bulk, hay is usually produced for individual or local use, except in times of drought, when large inter-regional transfers may take place.

Meadow hay requires greater care in preparation than cereal hay. Baling must be spaced carefully behind mowing to ensure that the bales are dry enough to prevent moulding, but not so dry as to result in excessive leaf loss. The leaves contain the bulk of the protein. Lucerne hay requires similar attention.

(ii) *Area, Production and Yield per Acre.* For a number of reasons, particularly the variations in the relative prices of grain and hay and whether the season is favourable or not for a grain crop, the area of hay is apt to fluctuate considerably. The area, production and yield per acre of hay of all kinds in several States during the years 1959-60 to 1963-64 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown below.

HAY: AREA, PRODUCTION AND YIELD PER ACRE

Season	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
AREA ('000 ACRES)									
Average for three years ended—									
1938-39 ..	859	1,122	67	540	439	81	..	3	3,111
1948-49 ..	516	642	66	287	245	93	..	3	1,852
1958-59 ..	556	978	64	336	305	129	(a)	4	2,372
Year—									
1959-60 ..	482	848	81	245	319	127	(a)	3	2,105
1960-61 ..	750	1,286	84	393	284	171	1	4	2,973
1961-62 ..	594	922	95	209	294	157	1	2	2,274
1962-63 ..	587	1,251	87	287	340	165	1	2	2,720
1963-64 ..	584	1,138	80	358	289	150	1	2	2,602
PRODUCTION ('000 TONS)									
Average for three years ended—									
1938-39 ..	975	1,181	94	591	434	120	..	3	3,398
1948-49 ..	618	987	119	396	275	153	..	4	2,552
1958-59 ..	752	1,712	129	476	377	248	(b)	7	3,701
Year—									
1959-60 ..	779	1,351	179	207	433	221	(b)	7	3,177
1960-61 ..	1,243	2,338	167	616	380	326	1	8	5,079
1961-62 ..	923	1,585	212	286	396	286	(b)	5	3,693
1962-63 ..	965	2,376	197	406	453	313	1	6	4,717
1963-64 ..	1,006	1,947	184	488	389	249	1	5	4,269
YIELD PER ACRE (TONS)									
Average for three years ended—									
1938-39 ..	1.14	1.05	1.40	1.09	0.99	1.48	..	1.00	1.69
1948-49 ..	1.20	1.54	1.80	1.38	1.12	1.65	..	1.33	1.38
1958-59 ..	1.35	1.75	2.02	1.42	1.24	1.92	0.54	1.75	1.56
Year—									
1959-60 ..	1.62	1.59	2.21	0.84	1.36	1.75	0.91	2.15	1.51
1960-61 ..	1.66	1.82	1.98	1.57	1.34	1.91	0.78	2.12	1.71
1961-62 ..	1.55	1.72	2.22	1.37	1.35	1.82	0.76	2.17	1.62
1962-63 ..	1.64	1.90	2.27	1.41	1.33	1.89	1.21	2.38	1.73
1963-64 ..	1.72	1.71	2.30	1.37	1.35	1.67	1.02	1.71	1.64

(a) Less than 500 acres.

(b) Less than 500 tons.

A graph showing the area under hay since 1900-01 appears on page 1003 of this Year Book.

(iii) *Varieties Grown.* Information regarding areas cut for hay in 1963-64 is given in the following table.

HAY: AREA OF VARIOUS KINDS GROWN, 1963-64
(Acres)

State or Territory	Oaten	Lucerne	Wheaten	Other	Total
New South Wales	63,744	172,771	57,039	290,083	583,637
Victoria	168,528	81,394	28,273	860,289	1,138,484
Queensland	2,965	63,939	6,384	6,796	80,084
South Australia	140,666	38,407	40,772	137,747	357,592
Western Australia	121,316	1,462	31,951	133,928	288,657
Tasmania	19,233	1,064	447	128,896	149,640
Northern Territory .. ..	..	..	..	993	993
Australian Capital Territory..	590	1,283	91	618	2,582
Australia	517,042	360,320	164,957	1,559,350	2,601,669

For all States and the Territories combined, the proportions of the areas sown to the principal kinds of hay in 1963-64 were 19.9 per cent. for oaten, 13.8 per cent. for lucerne, 6.3 per cent. for wheaten, and 60.0 per cent. for other hay.

(iv) *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 1963-64 season.

HAY: VALUE OF CROP, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value .. £'000	10,614	19,186	3,315	4,208	4,354	1,993	43	43,731
Value per acre .. £	18.2	16.9	41.4	11.8	15.1	13.3	16.7	16.8

(a) Includes £18,000 in the Northern Territory.

(v) *Farm Stocks of Hay.* Particulars of stocks of hay held on farms at 31st March in each year 1960 to 1964 are given in the table below.

STOCKS OF HAY HELD ON FARMS
(Tons)

31st March—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust. (a)
1960 ..	1,535,252	1,766,857	203,675	304,227	292,086	255,471	10,778	4,368,346
1961 ..	1,704,486	2,640,249	155,209	648,267	258,859	327,696	12,338	5,747,104
1962 ..	1,775,977	1,847,725	231,335	496,564	254,377	305,108	12,241	4,923,327
1963 ..	1,609,639	2,197,725	194,948	470,202	273,500	333,650	6,896	5,086,560
1964 ..	1,610,063	1,911,475	179,422	547,354	274,812	276,650	5,085	4,804,861

(a) Excludes the Northern Territory, for which particulars are not available.

(vi) *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 among Australian exports. During 1963-64 exports amounting to 2,743 tons, valued at £56,368, were made, principally to Singapore, Malaya, and Hong Kong. There were no imports of hay in 1963-64.

2. *Green Fodder.*—(i) *General.* Considerable areas are devoted to the growing of green fodder, usually as an adjunct to cereal operations or as a minor crop in irrigation areas. The areas recorded in respect of green fodder include areas of crops cut for feeding to live stock as green fodder or ensilage, together with areas fed off to stock as green forage.

Statistics of green fodder exclude areas which may have been sown with the intention of harvesting for grain, but which, owing to adverse 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 sugar cane are also used in this way. In 1963-64 the area under green fodder (4,876,788 acres) consisted of oats (2,035,327 acres), lucerne (1,933,660 acres), wheat (201,294 acres), barley (144,010 acres), sorghum (113,534 acres), maize (32,919 acres), rye (15,788 acres), sugar cane (2,551 acres), and other crops (397,705 acres). Particulars concerning the area of green fodder in the several States during each of the years 1959-60 to 1963-64 are given in the following table.

GREEN FODDER: AREA
(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1959-60 ..	1,578,759	422,237	725,155	595,713	708,793	62,229	220	968	4,094,074
1960-61 ..	1,691,408	430,920	874,702	743,538	606,039	59,563	138	1,247	4,407,555
1961-62 ..	1,829,867	539,020	864,461	787,388	622,067	57,000	558	1,197	4,701,558
1962-63 ..	1,900,130	477,432	912,018	927,807	667,890	64,940 (a)	314	1,106	4,951,637
1963-64 ..	1,973,637	430,781	1,010,570	971,594	417,519	71,004 (a)	422	1,261	4,876,788

(a) Not comparable with statistics prior to 1962-63.

In the 1963-64 season green fodder ranked second to wheat in area of crops throughout Australia. A graph showing the area sown to green fodder appears on page 1003 of this Year Book.

(ii) *Value of Green Fodder Crops.* The value of these crops is variously estimated in the several States, but the Australian total, excluding Western Australia, may be taken as approximately £9,600,000 for the 1962-63 season and £10,500,000 for the 1963-64 season.

3. *Ensilage.*—(i) *General.* Ensilage is produced from herbage compacted tightly to exclude air and kept from contact with air and extraneous moisture to avoid moulding. Fermentation results in a dark mass of high protein and lactic acid content. Molasses may be added to hasten fermentation. Ensilage may be stored in pits or stacks or in constructed silos.

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.

(ii) *Production and Stocks.* Information regarding production and farm stocks of ensilage for the years ended 31st March, 1960 to 1964, is given in the following table.

ENSILAGE: PRODUCTION AND FARM STOCKS
(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Production during—								
1959-60 season ..	202,821	281,566	60,129	19,744	73,265	46,933	90	684,548
1960-61 ..	256,459	303,198	51,198	100,727	50,911	72,344	80	834,917
1961-62 ..	196,625	261,884	73,838	52,451	51,364	77,781	700	714,643
1962-63 ..	210,653	295,914	63,489	64,206	48,806	68,117	290	751,475
1963-64 ..	222,126	252,837	53,160	88,183	37,238	43,760	270	697,574
Farm stocks at—								
31st March, 1960 ..	404,777	201,584	136,317	21,773	51,807	50,671	330	867,259
.. .. 1961 ..	499,244	231,315	117,749	79,269	43,518	46,570	80	1,017,745
.. .. 1962 ..	567,801	181,383	139,788	68,614	37,224	60,157	1,305	1,056,272
.. .. 1963 ..	602,585	263,440	146,286	63,315	37,415	61,110	1,768	1,175,919
.. .. 1964 ..	565,457	185,115	139,691	78,997	29,709	43,554	1,108	1,043,631

§ 5. Industrial Crops

1. **Sugar Cane.**—(i) *General.* The growing of sugar cane is restricted to those coastal areas in Queensland and northern New South Wales which have suitable climatic and soil conditions. Considerable areas in more southern coastal districts of New South Wales previously devoted to this crop are now used for dairying owing to the uncertainty of rainfall.

The Bureau of Sugar Experiment Stations in Queensland and the Colonial Sugar Refining Company Limited render useful service to the sugar industry by advocating and demonstrating better methods of cultivation and the more scientific use of fertilizers, lime, etc., and by producing and distributing improved varieties of cane.

(ii) *Sugar Agreements and Marketing Arrangements.* (a) *In Australia.* In Year Book No. 37, pages 940-1, a summary was given of 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 is for the period from 1st September, 1961 to 31st August, 1967. The Commonwealth Government appointed a Committee of Enquiry in 1960 to investigate all facets of the sugar and canned fruits industries. The Committee presented its report, publication of which was restricted to a summary of conclusions and recommendations, in 1961. There was no variation of the consequent agreement.

Production of sugar is regulated under the terms of the agreement. At the mill level, control is exerted by means of seasonal "mill peaks" in respect of Queensland mills and a proportionate allowance for New South Wales mills. The combined total equals the estimated requirements of the domestic and export markets. Farm production is regulated according to the limit on the mill which the farm supplies.

Up to the end of 1961 exports were limited by the export quota provisions of the International Sugar Agreement, but these provisions have not been operative since then (*see (b) below*).

The Queensland Government acquires the whole of the sugar production of that State and of 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.

In 1963 a Queensland Government Committee of Enquiry recommended that the industry should expand production to 2.26 million tons (of 94 net titre sugar) by 1965-66, of which New South Wales might produce 132,000 tons. This recommendation has been implemented.

(b) *International Sugar Agreement.* The International Sugar Agreement of 1937 was superseded by the International Sugar Agreements of 1953 and 1958. Details of the 1937 and 1953 Agreements were given in Year Books No. 40, pages 881-2, and No. 48, page 936, respectively.

The 1958 Agreement, which came into operation on 1st January, 1959, established basic export quotas for exporting countries. The British Commonwealth was allocated a total quota, the distribution of which remained a matter for internal arrangement by the countries and territories concerned (*see (c)*, p. 1022). The Australian quota for 1960 and 1961 was approximately 651,000 tons per annum.

The quota and price provisions of the International Sugar Agreement were subject to review before 31st December, 1961. A conference in Geneva in 1961 failed to reach agreement on quota provisions for 1962 and 1963. The conference adjourned with a resolution that it be reconvened if circumstances became favourable for an agreement on quotas.

The principal practical effect of the adjournment of the 1961 conference was that former export limitations on participating exporting countries, including Australia, did not apply until such time as agreement on this question was again reached at a resumed session of that conference, or at a newly convened conference.

The question of convening a United Nations conference to consider re-introduction of an agreement with quota provisions was deferred at a meeting of the International Sugar Council in April, 1963. The 1958 Agreement, in its restricted form, was extended by protocol until 31st December, 1965. The report of a preparatory committee appointed to study the basis and possible framework of a new agreement was considered at a Council meeting in November, 1964, when the question of convening a United Nations conference was again deferred.

(c) *British Commonwealth Sugar Agreement.* On 1st January, 1953, the British Commonwealth Sugar Agreement became effective. This agreement, which has been extended to 1972, provides for Australia to export to preferential markets a maximum of 600,000 tons per annum. Of the 600,000 tons, 335,000 tons are purchased by the United Kingdom Government at an annually negotiated price and the balance is sold at world market prices plus tariff preferences where applicable. The negotiated price for 1963 and 1964 was £Stg.46 0s. 10d. per ton bagged c.i.f. U.K. Following a variation in the basis of determination, the price for 1965 has been fixed at £Stg.42 bulk f.o.b. and stowed.

(iii) *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.

Until 15th May, 1960, a rebate of £2 4s. per ton of refined sugar used in processing approved fruit products was paid to Australian manufacturers, provided they bought the fresh fruit at prices not lower than those declared by the Committee as reasonable. This was increased to £5 per ton from 16th May, 1960.

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. The Queensland Government is responsible for payment of a similar rebate to exporters of other approved products. Payment of the export sugar rebate in respect of approved fruit products made from Australian fresh fruit purchased on or after 14th March, 1963, has been made conditional upon such fruit having been purchased at not less than the prices (if any) which the Committee had declared to be reasonable at the time of purchase.

Under the Sugar Agreement for 1961-67, the Queensland Government contributes to the fund £264,000 annually, reimburses the Committee for the actual expenditure on export sugar rebates, and by a supplementary agreement operating from 1st September, 1962, pays the Committee an additional sum equal to the amount payable by way of domestic sugar rebate in respect of the products exported. 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 research for the purpose of increasing the yield per acre of Australian fruit, or of obtaining information regarding Australian fresh marketable fruits.

Because the price of sugar on the world free market in late 1963 was so high that the rates of export sugar rebate determined monthly under the Sugar Agreement were nil, the sugar industry has made such payments, *ex gratia*, as have been necessary to maintain export sugar rebates at a minimum of £25 per ton and £30 per ton respectively on the cane sugar content of approved fruit products and other approved products exported on or after 1st November, 1963.

(iv) *Bulk Handling of Sugar.* The total conversion of the Australian sugar industry to bulk handling and mechanized loading and unloading of raw sugar has now been accomplished, except for the operation of a bagging station specially provided at Townsville to meet the needs of a few oversea customers.

Terminals for the bulk loading of sugar were opened at Mackay in 1957, at Lucinda and Bundaberg in 1958, at Townsville in 1959, at Mourilyan in 1960, and at Cairns in 1964. A second storage shed and an addition have been completed at Bundaberg. A third shed at Mackay and second sheds at Lucinda and Townsville are in course of construction.

The comparatively small New South Wales sugar industry was converted to bulk handling in 1954. Bulk receiving facilities are in operation at all Australian refineries.

(v) *Area.* A brief outline of the development of the industry was included in earlier issues of the Year Book (*see* No. 38, p. 985). The area of sugar cane in Australia for the seasons 1959-60 to 1963-64 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

SUGAR CANE: AREA(a)
(Acres)

Season	New South Wales			Queensland			Australia			Total
	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	
Average for three years ended—										
1938-39	10,468	10,366	n.a.	247,632	89,690	n.a.	258,100	100,056	n.a.	n.a.
1948-49	7,687	8,666	338	230,905	90,448	12,891	238,592	99,114	13,229	350,935
1958-59	11,094	9,462	619	360,709	110,786	12,596	371,803	120,248	13,215	505,266
Year—										
1959-60	14,248	10,510	392	299,732	151,114	11,039	313,980	161,624	11,431	487,035
1960-61	13,657	11,385	568	327,246	110,704	11,574	340,903	122,089	12,142	475,134
1961-62	14,655	11,299	482	372,223	87,831	12,339	386,878	99,130	12,821	498,829
1962-63	14,109	12,656	495	387,477	80,438	11,313	401,586	93,094	11,808	506,488
1963-64	15,508	14,204	594	402,060	93,149	13,205	417,568	107,353	13,799	538,720

(a) Excludes areas cut for green fodder.

The areas shown in the preceding table do not include the small acreage cut for green fodder, which in 1963-64 amounted to 2,551 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.

(vi) *Production of Cane and Sugar.* The production of sugar cane in 1963-64 was 12.1 million tons, which was 4.9 per cent. below the record production in 1962-63. A graph showing the production of sugar appears on page 995 of Year Book No. 49.

In the following table production data relating to cane and raw sugar are shown for the seasons 1959-60 to 1963-64 together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

SUGAR CANE: PRODUCTION OF CANE AND RAW SUGAR
(Tons)

Season	New South Wales		Queensland		Australia	
	Cane	Sugar(a)	Cane	Sugar(a)	Cane	Sugar(a)
Average for three years ended—						
1938-39	324,531	43,419	5,215,217	760,994	5,539,748	804,413
1948-49	283,613	35,444	4,767,291	700,053	5,050,904	735,497
1958-59	356,324	43,881	9,221,497	1,260,564	9,577,821	1,304,445
Year—						
1959-60	574,527	70,677	8,427,731	1,217,803	9,002,258	1,288,480
1960-61	480,147	62,978	8,685,426	1,319,633	9,165,573	1,382,611
1961-62	555,858	67,448	9,020,734	1,315,393	9,576,592	1,382,841
1962-63	637,310	79,733	12,098,582	1,770,084	12,735,892	1,849,817
1963-64	617,402	75,980	11,500,672	1,648,273	12,118,074	1,724,253

(a) Raw sugar at 94 net titre.

(vii) *Average Production of Cane Sugar.* Owing to climatic variations, the crop in New South Wales matures in from 20 to 24 months, whereas in Queensland a period of from 12 to 16 months is sufficient. The average yields of cane and sugar per acre for the years 1959-60 to 1963-64 and for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown below. Allowance should be made in interpreting these figures for the disparity in maturing periods noted above.

SUGAR CANE AND SUGAR: YIELD PER ACRE

(Tons)

Season	New South Wales			Queensland			Australia		
	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 for three years ended—									
1938-39	31.00	4.15	7.47	21.06	3.07	6.85	21.46	3.12	6.89
1948-49	36.90	4.61	8.00	20.65	3.03	6.81	21.17	3.08	6.87
1958-59	32.12	3.96	8.12	25.57	3.49	7.32	25.76	3.52	7.34
Year—									
1959-60	40.32	4.96	8.13	28.12	4.06	6.92	28.67	4.10	6.99
1960-61	35.16	4.61	7.62	26.54	4.03	6.58	26.89	4.06	6.63
1961-62	37.93	4.60	8.24	24.23	3.53	6.86	24.75	3.57	6.93
1962-63	45.17	5.65	7.99	31.22	4.57	6.84	31.71	4.61	6.88
1963-64	39.81	4.90	8.13	28.60	4.10	6.98	29.02	4.13	7.03

(viii) *Production and Utilization.* Details of the production and utilization of sugar for the years 1959-60 to 1963-64 are shown below. Consumption is shown in terms of refined sugar, including that consumed in manufactured products.

SUGAR: PRODUCTION AND UTILIZATION, AUSTRALIA

Year	Changes in stocks (a)	Production (raw)	Exports (b)	Miscellaneous uses(c)	Consumption in Australia(d)	
					Total	Per head
1959-60	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
	+25.6	1,270.6	725.2	18.6	501.2	110.4
1960-61	-10.3	1,324.8	815.6	21.0	498.5	107.4
1961-62	-4.8	1,404.2	862.5	18.0	528.5	111.6
1962-63	+112.0	1,831.6	1,175.8	17.8	526.0	109.0
1963-64	-131.9	1,578.7	1,156.0	18.2	536.4	109.0

(a) Includes allowance for estimated sugar content of imported foodstuffs. (b) Includes sugar content of manufactured products exported. (c) Includes refining losses and quantities used in golden syrup and treacle. (d) Includes sugar content of manufactured products consumed.

(ix) *Consumption in Factories.* The quantity of refined sugar used in factories in 1963-64 amounted to 369,882 tons compared with 325,436 tons in 1962-63 and 309,577 tons in 1961-62. Particulars of sugar used in establishments not classified as factories are not available, and consequently these quantities are deficient to that extent. In 1963-64 consumption by factories engaged in the production of jams, jellies and preserved fruit amounted to 97,750 tons, by those producing confectionery, ice cream, etc., to 127,272 tons, by breweries to 46,529 tons, and by factories producing aerated waters, cordials, etc., to 532,266 tons.

(x) *Sugar By-products.* Industrial chemicals, together with large quantities of molasses, are produced as by-products in sugar mills. Further, during the period 1939 to 1960, building boards were made from the residue of crushed fibre after removal of the sugar content from sugar cane. These boards possessed high insulating and sound absorbing properties which made them particularly suitable for use in walls and ceilings. Early in the period referred to the boards were manufactured almost entirely from crushed fibre residue, the remaining component being non-millable pine, but gradually the pine content was increased until by 1960 fibre residue was no longer being used. The main purpose for which crushed cane fibre residue is now used is furnace fuel in sugar mills.

(xi) *Sugar Prices and Returns.* The prices of sugar in Australia, from 1959 to 1963 in the case of raw sugar, and from 1960 to 1963 in the case of refined sugar (as determined under the Sugar Agreement in Australia—see para. ii (a), p. 1021), are shown in the following table.

SUGAR: PRICES IN AUSTRALIA

Year	Raw sugar, 94 net titre			Refined sugar		
	Average return per ton received by millers and growers for—			Date of determination	Wholesale price to retailer per ton	Retail price, capital cities per lb.
	Home consumption	Exports(a)	Whole crop (a)			
	£ s. d.	£ s. d.	£ s. d.		£ s. d.	d.
1959 ..	56 8 6	40 6 2	47 9 11	14.5.56 to 15.5.60	81 10 0	10
1960 ..	62 10 6	39 19 6	49 2 1	16.5.60	90 5 2	11
1961 ..	62 9 6	37 15 0	48 4 4			
1962 ..	62 11 0	41 1 10	47 19 10			
1963 ..	61 0 0	65 12 2	63 19 8			

(a) Includes "excess" sugar.

Details of the disposal of the crop, net value of exports and the average price realized during each of the years 1959-60 to 1963-64 are shown in the following table.

RAW SUGAR(a): NET RETURNS, AUSTRALIA

(Source: The Queensland Sugar Board)

Year	Proportion exported	Net value of exports per ton	Average price per ton for whole crop	Estimated value of crop
	per cent.	£ s. d.	£ s. d.	£'000
1959-60 ..	55.42	40 6 2	47 9 11	61,131
1960-61 ..	59.53	39 19 6	49 2 1	67,869
1961-62 ..	57.66	37 15 0	48 4 4	66,653
1962-63 ..	67.85	41 1 10	47 19 10	88,748
1963-64 ..	64.70	65 12 2	63 19 8	110,290

(a) 94 net titre.

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 comprise 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 1963-64 amounted to £1,123,000. The value thus obtained represents the net market value of all raw sugar sold, which, less the rebates, is divided between the growers and millers in the approximate proportions of 70 per cent. and 30 per cent. respectively.

(xii) *Exports of Sugar.* Particulars of the exports of Australian-produced cane sugar (raw and refined) for each year from 1959-60 to 1963-64 are as follows.

RAW AND REFINED SUGAR: EXPORTS, AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Quantity tons	701,319	796,499	843,537	1,145,966	1,116,190
Value £A.'000 f.o.b.	26,671	35,072	33,895	45,521	78,256

2. Peanuts.—(i) *General*. Peanuts, or groundnuts, are a sub-tropical legume (and hence summer growers), the pods of which mature beneath the surface of the soil. They thus require well drained, light textured soils. At harvest the plant is pulled, wind-rowed, field-cured for two to four weeks and then threshed to recover the pods. The main products of the industry are nuts, peanut oil, oil cake and synthetic protein fibre.

The production of peanuts in Australia is confined mainly to Queensland, although small quantities are grown in New South Wales, Western Australia and the Northern Territory.

(ii) *Area and Production*. Details of the area and production of peanuts are given in the table below for the years 1959–60 to 1963–64.

PEANUTS: AREA AND PRODUCTION

Season	Area (acres)				Production (cwt.)			
	N.S.W.	Q'land	N.T.	Aust.(a)	N.S.W.	Q'land	N.T.	Aust.(a)
1959–60	837	41,547	388	42,772	10,639	360,314	4,306	375,259
1960–61	788	41,659	335	42,782	9,578	446,215	1,215	457,008
1961–62	573	33,131	307	34,011	6,003	292,267	1,343	299,613
1962–63	395	35,552	(b)	c 35,947	4,258	315,144	(b)	c 319,402
1963–64	478	44,482	(b)	c 44,960	4,744	455,982	(b)	c 460,726

(a) Excludes Western Australia, for which details are not available for publication. (b) Not available for publication. (c) Incomplete; excludes Northern Territory.

(iii) *Value, Consumption and Trade*. The gross value of the 1963–64 crop was £2,259,000 which was approximately £702,000 more than in 1962–63. All production is consumed in Australia.

In recent years, considerable quantities of peanut kernels have been imported. Total supplies available for consumption in Australia in 1963–64 were 21,600 tons (in shell equivalent), after allowing for an increase of 1,200 tons in stock held by the Peanut Marketing Board and exports of 100 tons of peanut products. Supplies were made up of 19,500 tons from Australian production received into store by the Board and 3,400 tons imported.

3. Hops.—(i) *General*. Hops are grown from perennial rootstocks over deep, well-drained soils in localities sheltered from the wind. The hop-bearing vine shoots are carried upon wire and coir trellises, from which they are later harvested, principally by hand. The green hops are kiln-dried and bleached with sulphur dioxide fumes, following which the cured hops are pressed into bales.

Hop growing in Australia is confined to the Derwent, Huon and Channel areas of Tasmania and the Ovens and King Valleys in Victoria. A small area is also under hops in Western Australia, near Manjimup, but the details are not available for publication.

(ii) *Production and Imports*. 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 and imports of hops and the quantity of hops used in breweries are shown for each of the years 1959–60 to 1963–64. Exports of hops are not recorded separately, but are negligible.

HOPS: PRODUCTION AND DISPOSAL, AUSTRALIA

Year	Production(a)		Imports	Net available supplies (b)	Quantity used in breweries
	Quantity	Gross value			
	cwt.	£'000	cwt.	cwt.	cwt.
1959–60	31,790	1,159	..	31,790	40,357
1960–61	33,099	1,179	991	34,090	40,018
1961–62	32,936	1,242	5,569	38,505	39,000
1962–63	33,629	1,285	1,337	34,966	38,202
1963–64	19,858	767	536	20,395	37,033

(a) Excludes production in Western Australia, for which details are not available for publication. (b) Disregards movements in stocks.

4. **Flax.**—(i) *Flax for Fibre.* This crop has a winter-growing season in Australia. The whole plant, after harvesting, is retted and scutched at local mills to recover the linen fibre and tow. The seeds may be sold to oil mills and the refuse used for stock feed.

Details of the area under flax and the production of fibre are given in the following table.

FLAX FOR FIBRE: AREA AND PRODUCTION

Season					Victoria	W. Aust.	Australia
AREA (ACRES)							
1959-60 .. .. .	..	..	..	..	..	1,307	1,307
1960-61 .. .. .	..	..	..	..	430	736	1,166
1961-62 .. .. .	..	..	..	..	323	91	414
1962-63 .. .. .	..	..	..	..	419	871	1,290
1963-64 .. .. .	..	..	..	..	..	171	171
PRODUCTION (TONS OF FIBRE)							
1959-60 .. .. .	..	..	..	..	..	2,723	2,723
1960-61 .. .. .	..	..	..	..	592	1,176	1,768
1961-62 .. .. .	..	..	..	..	514	183	697
1962-63 .. .. .	..	..	..	..	648	2,152	2,800
1963-64 .. .. .	..	..	..	..	..	318	318

(ii) *Flax for Linseed.* Fibre varieties are uneconomic for seed production, and 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.

The question of assistance to the industry was investigated by the Commonwealth Tariff Board in 1953, and its conclusions are contained in its Report on *Linseed and Linseed Products* dated 23rd October, 1953.

The main producing areas are the Darling Downs in Queensland, the wheat belt of New South Wales, and the western and north-eastern districts of Victoria.

Details of the area and production of flax for linseed are shown in the following table for the seasons 1959-60 to 1963-64.

FLAX FOR LINSEED: AREA AND PRODUCTION

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.
AREA (ACRES)						
1959-60	11,933	24,850	60,837	1,687	186	99,493
1960-61	11,823	6,179	75,088	2,115	483	95,688
1961-62	7,266	17,711	34,390	1,513	1,253	62,133
1962-63	11,493	25,232	58,493	1,220	626	97,064
1963-64	15,335	16,240	83,336	1,002	1,588	117,501
PRODUCTION (TONS OF LINSEED)						
1959-60	2,922	7,391	16,247	191	48	26,799
1960-61	1,870	1,013	10,394	218	70	13,565
1961-62	856	6,093	5,187	275	178	12,589
1962-63	2,634	8,180	14,477	290	136	25,717
1963-64	3,722	4,758	20,342	283	411	29,516

5. Cotton.—(i) *General*. This annual shrub requires a hot climate and inter-row weed control. Lint (long fibres) is extracted from the seed cotton in the ginneries, and is used for yarn. The residue, consisting of linters (short fibres), kernels and hulls (outer seed coat), is treated in oil mills. From linters and kernels are produced such items as short-fibred cotton, cotton-seed oil for human consumption and industrial purposes, and meal cakes for stock feed. The hulls may be used as fuel.

The production of cotton in Australia was formerly restricted mainly to the coastal river valleys of Queensland. In recent years, however, it has been grown increasingly in other States, namely in the Namoi River area and Murrumbidgee Irrigation Areas of New South Wales and at the Ord River in the north-west of Western Australia.

Cotton spinning and weaving industries are referred to in Chapter VI. Manufacturing Industry.

(ii) *Cotton Bounty*. For particulars of the *Cotton Bounty Act* 1951 and amendments of 1952, 1955 and 1957, see page 1044 of Year Book No. 49.

Under the *Raw Cotton Bounty Act* 1963 the Commonwealth pays a bounty on raw cotton produced and sold for use in Australia at the rate of 16.125d. per lb. for Middling 1st White, with premiums and discounts on grades and staples above and below. The bounty is for a period of five years from 1st January, 1964.

(iii) *Area and Production*. In the five seasons 1959–60 to 1963–64 the area sown and quantity of unginned cotton produced have doubled. The yield per acre in the same period has fallen by 5 per cent.

The area under cultivation and the production in Australia for the years 1959–60 to 1963–64 are shown hereunder.

COTTON: AREA AND PRODUCTION, AUSTRALIA^(a)

Season	Area sown	Production of cotton			Average yield per acre sown	
		Unginned		Ginned	Unginned	Ginned
		Quantity	Gross value			
	acres	'000 lb.	£'000	'000 lb.	lb.	lb.
1959–60	20,229	9,463	556	3,592	468	178
1960–61	37,048	15,544	917	5,540	420	150
1961–62	28,844	10,948	647	3,830	380	133
1962–63	37,689	15,762	938	5,403	418	143
1963–64	40,938	18,223	1,106	6,570	445	160

(a) Incomplete; excludes Victoria, Western Australia and Northern Territory, for which particulars are not available for publication.

(iv) *Consumption of Raw Cotton*. The following table shows details of the availability and actual consumption of raw cotton in Australian factories during each of the five years ended 1963–64.

RAW COTTON: PRODUCTION, IMPORTS AND CONSUMPTION, AUSTRALIA ('000 lb.)

Year	Production	Imports	Total	Consumption of raw cotton
1959–60	3,592	41,519	45,111	51,689
1960–61	5,540	41,842	47,382	45,432
1961–62	3,830	37,735	41,565	44,543
1962–63	5,403	42,543	47,946	47,930
1963–64	6,570	56,663	63,233	64,808

6. Tobacco.—(i) *General*. This summer-growing annual requires a temperate to tropical climate, adequate soil moisture and a frost-free period of approximately five months. These requirements necessarily restrict its growth to particular areas. These include the Mareeba area (northern Queensland), the neighbourhood of Texas (Queensland and New South Wales border), and near Myrtleford (Victoria). The best quality Australian tobaccos are grown in Queensland.

In Australia flue-curing is the main method of drying used.

(ii) *Marketing*. Between 9th May, 1941, and 24th September, 1948, all leaf was under the direct control of the Australian Tobacco Board, and prices were paid on leaf appraisal. Subsequently, sales have been by open auction through the Tobacco Leaf Marketing Board (Queensland and northern New South Wales) and the Victorian Tobacco Growers Association Ltd. (southern New South Wales and Victoria). In 1964 the Victorian Tobacco Leaf Marketing Board was set up to market the portion of the crop that was formerly sold by the Victorian Tobacco Growers Association Ltd., and currently in 1965 a Board is being established in New South Wales. It is expected that the actual physical handling of New South Wales leaf at auction will continue to be carried out by the Queensland and Victorian authorities. A stabilization plan for the tobacco growing industry has been agreed between Commonwealth and State Governments.

The plan, which will operate initially for four years, commencing with the 1965 selling season, provides broadly for the establishment of an annual marketing quota of 26 million pounds (green weight) of leaf to be sold under an agreed grade and price schedule providing for an average minimum price, based on a normal crop fall-out, of 125 pence per pound.

The overall marketing quota will be divided among tobacco producing States, and the State quotas will in turn be divided among individual growers.

The plan will be administered by a Commonwealth Board representative of the Commonwealth, producing States, growers, and manufacturers.

Until the necessary legislation to establish the Board is introduced by the Commonwealth and the States concerned an Interim Committee will administer the scheme.

(iii) *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 the 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. The terms of reference of this committee are given in Year Book No. 47, page 935.

In 1955 the Committee formulated a programme for increased research and advisory activities. The capital costs of establishing this programme were estimated at £168,000, of which the Commonwealth Government and tobacco manufacturers each agreed to contribute half. Annual contributions are made to the fund by the Commonwealth and State Governments, tobacco growers, and manufacturers. A Tobacco Industry Trust Account was established to receive these contributions. This programme commenced in 1956 and since then £1,448,286 has been paid to State and Commonwealth departments for expenditure on tobacco research and extension. The allocation for 1964–65 was £288,738. As from 1st July, 1964, the annual Commonwealth contribution has been increased to one half of approved expenditure from the Tobacco Industry Trust Account; it now incorporates the Tobacco Extension Grant of £24,000 per annum.

In 1961 a Research Sub-Committee was established to review annually scientific programmes and finance in relation to the Tobacco Industry Trust Account and make recommendations to the Central Tobacco Advisory Committee.

(iv) *Other Assistance and Research*. Details of the recommendations by the Tobacco Inquiry Committee and grants periodically approved by the Commonwealth Government up to 30th June, 1953, are given in Year Book No. 40, pages 895–6, and in previous issues.

The Commonwealth Scientific and Industrial Research Organization and the State Departments of Agriculture in the tobacco growing States are carrying out investigations into a wide range of problems involving fundamental research, plant breeding, variety trials, irrigation, disease and pest control, fertilizers, crop rotation and cultural practices.

(v) *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 were increased from 3 per cent.

for cigarettes and 5 per cent. for tobacco in November, 1946, to 43 per cent. and 40 per cent. respectively from 1st July, 1962. The percentage applicable to both cigarettes and tobacco from 1st July, 1963, was 40 per cent. and from 1st July, 1964 to 31st March, 1965, 41.5 per cent. The rate from 1st April, 1965, to 30th June, 1965, is 43 per cent.; from 1st July, 1965, to 30th September, 1965, 45 per cent.; from 1st October, 1965, to 31st December, 1965, 47 per cent.; and from 1st January, 1966 onwards, 50 per cent.

In 1963-64 the quantity of cured leaf used in tobacco factories in Australia amounted to 51 million lb., of which 20 million lb. was of local origin. The balance was imported, chiefly from the United States of America and Rhodesia.

(vi) *Area and Production.* The area of tobacco in 1963-64 was 1.2 per cent. below the record area established in 1962-63. Production at 34,342,000 lb. was a record, exceeding by 15.0 per cent. the previous record established in 1960-61.

In the following table particulars of the area and production of tobacco are given by States for each of the seasons 1959-60 to 1963-64, together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

TOBACCO: AREA AND PRODUCTION

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
AREA (ACRES)								
Average for three years ended—								
1938-39 ..	697	4,262	3,842	77	1,055	134	(a)	10,067
1948-49 ..	415	1,046	1,948	..	609	..	..	4,018
1958-59 ..	1,257	3,478	7,479	..	1,295	..	(a)	13,509
Year—								
1959-60 ..	2,142	6,424	9,527	..	1,561	..	..	19,654
1960-61 ..	3,408	9,932	14,395	..	1,478	..	..	29,213
1961-62 ..	3,078	9,286	14,069	..	194	..	..	26,627
1962-63 ..	3,163	9,844	16,346	..	28	..	..	29,381
1963-64 ..	2,927	10,519	15,579	..	..	..	..	29,025
PRODUCTION OF DRIED LEAF ('000 lb.)								
Average for three years ended—								
1938-39 ..	471	1,603	2,173	17	741	104	(b)	5,109
1948-49 ..	380	670	1,725	..	523	..	..	3,298
1958-59 ..	1,066	3,770	5,563	..	1,016	..	(b)	11,415
Year—								
1959-60 ..	1,437	7,401	9,149	..	1,370	..	..	19,357
1960-61 ..	3,538	9,728	15,308	..	1,288	..	..	29,862
1961-62 ..	3,116	6,515	12,751	..	196	..	..	22,578
1962-63 ..	2,885	9,447	14,787	..	29	..	..	27,148
1963-64 ..	2,652	14,459	17,231	..	..	..	..	34,342

(a) Less than half an acre.

(b) Less than 500 lb.

(vii) *Oversea Trade.* Imports of tobacco and tobacco manufactures into Australia during 1963-64 were valued at £13.4 million. This included 29.6 million lb. of unmanufactured tobacco valued at £10.6 million. Exports of tobacco and tobacco manufactures during 1963-64 were valued at £889,893, including Australian produce, £760,692.

§ 6. Vegetables for Human Consumption

1. *Area, Production and Trade.*—(i) *General.* Vegetables were initially grown on a large scale near the main cities, where there was ready access to reliable water supplies and to markets. Later, the expansion of irrigation areas and improvement in transport services resulted in their production being extended into many other areas. At present, because of the wide diversity of climatic conditions across Australia, supplies for main city markets are drawn from widely different areas, depending upon the times of maturity of the various crops. Apart from potatoes and onions, which are sold in some States through marketing boards, the bulk of vegetable trading takes place at the metropolitan markets of the cities concerned.

(ii) *Area and Production of Fresh Vegetables.* Details of the areas planted and production of individual kinds of vegetables are shown on p. 1031 for the seasons 1961-62 to 1963-64. Certain particulars shown are incomplete in that details for specific vegetables in some States are either not available, or are not available for publication. For further information, see the bulletin *Rural Industries*.

FRESH VEGETABLES FOR HUMAN CONSUMPTION: AUSTRALIA

Vegetable	1961-62		1962-63		1963-64	
	Area sown	Production	Area sown	Production	Area sown	Production
	acres	tons	acres	tons	acres	tons
Asparagus	3,263	5,179	3,523	5,503	3,994	6,197
Beans, French and runner	18,239	30,641	18,429	32,373	17,969	33,065
Beans, navy	1,930	440	2,488	876	5,423	1,026
Beetroot	2,102	14,811	1,992	15,882	1,859	14,432
Cabbages and brussels sprouts	5,585	58,472	5,867	62,748	6,190	66,147
Carrots	5,212	51,796	5,204	55,380	5,446	58,478
Cauliflowers	6,404	72,786	6,659	76,811	6,631	72,677
Celery	679	9,987	735	10,849	740	10,272
Cucumbers	1,501	6,507	1,725	7,428	1,679	7,790
Lettuces	4,636	20,904	4,799	21,390	4,823	21,991
Onions	9,412	58,323	10,765	68,219	9,222	59,278
Parsnips	1,491	13,374	1,354	12,682	1,316	12,698
Peas, blue	3,956	2,830	5,710	3,407	5,165	2,656
Peas, green	58,399	88,025	52,926	79,046	50,971	74,229
Potatoes	94,443	525,981	113,742	666,596	101,987	562,032
Tomatoes	17,305	140,339	16,506	129,044	16,356	135,815
Turnips, swede and white	1,859	12,269	1,268	9,116	1,418	9,380
All other	30,734	..	34,804	..	35,651	..
Total	267,150	..	288,496	..	276,840	..

(iii) *Processed Vegetables.* Total production of canned vegetables in 1963-64 amounted to 144,070,000 lb., the principal types produced being green peas (excluding mint-pro peas), 21,007,000 lb.; green beans, 8,891,000 lb.; baked beans (including pork and beans), 34,599,000 lb.; asparagus, 12,514,000 lb.; beetroot, 20,997,000 lb.; and mushrooms, 5,676,000 lb.

The production of dehydrated vegetables during 1963-64 amounted to 609,450 lb., while the production of potato crisps, chips and flakes was 13,882,000 lb.

There has been rapid development in the quick-frozen vegetable industry. Data were collected for the first time in 1957-58, when 13,846,000 lb. of frozen vegetables were produced, made up primarily of 10,131,000 lb. of peas and 2,540,000 lb. of beans. In 1963-64 production had risen to 56,476,000 lb., of which 37,839,000 lb. were peas and 9,781,000 lb. were beans.

(iv) *Consumption of Vegetables.* Details of the estimated consumption of vegetables for a series of years ending 1963-64 are shown in Chapter XXX. Miscellaneous.

(v) *Exports and Imports of Vegetables (values in £A. f.o.b.).* The quantity and value of oversea exports of pulse and fresh vegetables during 1963-64 were respectively:—pulse, 9,560 tons, £431,463; fresh onions, 3,547 tons, £125,013; potatoes, 12,722 tons, £321,430; other vegetables, 4,420 tons, £489,277. Imports of pulse amounted to 7,136 tons, valued at £598,385, while imports of fresh vegetables in total were 5,911 tons, valued at £787,616.

In 1963-64 exports of vegetables preserved in liquid consisted of:—asparagus, 2,543,792 lb., £172,834; beans (including baked), 430,702 lb., £31,831; peas, 242,421 lb., £17,984; tomatoes, 227,888 lb., £16,152; other vegetables, 534,038 lb., £50,959.

2. **Potatoes.**—(i) *General.* This crop requires deep friable soils, which in Australia are usually basaltic, alluvial, or swampy in origin. Fertilizer requirements, which are generally high, vary with the type of soil. Potatoes are killed by heavy frost, but require only moderate temperatures for growth. Mechanical planters and diggers are used to a variable extent depending upon a variety of factors including terrain, state of the soil and scale of operations.

Seed certification schemes, which operate in all States except Queensland, provide a supply of seed which is free from viral, fungal and bacterial diseases.

In Australia potatoes are used almost entirely for human consumption and not for the production of starch or alcohol. They are rarely used as stock feed.

(ii) *Marketing.* Potato marketing boards were established in all States except Tasmania under separate State legislation after Commonwealth control of potato marketing under war-time legislation ceased at the end of 1948. The life of the Queensland Board was not extended when its term ended in 1954. The New South Wales Board was voted out by growers in 1956, and the Victorian Board also ceased functioning in that year. The boards in South Australia and Western Australia are the only statutory boards still in operation.

(iii) *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. Until 1958-59 Tasmania (where production is mainly in the north-west) came next in order of acreage sown, although production exceeded that of Victoria in some of the war years. Since then, however, acreage in New South Wales and Queensland has increased considerably and there is now a greater area of potatoes in both of these States than in Tasmania. In New South Wales, production is chiefly in the tablelands districts.

The area sown, production, and yield per acre of potatoes in each State during the years 1959-60 to 1963-64 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown hereunder. A graph showing production since 1935-36 appears on page 996 of Year Book No. 49.

POTATOES: AREA, PRODUCTION AND YIELD PER ACRE

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AREA (ACRES)									
Average for three years ended—									
1938-39 ..	21,049	40,376	11,551	4,445	4,627	32,044	..	59	114,151
1948-49 ..	20,440	53,862	10,795	6,084	6,753	38,643	..	103	136,680
1958-59 ..	16,589	45,225	12,980	6,035	7,977	19,002	4	94	107,906
Year—									
1959-60 ..	19,159	48,506	12,311	5,872	6,964	15,525	(a)	67	b 108,404
1960-61 ..	18,365	38,672	11,992	5,209	6,656	10,875	(a)	36	b 91,805
1961-62 ..	20,209	36,469	14,466	5,316	6,824	11,129	(a)	30	b 94,443
1962-63 ..	27,420	43,024	16,994	5,918	6,499	13,839	6	42	113,742
1963-64 ..	24,352	39,626	15,886	5,459	5,835	10,806	(a)	23	b 101,987
PRODUCTION (TONS)									
Average for three years ended—									
1938-39 ..	52,158	137,583	17,191	20,342	23,678	109,285	..	143	360,380
1948-49 ..	62,701	191,590	26,470	32,149	38,722	148,389	..	598	500,619
1958-59 ..	68,533	245,937	50,989	48,072	50,024	92,367	5	391	556,318
Year—									
1959-60 ..	81,908	242,548	51,468	48,923	56,000	98,000	(a)	360	b 579,207
1960-61 ..	85,182	180,819	59,311	40,797	45,500	39,050	(a)	134	b 450,793
1961-62 ..	83,301	196,032	70,675	48,479	55,700	71,560	(a)	234	b 525,981
1962-63 ..	132,969	254,473	86,239	53,253	56,900	82,545	5	212	666,596
1963-64 ..	98,308	200,384	90,201	51,195	55,402	66,420	(a)	122	b 562,032
YIELD PER ACRE (TONS)									
Average for three years ended—									
1938-39 ..	2.48	3.41	1.49	4.58	5.12	3.41	..	2.42	3.16
1948-49 ..	3.07	3.56	2.45	5.28	5.73	3.84	..	5.81	3.66
1958-59 ..	4.13	5.44	3.93	7.97	6.27	4.86	1.25	4.16	5.16
Year—									
1959-60 ..	4.28	5.00	4.18	8.33	8.04	6.31	(a)	5.37	(b) 5.34
1960-61 ..	4.64	4.68	4.95	7.83	6.84	3.59	(a)	3.72	(b) 4.91
1961-62 ..	4.12	5.38	4.89	9.12	8.16	6.43	(a)	7.80	(b) 5.57
1962-63 ..	4.85	5.91	5.07	9.00	8.76	5.96	0.83	5.05	5.86
1963-64 ..	4.04	5.06	5.68	9.38	9.49	6.15	(a)	5.30	(b) 5.51

(a) Not available for publication.

(b) Incomplete; excludes Northern Territory.

(iv) *Gross Value.* The estimated gross value of the potato crop of each State for the 1963-64 season and the value per acre are shown in the following table.

POTATOES: VALUE OF CROP, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.
Aggregate value .. £'000	2,019	7,792	1,633	1,170	1,840	2,154	5	16,613
Value per acre .. £	83	197	103	214	315	199	217	163

(v) *Consumption.* The annual consumption of potatoes in Australia during each of the three years 1961-62 to 1963-64 amounted to 459,600 tons, 594,300 tons, and 500,600 tons respectively, or 97.1 lb., 123.1 lb., and 101.7 lb. respectively per head of population. These figures exclude the quantities used for seed, which averaged about 53,000 tons annually over this period.

(vi) *Exports.* Details showing exports for the years 1959-60 to 1963-64 are given in the following table.

POTATOES: EXPORTS, AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Quantity tons	4,742	5,219	4,121	15,819	12,722
Value £A.'000 f.o.b.	134	195	160	425	321

The increased exports in 1962-63 and 1963-64 were due principally to increased shipments to Singapore, Ceylon, French Possessions, Pacific Islands and Hong Kong. Imports of potatoes into Australia are usually negligible.

3. *Onions.*—(i) *Area, Production, and Yield per Acre.* Until recently Australia's onion supply came chiefly from Victoria. However, during the last five years Victorian production has not been as great as formerly, and in 1960-61, and again in 1963-64, it was exceeded by Queensland. The Victorian crop consists almost entirely of brown onions, and the bulk of the crop is grown in a small section of the Western Division of the State, where the volcanic ash soils have been found to be particularly suitable for onion growing on a commercial scale. Most of Queensland's onion production is grown in the Lockyer Valley, and consists mainly of brown varieties. Details of the area, production and yield per acre are given in the following table for the years 1959-60 to 1963-64 together with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. A graph showing production since 1935-36 appears on page 996 of Year Book No. 49.

ONIONS: 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 for three years ended—								
1938-39 ..	126	5,534	1,187	521	122	8	6	7,604
1948-49 ..	433	6,245	2,234	534	468	26	4	9,944
1958-59 ..	491	4,614	3,655	635	413	29	9	9,846
Year—								
1959-60 ..	697	3,994	3,550	641	392	29	12	9,315
1960-61 ..	624	3,532	3,763	657	465	59	10	9,110
1961-62 ..	490	4,456	3,173	753	479	60	(a)	(b) 9,412
1962-63 ..	800	4,634	3,796	944	509	79	(a)	(b) 10,765
1963-64 ..	682	3,756	3,317	930	446	91	(a)	(b) 9,222
PRODUCTION (TONS)								
Average for three years ended—								
1938-39 ..	324	34,039	3,040	3,904	915	42	21	42,285
1948-49 ..	1,703	41,156	10,489	5,032	3,831	153	24	62,388
1958-59 ..	2,496	31,982	15,505	5,625	4,599	132	71	60,410
Year—								
1959-60 ..	3,658	27,808	14,708	5,644	4,830	135	39	56,822
1960-61 ..	3,935	16,286	21,156	5,947	5,826	285	80	53,515
1961-62 ..	3,082	23,784	17,921	6,915	6,290	327	(a)	(b) 58,323
1962-63 ..	5,185	26,175	21,184	8,531	6,622	515	(a)	(b) 68,219
1963-64 ..	4,998	17,946	20,412	8,736	6,814	372	(a)	(b) 59,278
YIELD PER ACRE (TONS)								
Average for three years ended—								
1938-39 ..	2.57	6.04	2.56	7.49	7.50	5.25	3.50	5.56
1948-49 ..	3.93	6.59	4.70	9.42	8.19	5.88	6.00	6.27
1958-59 ..	5.08	6.93	4.24	8.86	11.14	4.55	7.89	6.14
Year—								
1959-60 ..	5.25	6.96	4.14	8.80	12.32	4.66	3.25	6.10
1960-61 ..	6.31	4.61	5.62	9.05	12.52	4.83	8.00	5.87
1961-62 ..	6.29	5.34	5.65	9.18	13.13	5.45	(a)	(b) 6.20
1962-63 ..	6.48	5.63	5.38	9.04	13.01	6.52	(a)	(b) 6.34
1963-64 ..	7.33	4.78	6.15	9.39	15.28	4.09	(a)	(b) 6.43

(a) Not available for publication, but excludes Australian Capital Territory.

(b) Includes a small area and production in Northern Territory

(ii) *Gross Value.* The estimated gross value of the onion crop and the value per acre are shown in the following table for the 1963-64 season.

ONIONS: VALUE OF CROP, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Aggregate value £'000	165	569	677	398	222	17	(a)	(a)	(b) 2,048
Value per acre £	242	151	204	428	498	187	(a)	(a)	(b) 222

(a) Not available for publication.
Capital Territory.

(b) Incomplete; excludes Northern Territory and Australian

(iii) *Consumption.* The consumption of onions in Australia during 1963-64 was 58,800 tons or 12.0 lb. per head of population.

(iv) *Exports.* Onions are the only root crop, other than potatoes, in which any considerable overseas trade is carried on by Australia. In 1963-64 exports amounted to 3,547 tons, valued at £125,013, and were shipped mainly to Singapore, Japan, and New Caledonia. The quantity of exports in 1962-63 was 7,097 tons, valued at £208,328. Imports of onions amounted to 3,035 tons, valued at £122,010 in 1963-64, and 59 tons, valued at £2,276 in 1962-63. The principal country from which onions were imported was New Zealand.

§ 7. Fruit and Vineyards

1. *Fruit.*—(i) *General.* The varieties of fruit grown differ in various parts of the States, ranging from 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 fruit (oranges, lemons, etc.) and bananas are the principal crops, although apples, peaches, plums, pears, and cherries are grown extensively. The principal varieties grown in Victoria are apples, pears, peaches, oranges, and apricots. In Queensland apples, pineapples, bananas, oranges, mandarins, peaches, and plums are the varieties most largely cultivated. In South Australia, in addition to oranges, apples, peaches, apricots, and pears, almonds and olives are grown extensively. In Western Australia apples, oranges, plums, and pears are the chief varieties. In Tasmania apples occupy over three-quarters of the fruit-growing area, but small fruit, such as currants, raspberries, and gooseberries, are grown extensively, the balance of the area being mainly taken up with pears and apricots.

(ii) *Overseas Marketing of Fruit.* (a) *Apples and Pears.* The *Apple and Pear Organization Act 1938-1964* provides for the establishment of an Australian Apple and Pear Board comprising representatives of growers, exporters, employees and the Commonwealth Government. A representative in London has also been appointed by the Board. An export levy to meet the expenses of the Board is provided for in the *Apple and Pear Export Charges Act 1938-1960*.

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, allocate consignments from each State and recommend the licensing of exporters. The Board contributes to apple and pear publicity activities overseas.

(b) *Canned Fruit.* The *Canned Fruits Marketing Act 1963*, which was introduced in January, 1964, replaced the *Canned Fruits Export Control Act 1926-1959* under which the overseas marketing of canned fruit was initially organized (see Year Book No. 49, p. 1050). The Australian Canned Fruits Board, which is constituted under the Act, determines the terms and conditions for overseas sales. The Board exercises this control through a system of export licences. The Board, whose membership was increased from five to eleven members and which was granted greater powers under the 1963 Act, comprises representatives of the Commonwealth Government (one), canners of deciduous fruit (six), growers of deciduous fruit (three), and pineapple interests (one). The Board maintains a London office. The *Canned Fruits Export Charges Act 1926-1963* provides for a levy on exports to meet the Board's expenses, which include contributions to overseas publicity connected with the canned fruit industry. In 1963 an excise duty was imposed by the *Canned Fruits Excise Act 1963* on canned deciduous fruit entered for domestic consumption, and the proceeds of the duty are made available to the Board to assist in the promotion of overseas sales of canned deciduous fruit.

In 1959 the Australian Canned Fruits Sales Promotion Committee was established to promote the sale of canned deciduous fruit on the home market and overseas. The operations of the Committee are financed by a levy on fruit accepted by the canneries for the production of canned fruit. The Committee comprises representatives of growers and processors of canning fruit and a representative of the Commonwealth Government.

(iii) *Area and Production of Fruit.* The area under fruit in Australia has been increasing steadily in recent years, and new record levels have been reached each year since 1961-62. Increases were recorded in all States in 1963-64. The following table sets out the area under fruit in the several States for the seasons 1959-60 to 1963-64.

FRUIT: AREA

(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1959-60 ..	93,870	68,567	42,587	37,355	23,757	22,713	98	57	289,004
1960-61 ..	92,962	71,415	41,067	37,711	23,913	22,194	120	55	289,437
1961-62 ..	94,246	72,712	41,872	38,548	24,487	21,859	136	65	293,925
1962-63 ..	98,032	75,855	43,242	40,444	25,204	21,943	136	55	304,911
1963-64 ..	98,670	76,796	44,681	41,686	25,670	22,134	149	54	309,840

The next table shows the acreage (bearing and not-bearing) of the principal kinds of fruit and the quantities produced in the 1963-64 season.

FRUIT, 1963-64

Fruit	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
AREA, BEARING AND NOT-BEARING (ACRES)									
Apples ..	18,743	22,887	12,570	5,862	15,126	17,621	..	50	92,859
Apricots ..	2,074	4,015	470	4,520	316	495	..	..	11,890
Bananas ..	23,387	..	5,882	..	397	..	43	..	29,709
Cherries ..	2,714	1,891	13	550	37	51	..	..	5,256
Citrus—									
Oranges ..	28,195	6,695	3,616	15,933	4,719	..	53	..	59,211
Mandarins ..	2,408	410	2,018	557	462	..	5	..	5,860
Lemons ..	..	..	..	..	..	..	..	..	..
and limes ..	2,422	1,297	490	492	675	..	7	..	5,383
Other ..	635	314	257	508	131	..	6	..	1,664
Nuts ..	176	426	257	3,409	134	..	..	..	4,402
Peaches ..	7,907	14,802	1,882	4,690	904	52	..	(a)	(b)30,237
Pears ..	3,200	16,773	1,154	2,027	1,080	1,636	..	(a)	(b)25,870
Pineapples ..	160	..	10,903	..	..	..	23	..	11,086
Plums ..	1,903	1,889	1,462	400	1,036	86	..	..	6,776
Prunes ..	3,075	347	..	753	9	..	..	..	4,187
Small fruit ..	34	1,074	266	125	16	2,159	..	..	3,674
Other fruit ..	1,637	3,976	3,628	1,860	628	31	12	4	11,776
Total ..	98,670	76,796	44,681	41,686	25,670	22,134	149	54	309,840

PRODUCTION

Fruit	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Apples '000 bus.	3,329	3,299	1,481	1,341	1,287	8,545	..	3	19,285
Apricots ..	220	353	36	929	36	36	..	..	1,610
Bananas ..	4,497	..	684	..	141	..	2	..	5,324
Cherries ..	200	110	(c)	54	1	5	..	..	370
Citrus —									
Oranges ..	4,508	1,134	616	2,084	391	..	2	..	8,735
Mandarins ..	203	37	214	41	27	..	(c)	..	522
Lemons ..	..	..	..	..	..	..	..	..	..
and limes ..	435	106	104	36	124	..	1	..	806
Peaches ..	1,313	1,828	159	979	84	3	..	(d)	(b) 4,366
Pears ..	727	4,771	113	524	156	625	..	(d)	(b) 6,916
Pineapples ..	25	..	4,419	..	..	..	1	..	4,445
Plums ..	164	137	124	33	95	16	..	..	569
Prunes ..	392	19	..	58	1	(c)	..	..	470

(a) Not available for publication; included with Other fruit. (b) Incomplete; excludes the Australian Capital Territory. (c) Less than 500 bushels. (d) Not available for publication.

(iv) *Principal Fruit Crops.* The area and production of the principal fruit crops and the gross value of production during the seasons 1959-60 to 1963-64 are shown hereunder.

PRINCIPAL FRUIT CROPS: AREA, PRODUCTION AND GROSS VALUE OF PRODUCTION

Season	Apples	Apricots	Bananas	Oranges	Peaches	Pears	Plums and prunes
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AREA, BEARING AND NOT-BEARING (ACRES)

1959-60	85,269	12,059	31,708	49,328	26,376	23,684	10,569
1960-61	86,882	11,945	29,870	50,626	26,883	23,935	10,665
1961-62	87,571	11,461	29,180	53,623	29,627	25,338	10,839
1962-63	91,380	11,847	30,392	57,301	30,226	25,945	10,828
1963-64	92,859	11,890	29,709	59,211	30,237	25,870	10,963

PRODUCTION ('000 BUSHELS)

1959-60	14,069	1,546	4,915	7,450	2,916	5,268	904
1960-62	15,487	1,323	4,830	6,244	2,471	5,360	930
1961-61	17,127	1,869	4,876	8,168	3,962	6,567	961
1962-63	18,349	1,913	4,832	9,307	4,003	5,667	1,043
1963-64	19,285	1,610	5,324	8,735	4,366	6,916	1,039

**GROSS VALUE OF PRODUCTION
(£'000)**

1959-60	17,174	2,013	7,613	7,407	3,293	5,361	1,579
1960-61	20,643	1,935	7,715	9,470	3,470	6,592	1,828
1961-62	20,003	2,877	8,631	9,597	4,767	7,204	1,661
1962-63	21,003	2,648	9,177	9,876	4,774	6,380	1,613
1963-64	22,431	2,401	8,221	10,417	5,042	7,450	2,018

(v) *Production of Jams and Jellies and Preserved Fruit.* In Australia considerable quantities of fruit are used in the production of jams and jellies and for preserving. During 1963-64 output of jams, conserves, fruit spreads, etc., amounted to 90,462,000 lb., while output of preserved fruit amounted to 471,290,000 lb. Of the latter figure, pears accounted for 154,360,000 lb., peaches 155,959,000 lb., and pineapples 50,056,000 lb.

The recorded consumption of fruit in factories for all purposes, including that used for juice and cordial manufacture and for drying, was 326,000 tons in 1963-64.

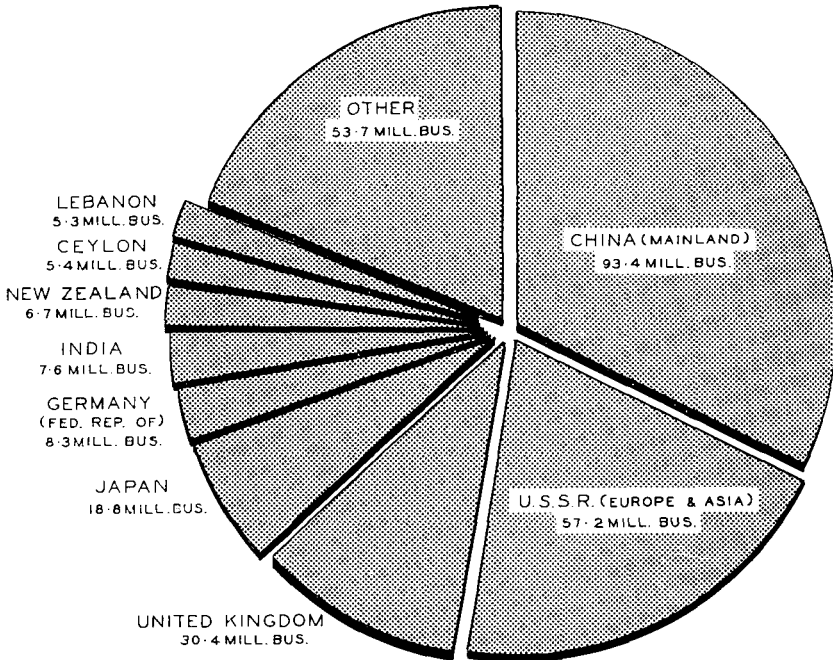
(vi) *Consumption of Fruit and Fruit Products.* Details of the estimated consumption of fruit and fruit products per head of population for a series of years ending 1963-64 are shown in Chapter XXX. Miscellaneous.

(vii) *Imports and Exports of Fruit. (a) General.* The imports of fresh fruit into Australia are negligible, while those of dried fruit consist mainly of dates.

A considerable export trade in both fresh and dried fruit is carried on by Australia with overseas countries. The values (£A. f.o.b.) of the shipments in 1963-64 amounted to £16,579,000 and £10,523,000 respectively. Apples constitute the bulk of the fresh fruit exported, although exports of pears and citrus fruit are considerable.

(b) *Fresh Fruit.* Particulars of the Australian export trade in fresh and frozen fruit for each of the years 1959-60 to 1963-64 are shown in the following table.

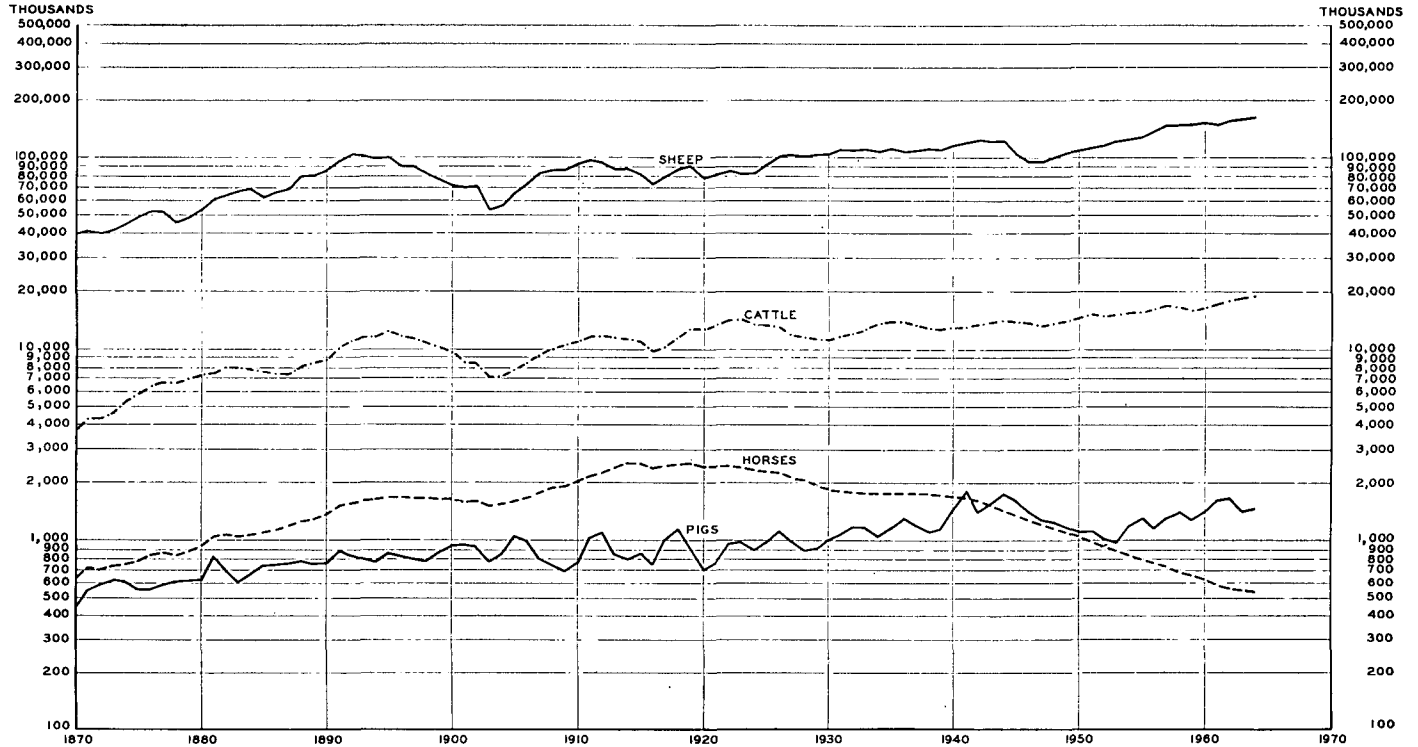
WHEAT: EXPORTS FROM AUSTRALIA
INCLUDING FLOUR IN TERMS OF WHEAT
1963 - 64



TOTAL: 286.8 MILLION BUSHELS

LIVESTOCK: AUSTRALIA, 1870 to 1964

RATIO GRAPH



NOTE:- VERTICAL SCALE IS LOGARITHMIC, AND THE CURVES RISE AND FALL ACCORDING TO RATE OF INCREASE OR DECREASE; ACTUAL NUMBERS ARE INDICATED BY SCALE.

FRESH AND FROZEN FRUIT: EXPORTS, AUSTRALIA

Year	Apples		Pears		Citrus		Total value ^(a)
	Quantity	Value	Quantity	Value	Quantity	Value	
	'000 bus.	£A.'000 f.o.b.	'000 bus.	£A.'000 f.o.b.	'000 bus.	£A.'000 f.o.b.	
1959-60	4,889	6,123	1,328	1,970	589	918	9,294
1960-61	5,729	7,321	1,235	2,080	419	664	10,369
1961-62	7,083	9,396	1,639	2,575	673	1,086	13,363
1962-63	7,207	11,645	1,071	1,750	861	1,283	14,985
1963-64	8,212	12,018	1,666	2,647	961	1,493	16,579

(a) Includes exports of all other fresh and frozen fruit.

(c) *Dried Tree Fruit.* The quantity and value of oversea imports and exports of dried fruit, other than raisins and currants, for the years 1959-60 to 1963-64 are shown below. Normally, the bulk of the imports consists of dates obtained almost entirely from Iraq and Iran. The export figures include particulars of some re-exported dried fruit.

DRIED TREE FRUIT^(a): IMPORTS AND EXPORTS, AUSTRALIA

Year	Imports ^(b)		Exports	
	Quantity	Value	Quantity	Value
	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.
1959-60	10,791	310	6,221	703
1960-61	9,178	303	8,199	932
1961-62	8,266	314	5,961	782
1962-63	8,939	296	6,611	952
1963-64	10,262	302	8,555	1,001

(a) Excludes raisins and currants dealt with separately under Vineyards (see below).
and figs only.

(b) Dates

(d) *Jams and Jellies.* Exports of jams and jellies in 1963-64 were 11,774,000 lb., valued at £A.811,000 f.o.b., compared with 10,160,000 lb., valued at £A.705,000 f.o.b. in 1962-63. Imports of jams and jellies in 1963-64 were 1,432,000 lb., valued at £A.135,000, compared with 1,581,000 lb., valued at £A.138,000 in 1962-63.

(e) *Preserved Fruit (values in £A. f.o.b.).* The total value of fruit preserved in tins or other airtight containers, or pulped, imported into Australia during 1963-64 was £201,112. Large quantities of fruit preserved in tins or other airtight containers are normally exported from Australia, the quantity recorded in 1963-64 being 126,786 tons valued at £17,117,653. Exports in 1963-64 were made up principally of pears (54,858 tons), peaches (48,339 tons), pineapples (6,099 tons), and apricots (5,055 tons). In addition, the exports of pulped fruits during 1963-64 amounted to 1,713 tons valued at £291,782.

2. *Vineyards.*—(i) *General.* Grapes require a warm to hot climate and a predominantly winter rainfall. Freedom from late spring frosts is essential.

Grapes are grown for wine-making, drying and, to a minor extent, for table use. In Australia wine is produced very largely from irrigated crops, as are dried fruits. Some of the better known wine producing areas are the Murray Valley (South Australia and Victoria), Barossa Valley and Southern Vales Areas (South Australia), the Murrumbidgee Irrigation Areas and the Hunter Valley (New South Wales), the Mildura, Rutherglen and Stawell districts of Victoria, and the Swan Valley (Western Australia). Nearly all the dried fruit is produced along the River Murray and its tributaries, with small localized areas in the other States.

(ii) *Area of Vineyards.* The area under vineyards in the 1963-64 season in Victoria and South Australia constituted 77 per cent. of the total area of vineyards. The total area of vines in the several States during each of the years 1959-60 to 1963-64 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

VINEYARDS: AREA

(Acres)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.(a)
Average for three years ended—						
1938-39	16,824	42,071	2,670	57,185	6,197	124,947
1948-49	16,482	44,114	3,099	58,971	9,965	132,631
1958-59	17,210	44,823	2,926	57,199	8,967	131,125
Year—						
1959-60	17,236	44,129	3,083	56,853	8,951	130,252
1960-61	16,988	44,649	3,110	56,897	8,864	130,508
1961-62	17,607	45,105	3,203	57,836	9,017	132,768
1962-63	17,704	45,662	3,237	58,266	8,685	133,554
1963-64—						
Wine	8,051	5,486	274	45,890	4,004	63,705
Table	2,830	2,842	3,002	288	1,244	10,206
Drying	7,834	38,173	..	12,501	3,381	61,889
Total	18,715	46,501	3,276	58,679	8,629	135,800

(a) Excludes particulars for Northern Territory and Australian Capital Territory, which are not available for publication.

NOTE.—There are no vineyards in Tasmania.

(iii) *Wine Industry.* (a) *General.* Australia produces wine of every type and also brandy. Five years ago the production of fortified wines such as sherries and ports was double that of table wines. During the past five to ten years consumption of all types of table wines, such as burgundy, claret, riesling, sauterne and sparkling wines, has increased rapidly, and in 1963-64 production of table wines was estimated at 7.6 million gallons compared with 10.4 million gallons of sherry and sweet wines.

Details of the Wine Research Trust Fund are given in Year Book No. 47, page 927.

(b) *Overseas Marketing of Wine.* The *Wine Overseas Marketing Act 1929-1963* was introduced to place the overseas marketing of wine on an orderly basis. The Australian Wine 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 also engages in wine publicity and trade promotion activities both in Australia and overseas. In London the Board maintains an Australian Wine Centre, which is a medium for promoting interest in Australian wines and brandy. It is also a retail shop for the sale of these products. The *Wine Grapes Charges Act 1929-1957* provides for the imposition of a levy on all grapes used in Australia for the manufacture of wine, brandy and spirit used for fortifying wine. The Board has no other source of income. The proceeds of the levy are used to meet the Board's projects in Australia and overseas and to defray the administrative expenses of the Board.

(c) *Production and Consumption.* In 1963-64 the total production of wine (beverage and distillation) in Australia was 37.5 million gallons, while total consumption of beverage wine was 13.2 million gallons (1.20 gallons per head of population). Similar particulars for 1962-63 are 29.9 million gallons and 12.6 million gallons (1.16 gallons per head of population) respectively.

The quantity of wine produced in the several States during the 1959-60 to 1963-64 seasons, together with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59, are shown in the following table.

WINE: PRODUCTION(a)
(^{'000} gallons)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Aust.
Average for three years ended—						
1938-39	2,712	1,359	31	14,021	396	18,519
1948-49	4,178	3,040	31	25,906	689	33,844
1958-59	3,974	2,435	36	25,190	743	32,378
Year—						
1959-60	3,840	2,147	37	21,576	801	28,401
1960-61	4,904	3,021	32	25,061	744	33,762
1961-62	6,442	3,605	36	30,831	822	41,736
1962-63	5,858	2,433	28	20,785	789	29,893
1963-64	6,030	3,705	33	27,102	666	37,536

(a) Net factory and farm production of beverage and distillation wine excluding the liquid gallonage of spirits added in wine fortifying.

The following table shows corresponding figures for the production of brandy.

BRANDY: PRODUCTION
(Proof gallons)

Season	South Australia	Australia(a)
Average for three years ended—		
1938-39	446,251	505,474
1948-49	648,641	714,688
1958-59	1,009,040	1,149,032
Year—		
1959-60	941,282	1,036,754
1960-61	1,044,285	1,166,978
1961-62	1,042,580	1,177,943
1962-63	994,420	1,128,997
1963-64	1,052,850	1,219,968

(a) Includes New South Wales and Victoria, for which separate details are not available for publication.

(d) *Exports and Imports of Wine and Brandy (values in £A. f.o.b.).* Exports in 1963-64 totalled 1,538,037 gallons, of which the United Kingdom received 1,054,366 gallons, Canada 221,568 gallons, New Zealand 59,824 gallons, Hong Kong 23,354 gallons, and other countries 178,925 gallons. Exports of Australian-produced wine for the five years ended 1963-64 are shown in the following table.

WINE: EXPORTS FROM AUSTRALIA

Year	Quantity (gallons)			Value (£A. f.o.b.)		
	Sparkling	Other	Total	Sparkling	Other	Total
1959-60	6,436	1,738,616	1,745,052	19,625	1,245,241	1,264,866
1960-61	11,441	1,884,978	1,896,419	29,786	1,273,079	1,302,865
1961-62	5,145	1,664,984	1,670,129	17,100	1,368,930	1,386,030
1962-63	17,245	1,596,887	1,614,132	46,222	1,328,526	1,374,748
1963-64	10,373	1,527,666	1,538,037	31,059	1,341,064	1,372,123

Imports for 1963-64 amounted to 117,537 gallons valued at £233,228, compared with 90,598 gallons valued at £189,968 in the previous year. During 1963-64 Italy supplied 49,171 gallons valued at £67,774, France 25,575 gallons valued at £85,203, and the Federal Republic of Germany 10,518 gallons valued at £29,083.

Exports of Australian-produced brandy in 1963-64 amounted to 105,743 proof gallons, valued at £214,433. Imports of brandy, mainly from France, amounted to 54,879 proof gallons, valued at £174,944.

(iv) *Dried Vine Fruit Industries. (a) General.* The dry period from November to March in the lower Murray valley makes this an ideal area for dried vine fruit. Harvesting for drying takes place at the end of summer. The sun-drying process is often accelerated by using a dip of cold potash.

(b) *Overseas Marketing of Dried Vine Fruit. The Dried Fruits Export Control Act 1924-1964* was passed to organize overseas marketing of Australian dried vine fruit. The Australian Dried Fruits Control Board, consisting of growers' representatives, members with commercial experience in marketing dried fruits, and a Government representative, controls the sale and distribution of dried fruit exports, recommends the licensing of exporters, and contributes to dried vine fruit publicity activity overseas. In conjunction with its London office, the Board has improved dried fruit marketing overseas by its system of appraisal, regulation of shipments and advertising.

The Dried Fruits Export Charges Act 1924-1964 provides for a levy on exports of dried fruit to defray costs and expenses incurred by the Board.

For details of the agreements which were negotiated between the Governments of the United Kingdom and Australia during the period 1946-1953 see Year Book No. 40, page 888. From 1st December, 1953, exports have been made on a trader to trader basis.

(c) *International Sultana Agreement.* In June, 1963, Australian, Greek and Turkish dried vine fruits industries signed a one-year agreement which aimed at stability in sultana marketing by means of a minimum price structure. The agreement was renewed in June, 1964, for a further period of two years. In terms of the agreement a Permanent Committee of the contracting parties was established in London for the purpose of supervising the working of the agreement, and a sub-committee of the Permanent Committee was established in Hamburg in 1964.

(d) *Dried Vine Fruits Stabilization Plan. The Dried Vine Fruits Stabilization Act 1964, Dried Vine Fruits Contribution Charges Act 1964, and Dried Vine Fruits Contributory Charges (Collection) Act 1964,* provide for guaranteed average prices for currants, sultanas and raisins and related matters as follows.

- (i) A guaranteed average return from seasonal sales of currants, sultanas and raisins at levels equal to £5 per ton below the average cost of production of each variety.
- (ii) Maximum quantities received for packing in respect of which the guaranteed average return will apply have been fixed at 13,500 tons of currants, 75,000 tons of sultanas and 11,000 tons of raisins.
- (iii) Growers to contribute to separate varietal stabilization funds when the average return to the industry from seasonal sales of a variety exceed cost of production by more than £5 per ton, with a limit on such contributions of £10 per ton.
- (iv) Growers not to be required to make a contribution to a stabilization fund in any season when the quantity received for packing does not reach 8,000 tons of currants, 50,000 tons of sultanas or 6,000 tons of raisins.
- (v) Contributions to be made by the Commonwealth to raise average returns to the guaranteed price, when there is insufficient industry money in a stabilization fund for this purpose.
- (vi) The setting of limits on the amounts to accumulate in each stabilization fund, namely £500,000 in the case of both the currant and raisin stabilization funds, and £2,000,000 in the case of the sultana stabilization fund.
- (vii) Where these limits are exceeded during the operation of the plan, the excess will be distributed, firstly, to reimburse the Government for any contribution it has previously made to a fund; any balance will be repaid to growers on a first-in first-out basis.
- (viii) The Government to be reimbursed at the end of the fifth year of the plan from any credit balance in a fund for any outstanding contribution previously made to that fund; in the event of the stabilization scheme not being renewed, any balance will be returned to growers on a first-in first-out basis.

(e) *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. Total production during the 1963-64 season amounted to 104,323 tons, while exports for the year ended December, 1964, were 76,641 tons, leaving an estimated 27,682 tons available for Australian consumption from that season's production. Australian consumption includes amounts delivered to biscuit manufacturers, bakeries, etc., as well as retail sales for household consumption.

The production of dried vine fruit during each of the seasons 1959-60 to 1963-64 and the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

DRIED VINE FRUIT: PRODUCTION
(Tons)

Season	N.S. Wales		Victoria		South Aust.		Western Aust.		Australia	
	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants	Raisins (a)	Currants
Average for three years ended—										
1938-39 ..	5,464	1,163	39,810	8,953	13,215	9,009	723	2,179	59,212	21,304
1948-49 ..	5,429	994	40,027	7,380	8,811	5,243	580	3,179	54,847	16,796
1958-59 ..	10,300	705	53,178	4,294	11,115	4,432	118	1,746	74,711	11,177
Year—										
1959-60 ..	7,722	462	44,764	3,331	9,192	2,844	73	1,402	61,751	8,039
1960-61 ..	10,777	981	51,002	5,383	8,751	4,243	31	1,288	69,361	13,071
1961-62 ..	13,089	410	64,862	2,714	10,674	2,742	66	1,941	88,691	7,807
1962-63 ..	8,560	463	44,059	2,536	11,007	2,607	51	1,225	63,677	6,831
1963-64 ..	13,563	709	66,138	3,934	13,159	4,533	121	2,166	92,981	11,342

(a) Includes sultanas and lexias.

(f) *Exports.* The following table shows the exports of dried vine fruit during each of the years 1959-60 to 1963-64.

DRIED VINE FRUIT(a): EXPORTS, AUSTRALIA

Year	Raisins, sultanas and lexias		Currants		Total	
	Quantity	Value	Quantity	Value	Quantity	Value
	tons	£A.'000 f.o.b.	tons	£A.'000 f.o.b.	tons	£A.'000 f.o.b.
1959-60 ..	45,634	7,726	4,540	637	50,174	8,363
1960-61 ..	48,805	7,133	7,838	1,032	56,643	8,165
1961-62 ..	60,169	8,955	4,564	620	64,733	9,575
1962-63 ..	56,696	8,029	4,208	571	60,904	8,600
1963-64 ..	57,451	8,728	5,512	801	62,963	9,529

(a) Excludes quantities exported as mincemeat.

The chief countries importing Australian dried vine fruit are the United Kingdom, Canada, New Zealand, the Federal Republic of Germany and Japan. The quantities exported to these countries in 1963-64 were 28,387 tons, 17,978 tons, 6,369 tons, 3,939 tons, and 1,352 tons respectively.

(v) *Table Grapes.* Grapes for table use are grown in all States except Tasmania, but the area of this type was only about 7 per cent. of the productive area of vines in 1963-64. The quantities of table grapes produced during the season 1963-64 in each State are shown in § 2, paragraph 2 (see p. 992).

PASTORAL PRODUCTION

§ 1. Introduction

1. **Livestock Numbers.**—A detailed account of the various enumerations of livestock in Australia made prior to 1860 was given on page 748 of Year Book No. 35. 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 1860 to 1950, and from 1960 onwards in single years, are given in the following table, and are shown continuously since 1870 on the graph on page 1038 of this Year Book.

LIVESTOCK: AUSTRALIA
(‘000)

Year	Horses	Cattle	Sheep	Pigs	Year	Horses	Cattle	Sheep	Pigs		
1860	..	432	3,958	20,135	351	1940	..	1,699	13,080	119,305	1,455
1870	..	717	4,276	41,594	543	1950	..	1,057	14,640	112,891	1,123
1880	..	1,069	7,527	62,184	816						
1890	..	1,522	10,300	97,881	891	1960	..	640	16,503	155,174	1,424
1900	..	1,610	8,640	70,603	950	1961	..	598	17,332	152,679	1,615
1910	..	2,166	11,745	98,066	1,026	1962	..	562	18,033	157,712	1,652
1920	..	2,416	13,500	81,796	764	1963	..	547	18,549	158,626	1,440
1930	..	1,793	11,721	110,568	1,072	1964	..	536	19,055	164,981	1,468

While livestock numbers (particularly sheep) have increased substantially since 1860, marked fluctuations have taken place during the period, mainly on account of widespread droughts which have from time to time left their impressions on the pastoral history of Australia. These occurred in 1868, 1877, 1883–84, 1892, 1893, 1895, 1901–02, 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 peaks are as follows:—horses, 1919 (2,527,000); cattle, 1964 (19,055,000); sheep, 1964 (164,981,000); and pigs, 1941 (1,797,000).

The distribution throughout Australia of sheep, beef cattle, dairy cattle and pigs at 31st March, 1963, is shown in the maps on pages 1049 and 1050 and facing pages 1082 and 1083 of Year Book No. 50.

The numbers of horses, cattle, sheep and pigs in each State and Territory are shown later in this chapter. As explained in paragraph 3 (page 1049), farmers are no longer asked to classify their herds as either “beef cattle” or “dairy cattle”; consequently detailed statistics of cattle for 1964 are not comparable with those for earlier years.

2. **Carrying Capacity of Pastoral Holdings.**—The carrying capacity of pastoral holdings has been increased in recent years, owing in some measure to the succession of good seasons experienced since 1946 (with the exception of the 1957–58 season, when prevailing dry conditions caused a slight decline in cattle and sheep numbers). Other important factors contributing to the progressive increase over this period have been the increased attention given to pasture improvement and the reduction of rabbit infestation, due principally to the introduction, in 1950, of the disease myxomatosis. Some information on pasture improvement in Australia was given on pages 1001–2 of Year Book No. 49.

3. **Size Classification of Cattle Herds and Sheep Flocks.**—A special series of tabulations relating to rural holdings in Australia was compiled for 1959–60 and has been published in full detail in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959–60*. Tables in these bulletins relating to beef cattle, dairy cattle, and sheep, show classifications according to size of herd or flock, area of holding, area of wheat for grain, area of sown pastures, and type of activity. These data are presented by statistical division. An earlier series, prepared for the year 1955–56, presents similar data, but only by State.

4. **Value of Pastoral Production.**—(i) *Gross, Local and Net Values, 1963–64.* Values of pastoral production for each State are shown for 1963–64 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 and depreciation have not been deducted; consequently the net values are inflated to the extent of these amounts.

GROSS, LOCAL AND NET VALUES OF PASTORAL PRODUCTION, 1963-64
(£'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Local value of production	Value of materials used in process of production	Net value of production (a)
New South Wales	291,634	21,178	270,456	(b) 18,911	251,545
Victoria	191,106	18,230	172,876	11,028	161,848
Queensland	140,340	11,043	129,297	11,410	117,887
South Australia	75,233	4,082	71,151	8,162	62,989
Western Australia	74,351	4,805	69,546	7,774	61,772
Tasmania	16,422	1,015	15,407	5,624	9,783
Northern Territory	4,006	561	3,445	n.a.	3,445
Australian Capital Territory	1,186	77	1,109	89	1,020
Australia	794,278	60,991	733,287	62,998	670,289

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

(ii) *Net Values, 1959-60 to 1963-64.* The net value of pastoral production by State and the net value per head of population are shown below.

NET VALUE OF PASTORAL PRODUCTION(a)

Year	N.S.W.(b)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.(c)
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NET VALUE
(£'000)

1959-60 ..	198,380	135,630	99,884	50,067	39,659	7,846	536,215
1960-61 ..	159,960	116,181	94,346	36,119	39,978	6,403	458,169
1961-62 ..	183,002	115,528	86,449	45,628	41,328	5,854	481,338
1962-63 ..	201,830	132,563	100,261	51,995	41,290	7,542	539,349
1963-64 ..	251,545	161,848	117,887	62,989	61,772	9,783	670,289

NET VALUE PER HEAD OF POPULATION
(£)

1959-60 ..	52.3	48.1	67.6	53.6	55.3	22.8	52.8
1960-61 ..	41.3	40.2	62.7	37.7	54.8	18.3	44.1
1961-62 ..	46.4	39.1	56.6	46.6	55.4	16.4	45.4
1962-63 ..	50.3	43.9	64.7	52.1	54.0	20.9	49.9
1963-64 ..	61.6	52.4	74.9	61.7	79.0	26.7	60.8

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils. (c) Includes Northern Territory and Australian Capital Territory.

5. Indexes of Quantum and Price of Pastoral Production, 1959-60 to 1963-64.—The quantum indexes shown in the following table 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	1959-60	1960-61	1961-62	1962-63	1963-64
QUANTUM^(a) PRODUCED					
Wool	172	165	174	170	183
Other products	153	136	144	154	158
<i>Total, Pastoral</i>	<i>163</i>	<i>152</i>	<i>160</i>	<i>163</i>	<i>172</i>
Per head of population	110	100	104	104	107
PRICE					
Wool	440	397	412	449	531
Other products	500	513	433	451	480
<i>Total, Pastoral</i>	<i>464</i>	<i>443</i>	<i>421</i>	<i>450</i>	<i>511</i>

(a) Index of value at constant prices, i.e. quantities revalued at average unit values of base years, 1936-37 to 1938-39.

§ 2. Sheep

1. **Distribution throughout Australia.**—With the exception of a short period in the early eighteen-sixties, when the flocks of Victoria outnumbered those of New South Wales, the latter State has occupied the premier position in sheep-raising, depasturing nearly one-half of the sheep of Australia.

A map showing the distribution of sheep in Australia at 31st March, 1963, appears on page 1049 of Year Book No. 50. Graphs showing the number of sheep in Australia from 1870 onwards appear on pages 1038 and 1071 of this Year Book.

The numbers of sheep in the several States and Territories at 31st March of each year 1960 to 1964 compared with average numbers for the three-year periods ended 1939, 1949 and 1959 are shown in the following table.

SHEEP: NUMBER
(’000)

Period	N.S.W.	Vic.	Q’land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1939 ..	51,202	17,845	21,889	8,916	8,972	2,460	23	251	111,558
1949 ..	46,525	17,900	16,442	8,793	10,368	2,060	24	227	102,339
1959 ..	67,006	26,615	22,537	15,285	15,609	3,259	25	265	150,601
Year—									
1960 ..	71,000	26,597	23,332	14,025	16,412	3,494	15	299	155,174
1961 ..	68,087	26,620	22,135	14,952	17,152	3,439	16	278	152,679
1962 ..	69,498	27,533	22,125	16,415	18,314	3,531	10	286	157,712
1963 ..	70,021	27,472	22,811	15,737	18,727	3,570	9	279	158,626
1964 ..	71,764	28,413	24,337	16,403	20,165	3,600	10	289	164,981

Except when affected by drought, the relative numbers of sheep in the different States have remained fairly constant in recent years. The percentage distribution in 1964 was:— New South Wales, 44; Victoria, 17; Queensland, 15; South Australia, 10; Western Australia, 12; and Tasmania, 2.

2. **Numbers of Sheep on Rural Holdings.**—(i) *Size of Sheep Flocks.* Details of the size of sheep flocks on rural holdings in Australia for 1959–60 have been published in a series of publications entitled *Classification of Rural Holdings by Size and Type of Activity, 1959–60.*

(ii) *Sheep Numbers.* The following table shows the approximate movement in sheep numbers in Australia in each year from 1959–60 to 1963–64.

SHEEP AND LAMBS: ANALYSIS OF MOVEMENT IN NUMBERS, AUSTRALIA ('000)

Season	Lambs marked	Excess of exports (a)	Sheep and lambs slaughtered	Estimated number of deaths from disease, drought, etc. (b)	Number at 31st March (end of season)	Annual net increase (+) or decrease (—)
1959–60	44,150	226	22,088	2,247	155,174	+2,467
1960–61 ..	39,792	148	32,582	9,557	152,679	—2,495
1961–62 ..	45,596	201	33,317	7,045	157,712	+5,033
1962–63 ..	45,146	263	33,847	10,122	158,626	+914
1963–64 ..	47,818	328	33,147	7,988	164,981	+6,355

(a) There were no imports in any of the years shown.

(b) Balance figure.

3. **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.

SHEEP: AGE AND SEX, AUSTRALIA ('000)

Description	1960	1961	1962	1963	1964
Rams, 1 year and over ..	1,898	1,934	1,956	1,979	1,986
Breeding ewes (including ewes intended for mating) ..	68,455	69,662	70,693	70,936	72,862
Other ewes, 1 year and over ..	9,276	8,951	8,729	8,878	8,631
Wethers, 1 year and over ..	43,046	42,912	43,021	44,267	46,203
Lambs and hoggets, under 1 year ..	32,499	29,220	33,313	32,566	35,299
Total, Sheep and Lambs	155,174	152,679	157,712	158,626	164,981

Particulars of the principal breeds of sheep at 31st March, 1962, the latest date for which these data are available (details are collected on a triennial basis), are shown in the following table.

SHEEP: PRINCIPAL BREEDS, 31st MARCH, 1962
('000)

Breed	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Merino ..	54,096	12,116	21,754	13,772	16,902	337	10	247	119,234
Other recognized breeds ..	7,203	6,990	48	1,149	587	1,959	..	10	17,946
Merino comebacks(a) ..	1,865	2,570	74	307	215	429	..	7	5,467
Crossbreds(b) ..	6,334	5,857	249	1,187	610	806	..	22	15,065
Total ..	69,498	27,533	22,125	16,415	18,314	3,531	10	286	157,712

(a) Merino comeback is the progeny of a crossbred Merino ewe and a Merino ram, i.e. finer than half-bred. (b) Half-bred and coarser.

4. **Imports and Exports of Sheep.**—The oversea exports of live sheep from Australia are of comparatively minor 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 from Western Australia to Singapore. In 1963–64 the number of sheep exported was 327,607, valued at £1,418,000 (1962–63, 263,145, valued at £892,000). Since June, 1958, an embargo has been imposed on the import of sheep in order to prevent the introduction of the disease blue-tongue.

5. **Comparison with other Countries.**—In 1963–64 Australian flocks numbered 165 million sheep, compared with an estimate of 238 million for the U.S.S.R., China, and eastern Europe combined, about 51 million in New Zealand, and about 48 million in Argentina. World sheep numbers were estimated at about 924 million in 1963–64. These figures relate only to woolled sheep, non-woolled sheep accounting for about 5 per cent. of the world total of all types of sheep. Further details of sheep numbers in the principal wool producing countries of the world are given in the table on page 1061.

§ 3. Cattle

1. **Objects of Cattle-raising.**—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. While dairy cattle are restricted mainly to coastal districts, beef 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.**—Although cattle numbers declined after 1957 because of drought conditions and heavy slaughterings, they began to rise again in 1960, and in 1964 reached a record level of 19,055,000.

A graph showing the number of cattle in Australia from 1870 onwards appears on page 1038 of this Year Book.

The numbers of cattle in the several States and Territories in each year 1960 to 1964, compared with averages for the three-year periods ended 1939, 1949 and 1959, are shown below.

CATTLE: NUMBER

('000)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1939 ..	3,040	1,861	6,002	324	767	260	882	8	13,144
1949 ..	3,122	2,153	5,971	443	830	244	1,006	9	13,778
1959 ..	3,770	2,722	7,177	598	985	367	1,173	10	16,802
Year—									
1960 ..	3,840	2,624	7,012	500	1,030	375	1,111	11	16,503
1961 ..	4,242	2,864	7,004	561	1,100	394	1,154	13	17,332
1962 ..	4,399	3,156	7,098	659	1,218	425	1,064	14	18,033
1963 ..	4,569	3,225	7,233	679	1,298	444	1,087	14	18,549
1964 ..	4,789	3,301	7,402	694	1,299	450	1,105	15	19,055

Although the proportion was not as high as it has been in some previous years, Queensland was carrying 39 per cent. of the cattle in Australia in 1964. The percentage in each State and Territory during that year was:—New South Wales, 25; Victoria, 17; Queensland, 39; South Australia, 4; Western Australia, 7; Tasmania, 2; and Northern Territory, 6.

Maps showing the distribution of beef and dairy cattle in Australia appear on pp. 1050 and 1082 of Year Book No. 50, and maps showing distribution in earlier years were published in previous issues of the Year Book.

3. Classification of Cattle.—Following an investigation into the adequacy of the wording and arrangement of the cattle sections of the statistical forms used for recent Agricultural, Dairying and Pastoral Censuses, certain changes were made to the forms used for the Census conducted at 31st March, 1964.

Prior to 1964 farmers were asked to classify their herds as either "beef cattle" or "dairy cattle". These two terms tended to cause confusion between breed and purpose, and in those instances where vealer production was carried on in association with dairying farmers were in doubt how to classify part or all of their herds.

On 31st March, 1964, farmers were asked to classify their cattle according to the two main purposes of (i) milk production, and (ii) meat production, irrespective of breed, and to report separately the number of cows and heifers kept for their own domestic milk supply. Consequently detailed statistics of cattle for 1964 are not comparable with those for earlier years. However, four broad groupings of cattle are generally comparable with earlier years, and particulars for each year from 1960 to 1964 are shown below.

CATTLE: NUMBER

('000)

31st March—		Bulls one year and over	Cows and heifers one year and over	Calves under one year	Other	Total
1960 ..	..	312	9,667	3,329	3,195	16,503
1961 ..	..	347	10,124	3,561	3,300	17,332
1962 ..	..	366	10,543	3,872	3,252	18,033
1963 ..	..	379	10,936	4,079	3,155	18,549
1964 ..	..	377	11,138	4,254	3,286	19,055

CATTLE: PURPOSE(a), AGE AND SEX, 31st MARCH, 1964

('000)

Classification.	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T. (b)	A.C.T.	Aust.
Bulls (1 year and over) used or intended for service—									
Dairy breeds	22	40	21	7	5	4	(c) 37	(c) 1	99
Beef breeds	67	32	105	10	22	4			278
Total	89	72	126	17	27	8	37	1	377
Cattle used or intended for production of—									
Milk or cream for sale—									
Cows—In milk	574	879	544	97	46	} 141	1	{ (c) 1 }	} 3,078
Dry	169	306	185	63	72				
Heifers—Springing (within 3 months of calving)	} 190	} 300	} 183	{ 24	{ 26	} 40	(c)	(c)	} 821
Other (1 year and over) Calves (under 1 year)										27	31	41	37	43	(c)	(c)	718
Milk or cream for use on rural holdings—									
House cows and heifers ..	116	34	43	8	10	6	(d)	1	(e) 218
Total	1,202	1,826	1,092	260	222	230	1	2	4,835
Cattle for other purposes(f)—									
Cows and heifers (1 year and over)	1,837	672	3,034	221	525	89	636	7	7,021
Calves (under 1 year)(g)	1,103	466	1,335	130	242	79	177	4	3,536
Other (1 year and over) i.e. steers, bullocks, speyed cows, etc. ..	558	265	1,815	66	283	44	254	1	3,286
Total	3,498	1,403	6,184	417	1,050	212	1,067	12	13,843
Total Cattle and Calves for All Purposes	4,789	3,301	7,402	694	1,299	450	1,105	15	19,055

(a) Collected according to this classification for the first time in 1964. See text on p. 1049. (b) As at 30th June, 1964. (c) Less than 500. (d) Not available separately. (e) Incomplete: excludes Northern Territory. (f) Mainly for meat production. (g) Includes vealers, and bull calves intended for service.

For beef cattle and dairy cattle numbers up to 1963 see pp. 1056 and 1078 respectively of Year Book No. 50.

Details of size of cattle herds on rural holdings in Australia for 1959-60 have been published in a series of publications entitled *Classification of Rural Holdings by Size and Type of Activity*.

4. **Cattle and Beef Research Schemes.**—In May, 1960, legislation was enacted to provide for a Commonwealth scheme for an expanded programme of research into the scientific, technical and economic problems connected with the Australian beef industry.

Funds are raised by a levy on all cattle weighing over 200 lb. dressed which are slaughtered for human consumption, and the Commonwealth provides a matching contribution on a £1 for £1 basis to meet expenditure on new research. The scheme is administered by the Australian Cattle and Beef Research Committee, whose main function is to formulate plans for projects on which the funds may be expended. The research is undertaken by existing bodies such as the universities, C.S.I.R.O. and State Departments of Agriculture.

The Minister for Primary Industry has approved a research programme of just over £1,000,000 for 1965-66. This is approximately the same amount as in the previous year.

At its first meeting in June, 1960, the Committee agreed to recommend to the Minister for Primary Industry that the levy be fixed at the maximum provided in the Act, namely 2s. a head. The levy was operative from 1st July, 1960. It was suspended in October, 1960, as a result of a High Court writ being issued by certain meat operators challenging the validity of the Act. Amending legislation was enacted in October, 1961, and the levy again became operative from the 14th October, 1961. The Acts covering the research arrangements and collection of the levy are the *Cattle and Beef Research Act 1964*, and the *Livestock Slaughter Levy Collection Act 1964*. The *Cattle Slaughter Levy (Suspension) Act 1961* covers the suspension of levy from 14th October, 1960, to 13th October, 1961.

5. Imports and Exports of Cattle.—In 1963-64 the number of cattle exported was 7,634, valued at £307,000 (1962-63, 8,969 valued at £283,000). The bulk of the animals at present being exported are sent to Hong Kong for slaughtering, the number exported thereto in 1963-64 being 5,333 head valued at £144,418.

Prior to June, 1958, small numbers of cattle were imported, consisting mainly of valuable animals for stud purposes. Since that date an embargo has been imposed on the import of cattle in order to prevent the introduction of the disease blue-tongue.

6. 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 at the latest available date.

CATTLE: NUMBER IN VARIOUS COUNTRIES

(Source (for countries other than Australia): *World Agricultural Production and Trade*, United States Department of Agriculture)

(*000)

Country	Year and month	Number(a)
India(b)	1962 (May)	236,000
United States of America	1964 (January)	106,488
U.S.S.R.	1964 (January)	85,000
Brazil	1963 (December)	81,115
China (Mainland)(b)	1960 (December)	65,400
Argentina	1964 (June)	41,500
Pakistan(b)	1961 (Estimate)	30,300
Mexico	1964 (Spring)	24,500
Ethiopia	1963 (Estimate)	22,000
France	1963 (October)	20,249
Australia	1964 (March)	19,055
Colombia	1963 (October)	15,800
Turkey(b)	1963 (December)	13,150
Germany, Federal Republic of	1963 (December)	13,014
South Africa	1959 (August)	11,300

(a) Subject to revision.

(b) Includes buffaloes.

§ 4. Horses

1. **Distribution throughout Australia.**—About 80 per cent. of the horses in Australia are in the States of New South Wales, Victoria and Queensland. In the following table figures are shown for each State and Territory for the years 1960 to 1964.

HORSES: NUMBER

('000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
1960 ..	204	81	234	30	41	11	38	1	640
1961 ..	192	65	224	27	40	9	40	1	598
1962 ..	168	61	217	25	40	9	41	1	562
1963 ..	166	58	212	25	39	8	38	1	547
1964 ..	163	56	206	(a) 25	39	8	38	1	(b) 536

(a) Estimated.

(b) See footnote (a) to South Australia.

The number of horses in Australia reached a peak of 2,527,000 in 1919. Since then it has declined, because of mechanization of transport and farming, at an average rate of 44,000 a year. A graph showing the number of horses in Australia since 1870 appears on page 1038 of this Year Book.

The percentage distribution of the number of horses in each State and Territory for 1964 was:—New South Wales, 30; Victoria, 10; Queensland, 39; South Australia, 5; Western Australia, 7; Tasmania, 2; and Northern Territory, 7.

2. **Overseas Trade in Horses.**—Exports of horses in 1963–64 numbered 482, valued at £476,569 (Australian produce 421 for £368,994, re-exports 61 for £107,575), made up of horses for breeding (100 valued at £134,307), horses for racing (205 valued at £295,324, shipped principally to the United States of America and Singapore), and horses for other purposes (177 valued at £46,938).

Horses imported into Australia for breeding purposes in 1963–64 (184 valued at £416,045) were mainly from the United Kingdom and New Zealand, while horses for racing purposes (495 valued at £483,773 in 1963–64) were mainly from New Zealand. The total number imported in 1963–64 was 698 valued at £905,225.

§ 5. Pastoral Products: Wool

1. **General.**—With about one-sixth of the world's woolled sheep, Australia produces almost one-third of the world's wool and more than half of the world's fine-quality Merino wool. The bulk of the production is exported, mainly as greasy wool, although substantial amounts of scoured and carbonized wool, wool on sheep skins and small quantities of semi-manufactured wool are also shipped.

The important position held by Australia among the principal sheep and wool producing countries of the world is shown in the table on page 1061.

2. **Earlier Wool Marketing Schemes.**—Details of past marketing schemes and agreements, including the 1914–18 War Imperial Purchase Scheme, the British Australian Wool Realization Association Ltd., the 1939–45 War Acquisition Scheme, Joint Organization, and Minimum Reserve Price Plan, are given in previous issues of the Year Book.

3. **Auction System.**—More than ninety per cent. of the Australian wool clip is disposed of at auction. (During both world wars, however, auction selling was suspended and replaced by bulk purchase schemes.)

There are fourteen recognized wool-selling centres, namely Sydney, Goulburn, Newcastle, Albury, Melbourne, Geelong, Ballarat, Portland, Brisbane, Adelaide, Perth, Albany, Hobart and Launceston. At these centres wool-selling brokers operate large stores where wool received from growers is held awaiting sale.

Each year a wool-selling programme is drawn up jointly by the selling brokers and wool-buyers on the basis of the expected clip. Selling dates and the quantities to be offered are then determined for each centre.

Before each sale, the selling brokers, who act as agents for the woolgrowers, display a representative portion of the wool to be sold on show floors for buyers' inspection and valuation. Auction sales are attended by buyers purchasing on behalf of wool users in over fifty countries.

4. Wool Marketing Committee of Inquiry.—In 1961 the Commonwealth Government appointed an independent committee to inquire into the marketing and promotion of Australian wool and related matters (*see* Year Book No. 48, page 977, for further details). The Committee presented its report to the Government in 1962. Its most important recommendation was that wool promotion, research and testing should be brought under the control of a single body, which should also act as an advisory authority on wool marketing. This recommendation was implemented under the *Wool Industry Act* 1962, which set up the Australian Wool Board.

5. Australian Wool Board.—This Board consists of a chairman, six woolgrower representatives, three members with special qualifications and a representative of the Commonwealth Government. The first chairman of the Board was appointed by the Minister for Primary Industry after consultation with the Australian Wool Industry Conference (*see* p. 1054) but subsequent chairmen are to be appointed on the nomination of the Board. The six woolgrower representatives are appointed by the Minister on the nomination of the Wool Industry Conference, and the three members with special qualifications are appointed from a panel of names submitted by the Conference. The Act provides that the latter members must be experienced in one of the following fields: wool marketing and manufacturing, research, finance and commerce.

When the Board came into being on 1st May, 1963, it took over the functions of the Australian Wool Bureau. On 1st July, 1963, the Australian Wool Testing Authority became part of the Board, and on 1st January, 1964, the Board took over the functions of the Wool Research Committee. Information on these three former instrumentalities appears in Year Book No. 48, pages 977–81.

Following the organizational changes carried out under the Wool Industry Act, the functions of the Board embrace the following activities.

- (i) *Wool promotion in Australia and overseas by publicity and other means.* Promotion overseas is carried out through the International Wool Secretariat, which is maintained jointly by the Wool Boards of Australia, New Zealand and South Africa.
- (ii) *Provision of a testing service for wool and wool products.* This service is administered by a subsidiary board retaining the name Australian Wool Testing Authority.
- (iii) *Administration of wool research.* The Board is responsible for preparing annual programmes of research expenditure which are subject to the approval of the Minister for Primary Industry. Two committees established by the Board, the Wool Production Research Advisory Committee and the Wool Textile Research Advisory Committee, assist in this task.
- (iv) *Investigation into all aspects of wool marketing on a continuing basis.* The Wool Marketing Committee, an ancillary body appointed by the Board, assists in carrying out this function. The Board is required to report to the Australian Wool Industry Conference on its findings and advise it on measures which should be adopted to meet changing marketing conditions. However, the Board has no executive powers over marketing.
- (v) *Maintenance and administration of the wool stores which were entrusted to the Board by the Commonwealth Government.* Further details concerning these stores appear in Year Book No. 48, page 978.
- (vi) *Other activities approved by the Minister for the benefit of the wool industry, including the operation of the Wool Statistical Service and the registration of wool classers.* The Wool Statistical Service (described in more detail in Year Book No. 48, pp. 977–8) provides comprehensive statistics on the Australian wool clip, while the registration of wool classers is designed to improve the standards of wool classing in Australia.

At present the main sources of finance for the various activities of the Board are a levy paid by woolgrowers and contributions by the Commonwealth Government.

6. The Australian Wool Industry Conference.—This body was formed by woolgrowers in October, 1962, to meet the need for an organization with sufficient authority to speak on behalf of the woolgrowing industry as a whole. It is not a statutory body and consists at present of 50 members and an independent chairman, 25 of the members being appointed by the Australian Woolgrowers' and Graziers' Council and 25 by the Australian Wool and Meat Producers' Federation.

The Conference makes recommendations to the Commonwealth Government on policy matters concerning the wool industry. Under the Wool Industry Act it is the responsibility of the Conference to nominate woolgrower representatives for appointment to the Australian Wool Board and to prepare panels of names from which the three Board members with special qualifications are selected. Under the Wool Tax Acts (see para. 7) the Conference is also responsible for recommending to the Commonwealth Government what rates of levy should be paid by woolgrowers to finance the activities of the Wool Board.

7. Wool Levy.—Since 1936 a statutory levy has been collected from woolgrowers to finance wool promotion activities. The initial rate of 6d. a bale was increased at the request of woolgrowers to 2s. a bale in 1945 and 4s. a bale in 1952, the latter rate continuing until 1960. Further details regarding the operation of this levy prior to 1957 appear in Year Book No. 48, page 978.

Under legislation passed in 1957 provision was also made for the payment by woolgrowers of a contribution for wool research which was fixed at 2s. a bale.

In 1960 the wool promotion levy was raised to 5s. a bale, and the following year it was increased further to 10s. a bale. The operation of this rate was subsequently extended for 1962-63 and 1963-64.

On 1st July, 1964, the basis of collecting the woolgrowers' combined levy for wool promotion and research was changed from the existing unit charge per bale to a percentage of the gross sale value of the wool. The maximum rate was set at 2 per cent. and provision was made for annual adjustments to the operative rate, not greater than that maximum, to yield the required amounts. At the same time the levy for wool promotion was increased from 10s. a bale to the equivalent of 27s. a bale, but the levy for research remained unchanged at the equivalent of 2s. a bale. For 1964-65 the rate for the combined levy for wool promotion and research was set at 1½ per cent.

The imposition and collection of the combined levy from woolgrowers is governed by six complementary Acts, the Wool Tax Acts (Nos. 1 to 5) 1964 and the *Wool Tax Administration Act* 1964 (see pp. 907-8.).

8. Commonwealth Government's Contributions to Wool Research and Promotion.—Since 1945 the Commonwealth Government has contributed to wool research on a statutory basis. Originally the contribution was equivalent to 2s. a bale. This was increased to 4s. a bale in 1957 and has remained unchanged since then.

Until 1964-65 the Commonwealth Government had not contributed to wool promotion, but in that year began contributing at the rate of about £4,250,000 a year. This was the result of a request from the Australian Wool Industry Conference to the Government in July, 1963, for assistance to the Australian Wool Board to finance its vastly increased commitments to the International Wool Secretariat (see p. 1053) for wool promotion overseas. The Secretariat had announced a 5-year plan of expanded wool promotion activities that envisaged an increase in the Australian Wool Board's share of contributions to the Secretariat from its then £2,500,000 to about £10,000,000 a year.

The Government agreed in October, 1963, to match £1 for £1 any increase in the growers' levy for promotion in excess of their current levy of 10s. a bale for that purpose. In January, 1964, the Conference agreed to increase the growers' levy to the equivalent of 27s. a bale, which resulted in a Government commitment of 17s. a bale. In terms of aggregate quantities this commitment required a Commonwealth Government contribution of about £4,250,000 a year, to commence in 1964-65. This will be reviewed after 3 years.

9. **Wool Production.**—(i) *General.* Wool as shorn from the sheep contains an appreciable amount of grease, dirt and other extraneous matter, and is termed "greasy wool". The quantity of grease and other 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.

To allow for this factor, the weight of greasy wool is sometimes given on a "clean" basis, i.e. minus the estimated amount of impurities. The net wool fibre content of greasy wool, expressed as a percentage, is termed "clean yield".

From 1946-47 to 1952-53, the Australian Wool Realization Commission, and from 1953-54, the Wool Statistical Service, have assessed annually the clean yield of the Australian wool clip. During the period of assessment, the clean yield showed a continuous rise up to 1951-52, when it reached 57.5 per cent. It has since fluctuated between 55.8 per cent. and 57.7 per cent.

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 50 per cent. The quantity of this wool exported during 1963-64 was about 11 per cent. of the total raw wool exports (excluding wool exported on skins) in terms of greasy.

For the clean yield of Australian scoured wools exported, a standard factor of 93 per cent. is taken.

(ii) *Production.* The production of wool in the States and Territories varies broadly in accordance with the number of sheep depastured and with seasonal conditions which affect clip per head (see para. 8 (iii), p. 1056). In general, however, South Australia obtains from its large-framed Merinos a much heavier fleece per sheep than the Australian average, while Tasmania generally obtains from its predominantly non-Merino flocks a lighter fleece per sheep. In addition, as a result of better management (improved pastures, fodder conservation, better breeding, control of diseases, etc.), the long-term trend has been towards higher fleece weights.

The following table shows details of total wool (i.e. shorn, dead and fellmongered, and exported on skins) produced by each of the States and Territories during the years 1959-60 to 1963-64 compared with averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. A graph showing the production of wool in relation to sheep numbers from 1870 onwards appears on page 1071 of this Year Book.

PRODUCTION OF WOOL (GREASY BASIS)

('000 lb.)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39 ..	478,595	169,256	169,325	88,699	73,141	15,728	35	1,822	996,601
1948-49 ..	439,363	200,229	151,679	108,126	95,031	16,272	305	1,927	1,012,932
1958-59 ..	633,938	298,302	217,062	187,225	160,402	30,141	277	2,371	1,529,718
Year—									
1959-60 ..	715,445	322,999	236,196	198,289	170,442	33,600	165	2,899	1,680,035
1960-61 ..	664,276	322,011	235,590	177,413	191,353	31,870	157	2,471	1,625,141
1961-62 ..	701,168	330,716	230,333	206,985	192,161	34,469	98	2,645	1,698,575
1962-63 ..	693,734	316,705	233,638	207,344	184,123	34,561	100	2,343	1,672,548
1963-64 ..	731,316	334,288	255,386	210,500	216,574	34,007	91	2,552	1,784,714

The bulk of the Australian wool production (about 91 per cent. in recent years) is shorn from live sheep. The remainder is obtained by fellmongering (about 2 per cent.), or is exported on skins (about 7 per cent.). The following table shows details of total wool production according to method of obtaining wool, and also the gross value of wool produced. Gross value is 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.

**QUANTITY (GREASY BASIS) AND VALUE OF WOOL PRODUCED:
AUSTRALIA**

Period	Shorn (incl. crutchings)	Dead and fell- mongered	Exported on skins	Total production	
				Quantity	Value
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	£'000
Average for three years ended—					
1938-39	889,338	49,280	57,983	996,601	53,425
1948-49	902,007	50,660	60,265	1,012,932	152,536
1958-59	1,411,424	36,804	81,490	1,529,718	394,145
Year—					
1959-60	1,529,362	38,929	111,744	1,680,035	389,761
1960-61	1,472,092	37,509	115,540	1,625,141	340,430
1961-62	1,546,318	36,192	116,065	1,698,575	372,554
1962-63	1,515,932	32,854	123,762	1,672,548	400,262
1963-64	1,631,962	28,688	124,064	1,784,714	511,721

(iii) *Average Fleece Weight.* The average weights of sheep and lamb fleeces shorn in each of the States and Territories of Australia are shown in the following table for each season from 1959-60 to 1963-64.

**AVERAGE WEIGHT OF FLEECES SHORN (SHEEP AND LAMBS)
(lb.)**

State or Territory	1959-60	1960-61	1961-62	1962-63	1963-64
SHEEP					
New South Wales	10.10	9.48	10.06	9.94	10.19
Victoria	10.06	10.24	10.17	9.59	10.09
Queensland	10.09	9.93	9.89	9.83	10.41
South Australia	12.31	12.12	12.86	12.29	12.89
Western Australia	10.32	11.37	10.90	10.09	11.46
Tasmania	9.10	8.89	9.39	9.44	9.14
Northern Territory	9.39	9.00	8.50	10.94	10.36
Australian Capital Territory ..	10.53	9.18	9.87	8.88	9.59
Australia	10.31	10.12	10.41	10.11	10.60
LAMBS					
New South Wales	3.22	3.31	3.30	3.34	3.39
Victoria	2.73	2.96	2.92	2.82	2.76
Queensland	3.95	4.16	3.89	3.85	3.99
South Australia	3.39	3.55	3.81	3.63	3.71
Western Australia	2.56	2.84	2.84	2.55	2.91
Tasmania	2.13	2.30	2.23	2.35	2.12
Northern Territory .. .. .	..	..	2.33	5.00	4.34
Australian Capital Territory ..	1.56	1.56	1.66	1.80	1.61
Australia	3.10	3.27	3.25	3.20	3.26

(iv) *Classification of Wool According to Quality.* The following table provides a detailed analysis of wool sold at auction, according to quality, for the years 1959-60 to 1963-64. These data are compiled by the Wool Statistical Service on the basis of catalogues of auction sales. "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 1 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.)

Pre-dominating quality	1959-60		1960-61		1961-62		1962-63		1963-64	
	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.	Quantity	Per cent.
70's and finer	113,234	2.4	122,534	2.7	115,434	2.4	138,238	3.0	132,620	2.7
64/70's	453,823	9.5	462,764	10.0	381,683	8.0	413,195	8.9	373,658	7.6
64's	659,126	13.8	633,919	13.8	572,549	12.1	582,315	12.5	567,559	11.6
64/60's	506,001	10.6	451,905	9.8	475,487	10.0	469,010	10.1	482,770	9.9
60/64's	1,071,961	22.4	947,627	20.5	1,048,912	22.1	1,043,674	22.4	1,149,957	23.4
60's and 60/58's	839,919	17.5	829,601	18.0	915,501	19.3	854,771	18.4	964,274	19.7
Total, 60's and finer	3,644,064	76.2	3,448,350	74.8	3,509,566	73.9	3,501,203	75.3	3,670,838	74.9
58's	491,277	10.3	555,237	12.0	578,588	12.2	527,493	11.3	566,904	11.6
56's	375,391	7.9	354,287	7.7	383,238	8.1	353,344	7.6	382,384	7.8
50's	152,056	3.2	140,457	3.0	146,637	3.1	135,256	2.9	141,638	2.9
Below 50's	46,429	1.0	43,552	0.9	49,875	1.1	45,631	1.0	45,675	0.9
Oddments	68,202	1.4	73,246	1.6	75,708	1.6	86,058	1.9	92,622	1.9
Grand Total	4,777,419	100.0	4,615,129	100.0	4,743,632	100.0	4,648,985	100.0	4,900,061	100.0

(a) All greasy wool sold at auction except "wool re-offered account buyer".

10. Price and Value.—(i) *Price.* During 1963-64 the price of greasy wool sold in the selling centres of Australia averaged 69.7d. per lb. compared with the average price of 59.0d. per lb. in 1962-63 and 54.1d. per lb. in 1961-62.

The prices quoted above 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.

(ii) *Value.* Fluctuation in Australian wool prices has a marked effect on the nation's rural and national income. In 1945-46 the gross value of wool production was £58,597,000, representing 17.4 per cent. of the gross value of production 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 value of production for all rural industries. The value of wool production fluctuated considerably in subsequent years. In 1963-64 it was £511,721,000, 29.9 per cent. of the gross value of production of rural industries.

Details of the value of wool production for the years 1959-60 to 1963-64 are shown in the following table.

ESTIMATED GROSS VALUE OF TOTAL WOOL PRODUCTION(a)
(£'000)

Season	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.(b)	A.C.T.	Aust.
1959-60	168,112	75,952	54,573	42,691	39,334	8,254	35	810	389,761
1960-61	138,881	69,265	50,859	35,242	38,312	7,229	28	614	340,430
1961-62	154,920	74,219	50,637	42,900	41,260	7,876	18	724	372,554
1962-63	166,170	79,006	37,731	46,257	41,494	8,886	20	698	400,262
1963-64	208,417	104,350	70,729	56,705	59,931	10,676	25	888	511,721

(a) Includes shorn, dead and fellmongered wool and wool exported on skins.

(b) Estimated.

11. Stocks of Wool.—Stocks of raw wool held in Australia at 30th June, 1964, amounted to 257.1 million lb. (greasy basis), of which 61.2 million lb. (37.6 million lb. as greasy and 23.6 million lb. as scoured and carbonized) were held by woollen mills, wool scourers and fellmongers, and 195.9 million lb., assumed to be all greasy, were held by brokers. Of the wool held by brokers, 66.1 million lb. were unsold wool and 129.8 million lb. were sold wool held awaiting shipment. These stocks exclude wool on skins, since this wool is not recorded as production until fellmongered in Australia or exported on skins.

12. **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 overseas trade in semi-processed wool (e.g. tops and yarns) as well as woollen goods. Estimates of raw wool used on the woollen and worsted systems and by felt manufacturers in Australia are shown in the following table for the years 1959–60 to 1963–64.

ESTIMATED CONSUMPTION OF RAW WOOL IN AUSTRALIA
(*000 lb.)

Year	Greasy basis			Clean equivalent		
	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total	Used on woollen and worsted systems	Used for felt manufacture (including hats)	Total
1959–60.. ..	123,529	5,092	128,621	75,226	2,419	77,645
1960–61.. ..	104,801	3,896	108,697	63,414	1,851	65,265
1961–62.. ..	117,555	4,328	121,883	70,682	2,056	72,738
1962–63.. ..	125,796	2,274	128,070	74,227	1,080	75,307
1963–64.. ..	133,252	3,370	136,622	78,627	1,601	80,228

(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 "Estimated Consumption of Locally Processed Wool in Australia" 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 in the following table for the years 1959–60 to 1963–64. 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 overseas trade in woollen piece goods, clothing, etc., because of the obvious difficulties of estimating accurately the wool content of these products.

ESTIMATED CONSUMPTION OF LOCALLY PROCESSED WOOL IN AUSTRALIA
(*000 lb.)

Year	Greasy basis				Clean equivalent			
	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total	Worsted yarn used (a)(b)	Woollen yarn used (b)	Scoured wool used for felt manufacture (including hats)	Total
1959–60.. ..	44,314	36,327	5,092	85,733	26,390	22,723	2,419	51,532
1960–61.. ..	40,315	32,268	3,896	76,479	24,516	20,034	1,851	46,401
1961–62.. ..	45,173	28,885	4,328	78,386	26,543	17,876	2,056	46,475
1962–63.. ..	47,312	32,568	2,274	82,154	27,341	19,869	1,080	48,290
1963–64.. ..	47,254	36,827	3,370	87,451	27,306	22,471	1,601	51,378

(a) Includes hand knitting yarns used.
of wool and other fibres.

(b) Includes wool content of yarns containing a mixture

13. Exports of Wool.—(i) *Quantities.* (a) *Greasy.* Of the total shipments in 1963–64 31 per cent. went to Japan, 17 per cent. to the United Kingdom, 10 per cent. to France, 9 per cent. to Italy, and 7 per cent. to Belgium-Luxembourg. The following table shows the quantities of greasy and slipé wool exported, and the principal countries of consignment.

EXPORTS OF GREASY AND SLIPE WOOL: AUSTRALIA
(*000 lb. actual weight)

Country of consignment	1959-60	1960-61	1961-62	1962-63	1963-64
Japan	335,296	411,782	416,970	386,956	433,944
United Kingdom	266,297	217,318	207,660	204,412	229,308
France	161,844	155,378	138,483	131,769	138,798
Italy	130,516	105,790	146,369	119,409	127,556
Belgium-Luxembourg	105,974	105,023	108,699	98,572	101,699
Germany, Fed. Rep. of	70,223	60,931	66,773	74,474	86,350
U.S.S.R.	39,254	1,212	40,753	49,445	45,595
China (Mainland)	15,760	12,784	20,052	26,893	32,306
United States of America	24,323	17,234	35,024	46,314	27,590
Other	144,863	171,688	149,352	140,724	159,655
Total	1,294,350	1,259,140	1,330,135	1,278,968	1,382,801

(b) *Scoured and Washed and Carbonized.* The exports of "scoured and washed" wool, whether carbonized or not, are shown in the following table according to principal countries of consignment.

EXPORTS OF WOOL—SCOURED AND WASHED AND CARBONIZED:
AUSTRALIA
(*000 lb. actual weight)

Country of consignment	1959-60	1960-61	1961-62	1962-63	1963-64
United States of America	14,482	19,345	20,564	25,469	23,063
United Kingdom	24,661	20,234	15,344	17,497	17,566
Italy	8,668	7,691	9,636	8,582	8,340
Germany, Fed. Rep. of	9,406	8,470	8,267	7,314	7,517
Japan	4,345	6,105	7,055	5,796	4,891
Canada	5,375	5,339	5,470	2,981	3,398
France	3,842	4,659	5,089	4,251	3,205
China (Mainland)	10,268	4,588	7,814	4,524	3,171
Iran	811	1,853	2,322	3,173	2,428
China, Republic of (Formosa)	464	538	753	1,010	2,011
Other	18,204	18,450	16,990	21,316	12,627
Total	100,526	97,272	99,304	101,913	88,217

(c) *Tops, Noils and Waste.* Particulars of the exports of carded or combed wool, noils and waste are shown in the following table.

EXPORTS OF CARDED OR COMBED WOOL, NOILS AND WOOLWASTE:
AUSTRALIA
(*000 lb. actual weight)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Carded or combed—Tops	22,743	16,694	21,438	21,631	25,932
Other					
Noils	4,017	4,372	3,957	4,794	5,006
Waste—Soft wool	5,607	2,322	2,580	3,121	2,661
Hard wool	3,193	3,088	2,154	3,181	3,448

(d) *Total Quantity of Exports.* The following table shows the estimated greasy and clean weights of exports of raw and semi-processed wool for the years 1959-60 to 1963-64. As the figures in the following table are in terms of "greasy" or "clean" basis, they differ from those in the preceding tables which represent actual weight shipped.

EXPORTS OF WOOL—GREASY AND CLEAN BASES: AUSTRALIA(a)
(^{'000} lb.)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
GREASY BASIS					
Raw wool—					
Greasy and slipe	1,294,598	1,259,448	1,330,343	1,279,334	1,383,271
Scoured and washed and carbonized	186,217	182,668	184,249	190,850	165,313
Exported on skins	111,744	115,539	116,065	123,762	124,064
Total	1,592,559	1,557,655	1,630,657	1,593,946	1,672,648
Semi-processed wool—					
Tops	41,620	30,049	40,089	41,315	49,559
Yarn	89	340	425	436	707
Grand Total	1,634,268	1,588,044	1,671,171	1,635,697	1,722,914
CLEAN EQUIVALENT					
Raw wool	911,389	892,824	937,919	912,148	969,008
Semi-processed wool	24,841	17,890	24,039	24,259	29,205
Total	936,230	910,714	961,958	936,407	998,213

(a) Includes re-exports.

(ii) *Total Value of Exports.* The value of wool (other than wool on sheepskins) exported from Australia during 1963-64 was 36 per cent. of the total value of exports of merchandise of Australian origin, while the proportion for the five years ended 1963-64 averaged 37 per cent. The value for the five years ended 1963-64, together with the principal countries to which wool was exported, is shown in the following table.

VALUE OF WOOL EXPORTS: AUSTRALIA(a)
([£]'000)

Country of consignment	1959-60	1960-61	1961-62	1962-63	1963-64
Japan	95,626	105,918	114,566	111,117	141,086
United Kingdom	75,947	55,559	53,291	57,002	76,764
Italy	38,556	27,097	38,527	32,630	42,007
France	40,040	35,125	32,451	33,269	41,567
Germany, Fed. Rep. of	20,733	15,916	17,458	20,470	27,915
Belgium-Luxembourg	19,774	18,343	20,300	18,953	24,134
United States of America	12,436	10,708	16,866	22,952	20,620
U.S.S.R.	12,018	7,743	11,449	14,571	16,995
Other	71,012	58,033	67,619	68,392	89,352
Total	386,142	334,442	372,527	379,356	480,440

(a) Excludes re-exports and wool exported on sheepskins.

14. **World Sheep Numbers, Wool Production and Trade.**—(i) *Numbers and Production.* The following table shows particulars of the woolled sheep numbers 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.

In 1963-64 Australia produced 31 per cent. of the world total of all types of wool, the share of all British Commonwealth countries combined representing approximately 46 per cent. The principal wool producers, other than Australia, were New Zealand with 11 per cent. of the world total, Argentina, 7 per cent., South Africa 5 per cent., and United States of America, 5 per cent. Production in the U.S.S.R., China and eastern European countries together amounted to 20 per cent. World production of wool (all types) in 1963-64 exceeded the average for the years 1934 to 1938 by approximately 1,931 million lb. or 50 per cent.

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 1963-64 was 45 per cent. above the average for the years 1934 to 1938, and the production of crossbred types has risen by about 74 per cent. Carpet wool production has risen by about 28 per cent.

ESTIMATED WORLD WOOLLED SHEEP NUMBERS AND PRODUCTION OF WOOL

(Source: Reports published by Commonwealth Economic Committee, London)

Country	Sheep numbers (million)			Wool production (million lb.—greasy basis)		
	1961-62	1962-63	1963-64 (a)	1961-62	1962-63	1963-64 (a)
British Commonwealth—						
Australia	158	159	165	1,699	1,673	1,785
New Zealand	49	50	51	587	620	616
Other Commonwealth countries	83	84	84	278	278	273
Total	290	293	300	2,564	2,571	2,674
Foreign—						
U.S.S.R., China, eastern						
Europe(b)	241	243	238	1,144	1,147	1,151
Argentina	45	48	48	413	408	395
South Africa	36	34	34	319	300	303
United States of America	31	30	28	320	300	287
Uruguay	21	22	22	185	190	192
Other foreign countries	257	253	254	751	758	758
Total	631	630	624	3,132	3,103	3,086
Grand Total	921	923	924	5,696	5,674	5,760
Type of Wool—						
Apparel type—						
Merino				2,302	2,277	2,353
Crossbred				2,159	2,177	2,195
Carpet type				1,235	1,220	1,212

(a) Provisional. (b) Comprises Albania, Bulgaria, China and Dependencies, Czechoslovakia, East Germany, Hungary, Other Mongolia, Poland, Romania, Tibet and U.S.S.R.

(ii) *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 1963 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.

WOOL: PRINCIPAL IMPORTING COUNTRIES AND SOURCES OF SUPPLY, 1963

(Source: Information published by Commonwealth Economic Committee, London)

(Million lb.)

Importing country	Pro- duction of importing country (a)	Quantity imported from— (b)					Total imports
		Australia	New Zealand	Argen- tina	South Africa	Other countries	
United Kingdom ..	131	241.5	156.8	46.4	34.2	151.0	629.9
Japan	(c)	424.7	41.0	23.9	25.2	11.5	526.3
France	56	152.7	103.9	35.6	48.9	20.1	361.2
Italy	32	124.4	42.2	28.8	36.2	72.2	303.8
Germany, Federal Re- public of	(c)	75.2	38.3	25.8	34.2	61.1	234.6
Belgium	(c)	95.5	40.6	18.7	10.6	42.3	207.7
United States of America(d) ..	300	44.9	82.6	53.9	20.8	74.5	276.7

(a) Greasy basis, 1962-63. (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 367.9 million lb.

As a considerable transit trade exists between European countries, it must not be assumed that the whole of the imports recorded by these countries is retained for their own consumption. The countries chiefly concerned with the transit trade are the United Kingdom and Belgium.

§ 6. Pastoral Products: Meat

1. General.—(i) *Australian Meat Board*. The Australian Meat Board, which was re-constituted under the *Meat Industry Act* 1964, is the body responsible for controlling the external marketing of Australian beef, mutton and lamb. Powers and membership of the Board prior to its re-constitution in 1964 are set out on page 801 of Year Book No. 40. The Board's primary function is to ensure that Australian meat exports are marketed in a manner which will safeguard the long-term interests of the Australian meat industry. It consists of representatives of producers, exporters and the Commonwealth Government, and an independent Chairman.

The Board regulates oversea marketing of Australian meat by means of an export licensing system. It has power of control over the kinds of meat that may be exported by licensed exporters to particular places, or to particular agents and representatives. The Board also has power to undertake measures to promote the sale and consumption of meat both in Australia and overseas, and it may purchase and sell meat in its own right for the purpose of market development. However, the exercise of this power is limited to activities aimed at meeting special marketing problems or circumstances which preclude the effective participation of private traders. The Board may also purchase and sell meat, with the approval of the Minister for Primary Industry, for the purpose of administering any international arrangements to which Australia may be a party.

(ii) *United Kingdom Long-term Purchase Arrangements*. Details of the long-term meat contracts with the United Kingdom from 1939 to 1952 and of the Fifteen Year Meat Agreement (1952-67) are given on page 710 of Year Book No. 41 and in earlier issues.

(iii) *Reversion to Private Trading*. In September, 1953, the trade in meat between the United Kingdom and Australia reverted to private traders. The main features of the arrangements were given in Year Book No. 47, page 960.

(iv) *Minimum Prices and Deficiency Payments*. Details of minimum prices operating and deficiency payments received in recent years under private trading appear in Year Book No. 48 (page 973) and No. 50 (page 1068).

(v) *Lamb Guarantee Scheme.* Since the 1962-63 lamb export season the Australian Meat Board has guaranteed exporters a minimum price on all lambs 36 lb. and under shipped to the United Kingdom. For the 1962-63 and 1963-64 seasons these prices were set at 18d. per lb. f.o.b. for the period September to November and 16. 5d. per lb. for the following three months, December to February. For the 1964-65 lamb export season the corresponding prices were 19d. per lb. and 17. 5d. per lb. The higher guaranteed price for the initial period was aimed at stimulating early shipments of lamb, because normally the most opportune time for selling Australian lamb in the United Kingdom market is early in the export season. Any commitment by the Board is payable from moneys accrued in the Lamb Deficiency Payments Account under the Fifteen Year Meat Agreement.

(vi) *United States-Australia Meat Agreement.* In February, 1964, the Governments of Australia and the United States concluded an agreement for the regulation of beef, veal and mutton exports from Australia to the United States with the object of promoting the orderly development of the trade in these classes of meat between the two countries. The agreement sought to preserve approximately the current pattern of trade in beef and mutton and to permit Australia to obtain a reasonable share of the expected market growth. Under the agreement Australia undertook to limit its exports of beef, veal and mutton to the United States to 242,000 tons in 1964, 251,000 tons in 1965 and 260,000 tons in 1966.

There is provision for this figure to be increased in succeeding years in accordance with the estimated rate of increase in the total United States meat market. The agreement is subject to review every three years and, as appropriate, the established annual rate of increase will be adjusted to apply to the succeeding three years.

In August, 1964, the United States Congress passed a Bill providing for the imposition of quotas on imports of beef and veal, mutton and goatmeat, from all sources, in 1965 and subsequent years, if imports of these items are estimated by the United States Department of Agriculture to equal or exceed 110 per cent. of a basic quantity.

The basic quantity, 323,840 tons, is approximately the average of imports from 1959 to 1963. This quantity may be increased or decreased in any future calendar year by a percentage equal to that by which the United States average annual commercial production of beef and veal, mutton and goatmeat has changed since the base period 1959-1963. For this purpose the level of domestic production is the average of estimated commercial production for the year in which quotas may be applied and the two preceding years. An increase of 17 per cent. in the basic quantity was set for 1965, providing for allowable imports of approximately 378,900 tons and an import ceiling, at which quotas would be established, of about 416,800 tons. On the basis of the first official estimate of United States meat imports during 1965, the United States Secretary for Agriculture announced on 28th December, 1964, that it would not be necessary to invoke meat import quotas for 1965. However, if a later quarterly estimate in 1965 indicated that the import ceiling would be equalled or exceeded then quotas could be imposed.

2. *Beef and Veal.*—(i) *Cattle Slaughtered.* The numbers of cattle slaughtered during each of the years ended June, 1960 to 1964, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

CATTLE (INCLUDING CALVES) SLAUGHTERED
(’000)

Period	Slaughtering passed for human consumption									Total slaughtering including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938-39 ..	1,169	881	1,178	163	131	49	5	3	3,579	3,628
1948-49 ..	1,094	759	1,119	168	146	42	14	4	3,346	3,378
1958-59 ..	1,745	1,313	1,689	274	216	116	24	11	5,388	5,463
Year—										
1959-60 ..	1,499	1,277	1,527	238	243	145	24	9	4,962	5,024
1960-61 ..	1,267	1,010	1,469	174	209	115	28	6	4,278	4,327
1961-62 ..	1,609	1,311	1,584	201	241	136	25	8	5,115	5,167
1962-63 ..	1,809	1,562	1,804	254	308	158	24	12	5,931	5,995
1963-64 ..	1,930	1,760	1,857	279	373	176	50	13	6,438	6,484

(ii) *Production of Beef and Veal.* Details of the production of beef and veal during each of the years ended June, 1960 to 1964, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

PRODUCTION OF BEEF AND VEAL (CARCASS WEIGHT)

('000 tons)

Period	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39..	181	123	199	26	28	10	1	1	569
1948-49..	160	106	206	27	30	9	3	1	542
1958-59..	248	176	305	41	41	19	5	2	837
Year—									
1959-60..	217	159	267	33	46	23	5	2	752
1960-61..	168	125	247	27	42	17	6	1	633
1961-62..	234	176	278	30	47	20	4	2	791
1962-63..	263	214	314	36	56	24	5	2	914
1963-64..	286	228	328	40	66	26	10	2	986

(iii) *Consumption of Beef and Veal.* The highest post-war consumption of beef and veal (including canned beef and veal) was 132.7 lb. per head in 1956-57. With the buoyant overseas market for beef and the high prices ruling in Australia during the following four years, consumption per head fell substantially, and in 1960-61 amounted to only 88.3 lb. In 1963-64 consumption per head was 108.8 lb., consisting of 104.9 lb. carcass weight and 3.9 lb. (carcass equivalent) of canned meat.

In the following table details of the production and disposal of beef and veal are shown for the years 1959-60 to 1963-64 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

PRODUCTION AND DISPOSAL OF BEEF AND VEAL (CARCASS WEIGHT): AUSTRALIA

Period	Net change in stocks	Production	Exports (a)	For canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39	n.a.	569	121	18	430	140.3
1948-49	+ 1	542	101	67	373	109.1
1958-59	+ 5	837	209	85	538	123.8
Year—						
1959-60	- 11	752	262	55	446	98.4
1960-61	+ 4	633	190	43	396	85.4
1961-62	+ 6	791	299	44	442	93.3
1962-63	(b)	914	385	45	484	100.4
1963-64	+ 4	986	423	42	517	104.9

(a) Includes carcass equivalent of boneless beef exported and all fresh and frozen meat shipped as ships' stores. (b) Less than 500 tons.

(iv) *Exports of Beef and Veal.* In 1963-64 chilled beef exports were 21,000 lb. valued at £2,000, while frozen beef exports amounted to 620,593,000 lb. valued at £86,863,000.

While beef and veal were previously shipped largely in carcass form, there has been in recent years a substantial increase in the amount of boneless beef exported. From 1958-59 to 1963-64 the quantity of boneless beef shipped exceeded that exported in carcass form. The trade in boneless beef has been developed principally with the United States of America.

Since 1958-59 the United States has surpassed the United Kingdom as the principal market for Australian beef exports, the United Kingdom now occupying second place. The total value of beef and veal shipped to these two countries during 1963-64 was £69,685,000 and £10,108,000 respectively.

The quantity and value of Australian frozen beef and veal exported from Australia in each year from 1959-60 to 1963-64 are shown in the following table. Figures in this table represent actual weight shipped, not carcass equivalent.

EXPORTS OF FROZEN AND CHILLED BEEF AND VEAL: AUSTRALIA

Year	Exports of frozen and chilled beef		Exports of frozen veal	
	Quantity	Value	Quantity	Value
	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.
1959-60	414,749	54,568	6,827	897
1960-61	295,686	39,447	4,506	663
1961-62	444,762	58,086	5,834	754
1962-63	576,504	78,228	7,624	1,037
1963-64	620,614	86,866	9,489	1,399

3. *Mutton and Lamb.*—(i) *Sheep Slaughtered.* The following table shows the numbers of sheep slaughtered during each of the years ended June, 1960 to 1964, compared with averages for the three-year periods ended June, 1939, 1949 and 1959.

SHEEP (INCLUDING LAMBS) SLAUGHTERED

('000)

Period	Slaughtering passed for human consumption									Total slaughtering including boiled down
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938-39 ..	6,520	7,891	1,088	1,762	1,216	364	..	25	18,866	18,925
1948-49 ..	6,367	6,413	1,066	1,863	1,458	396	3	47	17,613	17,650
1958-59 ..	7,857	9,058	1,429	2,917	2,059	775	3	71	24,169	24,278
Year—										
1959-60 ..	10,753	12,511	2,113	3,899	2,650	1,166	5	76	33,173	33,373
1960-61 ..	11,718	11,363	2,924	2,784	2,658	1,076	4	77	32,604	32,697
1961-62 ..	11,526	12,467	2,417	3,140	2,489	1,160	3	86	33,288	33,373
1962-63 ..	11,719	12,830	2,125	3,466	2,467	1,095	3	108	33,813	33,910
1963-64 ..	11,934	12,627	2,407	2,996	2,137	1,127	3	115	33,346	33,438

(ii) *Production of Mutton and Lamb.* Details of the production of mutton and lamb in each State and Territory in the years 1959-60 to 1963-64, compared with averages for the three-year periods ended June, 1939, 1949 and 1959, are shown in the following table.

PRODUCTION OF MUTTON AND LAMB (CARCASS WEIGHT)
(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39 ..	103,884	136,927	20,121	30,574	20,928	6,129	2	413	318,978
1948-49 ..	109,084	111,677	18,587	34,772	23,846	7,214	64	839	306,083
1958-59 ..	135,256	164,580	25,845	50,415	35,373	14,077	77	1,240	426,863
Year—									
1959-60 ..	184,600	223,519	35,886	62,760	44,385	20,780	111	1,292	573,333
1960-61 ..	196,417	210,245	48,529	52,242	46,560	18,925	98	1,292	574,308
1961-62 ..	196,844	229,722	40,339	55,390	42,697	20,229	65	1,427	586,713
1962-63 ..	198,873	237,645	35,483	58,919	41,236	19,386	68	1,849	593,459
1963-64 ..	202,057	231,769	40,209	52,864	36,690	20,079	72	1,944	585,684

(iii) *Consumption of Mutton and Lamb.* In 1959-60 consumption of mutton and lamb, at 103 lb. per head of population, showed a rise of approximately 15 lb. per head over the previous year and exceeded that of beef and veal for the first time on record. Since then consumption of mutton and lamb combined has declined each year; in 1962-63, and again in 1963-64, it was below the consumption of beef and veal.

The following table gives details of the production and disposal of mutton and lamb for the years 1959-60 to 1963-64, compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

**PRODUCTION AND DISPOSAL OF MUTTON AND LAMB (CARCASS WEIGHT):
AUSTRALIA**

Period	Net change in stocks (^{'000 tons})	Pro-duction (^{'000 tons})	Exports (^{'000 tons})	For canning (^{'000 tons})	Apparent consumption in Australia	
					Total (^{'000 tons})	Per head per year (lb.)

MUTTON

Average for three years ended—						
1938-39 ..	..	..	201	17	..	184
1948-49 ..	..	..	177	15	8	154
1958-59 ..	..	..	268	27	19	222
Year—						
1959-60 ..	..	..	370	47	33	290
1960-61 ..	..	..	+1	368	60	293
1961-62 ..	..	..	+1	368	83	261
1962-63 ..	..	..	-2	363	107	250
1963-64 ..	..	..	+1	361	112	238

LAMB

Average for three years ended—						
1938-39 ..	..	..	118	72	..	46
1948-49 ..	..	..	-1	130	45	86
1958-59 ..	..	..	..	159	31	128
Year—						
1959-60 ..	..	..	..	203	26	177
1960-61 ..	..	..	+1	207	29	177
1961-62 ..	..	..	-1	219	18	202
1962-63 ..	..	..	+1	231	27	203
1963-64 ..	..	..	-1	225	21	205

(a) Includes carcass equivalent of boneless mutton exported.

(iv) *Exports of Frozen Mutton and Lamb.* The quantities and values of exports of Australian frozen mutton and lamb in each year from 1959-60 to 1963-64 are shown in the following table.

EXPORTS OF FROZEN MUTTON AND LAMB: AUSTRALIA

Year	Exports of frozen mutton		Exports of frozen lamb		Exports of frozen mutton and lamb	
	Quantity	Value	Quantity	Value	Quantity	Value
	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.	'000 lb.	£A.'000 f.o.b.
1959-60.. ..	71,763	4,719	59,264	4,389	131,027	9,108
1960-61.. ..	83,075	7,437	64,430	5,790	147,505	13,227
1961-62.. ..	109,113	8,156	37,399	2,624	146,512	10,780
1962-63.. ..	136,741	11,652	56,615	5,181	193,356	16,833
1963-64.. ..	149,918	12,376	41,606	3,859	191,524	16,235

The principal customer for Australian frozen mutton and lamb was formerly the United Kingdom, although the United States of America has become a major buyer of mutton in recent years, and in 1963-64 exports to Japan increased sharply. In 1963-64 exports of mutton and lamb to the United Kingdom represented 7 per cent. and 65 per cent., respectively, of the total quantities exported. Thirty five per cent. of the mutton exported went to the United States of America, largely in the form of boneless meat, and the proportion of lamb exported to that country was 4 per cent. Exports of mutton to Japan represented 28 per cent. of the total quantity exported in 1963-64, but exports of lamb were negligible.

4. *Consumption of Meat and Meat Products.*—The apparent consumption of meat (including cured and canned meat) and edible offal per head of population in Australia is shown in the table below for the years 1959-60 to 1963-64 in comparison with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

MEAT (INCLUDING CURED AND CANNED) AND EDIBLE OFFAL AVAILABLE FOR CONSUMPTION: AUSTRALIA

(lb. per head per year)

Period	Beef and veal (a)	Mutton (a)	Lamb (a)	Pork (a)	Offal	Canned meat (b)	Bacon and ham (c)	Carcass equivalent of meat and meat products (d)
Average for three years ended—								
1938-39 ..	140.3	60.0	15.0	8.5	8.4	2.1	10.2	250.9
1948-49 ..	109.1	45.1	25.2	7.1	8.9	2.6	11.7	215.7
1958-59 ..	123.8	51.0	29.3	10.1	11.4	4.1	7.1	242.4
Year—								
1959-60 ..	98.4	63.8	39.0	10.3	11.6	4.1	7.1	238.6
1960-61 ..	85.4	63.2	38.2	11.4	10.9	4.2	6.8	224.2
1961-62 ..	93.3	55.3	42.8	13.6	11.7	3.8	7.0	232.3
1962-63 ..	100.4	51.6	42.1	12.0	12.4	4.3	7.4	235.1
1963-64 ..	104.9	48.3	41.7	11.4	12.9	4.1	7.5	235.3

(a) Carcass weight. (b) Canned weight. (c) Cured carcass weight. (d) Includes offal.

§ 7. Other Pastoral Products

1. **Tallow.**—(i) *Marketing.* Reference is made in Year Book, No. 47, page 976, to the now inoperative contracts relating to the sale of tallow to the United Kingdom.

(ii) *Consumption in Factories.* Details of consumption are collected from the principal factories using tallow. Consumption of inedible tallow in these factories (soap and candle, chemical and wooll scouring works) for the five years 1959–60 to 1963–64 was as follows:—1959–60, 1,278,546 cwt.; 1960–61, 1,196,137 cwt.; 1961–62, 1,077,627 cwt.; 1962–63 1,100,849 cwt.; 1963–64, 1,092,843 cwt. These figures are, however, deficient to the extent, that no allowance has been made for small unrecorded amounts used in other types of establishments. Details of edible tallow consumed in factories are not available.

(iii) *Exports.* Particulars of exports of edible and inedible tallow of Australian produce are shown in the following table for the five years 1959–60 to 1963–64.

TALLOW: EXPORTS, AUSTRALIA
(cwt.)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Edible	118,848	50,436	130,015	120,944	135,425
Inedible	1,533,734	1,079,681	1,853,161	2,229,230	1,978,063
Total	1,652,582	1,130,117	1,983,176	2,350,174	2,113,488

2. **Oversea Trade in Hides and Skins.**—(i) *Values.* The value of cattle and horse hides, sheep and other skins, and skin pieces, sent overseas during 1963–64 amounted to £45,590,000, compared with a total of £36,710,000 in 1962–63 and £32,044,000 in 1961–62.

(ii) *Sheepskins with Wool.* Of the total exports of sheepskins with wool during 1963–64, amounting to 185,796,000 lb. valued at £36,848,000, 118,414,000 lb. valued at £23,430,000 (64 per cent. of total value) were shipped to France, 22,832,000 lb. valued at £5,003,000 (14 per cent.) to Italy, and 14,957,000 lb. valued at £2,635,000 (7 per cent.) to the United Kingdom. In the previous year France received about 61 per cent. (by value) of all sheepskins with wool exported Italy 16 per cent. and the United Kingdom 6 per cent. The exports of sheepskins with wool during each of the years 1959–60 to 1963–64 were as follows.

EXPORTS OF SHEEPSKINS WITH WOOL: AUSTRALIA

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Number '000	25,560	25,883	26,237	26,795	27,913
Value £'000	23,238	21,429	24,222	27,742	36,848

(iii) *Sheepskins without Wool.* In 1963–64 skins to the value of £81,900 (29 per cent.) were shipped to the United States of America; £48,627 (17 per cent.) to the United Kingdom; £46,534 (17 per cent.) to France; £43,825 (16 per cent.) to Spain; and £15,654 (6 per cent.) to the Netherlands. In 1963–64 a total of 1,238,000 sheepskins without wool were exported, valued at £280,000. Since 1954–55 the number exported has exceeded two million once only (in 1958–59), and the value has averaged about £320,000.

(iv) *Hides.* The export trade in cattle hides and calfskins during 1963–64 was distributed amongst the main importing countries as follows:—Japan, £2,459,000; Italy, £688,000; Germany (Federal Republic), £394,000; South Africa, £283,000; the Netherlands, £279,000; and the United Kingdom, £264,000. The total quantity exported was 106,681,000 lb., valued at £5,301,000.

(v) *Furred Skins.* The exports of furred skins in 1963-64 were valued at £1,906,000, of which rabbit and hare skins constituted £934,000. The highest total value exported, £2,013,000, was recorded in 1955-56, when rabbit and hare skins accounted for £1,711,000. In 1962-63 they accounted for £819,000 out of a total of £1,349,000.

Skins were shipped principally to the United States of America, the United Kingdom, Italy, Belgium and Luxembourg, the values shipped to each in 1963-64 being:—United States of America, £1,478,300; United Kingdom, £201,700; Italy, £94,000; and Belgium-Luxembourg, £37,900.

Imports of cattle hides and calfskins are fairly substantial, the chief sources of supply being New Zealand and the Pacific Islands. The quantity of cattle hides, including calfskins, imported into Australia during the year 1963-64 amounted to 5,592,000 lb. valued at £360,000.

OTHER RURAL INDUSTRIES: DAIRYING, POULTRY AND BEE-FARMING

§ 1. The Dairying Industry

1. *Introduction.*—(i) *General.* The introduction of cattle into Australia and the early history of the dairying industry are treated in some detail in earlier issues of the Year Book.

Australian dairy cattle have shown steady improvement in quality, as demonstrated by yield, over the years. This is attributable to improved breeding, associated with herd recording, and better feeding, resulting from the use of improved pastures. Better farming methods, arising from the development of modern farm machinery and the application of the results of research, have also played a part in the increased yields.

The Australian dairying industry is conducted under conditions ranging from tropical to temperate and Mediterranean type climates, and nowhere is it necessary to house cattle in the winter months. Most Australian dairy cattle are fed only on pasture and pasture products, and this accounts for average yields being somewhat lower than in those countries where stock are fed heavily on concentrated feed.

In general, dairy farming is confined to the coastal and near coastal regions where rainfall and topography are favourable. These conditions are found in parts of the eastern, southern and south-western coasts. Inland districts include the lower north-east of Victoria, the south-western slopes of New South Wales, the fertile Darling Downs in Queensland, and the irrigated districts of the Riverina in New South Wales and northern Victoria.

The manufacturing and processing sections of the industry are highly organized and are well advanced technologically. Certain techniques and equipment, developed in Australia, are being adopted overseas.

(ii) *Official Supervision.* Dairy experts of the various State agricultural departments give instruction in approved methods of production, and inspect animals, buildings and marketable produce, with the result that a high standard of cleanliness and technology prevails in the industry.

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. This legislation requires that the true trade description, etc., 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.

(iii) *Marketing of Dairy Products.* (a) *Dairy Produce Export Control Act* 1924-1963. Details of this Act, and of the Australian Dairy Produce Board constituted under it, were given in earlier issues of the Year Book (*see* No. 48, pp. 999-1000).

(b) *Dairy Produce Export Charges Act 1964.* This Act provides for the imposition of a levy on all butter, cheese and other specified dairy produce exported from Australia to cover the administrative expenses of the Australian Dairy Produce Board and for advertising and other purposes. The rate of the levy is fixed by the Act.

(iv) *Equalization Schemes. (a) Butter and Cheese.* Reference is made to these schemes in Year Book No. 48, pp. 998-9.

Para. 2 (ix) on page 1081 gives particulars of the returns realized on local and overseas sales and of the average equalization rate for the years ended June, 1960 to 1964. Details are also given in para. 2 (vii) of the wholesale prices of butter and cheese for home consumption as determined by the Commonwealth Dairy Produce Equalization Committee Ltd.

(b) *Casein.* An equalization scheme for casein similar to that for butter and cheese has been operated since 1952 by the Commonwealth Dairy Produce Equalization Committee Ltd. Average realizations per cwt. under the scheme were 175s. 7. 5d. in 1959-60, 174s. 10. 9d. in 1960-61, 163s. 3. 4d. in 1961-62, 159s. 0. 9d. in 1962-63 and 161s. 0. 1d. in 1963-64. The interim equalization value for 1964-65 has been fixed at 162s. per cwt.

(v) *Commonwealth Subsidies and Stabilization Plans. (a) 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 and cheese. 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 Ltd. through factories to milk producers by payments on butter and cheese manufactured. Subsidy on milk supplied for the manufacture of processed milk products was also payable from 1942 until 30th June, 1948, and again from 1st July, 1949, to 30th June, 1952. The Commonwealth Government provided, under the *Processed Milk Products Bounty Act 1962*, for the payment of a maximum amount of £350,000 as a bounty on exports of processed milk products in 1962-63. The bounty was continued for the years ended 30th June, 1964 and 1965, the maximum amounts provided being £500,000 and £400,000 respectively.

Details of the three five-year stabilization plans which operated up to 30th June, 1962, will be found in Year Book No. 49, page 1084.

Under the five-year stabilization plan which came into operation on 1st July, 1962, a fixed bounty of £13,500,000 has been provided for each year of the plan. The bounty is payable on butter, cheese and butterfat products containing 40 per cent. or more of butterfat. Bounty is payable on the production of these commodities provided they are taken into equalization.

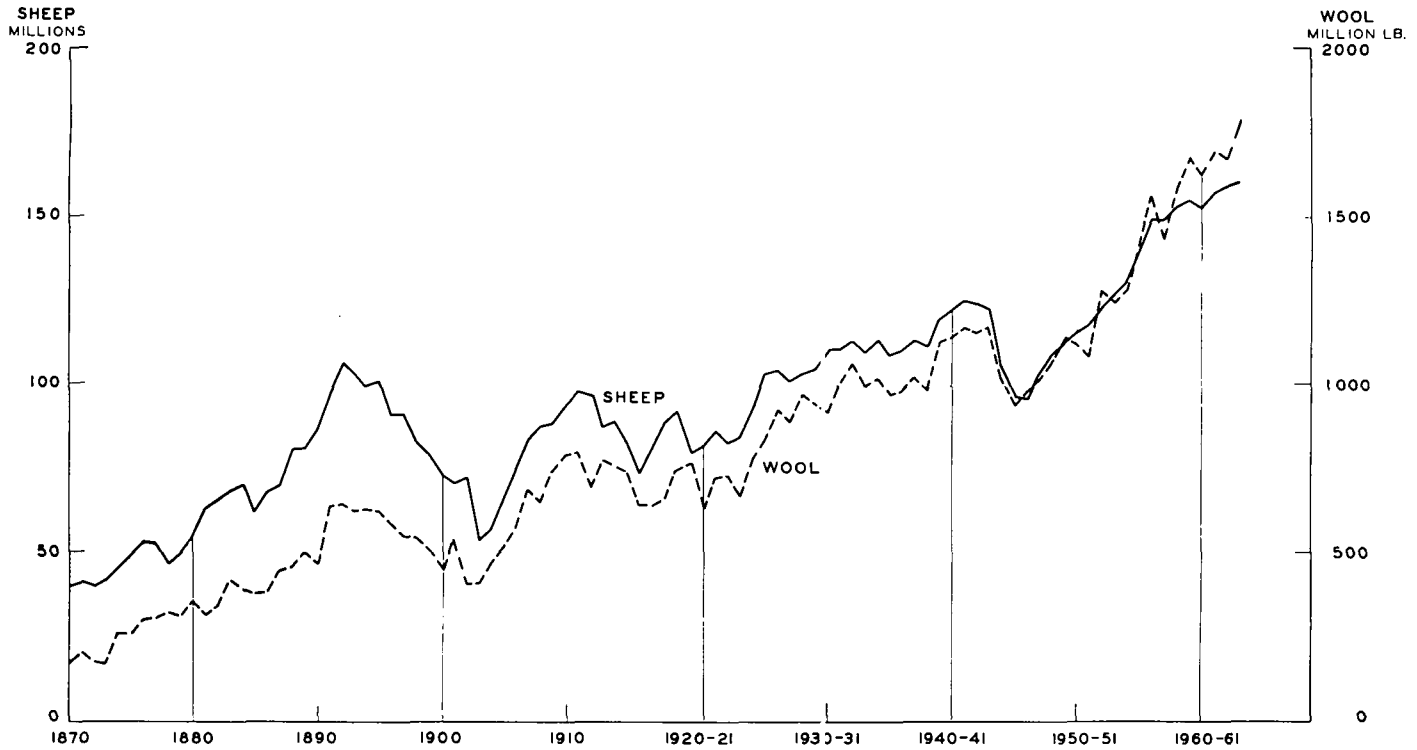
The Commonwealth Government extended for the full period of the plan the provision whereby it underwrites the final minimum equalized return to butter and cheese factories each year. The actual level at which returns are to be underwritten is to be decided prior to the commencement of each year of the plan. Returns to producers have been underwritten at 40d. per lb. on commercial butter each year since the inception of the underwriting arrangement in 1958. The principal value underlying this guarantee is that it enables the Commonwealth Dairy Produce Equalization Committee Ltd. to make a higher initial payment to factories than would otherwise be possible without risk of overpayment.

Under the current plan the Dairy Industry Investigation Committee has been disbanded. This Committee was reposable, during the last five-year plan, for the determination of the cost of efficient production of butterfat. However, this determination is not required for the current plan.

The Australian Dairy Industry Council assumes responsibility for determining domestic wholesale prices of butter and cheese. Under the previous plan it was the responsibility of the Minister for Primary Industry to determine local prices, after consultation with the Council.

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

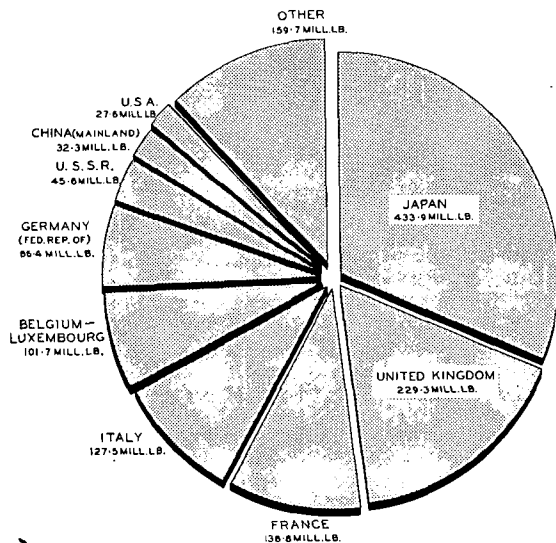
SHEEP NUMBERS AND WOOL PRODUCTION: AUSTRALIA 1870 TO 1963-64



WOOL: EXPORTS FROM AUSTRALIA

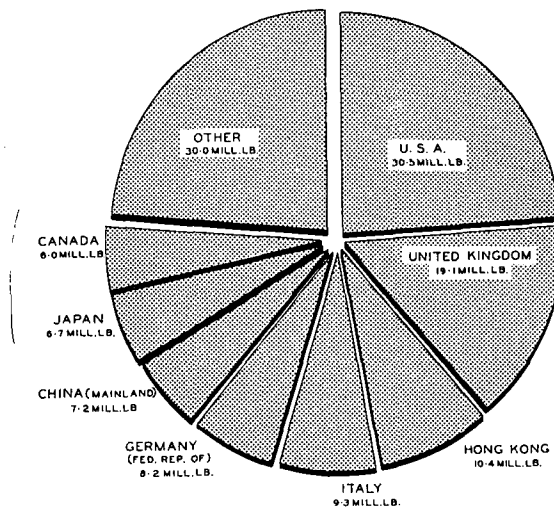
1963-64

GREASY AND SLIPE WOOL



TOTAL: 1,382.8 MILLION LB.

SCOURED AND WASHED, CARBONIZED, TOPS, NOILS
AND WASTE



TOTAL: 127.4 MILLION LB.

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 it considered desirable, to make good any deficiency in respect of all exports other than the 20 per cent. 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. The amount standing to the credit of the Dairying Industry Stabilization Fund at 30th June, 1964, totalled approximately £1,932,000.

(b) *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 Year Book No. 38, page 1031.

(vi) *Extension, Research and Promotion.* (a) *Dairy Industry Extension Grant.* An annual grant of £250,000, to be expended by State Governments for the purpose of promoting improved farming practices in the dairying industry, was first made by the Commonwealth Government for the five years from 1st July, 1948. This assistance was continued for further periods of five years from 1st July, 1953, and from 1st July, 1958, at the same rate. For the five years from 1st July, 1963, the amount of the annual grant has been increased to £350,000.

(b) *Dairy Industry Research and Sales Promotion.* At the request of the Australian Dairy Industry Council, legislation was enacted in 1958 to provide for a sales promotion campaign for butter and cheese in Australia and also for research into industry problems. The legislation provides for a statutory levy (the Dairy Produce Levy) which was initially set at rates of $\frac{1}{8}$ d. per lb. for butter and $\frac{1}{16}$ d. per lb. for cheese, the proceeds being divided equally between research and sales promotion. The rates of levy operative from November, 1959, are $\frac{3}{16}$ d. per lb. for butter and $\frac{3}{32}$ d. per lb. for cheese, of which two-thirds is allocated to sales promotion and one-third to research.

In August, 1964, the legislation was amended to include butter powder, at the same rates as for butter, and butter oil and ghee at $\frac{5}{16}$ d. per lb. for research and $\frac{5}{32}$ d. per lb. for sales promotion.

The Commonwealth Government agreed to contribute one half of the costs incurred on approved projects included in the programme of research, with a maximum contribution of £1 for £1 against funds raised by way of levy and allocated to research. The sales promotion programme is financed solely by the levy. The following table lists the amounts of levies collected for research and sales promotion, during the five years 1959-60 to 1963-64.

DAIRY PRODUCE LEVY: AMOUNTS COLLECTED

(£)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Research(a)	126,519	116,591	130,000	131,750	132,100
Sales promotion	206,918	233,181	260,000	263,500	264,200
Total Collected(a) ..	333,437	349,772	390,000	395,250	396,300

(a) Excludes amounts contributed by the Commonwealth Government.

The scheme is administered by the Australian Dairy Produce Board, which, in respect of research, is advised by a statutory committee, the Dairy Produce Research Committee.

2. Dairy Cattle and Dairy Products.—(i) *Dairy Herds*. For the reasons indicated earlier in this Chapter (*see* § 3, paragraph 3, page 1049), farmers are no longer asked to classify their herds according to breed. At the 1964 Census they were asked instead to classify their cattle according to the two main purposes of (i) milk production and (ii) meat production and to report separately the number of cows and heifers kept for their own domestic milk supply. Consequently the statistics shown in the following table are not comparable with those for earlier years.

For particulars of cattle classified as "dairy cattle" prior to 1964 *see* page 1078 of Year Book No. 50.

DAIRY BREED BULLS, AND COWS AND HEIFERS USED OR INTENDED FOR PRODUCTION OF MILK OR CREAM, 31st MARCH, 1964

State or Territory	Bulls, dairy breed (a)	Cows and heifers used or intended for production of milk or cream for sale				House cows and heifers (b)	
		Cows		Heifers			
		In milk	Dry	1 year and over			Under one year
				Springing(c)	Other		
New South Wales ..	21,606	574,428	168,747	189,958		152,929	116,205
Victoria ..	40,027	878,700	305,751	299,872		307,063	33,938
Queensland ..	20,971	544,774	184,984	183,075		136,599	42,844
South Australia ..	7,204	96,683	63,315	24,663	26,749	41,348	7,828
Western Australia ..	5,269	46,661	71,718	26,034	30,751	36,543	10,250
Tasmania ..	4,141	140,425		39,928		43,082	6,545
Northern Territory ..	17	376		93		81	(d)
Australian Capital Territory ..	35	1,204	309	163		250	488
Australia ..	99,270	3,078,075		821,286		717,895	e 218,098

(a) Used or intended for service; excludes bull calves (under 1 year). (b) Kept primarily for rural holdings' own milk supply. (c) Within 3 months of calving. (d) Not available separately. (e) Incomplete; excludes Northern Territory.

For particulars relating to dairy cattle numbers up to 1963 *see* page 1078 of Year Book No. 50.

A map showing the distribution of dairy cattle in Australia at 31st March, 1963, appears facing p. 1082 of Year Book No. 50.

(ii) *Milking Machines.* The following table shows particulars of the number of milking stands (units) on rural holdings in each State and Territory for the years 1960 to 1964.

MILKING MACHINES ON RURAL HOLDINGS: NUMBER OF STANDS(a)

31st March—	N.S.W.	Vic.	Qld.	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust. (b)
1960	43,980	89,657	47,996	17,920	10,564	11,051	} n.a. {	92	221,260
1961	43,640	92,315	47,403	18,235	10,419	11,704		99	223,815
1962	43,369	95,661	47,486	18,831	10,562	12,220		99	228,228
1963	43,089	97,372	46,674	18,836	10,514	12,701		84	229,270
1964	42,970	98,151	45,072	19,057	10,157	13,382		83	228,872

(a) The number of stands indicates the number of cows that can be milked simultaneously, i.e. the cow capacity of installed milking machines. (b) Excludes Northern Territory.

(iii) *Size of Dairy Herds.* Information on the size of dairy herds is published in a series of bulletins *Classification of Rural Holdings by Size and Type of Activity, 1959-60.*

(iv) *Production of Milk.* (a) *Production per Cow.* The quantity of milk produced by a dairy cow can be as high as 1,000 gallons a year, and varies greatly with breed, locality and season. For all dairy cows and for all seasons for the whole of Australia prior to 1916 production averaged considerably less than 300 gallons per annum. Largely owing to an improvement in the quality of the cattle, and the increased application of scientific methods, the 300-gallon average was exceeded in each year since 1924. In the last five years an average of 442 gallons per cow per annum has been obtained. In 1963-64 the average yield was 455 gallons. The annual average yields per cow shown in the following table are obtained by dividing the total production of whole milk for the year ended June by the mean of the number of dairy cows (in milk and dry) at 31st March of that year and of the preceding year. They are, in effect, 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, but it may be accepted as sufficiently reliable to show the general trend.

**AVERAGE MILK PRODUCTION PER DAIRY COW
(Gallons)**

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39 ..	315	439	298	442	353	349	} n.a. {	349	354
1948-49 ..	310	506	267	565	370	419		328	371
1958-59 ..	322	522	267	513	406	537		420	393
Year—									
1959-60 ..	382	544	301	505	452	554	} n.a. {	447	431
1960-61 ..	355	548	263	574	468	505		447	418
1961-62 ..	387	571	306	614	462	562		471	452
1962-63 ..	364	589	312	586	442	570		479	453
1963-64(a)	368	583	307	587	448	577		230	557	455

(a) May not be comparable with earlier years; see paragraph 2, page 1074.

(b) *Total Production of Whole Milk.* In the following table particulars of the production of whole milk in the various States are shown for the years 1959-60 to 1963-64 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59. Victoria is the principal milk-producing State, and in 1963-64 the output from that State, 689.9 million gallons, represented 46 per cent. of total production. Output from New South Wales in 1963-64 was 322.5 million gallons (22 per cent. of the total) and that of Queensland 239.8 million gallons (16 per cent.). Production in the remaining States accounted for 16 per cent.

TOTAL PRODUCTION OF WHOLE MILK

('000 gallons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938-39 ..	319,003	403,152	275,898	68,429	42,358	32,803	} n.a. {	363	1,142,006	
1948-49 ..	280,460	445,517	252,469	92,587	49,004	32,638		573	1,153,248	
1958-59 ..	307,514	578,529	240,446	84,185	54,218	65,032		929	1,330,853	
Year—										
1959-60 ..	348,389	598,323	252,562	78,483	57,549	70,226	} n.a. {	969	1,406,501	
1960-61 ..	319,410	596,706	212,749	87,030	58,544	63,858		1,005	1,339,302	
1961-62 ..	344,724	630,948	239,823	95,504	58,240	73,206		1,117	1,443,562	
1962-63 ..	324,113	667,562	245,067	95,378	56,029	78,518		1,090	1,467,757	
1963-64 ..	322,547	689,881	239,827	97,523	57,162	83,124		76	1,146	1,491,286

(v) *Utilization of Whole Milk.* The utilization of whole milk and the production of butter and cheese in 1963-64 is given in the table below.

UTILIZATION OF WHOLE MILK, PRODUCTION OF BUTTER AND CHEESE, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
MILK ('000 GALLONS)									
Used for—									
Butter ..	a 173,758	b 471,654	c 158,348	33,153	31,884	63,970	..	6	932,773
Cheese ..	10,541	57,739	21,849	33,989	3,454	2,994	..	..	130,566
Preserved milk products ..	14,739	64,689	(j)	(j)	(j)	(j)	..	..	94,795
Other purposes	123,509	95,799	59,630	{ 30,381 }	21,824	16,160	{ .. }	76	94,795
Total ..	322,547	689,881	239,827	97,523	57,162	83,124	76	1,140	333,152

BUTTER (TONS)

In factories(d) ..	(e) 36,107	f 103,026	f 35,366	7,406	6,960	13,694	..	..	202,559
On dairy and other farms ..	291	399	135	91	26	96	..	1	1,039
Total(d) ..	36,398	103,425	35,501	7,497	6,986	13,790	..	1	203,598

CHEESE (TONS)

In factories(d) ..	5,147	25,096	9,492	15,170	1,492	1,337	..	..	57,734
On dairy and other farms ..	..	22	..	(g)	2	(h)	..	..	(i) 24
Total(d) ..	5,147	25,118	9,492	15,170	1,494	1,337	..	..	57,758

(a) Includes 8,275,000 gallons of milk, the produce of New South Wales, sent as cream to factories in Victoria and Queensland. (b) Includes 3,870,000 gallons of milk, the produce of Victoria, sent as cream to New South Wales. (c) Includes 421,000 gallons of milk, the produce of Queensland, sent as cream to New South Wales. (d) Subject to revision. (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) Not available for publication. (h) Less than half the unit shown. (i) Incomplete; excludes South Australia. (j) Separate particulars are not available for publication.

In 1963-64 63 per cent. of the total milk supply was used for butter, 9 per cent. for cheese, 6 per cent. for preserved milk products and 22 per cent. for other purposes.

Details of the production of whole milk for various purposes are shown in the following table for each of the years 1959-60 to 1963-64 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

PRODUCTION AND UTILIZATION OF WHOLE MILK: AUSTRALIA

('000 gallons)

Period	Total production	Quantity used for—			
		Butter (factory and farm)	Cheese (factory and farm)	Preserved milk products	Other purposes (a)
Average for three years ended—					
1938-39.. ..	1,142,006	891,742	54,934	33,226	162,104
1948-49.. ..	1,153,248	738,377	91,642	78,739	244,490
1958-59.. ..	1,330,853	865,347	90,561	79,687	295,258
Year—					
1959-60.. ..	1,406,501	912,271	100,856	82,636	310,738
1960-61.. ..	1,339,302	839,596	104,470	76,619	318,617
1961-62.. ..	1,443,562	919,301	122,340	78,028	323,893
1962-63.. ..	1,467,757	932,041	130,503	83,167	322,046
1963-64.. ..	1,491,286	932,773	130,566	94,795	333,152

(a) Principally fluid milk for domestic purposes.

(vi) *Production of Butter, Cheese and Preserved Milk Products.* (a) *General.* The establishment of large central butter factories, either on a co-operative or 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 three gallons, factory butter requires only about two 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 1963-64 represented only about 0.5 per cent. of all butter made. A similar position exists in the cheese-making industry where a negligible amount is now made on farms.

In 1963-64 factories in Australia engaged in the processing of milk into butter or cheese or the various preserved milk products numbered 347 and were distributed among the States as follows:—New South Wales, 72; Victoria, 123; Queensland, 69; South Australia, 42; Western Australia, 17; and Tasmania, 24. More details regarding numbers of factories, output, etc., are given in Chapter VI. Manufacturing Industry (see p. 197).

(b) *Production of Butter.* Production in 1963-64 at 203,598 tons was 1,216 tons (0.6 per cent.) more than the amount produced in 1962-63, but 5,313 tons (2.5 per cent.) less than the record post-war production of 1955-56. The foregoing figures include butter produced on farms, which has shown a steady decline from about 4,000 tons in the early 1950's to 1,039 tons in 1963-64.

The following table shows production of butter in factories and on farms in each State for the years 1959-60 to 1963-64 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

BUTTER PRODUCTION IN FACTORIES AND ON FARMS

(Tons)

Period	Factory production							Factory and farm production, Aust.(a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.	
Average for three years ended—								
1938-39	49,665	61,566	52,637	7,977	5,803	3,934	181,582	190,827
1948-49	31,394	58,715	42,243	9,028	6,632	4,484	152,496	157,064
1958-59	33,832	87,659	38,131	7,509	6,812	10,618	184,561	187,393
Year—								
1959-60	41,373	89,388	38,932	6,194	7,376	11,744	195,007	197,552
1960-61	33,996	89,356	31,081	6,858	7,661	10,257	179,209	181,654
1961-62	38,994	95,649	35,643	7,424	7,483	12,063	197,256	198,621
1962-63	35,968	101,432	36,455	7,319	6,963	13,097	201,234	202,382
1963-64(b)	36,107	103,026	35,366	7,406	6,960	13,694	202,559	203,598

(a) Includes small quantities produced in the A.C.T. There is no recorded production in the Northern Territory. (b) Subject to revision.

(c) *Production of Cheese.* In 1963-64 production was 57,758 tons which was 897 tons (1.5 per cent.) less than the record of 58,655 tons in 1962-63.

The following table shows production of cheese in factories and on farms in each State in the years 1959-60 to 1963-64 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

CHEESE PRODUCTION IN FACTORIES AND ON FARMS

(Tons)

Period	Factory production							Factory and farm production, Aust.(a)
	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.	
Average for three years ended—								
1938-39	3,280	7,206	5,277	6,866	427	1,424	24,480	24,848
1948-49	2,385	17,378	8,916	11,984	969	641	42,273	42,343
1958-59	4,368	17,607	6,844	11,218	1,127	335	41,499	41,567
Year—								
1959-60	4,470	19,217	8,492	10,930	1,443	328	44,880	44,976
1960-61	5,472	19,978	7,222	12,609	1,350	348	46,979	47,100
1961-62	5,856	23,919	8,974	14,659	1,364	605	55,377	55,431
1962-63	5,524	25,568	10,201	15,164	1,439	643	58,539	58,655
1963-64(b)	5,147	25,096	9,492	15,170	1,492	1,337	57,734	57,758

(a) Northern Territory and Australian Capital Territory: nil. (b) Subject to revision.

(d) *Production of Preserved Milk Products.* The production in 1963-64 of all full-cream milk products and milk by-products, with the exception of powdered skim milk, increased in comparison with 1962-63.

Preserved milk products are manufactured mainly in Victoria, which produced 68.2 per cent. of the total (in terms of whole milk equivalent) in 1963-64. New South Wales accounted for 15.5 per cent. and the remaining States for 16.3 per cent.

WHOLESALE PRICES OF BUTTER AND CHEESE: AUSTRALIA—*continued*
(s. d. per cwt.)

Date from which prices became effective	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania
CHEESE						
26th July, 1955 ..	275 4	275 4	275 4	274 2	275 4	275 4
1st July, 1956 ..	282 4	282 4	282 4	281 2	282 4	282 4
1st July, 1958 ..	291 8	291 8	291 8	291 8	291 8	291 8
1st July, 1960 ..	296 4	296 4	296 4	296 4	296 4	296 4
19th June, 1964 ..	305 8	305 8	305 8	305 8	305 8	305 8

(viii) *Local Consumption of Butter and Cheese.* Following the cessation of butter rationing after the 1939-45 War, consumption per head rose to 31.2 lb. in 1951-52. However, in later years it gradually declined, and in 1963-64 it reached its lowest level since the war. At 23.4 lb. per head it was 2 per cent. below the level of 1962-63.

Consumption of cheese per head has been rising in recent years, reaching 7.2 lb. in 1963-64.

The following table shows details of the production and disposal of butter and cheese for each of the years 1959-60 to 1963-64 compared with the averages for the three years ended 1938-39, 1948-49 and 1958-59.

PRODUCTION AND DISPOSAL OF BUTTER AND CHEESE: AUSTRALIA

Period	Change in stocks (a)	Production (⁰ 000 tons)	Exports (b) (⁰ 000 tons)	Apparent consumption in Australia	
				Total (⁰ 000 tons)	Per head per year (lb.)
BUTTER					
Average for three years ended—					
1938-39.. ..	n.a.	190.8	89.4	101.4	32.9
1948-49.. ..	-3.6	157.1	76.0	84.7	24.8
1958-59.. ..	-0.6	187.4	69.6	118.4	27.2
Year—					
1959-60.. ..	+0.2	197.6	78.7	118.7	26.2
1960-61.. ..	+2.0	181.7	63.4	116.3	25.1
1961-62.. ..	+4.7	198.6	80.1	113.8	24.0
1962-63.. ..	+7.1	202.4	80.6	114.7	23.8
1963-64.. ..	-2.5	203.7	91.0	115.2	23.4

CHEESE					
Average for three years ended—					
1938-39.. ..	n.a.	24.9	11.5	13.4	4.4
1948-49.. ..	-0.8	42.3	24.3	18.8	5.5
1958-59.. ..	+2.8	41.6	13.8	25.0	5.7
Year—					
1959-60.. ..	-2.3	45.0	18.5	28.8	6.3
1960-61.. ..	-0.8	47.1	18.1	29.8	6.4
1961-62.. ..	+2.2	55.3	22.4	30.7	6.5
1962-63.. ..	+0.2	58.4	26.0	32.2	6.7
1963-64.. ..	-5.3	57.9	27.9	35.3	7.2

(a) Balance figure for 1946-47 and subsequent years; includes allowance for imports.
(b) Includes ships' stores; figures for butter include ghee and butter concentrate expressed as butter.

(ix) *Average Returns from Butter and Cheese Sold.* The table below shows rates realized on local, interstate and overseas sales and the average equalization and subsidy rates in operation for the years ended June, 1960 to 1964.

BUTTER AND CHEESE: RATES REALIZED ON SALES, AVERAGE EQUALIZATION RATES AND RATES OF COMMONWEALTH SUBSIDY UNDER DAIRY INDUSTRY ASSISTANCE ACTS

(Source: Commonwealth Dairy Produce Equalization Committee Ltd.)

(s. d. per cwt.)

Year	Rates realized on sales			Average equalization rate	Rate of subsidy	Rate of overall return to manufacturer
	Local	Interstate	Overseas			

BUTTER

1959-60.. ..	468 8.8	453 3.8	343 6.9	417 5.5	63 6.0	480 11.5
1960-61.. ..	481 4.5	462 7.9	261 11.7	399 8.3	68 11.3	468 7.6
1961-62.. ..	479 4.9	466 8.0	290 11.8	398 5.2	62 6.7	460 11.9
1962-63.. ..	484 11.0	464 11.0	326 9.0	411 6.2	61 6.0	473 0.2
1963-64.. ..	(a)	(a)	(a)	b411 10.0	61 0.5	b472 10.5

CHEESE

1959-60.. ..	279 7.9	204 11.1	247 10.7	29 1.4	277 0.1
1960-61.. ..	283 10.9	211 6.0	256 1.2	28 5.6	284 6.8
1961-62.. ..	283 10.7	189 6.0	241 2.7	24 4.6	265 7.3
1962-63.. ..	283 11.0	202 9.8	242 2.8	23 4.0	265 6.8
1963-64.. ..	(a)	(a)	b249 4.0	23 6.8	b272 10.8

(a) Not yet available. (b) Interim rates.

The distribution between factory and farm of the overall return to manufacturers for butter is shown in the following table.

COMMERCIAL BUTTER: AVERAGE OVERALL RETURNS

(Source: Commonwealth Dairy Produce Equalization Committee Ltd.)

(Pence per lb.)

Year	Average overall returns on commercial butter		
	Rate of overall return to manufacturer	Estimated manufacturing cost	Return to dairy farmer
1959-60	51.531	4.965	46.566
1960-61	50.210	5.339	44.871
1961-62	49.392	5.339	44.053
1962-63	50.680	5.339	45.341
1963-64	(a) 50.665	5.339	45.326

(a) Interim rates.

(x) *Oversea Trade in Dairy Products. (a) 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 seasonal conditions.

Exports of butter in 1963-64 amounted to 87,751 tons, compared with 77,410 tons in 1962-63. Exports of cheese in these years were 27,827 tons and 25,938 tons respectively. As in previous years, the principal importing country for Australian butter and cheese was the United Kingdom. In 1963-64 85 per cent. of butter and 47 per cent. of cheese exported was consigned to the United Kingdom.

Total quantities and values of exports of butter, cheese and preserved milk products of Australian origin are shown in the table at the foot of this page.

(b) *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 supervision, inspection and examination by 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 *Rural Industries, 1962-63, Bulletin No. 1.*

BULK BUTTER AND CHEESE GRADED FOR EXPORT: AUSTRALIA
(Per cent.)

Grade	Butter			Cheese		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Choicest	65.4	70.7	67.5	8.4	5.9	5.3
First quality	26.0	21.4	25.0	82.6	82.1	88.1
Second and third quality(a)	8.6	7.9	7.5	9.0	12.0	6.6
Total	100.0	100.0	100.0	100.0	100.0	100.0

(a) Includes rejected.

(c) *Exports of Dairy Products.* Exports of butter, cheese and other milk products of Australian origin are shown in the following table.

EXPORTS OF DAIRY PRODUCTS: AUSTRALIA

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Butter	174,731	173,399	196,563	23,537	23,593	27,357
Cheese	50,124	58,101	62,333	5,203	6,094	6,759
Milk—						
Condensed, preserved, etc.—						
Sweetened full cream	36,028	54,432	69,554	2,378	3,426	4,587
Unsweetened	4,327	5,077	8,337	258	304	470
Dried or powdered—						
Full cream	13,043	14,263	15,260	2,148	2,226	2,142
Skim	35,311	55,467	40,505	1,263	1,942	1,492
Malted	7,647	7,414	9,348	1,177	1,125	1,411
Infants' and invalids' foods—						
Essentially of milk	6,980	7,633	8,567	1,082	1,214	1,160
Other	9,573	9,059	11,611	1,774	1,763	2,041

3. Pigs and Pig Products.—(i) *Pig Numbers.* At 31st March, 1964, 1,468,000 pigs were recorded, representing an increase of 28,000 (1.9 per cent.) on numbers a year earlier. The number of pigs in each State and Territory at 31st March for each of the years 1960 to 1964 compared with the averages for the three-year periods ended 31st March, 1939, 1949 and 1959, are given in the following table.

NUMBER OF PIGS

At 31st March—	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1939 ..	374,963	285,465	299,707	74,329	74,657	42,802	404	481	1,152,808
1949 ..	366,267	261,922	375,191	101,934	91,862	43,184	424	554	1,241,338
1959 ..	377,510	263,363	405,702	99,632	135,404	61,389	2,543	160	1,345,703
Year—									
1960 ..	398,959	284,505	429,034	108,696	130,933	67,118	4,400	151	1,423,796
1961 ..	455,345	318,523	448,279	143,645	175,675	70,882	2,845	109	1,615,303
1962 ..	471,579	325,120	432,609	170,133	174,182	75,754	2,762	184	1,652,323
1963 ..	391,999	297,791	402,498	144,976	130,791	70,002	1,842	92	1,439,991
1964 ..	391,300	322,051	388,144	153,415	128,140	82,534	1,806	121	1,467,511

A long-term comparison of pig numbers is given in the division Pastoral Production of this chapter (see p. 1044). A map showing the distribution of pigs in Australia at 31st March, 1963, faces page 1093 of Year Book No. 50 and graph showing the number of pigs in Australia from 1870 onwards appears on page 1038 of this Year Book.

(ii) *Size of Pig Herds.* Details of the size of pig herds have been published in a series of bulletins entitled *Classification of Rural Holdings by Size and Type of Activity, 1959-60.*

(iii) *Pigs Slaughtered.* The number of pigs slaughtered during each of the years 1959-60 to 1963-64, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59, is shown in the following table.

PIGS SLAUGHTERED
(‘000)

Period	Slaughterings passed for human consumption									Total slaughterings (including boiled down)
	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.	
Average for three years ended—										
1938-39 ..	562	503	530	155	109	65	1		1,925	1,961
1948-59 ..	440	371	448	154	138	54	1		1,606	1,615
1958-59 ..	594	439	474	159	191	94	5		1,956	1,968
Year—										
1959-60 ..	584	458	530	171	168	115	7		2,033	2,043
1960-61 ..	655	513	554	183	194	111	9		2,219	2,229
1961-62 ..	755	587	597	232	264	120	2	7	2,564	2,573
1962-63 ..	688	528	604	234	237	116	2	7	2,416	2,424
1963-64 ..	636	531	606	214	185	123	2	7	2,304	2,312

(iv) *Production. (a) Pigmeat.* In the following table details of the production of pigmeat in each State are shown for the years 1959-60 to 1963-64, together with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

PRODUCTION OF PIGMEAT (CARCASS WEIGHT)
(Tons)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Average for three years ended—									
1938-39 ..	25,558	24,569	23,522	7,538	4,322	2,893	5	43	(a)88,450
1948-49 ..	27,182	22,308	22,856	8,993	8,500	2,916	24	36	92,815
1958-59 ..	28,272	23,097	23,180	8,778	9,624	4,156	84	209	97,400
Year—									
1959-60 ..	26,252	23,383	27,106	9,161	9,029	5,352	103	208	100,594
1960-61 ..	29,048	25,550	27,289	9,574	10,550	5,057	150	240	107,458
1961-62 ..	32,677	27,406	29,802	11,558	13,180	5,428	86	326	120,463
1962-63 ..	30,283	25,086	29,619	11,810	11,731	5,461	69	328	114,387
1963-64 ..	28,717	25,306	29,919	11,163	9,852	5,927	73	308	111,265

(a) Excludes trimmings from baconer carcasses.

(b) *Bacon and Ham.* Production of bacon and ham amounted to 41,539 tons in 1963-64. This amount is 0.3 per cent. below the amount of 41,661 tons produced in 1962-63. The record output of 56,246 tons was attained in 1944-45.

Details of production are shown by States in the following table for each year from 1959-60 to 1963-64, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

PRODUCTION OF BACON AND HAM (CURED CARCASS WEIGHT) (a)
(Tons)

Period	N.S.W.	Victoria	Q'land	S. Aust.	W. Aust.	Tas.	Australia
Average for three years ended—							
1938-39 ..	10,396	7,556	8,759	2,940	1,838	1,022	32,511
1948-49 ..	14,436	10,787	9,846	4,580	4,209	1,196	45,054
1958-59 ..	11,132	8,302	10,294	3,275	2,987	1,078	37,068
Year—							
1959-60 ..	11,012	8,634	9,948	3,115	3,061	1,144	36,914
1960-61 ..	11,328	9,211	9,442	3,141	3,169	1,120	37,411
1961-62 ..	11,145	9,102	12,221	2,757	3,512	1,131	39,868
1962-63 ..	12,827	9,004	11,449	3,355	3,844	1,182	41,661
1963-64 ..	13,504	8,629	10,843	3,605	3,792	1,166	41,539

(a) Pressed and canned bacon and ham have been converted to cured carcass weight for periods subsequent to 1948-49.

(v) *Consumption.* (a) *Pork.* Apparent consumption of pork per head in 1963-64 was 11.4 lb., compared with 12.0 lb. per head in 1962-63 and 13.6 lb. per head in 1961-62. The 1961-62 level was the highest since the war. In recent years annual consumption of pork per head has not fallen below 10 lb.

In the following table details of the production and disposal of pigmeat are shown for the years 1959-60 to 1963-64 compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59.

PRODUCTION AND DISPOSAL OF PIGMEAT (CARCASS WEIGHT): AUSTRALIA

Period	Change in stocks (a)	Production	Exports	Curing and canning	Apparent consumption (as pork or smallgoods) in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39 .. ..	..	88.5	13.7	48.6	26.2	8.5
1948-49 . . .	-1.2	92.8	6.3	63.4	24.3	7.1
1958-59 . . .	..	97.4	0.8	53.0	43.6	10.1
Year—						
1959-60	+0.8	100.6	0.4	52.6	46.8	10.3
1960-61	+0.8	107.5	0.4	53.3	53.0	11.4
1961-62	-0.7	120.5	0.9	55.9	64.4	13.6
1962-63	-1.8	114.4	0.2	58.0	58.0	12.0
1963-64	-3.1	111.3	0.2	57.9	56.3	11.4

(a) Includes allowance for imports.

(b) *Bacon and Ham.* Annual consumption of bacon and ham has been about 7 lb. per head in recent years. The 1963-64 consumption was 7.5 lb. per head.

Details of production and disposal of bacon and ham for the years 1959-60 to 1963-64, compared with the averages for the three-year periods ended 1938-39, 1948-49 and 1958-59 are shown in the following table.

PRODUCTION AND DISPOSAL OF BACON AND HAM (CURED CARCASS WEIGHT): AUSTRALIA

Period	Change in stocks	Production	Exports	Canning	Apparent consumption in Australia	
					Total	Per head per year
	'000 tons	'000 tons	'000 tons	'000 tons	'000 tons	lb.
Average for three years ended—						
1938-39 .. ..	..	32.5	1.0	..	31.5	10.2
1948-49 .. ..	..	45.1	3.1	2.1	39.9	11.7
1958-59	+0.1	37.1	0.5	6.0	30.5	7.1
Year—						
1959-60	-0.8	36.9	0.3	5.3	32.1	7.1
1960-61	+0.1	37.4	0.3	5.3	31.7	6.8
1961-62	(a)	39.9	0.1	6.8	33.0	7.0
1962-63	-0.1	41.7	0.1	5.7	36.0	7.4
1963-64	(a)	41.5	0.1	5.1	36.3	7.4

(a) Less than 50 tons.

(vi) *Exports of Pigs and Pig Products.* Total quantities and values of exports of pigs and pig products of Australian origin for the years 1961-62 to 1963-64 are given in the following table.

EXPORTS OF PIGS AND PIG PRODUCTS: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Bacon and ham (including canned) '000 lb.	596	216	186	154	59	61
Lard '000 lb.	645	246	95	48	24	11
Frozen pork '000 lb.	2,092	482	370	306	84	66
Pigs, live number	139	113	547	5	5	40

§ 2. The Poultry Industry

1. **General.**—Originally the poultry industry was conducted in conjunction with other branches of rural activity, mainly dairying, but it is now a specialized and distinct industry. It is from this source that the bulk of the commercial production is obtained. Practically all farm households keep poultry for the purpose of supplying their own domestic requirements and some supplies from this source are also marketed. In addition, many private homes in both rural and suburban areas keep small numbers of fowls in back-yard runs to help satisfy domestic needs. Because of the incompleteness of data available on poultry throughout Australia, details of poultry numbers are not published.

2. **Marketing of Eggs.**—(i) *Markets.* 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 four years following appear in previous issues of the Year Book.

Over the period 1953-54 to 1963-64 Australian exports of shell eggs fell by 72 per cent. In 1963-64 they amounted to 3,599,000 dozen compared with 3,943,000 dozen in 1962-63. The main outlets for Australian eggs in 1963-64 were Kuwait (1,596,000 dozen), Saudi Arabia (810,000 dozen), and Qatar (217,000 dozen).

The United Kingdom provides the major export market for egg pulp. Australian exports of pulp to that country were approximately 7,755 tons in 1962-63 and 3,554 tons in 1963-64. In 1963-64 the United Kingdom absorbed the bulk of the exports of dried eggs (421,000 lb.) also.

(ii) *Egg Export Control Act 1947.* Details of this Act were given in previous issues of the Year Book (see No. 47, p. 997).

3. **Recorded Production of Eggs and Egg Products.**—(i) *Shell Eggs.* Available statistics of the production and disposal of eggs in Australia are restricted to those recorded by the Australian Egg Board and the Egg Marketing Board of New South Wales. Details of production as recorded by these authorities are shown in the following table.

SHELL EGGS: PRODUCTION^(a) RECORDED BY EGG BOARDS
(^{'000} dozen)

State	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	53,498	62,157	61,657	54,609	56,713
Victoria	26,521	28,215	29,939	26,793	24,992
Queensland	10,007	10,810	10,176	11,290	12,459
South Australia	10,041	10,492	11,388	9,816	8,731
Western Australia	7,476	7,333	7,558	7,796	8,331
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total^(b)	107,543	119,007	120,718	110,304	111,226

(a) Receipts from consignors and sales by producer agents.

(b) Excludes Tasmania.

(ii) *Egg Pulp, etc. Production.* Particulars of the production of whole egg pulp as recorded by the Egg Marketing Board for the State of New South Wales and by the Australian Egg Board for the other States are shown in the following table.

LIQUID WHOLE EGG PULP: PRODUCTION RECORDED BY EGG BOARDS

('000 lb.)

State	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	17,810	21,496	20,916	11,500	9,272
Victoria	6,460	7,948	12,000	7,684	3,183
Queensland	2,767	3,716	3,321	3,864	3,922
South Australia	3,210	3,394	3,374	2,836	3,001
Western Australia	1,122	916	620	533	835
Tasmania	n.a.	n.a.	n.a.	n.a.	n.a.
Total(a)	31,369	37,470	40,231	26,417	20,213

(a) Excludes Tasmania.

In addition to liquid whole egg, production was also recorded of liquid egg whites and liquid egg yolks. Output in 1963-64 amounted to 2,711,000 lb. and 1,964,000 lb., respectively, compared with 2,030,000 lb. and 1,412,000 lb., respectively, in the previous year. These figures exclude small quantities produced in Tasmania for which details are not available.

4. *Consumption of Eggs and Egg Products.*—Because of the operations of producers in areas outside the control of the Egg Boards and the extent of "back-yard" poultry-keeping, for which no statistics are collected, figures relating to total egg production must 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:
AUSTRALIA

Period	Change in stocks	Estimated total production	Exports (a)	For drying and pulping(b)	Apparent consumption in Australia	
					Total	Per head per year
Average for three years ended—	mill. doz.	mill. doz.	mill. doz.	mill. doz.	mill. doz.	dozen
1938-39	-0.1	152.7	13.0	5.5	134.3	19.5
1948-49	+0.1	204.7	17.7	39.1	147.8	19.3
1958-59 .. ..	..	189.9	9.6	23.0	157.3	16.1
Year—						
1959-60	+0.6	198.6	3.4	27.2	167.4	16.5
1960-61	-0.3	212.1	6.2	36.9	169.3	16.3
1961-62	-0.1	215.8	5.8	35.5	174.6	16.4
1962-63	-0.4	207.2	4.6	23.9	179.1	16.6
1963-64	+1.3	210.1	4.3	21.0	183.5	16.7

(a) Includes ships' stores.

(b) Includes wastage.

Details of the annual consumption of shell eggs, liquid whole egg and total shell egg equivalent per head of population are shown in the following table.

**SUPPLIES OF EGGS AND EGG PRODUCTS AVAILABLE FOR CONSUMPTION:
AUSTRALIA**

(Per head per year)

Period	Eggs in shell	Liquid whole egg and egg powder (a)	Total	
			Number	Weight(b)
	number	number		lb.
Average for three years ended—				
1938-39	235	8	243	26.6
1948-49	232	23	255	27.9
1958-59	194	12	206	22.5
Year—				
1959-60	198	14	212	23.2
1960-61	195	15	210	(c) 26.3
1961-62	197	14	211	(c) 26.4
1962-63	199	11	210	(c) 26.2
1963-64	200	13	213	(c) 26.6

(a) In terms of the number of eggs in shell. (b) The average weight of an egg in Australia has been taken as 1.75 oz. for the years prior to 1960-61. From 1960-61, the average weight has been taken as 2 oz. (c) Not comparable with earlier years; see footnote (b).

5. **Oversea Trade in Poultry Products.**—Details of the exports of poultry products in each of the years 1961-62 to 1963-64 are shown below.

EXPORTS OF POULTRY PRODUCTS: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)			
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64	
Eggs in shell	'000 doz.	5,007	3,943	3,599	831	603	577
Eggs not in shell—							
In liquid form	'000 lb.	29,231	18,920	9,493	3,273	1,901	1,114
Dry	'000 lb.	190	3	421	87	2	84
Frozen poultry	'000 lb.	427	318	501	93	71	113
Poultry, live(a)	number	555,908	550,362	1,027,871	75	73	129

(a) Includes day-old chicks.

For a number of years prior to 1961-62 there were considerable imports of canned chicken from the United States of America. In 1960-61 the quantity imported was 2,016,000 lb. valued at £227,000, but the trade had declined to 184,000 lb., valued at £18,000, in 1963-64.

§ 3. The Bee-Farming Industry

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. In recent years there has been considerable growth in the number of itinerant apiarists operating on a large scale with mobile equipment. Some of these apiarists move as far afield as from Victoria to Queensland in an endeavour to provide a continuous supply of nectar from flora suitable for their bees. The returns of honey from productive hives during 1963-64 show an average of 134 lb. per hive, and the average quantity of wax was 1.7 lb. per productive hive.

The number of hives and the production of honey and bees-wax during the year 1963-64 are shown in the following table.

BEEHIVES, HONEY AND BEES-WAX, 1963-64

State or Territory	Beehives (a)			Honey produced		Bees-wax produced	
	Pro-ductive	Unpro-ductive	Total	Quantity	Gross value	Quantity	Gross value
	'000	'000	'000	'000 lb.	£'000	'000 lb.	£'000
New South Wales ..	132	56	188	15,135	1,023	194	46
Victoria ..	74	19	93	9,460	749	110	28
Queensland ..	23	16	39	2,053	129	32	7
South Australia ..	63	9	72	9,722	496	134	25
Western Australia ..	40	10	50	8,510	430	103	17
Tasmania ..	6	1	7	632	56	6	2
Aust. Cap. Territory ..	1	(b)	1	135	6	2	(b)
Australia ..	339	111	450	45,647	2,889	581	125

(a) At 30th June, 1964. (b) Less than 500.

The production of honey and bees-wax fluctuates considerably and is determined mainly by the flow of nectar from flora, particularly the eucalypts, which varies greatly from year to year.

The table below shows the production of honey and bees-wax for each of the years 1959-60 to 1963-64, compared with the averages for the three-year periods ended 1938-39, 1948-49, and 1958-59.

HONEY AND BEES-WAX PRODUCTION
(^{'000} lb.)

Period	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aus-tralia
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HONEY

Average for three years ended—								
1938-39 ..	3,005	3,107	700	2,874	1,299	200	3	11,188
1948-49 ..	14,934	8,232	2,185	8,292	2,831	206	34	36,714
1958-59 ..	12,853	7,239	2,071	5,924	6,548	398	44	35,077
Year—								
1959-60 ..	18,682	9,661	4,119	7,221	5,549	296	34	45,562
1960-61 ..	15,286	8,390	1,848	4,442	5,311	441	83	35,801
1961-62 ..	15,326	10,314	1,281	8,405	7,982	279	64	43,651
1962-63 ..	14,087	4,818	2,941	4,147	6,099	547	40	32,679
1963-64 ..	15,135	9,460	2,053	9,722	8,510	632	135	45,647

BEES-WAX

Average for three years ended—								
1938-39 ..	49	39	11	38	23	2	(a)	162
1948-49 ..	174	86	36	110	34	3	(a)	443
1958-59 ..	163	81	31	94	81	5	(a)	455
Year—								
1959-60 ..	257	113	59	106	67	4	1	607
1960-61 ..	197	105	32	59	71	5	1	470
1961-62 ..	208	135	22	123	94	4	1	587
1962-63 ..	177	64	44	56	79	6	(a)	426
1963-64 ..	194	110	32	134	103	6	2	581

(a) Less than 500 lb.

2. Oversea Trade in Bee Products.—The quantity of honey exported in 1963-64, 18.9 million lb., was 30 per cent. less than in 1962-63. The principal importers were the United Kingdom (67 per cent. of total exports), the Federal Republic of Germany (20 per cent.), and Japan (5 per cent.).

The quantity of bees-wax exported in 1963-64 was 161,300 lb., mainly to the United Kingdom.

Total quantities and values of exports of honey and bees-wax for the years 1961-62 to 1963-64 are shown below.

EXPORTS OF HONEY AND BEES-WAX: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Honey '000 lb.	25,390	26,759	18,859	1,113	1,401	1,381
Bees-wax lb.	211,420	322,922	161,347	43	71	36

§ 4. Value of Dairy, Poultry and Bee Production and Indexes of Price and Quantum of Production

1. Gross Value of Dairy, Poultry and Bee Production, 1959-60 to 1963-64.—The following table shows the gross value of recorded dairy, poultry and bee production at the principal markets in Australia.

GROSS VALUE OF DAIRY, POULTRY AND BEE PRODUCTION: AUSTRALIA (£'000)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
DAIRYING					
Whole milk used for—					
Butter(a)	72,615	64,601	67,912	73,538	72,870
Cheese(a)	10,124	10,658	11,341	12,558	13,728
Preserved milk products ..	10,340	9,376	9,641	9,544	10,743
Other purposes	61,768	64,098	65,973	66,005	69,261
Subsidy paid on whole milk for—					
Butter	12,295	12,275	12,247	12,250	12,250
Cheese	1,205	1,225	1,253	1,250	1,250
<i>Total, Whole Milk (including Subsidy)</i>	<i>168,347</i>	<i>162,233</i>	<i>168,367</i>	<i>175,145</i>	<i>180,102</i>
Pigs slaughtered	30,121	30,659	26,953	31,303	32,999
Dairy cattle slaughtered	14,228	11,864	10,916	13,241	15,332
Total, Dairying	212,696	204,756	206,236	219,689	228,433
POULTRY					
Total, Poultry	59,837	65,094	60,861	61,815	69,091
BEE-FARMING					
Honey	2,390	1,772	1,877	1,648	2,889
Bees-wax	155	111	130	92	125
Total, Bee-farming	2,545	1,883	2,007	1,740	3,014

(a) Excludes Commonwealth subsidy which is shown separately.

2. **Gross, Local and Net Values, 1963-64.**—The values of dairy, poultry and bee-farming production 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 DAIRY, POULTRY AND BEE PRODUCTION, 1963-64

(£'000)

State or Territory	Gross production valued at principal markets	Marketing costs	Local value of production	Value of materials used in process of production	Net value of production(a)
New South Wales	98,834	14,362	84,472	(b) 18,553	65,919
Victoria	109,424	6,081	103,343	30,517	72,826
Queensland	42,267	2,952	39,315	10,806	28,509
South Australia	21,351	924	20,427	8,625	11,802
Western Australia	14,361	902	13,459	7,102	6,357
Tasmania	13,676	702	12,974	3,916	9,058
Northern Territory	135	1	134	n.a.	134
Australian Capital Territory ..	490	43	447	111	336
Australia	300,538	25,967	274,571	79,630	194,941

(a) No deduction has been made for depreciation and maintenance. (b) No allowance has been made for costs of power, power kerosene, petrol and other oils.

3. **Net Value of Production, 1959-60 to 1963-64.**—In the following table the net values of dairy, poultry and bee production (total and per head of population) are shown by State.

NET VALUE OF DAIRY, POULTRY AND BEE PRODUCTION(a)

Year	N.S.W. (b)	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (c)
NET VALUE (£'000)							
1959-60	69,285	62,533	29,579	10,912	4,565	7,492	184,677
1960-61	63,933	65,612	22,443	9,986	5,075	7,214	174,587
1961-62	58,902	56,376	23,563	11,160	5,222	7,354	162,982
1962-63	62,456	67,713	26,466	10,749	5,666	8,167	181,592
1963-64	65,919	72,826	28,509	11,802	6,357	9,038	194,941

NET VALUE PER HEAD OF POPULATION (£)

1959-60	18.2	22.2	20.0	11.7	6.4	21.8	18.2
1960-61	16.5	22.8	14.9	10.4	7.0	20.6	16.8
1961-62	14.9	19.1	15.4	11.4	7.0	20.6	15.4
1962-63	15.6	22.4	17.1	10.8	7.4	22.6	16.8
1963-64	16.1	23.6	18.1	11.6	8.1	24.7	17.7

(a) No deduction has been made for depreciation and maintenance. (b) No deduction has been made for costs of power, power kerosene, petrol and other oils. (c) Includes Northern Territory and Australian Capital Territory.

4. Indexes of Quantum and Price of Dairy, Poultry and Bee Production.—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 DAIRY, POULTRY AND BEE PRODUCTION: AUSTRALIA

(Base: Average 3 years ended June, 1939 = 100)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Quantum^(a) of production—					
Milk	123	116	125	129	131
Other products	122	127	135	130	133
<i>Total, Dairy, Poultry and Bee</i>	<i>123</i>	<i>120</i>	<i>128</i>	<i>129</i>	<i>131</i>
Per head of population ..	83	79	83	82	82
Price—					
Milk	383	384	373	380	382
Other products	450	446	371	410	452
<i>Total, Dairy, Poultry and Bee..</i>	<i>402</i>	<i>402</i>	<i>373</i>	<i>388</i>	<i>402</i>

(a) Indexes of value at constant prices, i.e. quantities revalued at average unit values of base years 1936-37 to 1938-39.

CHAPTER XXIV

FORESTRY

NOTE.—For further details on subjects dealt with in this chapter see the annual bulletins *Non-Rural Primary Industries and Value of Production*, and *Secondary Industries* (for saw-mills, etc., operations).

§ 1. Source of Statistics

Statistics relating to forestry are, in general, provided by the various authorities concerned with forestry administration. Particulars of forest reservations contained in this chapter have been collected by the Statisticians of the various States, mainly from information provided by the State forestry authorities. Other information on forested areas has been provided by the Commonwealth Forestry and Timber Bureau, which has also supplied certain other data.

Statistics of timber and by-products have been compiled from the annual factory collections undertaken by the Statisticians in the several States. Figures of production of gums, resins and tanning barks have been provided by the State forestry authorities.

Data of imports and exports of forest products and timber and timber products have been compiled in the Commonwealth Bureau of Census and Statistics as part of the statistics of oversea trade.

The figures shown relate, in general, to years ended 30th June.

§ 2. Forestry in Australia

1. **Objects of Forestry.**—The main object of forestry authorities is to manage the forests of the country in a manner 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, oil and resins. Indirect benefits include protection of soil and stock from wind and exposure, regulation of stream flow, provision of recreational facilities, and aesthetic effects. Forestry also aims at improving existing forests and woodlands by properly controlled exploitation, by protection from such destructive agencies as fire and insect attack, and by inducing regeneration where it is desirable. The provision of a partial tree cover on denuded lands where this cover is necessary for protective purposes, and a complete cover when the land is better under forest than under any other land use, are further aims of forestry.

2. **General Account of Forests and Timbers.**—The area of land in Australia suitable for the production of commercial timber as a primary crop is very small in comparison with the size of the continent. Broadleaved forests (hardwoods) cover 97 per cent. of the total forested area, and approximately 94 per cent. of the broadleaved forests area is occupied by eucalypts.

(i) *Eucalypts.* The genus *Eucalyptus* is remarkable in that it includes over 600 species ranging in size from the mighty forest giants, mountain ash (*E. regnans*) of Victoria and karri (*E. diversicolor*) of Western Australia, down to the small mallee species which inhabit vast areas of the inland. The habitats range from the dry inland areas to the high mountain areas in the Australian Alps, from areas with the annual rainfall as low as 10 inches to those where it is 150 inches. Of the 600 species, only about 100 are used for sawmilling, and not more than 40 of these are exploited extensively.

The better class of eucalypt forest is concentrated mainly in the higher rainfall areas such as the east coast, the highlands of southern New South Wales, Victoria and Tasmania and the south-western corner of Western Australia. The more important species include blackbutt (*E. pilularis*), tallowwood (*E. microcorys*), flooded gum (*E. grandis*) and red mahogany (*E. resinifera*) of New South Wales and Queensland, alpine ash (*E. delegatensis*) of New South Wales, Victoria and Tasmania, mountain ash (*E. regnans*), messmate (*E. obliqua*) and blue gum (*E. bicostata*) of Victoria and Tasmania, and karri (*E. diversicolor*) of Western Australia. For height and grandeur, mountain ash and karri are unequalled among the broadleaved trees of the world, and are excelled only by a few North American coniferous (softwood) species.

In the coastal regions with lower rainfall the eucalypt forests contain many durable species such as the ironbarks, grey gums and bloodwoods of the east coast and jarrah (*E. marginata*) and tuart (*E. gomphocephala*) of Western Australia. The spotted gum (*E. maculata*) occurring in New South Wales and Queensland is another example.

Along most of the inland streams and adjacent flood-plains there are riverain forests consisting mainly of river red gum (*E. camaldulensis*), a very durable broadleaved tree which has supplied large quantities of sawn timber, railway sleepers and fence posts.

Eucalypts also occur in open forest and savannah woodland formations in areas receiving a reliable rainfall of about 10 to 20 inches per annum, as on the goldfields of Western Australia where salmon gum (*E. salmonophloia*), brown mallet (*E. astringens*) and wandoo (*E. wandoo*) occur. These forests are of considerable value for firewood, as mining timbers, and for fencing. Minor forest products such as sandalwood, tan bark, essential oils, etc., also come from isolated areas in this type of country, and in the more arid areas.

In 1963-64 the volume of eucalypt timber sawn was 974.7 million super. feet.

(ii) *Other Broadleaved Timbers (Hardwoods)*. Broadleaved genera other than *Eucalyptus* cover a comparatively small portion of the forested land in Australia (some 6 per cent.), but these areas provide a great variety of timbers suitable for a multitude of uses. There are two basic types of forest containing supplies of broadleaved timbers other than eucalypts, namely, the tropical and sub-tropical rainforests of coastal New South Wales and Queensland, and the temperate rainforests of southern Victoria and Tasmania, both of which yield species known collectively as rainforest or brushwood species. The total volume of brushwood species produced in 1963-64 was estimated at 70 million super. feet, i.e. less than 7 per cent. of the total broadleaved timber cut in Australia.

The tropical and subtropical rainforest along the eastern coast of Australia contains a large number of different species. Tropical rainforest occurs in northern Queensland in the vicinity of Cairns and on the Atherton Tableland, providing such well-known cabinet woods as Queensland maple (*Flindersia brayleana*), Queensland walnut (*Endiandra palmerstonii*) and the silky oaks. The subtropical rainforest found in southern Queensland and northern New South Wales yields the tulip oak, crab apple (*Shizomeria ovata*) and white beech (*Gmelina leichhardtii*). Coachwood (*Ceratopetalum apetalum*) and sassafras (*Doryphora sassafras*) occur in regions to the south near Dorriggo and have yielded valuable timber produce for many years.

Turpentine (*Syncarpia glomulifera*), an excellent harbour pile timber resistant to marine borer attack, and brush box (*Tristania conferta*), a superior structural and decking timber, are found in association with some eucalypts in the wetter rainfall areas on the north coast of New South Wales and in southern Queensland.

Temperate rainforest which is to be seen in southern parts of Victoria and western Tasmania consists mainly of myrtle beech (*Nothofagus cunninghamii*), but produces also southern sassafras (*Atherosperma moschata*) and blackwood (*Acacia melanoxylon*).

(iii) *Conifers (Softwoods)*. One of the most important species of native conifers is white cypress pine (*Callitris hugelii*). The main cypress pine forests of commercial value occur in New South Wales and southern Queensland west of the Great Dividing Range. The trees are comparatively smaller, but the timber has particular value owing to its durability and resistance to termites. It is suitable for use as scantlings, flooring, linings, weatherboards, poles and posts. As much of the area originally covered by cypress pine has been cleared for wheat farming and grazing, the production from the remaining State forests is now strictly regulated to ensure a continuous supply. The volume of cypress pine cut in 1963-64 was approximately 68.5 million super. feet.

Another important native conifer is hoop pine (*Araucaria cunninghamii*), which occurs naturally in the sub-tropical rain forest of southern Queensland and northern New South Wales associated with tulip oak, crab apple, white beech, coachwood and sassafras. The greater part of the original hoop pine forests has been exploited, but considerable areas have been replanted to this species in Queensland and, to a lesser extent, in New South Wales.

Other native conifers which have played a useful but minor part in the Australian timber industry include bunya and kauri pines (*Araucaria bidwillii* and *Agathis palmerstonii*) of Queensland, and celery top, Huon and King William pines (*Phyllocladus asplenifolius*, *Dacrydium franklinii* and *Athrotaxis selaginoides*) of Tasmania. Kauri pine is found in the tropical rainforest of northern Queensland in association with non-eucalypt broadleaved trees while bunya pine occurs in the subtropical rainforests. In the temperate rainforests of Tasmania, celery-top, Huon and King William pines are found in association with myrtle beech, southern sassafras and blackwood.

3. Forested Areas.—(i) *Extent of Forests.* Estimates prepared for the Eighth British Commonwealth Forestry Conference held in Kenya in 1962 show the total area of forest in Australia as 512.2 million acres, or about 27 per cent. of the total land area of the continent. In making these estimates, the F.A.O. definition of "forest" (published in *World Forest Inventory*, 1958, p. 123) was used. This definition includes areas of sparse or stunted tree growth, and in the case of Australia some four-fifths of the total forest area falls into this category.

CLASSIFICATION OF FOREST AREA(a): AUSTRALIA

(Source: Forestry and Timber Bureau)

('000 acres)

Type of forest	Area
LANDS	
Accessible forests—	
Productive forests in use—	
Coniferous (softwood)	492
Non-coniferous (broadleaved)	24,352
Mixed woods	5,636
Open areas	245
Total, Productive Forests in Use	30,725
Productive forests not in use	(b) 31,961
Unproductive accessible forests	(c) 257,687
Total, Accessible Forests	(d) 320,373
Inaccessible forests	191,795
Total, Forested Area	512,168

(a) Based on the 1960 classification of forests. (b) Includes approximately 25 million acres capable of producing fuelwood only. (c) This area carries only sparse, stunted trees. (d) Includes approximately 258 million acres of land carrying only stunted trees classified as unproductive accessible forests.

CLASSIFICATION OF FOREST AREA(a): AUSTRALIA—continued

(Source: Forestry and Timber Bureau)

('000 acres)

Type of forest							Area				
OWNERSHIP OF ACCESSIBLE FORESTS											
Publicly-owned forests—											
State forests	..	..	..	..	..	..	23,534
Other forests	..	..	..	..	..	..	150,329
<i>Total, Publicly-owned Forests</i>							173,863
Privately-owned forests	..	..	..	..	..	..	145,537
Ownership not yet determined	..	..	..	..	..	..	973
Total, Accessible Forests							320,373

(ii) *Forest Reservations.* Statements furnished by State and Commonwealth authorities show reservations of forest areas in Australia at 31st March, 1964, totalling 36.8 million acres, of which 24.2 million acres were dedicated State forests and 12.6 million acres were timber and other reserves. The distribution of those areas is shown by States in the following table. Detailed comparisons between States are not possible because of the lack of uniform definitions.

AREA OF FOREST RESERVATIONS, 31ST MARCH, 1964(a)

(Source: Forestry and Timber Bureau)

('000 acres)

State or Territory	State forests	Timber reserves	Other reserves of forestry value	Total
New South Wales	6,724	1,371	..	8,095
Victoria	4,870	861	368	6,099
Queensland	5,528	2,527	1,041	9,096
South Australia	286	..	n.a.	286
Western Australia	4,459	1,845	(b) 777	7,081
Tasmania	2,287	138	1,217	3,642
Northern Territory	..	9	(c) 2,394	2,403
Australian Capital Territory	..	..	(d) 131	131
Australia	24,154	6,751	5,928	36,833

(a) Includes figures for previous year for some States. (b) Timber reserves under the Land Act. (c) Includes fauna and flora reserve, Coburg Peninsula (473,600 acres), land within welfare reserves (1,100,000 acres), land covered by pastoral lease (820,000 acres). (d) Forest land not specifically reserved.

A considerable proportion of the permanently reserved areas 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.

(iii) *Plantations.* The indigenous forest of Australia does not contain adequate supplies of coniferous timber, and Australia's requirements have had to be met largely by imports. As a result of the planned policy of the forest services and of several private commercial organizations, the area of conifer plantations, mainly of exotic species, is steadily increasing. It was natural that this aspect of forestry should receive earliest attention in South Australia, as this is the State most poorly endowed with natural forest. South Australia now has a larger area of planted conifers than any other State in Australia, and for some years has been exploiting considerable quantities of timber from these plantations. Production is also increasing in the other States, and the thinnings from their plantations are already supplying a significant volume of timber.

The total production of roundwood from Australia's coniferous plantations is now more than 50 million cubic feet per annum and is expected to increase substantially during the next decade.

The following table shows the areas of coniferous and broadleaved plantations at 31st March, 1964.

AREA OF CONIFEROUS AND BROADLEAVED PLANTATIONS,
31ST MARCH, 1964(a)

(Source: Forestry and Timber Bureau)

(Acres)

State or Territory	Coniferous						Total	Broad-leaved
	Government			Private				
	Pinus radiata	Other species	Total	Pinus radiata	Other species	Total		
New South Wales	79,458	(b)20,091	99,549	10,657	(c)14,791	25,448	124,997	n.a.
Victoria	44,640	10,011	54,651	n.a.	n.a.	(d)75,000	129,651	6,668
Queensland	2,319	103,800	106,119	n.a.	n.a.	(d) 9,800	115,919	1,434
South Australia	118,638	10,964	129,602	n.a.	n.a.	41,104	170,706	3,479
Western Australia	14,713	24,205	38,918	1,226	175	1,401	40,319	19,111
Tasmania	17,917	431	18,348	7,108	..	7,108	25,456	..
Northern Territory	..	(e) 620	620	..	23	23	643	n.a.
Aust. Cap. Terr.	24,894	2,106	27,000	..	..	..	27,000	..
Australia	302,579	172,228	474,807	n.a.	n.a.	159,884	634,691	n.a.

(a) Provisional. Includes figures for previous year for some States. (b) Includes 3,791 acres of hoop, bunya and kauri pine. (c) Chiefly *Pinus elliotti*. (d) Estimated. (e) Cypress pine (*Callitris intratropica*).

A special article prepared by the Forestry and Timber Bureau giving a detailed account of the history and development of coniferous plantations and of the characteristics of individual species, is included in Year Book No. 44, page 975.

Broadleaved plantations (mainly *Eucalyptus spp.*) comprise a much smaller area, and the total acreage at 31st March, 1964, was 36,000 acres, about two-thirds of which was mallet. Plantations of this species have been established in Western Australia for tan bark production.

4. Forest Administration and Research.—(i) *Forestry Activities of the Commonwealth Government.* (a) *Commonwealth Forestry and Timber Bureau.* The functions of the Commonwealth Forestry and Timber Bureau are laid down in the Forestry and Timber Bureau Act and include forestry research and education, the study of timber supply and advice to the Government on forestry matters. The administering department is the Department of National Development.

In 1961 the Commonwealth Government decided to expand its activities in forestry research in Australia. The existing Divisions of Silvicultural Research and Forest Management Research were combined to form the Forest Research Institute. The purpose of the Institute is to provide complete coverage in forestry research, ensuring that all problems of primary importance to the practice and development of forestry in Australia are investigated. In developing a programme with this aim, the Institute takes account of the research activities and potential of the State forest services and other organizations. The research work carried out by the existing sections of the Forest Research Institute covers a wide range of studies, including the following: factors affecting tree growth, tree breeding, introduction of exotic species, forest nutrition, forest botany, forest entomology and pathology, fire protection, watershed management, forest mensuration, forest management and management economics, and aerial inventory. The Forest Research Institute maintains five regional establishments in the Commonwealth, two of which have an outstation in addition to the regional headquarters. These regional stations are run on a co-operative basis with State forest services and private forest companies or other government instrumentalities.

The Forestry and Timber Bureau also maintains a Timber Supply Economics Branch concerned with the compilation and analysis of statistics of production, consumption and trade in timber and other forest products. This Branch also carries out studies in forest economics and research into logging methods and machines. Advice on timber supply matters is currently made available to government departments and private enterprise. Research is also undertaken on matters associated with the marketing of timber products.

(b) *Commonwealth Scientific and Industrial Research Organization, Division of Forest Products.* The Division of Forest Products was formed in 1928 to carry out investigations into Australian forest products, assist in the effective use of such products, reduce waste, reduce losses from decay and insect attack, and conduct research into the fundamental chemical, physical and mechanical properties of Australian timbers.

The research work of the Division is carried out by eight separate sections: wood and fibre structure, wood chemistry, timber physics, timber mechanics, timber preservation, timber seasoning, plywood and glueing, and timber utilization. In addition, the Division provides assistance to individuals and local industry, administers courses of instruction on timber properties and usage, and maintains co-operative projects with several oversea authorities operating in the same field.

(c) *Forestry in the Territories.* Forestry activities in the Territory of Papua and New Guinea are controlled by the Administration through its Department of Forests. The management of forests in the Australian Capital Territory is the responsibility of the Forestry Section of the Department of the Interior.

The Forestry and Timber Bureau advises the Administrations of the Australian External Territories on the management of the forests in those territories, while the Northern Regional Station of the Forest Research Institute advises the Northern Territory Administration on forestry matters affecting the Northern Territory.

(ii) *Forestry Activities of the States.* Forestry on State-owned lands in the various States is the responsibility of the respective State Governments, but they do not exercise any control over forestry activities on private property. The powers and functions of State forest authorities are laid down under forest Acts and Regulations. In each State there is a department or commission to control and manage State forests, etc. Its functions include the introduction of proper measures for the control and management of forest land; the protection of forest land; the conversion, marketing and economic utilization of forest products; the securing of an adequate and permanent reservation of State forests; the establishment and maintenance of coniferous forests to remedy the existing deficiency of conifers in Australia. All State forest services are actively engaged on research programmes. Annual reports are issued by each State forest authority.

In addition to developing permanent forest reserves in each State foresters are surveying all forested crown lands with a view to obtaining dedications of new State forests to add to the permanent forest estate or to release for other uses areas unsuitable for forestry. State forest authorities also usually control all timber on unoccupied Crown lands as well as over 10 million acres of timber reserves, national parks, etc.

(iii) *Private Forestry.* Privately owned lands contribute considerably to the total production from Australian forests. The most important areas of managed native forest in private ownership are the forests owned by pulp and paper companies.

The area of privately owned coniferous plantations is rapidly increasing, and here again the pulp and paper companies are very active. In step with the increase in afforestation programmes the number of professional foresters employed in private forestry enterprise is increasing, while several are engaged on research.

An estimate of the area of coniferous plantations established by private companies and individuals is included in the table on page 1097.

5. *Forestry Education.*—The functions of the Australian Forestry School at Canberra, previously a division of the Forestry and Timber Bureau, were taken over by the Australian National University at the beginning of the 1965 academic year. The School has been absorbed into the University School of General Studies as a Department of Forestry. This department will provide a full four-year training leading to the degree of B.Sc. in forestry. The University of Melbourne also maintains a School of Forestry which gives training leading to a B.Sc. degree in Forestry. The universities in all States provide facilities for post-graduate studies in forestry, leading to higher degrees.

The Victorian Forestry Commission maintains a Forestry School at Creswick where recruits are trained mainly for employment in the Commission.

6. *The Australian Forestry Council.*—Following extensive discussions, the Commonwealth Government and the Governments of the six Australian States agreed in 1964 to establish an Australian Forestry Council, comprising the Ministers responsible for forestry in the seven Governments and the Commonwealth Minister for Territories.

The Council is intended to provide the means for the mutual exchange between the State and Commonwealth Governments of information and views on forestry. It will co-ordinate research into problems affecting the establishment, development, management and fire protection of all forests, and the utilization of forest products. It will assist in co-ordinating the work of State and Commonwealth Governments and also private enterprise in the development of Australian forestry.

The Council is supported by a Standing Committee, consisting of the Director-General of the Forestry and Timber Bureau, the heads of each of the six State Forest Services, the Chief of the Division of Forest Products, C.S.I.R.O., and the Secretary of the Department of Territories.

7. *Fire Protection.*—The provision of adequate fire protection is one of the main problems facing forest and rural authorities. The commercial forest area is estimated at 63 million acres, and of this area the forest services maintain a high degree of protection over a relatively accessible area of about 20 million acres, in the more inaccessible areas about 17 million acres receive a lesser degree of protection, and about 15 million acres are at present not protected. The remaining area of 11 million acres is mostly privately owned or leased, and under some degree of fire protection from the rural volunteer fire-fighting organizations.

Very intensive fire protection is afforded the coniferous plantation area of Australia. During the 1962–63 fire season 475 acres were burnt from a total area of 492,000 acres for which fire statistics are available. This represents an annual burn percentage of 0.1 which compares very favourably with the 0.53 per cent. experienced in the eucalypt forest areas. The area burnt in 1963–64 was 273 acres or 0.06 per cent. of the area for which statistics are available.

Protection of private property outside urban areas is undertaken by 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 5,000 registered volunteer bush fire brigades with a membership approaching 250,000. Although 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 1960 to 1964 the annual cost of protecting from fire the 37 million acres of forest land for which State forest services provide protection is estimated at £2,300,000 or about 1s. 3d. an acre. The cost of rural fire control as a whole cannot be estimated with any degree of accuracy, because by far the greatest contribution comes from the personal efforts of volunteer brigade members.

The Australian fire season is very variable, especially in the eastern and southern States. On the average, damaging fires can occur over a period of four months in all climatic zones. Occasionally this occurrence can extend one month either side of the main fire period. Individual fire seasons are generally of much shorter duration than four months and the severity of a season is judged more on the number of "blow-up" days than on its length. On the average, four years in ten are classified as of average severity and two years in ten as severe, the remaining four years being of below-average severity. During severe seasons in the past as much as 5-15 per cent. of the forest area has been burnt. However, with improving fire control services, it can be expected that the area burnt in severe fire seasons will in future be significantly reduced. The number of forest fires and the forest area burnt during recent years is shown in the following table.

NUMBER OF FIRES AND FOREST AREAS BURNT: AUSTRALIA

(Source: Forestry and Timber Bureau)

Year				Number of fires	Forest areas burnt	Burnt areas as a proportion of area receiving protection ^(a)
				No.	'000 acres	Per cent.
1959-60	..	..	..	1,504	1,314	3.6
1960-61	..	..	..	2,667	1,294	3.5
1961-62	..	..	..	1,761	297	0.8
1962-63	..	..	..	1,299	275	0.7
1963-64	..	..	..	1,494	549	1.5

(a) For this table the area receiving protection has been taken as the 37 million acres for which State forest services provide protection.

Intensive research work is being undertaken on fire problems, and several governmental groups are working on such projects as the study of fire behaviour and associated fuel and meteorological conditions, the use of chemical aids in fire suppression, the development of protective clothing and devices to aid fire-fighters, and the development of more efficient fire-fighting equipment.

Since fire prevention is one of the most important aspects of the problem, intensive campaigns are being conducted to reduce the incidence of man-caused fires. A study of fire causes in recent years reveals that human agencies account for approximately 90 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 30 per cent. of all fires. Lightning accounts for a little over 10 per cent. of all fires in Australia, although the incidence of fires caused by lightning is much higher in certain areas, especially the Southern Highlands regions in New South Wales and Victoria. Although lightning is a relatively small numerical cause of fire, the percentage area burnt from this cause is estimated at about 20 per cent. This higher figure is due to the occurrence of multiple fire outbreaks which cause fire fighting difficulties and to the inaccessibility of the areas in which such fires generally occur.

The damage resulting from bushfires in Australia is difficult to estimate. Eucalypts, which comprise the main forest species, are seldom killed by fire, and damage estimates frequently involve the complicated question of loss of increment and degradation of timber quality. It may be conservatively estimated that damage to forest values lies between £1 to £2 per acre burnt per year and that over the last ten years the average value of forest fire damage is of the order of £2 million per year. In very severe fire seasons such as 1925-26, 1938-39 and 1951-52, which affected large areas of the continent, fire loss may have been as high as £100 million.

§ 3. Employment in Forestry

1. *Persons Engaged in Forestry Activities.*—In the following table, which shows particulars collected in the Population Censuses of Australia of 30th June, 1947, 1954 and 1961, the numbers of persons whose industry statements were classified to "forestry (excluding sawmilling)" are shown, together with the numbers engaged in all primary industries and the total work force.

PERSONS ENGAGED IN FORESTRY: AUSTRALIA

Particulars	Census, 30th June—		
	1947	1954	1961
Persons engaged in—			
Forestry (excluding sawmilling)	24,793	15,468	13,847
All primary industries	563,607	560,100	513,286
Total work force	3,196,431	3,702,022	4,225,096
Persons employed in forestry (excluding sawmilling) as a proportion of—			
All primary industries %	4.4	2.8	2.7
Total work force %	0.8	0.4	0.3

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

2. *Employment by Forestry Departments.*—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 the Australian Capital Territory and the Northern Territory, at 30th June, 1964.

PERSONS EMPLOYED BY FORESTRY DEPARTMENTS, 30th JUNE, 1964

Occupational group	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.						
Professional staff	247	222	113	76	59	39	5	8	769						
Non-professional field staff ..	246	248	93	7	183	94	11	2	884						
Clerical staff ..	302	273	197	97	63	85	6	7	1,030						
Extraction of timber ..	1,293	40	111	731	33	20	12	..	6,021						
Milling of timber (forest workers, etc.)										18	..	35
Labour (forest workers, etc.)										816	1,491	275	521	379	181	65
Total ..	2,088	1,617	2,005	1,186	894	617	215	82	8,704						

3. **Employment in Milling Operations.**—Details of the average number of persons employed, including working proprietors, in sawmills during the year 1963-64 are shown in the next table. Further details regarding the operations of sawmills in 1962-63 are shown in Chapter VI. Manufacturing Industry.

NUMBER OF SAWMILLS AND NUMBER OF PERSONS EMPLOYED, 1963-64

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust. (a)
Number of sawmills	757	447	538	91	207	305	2,345
Average number of persons employed during year—							
Males	7,651	5,806	5,449	2,300	3,361	2,701	27,268
Females	341	232	274	185	62	53	1,147
Persons	7,992	6,038	5,723	2,485	3,423	2,754	28,415

(a) Excludes Northern Territory and Australian Capital Territory.

§ 4. Forest Production

1. **Forest Products.**—The table below shows details of production of forest products in each State and Territory in 1963-64.

FOREST PRODUCTION(a), 1963-64

Product	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Logs for sawing, peeling, slicing or pulping— '000									
Forest broadleaved	54,814	67,371	22,602	625	48,000	52,122	43	97	245,674
Brushwoods and scrubwoods	4,306	..	8,434	..	..	..	1	..	12,741
Coniferous—									
Indigenous forest "pines"—									
Cypress	7,270	13	5,634	..	..	..	153	..	13,070
Other	400	..	3,275	1	..	274	..	..	3,950
Plantation grown "pines"	6,239	10,853	3,568	25,537	1,902	1,700	..	1,084	50,883
Total, logs	73,029	78,237	43,513	26,163	49,902	54,096	197	1,181	326,318
Value of logs £'000	10,590	9,771	7,189	2,627	3,685	5,729	64	133	39,788
Hewn and other timber (not included above)—									
Firewood(b) (weight)	243	883	114	515	550	410	2	3	2,720
Other(c) (value)	3,887	1,245	952	..	(d) 599	199	65	3	6,950
Value of hewn and other timber	4,510	5,421	1,491	1,453	(d) 1,861	1,114	70	16	15,936
Other forest products (e) (total value)	135	104	24	30	(f) 10	6	..	..	309
Total Value of Forest Products	15,235	15,296	8,704	4,110	(g) 5,731	6,849	(a) 134	(f) 149	56,208

(a) Excludes some production from private land thought to be relatively small, details of which are not available.
 (b) Includes mill waste used as firewood. (c) Includes sleepers, transoms, girders, bridge timbers, mining timber, poles, piles, etc. (d) Excludes timber used for tannin extract, details of which are not available for publication.
 (e) Includes charcoal (forest production only), tannin bark, essential oils, eucalyptus leaves, crude rutin, etc.
 (f) Excludes value of sandalwood and substitutes, details of which are not available for publication. (g) Includes timber used for tannin extract and sandalwood and substitutes.

The following table gives particulars of the production of forest products in Australia.

FOREST PRODUCTION(a): AUSTRALIA

Product		1959-60	1960-61	1961-62	1962-63	1963-64
Logs for sawing, peeling, slicing or pulping—						
Forest broadleaved	'000 cub. ft.	243,940	242,142	223,389	230,401	245,674
Brushwoods and scrubwoods	"	14,287	14,689	11,890	12,657	12,741
Coniferous—						
Indigenous forest " pines "—						
Cypress	"	14,457	13,483	12,351	12,489	13,070
Other	"	4,716	4,726	3,676	3,799	3,950
Plantation grown " pines "	"	42,859	39,850	42,245	49,569	50,883
Total logs	"	320,259	314,890	293,551	308,915	326,318
Value of logs	£'000	38,972	38,475	35,588	37,477	39,788
Hewn and other timber (not included above)—						
Firewood(b)(weight)	'000 tons	3,189	3,090	2,742	2,702	2,720
Other (value)(c)	£'000	8,066	8,320	7,779	6,802	6,950
Value of hewn and other timber(d)	"	16,257	17,077	15,592	14,472	15,936
Other forest products(e) (total value)	"	345	372	421	294	309
Total Value of Forest Products(f)	"	55,762	56,296	51,843	52,410	56,208

(a) Excludes some production from private land thought to be relatively small, details of which are not available. (b) See footnote (b) to previous table. (c) See footnotes (c) and (d) to previous table. (d) Incomplete, see footnote (d) to previous table. (e) See footnotes (e) and (f) to previous table. (f) Includes timber used for tannin extract and sandalwood and substitutes in Western Australia.

2. Value of Production.—While statistics of both the gross value (at principal markets) and local value (at place of production) of the forestry industry are available, particulars of the value of materials used in the process of production are not available for all States. For this reason values cannot be stated on a net basis, as has been done with most other industries.

(i) *Gross and Local Values, 1963-64.* The following table shows gross and local values of forestry production for each State in 1963-64. A more detailed reference to the value of production of forestry and other industries in Australia, as well as a brief explanation of the terms used, will be found in Chapter XXX. Miscellaneous.

GROSS AND LOCAL VALUE OF FORESTRY PRODUCTION, 1963-64

(£'000)

State or Territory	Gross value(a)	Marketing costs	Local value(b)
New South Wales	15,235	426	14,809
Victoria	15,296	836	14,460
Queensland	8,704	2,214	6,490
South Australia	4,110	26	4,084
Western Australia	5,731	364	5,367
Tasmania	6,849	1,030	5,819
Northern Territory	134	n.a.	134
Australian Capital Territory	149	n.a.	149
Australia	56,208	4,896	51,312

(a) Gross production valued at principal markets. (b) Gross production valued at place of production.

(ii) *Local Values, 1959-60 to 1963-64.* 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 1959-60 to 1963-64.

LOCAL VALUE OF FORESTRY PRODUCTION

Year	N.S.W.	Vic. r	Qld	S.A.	W.A.	Tas.	Aust.(a)
LOCAL VALUE (£'000)							
1959-60	15,169	14,353	8,469	3,929	5,085	5,556	52,736
1960-61	15,300	13,940	7,149	3,729	5,167	5,735	51,202
1961-62	14,431	13,130	5,895	3,733	5,191	5,090	47,618
1962-63	13,988	13,100	5,988	4,058	5,081	5,657	48,051
1963-64	14,809	14,460	6,490	4,084	5,367	5,819	51,312

LOCAL VALUE PER HEAD OF POPULATION (£)

1959-60	4.0	5.1	5.7	4.2	7.1	16.1	5.2
1960-61	3.9	4.8	4.8	3.9	7.1	16.4	4.9
1961-62	3.7	4.4	3.9	3.8	7.0	14.3	4.5
1962-63	3.5	4.3	3.9	4.1	6.7	15.6	4.4
1963-64	3.6	4.6	4.1	4.0	6.9	15.9	4.7

(a) Includes Northern Territory and Australian Capital Territory.

§ 5. Timber and Timber Products

1. *Mill Production of Timber.*—Particulars of logs treated and the production of sawn, peeled and sliced timber by sawmills and other woodworking establishments are shown in the following table. These figures have been compiled from the annual factory collections in each State, which cover virtually all sawmills. The only omissions are some small portable mills operated by itinerants, e.g. sleeper cutters.

OUTPUT OF AUSTRALIAN-GROWN TIMBER: ALL MILLS, 1963-64

('000 super. feet)

Particulars	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Aust.(a)
LOGS TREATED (TRUE VOLUME)							
Broadleaved ..	650,839	642,981	376,234	10,842	575,683	424,986	2,681,565
Coniferous ..	157,671	82,712	150,709	275,286	22,814	15,104	704,296
Total ..	808,510	725,692	526,943	286,128	598,497	440,090	3,385,861

SAWN, PEELLED OR SLICED TIMBER PRODUCED FROM LOGS ABOVE

Broadleaved ..	339,044	289,491	177,024	5,363	188,018	165,028	1,163,968
Coniferous ..	76,265	32,487	69,307	137,072	9,578	6,195	330,904
Total ..	415,309	321,978	246,331	142,435	197,596	171,223	1,494,872

(a) Excludes Australian Capital Territory and Northern Territory.

The following table shows logs used, and sawn, peeled, and sliced timber produced, in Australia.

OUTPUT OF AUSTRALIAN-GROWN TIMBER, ALL MILLS: AUSTRALIA(a)
(⁰000 super. feet)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
LOGS TREATED (TRUE VOLUME)					
Broadleaved	2,793,399	2,672,080	2,524,528	2,552,552	2,681,565
Coniferous	705,772	646,801	640,833	778,674	704,296
Total	3,499,171	3,318,881	3,165,361	3,331,226	3,385,861

SAWN, PEELLED OR SLICED TIMBER PRODUCED FROM LOGS ABOVE

Broadleaved	1,208,595	1,152,995	1,063,086	1,088,197	1,163,968
Coniferous	312,450	264,838	289,116	322,370	330,904
Total	1,521,045	1,417,833	1,352,202	1,410,567	1,494,872

(a) Excludes Australian Capital Territory and Northern Territory.

In addition to the mill production of timber shown in the preceding tables, a large amount of hewn and round timber, e.g. sleepers, piles, poles, fencing timber, timber used in mining, and fuel, is obtained directly from forest and other areas. Complete information in respect of the volume of this output is not available.

2. 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. In recent years this has been considerably extended, since plywood manufacture has allowed the use of some species unsuitable for sawing. Special attention has been paid to ensure that logs suitable for peeling are diverted to ply factories.

The following table shows the production of plywood.

PLYWOOD PRODUCED
(⁰000 square feet: $\frac{3}{8}$ -in. basis)

State	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales	62,701	64,930	56,184	56,766	58,880
Queensland	134,825	112,414	98,086	85,746	97,252
Other States	44,574	46,045	48,537	52,751	60,150
Australia	242,100	223,389	202,807	195,263	216,282

Of the total plywood produced in 1963-64, 154,398,000 square feet ($\frac{3}{16}$ -in. basis) were classed as "Commercial", 38,803,000 as "Waterproof", 2,440,000 as "Case", and 20,640,000 as "Sliced Fancy".

During 1963-64, 561.3 million square feet ($\frac{1}{16}$ -in. basis) of veneers were produced by the rotary process for the manufacture of plywood, and 237.8 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, 52.6 million square feet of sliced veneers were produced.

3. **Manufactured Boards.**—(i) *Hardboard.* There were five factories producing hardboard in Australia during 1963-64 (two in New South Wales, and one in each of Victoria, Queensland and Tasmania), and during the three years ended 30th June, 1964, the following quantities were produced:—1961-62, 28,772,000 square yards; 1962-63, 33,317,000 square yards; and 1963-64, 39,799,000 square yards.

(ii) *Resin-bonded Boards.* Production of resin-bonded boards (made from wood chips, wood wool, sawdust, etc.) amounted to 2,921,508 square yards during 1963-64.

4. **Wood Pulp and Paper.**—(i) *Wood Pulp.* During 1963-64 seven wood pulp mills were operating in three States, and production was 215,019 tons of chemical pulp and 70,989 tons of mechanical pulp, a total of 286,008 tons. During the previous year production was 190,782 tons of chemical pulp and 68,062 tons of mechanical pulp.

Detailed information relating to the types and methods of production of wood pulp in the various States was published in Year Book No. 50, 1964, page 1110.

(ii) *Paper and Paper Board.* Paper and paper board are manufactured in all States, but the greater part of the industry is in New South Wales, Victoria and Tasmania. During 1963-64 twenty-six paper mills were operating, thirteen in Victoria, four in New South Wales, four in Tasmania, two each in Queensland and South Australia and one in Western Australia. A wide variety of paper and paper board is produced in Australian mills. The table below gives details of the production of some of the principal items.

PRODUCTION OF PAPER PRODUCTS: AUSTRALIA

Type of paper	Quantity (tons)			Value (£'000)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Newsprint	89,758	90,245	92,039	6,445	6,434	6,427
Blotting	487	558	553	84	83	82
Duplicating	5,156	6,794	7,008	834	1,073	1,185
Printing and writing ..	58,647	85,711	94,473	9,751	13,378	14,531
Wrapping—						
Kraft	108,313	118,018	141,006	13,228	14,308	16,567
Other	12,151	9,942	12,127	2,152	1,760	2,147
Felt and carpet felt ..	2,356	1,889	1,917	248	200	205
Paper boards	207,700	242,019	258,374	16,453	19,033	20,483

§ 6. Oversea Trade in Forest Products, Timber and Timber Products

1. Imports.—Quantities and values of forest products, timber and timber products imported into Australia during the years 1961–62 to 1963–64 are shown in the following table.

IMPORTS OF FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS: AUSTRALIA

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1961–62	1962–63	1963–64	1961–62	1962–63	1963–64
Logs not sawn—						
Softwoods(a) .. '000 sup. ft.	2,024	3,226	2,220	68	119	76
Hardwoods(b)	33,650	47,312	41,223	985	1,357	1,261
Undressed timber—						
Dunnage .. ..	..	..	..	4	4	5
Softwoods(a), n.e.i.—						
Douglas fir .. '000 sup. ft.	168,436	154,457	193,291	6,606	6,759	8,849
Radiata pine	24,913	24,388	25,086	900	860	882
Other	17,702	26,465	41,565	1,006	1,542	2,405
Hardwoods(b), n.e.i.	53,450	64,300	67,987	2,669	3,419	3,780
Box shooks, n.e.i.	641	561	567	48	39	47
Dressed timber	7,250	8,997	6,187	532	634	452
Veneers '000 sq. ft.	15,978	25,063	23,742	190	311	310
Plywood	31,390	26,428	30,993	1,069	925	1,193
Tanning substances .. cwt.	145,329	161,209	151,243	380	370	448
Sandalwood oil .. lb.	1,568	2,516	1,811	14	9	5

(a) Non-pored woods.

(b) Pored woods.

Imports of softwood logs in recent years have come largely from the Solomon Islands and Sarawak, and approximately two-thirds of the imports of hardwood logs have come from Sabah. Imports of undressed softwood timber comprise mainly Douglas fir (Oregon pine) from Canada and the United States of America, and Radiata pine from New Zealand. Imports of undressed hardwood timber come mainly from Malaya and Sarawak. Timbers from Scandinavian countries provide most of the dressed timber imports.

Imports of timber products are mainly veneers and plywoods. New Guinea and Japan provide most of the plywood imports, and the United Kingdom and New Guinea supply nearly half of Australia's imports of veneers.

Tanning substances are the only other forest products imported in significant quantities. The most important of these is wattle bark produced in South Africa.

2. Exports.—Details of exports of Australian forest and timber products in the years 1961–62 to 1963–64 are given in the following table.

EXPORTS OF AUSTRALIAN FOREST PRODUCTS, TIMBER AND TIMBER PRODUCTS(a)

Particulars	Quantity			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
Logs not sawn .. '000 sup. ft.	8,190	4,392	4,070	309	161	186
Undressed timber(b)—						
Sleepers	27,464	22,998	21,578	1,518	1,285	1,045
Fence posts, girders and pole blocks	879	373	650	51	20	40
Softwoods(c), n.e.i.	74	112	117	8	11	11
Hardwoods(d), n.e.i.	16,966	13,917	13,499	1,169	959	928
Dressed timber	1,330	1,419	1,907	184	207	268
Veneers	1,589	1,474	2,453	38	33	51
Plywood	898	751	735	107	95	87
Tanning substances	88,659	88,317	101,023	256	237	305
Charcoal	6,831	6,602	5,793	25	31	26
Eucalyptus oil	310	475	304	104	156	115
Acaroid resin, grass tree and yacca gum	15,714	10,934	6,583	32	20	13

(a) Excludes re-exports. (b) Excludes stumps and the like. (c) Non-pored woods.
 (d) Pored woods.

Of the exports of logs in 1963-64, 95 per cent. were consigned to New Zealand; of the sleepers exported, 56 per cent. were consigned to South Africa, 22 per cent. to Pakistan and 18 per cent. to New Zealand; while of all undressed timber exported, 43 per cent. were consigned to South Africa, 28 per cent. to New Zealand and 17 per cent. to Pakistan. Consignments to the United States of America accounted for 78 per cent. of the exports of tanning substances in 1963-64.

CHAPTER XXV

MARINE INDUSTRIES

NOTE.—Further information on subjects dealt with in this chapter is contained in the annual printed bulletin *Non-Rural Primary Industries and Value of Production* and in the annual mimeographed statistical bulletin *Fishing and Whaling*, particularly as regards types of fish, etc., caught.

§ 1. Introduction

1. **Marine Resources and their Commercial Exploitation.**—(i) *Fish.* It has been calculated that there are approximately 2,000 species of fish in Australia and the waters surrounding it (including freshwater species). Fishing is carried out continually in estuarine, coastal and off-shore Australian waters in the east and south from Port Douglas in Queensland to Ceduna in South Australia, and in Western Australia from Esperance to Shark Bay, and sporadically in the Onslow, Broome, Darwin and Karumba areas in the north. Most fishing is done in waters over the continental shelf, which varies greatly in width around the continent, but tuna is sometimes fished beyond the shelf. As in other countries, fisheries in Australia may be divided into three types: the estuarine fisheries, located in the tidal waters of rivers and coastal lakes; the pelagic fisheries which exploit species inhabiting the surface layers of the open ocean; and the demersal fisheries, which fish the bottom layers of the sea. The estuarine fisheries produce considerable quantities of the table varieties, such as mullets (*Mugil cephalus* and associated species), and breams (*Acanthopagrus spp.*). In addition to these there is a small freshwater commercial fishery, principally in New South Wales and South Australia, exploiting Murray cod (*Maccullochella macquariensis*) and golden perch (*Plectroplites ambiguus*). The pelagic fisheries produce species exploited during their seasonal migration, such as Australian "Salmon" (*Arripis trutta*), which is a member of the order Perciformes, or perch-like fishes, tunas (Fam. *Thynnidae*, *Katsuwonidae*, *Sardidae*), barracouta (*Leionura atun*) and mackerels (*Cybium spp.*). These fisheries, with the exception of some tuna, mackerel and reef fisheries, are concentrated in the temperate waters around the southern half of the continent. The offshore demersal fisheries include those pursued on the reefs which may be found virtually right around the continent, and which yield such species as snapper (*Chrysophrys auratus*), the so-called "cods" (*Epinephelus*, *Choerodon*, *Callyodon spp.*), and associated species; those pursued on the trawling grounds, which produce species such as flathead (*Neoplatycephalus*, *Trudis spp.*), morwong (*Nemadactylus spp.*), John Dory (*Zeus faber*), etc.; and the important fishery for edible shark (school shark, *Galeorhinus australis*, and gummy shark, *Mustelus antarcticus*), in south-eastern Australia.

(ii) *Crustaceans.* Crustaceans taken in Australia include crayfish, prawns, crabs and freshwater lobsters. Crayfish (southern, *Jasus lalandei*; western, *Panulirus cygnus*; and eastern, *Jasus verreauxi*) is the most important crustacean exploited in Australia, and various species occur on the reefs of the continental shelf in all States. The commercial fishery, for technological reasons and through lack of knowledge of numbers, has not extended to the

tropical species (*P. ornatus*, etc.), but is concentrated on species found around the southern part of Australia. Prawns (*Penaeus* and *Metapenaeus spp.*) are taken in the estuarine, coastal and offshore waters of New South Wales and Queensland, and in the Shark Bay and Exmouth Gulf region of Western Australia. Crabs (*Scylla* and *Portunus spp.*) are taken mainly in Queensland and Western Australia, but small quantities are also taken in the other States. Freshwater lobsters (*Euastacus serratus*) are caught in inland streams in New South Wales, and one species, marron (*Cheraps tenuimanus*) forms the basis of an amateur fishery in the south-west of Western Australia.

(iii) *Molluscs*. Edible molluscs produced in Australia include oysters (mainly *Crassostrea commercialis*), scallops, mussels and some of the cephalopods (squid, octopus, cuttlefish). Naturally-grown oysters are produced in all States except South Australia. In New South Wales and, to a lesser extent, in Queensland, edible oysters are cultured commercially. The scallops (*Pecten meridionalis* and *Equichlamys bifrons*) are taken in Tasmania, the saucer scallop (*Amusium balloti*) is harvested in Queensland, and a fishery exploiting the species *Pecten alba* has recently been developed in Port Phillip Bay. The scallop resources in the Shark Bay area of Western Australia have not been developed, and are still the subject of scientific investigations. Mussels (*Mytilis planulatus*) are gathered mainly in Victoria. Small quantities of cephalopods, mainly squid (*Loligo spp.*), are produced in many localities. Increased interest in the abalone (*Haliotis spp.*) has resulted in the development of small fisheries off southern New South Wales and Victoria and the east coast of Tasmania. Other edible molluscs taken from time to time include pipis (*Plebidonax deltoides*).

(iv) *Pearl-shell and Trochus-shell*. The shell of the Australian species of pearl oyster (*Pinctada maxima*) is taken in the tropical waters of Australia from Exmouth Gulf in Western Australia to Cairns in Queensland for the manufacture of buttons, knife handles, etc. Live pearl-shell is used for pearl culture, the *Pinctada maxima* being capable of producing pearls which are the largest in the world and which command top market prices. Trochus-shell is found mainly on coral reefs off the Queensland coast, although small quantities occur in Western Australia.

(v) *Whales*. The Australian whaling industry formerly exploited the humpback whales (*Megaptera nodosa*) during their winter migrations along the east and west coasts of Australia. However, owing to the total prohibition placed on their capture by the International Whaling Commission in 1963, Australian whaling is now confined to the sperm whale (*Physeter catoden*) which has been taken in the southern waters of Western Australia since 1955.

(vi) *Marine Flora*. Seaweeds of possible commercial value occur in the coastal waters of New South Wales, Tasmania and Western Australia. In 1964, at Louisville, Tasmania, a factory began processing seaweed (*Macrocystis pyrifera*) for its alginic content.

2. History of the Development of Marine Industries in Australia.—(i) *Fishing*. At the beginning of this century Australian fisheries were principally estuarine and onshore, and the deeper offshore resources were comparatively unknown. Vessels were generally sail-powered, and catching and preservation methods were primitive.

From 1909 to 1914 a Commonwealth vessel was engaged in research into fisheries resources around Australia. As a result of this exploration, trawling in the south-eastern waters began in 1915. There have been several years of high production from this fishery, but in each case the peak year was followed by a period of low production. Danish seine trawlers entered this fishery in 1936. In 1958–59 steam trawling vessels used in this area were taken out of service and a modern diesel trawler was introduced. This fishery is now stabilized at a relatively low level of production.

The tuna fishery began with the establishment in 1937 of a cannery at Narooma in New South Wales to exploit the occurrences, mainly of southern bluefin tuna (*Thunnus thynnus maccoyii*), which had been revealed by aerial surveys in 1936. However, landings were insignificant for over a decade. In 1950 the Commonwealth Government sponsored the visit of a Fijian tuna clipper and trained crew to instruct fishermen in the pole-and-live-bait method of catching tuna. Development of the South Australian tuna fishery followed the visit of two American tuna experts in 1954. Recent developments in tuna fishing include the use of gill netting and long-lining. Techniques for taking species of tuna other than southern bluefin are being investigated.

(ii) *Crustaceans*. The crayfishery, which is pursued off south-eastern Australia and off the west coast of Western Australia, was for many decades on a small scale. It was not until 1944 that the major sector, the western crayfishery, began to develop into what is now Australia's most productive single fishery. Between 1944 and 1947, production from the shallow areas of Houtman Abrolhos was used for canning for the armed forces. From 1948 to 1953 mechanization of the fleet was introduced progressively and deeper waters were worked. The United States market for frozen craytails was established during this period. The period 1954 to 1962 saw the introduction of larger and more powerful vessels, of conservation measures designed to maximize the sustainable yield, and of increased processing facilities. In the southern crayfishery development has followed similar lines, but on a smaller scale because of the smaller crayfish population.

The prawn fishery was pursued for many decades on a small scale, but it was not until the discovery of the need for prawns to spawn at sea that interest developed in catching them during this phase of their life cycle. The discovery in 1947 of stocks of prawns in Stockton Bight and off Evans Head (both in New South Wales) initiated the development of deep-sea prawning in Australia. Since that time the prawn fishery has expanded to the offshore grounds. Commercial prawn fisheries in Western Australia commenced at Shark Bay in 1962 and at Exmouth Gulf in 1964.

(iii) *Molluscs*. Natural oyster-beds were being harvested soon after settlement first began, but by 1870 rapid depletion of the stocks had resulted in restrictive legislation being passed in New South Wales. By the end of the nineteenth century, however, farms had been established in New South Wales and oyster cultivation was a notable industry. This cultivation has been almost entirely confined to the river estuaries of New South Wales. Very few oysters are exported and importation of oysters is necessary to cope with home demand. During 1964 a commercial scallop fishery was established in Port Phillip Bay and there was a noticeable development in the harvesting of abalone in the waters of New South Wales, Tasmania and Victoria.

(iv) *Whaling*. Whaling has been undertaken from time to time in Australia since the early days of settlement. Humpback whaling was carried out from stations on the west coast of Australia from 1949, and on the east coast from 1952. However, depleted stocks of the species resulted in the closing down by 1962 of the eastern stations, and in 1963, owing to the severe decline in world stocks of humpback whales, the International Whaling Commission, of which Australia is a member, prohibited the capture of the species south of the equator for an indefinite period. Australian whaling is now carried out from Albany only, and is confined to sperm whales for which there is no overall catch quota.

(v) *Pearling*. Since the middle of the nineteenth century, when pearling by Europeans first commenced in Australia, the collection of natural pearls has been incidental to the production of mother-of-pearl shell. Although attempts to establish pearl culture in Australia had been partially successful as early as the end of the last century, it was not until

1956 that the modern technique, as developed by the Japanese, was introduced into Australia at Kuri Bay in Western Australia. The joint venture between Australian and Japanese interests proved successful and others entered the industry. There are now fifteen pearl culture farms in Western Australia, the Northern Territory and Queensland. Twelve of the farms are operated as joint ventures by Australian and Japanese interests, while three are wholly Australian enterprises. The technique of pearl culture is still a closely-guarded trade secret.

A map showing Australia's principal ports and the localities of the fishery resources under exploitation appears on page 1121 of this Year Book.

§ 2. Administration and Research

1. Government Administration.—The fisheries within territorial waters (that is, within three miles of the shore) are administered by State departments and Territory administrations. The Fisheries Branch of the Department of Primary Industry develops and administers fisheries in extra-territorial waters and co-ordinates fisheries administration.

The fisheries legislation of each State and Territory and of the Commonwealth provides for the licensing of boats used in commercial fishing operations and of commercial fishermen. The provisions are broadly similar in each State, the general requirement being that any person who takes fish for sale, and any boat used in such fishing operations, must be licensed in the State or Territory concerned. Some States extend the licensing requirements to amateur or part-time fishermen. Australian nationals who fish commercially outside the territorial waters of a State or Territory, but within Australian waters as proclaimed under the *Fisheries Act 1952-1959*, are required to take out licences and to register their boats under that Act.

Fish stocks inhabiting Australian waters are a common property resource. With the exception of the Western Australian crayfishery and the Shark Bay prawn fishery, there are no restrictions on recruitment of men and vessels to any fishery. It has, therefore, been necessary for governmental action to be taken in an endeavour to provide rules of operation in certain fisheries which are vulnerable to depletion. The policy basic to the management of these fisheries is the greatest sustainable yield consistent with economic operations. Where a fishery, for economic reasons, is not producing its maximum yield, efforts to discover new methods of utilization of the catch are made.

The *Pearl Fisheries Act 1952-1953* aims at the management of the pearl-shell resources in accordance with Australia's proclamation of sovereign rights over the natural resources of the sea bed and subsoil to the 100 fathom line. It requires that all pearlers, vessels, etc., must be licensed, and prohibits the removal of live shell from Australian waters except with the written permission of the Minister for Primary Industry.

Under the *Whaling Act 1960* the Commonwealth controls whaling from Australian stations in accordance with the conditions laid down by the International Whaling Commission. This Commission was established by the International Convention for the Regulation of Whaling, 1946, to organize world-wide conservation measures.

2. Research.—The aim of all fisheries research in Australia is to achieve the greatest sustainable yield of fish and to assist in the development of an efficient industry. To this end much of the biological research already undertaken has been directed at formulating recommendations for management measures in various fisheries. Research work is also carried out which is expected to lead to the development of new fisheries, the expansion of under-exploited fisheries, more economical operations, and the use of more efficient equipment.

The organizations in Australia at present engaged in research into fisheries matters are:—

- (i) Division of Fisheries and Oceanography, C.S.I.R.O. (biological and oceanographic research);
- (ii) Division of Food Preservation, C.S.I.R.O. (research into handling, storage, processing and transport of fish);
- (iii) the several State fisheries departments (general biological research);
- (iv) Fisheries Branch, Department of Primary Industry (economic and management research, gear technology, extension work to the industry).

§ 3. Collection and Presentation of Statistics

1. **Source and Basis of Statistics.**—Statistics presented in this chapter have been collected by a number of authorities. The various State fisheries authorities have supplied, through the Deputy Commonwealth Statisticians in the States, the details of employment, boats, equipment, and production of the general fisheries and the pearl and shell fisheries. The Fisheries Branch of the Department of Primary Industry has supplied particulars of the whaling industry. Statistics of the processing of general fisheries products and of oversea trade in the products of fishing and whaling have been compiled in the Commonwealth Bureau of Census and Statistics.

The statistics refer, in general, to financial years. However, pearl and shell fishing data refer to the season ended in the financial year shown. Whaling statistics are shown by calendar years, and refer to the season in the calendar year. All oversea trade information refers to financial years.

In the preparation of Australian fisheries production statistics the quantities of individual products are generally in terms of the form in which they are taken from the water. For example, the statistics of fish production published in this chapter are in terms of "estimated live weights" which are calculated from landed weights by using conversion factors for each species in each State. These conversion factors allow for the fact that the quantities of fish reported are frequently in a gutted, headed and gutted, or otherwise reduced condition. Crustaceans are reported on a "whole weight" basis, and molluscs (edible) on a "gross (in-shell) weight basis". The figures of pearl-shell and trochus-shell refer to the actual quantities of dry shell for sale and exclude the weight of the fish.

In Australia the basic source of statistical information on commercial fishing operations is the fishermen. In four of the six States monthly returns of catch by species have been obtained from fishermen for a number of years. In the other two States (Queensland and South Australia) there have been no statistical collections from fishermen, and catch statistics have been derived from other sources such as markets and receiving depots. In general it is recognized that catch statistics in Australia have been somewhat incomplete in past years. For example, details of production given in this chapter refer in most cases only to the recorded commercial production. In view of the importance of amateur fishermen in certain types of fishing, details shown cannot be taken as representing the total catch. In addition, it is likely that the figures shown understate to some extent the full commercial catch, because no information is available on fish taken for sale by persons not licensed as professional fishermen.

Two weaknesses of fisheries statistical collections in Australia to date have been the lack of uniformity, which makes it difficult to compile statistics on an Australia-wide basis, and the lack of data on the effort involved in taking fish (time spent fishing, gear used, etc.). Recognizing these weaknesses, the Commonwealth-State Fisheries Conference in 1960 appointed a Statistics Committee "to examine all aspects of fisheries statistics and fully document a proposed system for submission to the States and Commonwealth for approval".

2. **Model System of Catch and Effort Statistics, 1962.**—The model system of catch and effort statistics designed by the Committee was adopted by the Commonwealth-States Fisheries Conference in 1962. The new system was introduced in Tasmania in 1963, and in Victoria and Western Australia in 1964. The system was introduced in Queensland for the otter trawl fishery early in 1965, but there are no definite plans at present to extend the system to other fisheries. Arrangements are proceeding for the introduction of the model system in New South Wales, but there are no plans as yet for the introduction of the system in South Australia.

Under the new system fishermen are asked to report, on a monthly basis, for the various fishing methods used, catch of each species taken and the locality where the greatest proportion of the catch is taken. Fishermen are asked to record catch in terms of landed weight, and appropriate conversion factors are used to obtain live weight where this is required. A grid system of 1° rectangles (relating to latitude and longitude) is used for recording location of catches at sea, and estuaries and inland waters are recorded where appropriate. Other data obtained include details of fishing effort, ports at which catch is landed, and employment details.

The eventual implementation of this system in all States is expected to ensure the availability of statistical information of a much higher standard in the future. In addition to the new system of catch and effort statistics, a uniform boat registration system is now being introduced by the States. This new system will eventually ensure that details of various characteristics of the commercial fishing fleet are available on a uniform basis for all States.

§ 4. Employment in Marine Industries

1. **Census Data.**—In the following table, which shows particulars collected in the Population Censuses of Australia at 30th June, 1947, 1954 and 1961, the numbers of persons whose industry statements were classified to "fishing" are shown together with the numbers engaged in all primary industries and the total work force. The Census classification "fishing" is equivalent to the general term "marine industries" and includes such activities as fishing, whaling, pearl-shell fishing, etc.

PERSONS ENGAGED IN FISHING: AUSTRALIA

Particulars	Census, 30th June—		
	1947	1954	1961
Persons engaged in—			
Fishing	10,656	8,637	8,252
All primary industries	563,607	560,100	513,286
Total work force	3,196,431	3,702,022	4,225,096
Persons engaged in fishing as a proportion of—			
All primary industries %	1.9	1.5	1.6
Total work force %	0.3	0.2	0.2

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

2. **Annual Employment by Industry.**—The following two tables show details of persons engaged in the taking of fish, crustaceans and edible molluscs, pearl-shell and trochus-shell, and in whaling. These statistics are derived mainly from the licensing records of the various State fisheries authorities. Because the definitions and licensing procedures used by these authorities are not uniform the statistics should not be used to compare the relative productivities of marine industries in the several States. Figures for employment in general fisheries in 1962–63 and 1963–64 are not comparable with those for previous years because licensed part-time (non-commercial) fishermen were included in the total for South Australia prior to 1962–63. In 1962–63 and 1963–64 an estimate for full-time (commercial) fisherman engaged has been included. Persons engaged in more than one industry are classified according to their main activity, and so may be classified differently from one year to the next.

The table below gives details by States for 1963–64 of employment in marine industries.

MARINE INDUSTRIES: EMPLOYMENT, 1963–64

(Persons engaged)

Industry	N.S.W.	Vic.	Qld	S.A.	W.A.(a)	Tas.	N.T.	Aust.
General fisheries ..	2,439	1,541	2,111	(b)2,000	2,526	1,191	54	11,862
Edible oyster fisheries ..	1,354	..	106	n.a.	7	..	..	1,467
Pearl-shell and trochus-shell ..	..	..	497	..	120	..	23	640
Whaling(c)—At sea ..	..	..	..	..	85	..	..	85
Whaling—Ashore ..	..	..	..	..	90	..	..	90

(a) Figures are for the year ended December, 1963. (b) In addition, approximately 6,520 (non-commercial) licensed fishermen operated on a part-time basis. (c) Estimated.

The following table shows similar information for Australia for the years 1959-60 to 1963-64.

MARINE INDUSTRIES: EMPLOYMENT, AUSTRALIA

(Persons engaged)

Industry	1959-60	1960-61	1961-62	1962-63	1963-64
General fisheries	13,319	14,955	15,878	(a) 11,544	(a) 11,862
Edible oyster fisheries	917	822	993	1,154	1,467
Pearl-shell and trochus-shell	1,120	995	724	727	640
Whaling—At sea	151	139	161	123	85
Whaling—Ashore	444	421	240	164	90

(a) Not comparable with previous years; see text p. 1114.

§ 5. Boats and Equipment in Marine Industries

1. **Fish, Crustaceans and Molluscs (edible).**—The boats used for the estuarine fisheries are mostly small vessels, propelled by diesel or petrol engines of low power. The offshore vessels range in length from 30 feet to 120 feet and are almost invariably powered by diesel engines. Many of them have insulated holds to carry fish in ice, and some of the crayfish boats are fitted with wells in which the catch is kept alive. Some vessels have dry refrigeration, and others, including some of the tuna live-bait pole-fishing vessels, are equipped with brine refrigeration.

A recent survey showed that about 50 per cent. of Australia's commercial fishing fleet consists of vessels up to 20 feet in length, about 25 per cent. are in the 20-29 feet category, and the remainder are greater in length. Only a very small percentage is greater than 50 feet in length. It is hoped that more precise information on this aspect of the fishing fleet will be available in the future when an improved boat registration system is adopted in all States.

Almost every type of fishing equipment is used. The following table sets out the equipment most commonly used for the main types of fish, crustaceans and molluscs.

FISHING EQUIPMENT USED IN AUSTRALIA

Type of fish	Equipment used
Mullet	Beach seine, gill net
Shark (edible)	Long-lines, gill net
Australian salmon	Beach seine
Barracouta	Trolling lines
Flathead	Danish seine, otter trawl
Snapper	Long-lines, traps
Morwong	Danish seine, otter trawl, traps
Whiting	Handlines, Danish seine
Garfish	Gill net, beach seine
Mackerel	Trolling lines
Tuna(a)	Pole and live-bait, trolling lines, gill netting
Prawns	Otter trawl, beam trawl, seine net
Crayfish	Pots, traps
Scallops	Dredge, otter trawl

(a) Lampara nets and purse seines are used for taking live bait for tuna.

2. Pearls, Pearl-shell and Trochus-shell.—Ketch-rigged luggers about 55 feet long which carry crews of 8 to 14 members are used for pearl and pearl-shell fishing around Australia.

3. Whaling.—The whaling industry is highly mechanized. Standard equipment includes aircraft to locate whales, steam- and diesel-powered catchers of about 100 to 125 feet in length, and tow boats.

4. Boats and Equipment Employed by Industry.—The following two tables show details of boats and equipment employed in the taking of fish, crustaceans and edible molluscs, pearl-shell and trochus-shell, and the number of chasers and stations engaged in whaling operations. The reservations mentioned in § 4., paragraph 2, page 1114, regarding the use of employment information are also applicable to these tables. Boats employed in more than one industry are classified to their main activity.

The table below gives details by States for 1963–64.

MARINE INDUSTRIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS OPERATING, 1963-64

Particulars		N.S.W.	Vic.	Qld.	S.A.	W.A.(a)	Tas.	N.T.	Aust.
General fisheries—									
Boats employed	No.	2,463	917	1,464	1,636	1,456	507	30	8,473
Value of boats and equipment	£'000	3,015	2,294	1,977	2,602	4,890	1,079	40	15,897
Edible oyster fisheries—									
Boats employed	No.	1,366	..	55	n.a.	3	..	..	1,424
Value of boats and equipment	£'000	468	..	19	n.a.	1	..	..	488
Pearl-shell and trochus-shell—									
Boats employed	No.	..	..	38	..	13	..	2	53
Value of boats and equipment	£'000	..	..	155	..	67	..	18	240
Whaling—									
Chasers	No.	..	..	..	..	8	..	..	8
Stations operating	No.	..	..	..	..	2	..	..	2

(a) Year ended December, 1963.

The following table shows similar information for Australia for the years 1959–60 to 1963–64.

MARINE INDUSTRIES: BOATS AND EQUIPMENT EMPLOYED AND WHALING STATIONS OPERATING, AUSTRALIA

Particulars		1959–60	1960–61	1961–62	1962–63	1963–64
General fisheries—						
Boats employed	No.	7,890	7,756	8,147	8,574	8,473
Value of boats and equipment	£'000	10,762	12,411	12,899	14,149	15,897
Edible oyster fisheries—						
Boats employed	No.	1,213	1,449	1,349	1,294	1,424
Value of boats and equipment	£'000	368	412	484	461	488
Pearl-shell and trochus-shell						
Boats employed	No.	85	85	56	60	53
Value of boats and equipment	£'000	515	467	254	275	240
Whaling—						
Chasers	No.	12	11	12	11	8
Stations operating .. .. .	..	4	4	4	4	2

§ 6. Production, Processing and Domestic Marketing

1. Marine Products.—(i) *Fish.* The following table shows details of the production of the main types of fish caught in each State and the Northern Territory in 1963–64.

FISH: PRODUCTION, BY TYPE, 1963-64
(‘000 lb. estimated live weight)

Type	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Marine types—								
Tuna	5,689	74	1	12,085	49	29	5	17,932
Mullet	6,029	960	3,611	600	1,276	18	2	12,496
Australian salmon	2,901	1,649	..	1,245	4,615	850	..	11,260
Shark	1,801	(a) 4,738	20	2,397	688	(a) 816	..	10,460
Flathead	3,681	2,213	192	..	22	43	..	6,151
Morwong	4,016	520	..	..	..	4	..	4,540
Barracouta	16	2,906	..	..	..	1,409	..	4,331
Snapper	1,635	335	68	579	1,543	..	..	4,160
Whiting	487	255	553	1,615	588	..	..	3,498
Mackerel	239	..	1,762	..	205	9	..	2,215
Garfish	290	476	152	620	73	129	..	1,740
Tailor	427	99	938	..	163	..	..	1,627
Luderick	1,056	58	179	..	..	..	..	1,293
Bream (incl. Tarwhine)	461	218	420	54	79	1	..	1,233
Leatherjacket	1,066	33	..	..	26	..	..	1,125
Ruff .. .. .	..	89	..	475	529	..	..	1,093
Other	4,110	1,924	1,788	1,066	1,638	122	259	10,907
<i>Total, Marine</i>	33,904	a16,547	9,684	20,736	11,494	(a)3,430	266	96,061
Freshwater types	301	240	(b)	475	..	1	..	(c) 1,017
Grand Total	34,205	(a)16787	(c) 9,684	21,211	11,494	(a) 3,431	266	(c) 97,078

(a) 703,600 lb. taken by Victorian fishermen in Tasmanian waters is included in Victoria.
(b) Not available. (c) Excludes freshwater fish caught in Queensland, particulars of which are not available.

The total Australian production of these more common types of fish is shown in the following table for the years 1959–60 to 1963–64.

FISH: PRODUCTION, BY TYPE, AUSTRALIA
(‘000 lb. estimated live weight)

Type	1959–60	1960–61	1961–62	1962–63	1963–64
Marine types—					
Tuna	7,099	9,767	10,616	11,005	17,932
Mullet	12,340	11,362	13,242	13,736	12,496
Australian salmon	7,601	6,630	11,534	7,794	11,260
Shark	8,457	7,636	8,691	10,524	10,460
Flathead	4,902	5,141	6,458	6,828	6,151
Morwong	2,329	2,258	2,773	4,949	4,540
Barracouta	5,871	5,981	6,810	4,842	4,331
Snapper	4,602	4,684	3,756	4,107	4,160
Whiting	3,297	3,267	3,513	3,699	3,498
Mackerel	1,641	1,779	1,631	2,192	2,215
Garfish	1,024	1,315	1,465	1,645	1,740
Tailor	1,199	1,407	1,148	956	1,627
Luderick	1,199	1,096	1,020	1,311	1,293
Bream (incl. Tarwhine)	1,123	1,236	1,382	1,531	1,233
Leatherjacket	2,476	2,516	2,193	1,955	1,125
Ruff	1,506	1,288	1,188	1,360	1,093
Other	9,819	10,137	9,780	9,941	10,907
<i>Total, Marine</i>	<i>76,485</i>	<i>77,500</i>	<i>87,200</i>	<i>88,375</i>	<i>96,061</i>
Freshwater types	1,612	(a) 1,597	(a) 1,260	(a) 1,309	(a) 1,017
Grand Total	78,097	(a) 79,097	(a) 88,460	(a) 89,684	(a) 97,078

(a) Excludes freshwater fish caught in Queensland, particulars of which are not available.

(ii) *Crustaceans*. In terms of gross value of catch, the importance of crustaceans has increased in recent years, and in 1963-64 was greater than that of fish. The crayfish is the most important crustacean. The bulk of Australian production of crayfish is exported, nearly all going to the United States of America. Details of the production of crustaceans in each State and the Northern Territory in 1963-64 are shown in the following table.

CRUSTACEANS: PRODUCTION, BY TYPE, 1963-64
(*000 lb. whole weight)

Type	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Crayfish(a) ..	400	(b) 1,317	47	4,325	17,973	(b) 3,572	..	27,634
Prawns ..	6,107	25	5,118	..	2,118	..	1	13,369
Crabs ..	103	..	571	..	30	..	4	708
Total ..	6,610	(b) 1,342	5,736	4,325	20,121	(b) 3,572	5	41,711

(a) Includes freshwater lobster caught in New South Wales and shovel-nosed lobster taken in Queensland. (b) The catch of crayfish by Victorian fishermen in Tasmanian waters (367,000 lb. in 1963-64) is included in Victoria.

The following table shows details of the production of crustaceans in Australia in the years 1959-60 to 1963-64.

CRUSTACEANS: PRODUCTION, BY TYPE, AUSTRALIA
(*000 lb. whole weight)

Type	1959-60	1960-61	1961-62	1962-63	1963-64
Crayfish(a)	28,023	27,494	29,355	31,400	27,634
Prawns	7,749	6,529	9,322	12,616	13,369
Crabs	1,044	787	875	842	708
Total	36,816	34,810	39,552	44,858	41,711

(a) Includes freshwater lobster caught in New South Wales and shovel-nosed lobster taken in Queensland.

(iii) *Molluscs (edible)*. Details of the production of molluscs in each State and the Northern Territory in 1963-64 are shown in the table below.

MOLLUSCS(a): PRODUCTION, BY TYPE, 1963-64
(*000 lb. gross (in shell) weight)

Type	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
Scallops .. ..	..	10,434	679	..	(b)	4,260	(c)15,373
Oysters	12,462	69	170	..	72	2	12,775
Mussels .. ..	..	410	..	..	..	..	410
Squid .. ..	..	186	114	..	4	..	304
Abalone	36	47	..	2	..	72	157
Octopus .. ..	..	12	..	..	5	..	17
Cuttlefish .. ..	..	..	..	..	1	..	1
Total	12,498	11,158	963	2	82	4,334	(d)29,037

(a) Excludes pipis taken in New South Wales, details of which are not available for publication. (b) Not available for publication. (c) Excludes Western Australia. (d) Incomplete see footnote (c).

The following table shows the production of molluscs in Australia in the years 1959-60 to 1963-64.

MOLLUSCS(a): PRODUCTION BY TYPE, AUSTRALIA

('000 lb. gross (in-shell) weight)

Type	1959-60	1960-61	1961-62	1962-63	1963-64
Scallops	(b) 6,105	6,896	5,172	(b) 6,498	(b) 15,373
Oysters	(c) 12,690	14,220	12,613	13,029	12,775
Mussels	87	394	646	683	410
Squid	210	228	319	292	304
Abalone .. .. .	..	..	..	..	157
Octopus	52	36	58	18	17
Cuttlefish	60	34	7	1	1
Total	(d) 19,204	21,808	18,815	(d) 20,521	(d) 29,037

(a) Excludes pipis, particulars of which are not available for publication. (b) Excludes Western Australia, particulars of which are not available for publication. (c) Excludes Northern Territory. (d) Incomplete; see footnotes to individual types.

(iv) *Pearls, Pearl-shell and Trochus-shell.* Particulars of cultured pearl production are not available for publication.

In recent years the production of pearl-shell has declined, owing to the development of plastics. However, the advent of pearl culture has since created a growing demand for live pearl-shell. The following table gives details of pearl-shell and trochus-shell production in Australia for the years 1959-60 to 1963-64.

PEARL-SHELL AND TROCHUS-SHELL: PRODUCTION

('000 lb.)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Pearl-shell—					
Queensland(a)	1,082	1,821	860	788	578
Western Australia(b)	1,138	1,270	802	782	542
Northern Territory(a)	188	222	147	115	11
Australia	(c)2,408	(c)3,313	(c)1,809	1,685	1,131
Trochus-shell—					
Queensland(a)	847	309	457	357	142
Western Australia(b)	22	10	..	..	..
Australia	869	319	457	357	142

(a) Season ended January of years shown. Shell taken by Queensland luggers operating in Northern Territory waters is included in Queensland. (b) Season ended December of years shown. (c) Excludes pearl-shell taken by Japanese pearl-liners operating in Australian waters. The quantities taken were as follows:—1959-60, 763,000 lb.; 1960-61, 860,000 lb.; 1961-62, 813,000 lb. The Japanese pearling fleet did not operate in Australian waters after 1961-62.

Particulars of the production of natural pearls in Australia are not available.

(v) *Whales*. Only sperm whales were caught during the 1964 season and no quotas were imposed on the catch. Quotas previously set by the Department of Primary Industry for the baleen species were in terms of humpback whales, and for this purpose 1 blue whale was taken as the equivalent of 2 fin, 2½ humpback, 6 sei or 6 bryde whales.

The following table shows particulars of whales taken by Australian vessels for the years 1960 to 1964.

WHALES TAKEN: AUSTRALIA(a)

(Source: Fisheries Branch, Department of Primary Industry)

(Number)

Particulars	1960	1961	1962	1963	1964
Types of baleen whales taken—					
Humpback	1,355	1,311	716	87	..
Blue	2	..	..	1	..
Bryde .. .. .	..	2	..	..	..
Sei .. .. .	..	..	2	..	..
Sex of baleen whales—					
Male	767	755	404	37	..
Female	590	556	314	51	..
<i>Total Baleen Whales Taken</i>	<i>1,357</i>	<i>b 1,313</i>	<i>718</i>	<i>88</i>	<i>..</i>
Humpback Equivalent(c)	1,360	1,312	717	89	..
Quota of Humpback Whales(c)	1,680	1,390	1,300	550	..
<i>Sperm Whales Taken</i>	<i>282</i>	<i>454</i>	<i>591</i>	<i>598</i>	<i>710</i>
Sex of sperm whales—					
Male	274	451	570	587	695
Female	8	3	21	11	15
Total Whales Taken	1,639	1,767	1,309	686	710

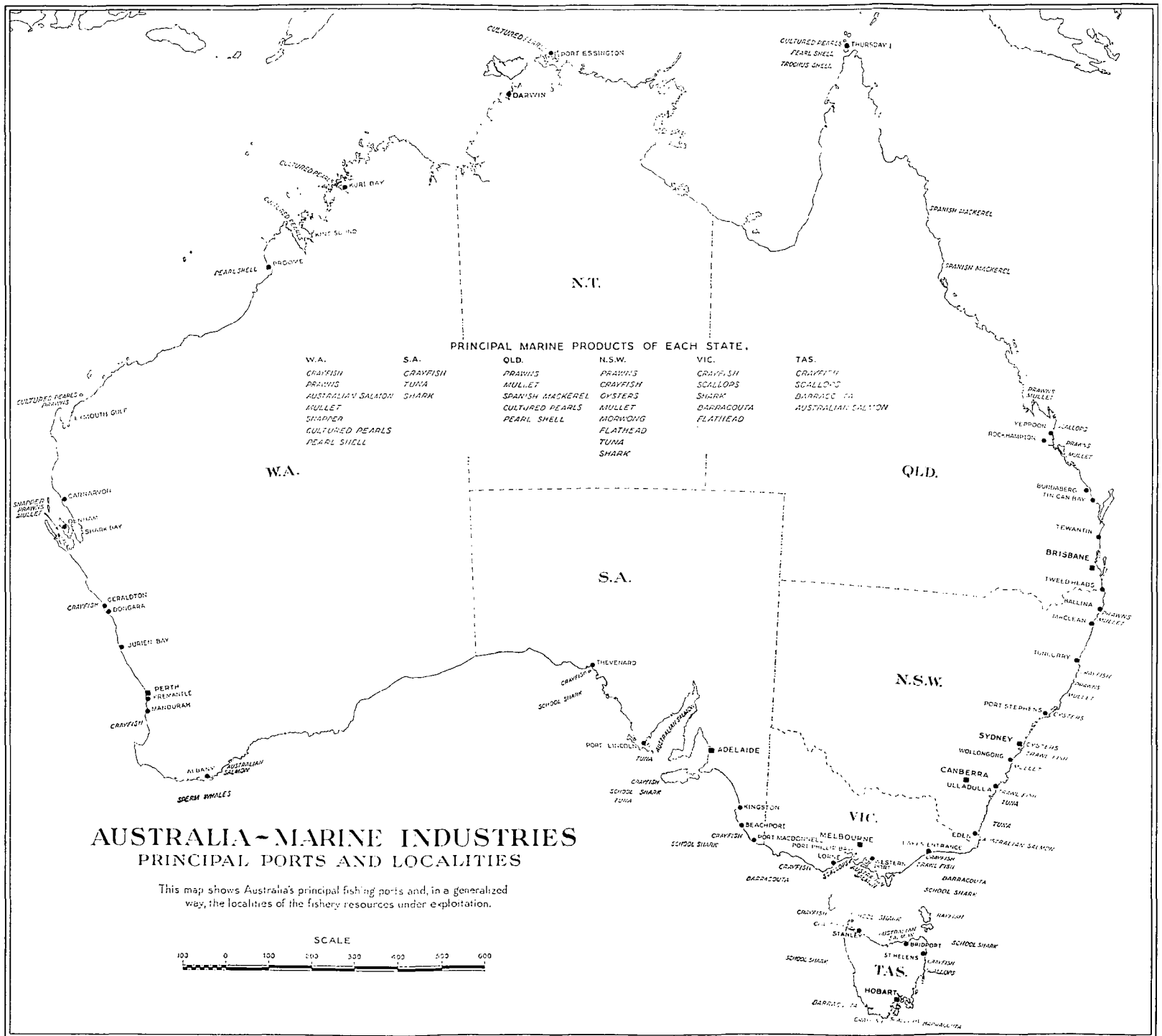
(a) Excludes details of Norfolk Island.

(b) The sex of two whales processed was not recorded.

(c) See text above.

2. *Processing*.—(i) *Fish*. Quick-freezing is used at sea and ashore to preserve fish before delivery to consumers. The main technique employed in Australia is brine-freezing, as used extensively in the tuna and salmon fisheries.

Fish canning in Australia on a modern scale dates from 1937, before which the only fish canning carried out was on an occasional basis by factories handling other foodstuffs. In 1963-64 there were 14 canneries in Australia dealing exclusively with marine products, as well as several other canneries using small amounts of fish in general canning operations. The main canneries handle tuna (Eden, New South Wales; Melbourne, Victoria; Port Lincoln, South Australia); Australian salmon (Eden, New South Wales; Melbourne, Victoria; Margate, Tasmania; Port Lincoln and Adelaide, South Australia; Albany, Western Australia); and barracouta (Melbourne and Portland, Victoria; Margate, Tasmania).



Other methods of fish processing include smoking and bottling, but these are undertaken on a minor scale only. Among the few fish by-products produced are small quantities of fish meal.

The following table gives further details of fish processing in Australia during the years 1959-60 to 1963-64.

FISH PROCESSING (EXCEPT FREEZING): AUSTRALIA

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Number of factories	19	18	20	25	25
	'000 lb.	'000 lb.	'000 lb.	'000 lb.	'000 lb.
Fish used(a)—					
Whole	12,507	13,737	18,494	15,447	17,846
Headed and/or gutted	3,773	3,758	6,796	4,972	5,083
<i>Estimated live weight equivalent(b)</i>	16,900	18,200	26,500	21,300	23,800
Production(c)—					
Canned fish(d)—					
Australian salmon	4,550	3,480	5,772	3,976	5,394
Tuna	1,983	3,070	3,624	4,201	4,704
Other	1,585	1,647	2,644	2,066	1,158
<i>Total</i>	8,118	8,197	12,040	10,243	11,256
Smoked fish	296	301	181	286	273
Fish paste	1,379	1,261	1,027	1,053	1,196
Fish meal(e)	1,718	2,041	2,640	2,076	2,068

(a) Fish used for canning (including fish loaf), smoking and the manufacture of fish paste, but excluding the weight of oysters, other shellfish and crustaceans used for canning. (b) The weight of headed and/or gutted fish is taken as 85 per cent. of live weight. (c) Excludes canned crayfish, lobsters, prawns, oysters and clams, details of which are not available for publication. (d) Includes fish loaf, fish cakes, etc. (e) Excludes whale meal.

(ii) *Crustaceans and Molluscs.* Quick-freezing is also used to preserve crustaceans and molluscs. The chief technique employed to preserve crayfish and scallops is air blast freezing, while plate contact freezing is being used on an ever increasing scale for prawns, scallops and abalone.

Crayfish for the domestic market are usually cooked whole and then frozen, as are some exported crayfish. However, the major proportion of crayfish exports consists of frozen, raw craytails.

Most prawns for domestic consumption are sold in a whole cooked condition. Some are also exported in this form, after freezing. As a rule, however, the majority of prawn exports consists of green headless prawns, sometimes de-veined, sometimes split in "butterfly" style, but in all cases frozen into five-pound blocks.

Scallops are normally frozen in cello-wrapped five-pound blocks, although packaging of individually frozen scallops in polythene pouches is growing in popularity for local consumer packs.

Canned abalone is now packed for the Asian market, as well as abalone soup for domestic and oversea sale.

(iii) *Whales*. Oil from sperm whales is used in the manufacture of soap, plastics and watch lubricants, and in automatic transmission systems in motor cars. The following table shows details of whale processing during the years 1960 to 1964.

WHALE PROCESSING: AUSTRALIA^(a)

Particulars	1960	1961	1962	1963	1964
Whale oil produced—			(b)	(b)	(b)
Baleen oil barrels ^(c)	69,738	59,187	30,849	3,865	..
Sperm oil „	11,312	18,929	24,833	23,860	27,534
Value of whale oil produced .. £'000	1,171	1,180	782	443	310
Value of by-products (meal, meat, solubles, etc.) „	320	346	224	69	60
Total Value.. .. . „	1,491	1,526	1,006	512	370

(a) Excludes details of Norfolk Island.
research.

(c) 6 barrels = 1 ton.

(b) Includes produce from whales taken for scientific

3. Domestic Marketing.—Although virtually the whole of the tuna and Australian salmon catches and a large proportion of the barracouta catch are canned, the greater part of Australian fisheries production is marketed fresh or frozen.

Marketing arrangements for fresh fish vary from State to State. In New South Wales fish marketing is the responsibility of the New South Wales Fish Authority, which operates the Metropolitan and Wollongong Fish Markets.

In other coastal centres of New South Wales fishermen's co-operatives may become registered as local fish markets. Fish for industrial use do not pass through any of these markets. The Queensland Fish Board sells all production on behalf of fishermen in that State, and has branches in 18 centres, as well as depots at eight others. The Board also purchases fish on its own account to stabilize prices. In Victoria, Western Australia, and Tasmania the marketing of fish is undertaken through agents. In South Australia the great majority of the fishermen are members of the South Australian Fishermen's Co-operative Ltd., which handles the whole of their production. Canned fish and frozen fish in the form of consumer packs are marketed mainly by the supermarket-type retail establishments. Oysters are usually sold live in the shell directly to restaurants, or are shelled and bottled before being sent to retailers.

4. Value of Production.—(i) *Gross Value of Products*. The following table shows details of gross values of production at principal markets of edible fisheries products, pearl-shell, and trochus-shell in each State and the Northern Territory in 1963–64.

FISHERIES PRODUCTION: GROSS VALUE, 1963-64

(£'000)

Product	N.S.W.	Vic.(a)	Qld	S. Aust.	W. Aust.	Tas.(a)	N.T.	Aust.
Fish(b)	2,314	1,766	737	1,149	688	156	22	6,832
Crustaceans ..	1,204	353	953	835	3,678	790	1	7,814
Molluscs (edible) ..	(c) 1,171	298	45	n.a.	(d) 5	156	..	1,675
Pearl-shell(e) ..	..	..	(f) 85	..	(g) 109	..	(f) 1	195
Trochus-shell ..	..	..	(f) 5	..	..	..	..	5

(a) Victorian figures include catch by Victorian fishermen in Tasmanian waters (shark, £54,000; crayfish, £96,000). (b) Includes shark livers for oil extraction; excludes freshwater fish caught in Queensland, particulars of which are not available. (c) Excludes pipis, particulars of which are not available for publication. (d) Excludes scallops, particulars of which are not available for publication. (e) Queensland figure includes pearl-shell taken by Queensland luggers operating in Northern Territory waters. (f) Season ended January. (g) Season ended December.

The table below gives this information for Australia for the years 1959-60 to 1963-64.

FISHERIES PRODUCTION: GROSS VALUE, AUSTRALIA

(£'000)

Product	1959-60	1960-61	1961-62	1962-63	1963-64
Fish(a)	5,851	5,907	6,075	6,142	6,832
Crustaceans ..	5,561	5,906	7,477	8,006	7,814
Molluscs (edible)(b) ..	1,089	1,186	1,252	1,404	1,675
Pearl-shell(c)	(d) 558	(d) 724	(d) 361	334	195
Trochus-shell(c)	78	27	28	18	5

(a) Includes shark livers for oil extraction; excludes freshwater fish caught in Queensland in 1960-61 and subsequent years. (b) Excludes pipis in New South Wales and scallops in Western Australia for all years, and oysters in the Northern Territory for 1959-60. (c) Season ended December (Western Australia) or January (Queensland and Northern Territory) of years shown. (d) Excludes pearl-shell taken by Japanese pearl-liners in Australian waters. The Japanese pearling fleet did not operate in Australian waters after 1961-62.

(ii) *Gross and Local Values, 1963-64.* Gross and local values of fishing and whaling production for each State are shown in the following table. A more detailed reference to the value of production of fishing and whaling and other industries in Australia, as well as a brief explanation of the terms used, is included in Chapter XXX. Miscellaneous.

**FISHING AND WHALING: GROSS AND LOCAL VALUE OF PRODUCTION,
1963-64**

(£'000)

State or Territory			Gross value(a)	Marketing costs	Local value(b)
New South Wales	..	..	4,690	762	3,928
Victoria	..	..	2,417	316	2,101
Queensland	..	..	2,363	201	2,162
South Australia	..	..	1,984	266	1,718
Western Australia	..	..	5,094	50	5,044
Tasmania	..	..	1,102	239	863
Northern Territory	..	..	26	n.a.	26
Australia			17,676	1,834	15,842

(a) Gross production valued at principal markets.

(b) Gross production valued at place of production.

(iii) *Local Values, 1959-60 to 1963-64.* In the following table, the local value of fisheries production and the local value per head of population are shown by States. 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.

FISHING AND WHALING: LOCAL VALUE OF PRODUCTION

Year	N.S.W.	Vic.	Qld	S. Aust.	W. Aust.	Tas.	Aust.(a)
LOCAL VALUE (£'000)							
1959-60	3,101	1,771	1,448	975	4,276	683	12,325
1960-61	3,299	1,787	1,372	1,237	4,220	813	12,813
1961-62	3,288	1,741	1,633	1,379	5,291	909	14,294
1962-63	3,800	1,624	1,922	1,473	5,564	885	15,311
1963-64	3,928	2,101	2,162	1,718	5,044	863	15,842

LOCAL VALUE PER HEAD OF POPULATION

(£)

1959-60	0.8	0.6	1.0	1.0	6.0	2.0	1.2
1960-61	0.9	0.6	0.9	1.3	5.8	2.3	1.2
1961-62	0.9	0.6	1.1	1.4	7.1	2.6	1.4
1962-63	0.9	0.6	1.2	1.5	7.2	2.5	1.4
1963-64	1.0	0.7	1.4	1.7	6.4	2.4	1.4

(a) Includes Northern Territory.

§ 7. Consumption of Edible Marine Products

Particulars of the estimated supplies of fish, crustaceans and molluscs available for consumption per head of population, in terms of edible weight, are included in the table below. For the purpose of compiling this table, an allowance has been made for the non-commercial fish catch.

MARINE PRODUCTS: ESTIMATED SUPPLIES AVAILABLE FOR CONSUMPTION, AUSTRALIA
(lb. edible weight per head per annum)

Particulars	1959-60	1960-61	1961-62	1962-63	1963-64
Fresh or frozen—					
Fish—					
Australian origin	3.2	3.1	3.1	3.3	3.3
Imported	3.2	3.0	2.7	2.7	3.1
Crustaceans and molluscs	1.0	1.2	1.0	1.3	1.2
Cured (including smoked and salted)	1.1	1.1	0.9	1.0	1.0
Canned—					
Australian origin	0.8	0.7	0.8	0.9	0.8
Imported	2.0	2.6	2.0	1.9	2.3
Total	11.3	11.7	10.5	11.1	11.7

§ 8. Oversea Trade in Marine Products

NOTE.—Values shown are expressed as £A. f.o.b. port of shipment. The tables of exports relate to Australian produce only, but quantities and values quoted in the text sometimes include re-exports, the amounts involved, however, generally being small.

1. **Edible Products.**—A large proportion of the fish consumed in Australia is imported. Of the edible products imported in 1963-64, those originating in United Kingdom were valued at £2.8 million (25 per cent. of the total value), Japan, £2.4 million (21 per cent.), South Africa, £1.2 million (11 per cent.), and Canada, £1.1 million (10 per cent.).

The United Kingdom supplied 13.3 million lb. (33 per cent., valued at £1.9 million) of the fresh or frozen fish products imported in 1963-64, South Africa, 6.9 million lb. (17 per cent. valued at £0.6 million), Denmark, 5.0 million lb. (12 per cent. valued at £0.7 million), and New Zealand, 4.9 million lb. (12 per cent., valued at £0.5 million). Of the smoked or dried fish products imported in 1963-64, South Africa supplied 5.3 million lb. (62 per cent., valued at £0.6 million) and the United Kingdom, 2.7 million lb. (32 per cent. valued at £0.3 million). Japan supplied 9.6 million lb. (38 per cent., valued at £2.2 million) of the canned fish products imported in 1963-64.

The value of exports of edible products in 1963-64 was 13 per cent. more than that in 1962-63. The value of crayfish tails exported in 1962-63 was 78 per cent. of the value of all exports of edible products. Of all crayfish tails exported in 1963-64, 89 per cent. (8,290,000 lb., valued at £4,977,000) were consigned to the United States of America.

The table below gives further details of Australia's overseas trade in edible products in the years 1961-62, 1962-63 and 1963-64.

OVERSEA TRADE IN EDIBLE MARINE PRODUCTS: AUSTRALIA

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64
IMPORTS						
Fresh and frozen(a)	32,290	33,630	40,177	3,561	3,822	5,192
Smoked and dried	8,359	8,945	8,523	718	835	956
Potted and concentrated(b) ..	177	256	184	58	94	65
Canned—						
Herrings	4,504	3,333	4,376	473	376	467
Salmon	9,370	9,158	11,642	2,211	2,255	2,737
Sardines and pilchards ..	5,460	6,136	6,494	884	960	984
Tuna	709	415	497	96	61	74
Other fish	1,251	1,869	1,192	147	163	132
Crustaceans and molluscs ..	736	619	886	276	224	290
<i>Total, Canned</i>	<i>22,030</i>	<i>21,530</i>	<i>25,087</i>	<i>4,087</i>	<i>4,039</i>	<i>4,684</i>
Products not elsewhere included	..	..	..	112	141	200
Grand Total .. ..	..	..	..	8,536	8,931	11,097
EXPORTS						
(Australian produce only; excludes re-exports)						
Fresh or frozen(c)—						
Crayfish tails	9,875	9,002	9,412	6,020	5,169	5,569
Whole crayfish	513	1,380	1,325	173	478	452
Fish	1,351	1,635	3,338	166	127	217
Other	195	1,260	2,374	66	494	865
Canned—						
Salmon	30	38	47	6	7	8
Other fish	130	113	155	17	12	16
Crustaceans and molluscs ..	57	25	87	17	11	17
<i>Total, Canned</i>	<i>217</i>	<i>176</i>	<i>289</i>	<i>40</i>	<i>30</i>	<i>41</i>
Products not elsewhere included	..	..	..	3	2	13
Grand Total .. ..	..	..	..	6,468	6,300	7,157

(a) Excludes frozen smoked, which is included with "Smoked and dried". (b) Includes extracts and caviare. (c) Excludes frozen smoked, which is included in item Products not elsewhere included.

2. Pearls.—Cultured pearls valued at £323,000 were imported into Australia in 1963–64. This was 32 per cent. greater than the value imported in 1962–63 (£245,000). In 1963–64 imports of cultured pearls valued at £319,000 (99 per cent. of the total value of cultured pearl imports) originated in Japan.

Cultured pearls exported from Australia in 1963–64 were valued at £316,000, £45,000 less than 1962–63. In 1963–64 cultured pearl exports consigned to Japan were valued at £310,000, 98 per cent. of the value of all cultured pearls shipped in that year.

The value of natural pearls exported from Australia in 1963–64 was £167,000, an increase of £161,000 compared with 1962–63 (£6,000). In 1963–64 natural pearls consigned to Japan were valued at £155,000, 93 per cent. of the value of all natural pearls shipped in that year.

3. Shells.—Of the pearl-shell exported in 1963–64, 431,000 lb. (35 per cent.) were consigned to the Federal Republic of Germany, 391,000 lb. (31 per cent.) to Japan, and 240,000 lb. (19 per cent.) to the United States of America. Of the trochus-shell exported, 122,000 lb. (41 per cent.) were consigned to Italy, and 108,000 lb. (36 per cent.) to the Federal Republic of Germany.

Imports of shells included quantities of pearl, trochus and green snail shell from New Guinea, Papua and the Pacific Islands, which were subsequently re-exported from Australia.

Further particulars of Australia's oversea trade in shells are shown in the table below.

OVERSEA TRADE IN SHELLS: AUSTRALIA

Particulars	Quantity ('000 lb.)			Value (£A.'000 f.o.b.)		
	1961–62	1962–63	1963–64	1961–62	1962–63	1963–64
IMPORTS						
Total	96	105	166	14	10	16
EXPORTS						
(Australian produce only; excludes re-exports)						
Pearl-shell	1,999	1,811	1,226	384	343	201
Trochus-shell	567	176	295	44	12	15
Other	22	38	61	4	5	10
Total	2,588	2,025	1,582	432	360	226

4. Marine Animal Oils.—Details of oversea trade in marine animal oils are shown in the table below.

OVERSEA TRADE IN MARINE ANIMAL OILS: AUSTRALIA

Particulars	Quantity ('000 gals.)			Value (£A.'000 f.o.b.)			
	1961-62	1962-63	1963-64	1961-62	1962-63	1963-64	
IMPORTS							
Whale oil from—							
Netherlands	24	78	..	7	38	
Japan	311	527	..	99	233	
Other countries	497	75	48	209	47	39
<i>Total, Whale Oil</i>	497	410	653	209	153	310
Cod liver oil	94	95	86	45	44	38
Unrefined fish oils	100	107	120	58	50	56
Other	36	28	45	21	20	28
Grand Total	727	640	904	333	267	432

EXPORTS

(Australian produce only; excludes re-exports)

Whale oil .. ..	..	1,900	950	1,253	671	322	464
Other .. ..	..	10	1	43	48	5	2
Total .. ..	..	1,910	951	1,296	719	327	466

CHAPTER XXVI

MINERAL INDUSTRY

NOTE.—Further detailed information on the subjects dealt with in this chapter is contained in the annual printed bulletin *Non-Rural Primary Industries and Value of Production* issued by this Bureau, and in *The Australian Mineral Industry—Annual Review* and other publications issued by the Bureau of Mineral Resources, Geology and Geophysics, which also issues, in co-operation with this Bureau, a quarterly publication *The Australian Mineral Industry*, comprising two parts—Part I.—Quarterly Review, and Part II.—Quarterly Statistics. The mimeographed statistical bulletin *Mining and Quarrying* of this Bureau contains annual statistics of the industry prepared and published as soon as possible after the data have been compiled. A monthly statistical bulletin *The Gold Mining Industry, Australia* is issued also, and other current information on mining or mine products is contained in the *Quarterly Summary of Australian Statistics*, the *Monthly Review of Business Statistics*, the *Digest of Current Economic Statistics* and the *Monthly Bulletin of Production Statistics*.

§ 1. Mineral Resources, Administration and Research

1. Occurrences of Minerals.—The greatest part of the area of outcropping rock on the Australian continent is Precambrian in age. These basement rocks form the western and central core of the continent and are flanked by younger Palaeozoic rocks which, along the eastern edge of the continent, form a belt several hundred miles wide extending from north Queensland to Tasmania. Smaller areas of Palaeozoic rocks occur in other States. Mesozoic sediments overlies large areas of the continent and reach their greatest development in central Queensland. Cainozoic rocks occur mainly in the southern parts of Victoria and South Australia and as residual basalt cappings over an extensive area of the Palaeozoic rocks of eastern Australia.

Minerals occur widely throughout the Precambrian and Palaeozoic rocks of the continent. Palaeozoic mineralization is perhaps more varied, but the deposits now being worked are in general smaller than those found in Precambrian rocks. Most of the larger deposits of minerals now being mined in Australia are shown in the following table according to the age of the geological formation in which they are found.

PRINCIPAL AUSTRALIAN MINERAL DEPOSITS

Age of geological formation in which located	Metal or mineral	State or Territory	Locality
Precambrian (more than 520 million years old)	Copper ..	Queensland ..	Mount Isa
	Gold ..	Northern Territory	Tennant Creek
		Western Australia	Kalgoortie and other localities
	Iron ..	South Australia ..	Middleback Ranges
		Western Australia	Yampi Sound and Pilbara
	Lead-silver-zinc	New South Wales	Broken Hill
	Uranium ..	Queensland ..	Mount Isa
Northern Territory		Mary Kathleen Rum Jungle and South Alligator River area	
Palaeozoic (between 200 and 520 million years old)	Black coal ..	New South Wales	Hunter Valley, Lithgow, South Coast
		Queensland ..	Kianga-Moura, Baralaba, Bowen, etc.
	Copper-gold ..	Western Australia	Collie
		Queensland ..	Mount Morgan
	Lead-silver-zinc	Tasmania ..	Mount Lyell
		Tasmania ..	Mount Read and Rosebery
	Tin (tode) ..	Queensland ..	Herberton
Tungsten ..	Tasmania ..	North-east of State	
	Tasmania ..	King Island and north-east of State	

PRINCIPAL AUSTRALIAN MINERAL DEPOSITS—*continued*

Age of geological formation in which located	Metal or mineral	State or Territory	Locality
Mesozoic (between 75 and 200 million years old)	Black coal ..	Queensland .. South Australia ..	Ipswich Leigh Creek
	Manangese ..	Northern Territory	Groote Eylandt
	Bauxite ..	Queensland .. Western Australia	Weipa Darling Range
Cainozoic (less than 75 million years old)	Brown coal ..	Victoria ..	Gippsland
	Mineral sands ^(a)	New South Wales	North coast
		Queensland ..	South coast
	Tin (alluvial) ..	Western Australia	South-west coast
		New South Wales	Tingha
		Queensland .. Tasmania ..	Herberton North-east of State

(a) Derived from granites of Palaeozoic age and sandstones of Mesozoic age in eastern Australia and from granites of Precambrian age in Western Australia.

Of the non-metallic minerals, many, such as clay, sand and silica, etc., are not restricted to the rocks of any particular era and are often polycyclic in nature. However, Precambrian rocks do contain important deposits of blue asbestos in Western Australia, limestone and dolomite in South Australia, and mica in the Northern Territory. All crude salt is produced by the evaporation of water from pans constructed along the sea coast or from inland lakes.

A map showing the location of principal mining centres, mineral discoveries, and mineral processing centres appears facing page 1154.

2. Government Administration and Assistance.—(i) *General.* For all practical purposes all mineral rights in Australia are vested in the Crown. In the States sovereign rights are held by the State Governments with respect to mineral resources within their boundaries. In the Territories of the Commonwealth these rights are vested in the Commonwealth Government. The Commonwealth Government, in addition, is able to influence development and production activity in the mineral industry by virtue of its statutory powers with respect to international trade, customs and excise, taxation and loan raisings.

The Commonwealth Government maintains export controls over certain minerals and metals. These controls are enforced by means of Customs (Prohibited Exports) Regulations as amended from time to time by Statutory Rules. The Commonwealth authorities having jurisdiction over mineral and metal exports, together with the relevant products are listed below. A clearance to export is needed in each case. In November, 1964, temporary restrictions were placed on the export of copper as a result of the industrial dispute at Mt. Isa.

Department of National Development—iron ores, beneficiated iron ores and iron concentrates; mineral sands in all forms (including concentrates) containing zircon, rutile or ilmenite; lithium ores and concentrates; manganese ores; beryllium ores and concentrates.

Department of Primary Industry—phosphate rock, phosphate and superphosphate, and fertilizers containing phosphate or superphosphate.

Australian Atomic Energy Commission—uranium and thorium minerals including monazite; uranium, thorium, beryllium, hafnium and lithium metals, compounds and alloys; hafnium-free zirconium metals, alloys and compounds; very pure calcium metal; nickel metal in certain forms.

The Commonwealth Government and the various State Governments provide assistance to the mineral industry in a variety of ways. The main forms of assistance are discussed below.

(ii) *Commonwealth Government Assistance.* Assistance provided by the Commonwealth Government takes the form of income taxation concessions, subsidies, and technical assistance mainly through the work of the Bureau of Mineral Resources and the Commonwealth Scientific and Industrial Research Organization.

(a) *Income Taxation Concessions.* One-fifth of the net income derived from mining for prescribed minerals in Australia or the Territory of Papua and New Guinea is exempt from tax. The metals or minerals to which this concession applies are as follows:—asbestos,

bauxite, chromite, emery, fluorspar, graphite, ilmenite, kyanite, magnesite, manganese oxides, mica, monazite, pyrite, quartz crystals (piezo-electric quality), radio-active ores, rutile, sillimanite, vermiculite and zircon; and ores of antimony, arsenic, beryllium, bismuth, cobalt, columbium, copper, lithium, mercury, molybdenum, nickel, osmiridium, platinum, selenium, strontium, tantalum, tellurium, tin, tungsten and vanadium.

Income derived from mining principally for gold in Australia or the Territory of Papua and New Guinea is exempt from tax. The exemption is also available in respect of income derived from mining principally for gold and copper if the value of the gold obtained is not less than 40 per cent. of the value of total output.

Income attributable to uranium obtained from working a mining property in Australia or the Territory of Papua and New Guinea, or from the treatment of ore in Australia or the Territory to recover uranium concentrates, is exempt from tax for residents of Australia and the Territory of Papua and New Guinea. The exemption is, however, conditional upon the uranium recovered being owned by the Commonwealth or disposed of to a person approved by the Commonwealth.

Dividends paid wholly and exclusively out of exempt mining income are also exempt from tax.

Valuable assistance has been given in the form of certain taxation concessions to encourage the search for petroleum. Investors are permitted, for tax purposes, to deduct from their assessable income all sums paid for shares issued by petroleum exploration companies in respect of application, allotment, and call moneys. These deductions are allowable only if a petroleum exploration company elects to forego an equivalent amount when, in the event of commercial production, capital expenditure is claimed as a deduction for tax purposes. Most Australian petroleum exploration companies have elected to pass on this benefit to their shareholders. In 1963 amendments aimed at providing increased incentive to petroleum exploration companies extended the range of deductible items to include expenditure on the purchase of rights to prospect, preliminary expenses incurred in the operation of exploration companies, and several other fringe items. The effect of these concessions is to exempt a company from payment of income tax on profits derived from the sale of petroleum until such time as the capital expended in developing the production has been recouped.

Further information is given in a booklet entitled *Income Tax for the Mining Industry*, issued by the Commissioner of Taxation.

(b) *Petroleum Search Subsidy.* In 1957 the Commonwealth Government introduced the *Petroleum Search Subsidy Act 1957*, whereby stratigraphic drilling operations were subsidized to the extent of 50 per cent. of cost. The *Petroleum Search Subsidy Act 1959* widened the scope of operations for which subsidy was offered to include all types of geophysical surveys and off-structure drilling operations. Another amendment in 1961 further widened the scope of the 1959 Act to provide subsidy for test drilling and detailed structure drilling operations. It also provided for the calculation of drilling subsidies on a footage basis as an alternative to the total cost basis. A sum of £5 million was allocated to the petroleum search subsidy scheme for 1962-63. This amount was almost double the allocation of £2.7 million provided in the previous year. In spite of the increased allocation, applications for subsidy increased to such an extent that the maximum rate of subsidy was reduced in 1962-63 from 50 per cent. of the allowable cost of approved operations to 30 per cent.

The *Petroleum Search Subsidy Act 1959-1961* was amended in June, 1964, to extend Commonwealth subsidy for a further three years. The *Petroleum Search Subsidy Act 1959-1964* provides subsidy for approved geophysical surveys, test and stratigraphic drilling operations; bore-hole surveys, off-structure and detailed structure drilling are no longer eligible for subsidy. As in the previous Act, an applicant may elect to receive subsidy for both types of drilling operations on either a footage basis or a total cost basis. In addition, the production testing of any well approved for subsidy is also eligible for additional subsidy. Under the Act the Minister may vary the rates of subsidy for prescribed operations but they may not exceed one-half the total cost. The present rates of subsidy for approved operations on a cost basis are 30 per cent. for test-drilling and 40 per cent. for stratigraphic drilling. The rate for all types of geophysical operations is 30 per cent. The 1959-1964 Act also specifies that exploration for petroleum on the Australian continental shelf is eligible for subsidy, retrospective to 1959. The Federal budget for 1964-65 contained an appropriation of £5 million for subsidies under the Act.

On 28th October, 1964, the Minister announced that action was necessary to limit the burden of the Commonwealth subsidy scheme on the Australian taxpayer in view of the many recent encouraging discoveries of oil and gas which were now providing the incentive to further exploration. To this end the Minister announced that operations within certain defined areas around discovery wells and fields would not be approved for subsidy. For the present, projects in the following areas would not be eligible for subsidy: 20 miles from a gas well; 30 miles from an oil well; 40 miles from a gas field; 50 miles from an oil field.

(c) *Assistance to the Gold-mining Industry.* Assistance to the gold-mining industry by subsidy was introduced at a time of rising costs in the industry and a fixed official world price for gold. Because many producers were faced with the likelihood of closing down, the Government decided to subsidize marginal producers in Australia and the Territories of Papua and New Guinea. Under the *Gold-Mining Industry Assistance Act 1954* a producer the value of whose gold output exceeded 50 per cent. of the total value of his mine output was eligible for assistance, subject to certain conditions, on the production of gold from 1st July, 1954. The rate of subsidy payable under the original Act was increased under amendments enacted on 22nd October, 1957, and 22nd May, 1959. The Act was again amended on 2nd June, 1965. Under the Act as it now stands, the subsidy payable to small producers whose annual deliveries do not exceed 500 fine oz. is £3 per fine oz., irrespective of cost of production or rate of profit. For large producers, subject to certain provisions, subsidy is paid at the rate of three-quarters of the excess of the average cost of production over £13 10s. per fine oz. with a maximum amount of subsidy of £4 per fine oz. A producer whose deliveries during the year exceed 500 fine oz. may elect to be treated as a small producer. In this case, the subsidy rate payable per fine ounce on total deliveries is £3 reduced by 1.2d. for each fine ounce by which deliveries exceed 500 fine ounces. The benefit under this provision terminates when deliveries in a year reach 1,100 fine ounces. 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 overseas premium markets or otherwise, the subsidy payable is reduced by the amount of the excess. The subsidy was also limited, prior to 30th June, 1965, in the case of large producers, to the extent that the annual net profit of a producer was not, with the addition of the subsidy, to exceed 10 per cent. of the capital used in the production and sale of gold. This limitation has now been removed. The latest amendment also provided for the removal of another two restrictive provisions. A large producer's entitlement to subsidy is no longer subject to reduction if the amount of expenditure on development included in costs exceeds a certain amount, or if the recovery rate of the mine falls below nine-tenths of that for the previous year. A significant liberalization was included in a provision under which a large producer is now able to include in his costs for subsidy purposes one-half of costs incurred in approved exploratory diamond drilling elsewhere than on his mining property. Payments under the amended Act are to apply to production until 30th June, 1970.

Payments under the Act commenced in March, 1955, and the amounts paid to gold producers in the various States and Territories of Australia in each of the years 1959 to 1964 are shown in the table on page 1152.

The purpose of the *Gold Mines Development Assistance Act 1962* was to provide assistance to gold producers in Australia and the Territories of Papua and New Guinea not receiving subsidy under the *Gold-Mining Industry Assistance Act 1954-1962*, in order to increase the rate of their development work and so to add to their proved reserves of gold-bearing minerals. In recent years, these reserves had declined to the extent that the long-term prospects of the industry were jeopardized. The Act, which applied to 1962-63 and the next two financial years, provided that a development allowance was payable to a mine approved for the purposes of the scheme equal to the amount by which its allowable expenditure on development in a year, as defined in the Act, exceeded a defined base amount which would normally be the average annual amount spent by the mine on development during the three years preceding 1962-63. The payment of allowance was also subject to a number of other conditions and limits provided for in the Act. With the liberalization of the *Gold-Mining Industry Assistance Act* from 1st July, 1965, the Commonwealth Government decided not to extend the development assistance legislation, which, accordingly, lapsed on 30th June, 1965.

(d) *Assistance to the Copper Mining Industry.* After a Tariff Board investigation, assistance was accorded to the industry in 1958, partly by import duty and partly by bounty. The assistance to the industry was reviewed in 1960 and 1963, and the present bounty assistance will continue until 31st December, 1965. Under the *Copper Bounty Act 1958-1963* bounty is payable, subject to specified conditions, on refined copper sold for use in Australia. The rate of bounty is £35 a ton when the overseas price, as determined by the Minister for Customs and Excise, is £290 (£Stg.232) or less. When the overseas price rises above £290,

the bounty falls by the same extent, so that no bounty is payable when the oversea price is £325 (£Sig.260) or more. A duty is imposed on imports of copper when the oversea price falls below £290 a ton, to the extent of £1 for each £1 that the price falls below £290. Including freight and other charges, the landed cost of imported copper is thus expected not to fall below about £305 a ton.

(e) *Assistance to Producers of Sulphuric Acid and Iron Pyrites.* Following recommendations of the Tariff Board, the Sulphuric Acid Bounty Act was extended for a period of five years from 1st July, 1960. Arising from these same recommendations, the *Pyrites Bounty Act* 1960 was enacted on 15th December, 1960, to be operative for a period of four and a half years from 1st January, 1961. The Acts provide for bounties to be paid, subject to specified conditions, on sulphuric acid produced from prescribed materials of Australian origin and to producers of iron pyrites. In June, 1965, it was announced that assistance under these Acts would continue until 31st December 1965 (unless an earlier date is specified by proclamation).

(f) *Bureau of Mineral Resources.* The functions of the Bureau of Mineral Resources, Geology and Geophysics are to explore, investigate and encourage the development of mineral deposits; to survey and assess the mineral resources of the Commonwealth and its Territories and to initiate and investigate proposals for their development; to interpret the results of completed surveys and recommend ways of remedying or meeting mineral deficiencies and to advise on all aspects of the mineral economy of Australia, including the best utilization of mineral resources in the national interest; to carry out geological and geophysical surveys and investigations and advise on all aspects of applied geology and geophysics.

The Bureau comprises five branches under the Director: Operations, Mineral Resources, Geological, Geophysical, and Petroleum Exploration. The Operations Branch consists of three sections, Planning and Co-ordination, Publications and Information, and Administrative. It carries out central office functions, including planning and control of programme, assessment of results, co-ordination of activities, liaison, and distribution of information. The Mineral Resources Branch comprises the sections Mineral Economics, Mining Engineering and Petroleum Technology, and is concerned largely with those aspects of the Bureau's work which involve studies of the mineral industry as a whole, and the preparation of advice and reviews for the Government, industry and the public. The Geological and Geophysical Branches are responsible for the principal field activities of the Bureau, and the operation of observatories; while the Petroleum Exploration Branch is concerned with the administration of the Petroleum Search Subsidy Act, and is also engaged in the assessment of sedimentary basins in Australia and its Territories. The establishment of the Bureau is 536 officers of whom 280 are professional. The budget for the financial year 1963-64 was approximately £7.6 million, of which £5 million was provided for payment under the Petroleum Search Subsidy Act.

The Bureau maintains in Canberra, Melbourne, and Darwin laboratories which are engaged on geochemical, geochronological, and petroleum technological studies, and basic research into the design and testing of geophysical equipment. The Bureau also maintains a vulcanological observatory at Rabaul and geophysical observatories at Melbourne, Toolangi, Mundaring, Darwin, Port Moresby, Mawson and Wilkes (Antarctica), and Macquarie Island. The geophysical observatories are engaged in magnetic, ionospheric, and seismic investigations, and are base stations for field operations.

(g) *Commonwealth Scientific and Industrial Research Organization.* The activities of this body with respect to the mineral industry are discussed on page 1137 under Research.

(iii) *State Government Assistance.* 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.

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. A quantity of mechanical equipment is also available in several localities for hire at reasonable rentals to prospectors and small mine operators, and District Inspectors have geiger counters and schelite detectors which are loaned to approved persons.

Victoria. Loans may be granted to assist prospecting and development or the purchase of machinery for gold mining. 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 State's underground water resources is in progress, in conjunction with the development of town water supplies from underground sources.

Queensland. Various forms of assistance to mining are made available by the Queensland Department of Mines. Grants are made from the Consolidated Revenue Fund for use on construction and maintenance of roads in mining areas. Advances are made from the Gold Mining Encouragement Fund for mining development work. This assistance is restricted to gold mines, and advances are repayable from proceeds of the mine, if any. From the Assistance to Metalliferous Mining Fund, plant such as jackhammers, compressors and pumps is purchased and maintained. Such plant is made available on hire, the rental payments being credited back to the fund. Prospecting assistance is made available in approved cases, the rates being £2 10s. a week for a single man and £3 10s. a week for a married man with dependants. This is not repayable. From the Advances to Mining Fund, assistance by way of subsidy is advanced for mine development. This is repayable from proceeds of the mine. The department also 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 battery at Charters Towers is available for the treatment of gold-bearing ores.

South Australia. The Department of Mines provides the following services and facilities to the mineral industry:—(i) hire of boring plant 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, and purchase of basic metal ores from prospectors; (ii) geological examination of mineral deposits, water supply, dam foundation and drainage problems, guidance on mining legislation, and publication and issue of geological bulletins and maps. It also provides, through the Australian Mineral Development Laboratories, chemical and metallurgical and analytical and assay investigation, testing and treatment of ores and minerals, and petrographic, mineragraphic and radiometric determinations. Pilot scale metallurgical and chemical treatment plants are maintained and operated for the development of mineral extraction processes.

Western Australia. Assistance is given to prospectors to the extent of £6 a week south of the Tropic of Capricorn, and of £7 a week north of that line; also provision is made for the supply of some tools required for prospecting.

There are twenty State batteries operating intermittently throughout the goldfields 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 also has a drilling scheme, financing mine-owners on a £1 for £1 basis.

Tasmania. The Department of Mines provides financial assistance to mining lessees for the purchase of plant and machinery, for sinking, repairing or de-watering 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. The Department has available for hire percussion and diamond drills for exploration, as well as a complete plant for small shaft sinking and tunnelling. Other assistance is rendered to the industry in the form of geological and engineering advice, through ore-dressing research into metallurgical recoveries, and the selection and design of treatment plant.

In consequence of a serious fall in world tungsten prices the *King Island Scheelite Agreement Act 1963 (No. 1)* was passed. This Act permitted the Tasmanian Government to provide financial assistance until the end of August, 1963, so that production of scheelite on King Island could be continued. A second Act (*King Island Scheelite Agreement Act 1963 (No. 2)*) gave authority for advances in the period to 31st May, 1964.

Northern Territory. To encourage the development of the mining industry the Northern Territory Administration has erected four government batteries for the treatment of miners' ores. Only two of these, at Tennant Creek and Mount Wells near Burrundie, are now in operation. The re-opening of the other two batteries will depend on the revival of small scale wolfram and tin mining in Hatches Creek and Maranboy where these batteries are located.

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.

3. **Research.**—Research investigations into problems of mining, ore-dressing and metallurgy are conducted by Governmental bodies, by universities, by private enterprise and by combined efforts of these bodies.

Commonwealth Scientific and Industrial Research Organization. Research for the mineral industry by the Commonwealth Scientific and Industrial Research Organization is concentrated mainly in the Divisions of Applied Mineralogy and Mineral Chemistry, and in the Mineragraphic Investigations and Ore-Dressing Investigations Sections. All of these groups have their laboratories in Melbourne. In addition, the Division of Applied Mineralogy has a small laboratory in Perth. The two Divisions are engaged in chemical research on the utilization and industrial application of minerals, both metallic and non-metallic, while the Ore-Dressing Investigations Section carries out investigations into the fundamentals of mineral processing operations. Research in the Mineragraphic Investigations Section is concerned with most aspects of mineralogy and petrology, including the examination of ores, rocks and minerals, the study of chemical element distribution in mines and mineral prospects, and the use of mineralogical techniques in problems connected with primary and secondary industry. Other sections carry out research on the properties of metals and alloys, and on the characteristics and uses of coals.

Australian Atomic Energy Commission. The Australian Atomic Energy Commission conducts research at its laboratories at Lucas Heights in Sydney on the development of nuclear power, including research on nuclear materials and on metals and ceramics used for nuclear power. Research conducted by the Commission is discussed in detail in Chapter XIX. Education, Cultural Activities and Research.

Australian Mineral Development Laboratories. Research investigations into mineral problems are undertaken by the Australian Mineral Development Laboratories in Adelaide. This organization is sponsored by the Commonwealth Government, the South Australian Government and the Australian Mineral Industries Research Association (an association of companies engaged in the mineral industry formed to foster and develop mineral research). These sponsors furnish work for the laboratories, or guarantee finance, in the proportions 25 : 50 : 25 respectively. The laboratories have sections dealing with mineralogy, petrology, chemical analysis, ore-dressing, ceramics, and extractive and physical metallurgy.

National Coal Research Advisory Committee. In December, 1964, the appointment of a National Coal Research Advisory Committee was completed, and the establishment of the Australian Coal Industry Research Laboratories was begun. These laboratories will assume the functions and the facilities of the Australian Coal Association (Research) Ltd., a subsidiary of the Australian Coal Association which is an association of colliery companies in New South Wales and Queensland. These developments have resulted from the recommendations of the Coal Utilization Research Advisory Committee made in 1962. The National Coal Research Advisory Committee, which had its inaugural meeting in Sydney in January, 1965, will report on all coal utilization research programmes in Australia and advise the Commonwealth and State Governments as to the disposition of additional funds to be made available for such research. It is proposed that in the first year of operation additional funds of about £250,000 will be available for coal utilization research, bringing total expenditure on coal research in Australia to nearly £1 million annually.

University Research. The various universities in Australia carry out research into various aspects of the mineral industry such as geology, ore mineralogy and genesis, mining techniques, mineral processing, extractive metallurgy, and materials and metals technology.

Research by Private Enterprise. Most large mining and smelting companies have laboratories dealing with their own individual immediate problems. The largest of such laboratories are those of the Broken Hill Proprietary Company Ltd. (the only company with central research facilities separate from production operations and in addition to works laboratories), Broken Hill Associated Smelters Pty. Ltd., and Conzinc Riotinto of Australia Ltd. Private industry has formed the Australian Mineral Industries Research Association which is composed of 43 members which represent a large proportion of the mining, metallurgical and related companies operating in Australia at present. The chief function of the association is to represent private industry in the management of the Australian Mineral Development Laboratories, but the Association also finances other research work into geology, mining and ore-dressing.

The Association recently conducted a survey among its members to obtain details of their research expenditure. The companies surveyed reported their expenditure on research and development, excluding exploration, as £2,364,722 in 1962 and £2,550,113 in 1963. Five of the companies reported their expenditure on research in excess of £100,000 per annum, four between £50,000 and £100,000, five between £10,000 and £50,000, and 29 reported a research budget less than £10,000 per annum.

§ 2. Scope and Sources of Statistics

1. Scope of Statistics.—Statistics presented in this chapter refer mainly to the mining and quarrying industry, which is defined as including all mining and quarrying and the recovery of minerals from ore dumps, tailings, etc. Ore-dressing and elementary smelting of metallic minerals (e.g. in the case of gold) 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. Establishments primarily engaged in smelting and/or refining (including the smelting and refining sections of the large plants operated at Mount Morgan and Mount Isa in Queensland and at Mount Lyell in Tasmania) are excluded from the mining industry and are classified to the manufacturing industry.

However, data relating to mineral treatment activities have been included wherever possible. Thus the information presented in this chapter relates to some extent to the concept of the mineral industry which is generally accepted as including mining and quarrying and the treatment of minerals (e.g. in smelting and refining works).

The coverage of establishments engaged in mining is considered to be satisfactory. However, coverage of establishments engaged in the quarrying of construction materials is incomplete in most States. This deficiency is due primarily to the inherent difficulty of obtaining complete lists of quarries (including those operated by government authorities), many of which operate intermittently and in different locations. There is difficulty also in obtaining satisfactory returns from quarries operated in conjunction with some other activity, e.g. roadmaking, brickworks, etc., and quarries operated in conjunction with large construction projects, such as the Snowy Mountains Scheme, are excluded from these statistics. In some States there have been deficiencies also in the collection of data for certain non-metal (excluding fuel) mining industries, mainly because these are outside the fields normally under the administrative control of Mines Departments. Products chiefly affected are clays, loam and silica.

Statistics presented in this chapter refer mainly to the calendar year 1963, although in some cases data for 1964 are available and have been included. In a few instances it has been necessary to show data on a fiscal year basis, but wherever this occurs it is clearly indicated.

2. Sources of Statistics.—Mining industry data have been obtained annually, since 1952, from the Mining and Quarrying Census. This census is carried out in collaboration with the several Mines Departments and involves the uniform collection of particulars from all establishments employing on the average four or more persons during the period worked by the mine. A representative specimen collection form is included in the bulletin *Non-Rural Primary Industries and Value of Production*, No. 1, 1962-63. For smaller mines either simplified Census returns covering number of persons employed and value of output are collected or these particulars are compiled from data made available by the Mines Departments.

Oil search operations are excluded from the annual Census, but a summary of recent developments in the search for oil, contributed by the Commonwealth Bureau of Mineral Resources, may be found in § 15 of this chapter. Details of the activities of establishments engaged in the mining and treatment of uranium ore have been excluded because of the confidential nature of these operations.

Mineral production statistics contained in this chapter consist, in the main, of official statistics of the Mines Departments of the several States and of the Northern Territory Mines Branch. The particulars shown have been compiled as far as practicable on the standardized basis which has been used in Australia since 1950, and this presentation has involved some rearrangement of official statistics published by the Mines Departments in some States. These statistics have been supplemented, as necessary, by data obtained from the Statisticians of the Several States, the Bureau of Mineral Resources, Geology and Geophysics, the Joint Coal Board, the Division of Minerals of the United States Bureau of Mines, and from several other sources.

Data of imports and exports of minerals and mineral products have been extracted from the official trade statistics compiled in the Commonwealth Bureau of Census and Statistics. Values of Australian oversea trade shown throughout this chapter are expressed as £A. f.o.b. port of shipment, except where otherwise indicated.

§ 3. Mining and Quarrying Industry Statistics

1. **General.**—The mining and quarrying industry is classified into four major groups, namely, metal mining, fuel mining, non-metal mining (excluding fuel), and construction material quarrying.

Mining and quarrying establishments are classified to these groups, and to sub-divisions of these groups, on the basis of the product or products of the establishments. This method of classification is straightforward for those establishments which produce only one product, but for mines and quarries which produce more than one product classification is not as simple a matter. Such establishments are classified according to the most important mineral produced in terms of value. Thus a mine producing, say, both tin and tungsten minerals would be classified as a tin mine if tin were the more important product by value, and as a tungsten mine if tungsten were the dominant product. There is, however, one important exception to this rule in that the mining establishment at Mount Isa is classified to the lead-silver-zinc sector rather than to the copper-gold sector.

For mines and quarries which produce more than one product it is not possible to apportion particulars of operations (such as employment, salaries and wages paid, costs) to the minerals produced. In practice, then, these data are recorded only as a total for each mine, and the mine is classified to an industry sector as outlined above.

Statistics relating to the structure of the industry, employment, production costs and value of additions and replacements to fixed assets are given in the following pages.

2. **Number of Mines and Quarries.**—The following table shows the number of mines and quarries which operated in each State and Territory in 1963.

MINING AND QUARRYING: NUMBER OF MINES AND QUARRIES, 1963

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining	31	31	34	..	146	4	11	..	257
Lead-silver-zinc mining ..	9	..	1	..	1	2	..	..	13
Copper-gold mining	17	1	44	2	32	1	1	..	98
Tin mining	52	6	190	..	14	24	14	..	300
Mineral sands mining	10	..	4	..	4	..	..	..	18
Other metal mining	20	2	6	2	29	2	1	..	62
Total, Metal Mining	139	40	279	4	226	33	27	..	748
Fuel mining—									
Black coal mining—									
Underground	91	2	69	..	3	(a) 10	..	..	175
Open-cut	3	..	5	1	1	..	..	..	10
Total	94	2	74	1	4	10	..	..	185
Brown coal mining .. ..	..	6	..	..	..	..	..	..	6
Other fuel mining .. ..	..	..	2	..	..	..	..	..	2
Total, Fuel Mining ..	94	8	76	1	4	10	..	..	193
Non-metal (excluding fuel) mining	391	68	103	132	73	24	1	..	792
Total, All Mining ..	624	116	458	137	303	67	28	..	1,733
Construction material quarrying(b)	343	244	52	223	40	55	37	11	1,005
Total, All Mining and Quarrying	967	360	510	360	343	122	65	11	2,738

(a) Includes one mine operating both underground and open-cut workings, owing to difficulties of coverage. See § 2, para. 1. Scope of Statistics, p. 1138.

(b) Incomplete.

In the next table, the numbers of mines and quarries which operated in Australia in each of the years 1959 to 1963 are shown.

MINING AND QUARRYING: NUMBER OF MINES AND QUARRIES, AUSTRALIA

Industry	1959	1960	1961	1962	1963
Metal mining—					
Gold mining	306	296	295	286	257
Lead-silver-zinc mining	35	28	27	22	13
Copper-gold mining	81	90	111	107	98
Tin mining	216	216	266	344	300
Mineral sands mining	22	22	21	20	18
Other metal mining	96	94	85	87	62
<i>Total, Metal Mining</i>	<i>756</i>	<i>746</i>	<i>805</i>	<i>866</i>	<i>748</i>
Fuel mining—					
Black coal mining	218	218	202	198	185
Brown coal mining	8	7	6	6	6
Other fuel mining .. .. .	..	..	..	..	2
<i>Total, Fuel Mining</i>	<i>226</i>	<i>225</i>	<i>208</i>	<i>204</i>	<i>193</i>
Non-metal (excluding fuel) mining(a)	687	698	755	731	792
<i>Total, All Mining</i>	<i>1,669</i>	<i>1,669</i>	<i>1,768</i>	<i>1,801</i>	<i>1,733</i>
Construction material quarrying(a)	862	892	(b)1,056	(b)1,107	(b)1,005
<i>Total, All Mining and Quarrying</i>	<i>2,531</i>	<i>2,561</i>	<i>(b)2,824</i>	<i>(b)2,908</i>	<i>(b)2,738</i>

(a) Incomplete. See § 2, para. 1. Scope of Statistics, p. 1138. prior to 1961, owing to extension of coverage in Victoria.

(b) Not comparable with years

3. **Employment in Mining and Quarrying.**—(i) *Persons Engaged.* Statistics of persons employed in the mining and quarrying industry are derived mainly from the annual census of that industry.

Data on the work force employed in the industry are also obtained from the population censuses of Australia. The population census figure for mining and quarrying includes a number of persons excluded from the mining and quarrying census employment figure, e.g. persons engaged in exploration activities, prospectors, head office employees, etc.

In the following table, which shows particulars collected in the population censuses of Australia at 30th June, 1947, 1954, and 1961, the numbers of persons whose industry statements were classified to "mining and quarrying" are shown together with the numbers engaged in all primary industries and the total work force.

PERSONS ENGAGED IN MINING AND QUARRYING: AUSTRALIA

Particulars	Census, 30th June—		
	1947	1954	1961
Persons engaged in—			
Mining and quarrying	57,574	62,107	54,401
All primary industries	563,697	560,100	513,286
Total work force	3,196,431	3,702,022	4,225,096
Persons engaged in mining and quarrying as a proportion of—			
All primary industries %	10.2	11.1	10.6
Total work force %	1.8	1.7	1.3

NOTE.—An adjustment was made to the 1947 and 1954 industry data by distributing over the range of recorded industry the number of persons whose industry was not stated. No such adjustment was made to the 1961 figures.

The following table is derived from mining census data and shows the average numbers engaged in the various mining industries in each State or Territory in 1963.

MINING AND QUARRYING: EMPLOYMENT(a), 1963

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining	18	175	121	..	4,833	..	140	..	5,287
Lead-silver-zinc mining	4,347	..	(b)	..	2	(b)	..	..	7,946
Copper-gold mining ..	180	4	(b)	..	184	(b)	244	..	2,288
Tin mining	139	9	387	..	79	474	28	..	1,116
Mineral sands mining ..	1,013	..	(b)	..	(b)	..	..	..	1,565
Other metal mining ..	35	6	95	(b)	522	(b)	1	..	1,168
Total, Metal Mining	5,732	194	4,752	(b)	(b)	2,035	413	..	19,370
Fuel mining—									
Black coal mining—									
Underground	11,398	261	c 2,514	..	(b)	(d) 185	..	..	(b)
Opencut	136	..	206	(b)	(b)	..	..	..	(b)
Total	11,534	261	c 2,720	(b)	(b)	185	..	..	15,636
Brown coal mining ..	..	1,613	..	..	..	..	..	..	1,613
Total, Fuel Mining ..	11,534	1,874	2,720	(b)	(b)	185	..	..	17,249
Non-metal (excluding fuel) mining	1,133	297	284	520	487	102	..	..	2,823
Total, All Mining ..	18,399	2,365	7,756	1,164	7,023	2,322	413	..	39,442
Construction material quarrying(e)	1,844	1,760	418	770	244	270	44	56	5,406
Total, All Mining and Quarrying	20,243	4,125	8,174	1,934	7,267	2,592	457	56	44,848

(a) Average employment during whole year, including working proprietors. (b) Not available for publication. (c) Includes other fuel mining. (d) Includes persons engaged by one mine which has both underground and opencut workings. (e) Incomplete owing to difficulties of coverage. See § 2, para. 1. Scope of Statistics, p. 1138.

The following table shows particulars of mining employment in Australia for the years 1959 to 1963. The figures show the average number of persons employed during the whole year, including working proprietors.

MINING AND QUARRYING: EMPLOYMENT, AUSTRALIA

Industry	1959	1960	1961	1962	1963
Metal mining—					
Gold mining	5,948	5,544	5,438	5,290	5,287
Lead-silver-zinc mining	9,031	8,731	8,158	7,958	7,946
Copper-gold mining ..	2,301	2,364	2,322	2,242	2,288
Tin mining	926	946	1,131	1,157	1,116
Mineral sands mining ..	1,019	1,127	1,141	1,408	1,565
Other metal mining ..	1,031	1,177	1,097	968	1,168
Total, Metal Mining	20,256	19,889	19,287	19,023	19,370
Fuel mining—					
Black coal mining	18,678	18,529	16,957	16,312	a 15,636
Brown coal mining	1,519	1,399	1,441	1,453	1,613
Total, Fuel Mining	20,197	19,928	18,398	17,765	17,249
Non-metal (excluding fuel) mining	2,975	2,925	2,942	2,838	2,823
Total, All Mining	43,428	42,742	40,627	39,626	39,442
Construction material quarrying (b)	4,116	5,016	(c) 5,498	(c) 5,599	(c) 5,406
Total, All Mining and Quarrying	47,544	47,758	c 46,125	c 45,222	c 44,848

(a) Includes other fuel mining. (b) Incomplete, see § 2, para. 1. Scope of Statistics, p. 1138. (c) Not comparable with years prior to 1961, owing to extension of coverage in Victoria.

(ii) *Size Classification of Mines and Quarries.* Most of the mines and quarries worked during 1963 employed less than four persons, including working proprietors. However, more than half of the persons engaged in mining and quarrying were in the 47 mines each employing 200 persons or more. The following table shows the distribution of the total number of mines into various size groups according to the average number of persons employed during the period worked by each mine in 1963.

MINING AND QUARRYING: SIZE CLASSIFICATION OF ESTABLISHMENTS, 1963

Mines and quarries employing on the average(a)—	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. and A.C.T.	Aust.
Less than 4 persons—								
Establishments ..	690	152	346	262	243	59	60	1,812
Persons ..	1,042	266	573	459	661	190	142	3,333
From 4 to 20 persons—								
Establishments ..	168	180	93	82	72	50	12	657
Persons ..	1,304	1,386	937	642	579	380	97	5,325
From 21 to 200 persons—								
Establishments ..	84	25	69	14	17	10	3	222
Persons ..	6,687	999	(b)	(b)	1,283	599	151	13,717
More than 200 persons—								
Establishments ..	25	3	2	2	11	3	1	47
Persons ..	11,459	1,965	(b)	(b)	5,148	1,684	244	24,818
Total—								
Establishments ..	967	360	510	360	343	122	76	2,738
Persons ..	20,492	4,616	8,609	2,318	7,671	2,853	634	47,193

(a) Average during period worked. Includes working proprietors. (b) Not available for publication; included in total for Australia.

(iii) *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. In 1963, 25 persons were recorded as killed and 1,255 as injured in mining (excluding quarrying) accidents. Recorded deaths and injuries in that year were highest in black coal mines (8 and 272, respectively), copper-gold mines (3 and 112), tin mines (3 and 37), gold mines (1 and 345), and silver-lead-zinc mines (1 and 315). Persons killed and injured in the construction material quarrying industry numbered 6 and 56 respectively in 1963.

4. Production Costs in Mining and Quarrying.—(i) Salaries and Wages Paid. Salaries and wages paid in the mining and quarrying industries in Australia during each year 1959 to 1963 are shown in the following table. Information regarding rates of wages paid in the mining industry is shown in Chapter XIII. Labour, Wages and Prices (p. 431) and also in the *Labour Report*.

MINING AND QUARRYING: SALARIES AND WAGES PAID(a), AUSTRALIA
(£'000)

Industry	1959	1960	1961	1962	1963
Metal mining—					
Gold mining	6,504	6,655	6,591	6,534	6,536
Lead-silver-zinc mining	13,944	13,555	13,261	12,227	12,839
Copper-gold mining	2,710	2,938	2,915	2,851	3,100
Tin mining	814	905	946	1,050	1,251
Mineral sands mining	1,188	1,336	1,474	1,739	2,078
Other metal mining	1,058	1,338	1,277	1,188	1,592
<i>Total, Metal Mining</i>	<i>26,218</i>	<i>26,727</i>	<i>26,464</i>	<i>25,589</i>	<i>27,396</i>
Fuel mining—					
Black coal mining	23,437	25,918	25,460	24,849	<i>b</i> 24,615
Brown coal mining	1,710	1,785	1,923	1,971	2,317
<i>Total, Fuel Mining</i>	<i>25,147</i>	<i>27,703</i>	<i>27,383</i>	<i>26,820</i>	<i>26,932</i>
Non-metal (excluding fuel) mining(c)	2,631	2,664	2,875	2,898	2,882
<i>Total, All Mining</i>	<i>53,996</i>	<i>57,094</i>	<i>56,722</i>	<i>55,307</i>	<i>57,210</i>
Construction material quarrying(c)	3,490	3,628	<i>(d)</i> 4,018	<i>(d)</i> 4,381	<i>(d)</i> 4,342
Total, All Mining and Quarrying	57,486	60,722	<i>d</i> 60,740	<i>d</i> 59,688	<i>d</i> 61,552

(a) Excludes mines and quarries employing less than four persons, and drawings by working proprietors; the amounts are net after deducting value of explosives sold to employees. (b) Includes other fuel mining. (c) Incomplete. See § 2, para. 1. Scope of Statistics, p. 1138. (d) Not comparable with years prior to 1961, owing to extension of coverage in Victoria.

(ii) *Power, Fuel, Light and Materials, etc., used.* The following table contains details of the value of power, fuel, materials and stores used by the mining and quarrying industry during each year 1959 to 1963.

MINING AND QUARRYING: VALUE OF POWER, FUEL, LIGHT AND MATERIALS, ETC., USED, AUSTRALIA
(£'000)

Industry	1959	1960	1961	1962	1963
Metal mining—					
Gold mining	5,069	4,909	4,979	4,947	4,879
Lead-silver-zinc mining	10,367	12,106	10,303	8,671	10,795
Copper-gold mining	3,325	3,288	3,503	3,384	3,616
Tin mining	512	530	601	637	754
Mineral sands mining	1,348	1,562	1,797	1,838	2,526
Other metal mining	924	1,109	1,258	1,242	1,425
<i>Total, Metal Mining</i>	<i>21,545</i>	<i>23,504</i>	<i>22,441</i>	<i>20,719</i>	<i>23,995</i>
Fuel mining—					
Black coal mining	10,166	11,319	12,409	13,346	<i>a</i> 13,501
Brown coal mining	593	623	622	672	739
<i>Total, Fuel Mining</i>	<i>10,759</i>	<i>11,942</i>	<i>13,031</i>	<i>14,018</i>	<i>14,240</i>
Non-metal (excluding fuel) mining(b)	2,359	2,340	2,508	2,818	2,767
<i>Total, All Mining</i>	<i>34,663</i>	<i>37,780</i>	<i>37,980</i>	<i>37,555</i>	<i>41,002</i>
Construction material quarrying(b)	4,167	4,427	<i>(c)</i> 4,926	<i>(c)</i> 4,500	<i>(c)</i> 4,541
Total, All Mining and Quarrying	38,830	42,213	<i>(c)</i> 42,906	<i>c</i> 42,055	<i>c</i> 45,543

(a) Includes other fuel mining. (b) Incomplete. See § 2, para. 1. Scope of Statistics, p. 1138. (c) Not comparable with years prior to 1961, owing to extension of coverage in Victoria.

5. Value of Additions and Replacements to Fixed Assets in Mining and Quarrying.—The following table shows details for Australia of the value of additions and replacements to fixed assets during the years 1959 to 1963.

MINING AND QUARRYING: VALUE OF ADDITIONS AND REPLACEMENTS TO FIXED ASSETS^(a), AUSTRALIA

(£'000)

Industry	1959	1960	1961	1962	1963
Metal mining—					
Gold mining	1,446	789	778	1,608	1,012
Lead-silver-zinc mining	6,566	3,548	3,425	3,523	7,077
Copper-gold mining	651	451	845	1,365	2,533
Tin mining	66	185	261	270	774
Mineral sands mining	787	481	728	1,876	1,218
Other metal mining	713	1,369	1,138	2,577	3,442
<i>Total, Metal Mining</i>	<i>10,229</i>	<i>6,823</i>	<i>7,175</i>	<i>11,219</i>	<i>16,056</i>
Fuel mining—					
Black coal mining	7,707	10,947	11,535	13,048	<i>b</i> 10,334
Brown coal mining	3,654	1,914	2,723	3,061	3,305
<i>Total, Fuel Mining</i>	<i>11,361</i>	<i>12,861</i>	<i>14,258</i>	<i>16,109</i>	<i>13,639</i>
Non-metal (excluding fuel) mining ^(c)	1,454	588	1,274	704	871
<i>Total, All Mining</i>	<i>23,044</i>	<i>20,272</i>	<i>22,707</i>	<i>28,032</i>	<i>30,566</i>
Construction material quarrying ^(c)	1,408	1,624	2,281	1,951	1,949
<i>Total, All Mining and Quarrying</i>	<i>24,452</i>	<i>21,896</i>	<i>24,988</i>	<i>29,983</i>	<i>32,515</i>

(a) Excludes mines and quarries employing less than four persons.
 (c) Incomplete. See § 2, para. 1. Scope of Statistics, p. 1138.

(b) Includes other fuel mining.

6. Value of Production.—Particulars of the local value of production (ex-mine value of output) for individual mining industry groups and quarrying are shown on pages 1185.

§ 4. Mining and Quarrying Commodity Statistics

1. General.—In the preparation of Australian mineral commodity production statistics the quantities and values of individual minerals produced are recorded in terms of the products in the form in which they are dispatched from the locality of each 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 contents of metallic minerals and contents or average grade of selected non-metallic minerals are recorded. Whenever 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. In general, other metallic contents which are not recovered are excluded.

Minerals are divided into four major groups, namely, metals, fuels, non-metals (excluding fuels) and construction materials. In this chapter individual mineral products are arranged in these four groups. Particulars relating to uranium-bearing minerals are excluded.

2. Quantity of Principal Minerals Produced.—In the following table particulars of the quantity of the principal minerals produced during 1963 are shown for each State and the Northern Territory.

QUANTITIES OF PRINCIPAL MINERALS PRODUCED, 1963

Mineral	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	Aust.
METALLIC MINERALS								
Antimony ore and concentrate tons	115							115
Bauxite "	7,352	2,157	287,491		57,206			354,206
Beryllium ore "	13			15	82			110
Copper ore(a) "		72	68,309			10,394		78,775
Copper concentrate "		11	343,373		6,266	55,405	29,313	434,368
Copper precipitate "	152		330			22		504
Gold(b) oz.	394	27,660	36,095	18	110,454	181	61,723	123,061
Ilmenite concentrate tons	5,975				195,008			200,983
Iron ore(c) '000 tons				4,182	1,333			5,515
Lead ore(d) tons	1,573		14,676					16,249
Lead concentrate "	429,944		138,012		185	16,321		584,462
Lead-copper concentrate "						9,309		9,309
Manganese ore "	624		150		34,808		479	36,061
Pyrite concentrate "			33,054	83,070	58,472	19,463		194,059
Rutile concentrate "	135,149		47,348		763			183,260
Tantalite-columbite concentrate lb.					30,889			30,889
Tin concentrate tons	352	15	1,692		576	1,435	62	4,132
Tungsten concentrates—								
Scheelite concentrate "						958		958
Wolfram concentrate "						394		394
Zinc concentrate "	465,158		48,535			81,168		594,861
Zircon concentrate "	119,586		52,720		12,524			184,830
FUEL MINERALS								
Coal, black—								
Semi-anthracite '000 tons			59			2		61
Bituminous "	18,940	51	3,072			205		22,268
Sub-bituminous "			113	1,512	902			2,527
Total "	18,940	51	3,244	1,512	902	207		24,856
Coal, brown (lignite) " 18,456								
Natural gas '000 c. ft.			95,725					95,725
Condensate gals.			4,312					4,312
NON-METALLIC (EXCLUDING FUEL) MINERALS								
Asbestos short tons	938				12,436			13,374
Barite tons	1,540			6,680				8,220
Clays—								
Brick clay and shale '000 tons	1,987	1,346	223	407	439	147		4,549
Other(e) "	505	204	105	82	62	26		984
Diatomite tons	2,837	496	1,800					5,133
Dolomite(f) "	4,481		6,391	200,844		2,623		214,339
Felspar "	6,690			1,160	992			8,842
Gypsum "	62,247	114,503		497,886	50,808			725,444
Limestone(f) '000 tons	2,542	1,228	(g)	1,574	(g)	345		6,721
Magnesite tons	49,909			342	6,495			56,946
Phosphate rock "				4,909	16			4,925
Salt, crude "		(g)	(g)	459,005	(g)			581,537
Silica (glass, chemical, etc.) "	161,709		38,111	24,879	20,388	2,641		247,928
Talc "	1,184		10	7,243	4,669			13,106
CONSTRUCTION MATERIALS(e)								
Sand '000 tons	3,671	3,000	n.a.	1,994	n.a.	110 (h)	275	9,050
River gravel "	1,853	3,684	n.a.	1,049	n.a.	914 (h)	124	7,624
Dimension stone "	371	10	2	25	211	2 (h)	8	629
Crushed and broken stone "	3,809	12,384	2,533	8,361	1,537	923 (h)	221	29,768
Other (decomposed rock, etc.) "	18,233	2,497	n.a.	n.a.	n.a.	20 (h)	80	20,830

(a) Includes cupreous ore for fertilizer. (b) Bullion, alluvial, retorted gold, etc. (c) Iron oxide for metal extraction only. (d) Includes lead-silver-zinc ore. (e) Incomplete, see § 2, para. 1. Scope of Statistics, p. 1138. (f) Excludes quantities used directly as building or road material. (g) Not available for publication. (h) Includes Australian Capital Territory which is not available for separate publication.

The following table shows the quantities of the principal minerals produced in Australia during the years 1959 to 1963.

QUANTITIES OF PRINCIPAL MINERALS PRODUCED: AUSTRALIA

Mineral	1959	1960	1961	1962	1963
METALLIC MINERALS					
Antimony ore and concentrate .. tons	1,022	256	190	100	115
Bauxite "	14,985	69,435	15,976	29,547	354,206
Beryllium ore "	317	190	306	223	110
Chromite "	120	529	..	369	160
Copper ore(a) "	77,738	68,321	75,215	110,777	78,775
Copper concentrate "	358,774	432,758	373,770	395,427	434,368
Copper precipitate "	1,379	1,301	825	216	504
Gold concentrate "	1,487	43	1	..	..
Gold—other forms(b) .. '000 oz.	(c)	(c)	(c)	(c)	1,231
Ilmenite concentrate tons	83,577	106,586	166,400	179,494	200,983
Iron ore(d) '000 tons	4,141	4,355	5,342	4,843	5,515
Lead ore(e) tons	12,693	13,716	7,743	13,197	16,249
Lead concentrate "	461,055	449,590	382,292	522,276	584,462
Lead-copper concentrate "	6,010	6,797	8,057	11,192	9,309
Manganese ore "	89,971	60,646	87,411	71,646	36,061
Pyrite concentrate "	223,004	238,630	213,423	148,566	194,059
Rutile concentrate "	81,905	88,637	101,431	119,195	183,260
Tantalite-columbite concentrate .. lb.	18,950	23,677	31,808	43,097	30,889
Tin concentrate tons	3,304	3,099	3,870	3,842	4,132
Tungsten concentrates—					
Scheelite concentrate "	1	420	1,017	995	958
Wolfram concentrate "	903	1,131	1,142	492	394
Zinc concentrate "	473,276	549,000	542,640	572,900	594,861
Zircon concentrate "	113,356	102,362	136,462	133,844	184,830

FUEL MINERALS

Coal, black—					
Semi-anthracite '000 tons	54	50	59	70	61
Bituminous "	18,576	20,641	21,991	22,006	22,268
Sub-bituminous "	1,668	1,878	1,956	2,394	2,527
<i>Total</i> "	20,298	22,569	24,006	24,470	24,856
Coal, brown (lignite) "	13,035	14,967	16,279	17,137	18,456
Natural gas '000 c. ft.	..	..	12,187	56,361	95,725
Condensate gals.	..	..	559	2,199	4,312

NON-METALLIC (EXCLUDING FUEL) MINERALS

Asbestos short tons	17,875	15,613	16,746	18,416	13,374
Barite tons	6,214	11,417	19,217	12,534	8,220
Clays—					
Brick clay and shale .. '000 tons	4,299	4,636	4,344	4,383	4,549
Other "	823	880	912	913	984
Diatomite tons	5,089	4,659	5,417	7,312	5,133
Dolomite(f) "	160,084	190,868	191,624	180,697	214,339
Felspar "	6,750	8,414	8,209	8,513	8,842
Gypsum "	516,791	580,878	609,907	630,910	725,444
Limestone(f) '000 tons	5,305	5,669	6,146	6,415	6,721
Magnesite tons	60,586	62,166	98,795	62,191	56,946
Mica—muscovite, trimmed .. lb.	44,665	9,500	..	..	..
Phosphate rock tons	4,775	2,321	4,874	4,385	4,925
Salt, crude "	467,532	463,296	508,657	536,019	581,537
Silica (glass, chemical, etc.) .. "	154,778	210,100	212,575	218,544	247,928
Talc "	16,376	15,670	13,545	14,060	13,106

NOTE.—For footnotes see next page.

QUANTITIES OF PRINCIPAL MINERALS PRODUCED: AUSTRALIA—*continued*

Mineral	1959	1960	1961	1962	1963
CONSTRUCTION MATERIALS(g)					
Sand '000 tons	4,623	5,934	7,427	7,535	9,050
River gravel "	2,524	2,932	6,018	5,912	7,624
Dimension stone "	283	318	533	379	629
Crushed and broken stone "	19,822	22,530	27,303	27,944	29,768
Other (decomposed rock, etc.) "	13,699	15,586	16,482	17,310	20,830

(a) Includes cupreous ore for fertilizer. (b) Bullion, alluvial, retorted gold, etc. (c) Gross weight not available. (d) Iron oxide for metal extraction. (e) Includes lead-silver-zinc ore. (f) Excludes quantities used directly as building or road material. (g) Incomplete owing to difficulties of coverage. See § 2, para. 1. Scope of Statistics, p. 1138. 1961 and later figures are not comparable with previous years owing to extension of coverage in Victoria.

NOTE.—Particulars of production of uranium oxide (U₃O₈) are not available for publication.

3. Contents of Metallic Minerals Produced.—The following table shows the contents of metallic minerals produced in 1963 which were "pay metals" or which were recovered as "refiners' prizes". Further particulars for earlier years are shown in the following paragraph and in the sections later in this chapter covering principal contents.

CONTENTS OF METALLIC MINERALS PRODUCED, 1963

Content of metallic minerals produced	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Alumina (Al ₂ O ₃) .. tons	2,801	1,161	129,371	..	21,166	..	..	154,499
Antimony "	74	..	..	..	..	..	..	74
Beryllium oxide (BeO) .. unit(a)	159	..	..	195	924	..	..	1,278
Cadmium tons	1,035	..	..	..	..	74	..	1,109
Chromic oxide (Cr ₂ O ₃) .. tons	..	..	72	..	..	..	..	72
Cobalt "	86	..	..	..	..	..	..	86
Copper "	3,864	6	83,221	5	1,919	16,805	7,147	112,967
Gold fine oz.	11,395	24,668	68,586	16	802,860	36,422	80,023	1,023,970
Iron(b) '000 tons	..	..	..	2,718	840	..	..	3,558
Lead tons	328,462	..	66,711	..	136	14,982	..	410,291
Manganese(c) .. .. "	..	..	..	..	23,951	..	..	23,951
Manganese dioxide (MnO ₂)(d) .. tons	467	..	114	..	527	..	120	1,228
Molybdenum disulphide (MoS ₂) .. lb.	..	..	32,547	..	..	..	..	32,547
Monazite tons	471	..	179	..	1,225	..	..	1,875
Platinum oz.	4	..	..	..	..	..	..	4
Silver '000 fine oz.	11,425	1	6,202	..	221	1,702	91	19,642
Sulphur(e) tons	212,712	..	32,541	32,813	25,252	42,318	..	345,636
Tantalite .. columbite (Ta ₂ O ₅ + Nb ₂ O ₅) .. lb.	..	..	..	..	12,935	..	..	12,935
Tin tons	250	11	1,196	..	363	1,005	35	2,860
Titanium dioxide (TiO ₂) .. tons	132,620	..	45,454	..	109,976	..	..	288,050
Tungstic oxide (WO ₃) .. tons	..	..	..	..	..	960	..	960
Zinc "	265,637	..	37,344	..	..	48,489	..	351,470
Zircon "	117,520	..	52,193	..	12,399	..	..	182,112

(a) 1 unit = 22.4 lb. (b) Excludes iron content of iron oxide not intended for metal extraction. (c) Content of metallurgical grade manganese ore and zinc concentrate. (d) Content of manganese ore of other than metallurgical grade. (e) Sulphur content of pyrite and other minerals from which sulphur is extracted.

NOTE.—Particulars of production of uranium oxide (U₃O₈) are not available for publication.

Particulars of the contents of metallic minerals produced in Australia in the years 1959 to 1963 are shown in the following table. Graphs showing details of the mine production of principal metals and coal from 1935 to 1964 may be found on pages 1155-6.

CONTENTS OF METALLIC MINERALS PRODUCED: AUSTRALIA

Content of metallic minerals produced	1959	1960	1961	1962	1963
Alumina (Al ₂ O ₃) .. tons	6,914	31,393	7,464	13,250	154,499
Antimony "	1,280	786	680	874	74
Beryllium oxide (BeO) units(a)	3,587	2,221	3,585	2,586	1,278
Bismuth lb.	..	..	602	97	..
Cadmium tons	860	949	907	992	1,109
Chromic oxide (Cr ₂ O ₃) .. "	60	265	..	185	72
Cobalt "	60	65	65	78	86
Copper "	94,950	109,435	95,626	106,972	112,967
Gold fine oz.	1,085,104	1,086,709	1,076,292	1,068,837	1,023,970
Iron(b) '000 tons	2,700	2,814	3,434	3,119	3,558
Lead tons	316,293	308,163	269,656	370,110	410,291
Manganese(c) "	46,729	33,964	45,087	39,413	23,951
Manganese dioxide (MnO ₂)(d)	..	..	..	..	..
.. .. tons	2,534	2,058	1,429	1,512	1,228
Molybdenum disulphide (MoS ₂) lb.	..	..	2,630	2,332	32,547
Monazite tons	331	344	1,463	772	1,875
Osmiridium oz.	3	..	..	..	..
Platinum "	..	4	2	2	4
Silver '000 fine oz.	15,161	15,216	13,059	17,554	19,642
Sulphur(e) tons	310,545	340,000	324,866	312,803	345,636
Tantalite-columbite (Ta ₂ O ₅ +Nb ₂ O ₅) lb.	8,499	11,500	13,814	18,879	12,935
Tin tons	2,351	2,202	2,745	2,715	2,860
Titanium dioxide (TiO ₂) .. "	125,523	144,742	191,965	215,494	288,050
Tungstic oxide (WO ₃) .. "	653	1,111	1,536	1,042	960
Zinc "	275,411	317,489	311,157	337,532	351,470
Zircon "	112,352	101,494	134,483	132,109	182,112

(a) 1 unit = 22.4 lb. (b) Iron oxide for metal extraction. (c) Content of metallurgical grade manganese ore. (d) Content of manganese ore of other than metallurgical grade, and zinc concentrate. (e) Sulphur content of pyrite and other minerals from which sulphur is extracted.

NOTE.—Particulars of production of uranium oxide (U₃O₈) are not available for publication.

4. Value of Minerals Produced.—Particulars of the values of minerals (mine and quarry products) produced are shown on pages 1184-8.

§ 5. Gold

1. Historical.—A brief history of gold-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1059).

2. Methods of Mining and Treatment.—Nearly all gold-bearing ore produced in Australia is won by underground mining of veins or lodes. Gold won from alluvial deposits is almost negligible and is, in part, a by-product of alluvial tin mining. A high recovery of gold can be made from most gold ores by amalgamation, amalgamation followed by cyanidation, or by cyanidation only. The Kalgoorlie mines, the largest producers of gold in Australia, find it necessary, in addition to cyanidating the whole of the ore, to make a flotation concentrate of the sulphide and telluride minerals which are then roasted and cyanided separately. Gold, whether recovered by amalgamation, cyanidation or flotation is always smelted into the form of bullion before sale.

3. **Mine Production.**—The following table shows the mine production of gold (gold content of minerals produced) during 1963 according to the mineral in which it was contained and the State or Territory of origin.

GOLD: MINE PRODUCTION, 1963

(fine oz.)

Mineral in which contained	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	Aust.
Copper ore, concentrate, etc. ..	..	..	53,369	..	4,310	10,305	23,758	91,742
Gold bullion(a) ..	321	24,668	15,217	16	798,550	165	56,265	895,202
Lead concentrate ..	9,485	..	..	..	..	4,335	..	13,820
Lead-copper concentrate ..	..	..	..	..	..	18,820	..	18,820
Zinc concentrate ..	1,589	..	..	..	..	2,797	..	4,386
Total Gold ..	11,395	24,668	68,586	16	802,860	36,422	80,023	1,023,970

(a) Retorted gold, alluvial gold, etc.

The principal sources of production during 1963 were as follows.

Western Australia. More than half the total production came from the East Coolgardie goldfield, while most of the remaining production came from the Dundas, Murchison and Yilgarn goldfields. Total production was 802,860 fine ounces, which was 57,179 fine ounces less than production in 1962. The Yilgarn, Coolgardie, East Murchison and Pilbara fields recorded lower production.

Northern Territory. Gold production is centred on Tennant Creek.

Queensland. The copper concentrate produced at Mount Morgan contained more than three-quarters of the State's output of gold, nearly all the remaining production coming from a mine at Cracow.

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 year 1960 to 1964 and total output since the first major discovery of gold in 1851. Owing to defective information in the earlier years, it is likely that the total production figures fall considerably short of the actual totals.

GOLD: MINE PRODUCTION(a)

State or Territory	1960	1961	1962	1963	1964(b)	Total(b) 1851-1964
	f. oz.	f. oz.	f. oz.	f. oz.	f. oz.	'000 f. oz.
New South Wales ..	13,628	12,034	11,234	11,395	10,569	16,495
Victoria ..	28,566	26,229	28,262	24,668	21,270	73,779
Queensland ..	78,267	64,786	67,729	68,586	101,010	22,990
South Australia ..	36	55	48	16	17	451
Western Australia ..	869,966	870,658	860,039	802,860	715,481	64,874
Tasmania ..	23,994	26,885	32,115	36,422	35,083	2,531
Northern Territory ..	72,252	75,645	69,410	80,023	82,317	1,690
Australia ..	1,086,709	1,076,292	1,068,837	1,023,970	965,747	182,810

(a) Gold content of minerals produced.

(b) Subject to revision.

4. **Refinery Production.**—Amalgam and gold slimes from cyanide extraction are treated at the mines to produce gold bullion, which at some mines may be partly refined before dispatch to the refineries (the largest refinery is the Royal Mint, Perth). By-product gold from lead smelting is refined at Port Pirie in South Australia, while the gold contained in copper refinery sludges resulting from electrolytic copper refining at Mount Lyell and Port Kembla is recovered at Port Kembla. Gold bullion and other gold-bearing materials are also refined in Sydney and Melbourne.

Details of the refinery production of gold in Australia and the value of refined newly-won gold of Australian origin are shown in the following table for each of the years 1960 to 1964. The value of the refined newly-won gold is based on the price fixed by the Reserve Bank, but allowance is made for premiums on sales of gold overseas and for industrial purposes in Australia.

PRODUCTION OF REFINED GOLD IN AUSTRALIA

Particulars	1960	1961	1962	1963	1964
QUANTITY (FINE OZ.)					
Australian origin—					
Newly-won gold	1,045,139	1,036,947	1,024,623	958,381	892,726
From scrap	22,699	22,593	21,806	20,404	19,282
Oversea origin—					
Newly-won gold	142,526	155,598	138,455	161,083	140,557
From scrap	1,164	1,277	188	290	901
Total	1,211,528	1,216,415	1,185,072	1,140,158	1,053,466
VALUE (£'000) (a)					
<i>Newly-won gold of Australian origin</i>	16,396	16,241	16,021	14,997	13,998

(a) Based on the price fixed by the Reserve Bank. Includes allowance for premiums on sales of gold overseas and for industrial purposes in Australia.

5. **Changes in Stocks of Gold held in Australia.**—The following table shows particulars of production and consumption, imports and exports of gold and changes in stocks of gold held in Australia for each of the years 1960 to 1964.

CHANGES IN STOCKS OF GOLD HELD IN AUSTRALIA
(fine oz.)

Particulars	1960	1961	1962	1963	1964 (a)
Supplies—					
Mine production of gold(b)	1,086,709	1,076,292	1,068,837	1,023,970	965,747
Imports of gold(c)(d) ..	144,033	146,279	132,963	162,065	144,307
<i>Total Supplies</i> ..	<i>1,230,742</i>	<i>1,222,571</i>	<i>1,201,800</i>	<i>1,186,035</i>	<i>1,110,054</i>
Disposals—					
Exports of gold(c) ..	2,513,906	1,099,701	314,996	472,132	427,203
Gold content of ores and concentrates exported ..	25,803	39,835	44,166	50,683	49,848
Gold exported in unrefined bullion .. ..	..	..	..	..	719
Net industrial consumption of gold	40,972	35,429	47,881	61,042	77,580
<i>Total Disposals</i> ..	<i>2,580,681</i>	<i>1,174,965</i>	<i>407,043</i>	<i>583,857</i>	<i>555,350</i>
Changes in stocks of gold held in Australia(e)	-1,349,939	+ 47,606	+ 794,757	+ 602,178	+ 554,704

(a) Subject to revision. (b) Gold content of minerals produced in Australia. (c) Excludes specie, leaf and foil and gold in unrefined forms other than the gold content of unrefined gold and silver bullion. (d) Excludes gold imported in some minor minerals. (e) Includes changes in holdings in Australia by official and banking institutions both on their own behalf and that of non-residents, together with the gold content of changes in stocks of minerals awaiting refining. The sign near the figure indicates increase (+) or decrease (-) in stocks during the period shown.

6. **Prices of Gold.**—Under existing legislation all gold produced in Australia is sold to the Reserve Bank. The official price of gold is fixed by the Reserve Bank. On 1st May, 1954, it was raised from £15 9s. 10d. to £15 12s. 6d. per fine oz. and has remained unchanged since that date. The current price reflects the "parity" value of Australian currency established by the *International Monetary Agreement Act 1947*. Prior to 1947 the price of gold was based on the price for which it could be sold abroad in official markets, less cost of movement.

Average prices of gold per fine oz. at mints in Australia and on the London gold market are shown in the following table for the years 1960 to 1964.

PRICES OF GOLD: AUSTRALIA AND LONDON
(per fine oz.)

Place of sale	1960	1961	1962	1963	1964
At mints in Australia £A. s. d.	15 12 6	15 12 6	15 12 6	15 12 6	15 12 6
London £stg. s. d.	12 11 2½	12 11 0	12 10 1	12 10 6½	12 11 3½

7. **Sales of Gold on Oversea Premium Markets.**—In November, 1951, the Commonwealth Government decided to allow Australian gold producers to benefit from the higher prices then being paid for gold on some overseas markets. To implement this decision producers formed the Gold Producers' Association Limited in December, 1951, and the first sales were made in that month. By arrangement with the Reserve Bank of Australia the total quantity of newly-won gold delivered to the Bank by members of the Association in any calendar month, less the quantity required for industrial purposes in Australia, is available to the Association for sale on overseas premium markets during the ensuing two calendar months. The net proceeds from premium sales are distributed to members in proportion to their production of gold.

The following table shows the quantity and value of gold sold on oversea premium markets and the average price realized for these sales during the years 1960 to 1964.

GOLD SOLD ON OVERSEA PREMIUM MARKETS

Particulars	1960	1961	1962	1963	1964
Quantity fine oz.	320,151	733,217	320,323	512,805	448,310
Value £A.	5,049,183	11,513,571	5,016,625	8,028,227	7,038,619
Average price £A. s. d.	15 15 5	15 14 0½	15 13 2½	15 13 1½	15 14 0

8. *Gold Subsidy*.—Details of amounts paid under the provisions of the *Gold-Mining Industry Assistance Act 1954-1962* for the years 1960 to 1964 are shown in the following table. Particulars of this Act and other legislation are given on page 1134.

NET SUBSIDY PAYMENTS TO GOLD PRODUCERS

(£A.)

Year	New South Wales	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Nor. Terr.	Papua and New Guinea	Total
1960	14	45,881	881	35	698,242	..	4,253	65,292	814,598
1961	145	63,036	1,325	..	585,306	..	4,930	44,758	699,500
1962	61	50,579	2,134	97	621,573	18	1,235	72,812	748,509
1963	463	43,267	2,488	..	669,782	12	288	42,896	759,196
1964	395	38,512	1,340	..	541,687	..	847	47,989	630,770

9. *Production in Principal Countries*.—The quantities of gold produced in the five principal producing countries and the estimated world total production in each of the years 1959 to 1963 are shown in the following table.

GOLD: MINE PRODUCTION IN SELECTED COUNTRIES

(Source: *Minerals Yearbook*, United States Department of the Interior)

('000 fine oz.)

Country	1959	1960	1961	1962	1963
South Africa	20,066	21,383	22,942	25,492	27,432
U.S.S.R.(a)	10,000	11,000	11,800	12,200	12,500
Canada	4,483	4,629	4,474	4,178	4,011
United States of America	1,603	1,667	1,548	1,543	1,454
Australia	1,085	1,087	1,076	1,069	1,024
<i>World Total(a)</i>	42,600	45,100	47,200	49,800	51,700

(a) Estimated.

§ 6. Lead, Silver and Zinc

1. **Historical.**—A brief history of silver-lead-zinc mining in Australia may be found in previous issues of the Year Book (*see* No. 48, p. 1065).

2. **Methods of Mining and Treatment.**—All the lead-zinc production from the large mines is obtained by underground mining. The lead-zinc sulphides mined are concentrated by differential flotation to produce separate lead and zinc concentrates, the lead concentrates containing most of the silver originally present in the ore.

3. **Mine Production.**—The following table shows the mine production for 1963 (metal content of ores and concentrates produced) of lead, silver and zinc in Australia, and the respective minerals in which these metals were contained.

LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED, 1963

Mineral in which contained	N.S.W.	Vic.	Q'land	S.A.	W. Aust.	Tas.	N.T.	Aust.
LEAD (tons)								
Lead ore ..	180	..	866	..	..	..	..	1,046
Lead concentrate ..	324,461	..	64,728	..	136	9,557	..	398,882
Lead-copper concentrate ..	..	..	..	..	..	2,934	..	2,934
Zinc concentrate ..	3,821	..	1,117	..	..	2,491	..	7,429
Total Lead ..	328,462	..	66,711	..	136	14,982	..	410,291
SILVER (fine oz.)								
Copper ore ..	..	..	..	..	..	9,023	..	9,023
Copper concentrate ..	..	..	738,610	..	12,436	59,608	90,956	901,610
Copper precipitate ..	..	..	..	..	..	3	..	3
Gold concentrate, etc.	33	546	14,777	..	208,328	..	..	223,684
Lead ore ..	27,131	..	29,152	..	..	..	..	56,283
Lead concentrate ..	11,058,747	..	5,258,257	..	90	461,396	..	16,778,490
Lead-copper concentrate ..	..	..	..	..	..	941,668	..	941,668
Zinc concentrate ..	338,947	..	161,263	..	..	230,954	..	731,164
Total Silver ..	11,424,858	546	6,202,059	..	220,854	1,702,652	90,956	19,641,925
ZINC (tons)								
Lead concentrate ..	18,530	..	12,145	..	..	2,537	..	33,212
Lead-copper concentrate ..	..	..	..	..	..	1,081	..	1,081
Zinc concentrate ..	247,107	..	25,199	..	..	44,871	..	317,177
Total Zinc ..	265,637	..	37,344	..	..	48,489	..	351,470

The principal sources of production of lead, silver and zinc during 1963, were as follows.

New South Wales. Lead and zinc concentrates, produced at Broken Hill, contained nearly all the New South Wales production of lead, silver and zinc. During 1963 New South Wales mines produced (in terms of the content of all ores and concentrates produced) 80 per cent. of Australia's lead, 76 per cent. of the zinc and 58 per cent. of the silver.

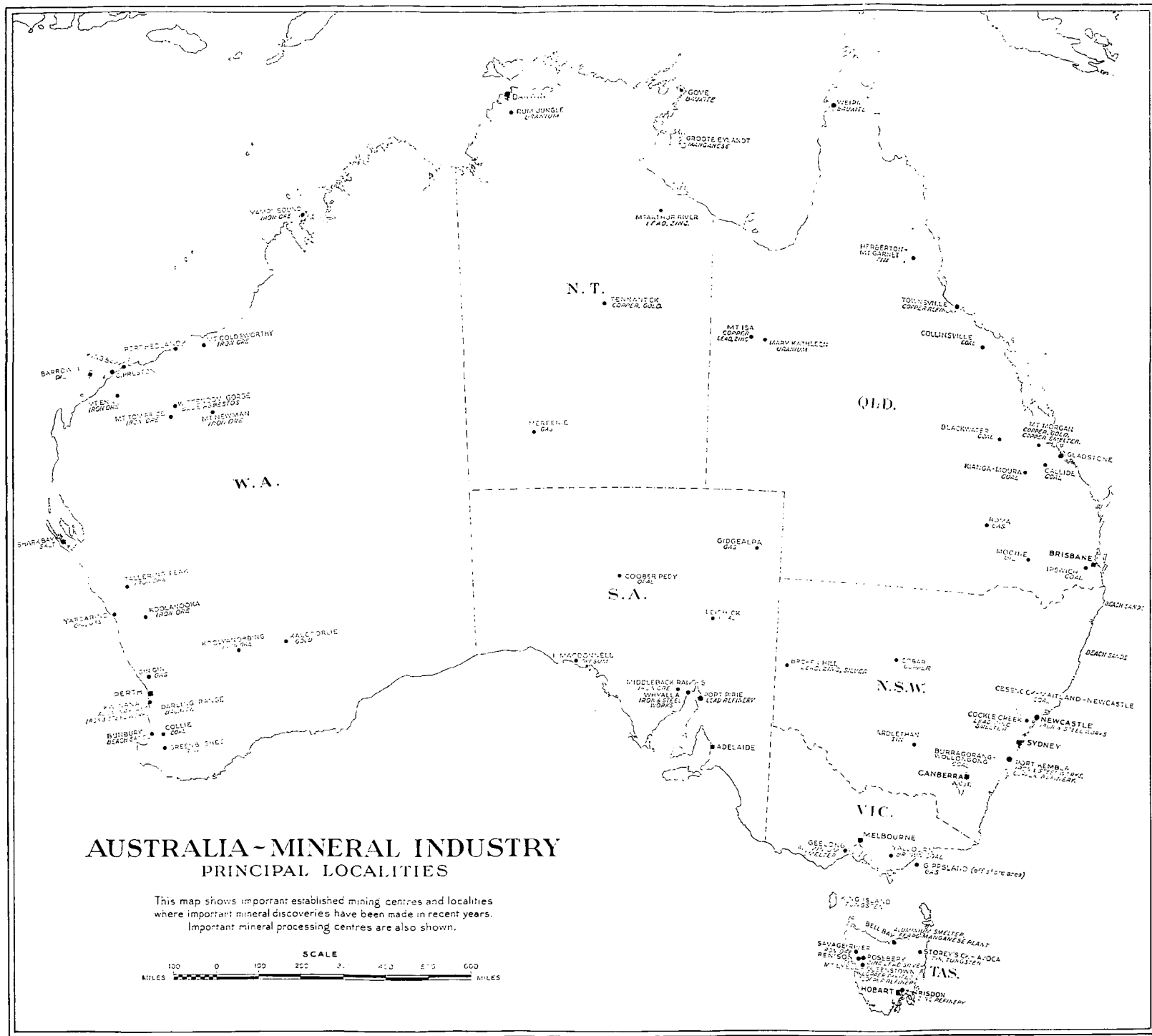
Queensland. Mount Isa produced all the lead and zinc concentrates in Queensland during 1963. These concentrates contained almost all the State's production of lead and silver and all the zinc. Nearly all the remaining silver was contained in copper concentrates produced at Mount Isa and at Mount Morgan.

Tasmania. All the lead, silver and zinc was produced from mines on the west coast. All the zinc and most of the lead and silver were produced from mines at Rosebery and Williamsford and milled at Rosebery to produce separate lead, zinc, and lead-copper concentrates.

The table hereunder shows the quantities of lead, silver and zinc contained in minerals won in the several States and the Northern Territory during the years 1959 to 1963.

LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES PRODUCED

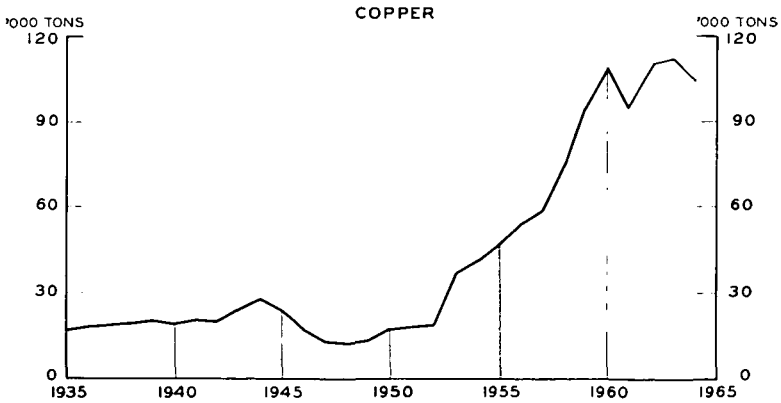
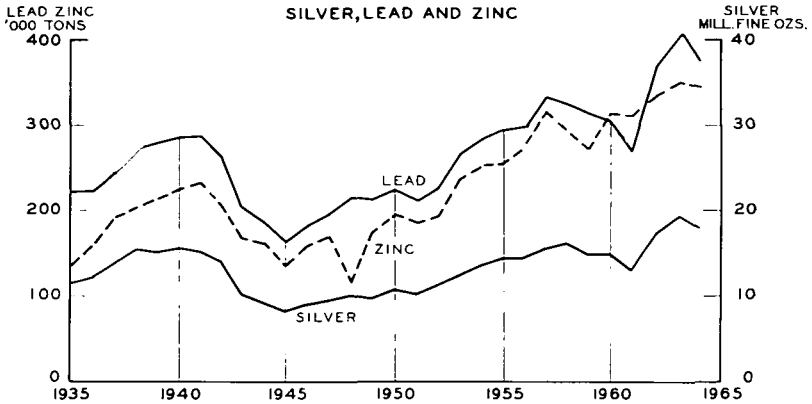
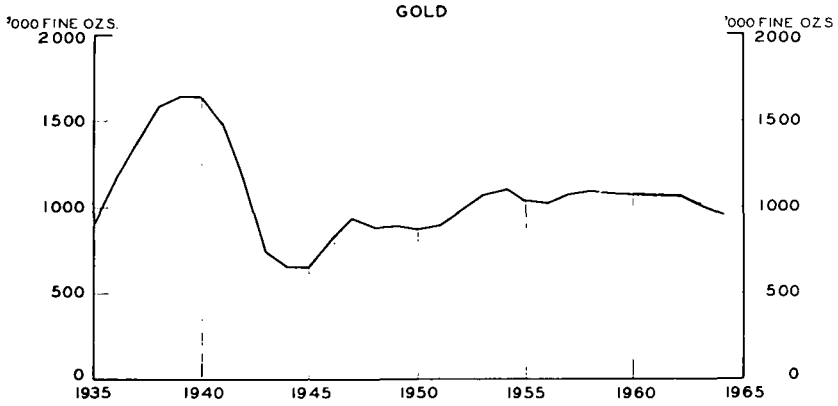
State or Territory	1959	1960	1961	1962	1963
LEAD (tons)					
New South Wales	246,449	235,868	211,679	292,381	328,462
Queensland	54,415	57,518	45,280	62,669	66,711
South Australia	8	..	..	..	..
Western Australia	1,382	1,739	433	306	136
Tasmania	14,039	13,038	12,253	14,754	14,982
Northern Territory .. ..	..	..	11	..	..
Australia	316,293	308,163	269,656	370,110	410,291
SILVER (fine oz.)					
New South Wales	8,555,203	8,397,889	7,447,957	9,929,179	11,424,858
Victoria	2,016	576	573	472	546
Queensland	4,953,209	5,121,700	3,882,784	5,600,502	6,202,059
South Australia	394	..	..	..	..
Western Australia	179,601	196,756	209,647	218,366	220,854
Tasmania	1,369,070	1,398,424	1,436,023	1,700,053	1,702,652
Northern Territory	101,138	100,611	82,182	105,119	90,956
Australia	15,160,631	15,215,956	13,059,166	17,553,691	19,641,925



MINE PRODUCTION OF PRINCIPAL METALS

(METALLIC CONTENT OF MINERALS)

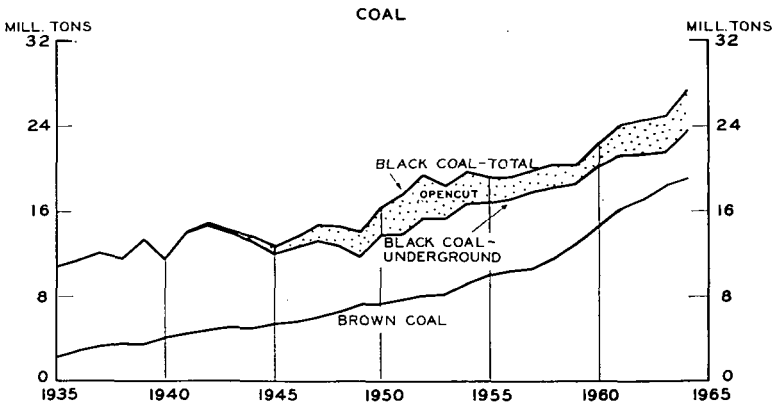
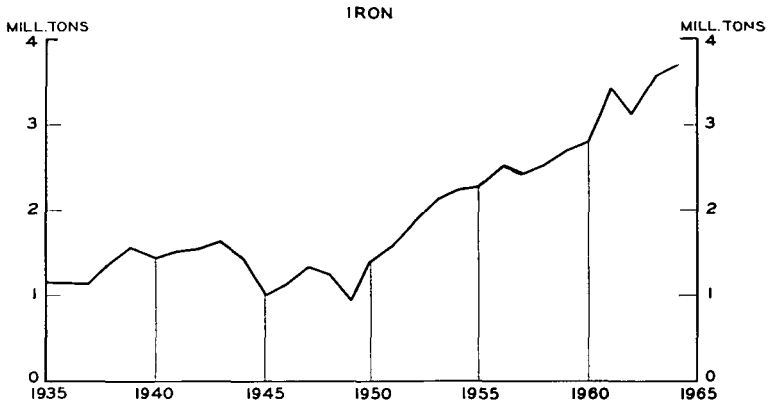
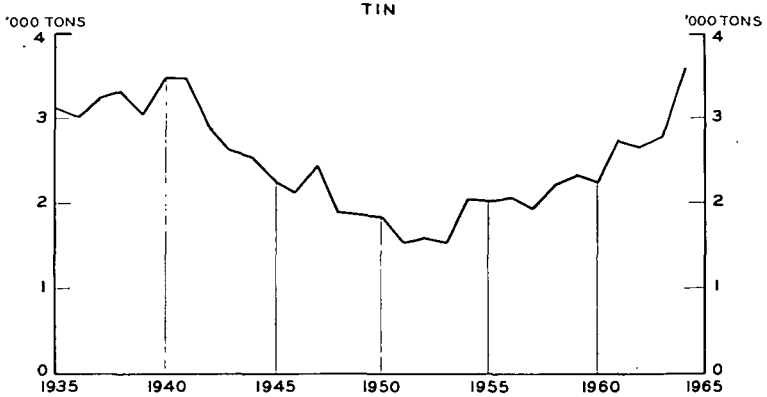
AUSTRALIA, 1935 TO 1964



MINE PRODUCTION OF PRINCIPAL METALS
AND PRODUCTION OF COAL

(METALLIC CONTENT OF MINERALS)

AUSTRALIA, 1935 TO 1964



LEAD, SILVER AND ZINC: CONTENT OF ORES AND CONCENTRATES
PRODUCED—*continued*

State or Territory	1959	1960	1961	1962	1963
ZINC (tons)					
New South Wales	216,993	248,164	237,834	244,863	265,637
Queensland	23,468	34,775	33,219	44,704	37,344
South Australia .. ..	..	35	12	47	..
Tasmania	34,950	34,515	40,092	47,918	48,489
Northern Territory .. ..	..	..	(a)	..	..
Australia	275,411	317,489	311,157	337,532	351,470

(a) Less than half a ton.

4. **Smelter and Refinery Production.**—(i) *Lead.* The bulk of lead concentrate produced at Broken Hill is railed to Port Pirie, in South Australia, for smelting and refining. Lead-silver bullion is produced from initial smelting, and lead, silver and gold are then extracted as refined products. Cadmium is contained in the smelter fumes and is extracted, but this metal is more characteristically associated with zinc production. The sulphur dioxide gas formed during pre-smelter sintering operations is used to manufacture sulphuric acid. The antimony contained in the concentrate is alloyed with lead to form marketable antimonial lead, while the copper is recovered in various products which are sent to copper refineries for copper extraction.

In 1961 a new smelter was commissioned at Cockle Creek, New South Wales. It draws its supplies of lead and zinc concentrates from Broken Hill. This plant is unique in Australia in that the zinc content of lead concentrate is recovered. Previously this zinc content had accumulated in lead smelter slags. The bullion produced at this plant is exported for treatment while most of the refined zinc is used domestically. Sulphuric acid and cadmium are recovered as by-products. Some of the Broken Hill concentrate not treated at Port Pirie and Cockle Creek is exported for treatment overseas.

Lead ore and concentrate produced at Mount Isa is smelted at the mine to derive a lead bullion which is rich in silver. All this bullion is exported to the United Kingdom for refining. A lead-copper dross is produced as a by-product of lead smelting and this is also exported. Lead and lead-copper concentrates produced in Tasmania and lead concentrates produced in Western Australia are exported for smelting and refining overseas.

(ii) *Zinc.* A large proportion of the zinc concentrate produced at Broken Hill is exported, and the remainder is either shipped from Port Pirie to Risdon, near Hobart, or railed to Cockle Creek for smelting and refining. At Risdon the Broken Hill concentrate, together with all zinc concentrate produced in Tasmania, is roasted to form zinc oxide or calcine. Sulphur dioxide formed during this roasting process is used for the manufacture of sulphuric acid. The calcine is leached with a weak solution of sulphuric acid to form a zinc sulphate solution which, after purification, is electrolysed. Zinc of high purity is deposited on the cathodes and this zinc is melted and cast into ingots. Cadmium metal and cobalt oxide are also recovered. Zinc concentrate produced at Mount Isa is refined overseas.

The following table gives, for the years 1959 to 1963, particulars of the production and apparent consumption of refined primary lead, silver and zinc as recorded from data received from the Bureau of Mineral Resources.

REFINED LEAD, SILVER AND ZINC: PRODUCTION, CONSUMPTION AND EXPORTS, AUSTRALIA

Particulars	1959	1960	1961	1962	1963
LEAD (tons)					
Refined lead—					
Production(a)	185,805	189,823	162,264	190,125	224,605
Apparent consumption(a)(b)	31,900	33,200	29,800	34,100	44,500
Exports(c)	139,101	125,920	146,147	198,582	180,780
Silver-lead bullion (lead content)—					
Production(a)	50,310	52,723	48,090	73,110	80,661
Exports	52,650	49,305	45,767	75,482	75,994
SILVER ('000 fine oz.)					
Production(a)	7,805	8,085	7,099	7,378	8,871
Apparent consumption(a)	4,775	5,284	6,362	6,851	7,811
Exports	2,958	2,770	1,002	342	1,453
ZINC (tons)					
Production(a)	116,461	120,230	138,694	167,928	179,777
Apparent consumption(a)	78,753	91,840	77,495	84,747	92,100
Exports	41,606	27,443	46,472	91,215	96,775

(a) Source: Bureau of Mineral Resources.

(b) Excludes secondary lead.

(c) Includes small amount of secondary lead.

5. **Prices of Lead, Silver and Zinc.**—The following table shows average prices of lead, silver and zinc in Australia and on the London Metal Exchange during the years 1960 to 1964.

AVERAGE PRICES OF LEAD, SILVER AND ZINC

Particulars	1960	1961	1962	1963	1964
Australian prices, in £A. s. d.—					
Lead, per ton(a) .. £	100	99	82	85	120
Silver, per fine oz.(b) s. d.	8 3½	8 4¼	9 6½	11 5	11 8
Zinc, per ton(c) .. £	113	102	100	111	152
London Metal Exchange prices, in £Stg. s. d.—					
Lead, per ton .. £	72	65	57	63	100
Silver, per fine oz. s. d.	6 7½	6 7¼	7 7½	9 2	9 4
Zinc, per ton .. £	88	78	68	76	112

(a) Soft pig lead f.o.b. Port Pirie, from London Metal Exchange prices. c.i.f. Sydney basis.

(b) Silver prices shown represent export parity calculated (c) Electrolytic zinc f.o.b. Risdon for 1960–62, subsequently

6. **Production in Principal Countries.**—The following table shows, for the years 1959 to 1963, particulars of lead, silver and zinc production (mine basis) in selected countries, together with the estimated world total.

LEAD, SILVER AND ZINC: MINE PRODUCTION IN SELECTED COUNTRIES

(Source: Minerals Yearbook, United States Department of the Interior)

Country	1959	1960	1961	1962	1963
LEAD ('000 tons)					
Australia	316	308	270	370	410
U.S.S.R.(a)	304	304	348	357	380
United States of America	228	220	234	212	236
Canada	167	184	163	189	178
Mexico	188	188	178	190	172
<i>World Total(a)</i>	<i>2,290</i>	<i>2,335</i>	<i>2,344</i>	<i>2,469</i>	<i>2,500</i>

SILVER ('000 fine oz.)					
Mexico	44,075	44,526	40,349	41,249	42,760
Peru	27,225	30,755	34,162	36,017	36,447
United States of America	31,194	30,766	34,794	36,798	35,000
Canada	31,924	34,017	31,382	30,669	30,739
U.S.S.R.(a)	25,000	25,000	25,000	27,000	27,000
Australia	15,161	15,216	13,059	17,554	19,642
<i>World Total(a)</i>	<i>221,900</i>	<i>240,500</i>	<i>236,500</i>	<i>242,400</i>	<i>249,500</i>

ZINC ('000 tons)					
United States of America	380	389	415	451	473
Canada	354	363	396	448	444
U.S.S.R.(a)(b)	330	339	393	393	402
Australia	275	317	311	338	351
Mexico	260	258	265	247	237
<i>World Total(a)</i>	<i>3,071</i>	<i>3,268</i>	<i>3,402</i>	<i>3,473</i>	<i>3,545</i>

(a) Estimated.

(b) Smelter production.

§ 7. Copper

1. **Historical.**—A brief history of copper-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1070).

2. **Assistance to the Copper Mining Industry.**—For particulars, see pages 1134–5.

3. **Methods of Mining and Treatment.**—Most of the large copper ore bodies contain the mineral chalcopyrite, an iron-copper sulphide. Copper ore is mined by opencut methods at Mount Morgan, Mount Isa and Mount Lyell and by underground methods at Mount Isa, Ravensthorpe (Western Australia) and Tennant Creek (Northern Territory). Oxidized copper ore is mined at Mount Isa and at numerous other localities, mainly in Western Australia.

It is the practice for the sulphide ore to be finely ground and for the chalcopyrite contained in it to be recovered by flotation. At Mount Lyell and Mount Morgan the tailings from the copper flotation are subjected to a further flotation and a pyrite concentrate is produced. The oxidized ore mined at Mount Isa was, in the past, fed direct to the smelter for fluxing purposes, but since 1963 some has been concentrated. Large amounts of this oxidized ore have been removed from the open-cut, but only material actually smelted or concentrated is recorded as current production.

4. Mine Production.—The following table shows for 1963 the copper content of all minerals produced in the several States and the Northern Territory.

COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED, 1963
(tons)

Mineral in which contained	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	Aust.
Copper ore, concentrate, and precipitate ..	118	6	82,382	5	1,889	15,352	7,147	106,899
Lead concentrate ..	3,320	..	839	..	30	125	..	4,314
Lead-copper concentrate ..	..	..	..	..	..	1,090	..	1,090
Zinc concentrate ..	426	..	..	..	..	238	..	664
Total	3,864	6	83,221	5	1,919	16,805	7,147	112,967

The following were the principal sources of copper during 1963.

Queensland. Mount Isa was the most important copper producing centre in Australia, its 1963 output being 65 per cent. of the Australian total. The copper produced at Mount Isa is contained in copper sulphide concentrate, oxidized copper ore and lead concentrate. Copper concentrate produced at Mount Morgan contained most of the remainder of the State's production.

Tasmania. Most of the State's production was at Mount Lyell, where copper is contained in copper concentrate, ore and precipitate. Lead-copper concentrate and lead concentrate milled at Rosebery contained the remainder of Tasmania's production.

Northern Territory. Copper concentrate from Tennant Creek and copper concentrate and precipitate from Rum Jungle contained almost all the Territory's output of copper.

The table hereunder shows the quantities of copper contained in minerals produced in the several States and the Northern Territory during the years 1959 to 1963.

COPPER: CONTENT OF ORES AND CONCENTRATES PRODUCED
(tons)

State or Territory	1959	1960	1961	1962	1963
New South Wales	3,728	3,572	3,510	3,747	3,864
Victoria	14	..	8	10	6
Queensland	66,798	82,753	66,505	79,242	83,221
South Australia	16	5	2	2	5
Western Australia	2,197	1,661	2,206	1,488	1,919
Tasmania	12,244	11,680	12,743	14,515	16,805
Northern Territory	9,953	9,764	10,652	7,968	7,147
Australia	94,950	109,435	95,626	106,972	112,967

5. *Smelter and Refinery Production of Copper.*—Most of the copper concentrate milled in Australia is smelted locally, blister copper being produced at Mount Isa, Mount Morgan, Mount Lyell and Port Kembla. Blister copper smelted at Mount Isa is railed to Townsville for electrolytic refining. Mount Lyell blister copper is electrolytically refined at Mount Lyell and the bulk is re-melted and cast into primary shapes at Port Kembla. Mount Morgan blister copper is shipped to Port Kembla, where, together with blister copper produced at Port Kembla, it is refined. All refined copper now produced in Australia is processed electrolytically. At Port Kembla gold and silver contained in electrolytic refining tank house slimes from Mount Lyell, Townsville, and Port Kembla are recovered.

In the following table details are given of the production and exports of blister and refined copper for the years 1959 to 1963.

METALLIC COPPER: PRODUCTION AND EXPORTS, AUSTRALIA

(Source: Bureau of Mineral Resources)

(tons)

Particulars	1959	1960	1961	1962	1963
Blister copper production ..	68,494	71,037	62,497	87,337	88,492
Refined copper production ..	51,593	70,652	63,723	79,450	86,115
Exports of blister and refinery shapes	18,974	14,079	24,095	16,497	24,949

6. *Prices.*—Details of average market prices for the years 1960 to 1964 are given in terms of Australian currency and sterling in the following table.

AVERAGE PRICES OF ELECTROLYTIC COPPER IN AUSTRALIA AND THE UNITED KINGDOM

(£ per ton)

Country	1960	1961	1962	1963	1964
Australia £A.(a)	324	307	305	305	328
United Kingdom .. £Stg.	239	228	232	234	332

(a) Ex works Port Kembla.

7. *Production in Principal Countries.*—The following table shows the mine production of copper for the years 1959 to 1963 in selected countries and the estimated world production in those years.

COPPER: MINE PRODUCTION IN SELECTED COUNTRIES

(Source: *Minerals Year Book*, United States Department of the Interior)

('000 tons)

Country	1959	1960	1961	1962	1963
United States of America ..	736	964	1,040	1,097	1,213
U.S.S.R.(a)	429	491	536	625	770
Chile	538	528	542	577	662
Rhodesia and Nyasaland ..	545	581	579	567	595
Canada	353	392	392	416	458
Australia	95	109	96	107	113
<i>World Total(a)</i> ..	<i>4,040</i>	<i>4,650</i>	<i>4,840</i>	<i>5,090</i>	<i>5,220</i>

(a) Estimated.

§ 8. Tin

1. **Historical.**—A brief history of tin-mining in Australia may be found in previous issues of the Year Book (*see* No. 48, p. 1073).

2. **Methods of Mining and Treatment.**—The greater part of tin concentrate production is obtained from alluvial workings as a gravity concentrate of cassiterite (tin oxide). The remainder is obtained from underground mining, where the tin mineralization is frequently associated with wolfram and sulphide minerals.

3. **Mine Production.**—The following table sets out the tin content of tin concentrate produced in Australia during the years 1959 to 1963. No tin production is recorded from minerals other than tin concentrate.

TIN: CONTENT OF TIN CONCENTRATES PRODUCED

(tons)

State or Territory	1959	1960	1961	1962	1963
New South Wales	174	223	173	212	250
Victoria .. ..	..	..	..	7	11
Queensland	1,104	885	1,350	1,077	1,196
Western Australia	174	190	231	323	363
Tasmania	890	884	986	1,058	1,005
Northern Territory	9	20	5	38	35
Australia	2,351	2,202	2,745	2,715	2,860

The following were the principal sources of production in 1963.

Queensland. Most of the tin concentrate produced was from the Herberton field, production being principally alluvial. Tin concentrate was also produced in the Chillagoe, Kangaroo Hills, Cooktown and Mareeba districts.

Tasmania. Most of the tin concentrate produced was won in the north-east part of the State from both lode and alluvial deposits. Wolfram concentrate, as well as tin concentrate, was produced.

Western Australia. Nearly all the tin concentrate produced was alluvial tin won from the Pilbara field.

4. **Smelter and Refinery Production.**—Except concentrate shipped to oversea smelters for technical reasons, the bulk of the production is treated by the two tin smelters located in Sydney.

The production of refined tin in Australia from locally produced tin concentrate during recent years, as recorded by the Bureau of Mineral Resources, was as follows:—1959, 2,226 tons; 1960, 2,254 tons; 1961, 2,546 tons; 1962, 2,704 tons; 1963, 2,626 tons; and 1964, 3,021 tons.

Consumption of refined tin has increased substantially in recent years following the introduction of tin-plate production in Australia; hot-dip plating began in 1957 and the electrolytic plant at Port Kembla, New South Wales, commenced operations early in 1962.

5. **Prices.**—Details of the movement in average market prices of tin for the years 1960 to 1964 are given in terms of Australian currency and sterling in the following table.

AVERAGE PRICE OF TIN IN AUSTRALIA AND THE UNITED KINGDOM
(£ per ton)

Country	1960	1961	1962	1963	1964
Australia £A (a)	1,042	1,169	1,163	1,179	1,598
United Kingdom .. £stg.(b)	794	895	898	909	1,217

(a) Delivered, Sydney.

(b) London Metal Exchange price.

6. **Production in Principal Countries.**—World production of tin reached its maximum in 1941, when 241,400 tons were recorded. Australia's contribution to the world's tin production is slightly above 1 per cent.

Mine production of tin for selected principal producing countries and Australia and the estimated world totals for 1959 to 1963 are given in the following table.

TIN: MINE PRODUCTION IN SELECTED COUNTRIES
(Source: *Minerals Year Book*, United States Department of the Interior)
(tons)

Country	Production				
	1959	1960	1961	1962	1963
Malaya, Federation of ..	37,525	51,979	56,028	58,603	59,947
China(a)	26,000	28,000	30,000	28,000	28,000
Bolivia	23,811	19,407	20,409	21,492	22,752
U.S.S.R.	15,000	16,000	17,000	17,000	20,000
Thailand	9,684	12,080	13,270	14,679	15,587
Indonesia	21,613	22,596	18,574	17,310	12,947
Australia	2,351	2,202	2,745	2,715	2,860
<i>World Total(b)</i> ..	<i>161,500</i>	<i>180,400</i>	<i>184,100</i>	<i>187,000</i>	<i>190,300</i>

(a) Estimated smelter production.

(b) Estimated.

§ 9. Iron

1. **Historical.**—A brief history of the iron and steel industry may be found in previous issues of the Year Book (*see* No. 50, p 1162).

2. **Recent Developments in the Iron and Steel Industries.**—In December, 1960, the Commonwealth Government announced a partial relaxation of the embargo on the export of iron ore which had been in force since 1938. This relaxation was further increased in 1963 after it became evident that reserves of iron ore in Australia are very extensive. Permission has been granted for the export of iron ore from Talling Peak-Koolanooka Hills, Mount Goldsworthy, the Hamersley and Ophthalmia Ranges and the Scott River area in Western Australia, and from small deposits in New South Wales and Queensland. A number of development agreements have been signed, mainly in Western Australia, for mining leases over important reserves of iron ore, and negotiations for the export of iron ore to Japan have been concluded in a number of instances.

Exports of iron ore in the future will be mainly from Western Australia. In December, 1963, the Western Mining-Hanna-Homestake consortium signed a contract with a group of Japanese steel mills to ship ore from the Talling Peak-Koolanooka Hills area to Japan. According to the terms of the contract, a total of 5.1 million tons of ore will be exported over a period of eight years from April, 1966. Shipments of iron ore are also due to start in April, 1966, from the deposits at Mount Goldsworthy, east of Port Hedland. Japanese steel mills have agreed to purchase 16.5 million tons of iron ore from Mount Goldsworthy Mining Associates over a period of seven years. A harbour deepening programme at Port Hedland costing about £5 million has been initiated, and overall cost of the development project, including construction costs of railway facilities from Mount Goldsworthy to Port Hedland, may exceed £20 million.

Major developments for the export of iron ore will take place at Mount Tom Price in the Hamersley Range and Mount Whaleback in the Ophthalmia Range. An offer by Hamersley Iron Pty. Ltd. to export iron ore to Japanese steel mills has been accepted, and 65.5 to 75 million tons of ore will be shipped over 16 to 18 years, with shipments beginning in August, 1966. A similar large scale offer by Mount Newman Iron Ore Co. Ltd. has also been accepted and 100 million tons of ore will be shipped over 21 to 22 years with shipments commencing in 1969. Both of these companies have signed with the Western Australian Government agreements which provide for the eventual establishment of a steel industry in Western Australia. Developments for the export of iron ore may also take place in the Robe River area of the Pilbara district, where Cleveland Cliffs Iron Mining Company proposes to produce pellets for export to Japan.

A small contract for the export of iron ore from the Frances Creek area in the Northern Territory has been signed, and the export of three million tons of ore over eight years is expected to begin in 1967. Exports of iron ore may also eventuate from Tasmania, and an investigation programme is under way at Savage River to determine the feasibility of an iron ore mining and pellet production operation.

It has been estimated that by 1970 Australia's iron ore exports will be about 12 to 15 million tons annually. However, the actual annual tonnage will depend upon specific delivery dates of contracts which have yet to be finalized.

Expansion of the domestic steel industry continues. In May, 1965, the Broken Hill Proprietary Co. Ltd. opened a new steelworks at Whyalla. The plant, built at a cost of approximately £50 million, has an initial capacity of 500,000 tons of steel ingots a year.

Within two years development plans provide for an increase in capacity to 900,000 ingot tons a year; the major project in this programme being the construction of two batteries of coke ovens to cost £10 million. Capital expenditure in the Australian iron and steel industry is currently of the order of £40 million to £50 million annually.

3. **Mine Production of Iron Ore.**—Iron oxide deposits exist in all States and in the Northern Territory, but at present iron oxide for metal extraction purposes, termed iron ore in this chapter, is produced in two States only. The following table shows the estimated iron content of iron ore produced during the years 1959 to 1963.

IRON: ESTIMATED IRON CONTENT OF IRON ORE PRODUCED
(tons)

State	1959	1960	1961	1962	1963
South Australia	2,218,846	2,227,551	2,581,313	2,235,832	2,717,926
Western Australia	480,769	586,404	852,663	883,263	839,877
Australia	2,699,615	2,813,955	3,433,976	3,119,095	3,557,803

The producing centres during 1963 were as follows.

South Australia. 4,181,424 tons of iron ore were drawn from the Iron Monarch and Iron Prince quarries in the Middleback Ranges. Selected foundry grade ore was diverted as required to the Whyalla blast furnace, but the greater part was shipped to Newcastle and Port Kembla for smelting. Production of beneficiated iron ore commenced at Iron Knob in the latter part of 1962.

Western Australia. Ore shipped from Yampi Sound, north of Derby, to New South Wales for sintering and smelting amounted to 1,277,613 tons. A quantity of 55,525 tons was mined at Koolyanobbing, near Southern Cross, for pig iron production at Wundowie.

4. **Mine Production of Iron Oxide.**—Small quantities of iron oxide are mined in five Australian States. New South Wales and South Australia are the major producers. In 1963 Australian production was 40,061 tons, of which 47 per cent. was for cement manufacture, 45 per cent. for fluxing in metallurgical processes, 5 per cent. for coal washing and 3 per cent. for gas purification.

5. **Smelter and Refinery Production.**—The production of pig-iron and steel ingots in Australia, of which New South Wales is the main producing State, is shown in the following table.

PIG-IRON AND INGOT STEEL: PRODUCTION, AUSTRALIA
(tons)

Commodity	1959	1960	1961	1962	1963
Pig-iron(a)	2,506,514	2,876,267	3,156,411	3,434,336	3,624,673
Ingot steel(b)	3,395,261	3,693,770	3,884,929	4,170,830	4,574,546

(a) Excludes ferro-alloys.
steel castings.

(b) Includes recovery from scrap, but excludes production of direct

6. **Production of Iron and Steel in Principal Countries.**—Particulars of the production in the seven principal countries and Australia and the estimated world total production during the calendar years 1962 and 1963 are shown in the following table.

IRON AND STEEL: PRODUCTION IN SELECTED COUNTRIES

(Source: *Minerals Yearbook*, United States Department of the Interior)

('000 tons)

Country	Pig-iron and ferro-alloys		Ingot steel and castings	
	1962	1963	1962	1963
United States of America ..	60,389	65,940	87,793	97,555
U.S.S.R.	54,643	57,773	75,089	78,953
Germany, Federal Republic of ..	23,868	22,547	32,049	31,098
Japan	18,147	20,112	27,111	31,004
United Kingdom	13,830	14,591	20,491	22,520
France	13,384	14,272	16,968	17,279
China (Mainland)	17,679	16,696	11,607	11,607
Australia	3,464	3,672	4,221	4,625
<i>World Total(a)</i>	<i>263,000</i>	<i>275,866</i>	<i>354,800</i>	<i>379,741</i>

(a) Estimated.

In 1964 eleven blast furnaces were operating in Australia; four at Port Kembla and four at Newcastle in New South Wales, two at Wundowie in Western Australia, and one at Whyalla, South Australia. Production of pig-iron in 1964 was at a record level. The fourth blast furnace at Newcastle, with a daily capacity of 1,400 tons of pig-iron, was commissioned in July, 1963.

During 1964 the bulk of Australia's ingot steel production was obtained from 17 open hearth furnaces (13 at Port Kembla and 4 at Newcastle). In addition, 3 other open hearth furnaces and 15 electric furnaces were in operation during 1964 for the production of special steels and ferro-alloys. The use of oxygen in steel-making continued to be of great importance in Australia during 1964. All furnaces in the No. 2 open hearth shop at Port Kembla are now using oxygen lancing equipment and two basic oxygen steel-making units were in operation at Newcastle throughout the year. Annual steel-making capacity in Australia is now in excess of 5 million tons.

§ 10. Mineral Sands

1. **Historical.**—A brief history of mineral sands mining in Australia may be found in previous issues of the Year Book (see No. 50, p. 1166).

2. **Methods of Mining and Treatment.**—Mining on the east coast of Australia is mainly by suction dredging. In Western Australia ilmenite is mined hydraulically or by earth-moving equipment. Heavy mineral concentrates are recovered by wet gravity concentration, using a combination of concentrating spirals and shaking tables. The constituent minerals of the heavy-mineral concentrates, mainly rutile, zircon, ilmenite and monazite, are separated by electromagnetic and electrostatic methods.

3. **Mine Production.**—(i) *Titanium Dioxide.* The following table shows the quantities of titanium dioxide contained in rutile and ilmenite concentrates produced during the years 1959 to 1963.

TITANIUM DIOXIDE: CONTENT OF CONCENTRATES PRODUCED

(tons)

State	1959	1960	1961	1962	1963
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CONTAINED IN RUTILE CONCENTRATE

New South Wales	44,792	52,262	64,284	77,227	129,931
Queensland	34,736	33,260	33,056	37,472	45,454
Western Australia	96	493	880	501	732
Australia	79,624	86,015	98,220	115,200	176,117

CONTAINED IN ILMENITE CONCENTRATE

New South Wales	111	537	905	1,930	2,689
Queensland .. ..	..	21	2	..	..
Western Australia	45,788	58,169	92,838	98,364	109,244
Australia	45,899	58,727	93,745	100,294	111,933

The Western Australian production figures for ilmenite concentrate for the years 1959 to 1963 include the following quantities of titanium dioxide contained in leucocoxene: 1959, 222 tons; 1960, 71 tons; 1961, 428 tons; 1962, 532 tons; 1963, 472 tons.

(ii) *Zircon.* The quantities of zircon mineral contained in zircon concentrate produced during the years 1959 to 1963 are shown in the following table.

ZIRCON: CONTENT OF ZIRCON CONCENTRATE PRODUCED

(tons)

State	1959	1960	1961	1962	1963
New South Wales	71,156	65,764	98,421	89,947	117,520
Queensland	34,504	31,752	28,775	38,468	52,193
Western Australia	6,692	3,978	7,287	3,694	12,399
Australia	112,352	101,494	134,483	132,109	182,112

(iii) *Other Products.* During 1963 small quantities of monazite concentrate, magnetite and garnet concentrate were also recovered from mineral sands.

4. *Sources of Production.*—The principal sources of mineral sands treated during 1963 were as follows.

New South Wales and Queensland. The main deposits of mineral sands occur along the eastern Australian coast from Wyong in New South Wales to Curtis Island, Queensland. At present the principal mining operations are located between Lake Munmorah and Newcastle in the south, between Laurieton and Crescent Head on the central coast, and between Byron Bay and North Stradbroke Island in the north. Most mining operations are now confined to dunes and swampy areas lying behind beaches.

Western Australia. The chief deposits of mineral sands occur in the south-west corner of the State, between Bunbury and Wonnerup. During 1963 the bulk of production was from inland deposits in the Capel-Yoganup area.

§ 11. Aluminium

1. **Historical.**—The aluminium production industry in Australia is of comparatively recent origin. Following legislation enacted in 1944, the Commonwealth and Tasmanian Governments together formed the Australian Aluminium Production Commission and subsequently initiated construction of an alumina refinery and an aluminium reduction plant at Bell Bay in Tasmania. Plant capacity was 13,000 tons of aluminium metal per annum and production began in February, 1955. Supplies of bauxite for the plant were drawn from Malaya, Indonesia and India, as the then known Australian bauxite deposits were unsuitable because of technical and economic considerations.

This situation changed in the ensuing years as it became clear that three major deposits of bauxite existed in Australia. In 1952 bauxite had been found at Gove, on the north-eastern tip of the Northern Territory, but the importance of this discovery did not become evident until later. Subsequently, in 1955, the bauxite deposits at Weipa on the eastern shores of the Gulf of Carpentaria were discovered and investigated. Shortly after bauxite was found at Weipa, investigations were begun of bauxite deposits in the Darling Ranges, south-east of Perth. Each of these deposits was considered, after examination, to be of sufficient size and quality to form the basis of separate aluminium production complexes.

During 1960 the Commonwealth Government disposed of its share in the Bell Bay project to Comalco Industries Pty. Ltd. A £10 million expansion plan was subsequently initiated at Bell Bay and plant capacity was increased to 52,000 tons of aluminium per annum by 1963. At the same time the same group proceeded with a £5 million development programme at Weipa. Construction of port facilities at Weipa was completed in 1963 and large scale bauxite shipments to Bell Bay and overseas began. During 1963 plans for an alumina refinery to be situated at Gladstone in Queensland were announced; these plans were later modified as two overseas aluminium companies entered this project, which now involves an alumina refinery with a capacity of about 600,000 tons per annum. The cost of building the refinery and ancillary facilities will be about £50 million.

In mid-1961 it was announced that the Aluminium Company of America would participate with three Australian companies in the establishment of an integrated aluminium industry based on the bauxite deposits of the Darling Ranges. Subsequently quarrying operations were developed at Jarrahdale, and an alumina refinery was built at Kwinana in Western Australia with production of alumina beginning in late 1963. At the same time an aluminium smelter was established by this group at Point Henry in Victoria, with an initial capacity of 20,000 tons per annum. Production of aluminium metal at this plant began in March, 1963, from imported alumina, and plant capacity was later increased to 40,000 tons per annum.

In February, 1963, it was announced that leases for the mining of bauxite would be granted to Gove Mining and Industrial Corporation Ltd., an Australian subsidiary of the Pechiney group. These leases are located in the "perimeter" area at Gove. The terms require the lessee to mine and export 10 million tons of bauxite over a period of 18 years; this operation will involve the construction of a port and the immediate expenditure of about £2 million. The lessee is required to spend £300,000, over a three-year period from the granting of the leases, in further exploration and in assessing the economic feasibility of a 500,000 tons per annum alumina plant. Within the same period the lessee is required to submit a plan for development of the leased areas, including erection of the alumina plant by the end of 1970.

In May, 1963, the Commonwealth Government announced its decision to cancel the lease over the central portion of the Gove deposits held by the British Aluminium Company Limited. Subsequent tenders for the mining leases of the inner bauxite deposits were still under consideration in May, 1965.

2. **Current Developments.**—Current developments in the Australian aluminium industry centre round the inner Gove leases, the alumina refinery being built at Gladstone (Queensland), the establishment of a power station at Anglesea (Victoria), and the expansion of the alumina refinery at Kwinana (Western Australia).

On 15th March, 1965, tenders closed for the development of the inner bauxite deposits at Gove. The Commonwealth Government's major policy objectives in respect of leases for the development of these deposits have been stated as: an immediate firm commitment for an alumina plant of at least 300,000 tons capacity in the Northern Territory, provided there is sufficient ore of satisfactory quality; provision for Australian equity participation in the project; clear demonstration of the availability of adequate market outlets and ability to organize and finance the project; and a willingness to establish an alumina smelter in the Northern Territory when this could be done on a demonstratively economic basis.

The construction of an alumina refinery at Gladstone by Queensland Alumina Ltd. is proceeding and is expected to be completed in 1967. Construction of a power station at Anglesea to provide power in the future for the Point Henry smelter is also proceeding. This power station, which is being built by Alcoa of Australia Pty. Ltd., will have a capacity of 150 MW and will cost £13 million. It is expected that the station will be completed in 1969. The Kwinana alumina refinery is being expanded at a cost of £7 million and capacity will be increased to about 400,000 tons per annum by 1967.

3. **Mine Production.**—The mineral source of aluminium is bauxite. Bauxite production, for Australia, in terms of alumina content, is shown for the years 1959 to 1963 in the following table.

ALUMINA: CONTENT OF BAUXITE PRODUCED

(tons)

State	1959	1960	1961	1962	1963
New South Wales	1,648	1,386	929	1,991	2,801
Victoria	1,991	2,306	2,035	2,300	1,161
Queensland .. ..	..	14,442	4,500	8,959	129,371
Western Australia	3,275	13,259	..	..	21,166
Australia	6,914	31,393	7,464	13,250	154,499

4. **Refinery Production.**—There is a refinery for the production of alumina and refined aluminium at Bell Bay on the River Tamar in Northern Tasmania. The location of this refinery was determined by the availability of large supplies of hydro-electric power. Production of alumina commenced in February, 1955, and production of refined aluminium in September, 1955. The capacity of the Bell Bay plant was increased to 35,000 tons in 1962 and was further increased to 52,000 tons in 1963. Another smelter with a total capacity of 40,000 tons was commissioned at Geelong (Victoria) in two stages in 1963. The following table shows the production of alumina and refined aluminium in Australia during the years 1959 to 1963.

ALUMINA AND REFINED ALUMINIUM: PRODUCTION, AUSTRALIA

(Source: Bureau of Mineral Resources)

(tons)

Product	1959	1960	1961	1962	1963
Alumina	26,900	29,801	29,468	33,806	46,350
Refined aluminium	11,370	11,655	13,204	16,152	41,263

§ 12. Uranium

1. **Historical.**—Uranium mineralization was first recorded in Australia at Carcoar in New South Wales during 1894. However, the only two significant occurrences of uranium in Australia known in 1944 were at Radium Hill and Mount Painter, both in South Australia. Radium Hill was discovered in 1906 and Mount Painter in 1910, and each was mined spasmodically for radium up to 1934, but both mines were finally forced to close down because of the complexity of the ores and the discovery of extensive reserves of pitchblende at Great Bear Lake in Canada.

The active search for uranium in Australia commenced in 1944 at the request of the United Kingdom Government, when uranium was urgently required for defence purposes. In the same year Commonwealth and South Australian Government geologists and geophysicists examined the Mount Painter and Radium Hill deposits. Tests proved these deposits to be of low grade and the project was abandoned. By 1950, however, experimental and exploratory work indicated that a suitable treatment process could be developed for Radium Hill ore.

In the meantime the Commonwealth, in 1947, sought the co-operation of State authorities in a general search for uranium. The Commonwealth Bureau of Mineral Resources investigated several radioactive occurrences, and assisted with technical advice to prospectors and manufacturers of relevant electronic equipment. From these beginnings the search for uranium ore expanded progressively as staff and funds became available.

In January, 1948, the Commonwealth Government instituted a system of tax-free rewards for discoveries of uranium ore. Rewards payable ranged to a maximum of £25,000 and were designed to encourage individual prospectors and small syndicates to take up the search. To encourage the mining of uranium ores approval was given in August, 1949, for the establishment for five years of a uranium ore buying pool in Australia. As a further incentive to uranium mining the Income Tax Assessment Act was amended during 1952 to exempt from tax profits earned by companies engaged in uranium mining and treatment, provided that no less than three-quarters of the voting power in the company concerned was controlled by persons resident in Australia. This exemption was later extended to income derived from uranium mining by taxpayers resident in Australia.

The discovery of uranium at Rum Jungle was made late in 1949. Prospecting and mining investigations were begun by the Bureau of Mineral Resources early in 1950, but the first high-grade ore-body was not discovered until December, 1951.

In March, 1952, the United States Atomic Energy Commission sent a party of experts to Australia at the invitation of the Commonwealth and South Australian Governments. Discussions took place regarding a basis for development of the Rum Jungle and Radium Hill fields. Agreement was reached on broad principles, and arrangements were made later for funds for the project to be provided by the Combined Development Agency—the joint Anglo-American uranium purchasing organization. The agreement with the Combined Development Agency was formally executed in January, 1953.

During August, 1952, the Commonwealth Government reached an agreement with Consolidated Zinc Pty. Ltd., for the development of the Rum Jungle area. On 1st January, 1953, Territory Enterprises Pty. Ltd., a wholly-owned subsidiary of Consolidated Zinc Pty. Ltd., took control of all work within the hundred of Goyder as agent for the Commonwealth Government. The exploration programme in this region was continued. Open-cut mining of the deposit began in September, 1954, and the treatment plant—the first uranium mill in Australia—was opened in the same month. Production of uranium oxide in the period September, 1954, to January, 1963, when the contract with Combined Development Agency expired, was in excess of 1,500 short tons. Since the completion of the contract the Commonwealth Government has continued production at the Rum Jungle plant.

While the Rum Jungle project was proceeding development was also occurring at Radium Hill. In 1952 a contract was signed by the Commonwealth Government, South Australian Government and the Combined Development Agency for the purchase of the uranium oxide concentrate output of Radium Hill by the Combined Development Agency. The agreement covered a seven-year period of full production. Full-scale mining commenced at Radium Hill in November, 1954, and concentrates were stockpiled until chemical extraction began at Port Pirie in August, 1955. This contract expired on 31st December, 1961, and the mine at Radium Hill and the treatment plant at Port Pirie were subsequently closed down in view of diminishing reserves of ore and the absence of a suitable market.

During 1954 there was intense activity in Australia in the search for uranium. In the previous year the Bureau of Mineral Resources had discovered uranium mineralization in the South Alligator River area, and further exploration and testing proceeded in this area. About the same time attention focused on a small area just south of the Mount Isa-Cloncurry road where a member of a small syndicate discovered the Mary Kathleen uranium deposit in June, 1954. Mary Kathleen Uranium Ltd. was formed, and in March, 1956, an agreement for the supply of uranium to the value of some £40 million was signed by Rio Tinto Company of Australia, Mary Kathleen Uranium Ltd., and the United Kingdom Atomic Energy Authority. Production of uranium oxide commenced during June, 1958. Following completion of the contract, mining operations were suspended late in 1963 and the plant and township placed on a care and maintenance basis. Production of uranium oxide during the term of the contract was about 4,500 short tons.

Two companies carried out large scale mining and treatment operations in the South Alligator River area. United Uranium N.L. opened a treatment plant at Moline in May, 1959, and subsequently completed a contract to the value of about £5 million. South Alligator Uranium N.L. opened a treatment plant in September, 1959, and subsequently completed a smaller contract to the value of approximately £1.15 million.

There has been little interest in the search for uranium deposits in recent years as a result of temporary world-wide over-supply, and early in 1961 the Australian Atomic Energy Commission announced that no applications for discovery rewards would be considered after 31st March, 1961.

2. **Mine Production.**—Uranium prospecting and mining in the Territories of the Commonwealth are open to private enterprise, subject to the *Atomic Energy Act 1953-1958* and the Ordinances of the Territories. The development of the uranium resources of the States is governed by the legislation and policies of the various State Governments. Commonwealth assistance, in the form of aerial, geological and geophysical services, is available to the States, and State Mines Departments inspect uranium prospects and test samples submitted by prospectors.

The Rum Jungle uranium mine will be kept in operation despite expiration of the original sales contract. Operations are being sustained at approximately previous levels, and the uranium oxide produced is available for sale overseas. The decision to continue operations was taken in the light of the fact that as well as being successful financially, operations at Rum Jungle have made a significant contribution to the development of the Northern Territory. The Commonwealth Government decided, therefore, that the profits it had made would be re-invested in the Northern Territory. Exploration is continuing to determine whether or not further ore bodies exist in the area. A recently discovered copper ore deposit is now being mined by a private company and the ore is being treated in the Rum Jungle plant on a toll basis.

§ 13. Other Metallic Minerals

1. **Tungsten.**—In recent years Tasmania has been the principal State producing tungsten ores, scheelite being mined on King Island in Bass Strait and wolfram being mined in association with tin ores in the north-east part of the State. Because of low world prices, scheelite production on King Island ceased in August, 1958, but production was recommenced in 1960. Low prices persisted and production in subsequent years was on a limited scale. The State Government ceased advances to the company producing scheelite on King Island on 31st May, 1964. Payments under the Act amounted to £36,029 in respect of 1964 production. The payments were to forestall a threatened mine closure.

Particulars of the production of tungstic oxide contained in scheelite and wolfram concentrates produced during the years 1959 to 1963 are shown in the following table.

TUNGSTIC OXIDE (WO₃): CONTENT OF CONCENTRATES PRODUCED (tons)

State	1959	1960	1961	1962	1963
CONTAINED IN SCHEELITE CONCENTRATE					
New South Wales	(a)	(a)	(a)	..	..
Western Australia .. ..	..	..	..	5	..
Tasmania .. ..	..	291	709	686	675
Australia	(a)	291	709	691	675
CONTAINED IN WOLFRAM CONCENTRATE					
New South Wales .. ..	..	..	(a)	..	..
Queensland .. ..	..	..	1	1	..
Tasmania	645	804	810	349	285
Northern Territory	8	16	16	1	..
Australia	653	820	827	351	285

(a) Less than one half ton.

2. **Manganese.**—In recent years Western Australia has been the principal State producing manganese ore, mined mainly from the Pilbara goldfield.

The following table shows the manganese content of metallurgical grade and the manganese dioxide content of battery and other grades of manganese ore produced during the years 1959 to 1963.

MANGANESE: CONTENT OF MANGANESE ORE PRODUCED
(tons)

Year	Metallurgical grade (In terms of manganese (Mn) content)				Battery and other grades (In terms of manganese dioxide (MnO ₂) content)					
	N.S.W.	Q'land	W. Aust.	Aust.	N.S.W.	Q'land	S. Aust.	W. Aust.	N.T.	Aust.
1959 ..	620	4,350	35,996	40,966	907	..	..	221	1,406	2,534
1960 ..	342	1,670	26,561	28,585	623	..	45	450	940	2,058
1961 ..	..	1,109	39,686	40,795	632	..	192	529	76	1,429
1962 ..	..	1,296	32,207	33,503	424	..	..	900	188	1,512
1963 ..	..	..	16,947	16,947	467	114	..	527	120	1,228

(a) Includes Victoria (12 tons).

The quantity of manganese dioxide recovered at the Risdon, Tasmania, refinery during 1963 amounted to 4,100 tons, of which 582 tons were sold for chemical processing and trace element fertilizer.

3. **Other.**—Other metallic minerals produced in Australia during 1963 were—antimony, beryllium, chromite, tantalite-columbite and small amounts of bismuth, molybdenite and platinum concentrate. Production data may be found on pages 1145–8.

§ 14. Coal

1. **Historical.**—A brief history of coal-mining in Australia may be found in previous issues of the Year Book (see No. 48, p. 1086).

2. **Joint Coal Board.**—For details of the powers and functions of this Board, which has functioned since 1947, see page 887 of Year Book No. 39.

3. **Coal Industry Tribunal.**—The Coal Industry Tribunal was established under the Commonwealth *Coal Industry Act* 1946 and the New South Wales *Coal Industry Act*, 1946 to consider and determine interstate disputes and, in respect of New South Wales only, intra-state disputes between the Australian Coal and Shale Employees' Federation and employers in the coal-mining industry. Following legislation in 1951, the Tribunal was vested with authority to deal with all interstate industrial disputes in the coal-mining industry, irrespective of the trade union involved, and, in the case of New South Wales, intra-state disputes also. The Tribunal consists of one person who may appoint two assessors nominated by the parties to advise him in matters relating to any dispute.

4. **Australia's Coal Reserves.**—The latest available estimates of the measured and indicated coal reserves of Australia are those prepared by the Mines Departments in the various States for the Coal Utilization Research Advisory Committee whose report was issued by the Department of National Development in 1962. This information is shown in the following table. It should be noted that reserves can only be included in the "measured and indicated" categories when sufficient exploratory and testing work has been completed.

ESTIMATED COAL RESERVES OF AUSTRALIA

(Source: State Mines Departments)

(million tons)

State	Type of coal	Measured and indicated	Inferred
New South Wales	Bituminous	(a) 3,000	(b)
Victoria	"	20	10
"	Brown	54,700	43,000
Queensland	Bituminous, sub-bituminous ..	950	(c)
South Australia	Sub-bituminous	130	..
"	Lignite	530	..
Western Australia	Sub-bituminous	274	1,603
Tasmania	Bituminous	(d)	(e) 137

(a) Recoverable reserves. (b) In excess of 30,000 million tons. (c) In excess of 10,000 million tons. (d) Very small; measured reserves in Tasmania amount to only several thousand tons. (e) Includes both indicated and inferred reserves.

5. Mine Production of Black Coal.—Production of black coal according to rank in the several States during the years 1960 to 1964 is set out in the following table. The tonnages produced by underground mining and opencut mining are also shown.

BLACK COAL: PRODUCTION

(tons)

Particulars	1960	1961	1962	1963	1964
NEW SOUTH WALES					
Total(a)	17,736,994	19,020,805	19,030,418	18,940,206	20,699,056
Underground mines	16,981,561	18,188,613	18,195,881	18,337,767	19,982,720
Opencut mines ..	755,433	832,192	834,537	602,439	716,336
VICTORIA					
Total(b)	76,972	66,363	56,721	50,481	48,118
QUEENSLAND					
Semi-anthracite	47,762	56,437	67,652	58,522	71,500
Bituminous	2,531,581	2,650,367	2,648,200	3,072,320	3,616,212
Sub-bituminous	70,769	75,362	82,989	113,317	121,123
Total	2,650,112	2,782,166	2,798,841	3,244,159	3,808,835
Underground mines	2,269,564	2,157,790	2,194,351	2,427,611	2,730,033
Opencut mines ..	380,548	624,376	604,490	816,548	1,078,802

NOTE.—For footnotes see next page.

BLACK COAL: PRODUCTION—continued
(tons)

Particulars	1960	1961	1962	1963	1964
SOUTH AUSTRALIA					
<i>Total(c)</i>	884,819	1,115,156	1,392,085	1,511,719	1,736,113
WESTERN AUSTRALIA					
<i>Total(d)</i>	922,393	765,740	919,112	902,495	987,420
Underground mines	798,185	506,306	598,502	600,933	644,107
Opencut mines ..	124,208	259,434	320,610	301,562	343,313
TASMANIA					
Semi-anthracite ..	2,333	2,142	1,649	2,081	1,529
Bituminous	295,337	253,686	270,693	205,199	149,632
<i>Total</i>	297,670	255,828	272,342	207,280	151,161
Underground mines	281,662	241,812	262,137	205,918	151,161
Opencut mines ..	16,008	14,016	10,205	1,362	..
AUSTRALIA					
Semi-anthracite ..	50,095	58,579	69,301	60,603	73,029
Bituminous	20,640,884	21,991,221	22,006,032	22,268,206	24,513,018
Sub-bituminous ..	1,877,981	1,956,258	2,394,186	2,527,531	2,844,656
<i>Total</i>	22,568,960	24,006,058	24,469,519	24,856,340	27,430,703
Underground mines	20,407,944	21,160,884	21,307,592	21,622,710	23,556,139
Opencut mines ..	2,161,016	2,845,174	3,161,927	3,233,630	3,874,564

(a) Bituminous coal from an opencut mine.

(b) Bituminous coal from underground mines.

(c) Sub-bituminous

(d) Sub-bituminous coal.

The principal producing centres during 1963 were as follows.

New South Wales. The principal deposits worked were in the vicinity of Newcastle, Cessnock and Singleton (northern field), Lithgow (western field), and Wollongong (southern field). Tonnages mined in 1963 were: northern field, 9,484,000 tons; southern field, 7,817,000 tons; and western field, 1,639,000 tons. All opencut coal was from the northern field.

The coal fields of New South Wales, predominantly bituminous, are the most important in Australia, in respect of the magnitude, quality and accessibility of reserves and the extent to which the deposits are being worked. Coal from the various seams differs in properties, coal from the Greta seam worked in the vicinity of Cessnock being particularly suitable for gas-making, while coal from the Victoria Tunnel, Dudley, Young Wallsend, and Borehole seams,

all of which are mined near Newcastle, have coking properties and are used in the steelworks. Coking coal is also obtained from the Bulli seam which is mined near Wollongong and in the Burratorang Valley. A multi-purpose coal is available in the Singleton area, and steaming coals are mined around Newcastle, Lithgow, Cessnock, and Wollongong.

Queensland. The principal producing centres were Ipswich, 1,801,765 tons; Bowen, 358,402 tons; Mount Morgan, 639,423 tons; Maryborough, 163,218 tons; and Clermont, 149,957 tons. Opencut methods were used on the Bowen, Clermont and Mount Morgan fields, and the total coal won by this means was 34 per cent. of total production.

6. 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 1959 to 1963. 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 opencut mining.

PRODUCTION OF BLACK COAL PER MAN-SHIFT: UNDERGROUND MINES
(tons)

Year	N.S.W.	Vic.	Q'land	W. Aust.	Tas.	Australia
PRODUCTION PER MAN-SHIFT WORKED AT COAL FACE						
1959	18.07	2.10	7.53	7.60	7.34	14.13
1960	20.64	2.16	8.37	8.12	7.64	16.08
1961	24.61	2.15	8.69	8.09	8.77	19.04
1962	25.92	1.94	9.25	8.90	11.04	20.13
1963	27.26	2.12	10.74	9.25	13.76	21.56
PRODUCTION PER MAN-SHIFT WORKED BY ALL EMPLOYEES						
1959	4.90	0.93	2.95	3.35	3.72	4.37
1960	5.39	0.94	3.19	3.62	3.87	4.81
1961	6.23	0.83	3.46	4.00	4.09	5.55
1962	6.57	0.78	3.57	4.32	4.71	5.84
1963	7.04	0.82	4.02	4.37	4.90	6.26

(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. 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
1959	12.47	12.50	10.36	7.64	10.47	11.08
1960	22.15	10.96	12.46	8.01	9.38	13.79
1961	22.29	11.43	14.91	9.63	10.79	14.60
1962	22.42	10.42	19.78	10.32	10.89	15.97
1963	18.86	15.43	21.91	12.52	6.81	18.17

7. **Mine Production of Brown Coal.**—The only production of brown coal in Australia is from Victoria, and production in recent years has been as follows:—1960, 14,967,202 tons; 1961, 16,279,168 tons; 1962, 17,137,436 tons; 1963, 18,456,838 tons; and 1964, a record of 19,033,000 tons. In the past ten years the output of brown coal has nearly doubled, and further increases are expected in the future as electricity generation projects proceed. Approximately 95 per cent. of brown coal production is from the State Electricity Commission's mines in the Latrobe Valley and the bulk of the brown coal is used in electricity generation.

8. **Value at the Mine in New South Wales.**—Particulars of the average values at the mine (or at screens or mine washeries 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 1959 to 1963. Saleable coal excludes miners' coal, coal consumed at the mines, and refuse, etc., removed by the use of hand-picking belts or at mine washeries. In calculating these values, most coal won by producer consumers is also excluded, and in respect of stocks of coal held at grass by the Commonwealth Government only actual sales have been taken into account. 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**

(s. d.)

Year	Northern District	Southern District	Western District	Average for State
1959.. .. .	52 5	54 4	47 6	52 7
1960.. .. .	51 11	55 11	48 1	52 8
1961.. .. .	51 5	55 1	46 9	52 3
1962.. .. .	51 3	52 9	44 4	51 2
1963.. .. .	48 7	52 3	39 3	48 11

9. **Values in New South Wales, United Kingdom and the United States of America.**—The following table shows for the years 1959 to 1963 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 between the countries concerned.

PRODUCTION VALUES OF COAL PER TON: NEW SOUTH WALES, UNITED KINGDOM AND UNITED STATES OF AMERICA

Country	1959	1960	1961	1962	1963
New South Wales—bituminous(a) ..	s. d. 52 7	s. d. 52 8	s. d. 52 3	s. d. 51 2	s. d. 48 11
United Kingdom—deep-mined(b) ..	83 5	86 1	90 10	91 9	91 8
United States of America— bituminous and lignite(c)	\$ 4.77	\$ 4.69	\$ 4.58	\$ 4.48	\$ 4.39

(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 sterling 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.

10. Consumption of Coal in Australia.—(i) *Black Coal*. Details of the production of black coal in Australia and its disposal are shown in the following table for the years 1959–60 to 1963–64.

BLACK COAL: PRODUCTION AND CONSUMPTION

('000 tons)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64
Production	21,223	22,947	24,427	24,301	26,872
Imports(a)	8	7	5	8	13
Total	21,231	22,954	24,432	24,309	26,885
Consumption as fuel—					
Electricity generation ..	7,398	7,420	7,869	8,293	9,066
Factories	3,166	3,103	2,844	2,779	2,894
Railway locomotives ..	2,031	1,885	1,653	1,542	1,454
Bunker coal(b)	176	151	126	123	150
Total	12,771	12,559	12,492	12,737	13,564
Consumption as raw material—					
For metallurgical coke ..	4,216	4,910	5,039	5,195	5,608
For other purposes	1,776	1,751	1,631	1,473	1,580
Total	5,992	6,661	6,670	6,668	7,188
Exports (oversea)	1,088	1,888	3,470	2,677	3,806
Mine washery refuse and dump losses(c)	982	1,072	1,341	1,278	1,584
Balance—unrecorded consumption, other purposes(d) ..	398	774	459	949	743
Grand Total	21,231	22,954	24,432	24,309	26,885

(a) For special purposes, interstate and intrastate vessels. Later figures include Tasmania. (b) Figures refer only to New South Wales coal consumed by oversea. (c) Prior to 1959–60, figures refer only to New South Wales. (d) Includes net change in stocks.

(ii) *Brown Coal*. The table following shows the production and consumption of brown coal and the production of briquettes in Victoria for the years 1959–60 to 1963–64.

BROWN COAL: PRODUCTION AND CONSUMPTION, VICTORIA

('000 tons)

Particulars	1959–60	1960–61	1961–62	1962–63	1963–64		
Production	14,101	15,723	16,729	17,766	18,683		
Consumption as fuel—							
Electricity generation ..	10,498	9,970	10,981	11,333	12,029		
Briquette factory						535	538
Other factories						1,248	951	860	894	894
Consumption as raw material—							
Briquette manufacture ..	2,396	4,764	4,862	4,980	5,192		
Balance(a)	-41	+38	+26	+24	+30		
Briquettes manufactured ..	975	1,807	1,820	1,805	1,88		

(a) The sign (+) indicates that the balance shown is available for other consumption and accumulation of stocks; the sign (-) indicates a reduction in stocks.

The State Electricity Commission of Victoria produces brown coal briquettes at Yallourn and Morwell, both situated on the brown coal deposits in Gippsland. The former commenced commercial production of briquettes in 1925, and initial output of the Morwell plant was in 1960.

In December, 1956, the Lurgi high pressure brown coal gasification plant at Morwell was opened by the Gas and Fuel Corporation of Victoria. This plant operates on briquettes supplied by belt conveyor from the State Electricity Commission's Morwell works, and produces town gas which is sent to Melbourne through 103 miles of pipeline.

11. **Exports.**—The quantities and values of the oversea exports of Australian coal and of bunker coal for oversea vessels for the five years 1959–60 to 1963–64 are shown in the following table. These shipments were made mainly from New South Wales ports.

COAL: OVERSEA EXPORTS AND BUNKER, AUSTRALIA

Year	Oversea exports(a)		Bunker coal for oversea vessels	
	Quantity	Value	Quantity	Value
	Tons	£	Tons	£
1959–60	1,087,844	4,326,810	8,117	25,380
1960–61	1,888,415	7,682,223	179	1,716
1961–62	3,469,552	13,611,122	37	410
1962–63	2,676,522	11,170,712	1,703	17,578
1963–64	3,805,747	16,230,845	86	1,162

(a) Excludes bunker coal.

New South Wales, in addition to meeting requirements within the State, supplies considerable quantities of coal to other States and for export overseas. Of the total of 20,416,000 tons produced in 1963–64, 1,142,000 tons (5.6 per cent.) were exported interstate and 2,995,000 tons (14.7 per cent.) were exported overseas. In 1963–64, 143,000 tons (0.7 per cent.) of New South Wales production was supplied for interstate, intrastate and oversea vessels.

12. **Production in Principal Countries.**—The following table shows the production of coal in the six principal countries and Australia and estimated world totals in 1962 and 1963.

COAL: MINE PRODUCTION IN SELECTED COUNTRIES

(Source: *Minerals Yearbook*, United States Department of the Interior)
(⁰000 tons)

Country	Black coal		Brown coal and lignite	
	1962	1963	1962	1963
United States of America	389,275	423,652	2,728	2,420
U.S.S.R.	375,966	383,840	132,868	137,788
China (Mainland)	(a) 375,000	(a) 267,957	(b)	(b)
United Kingdom	197,388	195,796	..	..
Germany, Federal Republic of	141,392	149,871	99,652	104,972
Poland	107,873	111,303	10,916	15,101
Australia	24,470	24,856	17,137	18,456
World Total(c)	1,959,197	1,901,773	677,621	710,755

(a) Includes lignite.

(b) Included with black coal.

(c) Estimated.

13. **Coke and Other By-products from Coal.**—(i) *Coke.* The production of metallurgical coke in Australia during 1963–64 was 2,915,005 tons, compared with 2,759,060 tons during 1962–63.

In addition to metallurgical coke referred to on page 1178 (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 1963-64 was 693,361 tons. To date there has been no production of petroleum coke at Australian oil refineries.

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 1959-60 to 1963-64. The figures exclude output of coke breeze, which amounted to 379,183 tons in 1962-63 and 417,949 tons in 1963-64.

COKE PRODUCTION: AUSTRALIA
(tons)

Industry	1959-60	1960-61	1961-62	1962-63	1963-64
Coke works	2,376,097	2,738,505	2,716,894	2,759,060	2,915,005
Gas works	758,668	764,626	761,355	694,575	693,361
Total	3,134,765	3,503,131	3,478,249	3,453,635	3,608,366

(ii) *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 1963-64 (1962-63 in parentheses) were: crude tar, 54,543,779 gallons (53,886,802 gallons); refined tar, 41,707,005 gallons (38,514,896 gallons); and ammonium sulphate, 85,488 tons (93,675 tons).

§ 15. Petroleum Exploration and Development in Australia

1. **Introduction.**—A comprehensive survey of developments in the search for oil up to the end of 1961 and early 1962 was presented on pages 1094-8 of Year Book No. 48 and continued in subsequent issues. A summary of developments in 1964 is given below.

2. **Developments in 1964.**—The year 1964 saw the entry of Australia into the ranks of the oil-producing countries. On 25th March, 1964, full scale pumping of oil from the Moonie field to Brisbane was started through the ten-inch Moonie-Brisbane pipeline. Production from the Moonie field is about 6,000 barrels a day (a barrel contains 34.97 gallons).

During 1964 gas fields were established in Queensland at Richmond, Bony Creek, Snake Creek and Pickanjinie near Roma, and at Rolleston. Oil was discovered at Alton, about 55 miles south-west of the Moonie field. In the Alton field all wells drilled so far have been completed as potential oil producers. Elsewhere, potential gas fields have been discovered at Gidgealpa in the north-east of South Australia, at Gilmore about 115 miles north-west of Charleville, Queensland, and at Mereenie about 140 miles west of Alice Springs in the Northern Territory. In Western Australia oil has been discovered on Barrow Island, 60 miles north-east of Onslow and gas has been found at Yardarino about eight miles east of Dongara. A map of Australia showing the main sedimentary basins and locations of oil and gas discoveries appears on page 1189.

During 1964 the combined expenditure on petroleum exploration and development by private enterprise and the Government was £25 million. Total expenditure to date on petroleum exploration and development is in the order of £150 million.

3. **Footage Drilled in the Search for Oil.**—The following table shows details of footage drilled in the petroleum exploration and development in Australia and Papua and New Guinea during the years 1960 to 1964.

**FOOTAGE DRILLED IN PETROLEUM EXPLORATION AND DEVELOPMENT
IN AUSTRALIA, PAPUA AND NEW GUINEA**

(Source: Bureau of Mineral Resources(a))

(feet)

State or Territory	1960	1961	1962	1963	1964
New South Wales	6,169	7,779	34,031	70,798	60,888
Victoria	14,682	22,439	42,635	28,028	41,595
Queensland	52,508	74,931	237,315	434,113	744,662
South Australia .. ..	..	8,945	40,836	65,956	83,959
Western Australia	14,003	13,712	38,400	41,423	99,972
Northern Territory	1,373	1,024	9,347	18,967	29,866
Australia	88,735	128,830	402,564	659,285	1,060,942
Papua and New Guinea ..	10,294	..	5,947	4,657	4,249

(a) Based on figures obtained from State Departments of Mines and the Northern Territory Mines Branch.

§ 16. Sulphur

1. **Mine Production.**—There is no production of elemental sulphur (brimstone) in Australia. However, while sulphur is itself non-metallic, considerable quantities are contained in certain metallic minerals produced. Large quantities of the lead and zinc concentrates produced are exported, and the sulphur they contain is not available for utilization in Australia.

The following table shows the sulphur content of the metallic minerals from which sulphur was subsequently recovered during 1963.

SULPHUR: CONTENT OF METALLIC MINERALS PRODUCED, 1963

(tons)

Mineral in which contained	N.S.W.	Q'land	S. Aust.	W. Aust.	Tas.	Australia
Lead concentrate ..	64,695	..	..	26	3,360	68,081
Lead-copper concentrate ..	..	..	..	..	2,624	2,624
Pyrite concentrate ..	..	17,010	32,813	25,226	9,537	84,586
Zinc concentrate ..	148,017	15,531	..	..	26,797	190,345
Total ..	212,712	32,541	32,813	25,252	42,318	345,636

The principal producing centres during 1963 were as follows.

New South Wales. All the sulphur produced was contained in lead and zinc concentrates produced at Broken Hill.

Tasmania. A pyrite concentrate was produced at Mount Lyell after the separation of the copper sulphide mineral. Recoverable sulphur was contained also in lead, lead-copper and zinc concentrates milled at Rosebery, but only that contained in zinc concentrate was recovered in Australia.

The following table shows for the years 1959 to 1963 the sulphur content of minerals from which sulphur was recovered.

SULPHUR: CONTENT OF METALLIC MINERALS PRODUCED

(tons)

State	1959	1960	1961	1962	1963
New South Wales	188,892	204,358	194,659	196,793	212,712
Queensland	17,464	24,612	20,515	27,151	32,542
South Australia	27,616	31,717	33,357	29,092	32,813
Western Australia	24,473	24,556	24,046	23,209	25,251
Tasmania	52,100	54,757	52,289	36,558	42,318
Australia	310,545	340,000	324,866	312,803	345,636

2. Production of Sulphuric Acid.—The principal use of sulphur is in the manufacture of sulphuric acid, which is produced in all States and in the Northern Territory. Most of the sulphuric acid is used for fertilizer manufacture, although small quantities are used in chemicals (including agricultural chemicals) and in metallurgy. Sulphur contained in lead concentrate is used for acid manufacture at Port Pirie and at Cockle Creek and sulphur in zinc concentrate is used at Risdon and also at Cockle Creek. Pyrite concentrate is used as a source of sulphur for acid manufacture at Cockle Creek, and at Melbourne, Brisbane, Adelaide, Perth and Fremantle. However, about half the sulphuric acid produced in Australia is made from imported elemental sulphur. The next table shows, for the years 1960 to 1964, the Australian production of sulphuric acid and the quantity of sulphur in the acid produced from various sources.

SULPHUR USED IN SULPHURIC ACID PRODUCTION: AUSTRALIA

(tons)

Item	1960	1961	1962	1963	1964
Production of sulphuric acid (mono)	1,109,751	1,137,501	1,229,256	1,315,562	1,542,606
Sulphur in sulphuric acid (mono) produced from—					
Sulphur (elemental)(a) ..	179,752	182,554	202,659	212,208	284,436
Zinc concentrate ..	42,946	52,423	65,342	72,059	85,448
Lead concentrate ..	21,573	22,440	20,247	24,643	27,221
Pyrite ..	104,406	100,520	97,927	108,692	99,897
Spent oxide ..	3,814	2,277	2,381	132	1,666
Other materials ..	10,396	11,749	13,410	12,455	5,040
Total Sulphur Content	362,887	371,963	401,966	430,189	503,708

(a) All imported.

§ 17. Non-metallic Minerals

1. **Asbestos.**—Production of asbestos has been confined mainly to crocidolite in Western Australia, principally at Wittenoom Gorge in the north-western part of the State. Deposits of chrysotile, located mainly at Nunyerry in Western Australia and at Baryulgil in New South Wales, are relatively small and widely scattered.

The production of chrysotile and crocidolite in Australia during the five years 1959 to 1963 is shown in the following table.

PRODUCTION OF ASBESTOS

(short tons of 2,000 lb.)

Year	Chrysotile			Crocidolite
	New South Wales	Western Australia	Australia	Australia(a)
1959	726	707	1,433	16,442
1960	1,072	69	1,141	14,472
1961	794	175	969	15,777
1962	866	59	925	17,491
1963	938	11	949	12,425

(a) Wholly produced in Western Australia.

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 addition, the statistics are incomplete, as some clays are outside the normal administrative control of some State Mines Departments. In the following table, the recorded production of the main types of clays produced in each State of Australia is shown for the year 1963.

PRODUCTION OF CLAYS, 1963

(tons)

Type	New South Wales	Victoria	Queensland	South Australia	Western Australia	Tasmania	Australia
Bentonite and bentonitic clay .. .. .	..	..	331	..	1,197	..	1,528
Brick clay and shale	1,987,381	1,345,427	222,651	407,247	439,419	146,885	4,549,010
Cement clay and shale	189,974	..	..	12,979	18,772	..	221,725
Damouritic clay .. .. .	..	..	..	492	..	..	492
Fireclay, n.e.i.	104,578	31,913	13,998	29,544	25,002	..	205,035
Fuller's earth	70	..	..	..	..	..	70
Kaolin	27,161	12,462	168	3,833	920	..	44,544
Stoneware clay	94,849	94,315	37,009	34,743	..	..	(a)260,916
Tile clay	88,649	64,972	n.a.	..	..	1,875	(a)155,496
Other clays	142	..	(b) 53,531	..	16,110	24,229	(a) 94,012

(a) Incomplete, see § 2, para. 1. Scope of Statistics, p. 1138.

(b) Includes tile clays.

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 St. Vincent Gulf 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 70 per cent. of the total Australian production of gypsum in 1963 came from that State, where the main centres of production are Kangaroo Island, Stenhouse Bay and Lake MacDonnell.

The building industry is the main user of the gypsum produced in Australia. The greatest 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. Substantial quantities of gypsum are also exported to Japan, Malaysia and the Philippines.

The production of gypsum in Australia is set out in the following table for the five years 1959 to 1963.

PRODUCTION OF GYPSUM

(tons)

Year	New South Wales	Victoria	South Australia	Western Australia	Australia
1959	101,143	81,101	296,816	37,731	516,791
1960	95,514	100,386	340,762	44,216	580,878
1961	97,250	80,223	387,289	45,145	609,907
1962	71,802	78,728	428,730	51,650	630,910
1963	62,247	114,503	497,886	50,808	725,444

4. **Limestone.**—Limestone is quarried in all States. It is used principally in the manufacture of cement, as a metallurgical flux in the steel industry, in the chemical industry, and in agricultural usages.

The recorded statistics of limestone production in each State of Australia are shown in the following table. Details of limestone produced for use as building or road material are not included.

PRODUCTION OF LIMESTONE(a)

('000 tons)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	Aust.
1959	2,056	1,120	(b)	1,017	(b)	230	5,305
1960	2,400	1,157	(b)	1,064	(b)	215	5,669
1961	2,576	1,243	(b)	1,105	(b)	204	6,146
1962	2,432	1,214	(b)	1,400	(b)	319	6,415
1963	2,524	1,228	(b)	1,574	(b)	345	6,721

(a) Includes shell and coral.

(b) Not available for publication, included in total for Australia.

5. **Magnesite.**—The major sources of magnesite at present are deposits at Fifield, Thuddungra and Lake Cargelligo in central New South Wales, and at Ravensthorpe in Western Australia. Most of the output of magnesite in Australia is used for refractory purposes, mainly in the steel industry, and small amounts are used in chemical, paper, glass, rubber, and ceramic industries. Approximately 32,000 tons of calcined magnesite were imported during 1963. Particulars of the production of magnesite in each State for the years 1959 to 1963 are set out in the table below.

PRODUCTION OF MAGNESITE

(tons)

Year	New South Wales	Queensland	South Australia	Western Australia	Australia
1959	59,777	..	790	19	60,586
1960	61,668	..	498	..	62,166
1961	88,511	..	659	9,625	98,795
1962	61,672	..	295	224	62,191
1963	49,909	..	542	6,495	56,946

6. **Salt.**—Salt is obtained in Australia from solar evaporation pans and dry salt lakes. Production satisfies local requirements and provides a considerable surplus for export, mainly to Japan.

SALT PRODUCTION

('000 tons)

Particulars	1959	1960	1961	1962	1963
South Australia	358	359	387	390	459
Australian total	468	463	509	536	582

7. **Other Non-metallic Minerals.**—Many other non-metallic minerals were produced in Australia during 1963, the most important being barite, diatomite, dolomite, felspar, gemstones (opals and sapphires), phosphate rock, silica, sillimanite and talc. Smaller quantities of garnet concentrate, foundry loam, lithium ores, mineral pigments, pebbles for grinding, perlite, pyrophyllite, rhodonite and serpentine were also produced. Production figures for the most important non-metallic minerals are given on pages 1145-6.

§ 18. Value of Production

1. **Local Value of Mining and Quarrying Production, 1963.**—The following table shows particulars of the local value of production for individual mining industry groups and quarrying for the year 1963. *These statistics are on an industry basis and not by product.* A more detailed reference to the value of production of mining and quarrying and other industries together with a brief explanation of terms used will be found in Chapter XXX. Miscellaneous.

MINING AND QUARRYING: LOCAL VALUE OF PRODUCTION(a), 1963

(£'000)

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining ..	6	428	245	..	13,362	..	1,136	..	15,177
Lead-silver-zinc mining ..	27,243	..	25,852	{ ..	(b)	(b)	..	..	53,234
Copper-gold mining ..	30	1	..	{ 1	424	(b)	1,696	..	8,980
Tin mining ..	255	10	1,163	..	405	1,107	40	..	2,980
Mineral sands mining ..	5,562	..	3,004	{ ..	(b)	..	..	..	8,694
Other metal mining ..	75	10	..	{ 5,411	1,981	(b)	1	..	8,691
Total, Metal Mining	33,171	449	30,264	5,412	17,139	8,457	2,873	..	97,765
Fuel mining—									
Black coal mining ..	45,419	295	9,533	1,448	1,985	421	..	..	59,101
Brown coal mining ..	..	8,078	..	..	..	..	..	..	8,078
Other fuel mining ..	..	..	29	..	..	..	..	..	29
Total, Fuel Mining ..	45,419	8,373	9,562	1,448	1,985	421	..	..	67,208
Non-metal (excluding fuel) mining—									
Clays(c) ..	1,340	1,277	87	339	184	54	..	..	3,281
Gypsum ..	128	88	..	592	51	..	..	..	859
Limestone ..	1,416	606	(b)	1,213	(b)	(b)	..	..	4,349
Salt ..	..	(b)	(b)	918	(b)	..	..	..	1,162
Other non-metal (excluding fuel) mining(c) ..	721	(b)	58	1,478	1,119	(b)	..	..	3,394
Total Non-metal (excluding Fuel) Mining ..	3,605	2,120	892	4,540	1,493	395	..	..	13,045
Total, All Mining ..	82,195	10,942	40,718	11,400	20,617	9,273	2,873	..	178,018
Construction material quarrying(c) ..	10,481	9,478	1,324	5,704	1,767	879	367	323	30,323
Total, All Mining and Quarrying ..	92,676	20,420	42,042	17,104	22,384	10,152	3,240	323	208,341

(a) Value of output or selling value of products at the mine or quarry. (b) Not available for publication, included in total for Australia. (c) Incomplete; see § 2, para. 1. Scope of Statistics, p. 1138.

2. Local Values, 1959 to 1963.—In the following table the local value of mining and quarrying production is shown by States and Territories.

MINING AND QUARRYING: LOCAL VALUE OF PRODUCTION(a)

(£'000)

Year	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T. and A.C.T.	Aust.
1959 ..	71,090	14,935	33,329	13,209	21,787	7,639	2,996	164,985
1960 ..	79,641	16,267	37,608	13,952	22,166	8,067	3,539	181,240
1961 ..	78,171	b 20,027	32,220	15,912	22,496	7,959	3,366	180,151
1962 ..	79,964	b 20,008	37,099	15,387	23,245	8,903	2,963	187,569
1963 ..	92,676	b 20,420	42,042	17,104	22,384	10,152	3,563	208,341

(a) Value of output or selling value of products at the mine or quarry. (b) Not comparable with years prior to 1961 owing to extension of coverage of quarrying activities.

3. Net Value of Mining and Quarrying Production.—The following table shows particulars of the net value of production for individual mining industry groups and construction material quarrying for the year 1963.

MINING AND QUARRYING: NET VALUE OF PRODUCTION(a), 1963
(£'000)

Industry	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Metal mining—									
Gold mining	3	(b)	(b)	..	8,854	..	966	..	10,298
Lead-silver-zinc mining	22,638	..	(b)	..	1	(b)	..	..	42,439
Copper-gold mining ..	21	..	(b)	(b)	253	(b)	1,295	..	5,373
Tin mining	212	9	883	..	289	804	29	..	2,226
Mineral sands mining ..	4,159	..	(b)	..	(b)	..	..	..	6,168
Other metal mining ..	65	(b)	(b)	(b)	1,530	(b)	1	..	7,266
Total, Metal Mining	27,098	310	21,926	(b)	(b)	5,878	2,291	..	73,770
Fuel mining—									
Black coal mining ..	34,483	209	(c) 7,760	(b)	(b)	343	..	..	d 45,629
Brown coal mining ..	..	7,339	..	..	..	..	..	..	7,339
Total, Fuel Mining ..	34,483	7,548	(c) 7,760	(b)	(b)	343	..	..	d 52,968
Non-metal (excluding fuel) mining—									
Clays(e)	1,053	1,198	73	309	130	47	..	..	2,810
Gypsum	92	69	..	(b)	(b)	..	..	..	690
Limestone	1,029	378	(b)	1,052	(b)	(b)	..	..	3,204
Salt .. ..	..	(b)	(b)	757	(b)	..	..	..	(f) 978
Other non-metal (excluding fuel) mining (e)	619	(b)	50	(b)	(b)	(b)	..	..	2,596
Total, Non-metal (excluding Fuel) Mining ..	2,793	1,794	571	3,986	822	312	..	..	10,278
Total, All Mining ..	64,374	9,652	30,257	9,879	14,030	6,533	2,291	..	137,016
Construction material quarrying(e) ..	10,481	7,174	717	4,928	1,319	700	252	211	25,782
Total, All Mining and Quarrying ..	74,855	16,826	30,974	14,807	15,349	7,233	2,543	211	162,798

(a) Local value (i.e. value of output at mine or quarry) 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 in total for Australia. (c) Includes other fuel mining. (d) Includes other fuel mining in Queensland. (e) Incomplete; see §2, para. 1. Scope of Statistics, p. 1138. (f) No allowance has been made for cost of power, fuel, light and materials and stores used by the salt industry in Victoria as particulars are not available.

4. Net Value of Production, 1959 to 1963.—In the following table the net value of mining and quarrying production and the value per head of population are shown by States and Territories.

MINING AND QUARRYING: NET VALUE OF PRODUCTION(a)

Year	N.S.W.	Vic.	Q'land	S.A.	W.A.	Tas.	N.T. and A.C.T.	Aust.
NET VALUE OF PRODUCTION (£'000)								
1959	56,331	12,101	24,481	10,698	14,765	5,398	2,381	126,155
1960	63,214	13,158	27,460	11,404	15,444	5,476	2,871	139,027
1961	60,684	(b)16,479	23,434	13,103	15,553	5,203	2,789	137,245
1962	62,609	(b)16,197	29,003	13,207	16,122	6,117	2,259	145,514
1963	74,855	(b)16,826	30,974	14,807	15,349	7,233	2,754	162,798

NET VALUE OF PRODUCTION PER HEAD OF POPULATION
(£)

1959	14.8	4.3	16.6	11.5	20.6	15.7	31.9	12.4
1960	16.3	4.5	18.3	11.9	21.2	15.6	35.5	13.4
1961	15.4	(b) 5.6	15.4	13.4	20.9	14.6	31.4	13.0
1962	15.6	(b) 5.4	18.7	13.2	21.1	16.9	23.3	13.5
1963	18.3	(b) 5.4	19.7	14.5	19.6	19.8	25.7	14.8

(a) Local value i.e. value of output at mine or quarry, less cost of power, fuel, light and other materials and stores used; depreciation and maintenance costs have not been deducted. (b) Not comparable with years prior to 1961 owing to extension of coverage of quarrying activities.

5. Local Value of Minerals Produced, 1959 to 1963.—Particulars of the values of minerals (mine and quarry products) produced are shown in the following table. The values represent the selling value at the mine or quarry of minerals produced during the years concerned.

LOCAL VALUE OF MINERALS PRODUCED: AUSTRALIA
(£'000)

Mineral	1959	1960	1961	1962	1963
METALLIC MINERALS					
Copper ore, concentrate, etc.	21,165	25,439	21,249	24,302	25,338
Gold ore, concentrate, other forms, etc.	15,853	15,870	15,859	15,627	14,062
Iron ore	4,633	4,844	5,899	5,325	6,100
Lead and lead-silver ore and concentrate, lead-copper concentrate, etc.	21,477	20,396	16,933	19,548	28,160
Manganese ore	626	329	427	480	246
Pyritic concentrate	1,068	1,136	1,252	1,115	778
Rutile concentrate	3,838	3,639	3,314	3,519	5,781
Tin concentrate	2,043	1,940	2,786	2,834	2,892
Tungsten concentrates	410	940	1,033	599	820
Zinc ore and concentrate	4,888	7,730	5,295	4,555	8,234
Zircon concentrate	1,008	972	1,267	1,291	1,775
Other metallic minerals	512	575	769	947	3,568
<i>Total, Metallic Minerals</i>	<i>77,521</i>	<i>83,810</i>	<i>76,083</i>	<i>80,102</i>	<i>97,754</i>
FUEL MINERALS					
Coal, black	49,211	55,201	57,081	59,539	59,101
Coal, brown	6,123	6,845	7,722	7,841	8,078
Other fuel minerals .. ..	..	..	n.a.	n.a.	29
<i>Total, Fuel Minerals</i>	<i>55,334</i>	<i>62,046</i>	<i>64,803</i>	<i>67,380</i>	<i>67,208</i>
NON-METALLIC (EXCLUDING FUEL) MINERALS					
Total, Non-metallic (excluding Fuel) Minerals	10,533	10,843	11,494	12,160	13,019

NOTE.—For footnotes see next page.

LOCAL VALUE OF MINERALS PRODUCED: AUSTRALIA—*continued*
(£'000)

Mineral	1959	1960	1961	1962	1963
CONSTRUCTION MATERIALS(a)					
Total, Construction Materials	21,597	24,541	(b) 27,771	(b) 27,927	(b) 30,360
TOTAL					
Total, All Minerals and Construction Materials	164,985	181,240	180,151	187,569	208,341

(a) Incomplete owing to difficulties of coverage. See § 2, para. 1. Scope of Statistics, p. 1138.
(b) Not comparable with years prior to 1961 owing to extension of coverage in Victoria.

NOTE.—Particulars of the value of uranium concentrate produced are not available for publication and have been excluded from the table above.

Owing to the necessity of classifying individual mines according to the principal mineral produced, the values in the table on page 1185 for mining industry groups differ slightly in some cases from totals of the corresponding groups of mine products shown in the table above.

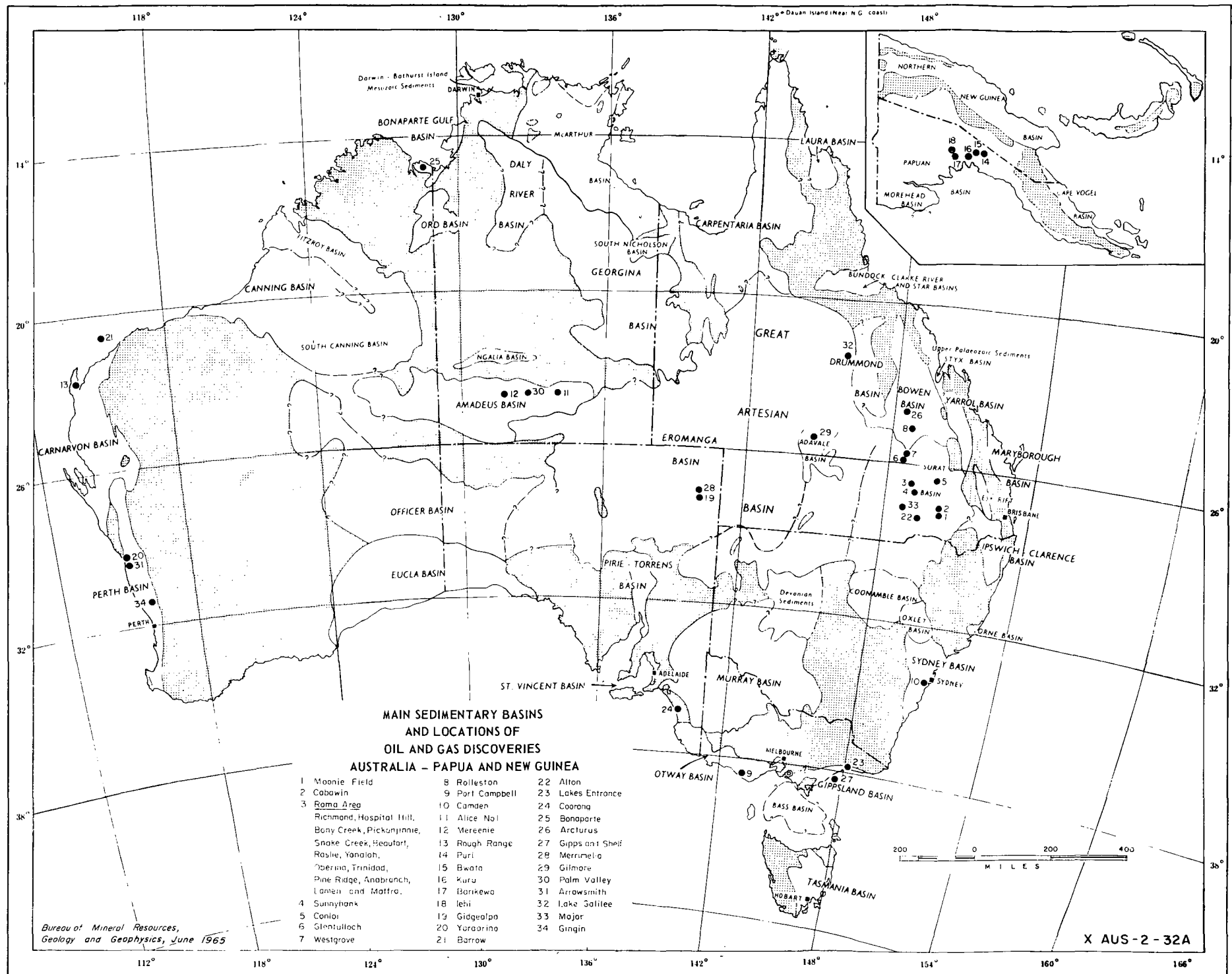
§ 19. Oversea Trade in Minerals and Mineral Products

Particulars of the quantity and value (£A. f.o.b. port of shipment) of the principal mineral and mineral product items imported into and exported from Australia during the years 1961 to 1963 are shown in the following table.

IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS: AUSTRALIA

Item	Quantity			Value (£A.'000 f.o.b.)		
	1961	1962	1963	1961	1962	1963
IMPORTS						
Alumina tons	(a)	(a)	54,486	(a)	(a)	1,825
Aluminium, refined ingots	16,141	31,389	12,115	3,883	7,443	2,764
Asbestos short tons	36,901	39,105	36,628	2,310	2,437	2,106
Gold, unrefined bullion(b) fine oz.	146,278	132,957	161,849	2,283	2,074	2,525
Ferro-alloys tons	55,959	16,218	28,878	4,195	1,296	2,488
Petroleum oils—						
Crude '000 gals.	2,837,372	2,976,789	3,286,617	66,455	66,675	74,160
Enriched crude "	404,861	411,683	572,164	11,831	11,692	13,728
Kerosenes "	110,906	103,176	89,231	5,673	5,403	4,838
Lubricating oil "	50,117	52,296	53,524	7,208	7,216	7,385
Gasolenes and solvents "	190,245	234,186	253,934	10,284	13,093	14,192
Phosphate rock '000 tons	1,766	1,721	1,762	4,768	4,484	5,354
Sulphur tons	182,052	229,195	222,527	1,920	2,389	3,152
Tim, refined "	778	1,778	1,751	836	1,993	1,862
Titanium oxide (pigments)	5,139	5,947	5,086	1,017	1,144	1,006

NOTE.—For footnotes see next page.



IMPORTS AND EXPORTS OF PRINCIPAL MINERALS AND MINERAL PRODUCTS: AUSTRALIA—*continued*

Item	Quantity			Value (£A.'000 f.o.b.)		
	1961	1962	1963	1961	1962	1963
EXPORTS(c)						
Coal tons	2,850,307	2,909,169	3,174,773	11,505	11,694	13,337
Copper—						
Ore and concentrate "	107,234	78,983	30,937	6,470	4,984	2,051
Ingots, pigs (refined) "	23,073	16,497	24,698	6,698	4,827	7,064
Rolled, drawn and extruded shapes "						
tons	2,029	3,270	5,049	769	1,188	1,907
Gold, refined fine oz.	1,099,701	314,996	472,132	17,265	4,932	7,389
Iron and steel—						
Pig iron tons	296,050	157,502	132,798	6,588	3,514	2,645
Ingots, blooms and slabs "	86,860	97,950	31,899	3,102	3,210	1,028
Tinplate "	16,644	25,238	68,200	1,338	2,134	4,767
Scrap "	223,320	138,977	334,351	3,957	1,967	3,965
Lead—						
Ore and concentrate(d) "	86,268	109,058	121,983	4,590	5,596	6,714
Lead-silver bullion "	46,089	76,014	76,482	4,476	6,212	6,693
Pig "	145,174	197,049	174,988	11,382	13,199	13,244
Opals .. .. . "	..	..	..	1,404	2,106	2,697
Petroleum oils—						
Gasolenes and solvents ..'000 gals.	63,214	32,073	51,752	3,635	2,131	2,867
Kerosenes "	43,464	20,710	25,327	2,438	1,254	1,552
Automotive distillate "	139,311	165,262	123,656	6,884	8,288	6,289
Residuals and heavy distillates "	238,318	350,661	384,816	8,096	10,376	11,551
Rutile concentrate tons	99,652	117,291	154,508	3,207	3,629	5,316
Zinc—						
Ore and concentrate "	276,109	255,209	260,421	5,056	4,072	4,366
Refinery type shapes "	46,472	91,215	96,755	4,482	7,459	8,557
Zircon concentrate "	140,333	131,843	179,697	1,723	1,645	2,177

(a) Not recorded separately. (b) Includes gold contained in matte. (c) Includes re-exports.
 (d) Includes lead-copper concentrate.

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 1963 and their principal metallic content as estimated by assay.

**PRINCIPAL METALLIC CONTENTS OF SPECIFIED ORES AND CONCENTRATES,
ETC., EXPORTED FROM AUSTRALIA DURING 1963**

Ores and concentrates, etc.	Quantity exported	Metallic contents—estimated from assay						
		Copper	Gold	Lead	Silver	Tin	Tungstic oxide	Zinc
		tons	tons	fine oz.	tons	fine oz.	tons	tons	tons
Copper—								
Ore and concentrate ..	30,937	7,330	23,078	..	156,175	5	..	..
Copper-lead dross and speiss	5,763	844	..	3,970	355,572	..	..	..
Other slags and residues	6,618	1,379	3,831	3	17,115	17	..	5
Blister	464	461	278	..	2,041	..	..	..
Matte	502	220	5	..	167	14,779	..	..
Precipitate	1,417	739	..	..	..	..	..	..
Lead—								
Ore and concentrate(a)	121,983	1,278	23,491	85,613	2,301,530	..	..	7,117
Slags and residues ..	2,896	90	..	1,099	6,812	73	..	29
Lead-silver bullion ..	76,482	..	..	75,994	5,122,294	..	..	..
Tin concentrate	91	..	..	..	..	44	..	..
Tungsten—								
Scheelite ore and con- centrate	739	..	..	..	..	..	513	..
Wolfram ore and con- centrate	337	..	..	..	..	..	242	..
Zinc—								
Ore and concentrate ..	260,421	..	..	1,993	124,612	..	..	133,495
Slags and residues ..	5,793	..	..	..	..	..	..	4,236
Total Metallic Con- tents .. ..	..	12,341	50,683	168,839	8,100,930	139	755	144,882

(a) Includes lead-copper concentrate.

CHAPTER XXVII

DEFENCE

§ 1. Department of Defence

1. **Functions and Organization.**—(i) *Functions.* The functions of the Department of Defence include:—defence policy; joint Service matters and matters having an inter-departmental defence aspect; the financial requirements of defence policy and the allocation of the funds made available; the supply aspect of defence policy including the review of production programmes and capacity; important matters of policy or principle affecting the Defence Forces and their requirements, including the strength, organization and disposition of the forces, higher appointments in the Services, their weapons and equipment, and defence research and development.

(ii) *Organization, higher Defence machinery and the control of the joint Service machinery.* 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, the Defence Administration 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 Chairman of the Chiefs of Staff Committee; 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—the defence policy as a whole and the co-ordination of military, strategic, economic, financial and external affairs aspects of defence policy; matters of policy or principle and important questions having a joint Service or an inter-departmental defence aspect; and such other matters having a defence aspect as are referred to the Committee by or on behalf of the Minister for Defence.

The Chiefs of Staff Committee meets regularly for the discussion of technical military matters on a joint service basis, and is responsible in peace for the preparation of military appreciations and plans. The functions of the Defence Administration Committee are the regular review of the progress of the Defence Programme, the co-ordination or integration of Service activities where appropriate in the interests of improved efficiency and economy, and the improvement of methods and organization. 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.

In addition, the Defence Business Board furnishes advice on business matters of common interest to the three Services, or important subjects on which the collective advice of the Board is desired from the business aspect, with a view to promoting efficiency and economy in the execution of the Defence Programme. 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.

2. Basis of Current Defence Policy.—The basic aim of Australia's defence policy is to ensure the security of this country and of its island territories. This aim is pursued through a series of defence programmes which are designed to give progressive effect to the objectives of policy approved by the Government, and are capable of adjustment to meet the requirements of the strategic situation as it may change from time to time. Because of the increased strength which comes from mutual security, Australia participates in a policy of collective defence in south-east Asia, which is the area of primary defence interest to Australia. The collective security arrangements in which Australia participates are—SEATO, ANZUS and British Commonwealth arrangements for defence co-operation (*see also* Chapter XXIX. International Relations).

Although general or global war is considered unlikely except as a result of miscalculation, armed conflicts short of general war could develop at any time in areas of tension throughout the world. In south-east Asia there has been a deterioration in the strategic situation since 1963, and the range of likely military situations Australia must be prepared to face has increased. In these circumstances the main aim of Australian defence preparations is the continual improvement of the capability of the forces to make a prompt and effective contribution to any allied effort required in a limited war or insurgency situation in south-east Asia, while at the same time having the capacity for independent action to meet the initial shock of an emergency. Should the situation change and Australia itself be directly threatened, our collective defence arrangements would be of great importance in maintaining the security of Australia and its territories.

3. The Defence Programme.—(i) *Objectives.* The defence programme must be maintained at a level that will enable Australia to meet its regional and home defence responsibilities. In the present strategic circumstances emphasis is placed on progressively increasing our military capacity and preparedness by having both regular and citizen forces more readily available, and improving their strategic and tactical mobility. The forces are being extensively re-equipped with modern conventional weapons which are standard or compatible, as far as possible, with those used by United States forces with whom Australia is associated in defence arrangements.

(ii) *Navy.* The naval programme provides for the continuing modernization and development of the Royal Australian Navy into a well-balanced fleet with emphasis on anti-submarine capability. The Navy has in commission one aircraft carrier, four Type 12 frigates, three Daring class destroyers (including one on loan from the United Kingdom), one Battle class destroyer, six minesweepers, a fast transport and a fast fleet replenishment tanker together with support and training vessels. There are also several ships in reserve. Three Charles F. Adams class guided missile destroyers are being constructed in the United States. Two are scheduled for delivery in 1965 and the third in 1967. Four Oberon class submarines are being constructed in the United Kingdom to replace those which have been maintained on the Australia station for some years by arrangement with the Royal Navy. Deliveries are expected to commence in 1966. Two Australian-built Type 12 frigates have been ordered as the permanent replacement for H.M.A.S. *Voyager*. These will be fitted with up-dated equipment and the anti-submarine guided weapon Ikara, which has been designed and developed in Australia. An escort maintenance ship is being built in Australia and is expected to be completed in 1967. H.M.A.S. *Melbourne* is to be extensively modernized in 1967 and her fixed-wing aircraft replaced by Tracker anti-submarine aircraft. The Daring class destroyers *Vendetta* and *Vampire* are to be modernized, commencing in 1968, and fitted with Ikara. This weapon will also be fitted in the guided missile destroyers and Type 12 frigates. Construction of a fast fleet replenishment ship with some tanker capacity is expected to commence in 1966. Two additional minesweepers are to be obtained and are due in service in 1968. A coastal security force, for which five patrol craft are to be obtained is to be formed in Papua-New Guinea. A further nine patrol craft are being ordered for the R.A.N. In addition, a wide range of naval projects is being provided. These include support facilities for the Charles F. Adams destroyers, a missile firing range, development

of a submarine base and support facilities and provision for a submarine rescue vessel, replacement of harbour support craft and fleet boats, modernization of Wessex helicopters, and rehabilitation of the Manus Island oil fuel installations. The Navy personnel requirement by June, 1968, is 16,700. In addition, the Navy Emergency Reserve with a planned strength of 2,000 is being raised.

(iii) *Army*. The Regular Army is to be increased to an effective strength of 33,000 and a total strength of 37,500 by the end of 1966. To achieve this, compulsory selective service has been introduced. In the second half of 1965, 4,200 young men in their 20th year will be called up, and then 6,900 annually. Selective service trainees will serve for two years full time with the Regular Army followed by three years on the Reserve, and will be liable for oversea service. The field force organization is to be expanded with emphasis on a substantial increase in the combat element and high priority logistic units, and is to be adapted to provide more infantry battalions in a division and to give greater flexibility to meet requirements for cold and limited war situations. The new divisional re-organization will further improve the Army's air mobility and obtain maximum value from the increased availability of air transport support. A major unit is to be stationed in the Townsville area in North Queensland. The Special Air Service Regiment will be more than doubled in size. The target strength of the Citizen Military Forces is 35,000, and substantial changes in the organization are planned to create additional battalions. The Regular Army Emergency Reserve with a planned strength of 4,000 is being raised. The Pacific Islands Regiment will be increased to three battalions with a total strength of some 3,500 by June, 1968. In order to provide for the increasing strength of the Army, the construction of major accommodation programmes is being undertaken in Papua-New Guinea, Puckapunyal, Enoggera, Hols-worthy and Townsville.

Expenditure on Army equipment is to be increased substantially to £75 million during the period 1965-66 to 1967-68. Of this, £50 million will be spent in buying additional equipment similar to that already in service or on order. The remaining amount will purchase new equipment such as low level anti-aircraft weapons, air portable armoured fighting vehicles, new artillery weapons and combat surveillance equipment. Seventeen Sioux helicopters are to be delivered during 1965. These and the purchase of Caribou aircraft for the R.A.A.F. (seven additional) are part of the continuing programme for improving the tactical mobility of the Army.

(iv) *Air Force*. The operational units of the Royal Australian Air Force comprise three bomber squadrons, four fighter squadrons, two maritime reconnaissance squadrons, three transport squadrons, one surface-to-air missile squadron, one utility helicopter squadron and three control and reporting radar units. The fighter squadrons are being re-equipped with the supersonic Mirage III-O jet fighter, of which 100 have been ordered. Deliveries have commenced from combined Australian-French production. Twenty-four F-111A strike-reconnaissance aircraft have been ordered to replace the Canberra bombers and deliveries will commence in 1968. Eighteen Caribou short take-off and landing transport aircraft have been delivered and a further seven are on order. The twenty-four Iroquois utility helicopters ordered have been delivered. The squadron of Hercules C130A aircraft is to be supplemented by an additional medium range transport squadron equipped with twelve C130E aircraft. These are to be delivered in 1966. Ten Orion aircraft are to replace the Neptune P2E maritime reconnaissance aircraft. Seventy-five all-through jet trainers are to be procured. Ten dual Mirage training aircraft have been ordered and eight navigator-signaller training aircraft are to be obtained. Two new control and reporting radar units are being obtained and the third unit modernized. A network of modern operational airfields has been established and is being extended. This includes a second airfield in the Northern Territory at Tindal; construction of a new airfield at Boram near Wewak in New Guinea; and development of airfields at Nadzab and Daru and smaller airstrips between Daru and Boram. The airfields at Learmonth near North West Cape and at Cocos Islands are also to be developed. The personnel requirement of the R.A.A.F. by June, 1968, is 21,000. In addition, the Air Force Emergency Force with a planned strength of some 1,300 is to be raised.

(v) *Research and Development*. In this field Australia is making its principal contribution through the Long Range Weapons Project which is a joint effort with the United Kingdom. Australia also participates in the European Launcher Development Organization and is associated with the United States in many space and defence projects. The Australian executive authority in these matters is the Department of Supply.

(vi) *Financial.* Details of defence expenditure for 1963-64 and the allocation of the Defence Vote for 1964-65 are set out in the following table.

DEFENCE EXPENDITURE
(£'000)

Service or department	Maintenance, aid pro- grammes, etc.	Capital material requirements, machinery, plant and equipment	Capital buildings, works and acquisition of sites	Total expenditure
-----------------------	---	--	---	----------------------

DEFENCE EXPENDITURE, 1963-64

Defence	1,771	50	22	1,843
Navy	37,229	16,891	1,431	55,551
Army	59,773	14,828	4,433	79,034
Air	49,604	36,162	3,409	89,175
Supply	23,248	3,492	2,553	29,293
Other	5,342	188	36	5,566
Total	176,967	71,611	11,884	260,462

DEFENCE VOTE, 1964-65

Defence	2,946	138	128	3,212
Navy	42,352	24,068	2,792	69,212
Army	69,661	17,650	6,874	94,185
Air	54,843	28,251	6,921	90,015
Supply	27,190	3,243	2,611	33,044
Other	6,949	184	3	7,136
Total	203,941	73,534	19,329	296,804

(iii) *Personnel Strengths.* The personnel strengths of the Services at 31st March, 1965, are shown in the following table.

PERSONNEL STRENGTHS: SERVICES, 31st MARCH, 1965

Category	Navy	Army	Air Force	Total
Permanent Forces	13,366	(a) 23,313	17,361	54,040
Citizen Forces	3,830	27,559	808	32,197
Total Forces	17,196	50,872	18,169	86,237

(a) Excludes 1,193 Pacific Islanders.

4. *Changes in Defence Legislation.*—Under amendments made to defence legislation in 1964* the Citizen and Reserve Forces may be called out by proclamation for continuous full time service in a "Time of Defence Emergency". The particular circumstances giving rise to the proclamation of a time of defence emergency could be varied, but would occur in a situation where the Regular Forces needed the full-time support of the Citizen and Reserve Forces in hostilities short of general war.

**Air Force Act 1964, Defence Act 1964, National Service Act 1964 and Naval Defence Act 1964.*

The legislation also provided for the establishment of volunteer Emergency Reserves for the three Services. These Reserves provide a ready means of supplementing and reinforcing operational units and may be called out for continuous full-time service when the Governor-General considers it desirable to do so.

Provision was made in new defence legislation enacted in 1965 for the inclusion in the Permanent Military Forces of national servicemen who are obliged under the National Service Act as amended in 1964 and 1965 to render two years continuous full-time service in the Regular Army Supplement and three years part-time service in the Regular Army Reserve. The amendment also provided for extension of the liability to render continuous full-time service in time of defence emergency and in time of war. National Servicemen in common with all members of the Defence Force may be required to serve either within or beyond the territorial limits of Australia.

The amending legislation repealed the former provisions of the Defence Act under which persons called up for compulsory service in the Citizen Military Forces in time of war were not required to serve beyond the territorial limits of Australia unless they volunteered to do so. Liability for oversea service became mandatory for all persons called up for service in the Defence Force in time of war. The war-time powers of call-up for compulsory service were extended to apply to service in the Navy and Air Force as well as in the Army. New provisions dealing with registration, allotment and exemption from compulsory service in time of war were also enacted.

5. Australian Forces Serving Overseas.—Australia has participated with the United Kingdom and New Zealand in the Commonwealth Strategic Reserve in Malaya since it was first established in 1955. The strength of the Australian component normally serving with the Reserve is as follows:—Navy—two destroyers or frigates, with an annual visit by an aircraft carrier; Army—one infantry battalion and supporting units; Air Force—one light bomber squadron, two fighter squadrons and supporting units. At the request of the Federation of Malaysia, the Strategic Reserve continues to be stationed in Malaya to assist in border security operations against the communist terrorists. The Australian Government has also agreed, following a request by the Malaysian Government, to provide additional forces to the Strategic Reserve to assist Malaysian and British forces in the defence of Malaysia's territorial and political independence. Australian forces are now providing assistance in countering infiltration of insurgents into Malaysian territory, for engineering construction in the Borneo States, for helicopter support of the security operations against terrorists along the northern border of Malaya and some air transport and anti-aircraft defence support. In January, 1965, the Government decided that the Australian battalion in the Strategic Reserve should be made available for service in Borneo in rotation with other battalions. A Special Air Service squadron also has been sent from Australia for service in Malaysia, including Borneo.

In pursuance of its obligations under the SEATO Treaty, Australia has also deployed to Thailand, at the invitation of the Government of Thailand, a contingent of Sabre fighter aircraft. In response to an invitation of the Government of South Vietnam, a team of Australian Army instructors has been provided since 1962 to assist in training Vietnamese in jungle warfare, village defence and related activities. The present strength of the team is 100. A detachment of 6 Caribou transport aircraft, together with the R.A.A.F. personnel required to fly and maintain them, was provided in 1964. In April, 1965, the Australian Government also agreed to a request from the South Vietnamese Government to deploy an Australian battalion and supporting elements for combat service.

§ 2. Naval Defence

1. General.—Prior to 1901, naval defence systems were organized under the State Governments. Information regarding these systems is given in Year Book No. 2, page 1084. An outline of the development of Australian Naval policy is given in Year Books No. 3, page 1060, and No. 12, page 1012. An account of the building of the Australian Navy, its cost, the compact with the Imperial Government, and other details appears in Year Book No. 15, pages 921–3. The growth and the activities of the Royal Australian Navy during the 1939–45 War are shown in Year Book No. 36, pages 1023–7.

Under the provisions of the Commonwealth of Australia Constitution Act the Minister of State for the Navy administers the Department of the Navy. Under the *Naval Defence Act 1910-1964* the Royal Australian Navy is administered by the Naval Board. The Naval Board consists of the Minister as Chairman, four Naval Members, and the Secretary, Department of the Navy.

Strong links with the Royal Navy are maintained by a constant exchange of officers for extended tours of duty, and by a full exchange of information and ideas. A liaison staff is maintained by the Royal Australian Naval Representative, London, and by the Royal Navy in Australia. Advanced training and staff courses in the United Kingdom are provided by the Royal Navy for Royal Australian Navy officers.

A liaison staff is also maintained by the Royal Australian Navy in Washington and a comprehensive exchange of information is provided by this link. Staff courses in the United States are also attended by officers of the Royal Australian Navy.

The 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 along this meridian to 10° South, thence west to 78° East.

Western—from 10° South, 78° East, south along this meridian.

2. *Ships of the Royal Australian Navy.*—The following ships were in commission or in reserve in March, 1964.

In commission:—*Melbourne*—aircraft carrier; *Sydney*—fast troop transport; *Supply*—fast fleet replenishment tanker; *Anzac*, *Vampire*, *Duchess* and *Vendetta*—destroyers; *Stuart*, *Parramatta*, *Derwent*, *Yarra*, *Diamantina* (training) and *Gascoyne* (training)—frigates; *Kimbla* (trials)—boom defence vessel; *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe*—mine-sweepers; *Bass* and *Banks*—general purpose vessels; *Paluma* and *Moresby*—survey vessels.

In reserve: *Arunta* and *Tobruk*—destroyers; *Culgoa*, *Queenborough*, *Quickmatch*, *Quiberon* and *Barcoo*—frigates; *Kangaroo*, *Kara Kara*, *Kookaburra* and *Koala*—boom working vessels; *Sprightly* and *Emu*—fleet tugs.

3. *Ships' Service Outside Australian Waters.*—During the year ended March, 1965, H.M.A. Ships *Melbourne*, *Supply*, *Vampire*, *Vendetta*, *Duchess*, *Yarra*, *Parramatta*, *Derwent*, *Quiberon*, *Hawk*, *Gull*, *Ibis*, *Teal*, *Curlew* and *Snipe* served on the Far East Station as units of the Commonwealth Strategic Reserve with headquarters at Singapore. H.M.A. Ships *Sydney*, *Anzac* and *Diamantina* also made visits beyond the limits of the Australia Station.

4. *Fleet Air Arm.*—The Fleet Air Arm of the Royal Australian Navy is maintaining two front line squadrons embarked on the operational carrier H.M.A.S. *Melbourne*. This ship is fitted with an angled deck, steam catapult and mirror deck-landing sights. Training and support squadrons for H.M.A.S. *Melbourne's* Sea Venom jet all-weather fighter and ground attack aircraft and Gannet turbo-prop anti-submarine aircraft are based at the Naval Air Station H.M.A.S. *Albatross* at Nowra, New South Wales. Westland Wessex anti-submarine helicopters have been introduced into the Fleet Air Arm and are embarked on H.M.A.S. *Melbourne*. Training and support squadrons for the helicopters are also based at the Naval Air Station.

5. *Ship Construction and Repair.*—There are two naval dockyards, at Garden Island, New South Wales and at Williamstown, Victoria. Also, the dockyard at Cockatoo Island, which is operated by the Cockatoo Docks and Engineering Company Pty. Ltd. by agreement with the Commonwealth, carries out considerable naval work. All three dockyards are engaged on ship refitting for the Navy.

Included in the present ship construction plan is the building of two type 12 destroyer escorts at Cockatoo Island and Williamstown Dockyards, and a 15,000 ton escort maintenance ship at Cockatoo Island. Four submarines of the Oberon class are being obtained from the United Kingdom. In the United States three Charles F. Adams class destroyers are being built for the Royal Australian Navy at the DeFoe Ship Building Yard.

6. **Personnel.**—The authorized establishment strength of the Royal Australian Navy for 1964–65 is 14,300. At 31st March, 1965, the actual strength of the Permanent Naval Forces was 1,495 officers and cadets, and 11,871 ratings.

7. **Naval College.**—The Royal Australian Naval College, H.M.A.S. *Creswell*, is at Jervis Bay. The Naval College was established to provide trained officers for the R.A.N. Junior entry to the Naval College is at the age of 15 to 17 years, and senior entry at a maximum of 19 years. Subsequent training as midshipmen and sub-lieutenants is in ships of the fleet, at universities or technical colleges, and at the Royal Navy training establishments in the United Kingdom. In March, 1965, there were 134 cadet midshipmen under training.

8. **Direct Entry into Navy.**—To meet increasing requirements for officers, direct entries are accepted into the Royal Australian Navy. Short service commissions of seven years are granted on completion of training as seamen or aircrew officers to suitable applicants who have completed their secondary schooling and who are over 17 years of age and under 23 years for seamen and under 24 years for aircrew.

Limited opportunities exist for university undergraduates studying medicine, dentistry or engineering, to enter the R.A.N. and on successful completion of their studies to commence full-time service in the Navy. Fully qualified doctors, dentists, mechanical or electrical engineers, and instructors may also enter the R.A.N. directly if they are of the appropriate age.

9. **Training Establishments.**—H.M.A.S. *Cerberus* at Westernport, Victoria, is the main training establishment for adult ratings in the permanent naval forces, while several advanced training schools are established in Sydney, New South Wales. The period of initial engagement for ratings varies from nine to twelve years, and on completion ratings may re-engage for shorter periods up to the age of 50.

H.M.A.S. *Nirimba* at Quakers Hill, New South Wales, is the Naval school for apprentices. It provides secondary education, as well as technical training in trades, to boys aged 15 to 16 years. The school was established in 1956 to meet the R.A.N.'s increasing demand for highly skilled tradesmen. In March, 1965, there were 532 naval artificer apprentices under training.

H.M.A.S. *Leeuwin* at Fremantle, Western Australia, is the junior recruit training establishment. Entrants must be aged between 15½ and 16½ years. Training lasts one year and instruction is mainly academic, the remaining time being devoted to basic naval and disciplinary training. On completion of the course, ratings may proceed to technical and specialist courses. In March, 1965, there were 577 junior recruits undergoing training.

10. **Women's Services.**—The present Women's Royal Australian Naval Service was inaugurated in January, 1951. The authorized establishment of the W.R.A.N.S. for 1964–65 is 20 officers and 550 ratings; the numbers serving in shore establishments in March, 1965, were 13 officers and 517 ratings.

The Royal Australian Naval Nursing Service was reconstituted in November, 1964, and its strength in March, 1965, was 20 officers.

11. **Emergency Reserve.**—In November, 1964, approval was given to form the Royal Australian Naval Emergency Reserve to provide a readily available source of trained manpower which may be called out for continuous full-time service. The authorized establishments of this force is 2,000 officers and men. Members are required to complete thirteen days training annually and are paid an annual bounty.

12. **Citizen Naval Forces.**—The Citizen Naval Forces consist of the Royal Australian Naval Reserve Royal Australian Naval Reserve (Seagoing), R.A.N. Emergency List, Royal Australian Fleet Reserve, and Royal Australian Naval Volunteer Reserve. Members of the R.A.N.R. are the training reserve of the Citizen Naval Forces. They do weekly training and thirteen days' annual continuous training. Officers are commissioned and may serve until retiring age is reached. Ratings engage for periods of three years. Other reserves do not carry out part-time training, but members may volunteer for periods of annual continuous training. Special courses and service for long periods are available to selected reservists.

§ 3. Military Defence

1. General.—(i) *State Systems*. A detailed historical account of the Australian defence forces prior to federation appears in Year Book No. 2, pages 1075–80. See also Year Book No. 12, page 999.

The strength of the military forces of the States at 31st December, 1900 (the eve of federation), exclusive of cadets, reservists, and rifle club members, 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.

(ii) *Commonwealth Systems*. Under the terms of the Commonwealth of Australia Constitution Act, 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 a number of 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 re-establishment of the Military Board and the organization of Commands after the 1939–45 War, see Year Book No. 46 and earlier issues.

National Service Training was introduced in 1951 and suspended in 1959–60. In November, 1964, the Government announced that National Service Training was to be re-introduced as from June, 1965. The scheme provides for a period of two years full-time duty in the Regular Army followed by three years in the reserve.

2. Organization.—Army Headquarters is responsible for the policy and control of the Australian Military Forces. The Military Board consists of the Minister for the Army, President; the Chief of the General Staff; the Adjutant-General; the Quartermaster-General; the Master-General of the Ordnance; the Deputy Chief of the General Staff; the Citizen Military Forces Member; and the Secretary, Department of the Army. After the 1939–45 War Command Headquarters were established to implement Army Headquarters policy and to command and administer those units placed under their authority. Command Headquarters are established in the capital cities of Australia and Papua-New Guinea. The geographic extent of Commands is as follows.

Northern Command—the State of Queensland and a small part of northern New South Wales.

Eastern Command—the State of New South Wales, less those parts included in Northern, Southern, and Central Commands.

Southern Command—the State of Victoria and part of southern New South Wales.

Central Command—the State of South Australia, plus a portion of south-western New South Wales.

Western Command—the State of Western Australia.

Tasmania Command—the State of Tasmania.

Northern Territory Command—the Northern Territory.

Papua-New Guinea Command—the Territory of Papua-New Guinea.

The basic formation in the Army is the division. In December, 1964, the Government announced that the Pentropic Division would be reorganized into a Tropical Warfare Division, which would be based on nine infantry battalions. Command would be exercised through three task Force Headquarters which would command varying combinations of Arms and Services.

Although as at 31st March, 1965, the Field Force was in progress of reorganization, the regular element was organized as follows.

(a) In Australia, two Regular Army battle groups with a third in the process of being raised, and eight Citizen Military Forces battle groups. In addition, there were combat support and communication zone supporting units. Two pentropic division headquarters, one Regular Army/Citizen Military Force and one Citizen Military Force, enabled grouping of battle groups as pentropic divisions.

(b) A restricted Regular Army battalion in Malaysia as a part of the British Commonwealth Far East Strategic Reserve.

(c) A Regular Army anti-aircraft battery and an engineer construction group in Malaysia at the request of the Malaysian Government.

Regular Army Forces in Papua-New Guinea consist of two battalions of the Pacific Islands Regiment with a number of small supporting units.

3. **Personnel.**—The effective strength at 31st March, 1965, was—Australian Regular Army (including 1,193 Pacific Islanders and 722 Women's Services), 24,506; Citizen Military Forces, 27,559.

4. **Military Training Systems.**—(i) *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, Victoria, and redesignated the Staff College in conformity with other Commonwealth training establishments for training officers for command and staff appointments. The College was later moved to Queenscliff, Victoria, where it is at present situated. The course is held annually and is of twelve months duration. The normal intake is 55 students, and, on successfully completing the course, an officer is awarded the symbol "psc". The course is designed to train selected officers for appointments in all branches of the staff in peace and war, and to prepare them to assume, after experience, command and higher staff appointments.

Included in the 1966 course will be students from the United Kingdom, Canada, New Zealand, India, Pakistan, United States of America, Thailand, Malaysia and the Philippines. 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 Commonwealth of Nations, liaison is maintained with other Staff Colleges, and to this end there is also a reciprocal exchange of instructors between the United Kingdom and Australia. An instructor is also provided by New Zealand.

(ii) *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. The length of the normal course is four years. While at the College Staff Cadets are wholly maintained, and, in addition, receive payment increasing with each year of the course. 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.

(iii) *The Officer Cadet School.* The Officer Cadet School was established in 1951 at Portsea, Victoria, for the purpose of speeding up the production of junior regimental officers for the Australian Regular Army. Serving members of the Australian Regular Army, the Citizen Military Forces, and civilians between the ages of 18½ and 22½ years are eligible to apply for entrance. A special entry provides for candidates up to 24½ years. The course is of 44 weeks' duration, and, on graduation, cadets are appointed second-lieutenants in the Australian Regular Army. Graduates normally proceed to further training at the Army School of the Arm and Service to which they have been allotted before being posted to regimental duties.

(iv) *The Officer Training Unit.* An Officer Training Unit has been established at Scheyville, New South Wales, and will be responsible for the training of National Service officers.

(v) *The Women's Royal Australian Army Corps School.* The W.R.A.A.C. School, established in 1952 at Mildura, Victoria, moved to Mosman, New South Wales, in 1958. It has three wings, one whose primary task is the training of officer cadets for the W.R.A.A.C., one for the training of non-commissioned officers at all levels and for other special courses, and one which is a basic training wing. The officer cadets are selected from eligible applicants, who may be serving members between 19½ 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.

(vi) *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's 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.

(vii) *Other Schools.* Army 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. Courses at Army Schools are conducted for members of both the Australian Army and the Citizen Military Forces.

The following Army Schools have been established:—Jungle Training Centre, Armoured Centre, School of Artillery, School of Military Engineering, Transportation Centre, School of Military Survey, School of Signals, Infantry Centre, Army Intelligence Centre, Royal Australian Army Service Corps Centre, Royal Australian Army Medical Corps School of Army Health, Royal Australian Army Ordnance Corps School, Royal Australian Electrical and Mechanical Engineers' Training Centre, School of Music, and Air Support Unit (Army Component).

5. *Women's Services.*—In July, 1950, approval was given for the enlistment of women into the Australian Regular Army on a limited scale. Enlistment commenced into the Royal Australian Army Nursing Service in November, 1950, and into the Australian Women's Army Corps early in 1951. In February, 1951, the Royal Australian Army Nursing Service became a Corps and was designated the Royal Australian Army Nursing Corps (R.A.A.N.C.). During June, 1951, the Australian Women's Army Corps was redesignated the Women's Royal Australian Army Corps (W.R.A.A.C.). The Women's Services in the Australian Regular Army now comprise two Corps only, the Royal Australian Army Nursing Corps and the Women's Royal Australian Army Corps.

Women's Services are incorporated in the Citizen Military Forces, and one company of the Women's Royal Australian Army Corps is located in each Command excluding Northern Territory Command and Papua-New Guinea Command. Companies of the Royal Australian Nursing Corps are located in each Command excluding Northern Territory Command and Papua-New Guinea Command.

6. *The Australian Cadet Corps.*—The Australian Cadet Corps is a voluntary organization. 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 a foremost position in the scheme of national defence. The Australian Cadet Corps, however, does not form part of the Australian Military Forces. School Cadet units are raised at educational establishments throughout the Commonwealth and Papua and New Guinea, except in the Northern Territory. 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, cadet under-officers, warrant and non-commissioned officers, on an authorized establishment scale from within school units. School Cadet units may be, and in many cases are, affiliated with Citizen Military Force units.

The establishment of the Corps is 45,203 all ranks, and at 31st March, 1965, comprised 323 School Cadet units with a posted strength of 40,201, all ranks,

§ 4. Air Defence

1. *General.*—A statement regarding the preliminary steps taken in connexion with the development of air defence appears in Year Book No. 18, page 610, and one on the expansion and development and zones and operations of the Royal Australian Air Force during the 1939-45 War in Year Book No. 36, page 1027. Details of the current defence expansion as it affects the R.A.A.F. were outlined by the Prime Minister in his speech in the House of Representatives on 10th November, 1964.

2. **Higher Organization.**—(i) *General.* The Air Board is responsible to the Minister for Air for the control, organization and administration of the Royal Australian Air Force, and is constituted as follows:—Chief of the Air Staff, Air Member for Personnel, Air Member for Supply and Equipment, Air Member for Technical Services, and the Secretary, Department of Air.

Headquarters of the Royal Australian Air Force is in Canberra. A R.A.A.F. representative is located in London, and Air Attachés are located in Djakarta, Paris, Saigon and Washington.

(ii) *Commands.* The Air Board exercises command and control over R.A.A.F. units in Australia through two commands, namely:

Operational Command—responsible for the command of operational units and the conduct of their operations within Australia and its territories;

Support Command—responsible for the command of training, supply and servicing units; recruitment and individual training in the R.A.A.F.; and supply and servicing, including technical servicing of the R.A.A.F. in Australia.

The guiding principles of the command organization within Australia are to decentralize day-to-day operating activities as far as possible, to streamline the force, and make it as efficient as possible. The operational units overseas, working within the broad directives issued by the Air Board, comprise the R.A.A.F. component of the British Commonwealth Strategic Reserve located at Butterworth in Malaysia and units in Thailand and South Vietnam.

3. **Organization of Units.**—The organization of the Royal Australian Air Force includes the following types of formations and units:

Bases. Each command is established with the units necessary to carry out its allotted function. There is no fixed rule in relation to the number and types of units within each command as this depends upon the nature of its present and future responsibilities. Where possible, units having similar functions or requiring similar facilities are located together and the geographical locations are known as bases. While in general only units belonging to one command will be located on a particular base, it is sometimes necessary to locate units of both commands at one base.

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.

Flying Squadrons—bomber, fighter, transport, helicopter and maritime reconnaissance squadrons which undertake the operational flying and, in conjunction with operational conversion units, the operational flying training commitments of the R.A.A.F.

Operational Conversion Units—specializing in operational conversion training of aircrew for the bomber and fighter squadrons.

Aircraft Depots—specializing in major overhaul, etc., of aircraft and equipment and relieving flying units of these commitments.

Stores Depots—centrally located depots to which stores and equipment ordered by the R.A.A.F. are delivered for distribution to units.

Flying, Ground Training, Navigation and Radio Training Units—schools specializing in the aircrew and ground staff training required by the R.A.A.F.

Airfield Construction Squadron—specializing in the construction of R.A.A.F. aerodromes and associated buildings and works services.

Royal Australian Air Force Academy—the training college for officer cadet entrants to the R.A.A.F.

Telecommunications Units—responsible for the communications services of the R.A.A.F.

R.A.A.F. Staff College—trains specially selected R.A.A.F. officers for higher staff and command posts.

4. **Aircraft.**—The aircraft which are at present being used in the Royal Australian Air Force are: bomber squadrons—Canberra; fighter squadrons—Avon Sabre (the R.A.A.F. is currently re-equipping with Mirage III fighters); transport squadrons—Caribou, Dakota, Hercules, Metropolitan and Viscount; maritime reconnaissance squadrons—Neptune; utility helicopter squadron—Iroquois helicopters; training—Avon Sabre, Canberra, Dakota, Mirage, Vampire and Winjeel.

5. **Personnel.**—At 1st April, 1965, the authorized establishment was—Permanent Air Force, 18,426, and Citizen Air Force, 1,081; the enlisted strength was, Permanent Air Force, 17,361, and Citizen Air Force, 808; while the strength of the General Reserve was 11,222. The preceding Permanent Air Force figures include the Women's Royal Australian Air Force, which has an establishment of 895 and strength of 860, and the R.A.A.F. Nursing Service with an establishment of 80 and strength of 66.

§ 5. Department of Supply

1. **General.**—On 17th March, 1950, the Department of Supply was created to take over the functions of the former Department of Supply and Development, except those relating to the Bureau of Mineral Resources, Geology and Geophysics, which were transferred to the Department of National Development on that date. The Department of Supply and Development had been formed in April, 1948, to take over the munitions and aircraft activities of the Department of Munitions and the supply activities of the Department of Supply and Shipping. To these were added the design and inspection activities of the Department of the Army in February, 1950.

On 11th May, 1951, the munitions and aircraft production and the defence production planning activities of the Department were transferred to a newly created Department of Defence Production. The Department of Supply continued to exercise the remaining functions except shipbuilding, which was transferred to the Department of Shipping and Transport. In April, 1953, the control of materials used in producing atomic energy was vested in a newly created Australian Atomic Energy Commission, which was administered by the Minister for Supply until October, 1956, when it became the responsibility of the Minister for National Development. In March, 1958, responsibility for the production of aluminium was transferred to the Department of National Development. The Australian Aluminium Production Commission, the executive body appointed to carry out this function, became responsible to the Minister for National Development as from that date.

On 24th April, 1958, the Department of Defence Production was abolished, and the functions of that Department were re-transferred to the Department of Supply. References to those functions and to the activities of the various branches and establishments of the former Department of Defence Production are contained in Year Book No. 44, pages 1059–61. On 11th March, 1959, the design and inspection functions were re-transferred to the Department of the Army.

On 18th December, 1959, the Department assumed responsibility for the operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration. On 29th March, 1962, Australia became a foundation member of the European Launcher Development Organization, and the Department accepted responsibility for the test firing of the launching rocket for that Organization's communications satellite, using the facilities of the Woomera Rocket Range.

2. **Functions of the Department.**—The functions of the Department of Supply include the following.

Defence research and development, including the operation of the Joint United Kingdom—Australia Weapons Research Project, and Australian research and development through the Weapons Research Establishment, the Aeronautical Research Laboratories, the Defence Standards Laboratories and associated establishments.

Manufacture, acquisition, provision and supply of munitions (including aircraft) and miscellaneous goods and services required by the defence forces.

Arrangement of contracts for the supply of goods and the performance of services.

Operation and management of factories, workshops and undertakings concerned in the production of munitions (including aircraft), clothing, canvas-ware and other defence goods.

Operation and management of space tracking stations in Australia on behalf of the United States National Aeronautics and Space Administration.

Test firing of the launching rocket for the European Launcher Development Organization's communications satellite, using the facilities of the Woomera Rocket Range.

Acquisition, maintenance and disposal of strategic materials.

Planning and establishment of manufacturing facilities for the production of munitions and other defence goods.

Investigation and development of Australian sources of supply in connexion with defence.

Sale or disposal of surplus Commonwealth property other than land or buildings.

Provision of Commonwealth transport facilities outside the Australian Capital Territory and the Northern Territory.

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.

Provision of security services within the Department.

Arrangements for ascertaining costs and the control and limitation of profits in connexion with the production of munitions and other defence goods.

3. *Act Administered.*—The Minister for Supply administers the *Supply and Development Act 1939–1948*, except insofar as it concerns the building (*see also* Chapter XV., p. 536, of this volume), repair and maintenance of merchant ships and the building, extension, alteration, repair and maintenance of shipyards, drydocking and repair facilities for merchant ships.

4. *Research and Development Division.*—(i) *General.* The Research and Development Division, 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 Weapons Research Project. The Chief Scientist is also the Chairman of the Joint Project Board, which is responsible for the administration of the Joint Project undertaking. The headquarters of the Division is situated in Melbourne, and the following establishments are included in the Division:—(a) Weapons Research Establishment, Salisbury, South Australia; (b) Defence Standards Laboratories, Maribyrnong, Victoria, Finsbury, South Australia, and Alexandria, New South Wales; (c) Aeronautical Research Laboratories, Fishermen's Bend, Victoria.

(ii) *Weapons Research Establishment, Salisbury, South Australia.* This establishment, which occupies an area of about six square miles, includes Edinburgh Airfield, where accommodation is provided for a unit of the R.A.A.F., which carries out the experimental and other flying required. Extensive facilities have been provided for branches of British firms which have contracted with the British Ministry of Aviation to develop weapons systems or components.

The Establishment has four main sections, namely the Trials Wing, the Space Physics Wing, the Weapons Research and Development Wing and the Engineering Wing. The Trials Wing is concerned with the operation, development and instrumentation of the Woomera Range, also the planning, execution and assessment of trials. The Space Physics Wing undertakes the operation of United States satellite and space tracking stations throughout Australia and conducts research and development in support of the Range, including investigations into the characteristics of the upper atmosphere using sounding rockets. The Weapons Research and Development Wing is concerned primarily with Australian-initiated defence research, but assistance is also given with some phases of the Joint Project programme. The Engineering Wing provides the design and manufacturing effort required to support the work of the Establishment and the Range.

Testing ranges have been established at Woomera, which is approximately 280 miles north-west of Adelaide. A township, together with modern amenities such as hospital, school, kindergarten, community store, swimming pool and all sporting facilities, has been built at Woomera to accommodate the staff and their families. The population is approximately 5,300.

(iii) *European Launcher Development Organization (ELDO).* By virtue of the major facilities at Woomera for launching space vehicles and the associated technical skills, Australia has become a member of ELDO, which has been established with the object of developing a launching vehicle for placing satellites in orbit for peaceful purposes. Other members of ELDO are Britain, Belgium, the Federal Republic of Germany, France, Italy and the Netherlands.

(iv) *United States Space Projects.* Agreements have been signed by the Australian and United States Governments for a co-operative programme for the establishment and operation in Australia, for scientific purposes, of facilities for space vehicle tracking and data recording. Space tracking, telemetry and command stations have been established at Island Lagoon, near Woomera, at Carnarvon, Western Australia, and at Tidbinbilla, near Canberra, while other stations are in course of construction at Orroral Valley and Honey-suckle Creek which are both situated close to Canberra. A small mobile station has also been set up at Darwin. All these are an integral part of the world-wide network of tracking and data recording stations being established by the United States National Aeronautics and Space Administration to support its programme for manned space vehicles, scientific satellites and deep space probes.

(v) *Defence Standards Laboratories.* The broad function of these Laboratories is to provide a scientific service to the Armed Services, civilian defence, and the factories, branches and establishments of the Department of Supply. It also provides trained groups in specialist fields for which there is no counterpart elsewhere in Australia. This service covers problems arising in the provision and use of defence *matériel* and is given generally within the fields of chemistry, physics, metallurgy and engineering and, to a limited extent, in those of bio-chemistry and physiology.

(vi) *Aeronautical Research Laboratories.* The work of these Laboratories lies in the fields of: (a) aeronautics; (b) guided missiles; and (c) branches of engineering appropriate to the special facilities, resources, or experience resulting from (a) and (b). In particular it comprises aerodynamics, including wind tunnel, free flight model and actual flight testing; structures of aircraft and missiles; metals and other materials used in the construction of airframes and engines; engines of the air-breathing type used for the propulsion of aircraft or missiles; human engineering studies relating to the operation of aircraft and guided missiles; research and development related to Australian-initiated guided missiles; and operational assessment studies on devices and techniques employed or proposed for the defence of Australia.

5. *Production.*—(i) *Munitions.* The Department is responsible for the production of a wide range of munitions required by the Armed Services. Production is carried out substantially in Government factories, although some orders, mainly for components, are placed with private industry.

The following Government factories are currently in operation:—Ammunition—Footscray, Victoria; Explosives and Filling—Albion and Maribyrnong, Victoria; Mulwala and St. Marys, New South Wales; Ordnance—Maribyrnong, Bendigo and Port Melbourne, Victoria; Small Arms—Lithgow, New South Wales; Clothing—South Melbourne and Brunswick, Victoria.

The Ammunition Factory produces the complete round of small arms ammunition and also components for larger calibre gun ammunition, including empty cartridge cases, electronic and mechanical fuses, and primers. The Explosives Factories produce the various types of explosive compositions and propellants required for gun ammunition, rockets and guided missiles. The Filling Factory at St. Marys fills and assembles into complete rounds of ammunition (other than small arms ammunition) the empty components and materials supplied by the other munitions factories and by private industry.

The Ordnance Factories at Maribyrnong and Bendigo are equipped to produce heavy ordnance equipment, such as naval guns and gun mountings; large turbine gears; steel shell bodies; empty rocket motors for guided missiles; trailers and tank transporters; and other items requiring heavy engineering capacity. As well as work for the Services, the Bendigo Factory is producing equipment for projects of national importance, e.g. control equipment for the Snowy Mountains Hydro-electric Authority, components for marine diesel engines for Australian shipping, large heavy engineering items for the coal, cement and steel industries, and coining presses for the Royal Australian Mint.

The Port Melbourne Factory builds large marine diesel engines for the Australian ship-building industry. Major forgings and fabrications for these engines are produced at the Ordnance Factories at Maribyrnong and Bendigo.

The Small Arms Factory is equipped to produce the rifles and other small arms required by the Services. Current production is the 7.62-mm. automatic rifle, for which orders have also been received from overseas, and the 9-mm. carbine, which replaces the Owen as the infantry light machine gun.

The Clothing Factories make uniforms, clothing and canvas goods for the three Services and also for the Postmaster-General's Department and some other Commonwealth authorities.

(ii) *Aircraft and Guided Weapons.* (a) *Aircraft and Engines.* Production both in Government factories and in industry of military types of aircraft and aero engines and of other aircraft components required by the Royal Australian Air Force is administered by the Department of Supply. Planning of capacity and the negotiations of contractual arrangements concerning aircraft modification, repair and overhaul, and for the supply of spare parts and airborne equipment for the R.A.A.F., the R.A.N. and the Army are also functions of the Department.

The following factories are operated by the Department:—The Government Aircraft Factory at Fishermen's Bend, and the Final Assembly Workshops and Test Airfield at Avalon, Victoria; and the Airframe Repair Workshops at Parafield and Northfield, South Australia.

The current aircraft production programme at the Government Aircraft Factory comprises the French Mirage supersonic fighter for the R.A.A.F. and the Jindivik radio-controlled target aircraft, which has been or is being supplied to Britain, Sweden and the United States, as well as to the Weapons Research Establishment and the Royal Australian Navy.

Apart from the Government Aircraft Factory, the Commonwealth Aircraft Corporation Pty. Ltd. is the only major aircraft manufacturer in Victoria, and this company is currently producing the French Atar turbo-jet engine for the Mirage fighter and also some sections of the airframe.

Other major activities carried out in the Government factories or by various private contractors are the manufacture of airframe and engine spare parts; the overhaul, repair and modification of military aircraft and engines currently in service with the R.A.A.F., R.A.N. and Army; and the reconditioning and servicing of aircraft instruments and other ancillary equipment.

(b) *Guided Weapons.* The Government Aircraft Factory at Fishermen's Bend has become increasingly engaged in recent years in guided weapons development and production. The first production task undertaken at the Factory in the guided weapons field was the supply of the Malkara anti-tank missile to the British Army. This task is now virtually complete. The present concentration of activity is on Ikara anti-submarine missiles for the Royal Australian Navy. This project, which is entering the production stage, represents a combined effort by departmental establishments and industry.

(c) *Telecommunications.* The Department is responsible for the technical aspects of production of telecommunications and electronics equipment for the Armed Services and for certain other organizations such as SEATO and the Colombo Plan. All production is carried out by the electronics industry. Substantial orders have been placed on local industry for a wide range of telecommunications and electronics equipment. Some of the major projects are the development of pilot models of an improved man-pack transistorized receiver/transmitter for the Army; the manufacture of telegraph relay stations for the R.A.A.F.; the production of major sections of the Ikara weapons system for the R.A.N.; and wind-finding radar equipment for the Bureau of Meteorology. Development contracts are in progress for the local production of high-stability miniaturized electronic components such as sealed crystal holders, fixed and variable resistors, mica and tantalum capacitors and a quartz crystal oscillator.

6. *Contract Board.*—(i) *General.* Under the *Supply and Development Act 1939-1948* the Contract Board is the authority responsible for the arranging of contracts for the performance of services and the purchase of supplies for the Naval, Military and Air Forces of the Commonwealth, as well as for the Department of Supply. The Board is also responsible for the sale or disposal of all surplus or unserviceable Commonwealth goods approved for disposal. By arrangement, the Board also arranges purchases on behalf of other Commonwealth departments and authorities which desire to use its facilities.

(ii) *The Board and its Administrative Organization.* The Contract Board meets in Melbourne, and comprises representatives of the Departments of Supply, Navy, Army and Air. The Board's administrative organization is the Contracts and Disposals Branch. In each State other than Victoria there is a District Contract Board with an administrative organization similar to that of the Contract Board. The table following shows, in respect of the Contract Board organization, the purchases and realizations from disposals for the years 1962-63 and 1963-64.

**CONTRACT BOARD ORGANIZATION: PURCHASES AND REALIZATIONS
FROM DISPOSALS**

(£)

State	Purchases		Realizations from disposals	
	1962-63	1963-64	1962-63	1963-64
Contract Board, Victoria	33,876,845	46,767,230	1,253,181	1,659,296
District Contract Board—				
New South Wales	6,664,285	7,325,884	1,206,164	1,368,814
Queensland	931,855	1,346,935	339,588	353,878
South Australia	2,089,214	2,691,091	541,318	558,285
Western Australia	843,685	404,730	187,663	174,695
Tasmania	103,501	86,346	49,131	47,290
Total	44,509,385	58,622,216	3,577,045	4,162,258

7. **Defence Supply Planning.**—The central planning authority of the Department is the Planning Branch, whose principal functions are:—

- to study manufacturing capacity available for the Services' requirements in peace and war;
- to plan for and to assist in the development of additional production capacity;
- to plan the organization of industrial resources for defence production in war;
- to provide and administer stock of relevant materials and reserve pools of plant equipment and other requirements needed for rapid expansion of production in the event of war;
- to prepare and advance co-ordinated production programmes against Service orders and to analyse and interpret achievement against these programmes for the information of the Department and the Services;
- to provide advisory services in the field of instrumentation, machine tools, materials, and inspection to Government factories and contractors engaged in the production of munitions requirements;
- to administer the national stockpile;
- to administer oversea aid programmes allocated to the Department; and
- to undertake commercial sales.

A series of Industry Advisory Committees has been established to advise the Minister and the Department on the ability of industry to meet the Services' *matériel* requirements for mobilization and war. The Committees are:—Aircraft and Guided Weapons; Chemical; Electrical; Electronics and Telecommunications; Heavy Engineering; Light Engineering; Fibres; Textiles, Clothing and Cordage; Leather and Footwear; Machine Tools and Gauges; Materials; Rubber. Members of the Committees include industrialists of wide experience and the highest ability in their chosen fields.

8. **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 storage authority and the central transport authority for all Commonwealth Departments. It is the authority for the arrangement of furniture removals at departmental expense in all States, but not in the Northern Territory. It has agents in Darwin. It also operates a shipping and customs section and the England-Australia bulk air freight scheme for Commonwealth Departments.

On 30th June, 1964, the Branch had under its control land, buildings and works, vehicles, plant and equipment valued at £11,505,926, and 3,180,000 sq. ft. of storage space, as well as storage facilities for large quantities of chemicals, bulk liquids and explosives.

9. **Finance Branch.**—The total expenditure on Department of Supply activities during the year 1963-64 was £56,493,000, comprising £29,243,000 (net) from Parliamentary appropriations, and £27,200,000 from Trust Fund Accounts. The latter included expenditure of £6,338,000 for Stores and Transport and £19,352,000 in Government Munitions and Aircraft Factories.

CHAPTER XXVIII REPATRIATION

§ 1. General

The Repatriation Commission, established under the *Repatriation Act* 1920–1964, consists of three full-time members. It is responsible for the administration of the Repatriation Act and associated legislation, all matters of policy, and the general administration and overall supervision of the Repatriation Department. The central office is in Melbourne and there is a branch office, under the control of a Deputy Commissioner, in each State.

The principal functions of the Department are:—the payment of war and service pensions to eligible ex-service men and women and their dependants; the provision of medical treatment to ex-service men and women for injuries and illnesses caused or aggravated by their war service; the provision of medical treatment in certain circumstances to ex-service men and women who are suffering from injuries and illnesses not caused or aggravated by war service; and the provision of medical treatment to widows and dependants of deceased ex-servicemen whose deaths are due to war service.

Other functions of the Repatriation Department are outlined in a later section of this chapter (*see* § 5, General Benefits and Miscellaneous, pp. 1220–2).

Benefits are provided in respect of service, not only in the 1914–18 and 1939–45 Wars, but also in the Korea and Malaya operations, with the British Commonwealth Far East Strategic Reserve, and the Special Overseas Forces.

§ 2. War Pensions

1. **General.**—The first provision for the payment of war pensions to ex-servicemen and their dependants was made by the Commonwealth Parliament in the *War Pensions Act* 1914. This Act was repealed in 1920 by the *Australian Soldiers' Repatriation Act* 1920 (amended from 31st December, 1950, to the Repatriation Act). The main features relating to war pensions under the *Repatriation Act* 1920–1964 are set out in the following paragraphs.

(i) *Eligibility for Pensions.* Claims for eligibility for war pensions are determined in the first instance by a Repatriation Board in each State of the Commonwealth, and the Repatriation Act provides for a right of appeal from the determination of a Board. 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. Amendments to the Act in 1943 considerably widened the eligibility provisions, to the benefit, mainly, of members of the Citizen Military Forces who had not served outside Australia. These provisions are summarized as follows.

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.

In other cases where a member served only in Australia, incapacity or death to be pensionable must have been attributable to service.

There is a third ground applicable to all members except those with less than 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.

If, at any time after discharge, an ex-serviceman who served in a theatre of war becomes incapacitated 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.

(ii) *Rates.* The main classes of war pensions are the special (T.P.I.) rate, the general rate and the war widows' pension. These are not subject to a means test except where stated for certain classes of dependants.

The *special rate* of war pension is payable to those who are totally and permanently incapacitated and are unable to earn more than a negligible percentage of a living wage. The weekly rate is £14 5s., plus £2 0s. 6d. wife's allowance and 13s. 9d. for each child under 16 years.

The *general rate* of war pension is the rate payable to those who suffer war-caused disabilities but are not thereby prevented from working, although their earning capacity may be reduced. The actual pension payable is assessed in accordance with the degree of incapacity suffered. The maximum (100 per cent.) rate is now £6 a week. A wife and children under 16 years also receive pensions at rates according to the assessed degree of incapacity of the ex-serviceman, the maximum being £2 0s. 6d. for a wife and 13s. 9d. for each child.

The *war widows' pension* is paid to widows of ex-servicemen who died as a result of war service, and to their children under the age of 16 years. The weekly rates are: widow, £6; first child, £1 19s.; second and each subsequent child, £1 7s. 6d.

(iii) *Other dependants* of an ex-serviceman who is suffering from a disability due to war service may be granted pensions under certain circumstances. Such pensions are subject to a means test and are assessed in accordance with the degree of the ex-serviceman's incapacity. Except in the case of a widowed mother of an unmarried ex-serviceman, other dependants are required to prove dependence on the ex-serviceman.

(iv) *Allowances.* The following allowances are provided in addition to pension.

Domestic Allowance (£3 10s. *per week*). This is paid, in addition to pension, to a widow of an ex-serviceman whose death is due to war service, if she is 50 years of age; or is permanently unemployable; or has a dependent child under the age of 16 years, or a dependent child over 16 years being educated and not in receipt of an adequate living wage.

Attendants' Allowance (*maximum rate* £5 5s. *per week*). This allowance is paid, in addition to war pension, to certain classes of seriously disabled ex-servicemen, for example, war blinded, those who are paralysed, and certain double amputees.

Clothing Allowance. A clothing allowance is paid at various rates (3s. 9d. to 7s. 6d. *per week*) to an ex-serviceman who, as a result of war service, has lost an arm or a leg or, because of an injury to a limb, is required to use a surgical aid or appliance. An amount not exceeding £9 15s. in any one year is also payable to certain other war disabled ex-servicemen.

Sustenance Allowance. This allowance is paid where an ex-serviceman is prevented from following his normal occupation through treatment of a war-caused disability or while undergoing medical investigation. The rate payable is the same as the general (100 per cent.) rate pension.

Where an ex-serviceman is receiving in-patient treatment for a war-caused disability or is undergoing periods of essential convalescence immediately following discharge from hospital, a higher rate to bring the sustenance allowance up to the equivalent of the special (T.P.I.) rate is paid.

A wife and children under 16 years also receive pensions at the current general or special rate.

Recreation Transport Allowance. This allowance provides transport for recreation purposes and may be paid to an ex-serviceman who, as a result of war service, suffers certain amputations of the arms or legs or is seriously disabled to the extent that his powers of locomotion are negligible.

Other Allowances and General Assistance. These include re-establishment loans and allowances, funeral benefits, vocational training allowances for education and training of children, fares and allowances for loss of remunerative time in connexion with medical or pension purposes, and motor vehicle allowances for seriously disabled ex-servicemen.

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-servicemen or their dependants against a decision of a Repatriation Board or the Repatriation Commission that the incapacity or death of an ex-serviceman 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-serviceman 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 whose applications for a service pension had been refused on the grounds that they were not suffering from pulmonary tuberculosis or were permanently unemployable.

3. **Summary of War Pensions, 1963-64.**—The following table provides a summary of war pensions for the 1914-18 War, the 1939-45 War, the Korea and Malaya operations and the Far East Strategic Reserve.

WAR PENSIONS: SUMMARY, AUSTRALIA, 1963-64

Particulars	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
New claims granted	2,050	29,119	862	196	32,227
Restorations	217	760	15	..	992
Claims rejected(a)	1,678	6,113	271	58	8,120
Pensions cancelled or discontinued..	547	24,606	117	5	25,275
Deaths of pensioners	5,331	4,075	33	1	9,440
Number of pensions in force at 30th June, 1964	111,768	547,376	9,051	658	668,853
Annual pension liability at 30th June, 1964 £'000	23,572	42,668	473	31	66,744
Amount paid in pensions during the year 1963-64 £'000	n.a.	n.a.	n.a.	n.a.	77,265

(a) Number of ex-servicemen who had their claims for all their disabilities rejected.

4. *Classes of War Pensions, Australia, 1963-64.*—(i) *New Claims Granted.* The following is an analysis of the total number of new claims granted during 1963-64.

WAR PENSIONS: NEW CLAIMS GRANTED, AUSTRALIA, 1963-64

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Ex-servicemen	927	7,231	165	58	8,381
Wives of ex-servicemen	1,012	7,206	172	44	8,434
Children	71	14,231	507	94	14,903
Other dependants	40	451	18	..	509
Total	2,050	29,119	862	196	32,227

(ii) *Pensions in Force.* The following table shows the number of pensions in force at 30th June, 1964, for each war and for each class of pensioner.

WAR PENSIONS IN FORCE: AUSTRALIA, 30th JUNE, 1964

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Ex-servicemen	44,401	175,301	2,554	223	222,479
Wives	42,300	149,027	1,945	143	193,415
Children	872	191,671	4,227	252	197,022
War widows	23,293	17,108	84	10	40,495
Children of deceased ex-servicemen	125	6,544	116	26	6,811
Orphans	17	151	4	..	172
Parents	505	7,222	118	3	7,848
Brothers and sisters	43	101	3	..	147
Others	212	251	..	1	464
Total	111,768	547,376	9,051	658	668,853

(iii) *Special Rate Pensions.* At 30th June, 1964, special rate pensions were being paid to the following classes of ex-servicemen.

WAR PENSIONS: MEMBERS ON SPECIAL RATES OR EQUIVALENT, AUSTRALIA, 30th JUNE, 1964

Class	1914-18 War	1939-45 War	Korea and Malaya operations	Far East Strategic Reserve	Total
Totally and permanently incapacitated ex-servicemen	12,312	9,593	39	..	21,944
Blinded ex-servicemen	211	240	2	..	453
Tuberculous ex-servicemen	388	305	9	..	702
Tuberculous ex-servicemen (intermediate rate)	82	215	3	..	300
Temporarily totally incapacitated ex-servicemen	281	1,736	25	4	2,046
Ex-servicemen suffering other disabilities	43	50	2	..	95
Total	13,317	12,139	80	4	25,540

5. Number of War Pensions and Annual Liability, States, 30th June, 1964.—The following table shows the number of pensions in force and annual liability for each war at 30th June, 1964, according to place of payment. (The amount paid is shown on p. 1215.)

**WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY,
30th JUNE, 1964**

Place of payment	Number of war pensions in force at 30th June, 1964				Annual pension liability (£'000)
	Incapacitated ex-service-men	Dependants of incapacitated ex-service-men	Dependants of deceased ex-service-men	Total	
1914-18 WAR					
New South Wales(a)	14,235	13,861	8,207	36,303	7,816
Victoria	14,591	13,937	7,969	36,497	7,785
Queensland	5,872	5,588	2,380	13,840	3,184
South Australia(b)	3,502	3,563	1,919	8,984	1,826
Western Australia	3,476	3,733	1,647	8,856	1,487
Tasmania	1,859	1,831	985	4,675	1,069
Abroad	866	1,008	739	2,613	405
Total	44,401	43,521	23,846	111,768	23,572
1939-45 WAR					
New South Wales(a)	61,418	113,025	11,510	185,953	14,940
Victoria	48,092	94,967	7,979	151,038	11,446
Queensland	25,520	52,608	4,515	82,643	7,014
South Australia(b)	17,415	35,414	3,098	55,927	3,972
Western Australia	15,560	29,187	2,526	47,273	3,465
Tasmania	6,706	15,259	886	22,851	1,651
Abroad	590	812	289	1,691	180
Total	175,301	341,272	30,803	547,376	42,668
KOREA AND MALAYA OPERATIONS					
New South Wales(a)	997	2,314	128	3,439	180
Victoria	580	1,309	56	1,945	98
Queensland	440	1,140	70	1,650	93
South Australia(b)	181	475	16	672	34
Western Australia	215	584	21	820	39
Tasmania	94	276	8	378	18
Abroad	47	77	23	147	11
Total	2,554	6,175	322	9,051	473
FAR EAST STRATEGIC RESERVE					
New South Wales(a)	87	167	22	276	12
Victoria	37	61	5	103	5
Queensland	67	120	7	194	9
South Australia(b)	8	10	..	18	1
Western Australia	22	36	3	61	3
Tasmania .. ..	..	..	..	..	..
Abroad	2	2	2	6	1
Total	223	396	39	658	31

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

6. *Summary of War Pensions.—(i) Number.* The following table shows, for each war and in total, the number of pensions granted, claims rejected, pensions in force, and the annual liability for pensions in each of the years ended 30th June, 1960 to 1964.

WAR PENSIONS: SUMMARY, AUSTRALIA

Year	Pensions granted	Claims rejected (a)	Number of war pensions in force at 30th June				Annual pension liability at 30th June (£'000)
			Incapacitated ex-service-men	Depend-ants of incapacitated ex-service-men	Depend-ants of deceased ex-service-men	Total	
1914-18 WAR							
1959-60 ..	2,343	(a) 2,638	52,324	49,861	22,528	124,713	22,429
1960-61 ..	2,094	2,085	50,338	48,205	22,743	121,286	23,017
1961-62 ..	2,422	1,872	48,670	46,772	23,144	118,586	23,891
1962-63 ..	2,394	1,854	46,606	45,212	23,566	115,384	23,705
1963-64 ..	2,050	1,678	44,401	43,521	23,846	111,768	23,572
1939-45 WAR							
1959-60 ..	28,397	(a) 17,852	155,534	341,985	26,327	523,846	33,057
1960-61 ..	27,202	14,718	159,727	346,391	27,205	533,323	35,147
1961-62 ..	30,794	7,030	165,101	350,297	28,506	543,904	38,553
1962-63 ..	32,496	6,125	170,594	345,914	29,723	546,231	40,546
1963-64 ..	29,119	6,113	175,301	341,272	30,803	547,376	42,668
KOREA AND MALAYA OPERATIONS							
1959-60 ..	908	(a) 1,174	1,864	3,593	255	5,712	311
1960-61 ..	913	848	2,043	4,247	261	6,551	352
1961-62 ..	969	383	2,208	4,919	285	7,412	399
1962-63 ..	1,035	342	2,412	5,618	290	8,320	438
1963-64 ..	862	271	2,554	6,175	322	9,051	473
FAR EAST STRATEGIC RESERVE							
1959-60 ..	53	n.a.	28	28	9	65	4
1960-61 ..	66	118	53	62	15	130	7
1961-62 ..	152	70	104	146	26	276	16
1962-63 ..	193	48	166	264	36	466	24
1963-64 ..	196	58	223	396	39	658	31
TOTAL							
1959-60 ..	31,701	n.a.	209,750	395,467	49,119	654,336	55,801
1960-61 ..	30,275	17,769	212,161	398,905	50,224	661,290	58,523
1961-62 ..	34,337	9,355	216,083	402,134	51,961	670,178	62,859
1962-63 ..	36,118	8,369	219,778	397,008	53,615	670,401	64,713
1963-64 ..	32,227	8,120	222,479	391,364	55,010	668,853	66,744

(a) For the year 1959-60 the figures for claims rejected refer to individual claims for each disability. The basis of showing rejected claims was changed during 1960-61 to show the number of claimants who had the claims for all their disabilities rejected.

(ii) *Amount Paid and Place of Payment.* The following table shows, for the years 1959-60 to 1963-64, the amounts paid in pensions and the place where they were paid.

WAR PENSIONS: AMOUNT PAID(a)
(£'000)

Place of payment	1959-60	1960-61 (b)	1961-62	1962-63	1963-64 (b)
New South Wales(c)	19,696	22,139	23,046	24,053	26,554
Victoria	17,460	19,897	20,140	20,908	22,763
Queensland	8,158	9,439	9,650	10,375	11,520
South Australia(d)	5,391	6,083	6,008	6,174	6,750
Western Australia	4,556	5,050	5,081	5,255	5,774
Tasmania	2,559	2,750	2,675	2,831	3,076
Abroad	772	762	802	769	828
Total	58,592	66,120	67,402	70,365	77,265

(a) Includes domestic allowances paid to widows.

(b) Includes five twelve-weekly payments.

(c) Includes Australian Capital Territory.

(d) Includes Northern Territory.

7. *Miscellaneous War Pensions.*—The Commission is also responsible for the payment of pensions and allowances to beneficiaries under the *Seamen's War Pensions and Allowances Act* 1940-1964, the *Interim Forces Benefits Act* 1947-1964, the *Native Members of the Forces Benefits Act* 1957, and Cabinet decisions granting eligibility to persons who were attached to the armed forces during war time.

(i) *Number of Miscellaneous War Pensions and Annual Liability.* The following table shows the number of pensions under the various Acts and the annual liability at 30th June, 1964.

MISCELLANEOUS WAR PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA, 30th JUNE, 1964

Particulars	Number of pensions in force at 30th June, 1964				Annual pension liability (£)
	Members	Dependants of members	Dependants of deceased members	Total	
Act of grace	138	169	61	368	50,511
Seamen's war pension	70	110	77	257	29,531
New Guinea civilians	1	..	90	91	27,235
Interim forces	11	26	..	37	1,052
Native members of the forces	65	166	13	244	12,303
Special overseas service	1	5	2	8	488
Total	286	476	243	1,005	121,120

(ii) *Amounts Paid and Place of Payment.* The following table shows the amounts paid in miscellaneous war pensions and place of payment in each of the years ended 30th June, 1960 to 1964.

MISCELLANEOUS WAR PENSIONS: AMOUNT PAID

(£)

Place of payment	1959-60	1960-61 (a)	1961-62	1962-63	1963-64 (a)
New South Wales(b) ..	64,460	70,201	68,342	71,917	74,934
Victoria	30,650	33,582	33,006	33,389	35,282
Queensland	20,525	23,693	22,925	18,974	22,441
South Australia(c) ..	13,733	15,375	16,216	15,839	17,374
Western Australia ..	8,115	9,540	7,827	8,620	8,632
Tasmania	2,161	2,354	2,177	2,318	2,423
Abroad	1,659	2,109	1,011	1,680	186
Total	141,303	156,854	151,504	152,737	161,272

(a) Includes five twelve-weekly payments.
(c) Includes Northern Territory.

(b) Includes Australian Capital Territory.

§ 3. Service Pensions

1. **General.**—The *Repatriation Act* 1920-1964 provides for a service pension to be paid, subject to a means test of income and property, to the following persons.

An ex-serviceman aged 60 years or over who served in a theatre of war, or an ex-servicewoman aged 55 years or over who served abroad. No pension is payable to the wife or children under 16 years of age of an ex-serviceman granted a service pension on account of age.

An ex-serviceman who is permanently unemployable and who served in a theatre of war (or in the case of an ex-servicewoman, who served abroad). Service pensions are also payable to a pensioner's wife and up to four children under 16 years of age.

An ex-serviceman suffering incapacity from pulmonary tuberculosis whether or not the person served in a theatre of war. (Only those persons who qualify in this group are entitled to receive both service and invalid pensions at the same time, subject to the maximum permissible income.) Service pensions are also payable to a pensioner's wife and up to four children under 16 years of age.

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 single ex-serviceman, £6; married ex-serviceman, £5 10s.; wife, £3. The rate for eligible children is 15s. a week for the first child and 2s. 6d. for each other child up to and including the fourth child. Eligible child means a child under 16 years of age, or a child under the age of 18 years who is not receiving an invalid pension and is undertaking full-time education, in which case pension may continue up to the end of the calendar year in which the child reaches 18 years of age.

If an ex-serviceman is receiving a service pension on the ground of being permanently unemployable, his service pension may be increased by 15s. a week in respect of each child other than the first, whether or not such children are eligible for pension in their own right.

Supplementary assistance of 10s. a week may be paid in addition to service pension to an unmarried ex-serviceman who is receiving the maximum rate of service pension, is paying rent or board, and is entirely dependent on his pension, or, if married, on condition that his wife is not receiving an allowance or pension under the Social Services Act or Tuberculosis Act or a service pension under the Repatriation Act.

The means test sets limits to the amount of income or property which a pensioner may have for the purpose of service pension. The amount of service pension payable depends upon the claimant's "means as assessed", which consist of his annual rate of income plus a property component equal to 9d. a fortnight for each complete unit of £10 of net

value of property above £200. For married couples, except where they are separated or in other special circumstances, the income and property of each for purposes of applying the means test is taken to be half the total income and property of both, even if only one is a pensioner or claimant. A person's "means as assessed" may consist entirely of income, entirely of property, or of both income and property components. If his "means as assessed" do not exceed £3 10s. a week, the claimant receives the maximum rate of pension. If his "means as assessed" exceed £3 10s. a week, the rate payable is the maximum rate less the amount by which "means as assessed" exceed £3 10s. a week. If his "means as assessed" are £9 10s. a week or more, or in the case of a married couple £19 a week or more, no service pension is payable.

Income means earnings and other forms of income derived from any source, with certain exceptions, of which the principal are—certain income derived from property, gifts or allowances from children, parents, brothers or sisters, benefits from friendly societies, child endowment, Commonwealth health benefits. The value of board and lodgings received by a pensioner is assessed as income at 12s. 6d. a week. Property includes all real and personal property, such as houses, land, money in hand, in a bank or on loan, shares, investments or legacies, vehicles used for business purposes, livestock. Property does not include an applicant's home, furniture or personal effects, the surrender value of life insurance policies (up to £750), the value of any reversionary interest, the capital value of any life interest, annuity or contingent interest, or vehicles maintained only for personal use.

Eligibility for service pensions was extended on 1st November, 1941, to veterans of the South African War 1899–1902, and in 1943 to members of the Forces of the 1939–45 War. Members of the Forces who served in Korea and those who served in Malaya prior to the commencement of the *Repatriation (Far East Strategic Reserve) Act 1956–1964* are also eligible.

An ex-serviceman or ex-servicewoman in receipt of a service pension is entitled, with certain exceptions, to free medical benefits for disabilities not caused by war. These benefits include general practitioner service, specialist service where necessary, full pharmaceutical benefits, surgical aids and appliances (including spectacles), dental treatment and treatment in Repatriation General Hospitals.

3. Operations, 1963–64.—The following table gives a summary of service pensions during 1963–64. Statistics relating to 200 miscellaneous service pensions are excluded.

Claims granted during year—					
Ex-servicemen	..	..	..	..	6,655
Wives	..	..	..	..	1,708
Children	..	..	..	..	1,259
<i>Total</i>	..	..	..	..	<u>9,622</u>
Claims rejected during year (i.e. number of claimants who had their claims for all their disabilities rejected)					
..	..	..	..	..	1,459
Service pensions cancelled or discontinued during year	..	..	..	..	4,675
Deaths of pensioners during year	..	..	..	..	3,572
Pensions in force at 30th June, 1964	..	..	..	..	64,588
Annual pension liability at 30th June, 1964	..	..	..	..	£12,326,081

4. Number of Service Pensions and Amount Paid.—(i) *Summary. Australia.* The following table shows the number of service pensions in force and the annual liability for pensions for the five years 1959–60 to 1963–64.

SERVICE PENSIONS: NUMBER OF PENSIONS AND ANNUAL LIABILITY, AUSTRALIA

Year	Number of service pensions at 30th June payable to—					Annual pension liability at 30th June (£'000)	
	Aged ex-servicemen	Ex-servicemen who are—		Dependants(a) of ex-servicemen where the ex-serviceman is—			Total
		Permanently unemployable	Suffering from pulmonary tuberculosis	Permanently unemployable	Suffering from pulmonary tuberculosis		
1959-60	18,193	12,140	1,379	12,080	2,026	45,818	6,924
1960-61	22,125	12,645	1,273	12,520	1,739	50,302	8,344
1961-62	27,479	13,603	1,246	13,597	1,663	57,588	10,430
1962-63	30,818	14,278	1,160	14,368	1,537	62,161	11,379
1963-64(b) ..	32,834	14,471	1,118	14,701	1,464	64,588	12,326

(a) Includes dependants of deceased service pensioners. (b) Statistics relating to 200 miscellaneous service pensions are excluded. They were not applicable prior to year ended 30th June, 1964.

(ii) *Amount Paid and Place of Payment.* The following table shows for the years 1959-60 to 1963-64 the amount paid in pensions and the place of payment.

SERVICE PENSIONS: AMOUNT PAID (£'000)

Place of payment	1959-60	1960-61	1961-62	1962-63	1963-64
New South Wales(a) ..	2,360	2,735	3,156	3,547	3,990
Victoria	1,518	1,731	2,122	2,475	2,827
Queensland	1,080	1,213	1,625	1,681 (c)	1,912
South Australia(b) ..	644	763	1,097	1,243	1,345
Western Australia ..	875	1,051	1,344	1,464	1,588
Tasmania	271	290	368	419	437
Australia	6,748	7,783	9,712	10,829	(c) 12,099

(a) Includes Australian Capital Territory. (b) Includes Northern Territory. (c) Excludes payment for 200 miscellaneous service pensions. This type of service pension was not payable prior to 1963-64.

§ 4. Medical Treatment for Ex-Servicemen and Dependants of Ex-Servicemen

1. *General.*—In-patient treatment for eligible patients is provided at the six Repatriation General Hospitals (one in each State) and nine auxiliary hospitals and sanatoria as follows:—*New South Wales*—Lady Davidson Hospital; *Victoria*—McLeod Hospital, Rockingham Red Cross Home, and Anzac Hostel; *Queensland*—Kenmore Hospital, Rosemount Hospital and Anzac Hostel; *South Australia*—Biralee Hospital; and *Western Australia*—The Edward Millen Hospital. The Anzac Hostels specialize in the care and treatment of long-term patients. The Rockingham Red Cross Home is controlled by the Australian Red Cross but is staffed by Repatriation medical officers. It treats Repatriation patients exclusively.

The total number of available beds for patients in open wards or parts of wards in all these institutions at 30th June, 1964, was 4,468, and expenditure amounted to £9,643,000. In addition, expenditure of £11,930,000 was incurred on medical services outside these institutions.

2. Staff.—Details regarding the number of full-time staff in Repatriation General Hospitals and other Repatriation institutions are given in the following table.

**REPATRIATION HOSPITALS AND INSTITUTIONS: FULL-TIME STAFF,
30th JUNE, 1964**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
General Hospitals—							
Medical staff	77	57	29	18	22	5	208
Nursing staff	774	480	220	144	192	44	1,854
Other staff	1,044	714	495	297	421	100	3,071
<i>Total</i>	<i>1,895</i>	<i>1,251</i>	<i>744</i>	<i>459</i>	<i>635</i>	<i>149</i>	<i>5,133</i>
Other in-patient institutions(a)	207	105	155	34	32	..	533
Out-patient clinics(a) ..	159	89	23	33	25	..	329
Limb and appliance centres(a) ..	63	63	29	17	13	11	196
<i>Grand Total</i>	<i>2,324</i>	<i>1,508</i>	<i>951</i>	<i>543</i>	<i>705</i>	<i>160</i>	<i>6,191</i>

(a) Total staff.

3. In-patients Treated.—(i) *Repatriation Institutions.* The following table gives details of in-patients treated at Repatriation General Hospitals and other Repatriation institutions in each State. The figures shown refer to cases, e.g., a person who is admitted to hospital twice during a year is counted twice.

**REPATRIATION GENERAL HOSPITALS AND INSTITUTIONS: IN-PATIENTS
TREATED, 1963-64**

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Aust.
REPATRIATION GENERAL HOSPITALS							
In-patients at beginning of year	1,402	814	514	311	443	103	3,587
Admissions and re-admissions during year	20,086	10,747	8,913	4,437	6,243	1,421	51,847
<i>Total in-patients treated</i>	<i>21,488</i>	<i>11,561</i>	<i>9,427</i>	<i>4,748</i>	<i>6,686</i>	<i>1,524</i>	<i>55,434</i>
Discharges	19,083	9,941	8,538	4,166	5,909	1,348	48,985
Deaths	960	798	354	265	331	60	2,768
In-patients at end of year	1,445	822	535	317	446	116	3,681
Average daily number resident	1,315	769	520	288	402	98	3,392
OTHER REPATRIATION INSTITUTIONS							
In-patients at beginning of year	183	140	117	33	25	..	498
Admissions and re-admissions during year	1,424	637	696	105	193	..	3,055
<i>Total in-patients treated</i> ..	<i>1,607</i>	<i>777</i>	<i>813</i>	<i>138</i>	<i>218</i>	<i>..</i>	<i>3,553</i>
Average daily number resident	206	131	126	35	27	..	525

(ii) *Other Institutions.* In addition to the Repatriation institutions, eligible patients may be treated in other country and metropolitan hospitals at Repatriation expense. During 1963-64 these hospitals accommodated and treated 12,473 Repatriation in-patients.

Repatriation psychiatric patients requiring custodial care are, by agreement with the State governments, accommodated at the expense of the Repatriation Department in separate wings of psychiatric hospitals administered by the State authorities. At 30th June, 1964, there were 933 Repatriation patients in these hospitals.

4. **Out-patient Treatment.**—Out-patient treatment is provided throughout the Commonwealth at Repatriation hospitals and clinics, and through the Repatriation Local Medical Officer Scheme. During 1963-64 548,721 out-patients were treated at Repatriation institutions and visits to or by local medical officers totalled 2,585,548.

§ 5. General Benefits and Miscellaneous

1. **Other Departmental Activities.**—(i) *General.* The activities of the Department in respect of general benefits for the welfare of ex-servicemen and dependants concern mainly education and training of children under the Soldiers' Children Education Scheme (*see* 3, pp. 1221-2), medical benefits for widows and children of deceased ex-servicemen and for widowed mothers of deceased unmarried ex-servicemen, funeral expenses for certain classes of ex-servicemen and dependants, and allowances to certain classes of dependants.

These and new benefits designed for the re-establishment of servicemen and servicewomen after discharge were extended and made available by legislation passed in June, 1940, to servicemen and servicewomen engaged in the 1939-45 War, and in November, 1950, and May, 1963, to those engaged in the Korea and Malaya operations, and to those serving in such other areas as may be prescribed under the *Repatriation (Special Overseas Service) Act* 1962, respectively. The re-establishment benefits generally administered by the Repatriation Commission are:—payment of re-employment allowance while awaiting employment; provision of tools of trade and equipment where they are necessary to employment; transportation expenses to meet the cost of fares and removal of household belongings where an ex-serviceman takes up training, employment, or a business, or settles on the land; supplements to wages of apprentices whose apprenticeships were interrupted by war service; re-establishment loans to enable ex-servicemen and widows to establish themselves in business, practices or 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 ex-servicemen 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 ex-servicemen who married abroad (and passages outward from Australia in certain cases of ex-servicemen and dependants).

In 1949 the Department took over the functions of the Re-establishment Division of the former Department of Post-War Reconstruction and became responsible for the co-ordination of all matters relating to training under the Commonwealth Reconstruction Training Scheme. This scheme is now concluded, the prescribed time limits for eligibility having expired. Re-establishment of the more seriously disabled, where ordinary training is not sufficient, continues to be a function of the Department, and special means have to be found to overcome each problem.

(ii) *General Repatriation Benefits.* Expenditure in 1963-64 on general repatriation benefits for all wars was £1,647,000, comprising expenditure on employment and vocational training, £55,000 (of which £52,000 was expended by other Commonwealth authorities); business loans and furniture, £1,000; Soldiers' Children Education Scheme, £1,136,000; recreation transport allowance, £269,000; and other benefits £186,000.

2. **Expenditure by the Repatriation Department, 1963-64.**—The net expenditure by the Department for the year ended 30th June, 1964, was £118,482,000 distributed as follows.

					£'000
Pensions, allowances and other benefits	..	..	..	..	91,120
Treatment	..	..	..	..	21,573
Administration	..	..	..	..	4,503
Works, rent and maintenance	..	..	..	..	1,286
					118,482

3. **Soldiers' Children Education Scheme.**—(i) *General.* The Soldiers' Children Education Scheme was established in 1921 and operates with the assistance of voluntary Education Boards in each State. These Boards consist of representatives of government and non-government education authorities and of ex-service and other organizations which have a general interest in the welfare of the children of ex-servicemen. The objects of the scheme are to assist and encourage eligible children in acquiring a standard of education compatible with their aptitude and ability, and to prepare them to enter an agricultural, commercial, professional or industrial calling of their own choice.

(ii) *Eligible Children.* Eligible children are children of ex-servicemen whose deaths have been accepted as due to war service; or of ex-servicemen who died from causes not due to war service but who were receiving at the date of death a war pension at a special rate for blindness, total and permanent incapacity, or for pulmonary tuberculosis, or for amputation of two or more limbs; or of ex-servicemen who, as the result of war service, are blinded, totally and permanently incapacitated or receiving the special rate pension for pulmonary tuberculosis and are likely to receive such pension for a period of at least three years.

(iii) *General Benefits.* From the commencement of primary education up to twelve years, school requisites and fares are provided. An education allowance is also payable for a child from commencement of secondary education or from the age of 12 years, whichever is the earlier, while the child is undertaking primary or secondary education.

Further assistance beyond, or parallel with, the later years of secondary education is provided where an approved beneficiary continues with a course of specialized education or training necessary for a career.

Specialized education covers a wide range and may include: professional degree or diploma courses at universities and technical colleges; theological training; cadet and pupilage training, i.e., training combined with employment, such as nursing, pharmacy and journalism; industrial, including apprenticeship, training, and other courses of trade and business training approved by an Education Board; and agricultural training at an agricultural college.

At this stage of training, in addition to the education allowance, fees are paid and text books, essential equipment and other minor benefits provided.

All education allowances are subject to an allowed income limit test; i.e., the amount of education allowance payable depends upon the amount of income a child receives over the allowed limit. The parent's income does not affect the child's allowance. Income does not include war or service pensions paid for the child or any similar payment, income the child receives from private means, or income from casual employment during the entire period of a school or university vacation where the student will continue as a full-time student under the scheme after the vacation.

The scale of maximum allowances payable to eligible children at various stages of education is as follows.

SOLDIERS' CHILDREN EDUCATION SCHEME: WEEKLY RATES OF ALLOWANCES, JANUARY, 1965

Type of training	Living at home	Living away from home
At school—	£ s. d.	£ s. d.
Aged 12 and under 14 years	0 19 0	3 3 3
Aged 14 and under 16 years	1 8 9	3 3 3
Aged 16 and under 18 years	3 3 3	4 17 9
Professional (university, etc.)	5 0 0	7 12 6
Agricultural .. .. .	..	1 11 9
Industrial (apprenticeship, etc.)	1 3 0	2 6 0

(iv) *Expenditure.* The following table shows the costs of education under the scheme for the year ended 30th June, 1964.

SOLDIERS' CHILDREN EDUCATION SCHEME: EXPENDITURE, 1963-64

(£)

Particulars	N.S.W. (a)	Vic.	Qld	S.A. (b)	W.A.	Tas.	Aust.
Cost of education of beneficiaries—							
Under 12 years of age ..	3,836	3,594	3,528	1,889	958	647	14,452
12 years of age and over ..	411,919	293,738	189,097	106,762	76,714	36,216	1,114,446
Total Expenditure ..	415,755	297,332	192,625	108,651	77,672	36,863	c1,128,898

(a) Includes Australian Capital Territory. overseas expenditure of £7,461.

(b) Includes Northern Territory.

(c) Excludes

(v) *Number Receiving Benefit.* The next table shows the number of children in receipt of benefit at 30th June, 1964.

SOLDIERS' CHILDREN EDUCATION SCHEME: NUMBER RECEIVING BENEFITS AT 30th JUNE, 1964

Type of training	N.S.W. (a)	Vic.	Qld	S.A. (b)	W.A.	Tas.	Abroad	Total
At school—								
Aged 12 and under								
14 years ..	942	628	480	231	198	137	9	2,625
Aged 14 and under								
16 years ..	1,017	769	555	309	236	145	4	3,035
Aged 16 and under								
18 years ..	476	439	269	140	88	49	19	1,480
Total ..	2,435	1,836	1,304	680	522	331	32	7,140
Professional ..	315	264	140	115	85	16	9	944
Agricultural ..	14	12	6	3	9	..	..	44
Industrial ..	38	7	5	4	14	1	..	69
Grand Total ..	2,802	2,119	1,455	802	630	348	41	8,197

(a) Includes Australian Capital Territory.

(b) Includes Northern Territory.

Note.—The above table refers only to children in receipt of an education allowance. Figures shown in previous issues of the Year Book included all industrial trainees under the scheme whether in receipt of an education allowance or not.

4. **Settlement of Returned Service Personnel on the Land.**—Reference to the settlement of returned service personnel on the land will be found in Chapter IV. Land Tenure and Settlement, pages 89-91 of this Year Book.

§ 6. The Services Canteens Trust Fund

1. **General.**—The Services Canteens Trust Fund was established under the *Services Trust Funds Act 1947*. Its funds are derived from the assets and profits of wartime services canteens, mess and regimental funds of disbanded units, and several other sources.

The total amount transferred to the Fund to 31st December, 1964, was £5,526,993. The Act prescribed that, of this, £2,500,000 and such further amounts as the trustees of the Fund might from time to time decide, should be devoted to the provision of education facilities for the children of eligible ex-servicemen and ex-servicewomen, and that the balance of the Fund should be used to provide relief for ex-servicemen and ex-servicewomen and their dependants in necessitous circumstances.

The Fund is administered by ten honorary trustees appointed by the Governor-General. 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. Members of regional committees are all persons who served in the 1939–45 War or are widows of men who served during the war. They serve in an honorary capacity.

2. **Assistance from the Fund.**—(i) *General.* Persons eligible for assistance from the Fund are those who, between 3rd 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 Forces who served in an official capacity on full-time paid duty, and their dependants.

The trustees have introduced schemes for providing welfare relief for ex-servicemen and ex-servicewomen who are eligible for benefits and for their dependants; benefits for children of eligible ex-servicemen and ex-servicewomen who are suffering from serious and incapacitating afflictions; and education benefits for the children of eligible ex-servicemen and ex-servicewomen. From its inauguration in 1947 the Fund is to be available for 40 years for welfare relief and for 30 years for educational benefits.

(ii) *Welfare Relief.* 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.

To 31st December, 1964, £1,356,881 has been granted as welfare relief from the Fund, £875,929 to ex-servicemen and their dependants, and £480,952 to widows and orphans. The amount granted during 1964 was £80,466. A total of 31,465 ex-servicemen and ex-servicewomen and 14,054 widows and orphans were granted welfare assistance from the Fund to 31st December, 1964.

(iii) *Assistance under Afflicted Children's Scheme.* The Fund assists dependent children suffering from afflictions which permanently disable or seriously retard their progress or prevent the enjoyment of normal health and strength, and who face a prospect of dependence on others for all or part of their lives. 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, 1964, 2,479 afflicted children had been assisted under the Afflicted Children's Scheme, involving an expenditure of £132,151. The amount granted during 1964 was £7,093. The number of new children assisted in 1964 was 68.

(iv) *Educational Assistance Scheme.* Educational assistance is restricted to children who are 15 years of age and over, 13 years and over where there are exceptional circumstances and 12 years in the case of orphans. The object is to assist eligible children to obtain the highest education within their capacity. Assistance is in the form of awards ranging from £5 to £200 a year depending on the nature of the course undertaken and the family circumstances. These awards are granted chiefly for children at secondary education level, but are also available for other types of education. 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, uniforms in certain cases, and maintenance for the child while at school. Higher training awards are provided for selected students for post-graduate study in

Australia or overseas in the ancillary services to medicine, welfare and science. One post-graduate scholarship is provided each year for study overseas, valued at £1,000 per annum for up to three years.

The number of children assisted under the educational assistance scheme to 31st December, 1964, was 48,409, and the expenditure on educational awards, post-graduate scholarships and higher training awards to 31st December, 1964, was £2,524,444. The number granted in 1964 was 7,345 at a value of £290,154.

(v) *Total Assistance.* The total assistance granted under the three schemes during 1964 was £377,713 and from the inception of the Fund to 31st December, 1964, totalled £4,013,476.

CHAPTER XXIX

INTERNATIONAL RELATIONS

§ 1. Relations with Commonwealth and Other Countries

1. Commonwealth Relations.—Australia's international relations have developed as a natural concomitant of Australia's growth from colonial status to independent nationhood. During this process Australia has remained on terms of close friendship and understanding with the United Kingdom. This intimate association, together with close co-operation with other countries of the Commonwealth of Nations, remains a basic principle of Australia's foreign policy.

Australia is represented at meetings of Commonwealth Prime Ministers and of Commonwealth Finance and Foreign Ministers. It is a member of the Commonwealth Economic Consultative Council, belongs to the Sterling Area, retains, with limitations, the system of judicial appeal to the Privy Council, and maintains High Commissioners in a number of other Commonwealth countries.

Between meetings of Commonwealth Prime Ministers the Australian Prime Minister has authority to consult with other Commonwealth Prime Ministers on matters of mutual interest. In addition, there is a constant flow of messages between the Australian Government and governments of other Commonwealth countries. In defence matters Australia's armed services send representatives to discussions by Commonwealth Chiefs of Staff; Australian naval ships take part in combined exercises with the navies of other Commonwealth members, and Australian officers maintain liaison with the Services of other Commonwealth countries.

2. Relations with the United States of America.—An important feature of Australia's international relations is her relationship with the United States of America. This relationship is formally expressed in a treaty known as the ANZUS Treaty which was signed pursuant to Articles 51 and 52 of the United Nations Charter, and provides that in the event of armed attack on any one of them in the Pacific, the U.S.A., Australia and New Zealand would act to meet the common danger in accordance with its constitutional processes. The Treaty is designed to establish a closer working relationship between the three countries concerned. The ANZUS partners, in their consultations, make no attempt to decide matters affecting the vital interest of other countries. The machinery of the ANZUS Treaty consists of a Council composed of the three Foreign Ministers or their deputies, which meets periodically to discuss matters of mutual concern.

3. Australia and Asia.—Australia's geographical location to the south of Asia has become an increasingly important factor in Australia's foreign policy. Australia has sought to develop close relations and understanding with her Asian neighbours. This was evidenced by Australia's inclusion in 1963 as a full regional member of the Economic Commission for Asia and the Far East (ECAFE), and an increasing recognition by Asian leaders of Australia's concern with, and contribution to, the solution of the problems of the region.

4. SEATO.—Following the cessation of fighting in Indo-China in 1954, Australia, with other countries situated in the South-East Asian region, or having responsibilities there, supported a proposal to form a collective defence alliance to guarantee the peace and security of the region from external aggression. On 8th September, 1954, Australia, France, New Zealand, Pakistan, the Philippines, Thailand, the United Kingdom and the United States signed the South-East Asian Collective Defence Treaty at Manila. They also signed a Pacific Charter stating the principles on which they had acted. A Protocol to the Treaty extended its operation to Cambodia, Laos and the free territory under the jurisdiction of the State of Vietnam, although no action on their territories would be taken except at the invitation or with the consent of the government concerned.

While primary emphasis has been placed on the defence significance of the Treaty, an organization has been established in Bangkok to co-ordinate activities to combat subversion both by counter-propaganda and security training and by the development of the economic and social welfare of the peoples of the Treaty Area. To facilitate this task, the Australian Government in 1956 instituted a SEATO Aid Programme, under which by 30th June, 1965, aid to the value of £64 millions had been given to member countries in Asia to help develop their capacity to resist aggression and subversion and to stimulate economic development.

Under the scheme Australia is providing two geodetic survey vessels to the Philippines, a military technical training school, a vehicle base repair shop and two 50 kW radio transmitters to Thailand, telecommunication and technical training equipment to Pakistan, and barbed wire, corrugated iron and blacksmith's tools for the strategic hamlet programme in Vietnam. Australia has also provided military training, and technical training in the fields of engineering, telecommunications, naval architecture and dockyard maintenance, security procedures, and surveying for nearly 200 trainees from Asian member countries. In addition, a number of senior service officers of other member countries have visited Australia to foster understanding and to develop co-operation between the armed forces.

§ 2. The Colombo Plan

1. **General.**—The Colombo Plan originated at a meeting of Commonwealth Foreign Ministers in Colombo in January, 1950. The meeting set up a Consultative Committee to review economic development in south and south-east Asia. The task of this Committee was to devise the most effective means of tackling the problems of economic development in the area and of focusing world attention on them.

Membership of the Consultative Committee is now made up of Australia, Canada, Ceylon, India, New Zealand, Pakistan, the United Kingdom, Malaysia, the United States, Burma, Cambodia, Indonesia, Japan, Laos, Nepal, the Philippines, Thailand, Vietnam, Korea, Bhutan, the Maldives Islands and Afghanistan.

Australian assistance under the Colombo Plan to 30th June, 1965, amounted to £58,641,744. Of this, £41,295,157 had been spent on economic development projects and £17,346,587 had been spent under the Technical Co-operation Scheme. Australia has placed emphasis on the importance of technical assistance in providing a base for economic development. A summary of expenditure, by country and under different heads, is set out in the following table.

AUSTRALIA'S EXPENDITURE ON THE COLOMBO PLAN TO 30th JUNE, 1965 (£)

Particulars	Economic development	Technical assistance					Grand total
		Training	Experts	Equipment	Miscellaneous	Total	
Country—							
Afghanistan		8,346	56	..	..	8,402	8,402
Bhutan	69,039	..	..	..	..	69,039	69,039
Brunei .. .. .	..	37,904	523	..	..	38,427	38,427
Burma	1,617,595	631,973	59,099	254,998	..	946,070	2,563,665
Cambodia	1,098,057	64,074	89,774	76,484	..	230,332	1,328,389
Ceylon	3,882,271	402,087	191,814	158,771	..	752,672	4,634,943
India	13,587,543	846,516	111,422	324,235	..	1,282,173	14,869,716
Indonesia	3,886,527	2,021,312	500,003	253,667	..	2,774,982	6,661,509
Korea .. .. .	..	103,372	1,153	6,030	..	110,555	110,555
Laos	483,222	72,629	29,147	160,955	..	262,731	745,953
Malaysia	1,064,467	3,144,953	1,026,268	888,982	..	5,060,203	6,124,670
Nepal	132,539	73,132	29,320	14,818	..	117,270	249,809
Pakistan	11,583,749	704,135	241,103	377,693	..	1,322,931	12,906,680
Philippines	42,679	504,354	77,903	238,005	..	820,262	862,941
Thailand	1,931,577	727,063	184,070	326,488	..	1,237,621	3,169,198
Vietnam	1,605,695	470,031	179,119	447,116	..	1,096,266	2,701,961
General—							
Economic development ..	310,197	..	..	..	..	310,197	310,197
Mekong Project .. .. .	..	..	..	..	236,081	236,081	236,081
Colombo Plan Bureau .. ..	..	..	..	..	34,581	34,581	34,581
Colombo Plan International Training Centre .. .. .	..	..	..	..	12,630	12,630	12,630
English Language Training Centre .. .. .	..	..	..	..	30,647	30,647	30,647
International House .. .. .	..	..	..	..	50,000	50,000	50,000
Publicity and publications ..	..	..	..	..	30,109	30,109	30,109
Administrative and incidental expenses .. .. .	..	..	..	..	853,678	853,678	853,678
Asian Institute of Economic Development .. .. .	..	..	..	..	37,964	37,964	37,964
Total	41,295,157	9,811,881	2,720,774	3,528,242	1,285,690	17,346,587	58,641,744

2. **Economic Development Aid.**—Most of Australia's contribution under the Colombo Plan has been spent on providing predominantly Australian-made equipment for developmental projects or on gifts of commodities such as wheat, flour, fertilizer, coal, copper and condensed milk which have been sold in the recipient country to raise counterpart funds for agreed developmental projects.

The projects assisted by Australia cover a wide range, including irrigation and preparation of land for food crops, irrigation and electric power projects, secondary industries, municipal services, road building, transport and communications facilities, broadcasting equipment and lignite mining.

A Technical Co-operation Scheme has been an integral part of the Colombo Plan since its inception in 1950. Co-ordination of technical assistance is provided by a Council for Technical Co-operation, which meets regularly in Colombo, served by a Colombo Plan Bureau.

3. **Technical Assistance.**—(i) *Training.* Australia had spent a total of £9,811,881 on training awards under the Colombo Plan up to 30th June, 1965. A total of 5,920 awards for training in Australia had been made. The main fields of study include engineering, public administration, education, nursing, science, medicine and health, and agriculture. Substantial numbers have also been trained in such fields as accountancy, arts, economics, food technology, social studies and industry.

At 30th June, 1965, a total of 4,103 awards had been granted under the correspondence scholarship scheme inaugurated by Australia in 1955. Main fields of study are accountancy, engineering, English, and trade courses. Burma, Ceylon, India, Indonesia, Malaysia, the Philippines and Thailand have joined the correspondence scheme. Malaysia has established a correspondence education scheme of its own, for which key personnel were trained in Australia under the Colombo Plan.

(ii) *Experts.* Australia has spent a total of £2,720,774 on experts and advisers up to 30th June, 1965. This involved the services of 563 experts and 127 advisers on 915 assignments. Of these numbers, 58 experts and 2 advisers were in the field at 30th June, 1965. The majority were in Malaysia and Thailand.

The following table shows the number of training awards and experts provided to Colombo Plan countries by Australia up to 30th June, 1965.

**AUSTRALIA: TRAINING AWARDS AND EXPERTS PROVIDED UNDER
COLOMBO PLAN TO 30th JUNE, 1965**

Country	Training awards	Correspondence awards	Expert assignments
Afghanistan	16	..	..
Brunei	24	13	1
Burma	439	350	14
Cambodia	35	..	28
Ceylon	331	478	60
India	695	297	33
Indonesia	966	286	57
Korea	123	..	..
Laos	62	..	7
Malaysia	1,647	2,528	280
Nepal	37	..	6
Pakistan	466	..	56
Philippines	419	70	27
Thailand	446	81	67
Vietnam	214	..	20
Regional (Projects) .. .. .	..	..	26
Total	5,920	4,103	682

(iii) *Equipment.* At 30th June, 1965, a total of 413 requests for technical equipment had been or were being met, at a total cost of £3,593,242.* The range of items supplied includes text books and Australian reference books for schools, universities and technical training institutions; equipment and tools for technical education; livestock and equipment for breeding programmes; radio receivers for use in remote areas; film projectors and visual aids for training centres; X-ray equipment for hospitals; and agricultural research equipment.

(iv) *Miscellaneous.* In addition to training awards, experts and equipment, technical assistance funds have been spent on contributions to the Colombo Plan Bureau, publications, International House, training centres and the ECAFE Asian Economic Development Institute.

*Includes £65,000 for equipment used in the Mekong Project and included under Miscellaneous in the table on page 1226.

§ 3. Participation in the United Nations

1. **Australia's Contributions to United Nations.**—Australia played an active part in drafting the Charter of the United Nations at the Conference on International Organization in San Francisco in 1945 and has been a consistent supporter of the principles and objectives of the United Nations since its foundation. Australia's influence in the affairs of the United Nations has been exerted primarily through the annual debates in the General Assembly, through membership of the Security Council (1946–47 and 1956–57), the Economic and Social Council (1948–50, 1953–55 and 1962–64), and through the Trusteeship Council. In virtue of responsibilities for administration of the Trust Territories of Nauru and New Guinea Australia has been a member of the Trusteeship Council since it was established.

In 1950 Australia joined fifteen other member States in answering the Security Council's call to help the Republic of Korea to repel Communist aggression from the north, and members of all three armed services took part in the three years of fighting which followed. Australia has also been directly involved in United Nations activities in many other parts of the world. Australia has contributed its share of the costs, both assessed and voluntary, of all United Nations peace-keeping operations, the largest of which have been the United Nations Emergency Force (UNEF) in the Middle East since 1956, the United Nations operation in the Congo (ONUC) in 1960–64, and the United Nations Force in Cyprus (UNFICYP) since 1964. In addition to financial contributions, an Element of 40 Australian policemen has been made available for service with UNFICYP.

In the economic, social and cultural sphere Australia has contributed to the work of the United Nations through membership of its specialized agencies and of the Economic and Social Council. Australia is a foundation member of one of the four Regional Economic Commissions—The Economic Commission for Asia and the Far East, the 4th and 15th Sessions of which were held in Australia. In 1963 Australia became a regional member of ECAFE.

Australia has had varying periods of service as a member of the executive bodies of the principal specialized agencies. As a leading agricultural country, Australia played a large part in the establishment of the Food and Agriculture Organization (FAO). Australia is a member of the Board of Governors of the International Atomic Energy Agency. Australia served as a member of the governing body of the International Labour Organisation either as a Titular Government member or as a Deputy member for 1945–60, and in 1963 was again elected to the Governing Body as a Titular Government member for a further three-year term. Australia has also been a prominent member of the International Civil Aviation Organization since its inception, and in 1962 was re-elected to the Council as one of the nine States of principal civil aviation importance.

2. **Australia's Contributions in International Aid.**—Australia's contributions towards various forms of international aid through the United Nations and other international organizations for 1964–65 have amounted to about \$21,000,000. This is additional to the funds provided for the Colombo Plan and the cash grant for the development of Papua and New Guinea in 1964–65.

The Australian Government has contributed £3,650,921 to the United Nations Expanded Programme of Technical Assistance from the inception of the Programme in 1950 up to June, 1965. This was spent on the provision of experts, training, supplies, and equipment and supplemented Australian aid under the Technical Co-operation Scheme of the Colombo Plan.

Australian experts sent abroad under the United Nations aid programmes up to 31st December, 1964, totalled 455. A total of 590 United Nations trainees had come to Australia up to 31st December, 1964.

Other contributions by Australia (as at June, 1965) have included £22,522,000 to the United Nations Relief and Rehabilitation Administration (UNRRA); £3,297,056 to the International Refugee Organization; £1,830,000 to Post-UNRRA Relief; £6,547,993 for food and medical supplies to the United Nations Children's Fund (UNICEF), which has been helping the under-privileged children of the world since its establishment in 1946; £1,799,000 of essential supplies to the United Nations Korean Reconstruction Agency; £1,390,000 of supplies to the United Nations Relief and Works Agency for Palestine refugees; £603,950 for the programmes of the United Nations High Commissioner for Refugees; £155,000 for the relief of Hungarian refugees; £47,500 for the WHO Malaria Eradication Special Account; and £625,000 to the United Nations Special Fund. Australia's assistance to the United Nations Children's Fund was recognized by the election of an Australian as chairman of the Executive Board for 1959. Australia was a member of the Board from 1947 to 1961.

Australia has also contributed £264,985 to the Inter-Governmental Committee for European Migration's programme for providing transportation from Hong Kong to countries of resettlement for refugees of European origin coming out of Mainland China.

In addition, Australia has made significant contributions to the development funds of international financial institutions; to June, 1965, these amounted to £21,265,000 to the International Bank for Reconstruction and Development, £998,000 to the International Finance Corporation and £4,472,000 to the International Development Association.

In 1962, Australia supported the establishment of the UN/FAO World Food Programme and will contribute £669,000 in cash and kind for the three years of the Programme. Australia contributed £1.2 million by the end of 1963 to the Freedom from Hunger Campaign and this money will be used on projects in South and South-East Asia.

§ 4. Diplomatic Representation

1. **General.**—The Department of External Affairs is responsible for advising the Minister for External Affairs and the Australian Government on the conduct of foreign affairs and relations with foreign Governments. Its officers staff the Australian diplomatic service and the consular and administrative service.

2. **Australian Missions Overseas.**—In September, 1965, Australia maintained the following diplomatic and consular missions abroad.

AUSTRALIAN MISSIONS OVERSEAS

Embassies (26)

Argentina—Calle Rivadavia 1829, Piso 5, Buenos Aires.

Austria—Concordia Platz 2, EZ800, Vienna 1.

Belgium—Boulevard Brand Whitlock, No. 4 Woluwe, St. Pierre, Brussels.

Brazil—Caixa Postal 251—ZC—00, Rio de Janeiro.

Burma—88 Strand Road, Rangoon.

Cambodia—94 Moha Vithei Preah Bat Norodom, Phnom Penh.

France—13 Rue Las Cases, Paris 7E.

*Germany, Federal Republic of**—Kolner Strasse 157, Bad Godesburg, Bonn.

Greece—8 Macedon Street, Athens.

Indonesia—Pegangsaan Barat 14, Djakarta.

Ireland—33 Fitzwilliam Square, Dublin.

Israel—145 Hayarkon Street, Tel Aviv.

Italy—Via Sallustiana 26, Rome.

Japan—9 Mita, Tsuna-Machi, Shiba, Minato-ku, Tokyo.

Korea—32-10 Songwoldong, Sudae moon-ku, Seoul.

Laos—Quartier Phone Xay, Vientiane.

Nepal†—C/o Australian High Commission, New Delhi, India.

The Netherlands—Lange Voorhout 18, The Hague.

The Philippines—L & S Building, 1414 Dewey Boulevard, Manila.

South Africa—Standard Bank Building, Church Square, Pretoria.

Sweden—Sergels Torg 12, Stockholm 40.

Thailand—323 Silom Road, Bangkok.

Union of Soviet Socialist Republics—13 Kropotkinsky Pereulok, Moscow.

United Arab Republic—1097 Corniche el Nil, Garden City, Cairo.

United States of America—1700 Massachusetts Avenue, Washington, D.C.

Vietnam—Caravelle Building, Place Lam Son, Saigon.

* The Australian Ambassador is also head of the Australian Military Mission in Berlin.

† The Australian High Commissioner in India is currently Ambassador to Nepal.

High Commissions (11)

- Britain**—Australia House, The Strand, London, W.C.2.
Canada—Royal Bank Chambers, 90 Sparks Street, Ottawa.
Ceylon—3 Cambridge Place, Colombo, 7.
Ghana—6/26 Milne Avenue, Accra.
India†—9/48 Sardar Patel Road, Chanakyapuri.
Malaysia—44 Ampang Road, Kuala Lumpur.
New Zealand—I.C.I. House, Molesworth Street, Wellington.
Nigeria—Investment House, 21/25 Broad Street, Lagos.
Pakistan—9 Kutchery Road, Karachi 4.
Singapore—MacDonald House, Orchard Road, Singapore 9.
Tanzania—Bank House, Independence Avenue, P.O., Box 2996.

Other (12)—

Military Mission in Berlin‡—Olympia Stadium, Charlottenburg 9, Berlin.

Mission to—

- European Economic Community*—Boulevard Brand Whitlock, No. 4 Woluwe, St. Pierre, Brussels.
United Nations (New York)—750 Third Avenue, New York 17, N.Y.
United Nations (Geneva)—254 route de Lausanne, Pregny, Geneva.

Consulate-General in—

- Spain*—Calle de General Sanjurjo 44, Madrid 3.
Switzerland—254 route de Lausanne, Pregny, Geneva.
New York—International Building, 636 Fifth Avenue, New York 20, N.Y.
San Francisco—Qantas Building, 350 Post Street, Union Square, San Francisco, California.

Consulate in—

- Denmark*—Norregade 68, Copenhagen.
New Caledonia—45 Tce. Rue du Verdun, Noumea.
Portuguese Timor—Dili.

Commission in—

- Fiji*—Joong Hing Loong Building, 68 Thompson Street, Suva.

The Department of External Affairs is responsible for the control and administration of all the diplomatic and consular missions listed above with the exception of the High Commission, London, which is the responsibility of the Prime Minister's Department, and the Australian Consulate in Copenhagen, which is the responsibility of the Department of Immigration.

Specialist officers of the Trade Commissioner Service, other Commonwealth Government Departments and the Defence Services stationed abroad are attached to Australian diplomatic or consular missions. Senior attached officers are in some cases accredited to the missions with diplomatic or consular ranks approved by the Minister for External Affairs. In addition, the Department of Trade and Industry maintains Trade Commissioner posts which engage in trade promotion in a number of cities where Australia does not have diplomatic or consular representation (for complete list of Trade Commissioner posts, *see p. 1232-3*).

The Department of Immigration similarly maintains 16 offices overseas which engage in recruitment of migrants. A complete list of these offices is given in §6 of this chapter (*see p. 1234*).

* Administered by Prime Minister's Department.

† The Australian High Commissioner in India is currently Ambassador to Nepal.

‡ The Australian Ambassador is also head of the Australian Military Mission in Berlin.

3. **Diplomatic Representatives in Australia.**—There are 33 non-Commonwealth and eight Commonwealth countries represented by diplomatic missions in Australia.

The following list shows the addresses of the oversea representatives in Australia. Full details of Commonwealth and foreign representation in Australia may be obtained from publications issued by the Department of External Affairs, Canberra. Consular representatives are not included. 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

Embassies (28)

- Argentina*—5a Arkana Street, Yarralumla, Canberra, A.C.T.
Austria—Ainslie Building, Ainslie Avenue, Civic Centre, Canberra, A.C.T.
Belgium—19 Arkana Street, Yarralumla, Canberra, A.C.T.
Brazil—55 Mugga Way, Red Hill, Canberra, A.C.T.
Burma—85 Mugga Way, Red Hill, Canberra, A.C.T.
Cambodia—5 Canterbury Crescent, Deakin, Canberra, A.C.T.
China—70 Empire Circuit, Forrest, A.C.T.
France—6 Darwin Avenue, Acton, Canberra, A.C.T.
Germany, Federal Republic of—Empire Circuit, Yarralumla, Canberra, A.C.T.
Greece—22 Arthur Circle, Forrest, Canberra, A.C.T.
Indonesia—4 Hotham Crescent, Deakin, Canberra, A.C.T.
Ireland—Ainslie Building, 39 Ainslie Avenue, Civic Centre, Canberra, A.C.T.
Israel—Turkana Street, Yarralumla, Canberra, A.C.T.
Italy—27 State Circle, Deakin, Canberra, A.C.T.
Japan—3 Tennyson Crescent, Forrest, Canberra, A.C.T.
Korea—50 Darling Point Road, Darling Point, N.S.W.
Laos—47 National Circuit, Forrest, Canberra, A.C.T.
The Netherlands—120 Empire Circuit, Yarralumla, Canberra, A.C.T.
The Philippines—Moonah Place, Yarralumla, Canberra, A.C.T.
Portugal—22 Bougainville Street, Manuka, Canberra, A.C.T.
South Africa—Green Square, Jardine Street, Kingston, Canberra, A.C.T.
Sweden—Turkana Street, Yarralumla, Canberra, A.C.T.
Switzerland—37 Stonehaven Crescent, Deakin, Canberra, A.C.T.
Thailand—1 Fraser Place, Yarralumla, Canberra, A.C.T.
Union of Soviet Socialist Republics—78 Canberra Avenue, Griffith, Canberra, A.C.T.
United Arab Republic—38 Empire Circuit, Forrest, Canberra, A.C.T.
United States of America—Yarralumla, Canberra, A.C.T.
Vietnam—39 National Circuit, Forrest, Canberra, A.C.T.

High Commissioners (7)

- Britain*—Commonwealth Avenue, Canberra, A.C.T.
Canada—Commonwealth Avenue, Canberra, A.C.T.
Ceylon—35 Empire Circuit, Forrest, Canberra, A.C.T.
India—63 Mugga Way, Red Hill, Canberra, A.C.T.
Malaysia—71 State Circle, Acton, Canberra, A.C.T.
New Zealand—M.L.C. Building, London Circuit, Civic Centre, Canberra, A.C.T.
Pakistan—59 Franklin Street, Forrest, Canberra, A.C.T.

Legations (5)

- Chile*—3 Aston Gardens, Bellevue Hill, Sydney, N.S.W.
Denmark—115 Pitt Street, Sydney, N.S.W.
Finland—537 New South Head Road, Double Bay, Sydney, N.S.W.
Peru—17 Canterbury Crescent, Deakin, Canberra, A.C.T.
Uruguay—22 Bougainville Street, Manuka, Canberra, A.C.T.

Other (1)

Commissioner for—

- Malta*—31 Clowes Street, South Yarra, Melbourne, Vic.

4. **Agents-General for States.**—From early times the Australian colonies maintained agents in London to encourage immigration and to carry out commercial and financial negotiations. Since federation the States have continued to maintain Agents-General in London, all of whom work in close co-operation with the High Commissioner for Australia at Australia House, The Strand, London. The addresses of the Agents-General are as follows: New South Wales—56–57 The Strand, London, W.C.2; Victoria—Victoria House, Melbourne Place, The Strand, London, W.C.2; Queensland—Marble Hall, 409–10 The Strand, London, W.C.2; South Australia—South Australia House, 50 The Strand, London, W.C.2; Western Australia—Savoy House, 115 The Strand, London, W.C.2; Tasmania—457 The Strand, Charing Cross, London, W.C.2.

§ 5. Oversea Trade Representation

1. **The Australian Trade Commissioner Service.**—The Department of Trade maintains Trade Commissioners in 32 countries. The first permanent Trade Commissioner Post was set up in Canada in 1929. Before that Australia's only official trade representatives abroad were in the High Commission Office in London and at the Office of the Commissioner General for Australia in New York. By May, 1965, Trade Commissioners were established at the following posts: United States of America—New York, Washington, Los Angeles and San Francisco; Canada—Vancouver, Ottawa and Montreal; West Indies—Trinidad; Britain and Europe—London, The Hague, Vienna, Athens, Paris, Bonn, Hamburg, Geneva, Stockholm and Rome; Persian Gulf—Bahrain; Africa—Lagos, Nairobi, Salisbury, Johannesburg and Cairo; Lebanon—Beirut; India—New Delhi, Bombay and Calcutta; Ceylon—Colombo; South-East Asia—Singapore, Djakarta, Kuala Lumpur, Bangkok and Hong Kong; Japan—Tokyo; New Zealand—Wellington, Christchurch and Auckland; Philippines—Manila; Pakistan—Karachi; South America—Buenos Aires and Lima. Twenty-eight editions of the Department of Trade's promotion periodical "Austral News" now circulate in over 100 countries in four languages. (*See also* Australian Trade Missions, § 4 of Chapter XIV. Oversea Trade, p. 497.)

The addresses of Australian Trade Commissioner Posts overseas are shown in the following list.

Trade Commissioner Service of the Commonwealth of Australia

- Argentina*—Australian Embassy, Calle Rivadavia 1829, Piso 5, Buenos Aires.
Austria—Australian Embassy, Concordia Platz 2, 2nd Floor, Vienna 1.
Britain—Australia House, The Strand, London, W.C.2.
Bahrain—Almoayyed Building, Government Road, Bahrain.
Canada—1155 Dorchester Boulevard West, Montreal, P.Q.; Suite 608, Burrard Building, 1030 W. Georgia Street, Vancouver 5, B.C.; Australian High Commission, Royal Bank Chambers, 90 Sparks Street, Ottawa, Ontario.
Ceylon—Australian High Commission, 3 Cambridge Place, Colombo 7.
France—2nd Floor, 26 Rue de la Pepiniere, Paris. 8E.
Germany, Federal Republic of—Australian Embassy, Kolner Strasse 157, Bad Godesberg, Bonn; 2000 Hamburg 36, Neuer Wall 39, Hamburg 11.
Greece—Australian Embassy, 15 Valaoritou Street, Athens.

Trade Commissioner Service of the Commonwealth of Australia—continued

- Hong Kong*—Union House, Connaught Road Central, Hong Kong.
- India*—Mercantile Bank Building, 52 Mahatma Gandhi Road, Bombay 1; 2 Fairlie Place, Calcutta 1; 34 Golf Links Road, New Delhi.
- Indonesia*—Djalan Nusantara 39, Djakarta.
- Italy*—Australian Embassy, Via Sallustiana 26, Rome.
- Japan*—9 Mita Tsuna-Machi, Shiba, Minato-ku, Tokyo.
- Kenya*—4th Floor, Silo Park House, Queensway, Nairobi.
- Lebanon*—5th Floor, L'Union de Paris Building, Rue Maamari, Beirut.
- Malaysia*—44 Ampang Road, Kuala Lumpur.
- The Netherlands*—36 Jan Van Nassau Straat, The Hague.
- New Zealand*—London and Lancashire Building, 56 Shortland Street, Auckland; Phoenix Building, 91 Worcester Street, Christchurch; Australian High Commission, Fourth Floor, I.C.I. Building, Molesworth Street, Wellington.
- Nigeria*—Australian High Commission, 4th Floor, Investment House, 21–25 Broad Street, Lagos.
- Pakistan*—Australian High Commission, 9 Kutchery Road, Karachi 4.
- Peru*—Monterosa Buildings, Jiron Arica 837, Lima.
- The Philippines*—Australian Embassy, L & S Building, 1414 Dewey Boulevard, Manila.
- Singapore*—Australian High Commission, MacDonal House, Orchard Road, Singapore, 9.
- Southern Rhodesia*—Central Africa House, Cnr. First Street and Gordon Avenue, Salisbury.
- South Africa*—10th Floor, Europa House, 32 Plein Street, Johannesburg.
- Sweden*—Australian Embassy, Sergels Torg 12, Stockholm 40.
- Switzerland*—Australian Consulate-General, 254 route de Lausanne, Pregny, Geneva.
- Thailand*—Australian Embassy, 323 Silom Road, Bangkok.
- United Arab Republic*—Australian Embassy, 1097 Corniche el Nil, Garden City, Cairo.
- United States of America*—Australian Embassy, 3148 Cleveland Avenue, Washington, D.C.; Australian Consulate-General, International Building, 636 Fifth Avenue, New York 20, N.Y.; Australian Consulate-General, 350 Post Street, Union Square, San Francisco, Cal.; 3600 Wilshire Boulevard, Los Angeles 5, Cal.
- West Indies, Federation of*—72 South Quay, Port of Spain, Trinidad, W.I.

2. **Australian Trade Correspondents and Marketing Officers.**—Australian Trade Correspondents and Marketing Officers have no official status but supplement the work of the Trade Commissioner Service. Correspondents are located in Suva, Fiji; Taipei, Taiwan; Valletta, Malta; Port Louis, Mauritius; Mexico City, Mexico; Montevideo, Uruguay; Madrid, Spain; and Istanbul, Turkey. Marketing Officers are located in Rangoon, Burma; and Accra, Ghana.

3. **Trade Commissioners of Oversea Governments in Australia.**—

- Britain*—Senior British Trade Commissioner—Commonwealth Avenue, Canberra, A.C.T.
- British Trade Commissioners*—London Assurance House, 16–20 Bridge Street, Sydney, N.S.W.; 330 Collins Street, Melbourne, Vic.; M.L.C. Building, Cnr. Adelaide and Edward Streets, Brisbane, Qld.; F.C.A. Building, Franklin Street, Adelaide, S.A.; Prudential Building, 189 St. George's Terrace, Perth, W.A.
- Office of the Hong Kong Government Trade Representative*—Kembla Building, Margaret Street, Sydney, N.S.W.
- Office of the Fiji Government Representative*—38 Martin Place, Sydney, N.S.W.
- Canada*—Canadian Trade Commissioners—A.M.P. Building, Circular Quay, Sydney, N.S.W.; 2 City Road, South Melbourne, Vic.

Trade Commissioners of Oversea Governments in Australia—continued

Ceylon—Ceylon Trade Commissioner—The Wales House, 66 Pitt Street, Sydney, N.S.W.

India—Indian Trade Commissioner—Caltex House, 167–187 Kent Street, Sydney, N.S.W.

Malaysia—Malaysian Trade Commissioner—71 State Circle, Acton, A.C.T.

New Zealand—Senior New Zealand Trade Commissioner—280–288 George Street, Sydney, N.S.W.

New Zealand Government Trade Commissioner—428 Collins Street, Melbourne, Vic.

Pakistan—Dalton House, 115 Pitt Street, Sydney, N.S.W.

South Africa—South African Trade Commissioner—622 St. Kilda Road, Melbourne, Vic.

§ 6. Commonwealth Migration Offices

The Department of Immigration has established sixteen offices overseas. A series of Regional Offices has also been set up in certain countries to provide additional facilities.

Chief Migration Officers are attached to Australian Diplomatic Missions to Britain, the Netherlands, Greece, Austria, Germany and Italy. In Spain the Chief Migration Officer is also the Consul-General. Senior Migration Officers have been attached to the Diplomatic Missions to Sweden and the United Arab Republic, and Migration Officers to the missions to Switzerland, Belgium, Denmark and France. In the Lebanon and Hong Kong, a Senior Migration Officer is attached to the Australian Trade Commission, and in Malta an independent office has been established under the control of a Senior Migration Officer.

The Administrative Officer to the Australian Trade Commissioner in Nairobi deals with migration matters in Kenya, and the diplomatic staffs of missions in other countries where Australia is represented are available to handle migration business on behalf of the Department.

Senior Immigration Officers Overseas

Austria—Australian Embassy, Migration Office, Teinfaltstrasse 1, Vienna.

Belgium—Australian Embassy, Boulevard Brand Whitlock, 4 Woluwe, St. Pierre, Brussels.

Britain—Australia House, The Strand, London, W.C.2.

Denmark—Australian Consulate, Norregard 68, Copenhagen.

France—Australian Embassy, Migration Office, 28 Rue de la Pepiniere, Paris.

Germany—Australian Embassy, Migration Office, Victoria Haus, Hohenzollernring 103, Cologne.

Greece—Australian Embassy, Migration Office, 15 Valaoritou Street, Athens.

Hong Kong—Australian Government Trade Commission, 9th Floor, Union House, Connaught Road Central, Hong Kong.

Italy—Australian Embassy, Migration Office, Via Magenta 5, Rome.

Lebanon—Australian Migration Office, Al Ghanem Building, 211 Madame Curie Street, Sana'eh, Beirut.

Malta—Australian Migration Office, Airways House, Gaiety Lane, Cnr. High Street, Sliema, Valletta, Malta.

The Netherlands—Australian Embassy, Migration Office, 1 Javastraat, The Hague.

Spain—Australian Consulate-General, Calle de General Sanjurjo 44, Madrid.

Sweden—Australian Embassy, Sergels Torg 12, Stockholm.

Switzerland—Australian Consulate-General, 41 Quai Wilson, Geneva.

United Arab Republic—Australian Embassy, Migration Office, 12 Hassan Sabri Street, Zamalek, Cairo.

CHAPTER XXX

MISCELLANEOUS

NOTE.—This chapter comprises statistics and other descriptive information not directly related to the subjects of the preceding chapters, or which it is convenient to assemble in single sections, arranged as follows:—

- §1. Valuation of Australian Production; §2. Indexes of Farm Production; §3. Consumption of Foodstuffs and Beverages; §4. Retail Trade; §5. Interstate Trade; §6. Statistical Organization in Australia; §7. Statistical Publications of Australia.

In issues of the Year Book prior to No. 49 (*see* No. 48, p. 1166), a list of *Australian Books* was included. This list, compiled by the Librarian of the Commonwealth National Library is available from the Library, but considerations of space preclude its publication in this issue.

§ 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 in the following tables have been compiled by the Statisticians in the various States from the latest and best data available, and are on a substantially uniform basis. However, marketing costs are not on a completely comparable basis between States and, in addition, accurate information is difficult to obtain for many items. In consequence, differences between States in the relationships of local to gross value should be treated with some reserve.

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 general, the "principal markets" are the metropolitan markets in each State. 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., 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.

For the years shown in the following tables, no allowance for power, power kerosene, petrol and other oils has been made in New South Wales. In the case of the mining and quarrying industry, however, this allowance has been made in all States. Marketing costs for mining and quarrying, and costs of materials used in the process of production in respect of bee-farming, trapping, forestry, and fishing and whaling are not available for all States. Local values have been used for these industries, with consequent understatement in gross value for the mining and quarrying industry and overstatement in net value for the other industries.

2. Value of Production, Australia, 1963-64.—The following table shows particulars of the gross, local and net values of production in Australia, by industry.

GROSS, LOCAL AND NET VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES: AUSTRALIA, 1963-64

(£'000)

Industry	Gross production valued at principal markets	Local value—gross production valued at place of production	Net value of production (without deduction of depreciation or maintenance)
Agriculture	614,242	527,837	458,692
Pastoral	794,278	733,287	670,289
Dairying	228,433	210,810	161,615
Poultry	69,091	61,189	30,754
Bee-farming	3,014	2,572	(a) 2,572
<i>Total, Rural</i>	<i>1,709,058</i>	<i>1,535,695</i>	<i>1,323,922</i>
Trapping	7,521	6,682	(a) 6,682
Forestry	56,208	51,312	(a) 51,312
Fishing and whaling	17,676	15,842	(a) 15,842
Mining and quarrying	(a) 208,341	208,341	162,798
<i>Total, Non-rural</i>	<i>289,746</i>	<i>282,177</i>	<i>236,634</i>
<i>Total, All Primary</i>	<i>1,998,804</i>	<i>1,817,872</i>	<i>1,560,556</i>
Factories	(b) 2,634,653	(b) 2,634,653	2,634,653
Grand Total	4,633,457	4,452,525	4,195,209

(a) Local value.

(b) Net value; excludes Northern Territory and Australian Capital Territory.

3. Net Value of Production, States, 1963-64.—The following tables show the total net value of production, and the net value per head of population, for each industry and State.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES, 1963-64

(£'000)

Industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Agriculture ..	122,953	109,068	111,185	62,590	39,810	12,864	84	138	458,692
Pastoral ..	251,545	161,848	117,887	62,989	61,772	9,783	3,445	1,020	670,289
Dairying ..	54,017	57,199	25,947	10,619	5,260	8,375	39	159	161,615
Poultry ..	10,985	15,052	2,440	710	672	629	95	171	30,754
Bee-farming(b) ..	917	575	122	473	425	54	..	6	2,572
<i>Total, Rural</i> ..	<i>440,417</i>	<i>343,742</i>	<i>257,581</i>	<i>137,381</i>	<i>107,939</i>	<i>31,705</i>	<i>3,663</i>	<i>1,494</i>	<i>1,323,922</i>
Trapping(b) ..	2,171	2,957	622	337	217	240	138	..	6,682
Forestry(b) ..	14,809	14,460	6,490	4,084	5,367	5,819	134	149	51,312
Fishing and whaling	3,928	2,101	2,162	1,718	5,044	863	26	..	15,842
Mining and quarrying ..	74,855	16,826	30,974	14,807	15,349	7,233	2,543	211	162,798
<i>Total, Non-rural</i> ..	<i>95,763</i>	<i>36,344</i>	<i>40,248</i>	<i>20,946</i>	<i>25,977</i>	<i>14,155</i>	<i>2,841</i>	<i>360</i>	<i>236,634</i>
<i>Total, All Primary</i> ..	<i>536,180</i>	<i>380,086</i>	<i>297,829</i>	<i>158,327</i>	<i>133,916</i>	<i>45,860</i>	<i>6,504</i>	<i>1,854</i>	<i>1,560,556</i>
Factories ..	1,133,258	875,239	220,937	213,678	115,256	76,285	..	..	2,634,653
Grand Total ..	1,669,438	1,255,325	518,766	372,005	249,172	122,145	6,504	1,854	4,195,209

(a) See letterpress on p. 1235.

(b) Local value.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND FACTORIES
PER HEAD OF POPULATION, 1963-64

(£)

Industry	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Australia (b)
Agriculture ..	30.1	35.3	70.6	61.4	50.9	35.1	41.6
Pastoral ..	61.6	52.4	74.9	61.7	79.0	26.7	60.8
Dairying ..	13.2	18.5	16.5	10.5	6.6	22.8	14.7
Poultry ..	2.7	4.9	1.5	0.7	0.9	1.7	2.8
Bee-farming(c) ..	0.2	0.2	0.1	0.4	0.6	0.2	0.2
Total, Rural ..	107.8	111.3	163.6	134.7	138.0	86.5	120.1
Trapping(c) ..	0.5	0.9	0.4	0.4	0.2	0.7	0.6
Forestry(c) ..	3.6	4.6	4.1	4.0	6.9	15.9	4.7
Fishing and whaling(c) ..	1.0	0.7	1.4	1.7	6.5	2.4	1.4
Mining and quarrying ..	18.3	5.5	19.8	14.5	19.6	19.8	14.8
Total, Non-rural ..	23.4	11.7	25.7	20.6	33.2	38.8	21.5
Total, All Primary Factories ..	131.2 277.3	123.0 283.2	189.3 140.4	155.3 209.5	171.2 147.4	125.3 208.3	141.6 241.3
Grand Total ..	408.5	406.2	329.7	364.8	318.6	333.6	382.9

(a) See letterpress on p. 1235.
with the exception of factories.(b) Includes Northern Territory and Australian Capital Territory
(c) Local value.

4. Net Value of Production, Australia, 1959-60 to 1963-64.—The following table shows the net value of production for Australia.

NET(a) VALUE OF PRODUCTION OF PRIMARY INDUSTRIES AND
FACTORIES: AUSTRALIA

(£'000)

Industry	1959-60	1960-61	1961-62	1962-63	1963-64
Agriculture ..	291,951	391,861	366,503	415,207	458,692
Pastoral ..	536,215	458,169	481,338	539,349	670,289
Dairying ..	152,193	142,131	136,497	153,679	161,615
Poultry ..	30,424	30,998	24,872	26,418	30,754
Bee-farming(b) ..	2,060	1,458	1,613	1,495	2,572
Total, Rural ..	1,012,843	1,024,617	1,010,823	1,136,148	1,323,922
Trapping(b) ..	6,881	6,601	5,888	5,708	6,682
Forestry(b) ..	r 52,736	r 51,202	r 47,618	r 48,051	51,312
Fishing and whaling(b)	12,325	12,813	14,294	15,311	15,842
Mining and quarrying	126,155	139,027	137,245	145,514	162,798
Total, Non-rural ..	r 198,097	r 209,643	r 205,045	r 214,584	236,634
Total, All Primary Factories ..	1,210,940 r 2,080,549	1,234,260 r 2,175,295	1,215,868 r 2,197,317	1,350,732 r 2,397,595	1,560,556 2,634,653
Grand Total ..	r 3,291,489	r 3,409,555	r 3,413,185	r 3,748,327	4,195,209

(a) See letterpress on p. 1235.

(b) Local value.

§ 2. Indexes of Farm 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:—Agriculture, Pastoral, Dairying, poultry and bee-farming, 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.

1. **Farm Production Price Indexes.**—The Farm Production Price Indexes shown in the following table relate to average "prices" of agricultural, pastoral, dairying, poultry and bee-farming 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 Year Book (see No. 43, p. 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)

Year	Agriculture	Pastoral	Dairying, poultry and bee- farming	All farming	Wool (shorn and dead)	Products other than wool
1949–50	272	396	228	316	483	261
1950–51	291	818	258	505	1,098	308
1951–52	355	501	332	410	552	363
1952–53	364	531	387	440	623	379
1953–54	324	534	395	429	621	365
1954–55	316	489	371	401	540	355
1955–56	330	451	392	397	468	373
1956–57	336	536	386	432	607	374
1957–58	336	435	382	388	473	359
1958–59	322	396	386	369	370	369
1959–60	329	464	402	403	440	391
1960–61	349	443	402	401	397	403
1961–62	348	421	373	385	412	376
1962–63	334	450	388	396	449	378
1963–64	351	511	402	431	531	398

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 Year Book (*see* No. 43, p. 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)

Year	Agri- culture	Pastoral	Dairying, poultry and bee- farming	All farming	Wool (shorn and dead)	Products other than wool
1949–50	117	112	111	115	115	115
1950–51	108	109	106	109	116	107
1951–52	103	105	97	103	112	100
1952–53	121	126	108	121	131	118
1953–54	129	123	107	122	128	120
1954–55	120	127	117	123	132	120
1955–56	134	136	120	131	146	127
1956–57	120	148	117	131	164	121
1957–58	109	142	114	124	148	116
1958–59	165	159	119	149	164	145
1959–60	140	163	123	144	172	136
1960–61	177	152	120	152	165	148
1961–62	163	160	128	155	174	150
1962–63	191	163	129	166	170	165
1963–64	196	172	131	174	183	171

(a) Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (*see* text preceding table).

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 live-stock 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.

**FARM PRODUCTS FOR FOOD USE: INDEXES OF QUANTUM^(a) OF
PRODUCTION, EXPORTS AND CONSUMPTION**

(Base: Average 1936-37 to 1938-39 = 100)

Year	Production		Exports		Consumption in Australia	
	Total	Per head of total population	Total	Per head of total population	Total	Per head of total population
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.. ..	129	95	131	97	131	97
1956-57.. ..	123	88	118	85	136	98
1957-58.. ..	115	81	90	64	139	98
1958-59.. ..	146	101	137	94	142	98
1959-60.. ..	138	93	132	89	145	98
1960-61.. ..	148	98	170	112	143	95
1961-62.. ..	154	99	161	104	150	97
1962-63.. ..	168	106	187	119	154	98
1963-64p ..	175	109	208	130	159	99

(a) Indexes of value at constant prices, i.e., quantities revalued at average unit values for the base years (see text preceding table).

§ 3. Consumption of Foodstuffs and Beverages

1. **Quantities Consumed.**—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 the sum of production and imports and allowing for recorded movements in stocks of the respective commodities. While the estimates may be generally accepted as being 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 certain oils and 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 previously 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 production by householders for their own requirements. In most cases broad estimates of non-commercial (householders') production have been made. 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 derived by dividing the total apparent consumption of each commodity or commodity group in a given year by the mean population of Australia in the same period.

More detailed information on the consumption of foodstuffs and beverages is contained in the statistical bulletin: *Report on Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia*, issued by this Bureau.

The following tables show the average annual consumption during the three-year periods ended 1938-39, 1948-49, and 1958-59, together with the data for each of the years 1961-62, 1962-63, and 1963-64.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA

Commodity	Average three years ended—			1961-62	1962-63	1963-64 P
	1938-39	1948-49	1958-59			
Milk and milk products—						
Fluid whole milk mill. gals.	161	233	276	303	300	311
Fresh cream '000 tons	19.7	5.1	8.7	9.5	9.7	9.8
Condensed, concentrated and evaporated milk—						
Full cream—						
Sweetened "	} 13.2	11.9	11.3	11.9	9.5	12.4
Unsweetened "		13.6	27.6	33.0	31.8	37.6
Skim "		n.a.	n.a.	5.6	5.9	8.6	11.5
Powdered milk—						
Full cream "	8.1	11.0	11.0	12.7	12.2	11.7
Skim "	..	1.9	10.7	20.5	18.8	23.8
Infants' and invalids' foods "	3.0	4.3	9.4	11.5	12.8	14.1
Cheese "	13.4	18.8	25.0	30.7	32.2	35.3
<i>Total (in terms of milk solids)</i> "	<i>120.5</i>	<i>167.4</i>	<i>212.4</i>	<i>244.7</i>	<i>242.3</i>	<i>258.5</i>
Meat—						
Beef and veal (carcass weight) "	430.3	372.7	538.4	441.9	484.7	516.6
Mutton "	184.1	154.0	221.6	261.9	249.1	237.4
Lamb "	46.0	86.1	127.7	202.6	203.0	205.1
Pigmeat "	26.2	24.3	43.6	64.4	58.0	56.3
Offal "	25.7	30.3	49.7	55.1	60.0	63.4
Canned meat (canned weight) "	6.5	9.0	17.9	17.8	20.6	20.1
Bacon and ham (cured carcass weight) "	31.5	39.9	30.5	33.0	36.0	36.6
<i>Total (in terms of carcass equivalent weight)</i> "	<i>769.9</i>	<i>736.9</i>	<i>1,054.1</i>	<i>1,099.7</i>	<i>1,134.7</i>	<i>1,158.3</i>
Poultry, game and fish—						
Poultry and rabbits (dressed weight) "	29.8	54.0	50.9	55.6	56.7	57.8
Fish (edible weight)—						
Fresh—						
Australian origin "	} 19.7	19.4	13.8	14.7	15.8	16.3
Imported "			9.0	12.6	13.2	15.4
Cured (including smoked and salted) "			3.8	4.4	4.8	4.7
Crustaceans and molluscs "	2.1	2.1	3.8	4.7	6.3	6.0
Canned—Australian origin "	} 12.4	10.5	3.3	3.8	4.5	3.9
Imported "			7.4	9.6	9.2	11.5
<i>Total (edible weight)</i> "	<i>51.5</i>	<i>63.2</i>	<i>76.2</i>	<i>81.9</i>	<i>86.5</i>	<i>91.1</i>
Eggs and egg products (in terms of eggs in shell)—						
Eggs in shell "	78.7	86.5	92.1	(a)116.9	(a)120.0	(a)122.9
Egg pulp "	2.9	8.6	5.7	(a) 7.7	(a) 6.2	(a) 7.6
Egg powder .. .. "	..	..	0.2	(a) 0.2	(a) 0.5	(a) 0.6
<i>Total</i> { mill. doz.	<i>81.6</i>	<i>95.1</i>	<i>98.0</i>	<i>(a)124.8</i>	<i>(a)126.7</i>	<i>(a)131.1</i>
	<i>139.3</i>	<i>162.3</i>	<i>167.3</i>	<i>186.3</i>	<i>189.2</i>	<i>195.7</i>
Fats and oils—						
Butter '000 tons	101.4	84.7	118.4	113.8	114.7	115.2
Margarine—						
Table "	2.8	3.0	15.5	15.3	15.8	15.5
Other "	12.2	18.7	21.2	28.5	30.2	32.6
Vegetable oils and other fats "	14.4	13.8	19.6	21.3	21.7	22.2
<i>Total (fat content)</i> "	<i>115.5</i>	<i>105.5</i>	<i>148.3</i>	<i>152.8</i>	<i>155.8</i>	<i>158.6</i>

For footnotes see next page.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY: AUSTRALIA—*continued*

Commodity	Average three years ended—			1961-62	1962-63	1963-64 P
	1938-39	1948-49	1958-59			
Sugar and syrups—						
Refined sugar—						
As sugar '000 tons	216.5	234.6	259.0	255.4	252.3	262.3
In manufactured products	110.1	174.2	226.1	273.1	273.7	274.1
Honey, glucose and syrups (sugar content)	17.3	19.1	22.8	24.5	23.2	30.8
<i>Total (sugar content)</i>	<i>343.9</i>	<i>427.9</i>	<i>507.9</i>	<i>553.0</i>	<i>549.2</i>	<i>567.2</i>
Pulse and nuts—						
Dried pulse	4.5	7.2	10.7	13.3	13.3	14.6
Peanuts (weight without shell)	2.8	8.7	7.2	13.5	12.6	9.3
Edible tree nuts (weight without shell)	2.6	4.4	6.7	9.1	9.4	10.0
Cocoa (raw beans)	6.3	11.6	12.1	15.1	16.8	14.2
<i>Total</i>	<i>16.2</i>	<i>31.9</i>	<i>36.7</i>	<i>51.0</i>	<i>52.1</i>	<i>48.1</i>
Fruit—						
Citrus fruit(b)	97.8	127.2	153.8	204.8	230.5	208.7
Other fresh fruit	288.2	297.5	341.4	412.2	401.5	441.1
Jams	35.1	42.5	37.5	38.4	39.4	38.2
Dried fruit	24.8	30.0	26.4	29.3	35.7	25.5
Canned fruit	31.9	37.3	59.4	77.4	98.2	101.1
<i>Total (fresh fruit equivalent)</i>	<i>532.3</i>	<i>607.9</i>	<i>691.4</i>	<i>847.5</i>	<i>912.0</i>	<i>891.7</i>
Vegetables—						
Leafy and green vegetables	n.a.	154.0	172.1	202.8	206.6	212.8
Tomatoes(b)	(c) 48.0	86.3	124.4	139.4	135.3	146.0
Root and bulb vegetables	n.a.	143.7	152.8	155.9	160.2	158.7
Potatoes—						
White	318.5	424.3	495.4	459.6	594.3	500.6
Sweet	7.4	5.3	6.1	6.6	6.8	6.9
Other vegetables	n.a.	162.8	178.4	170.7	183.4	176.3
<i>Total</i>	<i>n.a.</i>	<i>976.4</i>	<i>1,129.2</i>	<i>1,135.0</i>	<i>1,286.6</i>	<i>1,201.3</i>
Grain products—						
Flour (including wheatmeal for baking and sharps)	574.0	689.7	789.1	803.1	804.2	846.9
Breakfast foods	32.5	45.8	58.8	67.3	66.9	69.1
Rice (milled)	12.2	3.0	16.1	17.5	17.9	18.2
Tapioca, sago, etc.	3.7	2.3	1.4	0.8	1.1	1.0
Pearl barley	3.0	1.7	2.0	1.4	1.8	1.7
Edible starch (cornflour)	4.3	4.9	2.7	n.a.	n.a.	n.a.
<i>Total</i>	<i>629.7</i>	<i>747.4</i>	<i>870.1</i>	<i>890.1</i>	<i>891.9</i>	<i>936.9</i>
Beverages—						
Tea	21.1	22.1	26.1	27.3	27.9	28.1
Coffee(d)	2.0	3.4	5.9	9.5	10.7	10.7
Beer mill. gals.	80.1	129.5	221.0	238.4	245.9	259.2
Wine	4.2	9.8	11.1	12.0	12.6	13.2
Spirits mill. pf. gals.	1.5	2.4	2.8	3.4	3.4	3.7

(a) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz. to 2 oz. (b) Includes fresh equivalent of manufactured products. (c) Probably understated owing to lack of complete data. (d) Coffee and coffee products in terms of pure processed whole or ground coffee.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION: AUSTRALIA

Commodity		Average three years ended—			1961-62	1962-63	1963-64 p
		1938-39	1948-49	1958-59			
Milk and milk products—							
Fluid whole milk	gallons	23.4	30.5	28.3	28.5	27.8	28.2
Fresh cream	lb.	6.1	1.5	2.0	2.0	2.0	2.0
Condensed, concentrated and evaporated milk—							
Full cream—							
Sweetened	"	4.3	3.5	2.6	2.5	2.0	2.5
Unsweetened	"		4.0	6.4	7.0	6.6	7.6
Skim	"	n.a.	n.a.	1.3	1.2	1.8	2.3
Powdered milk—							
Full cream	"	2.6	3.2	2.5	2.7	2.5	2.4
Skim	"	..	0.6	2.5	4.3	3.9	4.8
Infants' and invalids' foods	"	1.0	1.3	2.2	2.4	2.6	2.9
Cheese	"	4.4	5.5	5.7	6.5	6.7	7.2
Total (in terms of milk solids)	"	39.3	49.1	48.7	51.7	50.2	52.6
Meat—							
Beef and veal (carcass weight)	"	140.3	109.1	123.8	93.3	100.4	104.9
Mutton	"	60.0	45.1	51.0	55.3	51.6	48.3
Lamb	"	15.0	25.2	29.3	42.8	42.1	41.7
Pigmeat	"	8.5	7.1	10.1	13.6	12.0	11.4
Offal	"	8.4	8.9	11.4	11.7	12.4	12.9
Canned meat (canned weight)	"	2.1	2.6	4.1	3.8	4.3	4.1
Bacon and ham (cured carcass weight)	"	10.2	11.7	7.1	7.0	7.4	7.5
Total (in terms of carcass equivalent weight)	"	250.9	215.7	242.4	232.3	235.1	235.3
Poultry, game and fish—							
Poultry and rabbits (dressed weight)	"	9.7	15.8	11.7	11.7	11.7	11.7
Fish (edible weight)—							
Fresh—							
Australian origin	"	6.4	5.7	3.2	3.1	3.3	3.3
Imported	"			2.1	2.7	2.7	3.1
Cured (including smoked and salted)	"	0.7	0.6	0.9	0.9	1.0	1.0
Crustaceans and molluscs	"			0.9	1.0	1.3	1.2
Canned—							
Australian origin	"	4.1	3.0	0.8	0.8	0.9	0.8
Imported	"			1.7	2.0	1.9	2.3
Total (edible weight)	"	16.8	18.5	17.7	17.3	17.9	18.5
Eggs and egg products (in terms of eggs in shell)—							
Eggs in shell	"	25.7	25.4	21.2	(a) 24.7	(a) 24.8	(a) 25.0
Egg pulp	"	0.9	2.5	1.3	(a) 1.6	(a) 1.3	(a) 1.5
Egg powder .. ..	"	..	..	..	(a) 0.1	(a) 0.1	(a) 0.1
Total	no.	26.6 243	27.9 255	22.5 206	(a) 26.4 211	(a) 26.2 210	(a) 26.6 213
Fats and oils—							
Butter	lb.	32.9	24.8	27.2	24.0	23.8	23.4
Margarine	"						
Table	"	0.9	0.9	3.6	3.2	3.3	3.2
Other	"	4.0	5.2	4.9	6.0	6.3	6.6
Vegetable oils and other fats	"	6.4	5.3	4.5	4.5	4.5	4.5
Total (fat content)	"	37.6	30.9	34.1	32.2	32.4	32.2
Sugar and syrups—							
Refined sugar—							
As sugar	"	70.6	68.7	59.6	53.9	52.3	53.3
In manufactured products	"	35.9	51.0	52.0	57.7	56.7	55.7
Honey, glucose and syrups (sugar content)	"	5.5	5.6	5.2	5.2	4.8	6.2
Total (sugar content)	"	112.0	125.3	116.8	116.8	113.8	115.2

For footnotes see next page.

ESTIMATED QUANTITY OF FOODSTUFFS AND BEVERAGES AVAILABLE
FOR CONSUMPTION ANNUALLY PER HEAD OF POPULATION:
AUSTRALIA—*continued*

Commodity	Average three years ended—			1961-62	1962-63	1963-64 P
	1938-39	1948-49	1958-59			
Pulse and nuts—						
Dried pulse lb.	1.5	2.0	2.5	2.8	2.8	2.9
Peanuts (weight without shell)	0.9	2.5	1.7	2.9	2.6	1.9
Edible tree nuts (weight without shell)	0.8	1.3	1.5	1.9	2.0	2.0
Cocoa (raw beans)	2.1	3.4	2.8	3.2	3.5	2.9
<i>Total</i>	<i>5.3</i>	<i>9.2</i>	<i>8.5</i>	<i>10.8</i>	<i>10.9</i>	<i>9.7</i>
Fruit—						
Citrus fruit(b)	31.9	37.2	35.4	43.3	47.7	42.4
Other fresh fruit	94.0	87.1	78.4	87.0	83.2	89.6
Jams	11.4	12.4	8.6	8.1	8.2	7.8
Dried fruit	8.1	8.7	6.0	6.2	7.4	5.1
Canned fruit	10.4	11.0	13.6	16.4	20.4	20.5
<i>Total (fresh fruit equivalent)</i>	<i>173.6</i>	<i>178.0</i>	<i>157.6</i>	<i>179.0</i>	<i>189.0</i>	<i>181.1</i>
Vegetables—						
Leafy and green vegetables	n.a.	45.1	39.5	42.8	42.8	43.2
Tomatoes(b)	(c) 15.7	25.3	28.6	29.4	28.0	29.7
Root and bulb vegetables	n.a.	42.1	35.1	32.9	33.2	32.2
Potatoes—						
White	103.8	124.2	113.9	97.1	123.1	101.7
Sweet	2.4	1.5	1.4	1.4	1.4	1.4
Other vegetables	n.a.	47.7	41.0	36.0	38.0	35.8
<i>Total</i>	<i>n.a.</i>	<i>285.9</i>	<i>259.5</i>	<i>239.6</i>	<i>266.5</i>	<i>244.0</i>
Grain products—						
Flour (including wheatmeal for baking and sharps)	187.1	201.9	181.5	169.6	166.6	172.1
Breakfast foods	10.6	13.4	13.5	14.3	13.7	14.0
Rice (milled)	4.0	0.9	3.7	3.7	3.7	3.7
Tapioca, sago, etc.	1.2	0.7	0.3	0.2	0.2	0.2
Pearl barley	1.0	0.5	0.4	0.3	0.4	0.3
Edible starch (cornflour)	1.4	1.4	0.6	n.a.	n.a.	n.a.
<i>Total</i>	<i>205.3</i>	<i>218.8</i>	<i>200.0</i>	<i>188.1</i>	<i>184.6</i>	<i>190.3</i>
Beverages—						
Tea	6.9	6.5	6.0	5.8	5.8	5.7
Coffee(d)	0.6	1.0	1.3	2.0	2.2	2.2
Beer gallons	11.7	16.9	22.7	22.5	22.7	23.5
Wine	0.6	1.3	1.1	1.1	1.2	1.2
Spirits pf. gals.	0.2	0.3	0.3	0.3	0.3	0.3

(a) Not comparable with data prior to 1960-61, in which year the average weight of an egg was altered in calculations from 1.75 oz. to 2 oz. (b) Includes fresh equivalent of manufactured products. (c) Probably understated owing to lack of complete data. (d) Coffee and coffee products in terms of pure processed whole or ground coffee.

2. **Level of Nutrient Intake.**—The table below shows details of the estimated supplies of nutrients available for consumption in Australia during annual periods since 1961-62 in comparison with the annual averages for the three-year periods ended 1938-39, 1948-49 and 1958-59. 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	Average three years ended—			1961-62	1962-63	1963-64 P
	1938-39	1948-49	1958-59			
Calories no.	3,117	3,245	3,297	3,287	3,258	3,287
Protein—						
Animal gm.	58.7	57.4	59.6	59.8	57.3	61.5
Vegetable "	30.9	35.3	32.3	31.6	31.8	31.4
Total "	89.6	92.7	91.9	91.4	89.1	92.9
Fat "	133.5	121.7	131.7	133.2	131.6	131.7
Carbohydrate "	377.4	424.8	416.7	409.9	408.6	411.9
Calcium mgm.	642	785	817	898	861	903
Iron "	15.4	15.1	14.0	13.9	14.1	14.2
Vitamin A I.U.	4,905	4,630	4,568	4,166	4,173	4,236
Ascorbic acid mgm.	86	96	89	93	96	88
Thiamine "	1.4	1.5	1.3	1.3	1.3	1.3
Riboflavin "	1.7	1.9	1.8	1.9	1.9	2.0
Niacin "	18.7	17.6	18.6	18.3	18.8	18.6

§ 4. Retail Trade

1. **General.**—The statistics in this section relate to retail establishments throughout Australia and the value of retail sales of goods by 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.

Further censuses were taken in respect of the years ended 30th June, 1953 and 1957. In these censuses 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 retail activities, and credit sales. In addition, the 1956-57 census included questions relating to purchases, customers' indebtedness, and type of organization.

The most recent census was taken in respect of the year ended 30th June, 1962, and results have been published for all States and Australia. With the exception of some modifications to the scope of the collection (see p. 1246), the 1961-62 census followed the same general principles adopted for the previous census.

In general terms the census covered the retail trading activities of establishments which normally sell goods by retail to the general public from fixed premises (i.e., shops, rooms, kiosks and yards). Retail activities of wholesalers and manufacturers were included if they sold regularly by retail to the general public. Sales by itinerant vendors (e.g., hawkers, street sellers, etc.) and sales from casual stalls or booths were excluded. Organizations such as clubs and societies making sales to their own members were excluded from the main census collection, but a supplementary collection was made, covering sales by *licensed* clubs, and separate details are included in this section.

In general, establishments with retail sales of goods amounting to less than £500 in the census year are not included in the census tabulations. However, some "service" establishments with retail sales of less than £500, but with takings of £500 or more from repairs, meals, or hairdressing, are included in tables relating to these items. The types of establishments in this category are boot repairers, repair-only garages, cafés and restaurants, and hairdressers.

The design of the census is such that particulars of retail sales relate principally to sales to the final consumer of new and second-hand goods generally used for household and personal purposes. For this reason, sales of building materials, farm and industrial machinery and equipment, earth-moving equipment, etc., have been excluded from the censuses. For the same reason, and also because of difficulties in obtaining reliable and complete reporting, sales of builders' hardware and supplies, business machines and equipment, grain, feed, fertilizer and agricultural supplies, and tractors were excluded from the 1961-62 census. Retail sales of motor vehicles, parts, etc., have been included, whether for industrial, commercial, farm or private use.

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, adjusted to a basis comparable in scope with the 1961-62 census, and some of the results of the 1961-62 census, are included in this section.

Year Book No. 50, pages 1239-45, contains details of the number of retail establishments, the values of retail sales and of retail stocks, and particulars of hairdressing, boot repairing and motor repairing establishments, restaurants, self-service stores and licensed clubs, for each State and Territory, from the results of the 1961-62 census. Major classifications are by commodity groups and type of business.

2. Value of Retail Sales in Each Commodity Group, Australia.—The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1958-59 to 1963-64 on a comparable basis throughout. The figures for the year 1961-62 were obtained from the census, whereas figures for the other years shown are estimates based on sample surveys.

VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)
(£ million)

Commodity group	1958-59	1959-60	1960-61	1961-62	1962-63	1963-64
Groceries	368.8	391.1	416.5	429.2	445.8	469.7
Butchers' meat	178.3	193.2	210.7	211.1	221.9	232.9
Other food (b)	308.3	335.0	352.6	365.0	381.6	395.7
<i>Total, Food and Groceries</i>	<i>855.4</i>	<i>919.3</i>	<i>979.8</i>	<i>1,005.3</i>	<i>1,049.3</i>	<i>1,098.3</i>
Beer, wine and spirits (c)	247.5	262.9	269.3	273.0	287.1	295.6
Clothing and drapery	397.5	434.1	450.4	450.0	464.0	505.1
Footwear	64.5	71.9	76.7	77.2	81.0	85.5
Hardware, china and glassware (d)	65.6	70.6	72.6	73.0	77.5	76.8
Electrical goods (e)	154.9	187.0	177.3	174.0	182.5	182.2
Furniture and floor coverings	97.7	114.7	117.0	115.0	122.1	135.5
Newspapers, books and stationery	96.9	107.9	121.5	132.9	142.1	152.9
Chemists' goods	72.4	77.6	80.1	83.2	85.9	95.0
Other goods(f)	204.9	226.5	241.8	245.0	257.9	275.1
<i>Total (excluding Motor Vehicles)</i>	<i>2,257.3</i>	<i>2,472.5</i>	<i>2,586.5</i>	<i>2,628.6</i>	<i>2,749.4</i>	<i>2,912.0</i>
Motor vehicles, parts, petrol, etc. (g) ..	691.2	827.3	824.9	801.5	988.5	1,082.3

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (c) Excludes sales made by licensed clubs. (d) Excludes basic building materials, builders' hardware, and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, etc., jewellery, sporting goods, etc., but excludes grain and produce and business machines. (g) Includes new and used motor vehicles, parts, petrol, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

§ 5. 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.

Complete interstate trade statistics are now published in detail for Queensland, Western Australia and Tasmania by the Deputy Commonwealth Statisticians in those States, and incomplete statistics, relating mainly to trade with Western Australia and Tasmania, by the Deputy Commonwealth Statisticians in the remaining States.

§ 6. Statistical Organization in Australia

1. **Early Development of Australian Statistics.**—Statistical organization in Australia was found in the "Blue Books" which, in the Crown Colony days, were prepared annually for the information of the Colonial Office. Although intended primarily for administrative purposes, these documents have been important sources of statistical data, and formed the basis from which later statistical publications were developed. Following the advent of responsible government the "Blue Book" was succeeded in all States by "Statistical Registers", which, however, were still largely confined to summaries of the "by-product" statistics of government administrative departments.

The growing need for quantitative data concerning the progress of the several young communities of Australia led eventually to the appointment of official Statisticians commissioned to prepare and publish such data, and conferences were held between the Statisticians to provide for the interchange of ideas between States and to obtain uniform State statistics which could be aggregated to Australian totals. Altogether, six conferences were held prior to the formation of the Commonwealth Bureau of Census and Statistics in 1906—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, as became apparent when economic problems following the 1914-18 War drew attention to deficiencies in Australian statistical data.

The first step towards integration was taken in 1924, when, in response to a proposal by the Prime Minister to the Premiers' Conference that State Statistical officers be transferred to the Commonwealth (to which Tasmania alone agreed), the Tasmanian office was transferred to the Commonwealth, and has since functioned as a Commonwealth office which also serves State statistical needs.

The varied economic problems of the 1920's and 1930's, the 1939-45 War and the post-war boom, and the development during and since the war of a volume of new statistics, imposed a severe strain on the statistical systems and increased the complexities of the several administrations in their efforts to secure, and maintain, uniformity in statistical collections.

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 with the Premiers were initiated by the Prime Minister, with the object of integrating the statistical services of the Commonwealth and the States by agreement. Following negotiations by correspondence, all State Governments accepted the terms of draft agreements to integrate their respective statistical offices with that of the Commonwealth, and effect was given to this by the *Statistics (Arrangements with States) Act 1956*. This legislation, permissive in nature, was 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 object of such an agreement was that, in each State accepting it, there would 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 were to be adequately served with statistics, and no State would be required to surrender its existing powers in the field of statistics. Integration of the Commonwealth and State statistical services was finally accomplished when the integration arrangement with Victoria came into effect on 15th September, 1958.

4. Scope of the Commonwealth Bureau of Census and Statistics.—The scope of the Commonwealth Bureau of Census and Statistics has been continually 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, Canberra, is divided into the following Branches (in italics) and Sections dealing with specific fields of statistics or providing services for the Bureau as a whole. The organizational patterns of the State Offices are broadly similar, although local requirements have naturally given rise to differences in detail.

Production, Distribution and Development. Primary Industry; Secondary Industry; Development, Integration and Classification; Internal Trade.

Population Census.

Demography and Employment. Employment and Field Survey Operations; Demographic and Social; Population Research.

Prices and Labour.

Finance and Oversea Transactions. Oversea Transactions; Public Finance and Taxation; Private Finance.

National Accounts. National Income and Expenditure; Inter-industry and Sector Financial Accounts.

Sampling and Methodology. Sampling; Methodology and Mathematical Research.

Automatic Data Processing. Applications; Systems Operations; Mechanical Tabulation.

Services. Publications; Establishments and Finance; Secretariat.

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 statistical developments require and as time and circumstances permit.

§ 7. 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.

Commonwealth publications containing statistics may be grouped under two heads, namely:—(i) publications issued by the Commonwealth Statistician; and (ii) Parliamentary and Departmental Reports and Papers.

2. **Publications issued by the Commonwealth Statistician.**—(i) *Principal Statistical Publications.* The following is a list of the principal statistical publications issued from the Central Office of the Commonwealth Bureau of Census and Statistics since its inauguration.

Australian Capital Territory Statistical Summary.—Annually; 1963 to 1965.

Balance of Payments, Australian.—Statements Nos. 1 to 3, 1928–29 to 1951–52.

* *Banking and Currency.*—Annually; 1961–62 and 1962–63 (first issue), and 1963–64.

† *Causes of Death.*—Bulletin, annually; first issue, 1963.

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, Vol. III.

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.—Bulletins, Nos. 1 to 3. Vols. I. to VI., comprising respectively Parts I. to V. for each State; Vol. VII., comprising Parts I. to V. for the Australian Territories; Vol. VIII., comprising Parts I. to III. for Australia, Australian Life Tables, 1953–1955, and the Statistician's Report.

Census (1961) Results.—Bulletins Nos 1. to 36 (mimeographed)†; Vols. I. to VI., comprising respectively Parts I. to V. for each State; Vol. VII., comprising Parts I. to V. for the Australian Territories; and Vol. VIII., comprising Parts I. to III. for Australia, Australian Life Tables, 1960–1962, and the Statistician's Report (printed). The complete series of printed publications has not yet been issued; for publications already issued see back pages of this volume.

‡ *Conference of British Commonwealth Statisticians, 1951, Report of Proceedings.*

‡ *Dairying Industry* (formerly *Summary of Dairying Industry*).—Statistical Bulletin, monthly; first issue, September, 1937.

Demography.—Bulletin, annually, 1911 to 1963. Commencing 1963, excludes details of causes of death, see *Causes of Death*.

‡ *Digest of Current Economic Statistics.*—August, 1959 onward.

‡ *Export Commodity Classification, Australian.*—1965–66.

Exports, Australian.—Annually, 1958–59 to 1964–65.

‡ *Factories, Principal Statistics, Summary.*—Annually, 1948–49 to 1963–64.

Finance.—Bulletin, 1907 to 1916–17 annually; 1917–18 and 1918–19 (one vol.); 1919–20 and 1920–21 (one vol.); 1922–23 to 1960–61 annually. Commencing 1955–56, issued in two parts: Part I., Public and Private Finance; Part II., Commonwealth Taxation. Commencing 1961–62, issued as five separate bulletins, see *Banking, Finance (2), Insurance, and Taxation.*

* *Finance, Commonwealth.*—Annually; 1961–62 and 1962–63 (first issue), to 1964–65.

* *Finance, State, Territory and Local Government Authorities', and Government Securities.*—Annually; 1961–62 and 1962–63 (first issue), and 1963–64.

‡ *Food Production and the Apparent Consumption of Foodstuffs and Nutrients in Australia, Report on.*—Statistical Bulletin, half-yearly, 1946–47 to 1947–48; annually, 1948–49 to 1963–64.

‡ *Fruit Growing Industry* (formerly *Summary of Fruit Growing Industry*).—Statistical Bulletin, annually, 1944–45 to 1963–64.

* Previously included in *Finance, Part I.* † Previously included in *Demography.* ‡ Distributed by Commonwealth Statistician—for methods of obtaining other publications still in print see back pages of this volume.

- **Import Commodity Classification, Australian.*—1965-66.
Imports Cleared for Home Consumption.—Annually, 1950-51 to 1964-65.
- ***Insurance and Other Private Finance (other than Banking and Currency).*—Annually; 1961-62 and 1962-63 (first issue), and 1963-64.
- Labour and Industrial Statistics.*—Memoranda and Reports, various, to 1922.
Labour Report.—1913 to 1963.
Life Tables, Australian, 1901-1910. *Australian Joint Life Tables, 1901-1910.*
Life Tables, Australian, 1920-1922.
Life Tables, Australian, 1932-1934. *Australian Joint Life Tables, 1932-1934.*
Life Tables, Australian, 1946-1948.
Life Tables, Australian, 1953-1955.
Life Tables, Australian, 1960-1962.
- **Livestock Numbers (formerly Summary of Livestock Statistics).*—Statistical Bulletin, annually, 1943 to 1964.
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 1963-64.†
- ‡*Mineral Industry, The Australian (formerly Minerals and Metals Bulletin).*—Part 2—*Quarterly Statistics* of a quarterly bulletin issued jointly with the Bureau of Mineral Resources.
Monthly Review of Business Statistics.—October, 1937 onward.
Motor Vehicles, Census of, 31st December, 1955.—Bulletins Nos. 1 to 8.
Motor Vehicles, Census of, 31st December, 1962.—Bulletins Nos. 1 to 9.
Motor Vehicles, Survey of (1947-48), Results.—Bulletins Nos. 1 to 7.
National Accounts, Australian (National Income and Expenditure), 1948-49 to 1961-62, first issue—mimeographed, to 1963-64.*
- §*Non-Rural Primary Industries and Value of Production.*—Annually, first issue, 1962-63.
Northern Territory Statistical Summary.—Annually, 1960 to 1965.
- **Occupation Survey (1945) Results.*—Detailed tables.
Official Year Book of the Commonwealth of Australia.—1907 to present issue (No. 51). Issues Nos. 40 to 51 also published in parts.
Pocket Compendium of Australian Statistics (formerly Statistical Digest).—1913, 1914, 1916 and 1918 to 1965, annually.
Population and Vital Statistics.—Bulletins and Reports, various, 1906-1910.
Primary Industries.—Bulletins, annually, 1950-51 to 1961-62 in two parts—Part I. Rural Industries, Part II. Non-rural Industries and Value of Production. Commencing 1962-63, issued as two separate Bulletins, see *Rural Industries*, and *Non-rural Primary Industries and Value of Production*.
Primary Industries, Australian.—Report prepared for the Empire Producers Conference, Sydney, March, 1938.
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, page 3.
- **Publications of the Commonwealth Bureau of Census and Statistics.*—Annually (1964 and 1965 printed).
Quarterly Summary of Australian Statistics (replaced Monthly Summary of Australian Statistics).—December, 1917 onward.
- **Retail Establishments, Census of (1947-48), Results.*—Bulletins, Nos. 1 to 7.
 **Retail Establishments, Census of (1948-49), Results.*—Bulletins, Nos. 1 to 7.
 **Retail Establishments, Census of (1952-53), Results.*—Bulletins, Nos. 1 to 14.
 **Retail Establishments, Census of (1956-57), Results.*—Bulletins, Nos. 1 to 8 (mimeographed*) and 9 to 15 (printed).
Retail Establishments and Other Services, Census of (1961-62), Results.—Bulletins Nos. 1 to 7 (printed) and 8 and 9 (mimeographed*).
- **Rural Holdings, Classification by Size and Type of Activity, 1959-60.*—Bulletins, Nos. 1 to 7.
Rural Holdings, Size Classification of, 1955-56.—Bulletins Nos. 1 to 7.
- ††*Rural Industries.*—Annually; first issue, 1962-63.

- * *Rural Land Use and Crop Production* (formerly *Summary of Crop Statistics*).—Statistical Bulletin, annually, 1943–44 to 1963–64.
- Secondary Industries*.—Bulletin, annually, 1950–51 to 1962–63 (commencing 1960–61 issued in two parts—Part I. Factory and Building Operations, Part II. Materials Used and Articles Produced in Factories).
- 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.
- †† *Taxation Assessments, Commonwealth*.—Annually, 1961–62 to 1963–64.
- Trade, Oversea*.—Bulletin, annually, 1906 to 1964–65.
- * *Trade, Oversea*.—Preliminary Bulletin, annually, 1952–53 to 1964–65, in two parts—Part 1, Exports; Part 2, Imports.
(See also *Exports, Australian and Imports Cleared for Home Consumption*.)
- Transport and Communication*.—Bulletin, 1906, 1908 to 1916 annually, 1919 to 1930 annually, and 1932 to 1963–64 annually.
- 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 Production and Utilization*.—Bulletin, annually, 1952–53 to 1963–64.

The foregoing list includes all the printed publications issued from the Bureau and certain more important mimeographed publications issued for the most part annually. Minor changes in the titles of several publications have not been referred to above. Copies of a number of these publications, particularly earlier issues, are not available.

(ii) *Other Statistical Publications*. Other mimeographed statements are distributed by the Commonwealth Statistician and deal with a wide variety of subjects, as follows.

Triennially.—Tractors on Rural Holdings.

Annually.—Agricultural Statistics (Preliminary); Australian National Accounts—Gross National Product at Current and Constant Prices (No. 1), Personal Income, by States (No. 2), Gross National Product at Factor Cost, by Industry (No. 3) (Preliminary Statements); Bee Farming; Consumption of Tea and Coffee; Factories, Principal Statistics of, by Class of Industry; Factory Products, Principal; Factory Production, Indexes of; Factory Statistics, Australian Capital Territory; Factory Statistics (Preliminary); Farm Machinery on Rural Holdings; Fire, Marine and General Insurance; Fishing and Whaling; Fruit Statistics (Preliminary); Livestock Statistics (Preliminary); Mining and Quarrying (also Preliminary); Oversea Investment; Oversea Investment in Companies in Australia (Preliminary); Registered Building Societies; Registrations of New Motor Vehicles; Rural Statistics of the Australian Capital Territory; Survey of Private Pension and Retiring Allowance Schemes; Survey of Retail Establishments, Australian Capital Territory; Survey of Retail Establishments, Northern Territory; Survey of Selected Large Private Pension Funds; Commonwealth, State and Territory Taxation Collections; Trade of Australia with Eastern Countries; University Statistics (also Preliminary); Value of Primary Production (Preliminary); Value of Production and Indexes of Price and Quantum of Farm Production; Wholesale Sales and Stocks of Wine and Brandy; Wool Production (Preliminary).

Half-yearly.—Balance of Payments; Labour Turnover; Trade of Australia with the United Kingdom.

* Distributed by the Commonwealth Statistician—for methods of obtaining other publications still in print see back pages of this volume. † The series for 1963–64 comprises:—Nos. 1. Cement and Cement Goods, 2. Bricks, Tiles, Pottery and Earthenware, 3. Chemicals, Drugs and Medicines, 4. White Lead, Paints and Varnish, 5. Chemical Fertilizers, 6. Soap and Candles, 7. Basic Metal Industries, 8. Metal Fabricating Industries, 9. Motor Vehicles and Cycles, 10. Cotton Mills, 11. Woollen Mills, 12. Rope and Cordage, 13. Tanneries, 14. Boots and Shoes, 15. Clothing (including Hosiery and Knitted Goods), 16. Flour and Other Grain Mills, 17. Biscuits, 18. Confectionery, 19. Jam, Fruit, Vegetables, Pickles, Sauces, Condiments, etc., 20. Bacon Curing, 21. Butter, Cheese and Condensed, Concentrated, etc., Milk, 22. Aerated Waters and Cordials, 23. Meat and Fish Preserving, 24. Breweries, 25. Wineries and Distilleries, 26. Tobacco, Cigars and Cigarettes, 27. Sawmilling, 28. Pulp and Paper Making, 29. Rubber Works, 30. Brooms and Brushes, 31. Electric Light and Power Works, 32. Gas Works, 33. Plastic Moulding and Products, 34. Leather Goods (including Saddlery and Belting), 35. Printing and Stationery.

‡ Copies available from the Department of National Development in each capital city (6s. each).

§ Previously Primary Industries, Part II.

** Previously included in Finance, Part I.

†† Previously Primary Industries, Part I.

‡‡ Previously Finance, Part II.

Quarterly.—Aerial Agriculture; Balance of Payments; Building; Building—Australian Capital Territory; Building—Northern Territory; Building—Number of New Houses and Flats (Preliminary); Capital and Maintenance Expenditure by Private Businesses in Australia; Capital Expenditure by Private Businesses in Australia (Preliminary); Consumer Price Index; Industrial Disputes; Instalment Credit for Retail Sales; National Income and Expenditure; New Agricultural Machinery; New Capital Raisings by Companies in Australia; New Capital Raisings by Companies in Australia—New Money Raised by Listed Australian Companies (Preliminary); New Tractors; Oversea Arrivals and Departures; Oversea Trade with Major Groups of Countries; Retail Sales of Goods (also Preliminary); Road Traffic Accidents; Unit Trusts, Land Trusts and Mutual Funds; Wholesale Prices—Price Index of Electric Installation Materials.

Monthly.—Banking (General) (also Preliminary); Building Approvals; Employment and Unemployment; Exports of Wool; Export Price Index; Gold Mining Industry; Instalment Credit for Retail Sales (Preliminary); Life Insurance; Meat Industry; Oversea Arrivals and Departures; Oversea Trade (also Preliminary); Production Statistics (also Preliminary); Production Summaries*; Registrations of New Motor Vehicles (also Preliminary); Retail Sales of Goods (Provisional); Savings Banks (also Preliminary); Wage and Salary Earners in Civilian Employment; Wage Rates and Earnings; Wholesale Price (Basic Materials and Foodstuffs) Index.

Periodically.—Demographic Review (separate issues cover population and vital statistics, births, deaths and marriages; Social Statistics, including Schools, Universities, Hospitals (all annual) and Divorces (quarterly).

Occasional Publications.—In addition to the publications listed on pages 1251–2, most of which are issued regularly, there have been a number of statements issued by this Bureau which contain the results of special surveys or new statistical series and descriptions thereof. The more recent of these are listed below.

Special Business Survey No. 16. Incidence of Industrial Awards, Determinations and Agreements, May, 1963. Year Book No. 49 included a list of previous Surveys in this series, but they are now for the most part out of print or included in regular publications.

Population Count of Canberra, 30th June, 1965; Population Count of Darwin, Alice Springs, Tennant Creek, Katherine and Bachelor, 30th June, 1964; Minimum Wage Rates, January, 1960, to June, 1963; Wage and Salary Earners in Employment, June, 1954, to June, 1962; Wage and Salary Earners in Employment, July, 1962 to June, 1964; Survey of Motor Vehicle Usage, 1963; Projections of the Population of Australia (1966 to 1986).

(iii) *Information on Current Bureau Publications.* Further information on current publications of the Commonwealth Bureau of Census and Statistics is contained in *Publications of the Commonwealth Bureau of Census and Statistics*, April, 1965, available free, on request, from the Commonwealth Statistician, Canberra. This contains a list of all Bureau publications and also a subject index to show the publications in which information on the various subjects dealt with by the Bureau is to be found. Publications issued by the State Offices of the Commonwealth Bureau of Census and Statistics are also listed therein.

3. *Publications issued by the Deputy Commonwealth Statisticians.*—A list of the current publications issued by the Deputy Commonwealth Statistician of each State appears in Year Book No. 48 (see p. 1163) and in *Publications of the Commonwealth Bureau of Census and Statistics*, April, 1965.

4. *Commonwealth and State Parliamentary and Departmental Reports and Papers.*—No comprehensive list of current publications of this nature is available, but the Commonwealth National Library issues an annual publication *Australian Government Publications*, a list of official publications of the Commonwealth, States and Territories, compiled from records of material received by the Library during the year.

* The current series comprises:—Nos. 2. Chemicals, etc., 3. Plastic and Synthetic Resins and Plasticisers, 4. Paints and Other Surface Coatings, 6. Soaps, Detergents and Glycerine, 7. Internal Combustion Engines, 8. Lawn Mowers, 9. Electric Appliances, 10. Motor Bodies, Trailers, etc., 11. Pedal Cycles, 12. Meters, 13. Building Fittings, 14. Cotton Goods, 15. Wool-scouring, Carbonizing and Fellmongering, 16. Wool Textile Industry, 17. Wool Weaving, 18. Hosiery, 19. Shirts, Cardigans, Nightwear, Underclothing, etc., 20. Cellulosic and Synthetic Fibre, Tops, Yarns and Woven Fabrics, 21. Paper and Paper Board; Pressure Sensitive Adhesive Tape, 22. Floor Coverings, 23. Electric Motors, 24. Men's, Youths' and Boys' Outer Clothing, 25. Foundation Garments, 27. Gloves; Slide Zip Fasteners, 28. Footwear (excluding Sandshoes, Goggles and Gumboots, etc., of Rubber), 29. Biscuits, Ice Cream, Confectionery, 30. Storage Batteries, 31. Motor Vehicle Chassis, 32. Perambulators, Pushers and Strollers, 34. Radio, etc., Television Sets and Cabinets, 35. Mattresses, 36. Preserved Milk Products, 38. Canned Fish, 39. Jams and Preserved Fruit and Vegetables, 40. Cereal Products, 41. Margarine and Other Edible Processed Fats, 42. Malt and Beer, 43. Stock and Poultry Meals (Other than Cereal), 45. Phonograph Records, 47. Aerated Waters, Cordials and Syrups, and Concentrated Cordial Extract, 48. Sports Goods, 49. Building Materials, 51. Hides and Skins used in Tanneries, 53. Plastics Film, Sheet and Coated Materials, 55. Butter and Cheese, 56. Canned Meat, 58. Steel Wire and Wire Products, 59. Non-ferrous Rolled, Extruded and Drawn Products.

CHAPTER XXXI

NATIONAL ACCOUNTS

NATIONAL INCOME AND EXPENDITURE

National accounting aims at providing a systematic summary of the transactions taking place in the economy, especially of those that relate to the production and use of goods and services, and to transfers of income or capital between sectors of the economy.

Estimates of national income and expenditure have been compiled by the Bureau since 1944-45, and have been published annually as papers entitled *National Income and Expenditure* accompanying the Commonwealth Budgets. Detailed annual estimates of national income and expenditure on a revised basis were published in *Australian National Accounts, National Income and Expenditure, 1948-49 to 1963-64*. Preliminary estimates for 1964-65 were published in a Budget Paper. Quarterly estimates are published in *Quarterly Estimates of National Income and Expenditure*.

The figures shown in § 2 incorporate revisions made in August, 1965, in the Budget Paper, *National Income and Expenditure, 1964-65*, and corresponding revisions to figures for 1959-60 not included in that publication.

§ 1. Description of the National Accounts

A brief description of the conceptual basis of national accounts is given in this section, but for a more detailed treatment of the concepts and structure of the Australian national accounts reference should be made to *Australian National Accounts, National Income and Expenditure 1948-49 to 1963-64* or to Year Book No. 50, pages 1253-68.

1. Definition and Relationship of the Concepts of Product, Income and Expenditure.—The main concepts of product, income and expenditure in the Australian National Accounts are defined and expressed in equivalents as follows.

Gross National Expenditure within a given period is the total expenditure on final goods and services (i.e. excluding goods and services produced or imported and used up in the process of further production) bought for use in the Australian economy. It is equivalent to gross national product, plus imports of goods and services, less exports of goods and services.

National Turnover of Goods and Services is the total flow of final goods and services within a given period in the Australian economy as a whole (i.e. excluding goods and services produced or imported and used up in the process of further production) derived from production in Australia and imports. This value is equivalent to gross national product plus imports of goods and services or, alternatively, to gross national expenditure plus exports of goods and services.

Gross National Product is the total market value of goods and services produced in Australia within a given period after deduction of the cost of goods and services, other than capital equipment, used in the process of production. Thus gross national product, as here defined is "at market prices". It is equivalent to gross national expenditure, plus exports of goods and services, less imports of goods and services.

Gross National Product at Factor Cost is that part of the cost of producing the gross national product which consists of gross payments to factors of production (labour, land, capital or enterprise). It represents the value added by these factors in the process of production and is equivalent to gross national product, less indirect taxes, plus subsidies.

Net National Product is the part of the value added within a given period by factors of production (labour, land, capital or enterprise) which accrues as income to their suppliers after allowing for the depreciation of capital equipment. It is equivalent to gross national product at factor cost less allowance for depreciation.

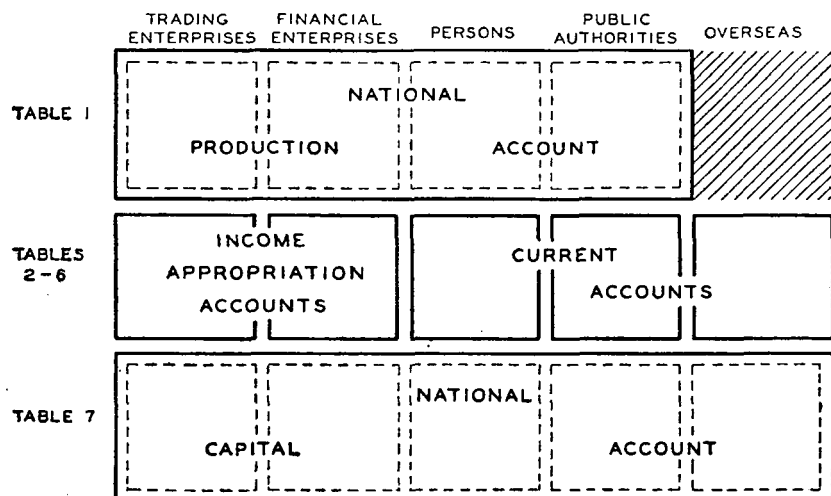
National Income is the net income accruing within a given period to Australian residents from their services in supplying factors of production (labour, land, capital or enterprise) in Australia or overseas. It is equivalent to net national product, plus income receivable from overseas, less income payable overseas.

Personal Income is the total income, whether in cash or kind, received by persons normally resident in Australia. It includes both income received in return for productive activity (such as wages, salaries and supplements, incomes of unincorporated enterprises, etc.) and transfer incomes (such as cash social service benefits, interest, etc.). Personal income also includes any property income received by non-taxable organizations such as private schools, churches, charitable organizations, etc. However, it excludes any income which might be said to accrue to persons in the form of undistributed company income and retained investment income of life insurance, etc., funds.

2. **Framework of Accounts and Sectors.**—In the accounts shown in Tables 1 to 7, four internal sectors are distinguished—persons, public authorities, financial enterprises and trading enterprises. In addition, there is an overseas sector which shows a summary of the transactions into which overseas governments, persons and businesses enter with Australian residents. All the sectors (except the overseas sector) engage in productive activity, but in the tables a national production account for the whole economy is shown instead of separate accounts for each sector. Similarly, the tables show only a national capital account for the economy, but a current (or income appropriation) account is shown for each sector. The system of accounts as thus envisaged is a completely articulated system in that a credit in any account must be matched with a corresponding debit in some other account—or in the same account if a complete consolidation of the transactions appropriate to that account has not been carried through.

The framework of sectors and accounts underlying the form of social accounts shown in this Year Book is set out in the following diagram. As stated in the previous paragraph, each sector could be envisaged as having separate production, appropriation and capital accounts, but in the tables compiled for Australia the production and capital accounts have been combined. In the diagram the solid rectangles depict the actual form of the tables, and the remaining rectangles show the full amount of detail which would be needed to provide the complete articulation of the accounts. The appropriate number of each table in § 2 is shown on the left of the diagram.

ARTICULATION OF AUSTRALIAN NATIONAL ACCOUNTS



3. **Description of the Accounts.**—(i) *National Production Account.* The national production account is a consolidation of the production accounts of each sector. The production account is shown as receiving revenue from the sale of goods and services to final buyers; all intermediate goods and services are cancelled out, since they represent a cost to one producer to offset the revenue of the other. On the payments side are shown the payments of indirect taxes, and, since the accounts are presented from the point of view of the producing unit, the wages and salaries paid to employees. The balance is the gross operating surplus which is carried to the trading enterprises income appropriation account.

(ii) *The Trading Enterprises Income Appropriation Account* is shown as receiving the gross operating surpluses from the national production account, and dividends, non-dwelling rent and interest from other sectors. The allocation of this total to depreciation allowances, and to various transfer payments (taxes, dividends, interest, etc.) is shown on the appropriation side. All net income of unincorporated enterprises is treated as being transferred to persons. Any income of trading companies not distributed but retained for use in the business is shown as undistributed income and transferred to the national capital account either directly or by way of the oversea current account (when it accrues to non-residents).

(iii) *The Financial Enterprises Income Appropriation Account* is in the main similar to the preceding account. There is, however, no operating surplus, as property income (which is treated as transfer income, not as income of factors of production) is the sole receipt.

(iv) *The Personal Current Account* records all receipts on current account whether of factor incomes (wages and salaries) or transfer incomes (interest, etc., dividends, net business incomes, cash benefits from public authorities and remittances from overseas). On the payments side are shown current payments for goods and services and transfer payments (taxes, interest, etc., remittances to overseas). The balance is transferred to the national capital account under the heading of saving.

(v) *The Public Authorities Current Account* reflects a distinction between current and capital expenditure, which is necessarily arbitrary in some measure and has been made on the basis of excluding from the current account expenditure on public works and increase in stocks. Expenditure on public works is taken to include new buildings, construction, plant and machinery and any replacement of assets charged to loan funds or capital works votes. It includes capital expenditure of public enterprises, including replacements of assets charged to depreciation reserves but not those charged directly to working expenses. It includes all expenditure on roads, for which a satisfactory distinction between new works and maintenance cannot be made, but excludes all defence expenditure, which is included in the current account.

The income of public enterprises shown in this account is derived by deducting from their operating surplus any depreciation shown by these enterprises in their published accounts except in the case of enterprises (e.g. railways and Postmaster-General's Department) whose accounts are included in the Commonwealth or State budgets and are for the present analysed on the basis of these cash accounts in which depreciation is not deducted. The depreciation allowances set aside by the enterprises whose accounts are not included in Commonwealth or State Budgets are shown in the capital account. As in the case of persons, all oversea gifts are included in current account. These include gifts for international relief, technical assistance, etc., grants, and other expenditure in connexion with the administration of Papua and New Guinea.

(vi) *The Oversea Current Account* records all transactions of a current nature between Australian and oversea residents. It should be emphasized that this account is shown here from the point of view of oversea residents, i.e. receipts from Australia are shown as credits, and payments to Australia as debits. Australians temporarily overseas are regarded as residents, and visitors to Australia as non-residents.

(vii) Capital transactions of the four domestic sectors and the net deficit on current account with overseas are shown in the *National Capital Account*. On the receipts side are shown the savings of the various sectors—saving by enterprises, personal saving, the retained investment income of insurance funds, and the public authority surplus on current account. Net apparent capital inflow from overseas and withdrawal from monetary reserves is also reflected in the item "deficit on current account with overseas". On the payments side are shown the purchases by all sectors of new buildings and capital equipment and the increase in the value of stocks. The private component of capital expenditure includes new dwellings and major alterations to dwellings and expenditure of a capital nature by private non-profit institutions (churches, schools, clubs, etc.), but excludes motor vehicles for personal use and other durable consumer goods, which are included in personal consumption expenditure.

4. **Estimates at Constant Prices.**—For certain types of economic analysis, it is useful to examine estimates of the principal flows of goods and services in the economy revalued in such a way as to remove the direct effects of changes in their prices which have occurred between the years under review. Such estimates, conventionally described as “at constant prices” are presented in Table 8 (at both current and average 1959–60 prices) for gross national product, gross national expenditure, personal consumption expenditure, and certain of their components.

Constant price estimates amount to an attempt to express every component item of expenditure as the product of a price and a quantity, instead of as a value, and to substitute for the actual current prices the prices that ruled in the chosen base year. Such estimates can be made only on the basis of approximations and assumptions, and this should be borne in mind in the interpretation and use of the results.

(i) *Estimates of Gross National Expenditure at Constant Prices.* Where possible, a direct revaluation is made of each item at constant prices instead of using the prices at which quantities are bought or consumed. However, where it is not possible to express the values in successive years as the product of prices and standard units of quantity (e.g. for many items of capital expenditure by public and private sectors, for which homogeneous and standard components of expenditure do not exist), the values are divided by an appropriate price index, or by a substitute index of cost of production based on materials and wages. The estimates resulting from the application of this method, therefore, have considerable limitations for many uses, for example in studies of productivity. A broadly similar treatment is applied to current expenditure by public authorities, including expenditure on defence.

The information available on which to base an estimate of changes in stocks at constant prices is very limited, and the estimate made is subject to an appreciable margin of error. The method used involves an adjustment for stock revaluation, arising out of the replacement during the year of trading stocks with equivalent new stocks different in value from those held at the beginning of the year.

(ii) *Estimation of Gross National Product at Constant Prices.* The essential nature of gross national product is that it is the value added to goods and services by productive activity in the economy. The measure of gross national product obtained by adding up the major forms of income, namely, wages and salaries and gross operating surplus, is not in itself the measure of a flow of goods and services, and in these terms gross national product cannot be expressed at constant prices since it has no units of quantity to be revalued.

Gross national product, however, is the difference between the value of output and the value of materials used in production, that is, the difference between the values of two flows of goods and services. By revaluing each of these flows, it is possible to express, in these terms, gross national product at constant prices. This relationship has been used in the estimation of gross national product at constant prices in Table 8.

Part I. of *Australian National Accounts, National Income and Expenditure, 1948–49 to 1963–64* contains a fuller discussion of the conceptual problems involved in making these estimates, and Appendix B of that publication contains a brief account of the sources and methods used in preparing the estimates.

5. **Reliability and Future Revisions.**—Estimates of national income and expenditure are necessarily prepared from a very wide range of information, some of which is available quickly, some of it with a delay of several years after the period to which it relates. Some of it is closely related to the desired national income concepts, while some of it is not completely satisfactory in various respects, including coverage, concepts and timing. Estimates, in particular for the most recent years, are therefore subject to revision.

This applies especially to estimates based on income tax statistics—income of companies, non-farm unincorporated enterprises, depreciation and part of gross private fixed investment—which are subject to substantial revisions for the last two years, as tabulations of income tax statistics do not become available until about 22 months after the end of each financial year.

It is not possible to put precise limits on the degree of revision likely in any particular series, nor to state degrees of reliability in a statistical sense. These depend in large part on the range and quality of the basic statistical data. For illustrations of common causes of revisions, reference should be made to *Australian National Accounts, National Income and Expenditure, 1948–49 to 1963–64*.

§ 2. National Accounts and Tables

NOTE.—Items in these tables are consecutively numbered from 1 to 28, with or without the addition of a letter, and this system is used to identify the corresponding credit and debit entries in the accounts, and as a key to the notes on pages 1264–8. In some cases the items correspond exactly, while in other cases an entry in one table is the sum of two or more entries in other tables; here the total is given a number, and the components have a number and a letter. In the remaining type of case, all entries are given the same number and a distinguishing letter, because in this group one item is not the sum of one or more entries. The relationship between these items can still be traced through because the sum of all credit entries must equal the sum of all debit entries.

TABLE 1
NATIONAL PRODUCTION ACCOUNT
(£ million)

	1959–60	1960–61	1961–62	1962–63	1963–64
1 Wages, salaries and supplements	3,443	3,710	3,820	4,034	4,390
Gross operating surplus of trading enterprises—					
2a Companies	966	943	967	1,087	1,213
2b Unincorporated enterprises	1,330	1,365	1,352	1,475	1,695
2c Dwellings owned by persons	221	246	268	287	305
2d Public enterprises	156	186	195	243	278
Gross National Product at Factor Cost	6,116	6,450	6,602	7,126	7,881
3 Indirect taxes less subsidies	770	812	789	859	915
Gross National Product	6,886	7,262	7,391	7,985	8,796
4 Imports of goods and services	1,132	1,290	1,090	1,293	1,413
<i>National Turnover of Goods and Services</i>	8,018	8,552	8,481	9,278	10,209
Net current expenditure on goods and services—					
5 Personal consumption	4,362	4,605	4,737	5,046	5,381
6 Financial enterprises	88	92	95	99	109
7 Public authorities	658	712	767	816	915
Gross fixed capital expenditure—					
8 Private	1,081	1,194	1,147	1,264	1,410
9 Public enterprises	330	322	369	383	415
10 Public authorities	246	277	299	318	356
11 Increase in value of stocks	121	260	–97	159	65
12 Statistical discrepancy(a)	72	19	–52	–30	4
Gross National Expenditure	6,958	7,481	7,265	8,055	8,655
13 Exports of goods and services	1,060	1,071	1,216	1,223	1,554
<i>National Turnover of Goods and Services</i>	8,018	8,552	8,481	9,278	10,209

(a) See note to item 12 p. 1266.

TABLE 2
TRADING ENTERPRISES INCOME APPROPRIATION ACCOUNT
(£ million)

—		1959-60	1960-61	1961-62	1962-63	1963-64
2	Gross operating surplus ..	2,673	2,740	2,782	3,092	3,491
15b, 17b, 18b	Interest, etc., and dividends received and undistributed income accruing from overseas ..	41	49	50	58	65
	<i>Total Receipts</i>	<i>2,714</i>	<i>2,789</i>	<i>2,832</i>	<i>3,150</i>	<i>3,556</i>
14a	Depreciation allowances ..	512	560	591	626	672
15a	Interest, etc., paid	205	229	247	268	299
	Company income—					
16a	Income tax payable	273	261	257	288	338
17a	Dividends payable	208	209	233	254	275
18a	Undistributed income	253	210	185	231	255
	<i>Total Company Income</i>	<i>734</i>	<i>680</i>	<i>675</i>	<i>773</i>	<i>868</i>
19	Unincorporated enterprises income	1,038	1,060	1,042	1,153	1,362
20	Personal income from dwelling rent	120	132	140	149	152
21a	Public enterprises income ..	105	128	137	181	203
	<i>Total Outlay</i>	<i>2,714</i>	<i>2,789</i>	<i>2,832</i>	<i>3,150</i>	<i>3,556</i>

TABLE 3
FINANCIAL ENTERPRISES INCOME APPROPRIATION ACCOUNT
(£ million)

—		1959-60	1960-61	1961-62	1962-63	1963-64
15d, 17d, 18d	Interest, etc., and dividends received and undistributed income accruing from overseas ..	338	389	424	454	514
	<i>Total Receipts</i>	<i>338</i>	<i>389</i>	<i>424</i>	<i>454</i>	<i>514</i>
14b	Depreciation allowances ..	4	5	6	7	8
6	Net current expenditure on goods and services	88	92	95	99	109
15c	Interest paid	89	111	131	135	148
	Company income—					
16b	Income tax payable	19	21	19	22	25
17c	Dividends payable	20	23	23	26	26
18c	Undistributed income	12	11	8	7	17
	<i>Total Company Income</i>	<i>51</i>	<i>55</i>	<i>50</i>	<i>55</i>	<i>68</i>
21b	Public enterprises income ..	36	45	45	48	56
22	Retained investment income of life insurance funds, etc. ..	70	81	97	110	125
	<i>Total Outlay</i>	<i>338</i>	<i>389</i>	<i>424</i>	<i>454</i>	<i>514</i>

TABLE 4
PERSONAL CURRENT ACCOUNT
(£ million)

	1959-60	1960-61	1961-62	1962-63	1963-64
1 Wages, salaries and supplements	3,443	3,710	3,820	4,034	4,390
15f Interest, etc., received	134	149	165	175	184
17e Dividends	157	158	168	176	203
19a Unincorporated enterprises income—Farm	482	494	464	553	713
19b Other	556	566	578	600	649
20 Income from dwelling rent	120	132	140	149	152
23b Remittances from overseas	31	34	36	39	56
25 Cash benefits from public authorities ..	376	417	458	476	523
<i>Total Receipts</i>	<i>5,299</i>	<i>5,660</i>	<i>5,829</i>	<i>6,202</i>	<i>6,870</i>
5 Personal consumption expenditure ..	4,362	4,605	4,737	5,046	5,381
15e Interest paid	79	96	93	97	113
16c Income tax payable	441	503	492	543	634
16d Estate and gift duties	50	51	57	61	69
23a Remittances overseas	26	27	27	30	34
24 Saving	341	378	423	425	639
<i>Total Outlay</i>	<i>5,299</i>	<i>5,660</i>	<i>5,829</i>	<i>6,202</i>	<i>6,870</i>

TABLE 5
PUBLIC AUTHORITIES CURRENT ACCOUNT
(£ million)

	1959-60	1960-61	1961-62	1962-63	1963-64
3a Indirect taxes	795	847	834	899	970
16e Income tax, estate and gift duties received	720	857	884	870	1,005
15h Interest, etc., received	32	35	38	36	40
21 Public enterprises income	141	173	182	229	259
<i>Total Receipts</i>	<i>1,688</i>	<i>1,912</i>	<i>1,938</i>	<i>2,034</i>	<i>2,274</i>
7 Net current expenditure on goods and services	658	712	767	816	915
3b Subsidies	25	35	45	40	55
15g Interest, etc., paid	177	185	200	219	235
23c Oversea grants	20	23	26	33	38
25 Cash benefits to persons	376	417	458	476	523
26 Grants towards private capital expenditure	4	4	6	5	5
27 Surplus on current account	428	536	436	445	503
<i>Total Outlay</i>	<i>1,688</i>	<i>1,912</i>	<i>1,938</i>	<i>2,034</i>	<i>2,274</i>

TABLE 6
OVERSEA CURRENT ACCOUNT
(£ million)

—		1959-60	1960-61	1961-62	1962-63	1963-64
4a	Imports f.o.b.	911	1,035	857	1,038	1,125
4b	Transportation	136	164	139	155	170
4c	Travel	36	42	41	45	51
4d	Government transactions ..	29	26	27	28	34
4e	Other goods and services ..	20	23	26	27	33
4	Total imports of goods and services	1,132	1,290	1,090	1,293	1,413
15j, 17g	Interest, etc., paid, and dividends payable and profits remitted overseas	100	107	115	127	132
18f	Undistributed income accruing to overseas residents	69	57	33	53	65
23a	Personal remittances overseas ..	26	27	27	30	34
23c	Public authority grants ..	20	23	26	33	38
	<i>Total Credits to Non-residents</i>	<i>1,347</i>	<i>1,504</i>	<i>1,291</i>	<i>1,536</i>	<i>1,682</i>
13a	Exports f.o.b... ..	932	926	1,067	1,065	1,370
13b	Transportation	71	82	81	86	99
13c	Travel	10	14	16	14	18
13d	Government transactions ..	22	20	22	24	31
13e	Other goods and services ..	25	29	30	34	36
13	Total exports of goods and services	1,060	1,071	1,216	1,223	1,554
15i, 17f	Interest, etc., received and dividends receivable from overseas	23	27	36	34	40
18e	Undistributed income accruing from overseas	3	4	4	4	7
23b	Personal remittances from overseas	31	34	36	39	56
28	Oversea balance on current account	230	368	-1	236	25
	<i>Total Debits to Non-residents</i>	<i>1,347</i>	<i>1,504</i>	<i>1,291</i>	<i>1,536</i>	<i>1,682</i>

TABLE 7
NATIONAL CAPITAL ACCOUNT
(£ million)

	1959-60	1960-61	1961-62	1962-63	1963-64
14 Depreciation allowances	516	565	597	633	680
16f, 17h Increase in dividend and income tax provisions	65	-24	-52	55	66
18g Undistributed company income accruing to residents	196	164	160	185	207
22 Retained investment income of life insurance funds, etc.	70	81	97	110	125
24 Personal saving	341	378	423	425	639
26 Public authority grants towards private capital expenditure	4	4	6	5	5
27 Public authorities surplus on current account	428	536	436	445	503
Deficit on current account with overseas—					
28a Withdrawal from overseas monetary reserves(a)	-8	40	-89	-74	-229
28b Net apparent capital inflow	238	328	88	310	254
<i>Total Capital Funds Accruing ..</i>	<i>1,850</i>	<i>2,072</i>	<i>1,666</i>	<i>2,094</i>	<i>2,250</i>
Gross fixed capital expenditure—					
8a Private—Dwellings	303	328	293	321	374
8b Other new buildings	211	239	229	260	286
8c All other	567	627	625	683	750
9 Public enterprises	330	322	369	383	415
10 Public authorities	246	277	299	318	356
<i>Total Gross Fixed Capital Expenditure</i>	<i>1,657</i>	<i>1,793</i>	<i>1,815</i>	<i>1,965</i>	<i>2,181</i>
11a Increase in value of stocks—Farm	-12	34	-43	44	-8
11b Other	133	226	-54	115	73
<i>Total Use of Funds</i>	<i>1,778</i>	<i>2,053</i>	<i>1,718</i>	<i>2,124</i>	<i>2,246</i>
12 Statistical discrepancy(b)	72	19	-52	-30	4
<i>Total Capital Funds Accruing ..</i>	<i>1,850</i>	<i>2,072</i>	<i>1,666</i>	<i>2,094</i>	<i>2,250</i>

(a) Minus sign (-) indicates an addition to reserves.

(b) See note to item 12, p. 1266.

TABLE 8

VALUE OF MAIN AGGREGATES AT CURRENT AND AVERAGE 1959-60 PRICES
(£ million)

	1959-60	1960-61	1961-62	1962-63	1963-64
AT CURRENT PRICES					
Personal consumption expenditure	4,362	4,605	4,737	5,046	5,381
Current expenditure by financial enterprises and public authorities	746	804	862	915	1,024
Gross fixed capital expenditure—					
Public	576	599	668	701	771
Private—Dwellings	303	328	293	321	374
Other	778	866	854	943	1,036
Increase in value of stocks	121	260	-97	159	65
Statistical discrepancy	72	19	-52	-30	4
Total Gross National Expenditure ..	6,958	7,481	7,265	8,055	8,655
Gross National Expenditure after stock valuation adjustment	6,813	7,489	7,283	8,012	8,595
Plus Exports of goods and services	1,060	1,071	1,216	1,223	1,554
Less Imports of goods and services	1,132	1,290	1,090	1,293	1,413
Gross National Product after stock valuation adjustment	6,741	7,270	7,409	7,942	8,736
AT AVERAGE 1959-60 PRICES(a)					
Personal consumption expenditure	4,362	4,443	4,559	4,857	5,110
Current expenditure by financial enterprises and public authorities	746	776	811	846	895
Gross fixed capital expenditure—					
Public	576	576	617	639	680
Private—Dwellings	303	313	275	295	339
Other	778	845	826	907	983
Statistical discrepancy	72	18	-50	-29	4
Gross National Expenditure after stock valuation adjustment	6,813	7,236	6,964	7,627	8,013
Plus Exports of goods and services	1,060	1,133	1,274	1,254	1,464
Less Imports of goods and services	1,132	1,325	1,120	1,358	1,485
Gross National Product after stock valuation adjustment	6,741	7,044	7,118	7,523	7,992

(a) See p. 1256.

TABLE 9
RELATIONSHIP OF MAIN AGGREGATES
(£ million)

	1959-60	1960-61	1961-62	1962-63	1963-64
Net current expenditure on goods and services ..	5,108	5,409	5,599	5,961	6,405
Gross fixed capital expenditure	1,657	1,793	1,815	1,965	2,181
Increase in value of stocks	121	260	-97	159	65
Statistical discrepancy	72	19	-52	-30	4
Gross National Expenditure	6,958	7,481	7,265	8,055	8,655
<i>Plus</i> Exports of goods and services	1,060	1,071	1,216	1,223	1,554
National Turnover of Goods and Services	8,018	8,552	8,481	9,278	10,209
<i>Less</i> Imports of goods and services	1,132	1,290	1,090	1,293	1,413
Gross National Product	6,886	7,262	7,391	7,985	8,796
<i>Less</i> Indirect taxes <i>less</i> subsidies	770	812	789	859	915
Gross National Product at Factor Cost	6,116	6,450	6,602	7,126	7,881
<i>Less</i> Depreciation allowances of trading enterprises	512	560	591	626	672
Net National Product	5,604	5,890	6,011	6,500	7,209
<i>Less</i> Net income payable overseas	143	133	108	142	150
National Income	5,461	5,757	5,903	6,358	7,059
<i>Plus</i> Net income payable overseas	143	133	108	142	150
Net National Product	5,604	5,890	6,011	6,500	7,209
<i>Less</i> Net operating surplus of companies and public enterprises	879	852	863	1,007	1,134
<i>Less</i> Interest, etc., paid by unincorporated enterprises and dwellings owned by persons	124	136	146	157	171
<i>Plus</i> Interest received by persons	134	149	165	175	184
Dividends received by persons	157	158	168	176	203
Cash benefits to persons	376	417	458	476	523
Remittances from overseas	31	34	36	39	56
Personal Income	5,299	5,660	5,829	6,202	6,870

TABLE 10
MAIN AGGREGATES AT CURRENT PRICES, 1948-49 TO 1963-64
(£ million)

Year	1 Personal consumption	2 Net current expenditure on goods and services by public authorities and financial enterprises	3 Private gross fixed capital expenditure	4 Public gross fixed capital expenditure	5 Increase in value of stocks	6 Statistical discrepancy	7 (1 to 6) Gross national expenditure
1948-49 ..	1,496	197	249	142	73	-2	2,155
1949-50 ..	1,721	234	322	200	157	22	2,656
1950-51 ..	2,092	317	460	287	265	-13	3,408
1951-52 ..	2,493	433	564	396	385	52	4,323
1952-53 ..	2,644	499	568	388	-90	-103	3,906
1953-54 ..	2,903	478	655	399	22	-41	4,416
1954-55 ..	3,152	515	736	424	139	41	5,007
1955-56 ..	3,388	576	812	451	172	-7	5,392
1956-57 ..	3,619	601	845	466	24	-54	5,501
1957-58 ..	3,796	624	920	489	-1	1	5,829
1958-59 ..	3,980	671	949	539	166	-33	6,272
1959-60 ..	4,362	746	1,081	576	121	72	6,958
1960-61 ..	4,605	804	1,194	599	260	19	7,481
1961-62 ..	4,737	862	1,147	668	-97	-52	7,265
1962-63 ..	5,046	915	1,264	701	159	-30	8,055
1963-64 ..	5,381	1,024	1,410	771	65	4	8,655

Year	8 Exports of goods and services	9 Imports of goods and services	10 (7 + 8 - 9) Gross national product	11 National income	12 Personal income	13 Wages, salaries and supplements	14 Net income payable overseas
1948-49 ..	570	490	2,235	1,867	1,873	1,084	40
1949-50 ..	651	630	2,677	2,204	2,214	1,233	51
1950-51 ..	1,041	862	3,587	3,029	3,029	1,551	59
1951-52 ..	739	1,219	3,843	3,202	3,164	1,961	63
1952-53 ..	922	654	4,174	3,515	3,499	2,119	60
1953-54 ..	893	800	4,509	3,733	3,633	2,256	80
1954-55 ..	847	987	4,867	4,001	3,892	2,468	82
1955-56 ..	863	974	5,281	4,315	4,236	2,705	94
1956-57 ..	1,087	864	5,724	4,652	4,528	2,861	95
1957-58 ..	914	957	5,786	4,585	4,496	2,965	93
1958-59 ..	922	972	6,222	4,928	4,836	3,106	127
1959-60 ..	1,060	1,132	6,886	5,461	5,299	3,443	143
1960-61 ..	1,071	1,290	7,262	5,757	5,660	3,710	133
1961-62 ..	1,216	1,090	7,391	5,903	5,829	3,820	108
1962-63 ..	1,223	1,293	7,985	6,358	6,202	4,034	142
1963-64 ..	1,554	1,413	8,796	7,059	6,870	4,390	150

§ 3. Description of Items in the National Accounts

Tables 1 to 7

Item 1. Wages, salaries and supplements.—Payments in the nature of wages and salaries as defined for pay-roll tax, including allowances for income in kind (board and quarters, etc.), together with supplements to wages, and pay and allowances of members of the forces. In addition to wages and salaries paid by employers subject to pay-roll tax, this item includes

wages and salaries paid by employers not subject to pay-roll tax, based on estimates of employment and average earnings. Supplements consist of employers' contributions to pension and superannuation funds, direct payments of pensions and retiring allowances, and amounts paid as workers' compensation for injuries. Pay and allowances of members of the forces consist of active pay, field allowances, subsistence allowances, dependants' allowances and the value to the members of the forces of food, clothing, normal medical attention, etc., supplied in kind.

Item 2. Gross operating surplus of trading enterprises.—The operating surplus, before deduction of depreciation provisions, dividends, interest, rent and royalties and direct taxes payable, of all trading enterprises operating in Australia. Trading enterprises include all companies, public enterprises, partnerships and self-employed persons engaged in the production of goods and services for sale, but exclude financial enterprises. Public trading enterprises are government undertakings which attempt to recover all, or a substantial part, of their costs through charges made to the public for the sale of goods and services. All owners of dwellings are included whether they let the dwellings or occupy them themselves. Trading enterprises' gross operating surplus is shown separately for companies (item 2a), unincorporated enterprises (item 2b), dwellings owned by persons (item 2c) and public enterprises (item 2d).

Item 3. Indirect taxes less subsidies.—Indirect taxes comprise taxes on purchases, sales or other transactions, or on the ownership of property, etc., paid by enterprises, public authorities and persons. They include licence fees in respect of rights conferred, such as liquor licences, etc. Subsidies are transfer payments made with the object of assisting certain industries. Such payments may take the form of bounties on goods produced, subsidies to producers to ensure a guaranteed price, payments to transport undertakings to permit a reduction of freights on certain classes of goods, assistance to producers, etc.

Item 4. Imports of goods and services.—The value of goods imported from overseas and amounts payable overseas for services. In Table 6, this item is sub-divided into the following components.

Item 4a. Imports f.o.b.—Recorded trade figures adjusted for the purpose of balance of payments estimates. The principal adjustments are the addition of unrecorded imports, including ships and aircraft for use on oversea routes, the subtraction of films imported on a rental basis, imports of gold, goods for repair and goods intended for re-export, and the deduction of a "valuation adjustment" representing the excess of the recorded value of imports (based on value for duty) over the estimated selling price to the importer as shown on invoices accompanying customs entries.

Item 4b. Transportation.—Freight payable to foreign carriers on goods imported into Australia and transported between Australian ports, fares payable in Australia, the oversea expenditure of Australian ships, remittances to foreign airlines, and premiums (less claims) on marine insurance payable overseas on imports into Australia, less the net earnings on marine insurance business undertaken by Australian firms in respect of both exports and imports.

Item 4c. Travel.—Net remittances in the form of travellers' cheques, etc., by Australians visiting overseas for pleasure and for business.

Item 4d. Government transactions.—Expenditure overseas for defence, including the pay and allowances of personnel serving overseas, expenditure overseas on diplomatic, consular and trade representation, contributions to international organizations, government pensions paid abroad, oversea expenditure on immigration and miscellaneous payments for services.

Item 4e. Other goods and services.—Cinema and television film rentals payable overseas, expenses of Australian firms transacting business overseas, commissions, brokerage, etc., and the value of repairs on goods previously exported for repair and return, etc.

Item 5. Net current expenditure on goods and services—personal consumption.—Net expenditure on goods and services for purposes of consumption by persons and private non-profit making bodies serving persons. This item excludes the purchase of dwellings and capital expenditure by non-profit making bodies (included in item 8), and maintenance of dwellings (treated as expenses of private enterprises), but includes personal expenditure on motor vehicles and other durable goods and the imputed rent of owner-occupied dwellings. Purchase of motor vehicles is the estimated expenditure by persons on new motor vehicles, secondhand motor vehicles purchased from business enterprises and public authorities, and net dealers' margins on purchases and sales of motor vehicles within the personal sector.

Motor vehicles include cars, station wagons, motor cycles and motor scooters bought on personal account. The value of income in kind (e.g. food produced and consumed on farms, board and lodging provided free to employees) is included in both personal income and personal consumption expenditure, but goods chargeable to business (expense) accounts are excluded.

Item 6. Net current expenditure on goods and services—financial enterprises.—The current expenditure of banks, instalment credit companies, short-term money market companies and building societies after deduction of bank charges to customers. Charges by instalment credit companies are treated as interest receipts and therefore not offset against expenditure. This item includes wages, salaries and supplements, indirect taxes and other payments for goods and services. Public financial enterprises are government businesses (mainly banks, including the Reserve Bank) which operate in a manner analogous to other financial enterprises, in that their current expenditure is largely financed by the net receipt of interest. The interest received by government housing authorities is treated as a receipt by public financial enterprises, but their other receipts, including net profit on sale of houses, and all their expenditure, are included in those of public trading enterprises.

Item 7. Net current expenditure on goods and services—public authorities.—Expenditure by public authorities (not public enterprises) which does not result in the creation of fixed tangible assets or in the acquisition of land, buildings or secondhand goods (other than imported). It comprises expenditure on wages, salaries, and supplements, and on goods and services, other than fixed assets and stocks; fees, etc., charged by public authorities for goods sold and services rendered are offset against purchases. Net expenditure overseas by public authorities and purchases from public enterprises are included. All expenditure on defence is classified as current.

Item 8. Gross fixed capital expenditure—private.—Expenditure on fixed assets whether for additions or replacements. This item includes expenditure on dwellings (item 8a), other building and construction (item 8b), and vehicles, plant, machinery, etc. (item 8c). It includes also expenditure on secondhand assets (other than houses purchased from public authorities) as well as new assets, less sales of existing assets. Expenditure on ordinary repair and maintenance of fixed assets is excluded as being chargeable to current account. Major additions are, however, regarded as capital expenditure. New dwellings purchased by persons from public housing authorities are included in private capital expenditure.

Item 9. Gross fixed capital expenditure—public enterprises.—Expenditure on fixed assets whether for additions or replacements, including wages and salaries paid by public enterprises in connexion with capital works.

Item 10. Gross fixed capital expenditure—public authorities.—Expenditure on fixed assets whether for additions or replacements other than for defence purposes. Because it has not been possible to make a satisfactory dissection, all expenditure on roads, including maintenance, is classified as fixed capital expenditure. Expenditure on housing, included in this item, includes the estimated expenditure on construction of dwellings for rental purposes, and hostels for migrants and others, but excludes houses built for sale, which are included in private capital expenditure. Advances by War Service Homes Division and other authorities for financing home purchase schemes are also excluded.

Item 11. Increase in value of stocks.—The change in book value of non-farm stocks held by trading enterprises and public authorities (item 11b), and the change in the value of farm stocks (item 11a).

Item 12. Statistical discrepancy.—The difference between the sum of the direct estimates of gross national product and imports of goods and services on the one hand and the sum of the estimates of components of gross national expenditure and exports of goods and services on the other hand. Conceptually these two totals are the same. Inclusion of the discrepancy on the expenditure side of the national production account implies nothing as to the relative accuracy of the estimates of gross national product and expenditure. Similarly its inclusion in the capital account does not imply that estimates in this table are less accurate than those in other tables, or that capital expenditure estimates are less accurate than estimates on the receipts side of this account.

Item 13. Exports of goods and services.—The value of goods exported overseas, and receipts from overseas for other goods and services. In Table 6, this item is sub-divided into the following components.

Item 13a. Exports f.o.b.—The recorded trade figures adjusted for balance of payments purposes. The adjustments are similar to those made to the recorded import figures but no change is made to the basis of valuation. The adjustment for un-recorded exports includes exports of uranium ores.

Item 13b. Transportation.—The expenditure of oversea carriers in Australian ports; the oversea earnings of ships owned or chartered by Australian operators, the remittances from overseas to Australian domestic and international airline operators.

Item 13c. Travel.—Net receipts of travellers' cheques, etc., from persons visiting Australia for pleasure and for business.

Item 13d. Government transactions.—Receipts for services rendered by the Australian Government to other governments, and other payments in Australia by foreign governments on defence and other projects, on diplomatic, consular and trade representation and for pensions paid in Australia.

Item 13e. Other goods and services.—The value of Australian production of gold less net industrial usage, business expenses of oversea firms in Australia and commissions, brokerage, etc.

Item 14. Depreciation allowances.—The financial provisions made for depreciation which are deducted to obtain net income. The estimates represent, in the main, amounts allowed under income tax legislation, but include also the estimated depreciation on tenanted and owner-occupied dwellings owned by persons and provisions made by public enterprises. This item is divided into depreciation allowances of trading enterprises (item 14a) and of financial enterprises (item 14b).

Item 15. Interest, etc.—Comprises interest, non-dwelling rent and royalties. This item appears in most accounts as receipts and payments of interest, etc., but in the case of some entries the amounts are combined with dividends and oversea profits. The item is shown net of intra-sector receipts and payments. Payments of interest, etc., by public enterprises is included in item 15g. Payment of interest, etc., by trading enterprises (item 15a) includes interest charged on borrowings for the purchase of a house by persons, which is treated as an appropriation from the gross operating surplus of dwellings owned by persons. Non-dwelling rent includes only actual payments. It is estimated net of the expenses of the owner of the premises on rates, maintenance, etc., which are treated as working expenses of the enterprises renting the building. Royalties include mining and forestry royalties paid to public authorities, and royalties and fees for use of trade marks, patents, etc., paid overseas.

Item 16. Income tax, estate and gift duties.—Income tax payable by trading and financial companies (items 16a and 16b) and persons (item 16c) are amounts payable at rates of taxation applicable in each year. Income tax payable by companies in respect of the most recent year's income is estimated on the basis of rates of tax applicable in respect of the preceding year's income. The difference between the amounts of income tax payable and the cash receipts by public authorities (part of item 16e) is included in item 16f. Income tax payable by persons (item 16c) includes the total income tax payable by individuals on all forms of income whether wages, business income or property income. Estate and gift duties (item 16d) are the amounts actually paid by persons in that year.

Item 17. Dividends.—All receipts and payments of dividends, including dividends payable overseas and the remitted profits of Australian branches of oversea enterprises. Dividends payable (items 17a and 17c) are the dividends declared by trading and financial companies in respect of the year (including an estimate of dividends to be declared in respect of the most recent year). Receipts of dividends (other than dividends receivable from oversea subsidiaries) are cash receipts, and the difference between the amounts payable and received is included in item 17h. The items are shown net of intra-sector receipts and payments.

Item 18. Undistributed income.—The undistributed income of companies comprising trading enterprises (item 18a) and financial enterprises (item 18c) is the balance of total company income, including profits receivable from overseas (items 18b and 18d) after deducting income tax and dividends payable, and is equal to the sum of undistributed income accruing to oversea residents (item 18f) and undistributed company income accruing to residents (item 18g). Profits receivable from overseas is the unremitted part of profits earned by oversea branches of Australian companies and undistributed profits of oversea subsidiaries.

Item 19. Unincorporated enterprises income.—The gross operating surplus of unincorporated enterprises less interest, etc., paid, and depreciation allowances. It comprises the income of farm unincorporated enterprises (item 19a), and the income of all other unincorporated enterprises (item 19b).

Item 20. Personal income from dwelling rent.—The gross operating surplus of dwellings owned by persons less interest, etc., paid, and depreciation allowances.

Item 21. Public enterprises income.—Includes income of public trading enterprises (item 21a) and income of public financial enterprises (item 21b). For trading enterprises it is equal to gross operating surplus after the deduction of depreciation allowances; for financial enterprises it is the net income after depreciation allowances, interest paid, and net current expenditure on goods and services by government banks are deducted from total receipts of interest and non-dwelling rent. Depreciation allowances deducted in arriving at the income of public trading enterprises are those shown in their published accounts, except in the case of enterprises whose accounts are included in the Commonwealth or State budgets and are analysed on the basis of their cash accounts in which depreciation is not deducted. In particular, no amount is included for the Post Office, or most railways, since cash accounts for these enterprises have been used.

Item 22. Retained investment income of life insurance funds, etc.—Total dividends, interest, etc., received by life insurance and superannuation funds less depreciation allowances, income tax and dividends payable, and the undistributed income of non-mutual life insurance companies.

Item 23. Oversea gifts.—All transfers to or from overseas on public authority or private account which are not payments for goods and services or payments of dividends, interest, etc.

Personal remittances overseas (item 23a).—Gifts of money by resident persons and private institutions, payments for sustenance and transfers of emigrants' funds and legacies from Australia to overseas, together with the value of goods exported as personal effects and gifts.

Personal remittances from overseas (item 23b).—Gifts of money received from non-resident persons and private institutions, receipts for sustenance, transfers of immigrants' funds and legacies from overseas to Australia, together with the value of goods imported as personal effects and gifts.

Public authority overseas grants (item 23c).—Grants to, and payments made on behalf of, the Territories of Papua and New Guinea, and expenditure overseas in respect of technical assistance and relief under the Colombo Plan and United Nations projects. Payments to United Nations and other organizations due by virtue of membership of these organizations are included in net current expenditure on goods and services.

Item 24. Personal saving.—The excess of personal income over the sum of personal consumption expenditure, interest paid, income tax payable and estate and gift duties paid and remittances overseas. It includes saving through life insurance and superannuation funds (defined as premiums, etc., paid less claims, etc., received and administrative expenses of life insurance offices) and the increase in assets of marketing authorities. It includes also changes in holdings of cash and securities, the net increase in bank deposits less advances, the reduction in the outstanding advances of instalment credit companies to persons and unincorporated enterprises, and the increase in the equity of persons in dwellings and in capital equipment, buildings and stocks of unincorporated enterprises. Personal saving is estimated as the balancing item in the personal current account.

Item 25. Cash benefits.—Current transfers to persons from public authorities in return for which no services are rendered or goods supplied. Principal components are scholarships; hospital, medical, pharmaceutical, maternity, sickness and unemployment benefits; child endowment; widows', age, invalid and repatriation pensions; and attendance money for waterside workers.

Item 26. Grants towards private capital expenditure.—Grants to meet part of capital costs of e.g., homes for aged persons and property for War Service Land Settlement, and homes savings grants to assist young married persons to purchase or build their own homes.

Item 27. Public authorities surplus on current account.—The excess of current revenue, including income of public enterprises, over current outlay. Current outlay includes current expenditure on goods and services, as defined in item 7, and transfer payments (interest, cash benefits, subsidies, grants towards private capital expenditure and overseas grants). The surplus is transferred to the capital account where it is shown as part of total funds available for financing capital outlay.

Item 28. Oversea balance on current account.—The excess of payments to the rest of the world on current account over receipts from the rest of the world on current account. In the national capital account it is shown divided into drawings on Australia's overseas monetary reserves (item 28a) and net apparent capital inflow (item 28b).

DIARY OF PRINCIPAL ECONOMIC EVENTS, 1964-65

The principal economic events in earlier years were shown in the following issues:—

YEARS	OFFICIAL YEAR BOOK No.	PAGES
1931 to 1938	33	968-77
1939 to 1944	36	1129-41
1945 to 1948	37	1235-45
1949 to 1951	39	1331-40
1952 to 1955	42	1149-60
1956 to 1958	46	1185-92
1958-59 to 1961-62	48	1188-1200
1962-63	49	1253-56
1963-64	50	1283-88

The year 1964-65 saw a continuation of the economic expansion which marked the two previous years and again there were substantial increases in most components of national expenditure and product. Gross national expenditure increased by about 13 per cent., imports of goods and services by about 21 per cent., and gross national product by about 9 per cent. However, owing partly to falling wool and sugar prices, exports of goods and services fell by about 3 per cent., and international reserves fell by almost £158 million.

National Service Training was resumed and there was an increase of £45 million in the defence vote, much of which went to the building of camps and barracks, and to the import of aircraft. The grazing and dairying industries were adversely affected during the second half of the year by a prolonged and severe drought, especially in New South Wales and southern Queensland, and by stock losses in extensive bush fires in southern New South Wales and Victoria. Total rural production for the year, nevertheless, showed an increase.

Civilian employment (excluding rural) continued to rise, and in June, 1965, it was 3,600,000, an increase of nearly 140,000 (4.0 per cent.) on June, 1964, while during the same period the number of persons on unemployment benefit fell by 5,473 to 12,656. Major industrial disputes in the motor vehicle and copper mining industries caused some loss of production, but most manufactured items were at record levels. The level of building operations continued to increase, the number of new house and flat commencements rising from 107,600 in 1963-64 to 116,700 in 1964-65, although there were signs of levelling off at the end of the year.

Motor vehicle sales were maintained at a high level, registrations of new motor vehicles during the year being 428,000, about 23,000 more than in 1963-64. Retail sales, exclusive of motor vehicles, parts, petrol, etc., increased by about 7 per cent. during the year. These increases in sales, however, were accompanied by increases in outstanding balances in transactions financed by instalment credit from £677.8 million in June, 1964, to £722.7 million in June, 1965, and by an increase of £149 million in loans, advances, and bills discounted by trading banks. At the same time the combined trading bank and savings bank deposits reached a record £5,000 million. Some call-up of statutory reserve funds and increased interest rates for overdrafts were made by the Reserve Bank to guard against excess liquidity, but these measures were later relaxed.

The consumer price index rose by about 4 per cent. during the year, while the index of average minimum weekly wage rates rose by 2.4 per cent. and average weekly earnings per employed male unit were about 7 per cent. higher in June, 1965 than in June, 1964. The judgment of the Commonwealth Conciliation and Arbitration Commission in the National Wage Cases of 1965 did not change the basic wage but granted an increase in margins equivalent to $1\frac{1}{2}$ per cent. of the basic wage plus margins.

- 2nd July.** Loan Council met in Canberra and approved borrowing programme for 1964-65 of £290 million (£239 million for State Works, £51 million for Commonwealth-State Housing).
- 16th July.** Wool Board recommended wool reserve price scheme.
- 17th July.** Orders placed with local shipyards by Australian Shipbuilding Board for eight oil tankers, four bulk carriers, and other ships to total amount of over £65 million.
- 20th July.** First applications lodged for Commonwealth Home Savings Grants.
- 24th July.** Contracts worth £18.1 million placed by State Electricity Commission of Victoria for boiler plant and two generators for Hazelwood power station.
- 6th August.** Australian Action Council established by Associated Chambers of Commerce and Associated Chambers of Manufacturers to promote closer economic relations with Britain. Commonwealth Special Bonds Series "K" issued at par with coupons rising from 4½ to 5 per cent. and optional redemption prices par to 103 per cent. at maturity.
- 7th August.** \$U.S. 3 million appropriated by United States Senate for erection of 130 housing units at U.S. naval communications centre at North-West Cape, Western Australia.
- 10th August.** United States and Australian Governments agreed to establish joint educational foundation to succeed Fulbright Scheme.
- 11th August.** Commonwealth Budget for 1964-65 introduced into House of Representatives. In 1963-64 receipts of the Consolidated Revenue Fund were £1,904.7 million, and expenditure (excluding payments of £14.9 million to the Loan Consolidation and Investment Reserve and £18.0 million for the redemption of Treasury Bills) amounted to £1,871.8 million. The main items of revenue (1962-63 figures shown in parentheses) were: income taxes, £937.2 million (£810.6 million); excise duties, £291.1 million (£274.4 million); customs duties, £116.4 million (£105.1 million); sales tax, £162.6 million (£156.5 million); and pay-roll tax, £68.2 million (£63.3 million). The main items of expenditure were: payments to or for the States, £448.1 million (£423.7 million); social and health services, £416.3 million (£379.3 million); defence services (excluding £38.7 million provided from loan fund in 1963-64), £221.7 million (£148 million); war and repatriation services, £112.7 million (£111.2 million); works services, £176.3 million (£166.5 million). The Budget for 1964-65 provided for an estimated expenditure of £2,150.7 million, to be provided from Consolidated Revenue Fund.
- 13th August.** Commonwealth cash loan of £50 million opened, issued at £99 10s. and £100 with coupons at 4½ per cent. to 5 per cent. and periods 2 years 9 months to 19 years 9 months; oversubscribed £21.0 million.
- 18th August.** Fares on internal air-lines raised by 6 per cent. Announcement made of contracts for import of up to £1 million worth of Siberian pine.
- 21st August.** Australian Wheat Board sold 75,000 tons of wheat to India on credit terms of up to six months.
- 22nd August.** Australia became partner with eighteen other members of International Telecommunications Union in setting up an international communications satellite system. Australia's contribution £2.5 million, 2.75 per cent. of total.
- 31st August.** Minister for Civil Aviation announced that Qantas would place £12 million order for three additional Boeing 707 jet-airliners (*see p. 579*).
- 1st September.** 1964-65 Budget introduced into South Australian House of Assembly. In 1963-64, revenue amounted to £105,503,000 and expenditure to £103,878,000, leaving a surplus of £1,625,000. For 1964-65 it was estimated that revenue would be £110,076,000 and expenditure £112,568,000, leaving a deficit of £2,492,000.
- 1964-65 Budget introduced into Tasmanian House of Assembly. The transactions of the Consolidated Revenue Fund in 1963-64 resulted in a deficit of £593,000. Receipts of the Consolidated Revenue Fund totalled £33,918,000, and expenditure £34,510,000. For 1964-65 it was estimated that expenditure would be £37,793,000 and revenue £37,225,000, leaving a deficit of £568,000.
- 6th September.** Commonwealth Government allocated expenditure of £3.4 million for sheep and wool research in 1964-65.

9th September. 1964-65 Budget introduced into Victorian Legislative Assembly. In 1963-64 revenue amounted to £222,185,000 and expenditure to £222,437,000. The Budget for 1964-65 provided for expenditure and revenue of £238,421,000. Railway operating expenses and income were estimated at £49,214,000 and £48,750,000 respectively, and it was anticipated that the Railway Equalization Account would have to provide the balance of £464,000.

15th September. Northern Territory *Social Welfare Ordinance* 1964 repealed *Welfare Ordinance* 1953-1963 (see p. 106) and provided for assistance without control for any person socially or economically in need of it.

16th September. Seven additional Caribou aircraft ordered for R.A.A.F. (see p. 1195).

23rd September. Premier of New South Wales announced plans for reclamation of land on Newcastle Island. First project, fertilizer works, would involve expenditure of £9.2 million.

24th September. 1964-65 Budget introduced into Queensland Legislative Assembly. In 1963-64 receipts of the Consolidated Revenue Fund amounted to £130,448,000 and expenditure to £130,227,000. For 1964-65 it was estimated that revenue would amount to £135,937,000 and expenditure to £136,771,000.

25th September. £25 million British Exhibition opened in Sydney.

26th September. Sydney and Cornell (U.S.A.) Universities agreed to pool their astronomy resources to set up a joint Astronomy Centre, the largest of its kind in the world.

29th September. New South Wales Government announced start of work by State Electricity Commission on new £100 million power station at Liddell.

1964-65 Budget introduced into New South Wales Legislative Assembly. During 1963-64 the transactions of the Consolidated Revenue Fund, Railways, Metropolitan and Newcastle Transport Services, and Maritime Services Board resulted in a surplus of £272,000. (Total revenue overall was £342,268,000, total expenditure £341,996,000.) After providing for debt charges, there was a surplus of £213,000 on the Department of Railways, a deficit of £2,267,000 on the Metropolitan and Newcastle Transport Services, and a surplus of £48,000 from the operations of the Maritime Services Board. The 1964-65 Budget provided for an overall deficit of £2,130,000 (revenue £357,555,000, expenditure £359,685,000). After meeting debt charges, it was estimated that there would be a deficit of £1,478,000 on the transactions of the Consolidated Revenue Fund, a surplus of £89,000 on the Railways, a deficit of £2,804,000 on the Metropolitan and Newcastle Transport Services and a surplus of £26,000 on the Maritime Services Board.

6th October. 1964-65 Budget introduced into Western Australian Legislative Assembly. Financial transactions for the year 1963-64 resulted in a deficit of £1,396,000. For 1964-65 it was estimated that expenditure would be £91,054,000 and revenue £90,258,000, leaving a deficit of £796,000.

Governor of Reserve Bank announced additional restraints on banking system designed to restrict rate of new lending.

16th October. Wool reserve price scheme (see 16th July) rejected by Commonwealth Government.

29th October. Chairman of Australian Wheat Board reported sale of 56 million bushels of wheat to mainland China, bringing total sales since 1960 to over 370 million bushels.

31st October. Month-old General Motors-Holden's industrial dispute ended. Cost estimated at £26 million.

2nd November. The Commonwealth raised a private loan of \$U.S.30 million in New York for financing the purchase of aircraft and parts by Qantas Empire Airways and Australian National Airlines Commission. The loan is repayable in half-yearly instalments from 1967 to 1973 with interest from 4½ to 5½ per cent.

5th November. Commonwealth cash loan of £60 million opened, issued at £99 10s. and £100 with coupons at 4½ to 5 per cent. and periods 2 years 6 months to 20 years; under-subscribed £9.8 million.

10th November. As a result of major review of defence planning, Prime Minister announced increase of £1,200 million in defence spending over next three years, associated with resumption of National Service Training and establishment of special Reserve Forces (see p. 1195) (legislation passed 17th November).

- 15th November.* Commonwealth approved export of 210 million tons of iron ore, over 21 years, from Mount Newman, Western Australia, to Japan (*see p. 1164*). Contract signed 1st February, 1965.
- 16th November.* As a result of long-standing industrial dispute, Mount Isa Mines closed down. Ban imposed on exports of copper. Minister for Immigration announced plans to increase migrant intake this year by 15,000, all from Britain.
- 21st November.* Last major tunnel in Snowy Mountains Hydro-electric Scheme completed.
- 3rd December.* Bale of wool sold at Goulburn sales for world record of 1,800 pence a pound. World Bank report released on development of Papua-New Guinea.
- 7th December.* Sharp drop in world sugar price expected to have effect on Australian crops.
- 9th December.* Victorian Parliamentary salaries increased by from £800 to £1,500 a year.
- 12th December.* Japan contracted to buy 29.6 million tons of coal valued at £120 million from Maura (Queensland) over the next thirteen years, the largest single coal export contract yet negotiated in Australia.
- 14th December.* Contract signed for £5 million development of part of Long Bay rifle range, Sydney, as housing project.
- 18th December.* Japan contracted to buy 82 million tons of iron ore, over seventeen years, from Mount Goldsworthy and Hamersley Mines (*see p. 1164*).
- 1st January.* Treasurer announced details of Government assistance in conversion of coin-operated machines to decimal currency. Details announced of new port to be built near Borroloola, Northern Territory, on Gulf of Carpentaria, to serve big new mineral and pastoral developments in the area and for defence purposes.
- 3rd January.* Snowy Mountains Hydro-electric Authority let £2.75 million contract for building of Jindabyne dam.
- 4th January.* Increased stamp duty on cheques, receipts, mortgages and insurance policies imposed in Victoria.
- 6th January.* Army Minister announced details of £23 million works programme for barracks and camps to be completed by June to provide accommodation for intake of National Service Trainees.
- 12th January.* Minister for Territories announced plans for establishing a major tea industry in New Guinea.
- 15th January.* Tenders called by Australian Shipping Commission for two more roll-on roll-off cargo ships to cost about £2.5 million each.
- 19th January.* New South Wales Minister for Local Government announced plans for £82 million development scheme for Woolloomooloo.
- 21st January.* £12.2 million contract let for construction of army facilities in New Guinea. Further six "Jindiviks" sold to the United States of America.
- 2nd February.* Mt. Newman Iron Ore Co. Ltd. announced plans to spend £70 million on capital works to develop Pilbara iron ore mines for export.
- 3rd February.* Full High Court judgment on intra-state airlines case held that New South Wales Air Transport Act requiring intra-state services to hold a State licence was valid, but also that four out of five Commonwealth regulations were valid so that airlines needed Commonwealth licence as well. Broken Hill Pty. Co. Ltd. signed contracts for importation of 1,800 tons of Japanese steel.
- 4th February.* Chairman of Wheat Board announced cash sale of 250,000 tons (£22 million) of wheat to Russia. Commonwealth Tobacco Board set up to administer new tobacco stabilization plan, including four-year plan for annual marketing quota of 26 million lb. Commonwealth cash loan of £60 million opened, issued at £99 12s. 6d., £99 5s. and £100 with coupons at 4½ to 5 per cent. and period 1 year 8 months to 20 years 3 months. Undersubscribed £20.8 million.

- 17th February.* Mount Isa mine re-opened after stoppage which was estimated to have cost Australia over £2 million in export income. (Production resumed 26th March.)
- 22nd February.* Royal Australian Mint opened by H.R.H. the Duke of Edinburgh.
- 25th February.* Australian firm gained £1.25 million contract for re-organization of Spain's telephone system.
- 10th March.* Reserve Bank raised maximum interest rates on overdrafts to 7½ per cent.
- 24th March.* Ansett-A.N.A. contracted for purchase of two DC9 twin-jet planes.
- 30th March.* £18 million Burrendong Dam near Wellington (New South Wales) began to store water.
- 1st April.* Rate of contributions to medical benefits funds increased.
- 2nd April.* Commonwealth Government and Australian Wool Industry Conference, following negotiations, agreed on conservative reserve price scheme for wool, to be administered by seven-member board, growers to contribute £30 million over seven years. Plan to be submitted to referendum of woolgrowers. (See 16th July and 16th October.)*
- 3rd April.* Australian Wheat Board announced further sales of 1.2 million tons of wheat to China and 600,000 tons to Union of Soviet Socialist Republics.
- 5th April.* Reserve Bank released £24 million of trading bank funds to relieve tight liquidity situation.
- 6th April.* Philips Imperial Chemicals announced plans for establishment of a carbon black, synthetic rubber, and chemical industry at Kurnell, New South Wales.
- 7th April.* Commonwealth Special Bonds Series "L" issued at par with coupons rising from 4½ to 5½ per cent. and optional redemption prices par to 103 per cent. at maturity.
- 13th April.* Commonwealth cash loan of £40 million opened, issued at £99 and £100 with coupons at 5 and 5½ per cent., and periods 2 years 10 months to 20 years. Oversubscribed £6.3 million.
- 18th April.* £5 million tender accepted by the New South Wales Department of Main Roads for construction of first section of Warringah expressway.
- 23rd April.* Commonwealth Treasurer announced that Reserve Bank had commenced production of \$1 notes. Importation of pig-meat prohibited from all countries other than United Kingdom, Ireland, Canada, New Zealand, and the United States.
- 24th April.* Japan contracted for £391 million worth of iron ore pellets to be produced from Mount Enid field, Western Australia, by foreign-owned firm. Australia took action to delay plans for raising of capital in Australia by oversea firms.
- 27th April.* Indonesian Government expropriated Australian pharmaceutical firm.
- 4th May.* Housing Loans Insurance Bill passed, setting up corporation to insure loans made to credit-worthy borrowers for home building.
- 5th May.* Five-year £300 million development programme for Papua and New Guinea approved by Commonwealth Government. Commonwealth issued prospectus for \$U.S.25 million loan, negotiated with underwriters in the United States and in Europe. The loan was offered to other than United States persons at a price of \$98½ with coupons at 5½ per cent. for a period of from 10 to 20 years.
- 6th May.* New £50 million steelworks opened at Whyalla (South Australia).
- 19th May.* Restrictive Trade Practices Bill introduced into Commonwealth Parliament.

* Act authorizing referendum assented to 29th September.

- 1st June.** Premiers' Conference adopted new formula for tax reimbursement grants to give States £376.4 million in 1965-66.
- 3rd June.** Loan Council met in Canberra and approved of borrowing programme for 1965-66 of £295 million (£244 million for State Works, £51 million for Commonwealth-State Housing).
- 6th June.** Further contract for sale of 3 million tons (£12 million) of New South Wales coal to Japan over next six years.
- 11th June.** Graziers' Association of New South Wales opposed reserve price plan for wool auctions (*see* 2nd April) by majority vote.
- 18th June.** Bellambi Coal Co. Ltd. signed five-year contract for supply of £17.5 million of hard coking coal to Japan, to start in 1967.
- 23rd June.** Contract signed to buy two new radar control and reporting systems for R.A.A.F. at cost of £7 million.
- 29th June.** Commonwealth Conciliation and Arbitration Commission handed down decision in National Wage Cases (for details *see* Appendix, pp. 1295-6).
- 30th June.** Commonwealth Special Cash loan of £67 million issued at £99 and £100 with coupons at 5 and 5½ per cent. for a period of 2 years 8 months to 20 years.

CHRONOLOGICAL TABLE

CHRONOLOGICAL TABLE OF CHIEF EVENTS IN AUSTRALIA SINCE 1955

NOTES.—In issues of the Year Book up to No. 48 (see No. 48, p. 1201) this table covered events back to the establishment of settlement in Australia in 1788. Later issues up to No. 50 (see No. 50, p. 1289) covered events back to 1945. This issue covers the years 1955 to 1965.

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.

Year

- 1955 First power generated by Snowy Mountains Hydro-electric Authority. Australian population reached 9,000,000. Cocos (Keeling) Islands became Territory under authority of Commonwealth.
- 1956 Amendment to Conciliation and Arbitration Act separated judicial functions from conciliation and arbitration functions.
- 1957 High Court ruled that interstate vehicles could not be compelled to register, but upheld validity of tax on commercial vehicles, including those engaged in interstate trade, imposed solely for the maintenance of roads. National Capital Development Commission set up to co-ordinate development of Canberra as centre of government.
- 1958 Prime Minister officially opened Australia's first nuclear reactor at Lucas Heights, near Sydney. Christmas Island (Indian Ocean) transferred to Australian Administration.
- 1959 Appointment of Decimal Currency Committee to investigate advantages and disadvantages of a decimal currency. Annual Holidays Act, 1944-1958 provided for three weeks annual holiday for all New South Wales workers. Population reached 10,000,000. First major station of Snowy Mountains Scheme commenced operation.
- 1960 Provision made for Social Service benefits to be paid to Australian Aborigines. *Commonwealth Banks Act 1959* and *Reserve Bank Act 1959* proclaimed (see p. 818). Goods comprising 90 per cent. of Australia's current imports exempted from licensing provisions. National Service training suspended. Report of Decimal Currency Committee presented to Parliament—decimal currency system favoured. Changes made in Constitution of Papua and New Guinea providing for an increase in number of indigenous members of Legislative Council to eleven, including six elected by indigenes. Commonwealth Government announced special economic measures designed to counter inflationary trend and safeguard overseas funds.
- 1961 Australia's first guided missile base established at Williamstown (New South Wales). *Commonwealth Matrimonial Causes Act 1959* unifying State Acts, became operative (see p. 634). Commonwealth Government announced tax concessions to exporters for promotional expenses in developing overseas export markets. Oil discovered in south-west Queensland. Australian population census taken. Australia sold interest in Tasman Empire Airways Ltd. to New Zealand. Iron ore deposits estimated at 1,800 million tons discovered at Pilbara (Western Australia).
- 1962 Western Australian Premier signed agreement with American companies for 21-year lease to extract and export up to 15 million tons of iron ore from Pilbara deposits. Commonwealth and Western Australian Electoral Acts amended to provide for votes for Aborigines. Work began on standardization of rail gauge from Kwinana to Kalgoorlie (Western Australia). Commonwealth provided £1,765,000 grants to States for assistance to universities in development of training facilities for medical students in teaching hospitals. First production of bauxite ore from Weipa deposits. Minister for Defence outlined proposals for new defence plan to cost £650 million, providing for increases in the strength of all services. First major International Labour Office Conference held in Australia opened in Melbourne. Aborigines exercised voting rights in Northern Territory for first time.

Year

- 1963** Her Majesty, Queen Elizabeth II and His Royal Highness the Duke of Edinburgh made second Royal Tour of Australia and attended the jubilee celebrations of the founding of Canberra. Commonwealth Committee of Economic Enquiry appointed to investigate broad aspects of the Australian economy. First meeting of Australian Water Resources Council (*see* p. 230). South Australian school leaving age raised to 15 years. Approval given to agreement for United States to establish, maintain and operate a naval communications station at North West Cape, Western Australia. Prime Minister opened pilot scheme for the Ord River (Western Australia) development scheme. Contract let for construction of U.S. Space Tracking Station at Tidbinbilla, near Canberra. Western Australian Government signed £78 million contract for the establishment and development of a new iron and steel industry in the State. Australia signed Nuclear Test Ban Treaty. Uniform *Marriage Act* 1961 came into effect. Decimal currency legislation introduced into House of Representatives (*see* p. 809). Second stage (Snowy-Murray section) of Snowy Mountains Hydro-electric Scheme commenced. Australian population reached 11 million.
- 1964. January.** Agreement concluded with United States of America on establishment of meteorological research station at Pearce (Western Australia) R.A.A.F. Base. Establishment of a new Division of Northern Development approved for Department of National Development.
- February.** Australian Defence Mission sent to Malaysia. R.A.N. Destroyer *Voyager* sunk in collision off Jervis Bay with loss of 82 lives. First general election from common roll in Papua-New Guinea. New South Wales Government employees granted four weeks annual leave. Australian Water Resources Council to seek establishment of network of stream gauging stations throughout Australia. Australia represented as full regional member of ECAFE for the first time at 20th Conference in Teheran.
- March.** Commonwealth Government announced programme of assistance for schools for teaching of science. Commonwealth Bureau of Roads to be set up to make a full and continuous study of the roads problem. Minister for Defence announced £3 million military aid grant to Malaysia. Malaysia-Australia air services agreement signed in Kuala Lumpur. £13 million oil refinery opened at Kurnell. Moonie to Brisbane oil pipeline opened and Australia's first commercial oil production started. Australian School of Nuclear Technology established at Lucas Heights, near Sydney.
- April.** Additional naval, army and air-force units made available for service in Malaysia.
- May.** Soviet Trade Mission stationed in Sydney. Advance party of army engineers left for Sabah (North Borneo). Northern Territory Legislative Council passed legislation removing discrimination against Aborigines.
- June.** New 64-member House of Assembly for Papua-New Guinea opened. Contract let for construction of jet-port at Tullamarine (Victoria).
- July.** Army sent instructors and advisers to Vietnam. Minister for Navy led parliamentary delegation on goodwill mission to South-east Asia. Severe storms battered five States (*see* p. 65) and Melbourne recorded lowest barometric pressure for 100 years. Orders placed by Australian Shipbuilding Board with local shipyards for eight oil tankers, four bulk carriers and other ships to total amount of over £65 million. First applications lodged for Commonwealth Home Savings Grants.
- August.** Australia joined eighteen other members of International Telecommunications Union in setting up an international communications satellite system, Australia's share £2.5 million. \$U.S.3 million appropriated by United States Senate for erection of 130 housing units at U.S. Naval Communications Centre at North-West Cape, Western Australia. United States and Australian Governments agreed to establish joint educational foundation to succeed Fulbright Scheme. £4.5 million Tasman bridge across River Derwent opened at Hobart. Report on loss of H.M.A.S. *Voyager* tabled in Parliament.

Year

1964 *September.* Qantas ordered three additional £4 million Boeing 707 jet airliners (*see p. 579*). Commonwealth Government approved construction of £1 million tracking station at Gove in the Northern Territory for ELDO (*see p. 1195*). Construction began of new £4 million jet airport at Tullamarine, Victoria, to handle international air traffic. SEATO Secretary-General made two-week visit to Australia as guest of Commonwealth Government. Australia provided £1 million worth of aid in road and bridge building to Sarawak. Northern Territory *Social Welfare Ordinance 1964* repealed *Welfare Ordinance 1953-1963* (*see p. 106*) and provided for assistance without control for any person socially or economically in need of it. Seven additional Caribou aircraft ordered for R.A.A.F. (*see p. 1195*). Construction of fertilizer works involving cost of £9.2 million began on Newcastle Island. £25 million British Exhibition opened in Sydney. Princess Marina, Duchess of Kent, made two-week visit to Canberra and Sydney. Sydney and Cornell (United States of America) Universities pooled resources to set up joint Astronomy Centre, the largest of its kind in the world.

October. New South Wales State Electricity Commission began construction of £100 million power station at Liddell. Army ordered seventeen American Sioux Helicopters (*see p. 1195*). Site selected for third United States Space Tracking Station near Canberra. Commonwealth Government established licensing system for intrastate civil aviation. Sydney University released report on extension plans expected to exceed £15 million when completed. Australian forces saw action in Malaysia.

November. Prime Minister announced expansion of defence provisions involving additional defence expenditure of £1,220 million over three years, resumption of National Service Training, and establishment of special Reserve Forces (*see p. 1195*). *National Service Act 1964* passed. Commonwealth Government allowed export of iron ore to Japan from fields in Western Australia (*see p. 1164*). United States National Science Foundation made additional grant of £44,600 to Sydney University towards running cost of radio telescope (*see Year Book No. 49, p. 1259*). Professorial salaries increased to £5,200 following recommendations of committee of inquiry into academic salaries. Legislation introduced in New South Wales Parliament to establish University of Newcastle (*see p. 711*). Last major tunnel in Snowy Mountains Hydro-electric Scheme completed.

December. World bank report on development of Papua-New Guinea released. (Adopted by Government, May, 1965.) Mr. Donald Campbell established new world's water speed record of 276.33 m.p.h. in Western Australia, following his world land speed record for conventional drive machines established at Lake Eyre in July. First awards of Commonwealth Scholarships to secondary school students.

1965. *January.* Snowy Mountains Hydro-electric Authority let contract for building of Jindabyne dam. Details announced of £23 million works programme for barracks and camps to be completed by June to accommodate intake of National Service trainees. New passenger car ferry, the *Empress of Australia*, commissioned for Sydney-Hobart run. First Australian Ambassador appointed to Ireland. Two more roll-on roll-off cargo ships ordered by Australian Shipping Commission. Tasmania introduced provisional driver's licences.

February. Full High Court judgment on intra-state airlines case held that New South Wales Air Transport Act requiring intra-state services to hold a State licence was valid, but also that four out of five Commonwealth regulations were valid, so that airlines needed Commonwealth licence as well. Victorian Premier announced £30 million plan for city freeways. Australia signed major defence agreement to buy £156 million of aircraft and other military equipment in next three years. H.R.H. the Duke of Edinburgh made six-day visit to Australia. Royal Australian Mint opened. First Australian Ambassador to Greece appointed. Australian Council of National Trusts inaugurated in Canberra.

March. Earl Mountbatten visited Australia for talks on Asian defence. Over £2 million subscribed to establish Churchill Memorial Fellowships. Change of Government in South Australia after 32 years. First ballot for National Service call-up. Premier of Singapore made short visit for talks with Commonwealth and State Ministers and senior officials. Martin Report on tertiary education tabled

Year

1965

contd.

in House of Representatives (Commonwealth will provide grants, subject to matching grants by States, rising from £2.5 million to £25 million over six-year period for development of technical education at tertiary level and will award 1,000 additional scholarships, to total of 6,000). Burrendong Dam near Wellington (New South Wales) began to store water.

April. Tender accepted by New South Wales Department of Main Roads for construction of first section of Warringah expressway. Mr. Cabot Lodge, special envoy of United States President, visited Australia for talks with Cabinet. Indonesian government expropriated Australian pharmaceutical firm. Australia changed to metric system for dispensing of medicine.

May. Japanese firm commenced dredging operations to deepen harbour at Port Hedland (Western Australia). Australia received orders for supply of £6 million Ikara anti-submarine weapons system to Royal Navy. New steelworks opened at Whyalla (South Australia). 1st Battalion, Royal Australian Regiment, embarked for service in South Vietnam.

June. Minister for Army announced plans for Army re-organization. Two new C.M.F. Battalions to be raised in New South Wales. Australia agreed to establishment of Legislative Council for Nauru and payment of substantially higher phosphate royalties. Victorian fodder shipped to New South Wales to relieve stock losses in worst drought for 63 years. Loan Council and Premiers' Conference met in Canberra. Decision handed down in National Wage Cases of 1965 (*see* pp. 1295-6).

STATISTICAL SUMMARY: AUSTRALIA

NOTE.—(1) In most cases where figures are available back to 1861, these were shown in Year Book No. 39, pp. xxviii-xxix.

(2) The statistics in this summary relate in general to the periods shown in the table headings; where the statistics relate to other periods, this is indicated in the footnotes.

Item	Year ended 30th June—								
	1902	1912	1922	1932	1942	1952	1962	1965	
DEMOGRAPHY(a)—									
Population(b)	{ '000 males ..	2,005	2,382	2,799	3,333	3,599	4,311	5,355	5,671
	{ '000 females ..	1,820	2,192	2,712	3,220	3,545	4,217	5,249	5,580
	{ '000 persons ..	3,825	4,574	5,511	6,553	7,144	8,528	10,604	11,251
Natural increase	'000	56.6	74.3	82.1	61.9	63.3	111.5	151.0	128.6
Net oversea migration	'000	3.0	74.4	17.5	-10.1	5.2	111.4	61.5	99.3
Marriages	'000	28	39	47	39	75	77	77	86
Divorces(d) and judicial separations	rate(c)	7.3	8.8	8.6	6.0	10.6	9.2	7.3	7.7
Births	'000	398	509	1,490	1,969	3,351	7,330	6,751	7,967
	rate(c)	103	122	136	119	135	193	240	229
Deaths	'000	27.2	27.2	25.0	18.2	18.9	23.0	22.9	20.6
	rate(c)	46	48	54	57	71	82	89	101
Infant deaths	'000	12.2	10.7	9.9	8.7	10.0	9.7	8.5	9.0
	rate(e)	10.7	8.4	9.0	5.0	5.3	4.9	4.7	4.4
	rate(f)	103.6	68.5	65.7	42.1	39.7	25.2	19.5	19.1
WAGES (ADULT MALES)(b)—									
Minimum weekly wage rate index numbers(f)		n.a.	n.a.	n.a.	n.a.	38.5	85.8	129.5	140.1
PRODUCTION—									
Agricultural(g)—									
Wheat	{ area mill. acs.	5.1	7.4	9.7	14.7	12.0	10.4	14.7	(l) 17.7
	{ yield mill. bus.	39	72	129	191	167	160	247	370
	{ av. yield bus.	7.5	9.6	13.3	12.9	13.9	15.4	16.8	20.9
	{ area '000 acs.	461	617	733	1,085	1,460	2,365	3,097	3,392
Oats	{ yield mill. bus.	9.8	9.6	12.1	15.2	22.3	34.5	55.1	68.2
	{ av. yield bus.	21.2	15.5	16.6	14.0	15.3	14.6	17.8	20.1
	{ area '000 acs.	75	116	299	342	784	1,118	2,383	2,013
Barley	{ yield mill. bus.	1.5	2.1	6.1	6.3	18.0	21.9	41.5	43.4
	{ av. yield bus.	20.4	17.7	20.4	18.4	23.0	19.6	17.4	21.6
	{ area '000 acs.	295	340	305	269	301	170	211	215
Maize	{ yield mill. bus.	7.0	8.9	7.8	7.1	7.4	4.0	7.3	6.7
	{ av. yield bus.	23.9	26.3	25.7	26.2	24.7	23.7	34.7	31.3
	{ area '000 acs.	1,688	2,518	2,995	2,635	2,758	1,549	2,274	2,602
Hay	{ yield '000 tons	2,025	2,868	3,902	3,167	3,575	2,34*	3,693	4,269
	{ av. yield tons	1.20	1.14	1.30	1.20	1.30	1.51	1.62	1.64
	{ area '000 acs.	110	130	149	145	99	118	94	102
Potatoes	{ yield '000 tons	323	301	388	397	333	509	526	562
	{ av. yield tons	2.94	2.31	2.60	2.74	3.35	4.31	5.57	5.51
	{ area '000 acs.	87	101	128	242	255	282	387	418
Sugar-cane(h)	{ yield '000 tons	1,368	1,682	2,437	4,213	5,154	5,327	9,577	12,118
	{ av. yield tons	15.7	16.7	19.0	17.4	20.3	18.9	24.8	29.0
	{ area '000 acs.	64	61	92	115	130	136	133	136
Vineyards	{ wine mill. gals.	5.3	5.0	8.5	14.2	15.6	35.3	41.7	37.9
Total Area of Crops	mill. acs.	8.4	12.1	15.4	21.2	20.5	19.7	29.6	32.0
Pastoral, dairying, etc.—									
Livestock(i)	{ horses mill.	1.6	2.3	2.4	1.8	1.6	0.9	0.6	(m) 0.5
	{ cattle "	8.5	11.8	14.4	12.3	13.6	14.9	18.0	18.8
	{ sheep "	72	97	86	111	125	118	158	171
	{ pigs "	0.9	1.1	1.0	1.2	1.4	1.0	1.7	1.7
Wool(j)	mill. lb.	(a) 539	(a) 798	723	1,007	1,167	1,080	1,699	1,799
Butter	'000 tons	(a) 46	(a) 95	(a) 119	175	168	135	198	203
Cheese	"	(a) 5.3	(a) 7.1	(a) 14.6	14.0	30.1	40.6	55.7	61.4
Meat(k)—									
Beef and veal	"			{ 339	350	534	582	791	1,005
Mutton and lamb	"			{ 218	307	372	282	587	586
Pigmeat	"			{ 51	70	121	85	120	122
Total Meat	"			{ 608	727	1,027	949	1,498	1,713

(a) Year ended previous December. (b) At 31st December of previous year. (c) Number per 1,000 of mean population. (d) Decreases made absolute, including decreases for nullity of marriage. (e) Number per 1,000 live births. (f) New series. Base: Year 1954 = 100. Excludes rural industry. (g) Season ended in year shown. (h) Cane cut for crushing. (i) As at 31st December of previous year for years to 1942; at 31st March thereafter. (j) In terms of greasy. (k) Carcass weight in terms of fresh meat. (l) Except for wheat, crop figures shown are for 1964 season. (m) Estimated.

STATISTICAL SUMMARY: AUSTRALIA—continued

NOTE.—See headnotes on page 1279.

Item	Year ended 30th June—							
	1902	1912	1922	1932	1942	1952	1962	1965
PRODUCTION—continued								
Mineral(a)(b)—								
Copper(c) .. '000 tons	n.a.	n.a.	n.a.	13.5	20.9	18.1	95.6	105.0
Gold(c) .. '000 fine oz.	3,300	2,484	758	595	1,497	896	1,076	966
Lead(c) .. '000 tons	n.a.	222.0	57.7	162.6	275.5	212.0	269.7	374.9
Zinc(c) .. (d)		190.3	20.7	97.5	170.0	189.2	311.2	344.6
Black coal .. 'mill. tons	6.9	10.5	12.8	8.4	14.2	17.6	24.0	27.4
Brown coal .. " "		(d)	0.1	2.2	4.6	7.8	16.3	19.0
Forestry—								
Sawn output of Australian-grown timber, mill. sup. ft.	(a) 452	(a) 605	590	237	914	1,393	1,352	1,515
Factories—								
Number of factories '000								(k)
Persons employed .. "	(e)	{ 14.5	18.0	21.7	27.0	45.8	58.5	59.4
Salaries and wages paid .. £m.		{ 312	379	337	725	978	1,121	1,210
Net value of production(f)—		{ 28	68	56	180	612	1,143	1,326
Chemicals, etc. .. "		{ 1.1	3.2	7.9	24.8	63.7	182.2	225.3
Industrial metals, etc. .. "		{ 12.0	23.6	22.8	119.9	413.1	885.8	1,087.0
Textiles, etc. .. "		{ n.a.	7.5	19.2	6.9	21.0	56.6	105.6
Clothing .. "		{ 11.1	23.6	23.6	81.1	126.2	140.7	140.7
Food, etc. .. "		{ 11.8	27.2	28.7	53.2	141.1	297.7	350.2
Paper, etc. .. "		{ 4.2	9.0	9.6	17.1	68.2	163.5	189.9
All Groups .. "	29.1	{ 47.5	112.5	111.0	316.5	1,024.9	2,197.3	2,635.4
Value of land and buildings .. "	{ n.a.	{ 32.5	67.3	106.6	156.3	360.2	1,404.8	1,603.7
Value of plant and machinery, .. "		{ 31.4	78.1	121.5	169.2	412.5	1,526.0	1,740.3
Net value of production(g)—								
Agriculture .. £m.	23.8	38.8	81.9	49.7	64.0	246.7	366.5	458.7
Pastoral .. "	27.2	52.7	75.1	43.0	85.4	400.5	481.3	670.3
Dairying .. "	7.6	16.1	35.3	22.6	34.3	103.8	136.5	161.6
Poultry .. "	2.0	4.0	9.0	5.7	6.5	31.5	24.9	30.7
Bee-farming .. "	0.1	0.1	0.1	0.1	0.4	0.8	1.6	2.6
Total, Rural .. "	60.7	111.7	201.4	121.1	190.6	783.3	1,010.8	1,323.9
Trapping .. "	n.a.	n.a.	n.a.	1.5	5.0	6.7	5.9	6.7
Forestry .. "		{ 4.8	9.1	3.9	10.2	37.9	47.6	51.3
Fishing and whaling .. "	{ 2.8	{ 1.1	1.4	1.4	1.8	5.7	14.3	15.8
Mining and quarrying .. "	22.0	23.3	20.0	13.5	33.4	97.2	137.3	162.8
Total, Non-rural .. "	24.8	29.2	30.5	20.3	50.4	147.5	205.1	236.6
Total, Primary .. "	85.5	140.9	231.9	141.4	241.0	930.8	1,215.9	1,560.5
Factories(f) .. "	29.1	47.5	112.5	111.0	316.5	1,024.9	2,197.3	2,635.4
Grand Total .. "	114.6	188.4	344.4	252.4	557.5	1,955.7	3,413.2	4,195.9
BUILDING—								
New houses and flats completed	'000							
.. £m.	{ n.a.	{ n.a.	{ n.a.	{ n.a.	{ (h) 15.4	80.1	86.3	112.5
					{ (h) 14.5	177.0	296.6	411.5
OVERSEA TRADE—								
Imports .. £m. f.o.b.	(a) 38	(a) 61	94	52	174	1,053	885	1,453
Exports .. " "	50	79	128	108	169	675	1,077	1,326
Principal exports(i)—								
Wool .. { mill. lb.(j) .. 529	734	946	903	938	1,036	1,460	1,453	
.. { £m. f.o.b. .. 15	26	48	32	58	323	373	403	
Wheat .. { '000 tons .. 543	1,477	2,677	3,413	598	1,685	5,442	5,624	
.. { £m. f.o.b. .. 2.8	9.6	28.6	19.2	4.6	55.3	142.4	148.6	
Flour .. { '000 short tons .. 97	176	360	611	414	789	579	572	
.. { £m. f.o.b. .. 0.6	1.4	5.5	3.8	4.2	33.0	17.4	18.7	
Butter .. { mill. lb. .. 35	102	127	202	130	25	175	202	
.. { £m. f.o.b. .. 1.4	4.6	8.0	10.3	8.1	4.6	23.5	31.1	
Hides and skins .. £m. f.o.b. .. 1.3	3.2	3.1	2.3	6.0	17.1	32.2	40.0	

(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) Less than 0.05. (e) Owing to variation in classification effective comparison is impossible. (f) For definition see pages 145-6. (g) Gross value from 1901 to 1921-22. Prior to 1922, figures are for years ended previous December. For definitions of gross and net value see p. 1235. (h) 1945-46, initial year of collection. (i) Australian produce except gold, which includes re-exports. (j) In terms of greasy. (k) Factory figures and net value of production are for 1963-64.

STATISTICAL SUMMARY: AUSTRALIA—continued

Note.—See headnotes on page 1279.

Item	Year ended 30th June—							
	1902	1912	1922	1932	1942	1952	1962	1965
OVERSEA TRADE—continued	(a)	(a)						
Principal exports(b)—continued								
Meats £m.f.o.b.	2.6	4.3	5.5	6.4	14.1	35.5	89.7	143.2
Fruit(c)	0.2	0.5	3.0	4.8	4.0	19.5	35.6	41.4
Sugar	(d)	(d)	(d)	2.5	2.6	6.9	33.9	56.3
Gold	14.3	12.0	3.5	11.9	9.2	7.0	9.0	9.2
Silver and lead(e)	2.3	3.2	2.7	2.9	7.4	32.1	23.5	42.2
Ores and concentrates(f)	(d)	3.7	0.8	0.2	1.3	17.0	20.2	31.2
Principal imports—								
Vegetable foodstuffs, etc.	3.6	3.7	4.0	2.6	6.1	25.0	28.1	33.1
Apparel, etc.	10.9	16.2	31.0	15.4	32.7	203.6	104.2	136.1
Oil, etc.	1.2	1.6	4.7	5.5	16.2	87.5	109.9	130.1
Metals, etc.	7.8	14.0	22.8	7.4	71.8	393.4	315.3	637.6
Rubber, etc.	0.5	1.4	1.7	0.8	3.2	34.0	17.8	30.0
Paper, etc.	1.6	2.6	4.4	4.4	4.3	68.8	57.9	78.3
TRANSPORT AND COMMUNICATION—								(h)
Shipping—	(a)	(a)						
Oversea vessels, } no.	4,028	4,174	3,111	3,057	2,544	4,136	7,210	7,477
entrances and } mill. tons	6.5	10.0	9.1	11.4	10.8	18.2	37.7	41.6
clearances								
Oversea cargo—								
Discharged mill. tons(g)		n.a.	2.4	3.0	5.5	14.4	20.3	24.7
Shipped (g)		n.a.	5.8	6.7	4.2	5.7	18.7	21.6
Interstate vessels, } no.	n.a.	9,605	9,782	7,957	9,100	7,524	10,127	10,162
entrances and } mill. tons		13.1	12.8	11.1	12.9	15.8	19.7	21.7
clearances								
Interstate cargo shipped } mill. tons(g)		n.a.	5.5	4.0	10.0	9.0	14.8	16.8
Government railways—	(f)	(f)						
Route-miles (j) '000	12.8	16.8	23.5	27.0	27.2	26.8	25.6	25.2
Passenger-journeys mill.	115	228	335	303	475	501	443	448
Goods and livestock carried } mill. tons	15.5	25.5	31.5	26.1	38.9	44.3	55.6	61.7
Train-miles run mill.	38.2	55.2	56.1	63.8	88.5	93.4	92.6	96.5
Tramways and omnibuses—								
Passenger-journeys—								
Trams and trolley-buses mill.	n.a.	360	569	589	874	663	265	239
Omnibuses(k)		n.a.	n.a.	n.a.	193	356	453	464
Motor vehicles on the register(j)								
Cars '000		n.a.	102	420	451	1,026	o 2,203	oq 2,710
Commercial vehicles				96	251	585	p 817	pq 865
Civil aviation (internal)—								
Plane-miles flown mill.				2.5	7.8	41.8	41.2	49.0
Passengers carried '000				57	152	1,829	2,666	3,257
Passenger-miles mill.				n.a.	76	722	1,119	1,408
Freight car- '000 short tons				0.1	1.2	57.5	57.2	63.2
ried mill. ton-miles				n.a.	0.9	26.7	26.1	30.5
Postal, etc.—	(a)	(a)						
Postal matter dealt with(l) } mill. articles	365	680	778	887	1,124	1,482	2,101	2,342
Telegrams and cablegrams mill.	9.9	13.3	16.8	13.9	26.1	29.8	21.6	23.4
Telephones—								
Instruments '000	29	103	259	485	739	1,301	2,382	2,670
Lines	25	85	196	364	531	928	1,718	1,919
Calls—trunk mill.	n.a.	n.a.	14.0	28.9	45.3	69.4	76.5	95.7
local	n.a.	n.a.	221	369	664	968	1,650	2,006
Broadcast listeners' licences(j)'000			(m) 36	369	1,320	1,961	2,220	2,302
Television viewers' licences(j)'000							1,424	1,882
PUBLIC FINANCE—								
Commonwealth—								
Consolidated Revenue Fund—	(f)	(f)						
Revenue £m.	11	21	64	72	210	1,017	1,642	2,209
Expenditure	4	15	64	72	210	1,017	1,642	2,209
Net loan fund expenditure(n)		1	5	4	213	55	91	84
Taxation collections	9	16	50	54	180	934	1,409	1,879

(a) Year ended previous December. (b) Australian produce except gold, which includes re-exports. (c) Excludes fruit juices. (d) Less than 0.05. (e) Includes concentrates. (f) Excludes lead and silver-lead ores and concentrates. See note (e). (g) Tons weight plus tons measurement. (h) 1963-64. (i) Year ended 30th June. (j) At end of period. (k) Government and municipal only. (l) Letters, post-cards, letter-cards, newspapers, packets, parcels and registered articles. (m) 1923-24. (n) Loan expenditure on works, services, etc. (o) Cars and station wagons. (p) Utilities, vans, trucks, etc. (q) 31st December, 1964. (r) Services in operation.

STATISTICAL SUMMARY: AUSTRALIA—continued

NOTE.—See headnotes on page 1279.

Item	Year ended 30th June—							
	1902	1912	1922	1932	1942	1952	1962	1965
PUBLIC FINANCE—continued								
State—								(a)
Consolidated Revenue Funds—								
Revenue £m.	28	41	85	100	152	388	805	915
Expenditure "	29	41	87	121	149	392	808	915
Net loan expenditure (b) "	9	16	34	6	8	198	198	219
Taxation collections "	3	5	18	33	57	63	177	225
Govt. securities on issue(c)—					(d)	(d)	(d)	(d)
Commonwealth £m.	..	6	354	319	670	1,919	1,560	1,567
State "	213	279	519	789	1,019	1,496	2,981	3,545
Total "	213	285	873	1,108	1,689	3,415	4,541	5,112
Overseas "	n.a.	194	412	522	656	556	712	764
In Australia "	n.a.	91	461	586	1,033	2,859	3,829	4,348
PRIVATE FINANCE—								
Commonwealth note issue (e) £m.	..	8	54	51	103	303	431	442
All cheque-paying banks—								
Advances(f) "	94	119	182	261	324	817	1,132	1,453
Deposits(g) "	93	150	289	319	483	1,353	1,941	2,329
Bank clearings(g) "	338	662	1,702	1,581	2,828	12,160	25,108	38,178
Savings bank deposits(c) "	31	59	154	198	274	892	1,735	2,443
Life insurance(g)(h)—								
Ordinary—								(i)
Policies '000	414	484	730	871	1,340	2,554	4,202	4,401
Sum assured £m.	108	109	181	285	463	1,212	4,372	5,501
Industrial—								
Policies '000	236	467	973	1,550	2,780	3,843	3,199	2,953
Sum assured £m.	5	10	30	67	127	254	353	388
Total—								
Policies '000	650	951	1,703	2,421	4,120	6,397	7,401	7,354
Sum assured £m.	113	119	211	352	590	1,466	4,725	5,889
SOCIAL STATISTICS—								
Commonwealth social services—								
Age and invalid pensions—								
Pensioners '000(c)	..	90	144	256	336	420	691	736
Amount paid £m.	..	2.2	5.4	11.1	19.3	59.8	180.2	213.3
Child endowment—								
Endowed children '000(c)	..	..	..	..	910	2,518	3,420	3,711
Endowment paid £m.	..	..	..	..	11.3	46.6	66.4	86.4
Total Commonwealth health and social services(j) £m.	..	2.2	6.1	11.5	30.9	137.6	365.2	445.2
War pensions '000(c)	..	..	225	274	220	525	671	660
.. .. £m.	..	..	7.0	7.4	7.5	31.8	67.6	76.9
Service pensions '000(c)	..	..	..	..	14	17	58	65
.. .. £m.	..	..	..	..	0.6	1.8	9.7	12.8
Education(g)—								
Government schools—								
Schools '000	7.0	8.0	9.4	10.1	9.5	7.6	7.9	8.0
Staff "	14.5	17.0	26.1	33.8	32.1	36.7	60.0	67.5
Students "	638	639	819	937	887	1,013	1,664	1,801
Non-government schools—								
Schools '000	2.5	1.9	1.7	1.8	1.9	1.9	2.1	2.2
Staff "	8.3	7.8	8.8	10.0	11.4	13.3	18.1	20.1
Students "	149	161	199	221	257	326	525	565
Universities—								
Number "	4	5	6	6	8	10	10	10
Staff(k) "	n.a.	249	482	703	1,416	3,132	3,901	4,723
Students '000	1.8	3.4	8.0	9.8	13.9	31.7	57.7	76.2
Public hospitals—								
Number (g)	285	355	404	513	566	675	739	746
Staff—medical '000	n.a.	1.1	1.5	3.2	3.9	6.9	10.5	11.0
nursing "	n.a.	5.1	6.8	9.3	15.4	24.6	39.1	40.2
In-patients, cases treated (l)	91	134	215	371	595	896	1,278	1,309
POLICE AND PRISONS(g)—								(n)
Police '000	5.8	6.4	6.9	8.6	9.7	12.3	15.9	17.2
Prisons "	n.a.	104	91	85	70	69	75	74
Prisoners '000	4.3	3.1	2.9	4.2	3.2	4.8	7.2	7.5

(a) 1963-64. (b) Loan expenditure on works, services, etc. (c) At 30th June.
 (d) Expressed in Australian currency equivalents at ruling rates of exchange. (e) At end of June.
 (f) Figures are for the June quarter. (g) Year ended previous December. (h) Existing business in Australia. (i) 1963. (j) Excludes war and service pensions. (k) Teaching and research staff. Includes part-time until 1952, thereafter full-time only. (l) South Australia includes Adelaide Hospital only. (m) Year ended 30th June, 1963. (n) Year ended previous 30th June.

APPENDIX

NOTE.—Some recent information which has come to hand since the various chapters were sent to press is given in summarized form in the following pages. For further or more detailed information, and for the latest available statistics, reference should be made to other publications issued by this Bureau, e.g., the *Monthly Review of Business Statistics*, the *Quarterly Summary of Australian Statistics*, the *Digest of Current Economic Statistics* and the various mimeographed statements issued on particular subjects.

CHAPTER II. PHYSIOGRAPHY

§ 2. Climate and Meteorology of Australia

Rainfall: Australian Capital Cities, p. 31.—Rainfall recorded in Australian capital cities during 1964 was as follows:—Perth, 38.40 ins.; Darwin, 67.06 ins.; Adelaide, 21.89 ins.; Brisbane, 48.18 ins.; Sydney, 43.30 ins.; Canberra, 28.69 ins.; Melbourne, 27.80 ins.; Hobart, 28.06 ins.

CHAPTER III. GENERAL GOVERNMENT

§ 3. Administration and Legislation

Commonwealth Elections, p. 72.—The results of the Senate Elections held on 5th December, 1964, were as follows.

SENATE ELECTIONS: 5th DECEMBER, 1964

State	Electors enrolled			Electors who voted			Percentage of electors who voted		
	Males	Females	Total	Males	Females	Total	Males	Females	Total
N.S.W. . .	1,084,196	1,141,270	2,225,466	1,016,238	1,069,746	2,085,984	93.73	93.73	93.73
Vic. . .	808,392	842,087	1,650,479	767,093	797,345	1,564,438	94.89	94.69	94.79
Qld. . .	423,064	429,677	852,741	401,326	407,964	809,290	94.86	94.95	94.90
S.A. . .	271,047	280,294	551,341	260,309	268,155	528,464	96.04	95.67	95.85
W.A. . .	203,349	205,200	408,549	190,554	193,328	383,882	93.71	94.21	93.96
Tas. . .	95,339	97,037	192,376	91,489	93,433	184,922	95.96	96.29	96.13
Total . .	2,885,387	2,995,565	5,880,952	2,727,009	2,829,971	5,556,980	94.51	94.47	94.49

The state of the parties at 1st July, 1965, was:—Liberal—Country Parties, 30; Australian Labor Party, 27; Australian Democratic Labour Party, 2; Independent, 1.

Governors-General, p. 74.—*Add* Rt. Hon. RICHARD GARDINER, BARON CASEY, P.C., G.C.M.G., C.H., D.S.O., M.C., K.St.J. From 22nd September, 1965.

Administrators, p. 75.—*Add* Colonel Sir Henry Abel Smith, K.C.M.G., K.C.V.O., D.S.O., from 7th May, 1965, to 21st September, 1965.

Commonwealth Ministries, p. 76.—Consequent on the death of Senator Wade, Minister for Health, the Hon. R. W. C. Swartz, M.B.E., E.D., M.P. was appointed as Minister for Health, and Senator the Hon. G. C. McKellar was appointed as Minister for Repatriation. When the Hon. H. S. Robertson was appointed as Ambassador to Ireland, the Hon. I. M. Sinclair, M.P., became Minister for Social Services. On 13th August, 1965, the Hon. C. E. Barnes, M.P., Minister for Territories was added to the Ministers in the Cabinet.

State Ministers, pp. 77-9.

(i) *New South Wales.* As from 13th May, 1965, following the resignation of the Hon. J. B. Renshaw, M.L.A., after his party was defeated at the elections, the Hon. R. W. Askin, M.L.A. became Premier. The new ministry was as follows.

Premier and Treasurer—

THE HON. R. W. ASKIN, M.L.A.

Deputy Premier, Minister for Education, and Minister for Science—

THE HON. C. B. CUTLER, E.D., M.L.A.

Minister for Labour and Industry, Chief Secretary, and Minister for Tourist Activities—

THE HON. E. A. WILLIS, M.L.A.

Minister for Child Welfare, Minister for Social Welfare, Advisory Minister for Transport, and Vice-President of the Executive Council—

THE HON. A. D. BRIDGES, M.L.C.

Minister for Agriculture—

THE HON. W. A. CHAFFEY, M.L.A.

Attorney-General—

THE HON. K. M. MCCAW, M.L.A.

Minister for Local Government and Minister for Highways—

THE HON. P. H. MORTON, M.L.A.

Minister for Public Works—

THE HON. D. HUGHES, M.L.A.

Minister for Transport—

THE HON. M. A. MORRIS, M.L.A.

Minister for Decentralisation and Development—

THE HON. J. B. M. FULLER, M.L.C.

Minister for Lands and Minister for Mines—

THE HON. T. L. LEWIS, M.L.A.

Minister for Conservation—

THE HON. J. G. BEALE, M.L.A.

Minister for Housing and Minister for Co-operative Societies—

THE HON. S. T. STEPHENS, M.L.A.

Minister of Justice—

THE HON. J. C. MADDISON, M.L.A.

Minister for Health—

THE HON. A. H. JAGO, M.L.A.

Assistant Minister for Education—

THE HON. W. C. FIFE, M.L.A.

Leader of the Opposition. The Hon. J. B. Renshaw, M.L.A. is the new Leader of the Opposition.

(ii) *Victoria.* The Commissioner of Public Works and the Commissioner of Crown Lands and Survey are now called, respectively, Minister of Public Works and Minister of Lands, and the offices of President and Vice-President of the Board of Works have been dropped from various portfolios.

(iii) *Queensland.* The Nicklin Ministry was reconstituted on 11th March, 1965, as follows.

Premier and Minister for State Development, and Vice-President of the Executive Council—

THE HON. G. F. R. NICKLIN, M.M., M.L.A.

Treasurer—

THE HON. T. R. HILEY, M.L.A.

Minister for Education—

THE HON. J. C. A. PIZZEY, M.L.A.

Minister for Transport—

THE HON. G. W. W. CHALK, M.L.A.

Minister for Lands—

THE HON. A. R. FLETCHER, M.L.A.

Minister for Local Government and Conservation—

THE HON. H. RICHTER, M.L.A.

Minister for Industrial Development—

THE HON. A. T. DEWAR, M.L.A.

Minister for Primary Industries—

THE HON. J. A. ROW, M.L.A.

Minister for Works and Housing—

THE HON. J. BJELKE-PETERSEN, M.L.A.

(iv) *South Australia.* The Playford Government, which had held office for a record term for an Australian Ministry, was defeated at the 1965 elections and the new ministry was as follows from 27th May, 1965.

Premier, Treasurer, Minister of Immigration, and Minister of Housing—

THE HON. F. H. WALSH, M.P.

Chief Secretary and Minister of Health—

THE HON. A. J. SHARD, M.L.C.

Minister of Works and Minister of Marine—

THE HON. C. D. HUTCHENS, M.P.

Attorney-General, Minister of Aboriginal Affairs and Minister of Social Welfare—

THE HON. D. A. DUNSTAN, M.P.

Leader of the Opposition. The Hon. Sir Thomas Playford, G.C.M.G., M.P., is the new Leader of the Opposition.

(v) *Western Australia.* The Brand Ministry was reconstituted as follows on 17th August, 1965.

Premier, Treasurer, and Minister for Tourists—

THE HON. D. BRAND, M.L.A.

Deputy Premier, and Minister for Agriculture and Electricity—

THE HON. C. D. NALDER, M.L.A.

Minister for Industrial Development, Railways, and the North-West—

THE HON. C. W. M. COURT, O.B.E., M.L.A.

Minister for Education and Native Welfare—

THE HON. E. H. M. LEWIS, M.L.A.

Minister for Mines and Justice—

THE HON. A. F. GRIFFITH, M.L.C.

Minister for Lands, Forests, and Immigration—

THE HON. W. S. BOVELL, M.L.A.

Minister for Justice and Attorney-General—

THE HON. P. R. DELAMOTHE, O.B.E., M.L.A.

Minister for Health—

THE HON. S. D. TOOTH, M.L.A.

Minister for Labour and Industry—

THE HON. J. D. HERBERT, M.L.A.

Minister for Mines and Main Roads—

THE HON. R. E. CANN, M.L.A.

Minister of Education—

THE HON. R. R. LOVEDAY, M.P.

Minister of Local Government, Minister of Roads, and Minister of Mines—

THE HON. S. C. BEVAN, M.L.C.

Minister of Labour and Industry, and Minister of Transport—

THE HON. A. F. KNEEBONE, M.L.C.

Minister of Lands, Minister of Repatriation, Minister of Irrigation, Minister of Agriculture, and Minister of Forests—

THE HON. G. A. BYWATERS, M.L.A.

Minister for Works and Water Supplies—

THE HON. R. HUTCHINSON, D.F.C., M.L.A.

Minister for Local Government, Town Planning and Child Welfare—

THE HON. L. A. LOGAN, M.L.C.

Chief Secretary, and Minister for Police and Traffic—

THE HON. J. F. CRAIG, M.L.A.

Minister for Housing and Labour—

THE HON. D. H. O'NEIL, M.L.A.

Minister for Transport—

THE HON. R. J. O'CONNOR, M.L.A.

Minister for Health, and Fisheries and Fauna—

THE HON. G. C. MACKINNON, M.L.C.

CHAPTER VI. MANUFACTURING INDUSTRY

§ 1. General

Factory Development, p. 148.—The following table gives a summary of operations in manufacturing industries during 1962-63 (revised figures) and 1963-64.

FACTORIES: SUMMARY

Particulars		N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
1962-63								
Factories..	No.	23,729	17,500	5,895	5,766	4,492	1,764	59,146
Persons employed(a)	..	475,249	397,827	104,998	105,265	53,435	30,755	1,167,529
Salaries and wages paid(b)	£'000	513,608	419,400	97,916	110,033	49,940	32,419	1,223,316
Value of power, fuel, light, etc., used	..	98,755	51,775	17,599	16,036	10,860	7,218	202,243
.. materials used(c)	..	1,314,824	1,000,666	356,864	251,430	139,878	78,038	3,141,700
.. production(d)	..	1,037,443	800,871	190,483	189,571	108,211	71,016	2,397,595
.. output(e)	..	2,451,022	1,853,312	564,946	457,037	258,949	156,272	5,741,538
.. land and buildings	..	689,767	476,868	96,742	106,482	51,428	81,959	1,503,246
.. plant and machinery	..	719,191	501,660	140,292	146,804	66,318	68,966	1,643,231
1963-64								
Factories..	No.	23,642	17,597	5,955	5,826	4,609	1,746	59,375
Persons employed(a)	..	487,753	413,120	110,696	110,813	55,705	31,833	1,209,920
Salaries and wages paid(b)	£'000	550,510	456,212	109,381	120,158	54,258	35,291	1,325,810
Value of power, fuel, light, etc., used	..	105,079	57,324	18,731	17,386	11,874	8,182	218,576
.. materials used(c)	..	1,429,811	1,094,169	406,462	299,829	150,399	86,065	3,466,735
.. production(d)	..	1,133,958	875,239	220,937	213,678	115,256	76,285	2,635,353
.. output(e)	..	2,668,848	2,026,732	646,130	530,893	277,529	170,532	6,320,664
.. land and buildings	..	728,595	510,397	105,760	115,314	59,406	84,201	1,603,673
.. plant and machinery	..	752,098	520,362	154,153	165,140	77,757	70,826	1,740,336

(a) Average over whole year; includes working proprietors. (b) Excludes amounts drawn by working proprietors. (c) Includes also value of containers, packing, etc., replacements of tools and repairs to plant. (d) Value added in process of manufacture (i.e., value of output less value of materials and fuel used). (e) Value at the factory of goods produced.

§ 8. Value of Production, etc.

Value of Production, p. 171.—The values of production (£'000) in Australia for the various classes of industry in 1963-64 (with revised figures for 1962-63 in parentheses) were as follows:—

I., 74,423 (64,953); II., 56,865 (50,050); III., 225,322 (205,688); IV., 1,086,995 (977,352); V., 9,376 (8,623); VI., 125,680 (116,892); VII., 20,484 (20,130); VIII., 140,708 (133,168); IX., 350,245 (318,458); X., 103,139 (95,178); XI., 37,956 (34,994); XII., 189,869 (175,457); XIII., 42,852 (39,162); XIV., 2,450 (2,181); XV., 55,334 (49,883); XVI., 113,654 (105,426); Total, all classes, 2,635,353 (2,397,595).

§ 10. Principal Factory Products, pp. 177-81

The following table provides an abbreviated list of commodities and the quantities produced in factories in Australia during 1963-64 and 1964-65 (preliminary figures). Figures for 1963-64 include revisions of figures shown earlier in this Year Book.

DESIGNS FOR AUSTRALIAN DECIMAL COINS



OBVERSE DESIGN FOR ALL COINS
(Mr. Arnold Machin, R.A. of London
designed the Queen's effigy)

REVERSE DESIGNS. (Designer Mr. Stuart Devlin of Melbourne,
who also prepared the lettering on the obverse inscription)

<i>Notes on designs and characteristics of new coins</i>	<i>Composition</i>	<i>Diameter (inches)</i>	<i>Weight (grains)</i>
Fifty-cents	80% Silver 20% Copper	1.240	205
Twenty-cents	Cupro-nickel (75% copper and 25% nickel)	1.122	174.6
Ten-cents		0.929	87.3
Five-cents		0.764	43.6
Two-cents	97% copper 3% zinc and tin	0.850	80
One-cent		0.690	40

Reverse design

The Australian Coat-of-Arms, which is supported by the kangaroo and the emu. The kangaroo is Australia's biggest marsupial, and one or other of the species are found in every part of the Continent; the doe, which can be four or five feet tall, gives birth to a "joey" which is only an inch or so long, and which completes its development in its mother's pouch. The emu is the second largest bird in the world—only the ostrich is bigger: before pushed back by settlement, the emu ranged all over Australia; the male bird incubates the eggs and takes care of the chickens when they hatch.

The platypus is one of the only two egg-laying mammals (the other is the echidna) and is found in the rivers and creeks of the Eastern side of the Continent; it is about the same size as the echidna and has webbed feet and rich short fur: it swims with the skill and dash of a seal.

The lyrebird on the 10-cent is the male of the species as it appears when dancing and singing, with its magnificent tail expanded and thrown forward over its head: it is a famous mimic: it is about the size of a pheasant, and inhabits dense damp forests from Southern Queensland to Victoria.

The echidna or spiny ant-eater is Australia's other egg-layer which suckles its young; like the hedgehog, it depends on its spines for protection and rolls up into a tight ball when frightened; it is about 18 inches long and thrives in every part of Australia. A related species is found in New Guinea.

The frilled lizard is found only in the tropical north of Australia: it grows to about three feet in length—most of it tail: it is harmless but when cornered it presents a gaping hissing mouth in the middle of its brightly-coloured neck frill.

The feather-tail glider is the smallest of our gliding marsupials and glides by means of membranes along its sides: it is strictly nocturnal and is quite common in the forests of Eastern Australia: one of its bush nicknames—the "flying mouse"—gives an idea of its size.

The twenty-cent, ten-cent and five-cent coins will have the same weight and almost exactly the same diameter as the present florin, shilling and sixpence. The fifty-cent coin will be slightly larger than a penny (which has a diameter of 1.215 inches and a weight of 145.8 grains). The two-cent coin will have a diameter midway between those of the shilling (ten-cents) and sixpence (five-cents) and the one-cent coin a diameter between those of the sixpence and the threepence (which has a diameter of 0.635 inches and a weight of 21.8 grains).

(NOTE: The photograph above depicting the obverse design is an enlargement to 50-cent size of a photograph of an actual one-cent coin. The photographs of the reverse designs are at actual coin size and were taken from plaster models prepared by the designer.)

**QUANTITY OF PRINCIPAL ARTICLES PRODUCED IN FACTORIES:
AUSTRALIA**

Article	1963-64	1964-65 p	Article	1963-64	1964-65 p
Acid, sulphuric .. '000 tons	1,447	1,613	Meat, canned(g) .. mill. lb.	99.9	115.3
Beer mill. gals.	262	(a) 283	Motor bodies (excl. caravans, trailers, etc.) '000	367	346
Biscuits mill. lb.	198	208	Motor chassis (all types) '000	401	413
Blankets thousands	2,176	2,084	Motors, electric .. thousands	2,223	2,563
Bricks, clay millions	1,238	1,345	Paints, ready mixed, and enamels .. '000 gals.	15,491	16,144
Cement, portland .. '000 tons	3,320	3,741	Paper, newsprint .. '000 tons	92.0	93.1
Cloth, woven, woollen (b) mill. sq. yds.	23.7	24.7	Preserves—		
Confectionery—			Fruit mill. lb.	471	549
Chocolate mill. lb.	92.7	95.3	Vegetables " "	144	150
Other " "	100.5	105.9	Refrigerators, domestic thousands	203	227
Electricity mill. kWh	32,519	35,390	Soap '000 cwt.	1,229	1,175
Engines, internal combustion(c) number	289,931	289,312	Socks and stockings—		
Fibrous plaster sheets '000 sq. yds.	15,841	14,330	Men's and youths' '000 doz. prs.	1,628	1,701
Flour, wheaten(d) .. '000 tons (2,000 lb.)	1,672	1,550	Women's " " "	3,991	4,463
Footwear—			Children's and infants' " " "	937	1,022
Boots, shoes and sandals '000 prs.	28,241	27,898	Stoves, cooking—		(h)
Slippers " "	11,381	11,775	Electric thousands	177	181
Gas(e) mill. cub. ft.	53,209	53,023	Gas " "	103	84.5
Ice-cream '000 gals.	22,591	24,658	Solid fuel " "	28.1	23.6
Iron and steel(f)—			Sugar, refined(i) .. '000 tons	576	589
Pig iron '000 tons	3,772	4,033	Sulphate of ammonia "	85.5	109.3
Steel ingots " "	4,764	5,121	Superphosphate " "	3,347	3,703
Jams mill. lb.	90.5	89.8	Tiles, roofing—		
Lacquers '000 gals.	1,525	1,525	Cement millions	76.5	86.6
Malt, barley and wheaten '000 bus.	12,127	11,997	Terracotta " "	53.8	53.5
Margarine—			Timber, sawn Australian-grown million sup. ft.	1,488	1,509
Table '000 lb.	35,431	50,518	(j) "		
Other " "	73,046	69,058	Tobacco, cigars and cigarettes mill. lb.	56.1	58.8
			Wool, scoured " "	161	157
			Wool tops " "	51.1	46.5
			Yarn, woollen and worsted " "	52.2	54.4

(a) Includes waste beer. (b) Includes mixture cloths predominantly wool. (c) Excludes motor car, motor cycle, truck, tractor, aeroplane and marine engines but includes diesel and semi-diesel. (d) Includes wheatmeal for baking. (e) Made in gas-works only. (f) Year ended 31st May. (g) Excludes canned rabbit and poultry. (h) Domestic, excludes stoves, cookers, etc. (i) Year ended 31st March. (j) Includes sawn sleepers.

CHAPTER XI. HOUSING AND BUILDING

§ 2. Building

New Houses, p. 359-62.—The number of new houses approved, commenced, completed and under construction in each State and Territory during 1964-65 was as follows.

NEW HOUSES: NUMBER, 1964-65
(INCLUDING OWNER-BUILT HOUSES)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	28,925	22,508	11,729	9,808	7,570	2,669	774	2,043	86,026
Commenced ..	26,624	21,767	11,657	11,220	7,467	2,546	605	1,910	83,796
Completed ..	26,764	22,821	11,546	11,050	7,445	2,579	473	1,806	84,484
Under construction at 30th June, 1965 ..	12,851	11,858	3,027	5,809	2,945	1,600	491	1,055	39,636

Of the 84,484 new houses completed during 1964-65, 52,285 had outer walls of brick, brick veneer, concrete or stone, 14,480 of wood (weatherboard, etc.), 17,171 of fibro-cement and 548 of other materials.

New Flats, p. 362-4.—The following table shows the number of new flats approved, commenced, completed and under construction in each State and Territory during 1964-65.

NEW FLATS: NUMBER, 1964-65
(INDIVIDUAL LIVING UNITS)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	17,989	10,400	3,144	2,526	1,795	252	165	494	36,765
Commenced ..	15,583	10,054	2,428	2,158	1,730	251	148	561	32,913
Completed ..	13,126	8,674	2,079	1,820	1,841	153	137	337	28,167
Under construction at 30th June, 1965 ..	9,706	6,331	1,041	1,063	950	188	132	488	19,899

Value of New Buildings, p. 365-7.—The values of all new buildings approved, commenced, completed and under construction in each State and Territory are shown in the following table for the year 1964-65.

NEW BUILDINGS: VALUE, 1964-65
(INCLUDING ESTIMATED VALUE OF OWNER-BUILT HOUSES)
(£'000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Approved ..	265,672	218,757	101,946	83,005	65,979	21,380	8,829	24,110	789,678
Commenced ..	297,689	209,932	100,852	84,494	61,028	21,020	6,570	27,112	808,697
Completed ..	265,772	201,140	89,235	77,250	53,550	18,872	5,892	21,493	733,204
Under construction at 30th June, 1965 ..	243,092	163,655	56,611	65,445	44,218	16,753	5,627	33,343	628,744

The value of new buildings completed in Australia during 1964-65, according to type of building, was as follows:—*Houses*—Brick, brick veneer, concrete and stone, £230,764,000; wood (weatherboard, etc.), £50,474,000; fibro-cement, £49,737,000; other £1,886,000; total, £332,861,000; *Flats*—£78,635,000; *Other Buildings*—Hotels, hostels, etc., £14,537,000;

shops, £23,183,000; factories, £76,319,000; offices, £58,413,000; other business premises, £34,055,000; educational, £47,668,000; religious, £8,286,000; health, £21,870,000; entertainment and recreation, £15,641,000; miscellaneous, £21,736,000; total other buildings, £321,708,000; grand total, new buildings, £733,204,000.

Persons Working on Jobs Carried out by Builders of New Buildings, p. 367-8.—The number of persons working on jobs *carried out by builders of new buildings* in Australia at 30th June, 1965, was as follows:—Carpenters, 54,592; bricklayers, 18,131; painters, 13,769; electricians, 9,055; plumbers, 14,038; builders' labourers, 23,261; other, 24,989; Total, 157,835. Of this total, contractors actually working on jobs numbered 11,812, sub-contractors actually working on jobs, 29,594, and wage earners, 116,429.

CHAPTER XII. EMPLOYMENT AND UNEMPLOYMENT

WAGE AND SALARY EARNERS IN EMPLOYMENT

Civilian Employees, pp. 407-8.—The following table shows particulars of the estimated numbers of wage and salary earners (excluding employees in rural industry, private domestic service and defence forces) in each State and Territory at June, 1965, with revised figures for June and December, 1964. Figures are shown in thousands correct to one decimal place. Any discrepancies between totals and sums of components are due to rounding.

WAGE AND SALARY EARNERS IN CIVILIAN EMPLOYMENT

(EXCLUDING EMPLOYEES IN RURAL INDUSTRY AND PRIVATE DOMESTIC SERVICE, AND DEFENCE FORCES)

('000)

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T. (a)	Aus- tralia
JUNE, 1964									
Males ..	947.9	702.8	316.8	229.1	164.3	77.5	8.9	21.9	2,469.2
Females ..	390.7	300.6	115.5	86.0	58.5	27.0	3.0	10.0	991.3
Persons ..	1,338.6	1,003.3	432.3	315.2	222.9	104.5	11.9	31.9	3,460.6
DECEMBER, 1964									
Males ..	964.2	716.7	316.1	233.9	168.1	78.0	8.9	23.2	2,509.2
Females ..	405.1	308.8	119.1	90.1	59.5	27.6	3.0	10.7	1,023.9
Persons ..	1,369.3	1,025.5	435.2	324.0	227.7	105.7	11.9	33.9	3,533.1
JUNE, 1965									
Males ..	974.8	722.9	329.8	239.7	171.5	78.5	9.6	24.2	2,551.0
Females ..	411.9	315.5	122.9	93.2	62.9	27.8	3.2	11.5	1,048.9
Persons ..	1,386.7	1,038.4	452.7	332.9	234.4	106.3	12.8	35.7	3,599.9

(a) Includes persons employed in the Australian Capital Territory who reside in adjoining areas.

CHAPTER XIII. LABOUR, WAGES AND PRICES

RETAIL PRICES AND PRICE INDEXES

§ 4. Tabular Statements of Retail Price Index Numbers

Consumer Price Index, p. 414-6.—The following table shows Consumer Price Index numbers for March, June, and September quarters, 1965, for the six State capital cities separately and combined and for Canberra, for each Group and all Groups combined.

CONSUMER PRICE INDEX NUMBERS^(a)

(Base of each Index: Year 1952-53 = 100.0)

Period	State Capital Cities—separately and combined							Canberra
	Weighted Average of Six State Capital Cities	Sydney	Melbourne	Brisbane	Adelaide	Perth	Hobart	
FOOD								
March quarter, 1965 ..	133.1	129.8	133.8	142.7	136.8	130.1	135.0	129.4
June quarter, 1965 ..	135.9	132.7	136.7	145.0	139.4	133.3	137.2	132.4
September quarter, 1965..	139.3	136.7	139.9	149.7	141.0	134.4	140.9	135.9
CLOTHING AND DRAPERY								
March quarter, 1965 ..	115.8	114.4	116.9	119.7	114.6	114.3	116.9	113.3
June quarter, 1965 ..	116.3	114.9	117.5	120.1	115.0	114.7	117.3	113.8
September quarter, 1965..	116.3	114.9	117.5	120.2	115.0	114.7	117.2	113.8
HOUSING								
March quarter, 1965 ..	165.3	166.8	169.4	149.5	165.4	160.4	182.4	164.7
June quarter, 1965 ..	167.2	168.3	172.4	150.4	166.5	161.5	183.5	165.0
September quarter, 1965..	168.6	168.7	173.3	157.1	167.2	162.9	184.5	165.4
HOUSEHOLD SUPPLIES AND EQUIPMENT								
March quarter, 1965 ..	112.5	110.7	117.0	112.7	104.9	106.6	124.3	113.2
June quarter, 1965 ..	112.9	110.8	117.7	113.1	105.2	106.9	124.9	113.0
September quarter, 1965..	113.4	111.2	118.2	114.2	105.6	107.9	125.6	113.3
MISCELLANEOUS								
March quarter, 1965 ..	137.3	135.9	140.1	141.7	130.2	136.0	133.9	130.4
June quarter, 1965 ..	137.3	135.8	140.1	142.4	130.2	136.2	134.7	130.5
September quarter, 1965..	137.8	136.3	140.5	143.1	130.7	136.4	136.2	130.4
ALL GROUPS								
March quarter, 1965 ..	130.9	129.1	132.9	134.6	128.9	128.0	134.0	128.4
June quarter, 1965 ..	132.1	130.3	134.4	135.7	129.9	129.3	135.2	129.5
September quarter, 1965..	133.5	131.8	135.6	138.3	130.7	130.0	137.0	130.8

(a) The index numbers measure price movements in each State Capital City and Canberra individually and for the weighted average of the six State capitals. They do not measure differences in price levels as between cities.

WHOLESALE PRICES AND PRICE INDEXES

§ 2. Wholesale Price (Basic Materials and Foodstuffs) Index

Index Numbers, p. 420.—Index numbers for each group of commodities and for All Groups for the index of wholesale prices of basic materials and foodstuffs are shown below for the year 1964-65 and for the months March to August, 1965.

WHOLESALE PRICE (BASIC MATERIALS AND FOODSTUFFS) INDEX NUMBERS

(Base of each Index: Average of 3 years ended June, 1939 = 100)

Period	Basic Materials						Food-stuffs and Tobacco (a)	Basic Materials and Foodstuffs			
	Metals and Coal	Oils, Fats and Waxes	Textiles	Chemicals	Rubber and Hides	Building Materials		Total	Goods principally imported (b)	Goods principally home produced (a)	Total All Groups (a)
1964-65	391	207	427	286	242	503	345	364	277	388	355
1965—											
March	396	208	398	288	237	505	346	358	275	385	352
April	398	208	398	288	244	505	347	365	276	390	357
May ..	398	207	403	288	248	505	347	369	276	393	359
June ..	396	207	403	288	250	505	346	375	275	398	362
July ..	p394	208	p407	288	256	508	p347	p384	p274	p406	p376
Aug. . .	p390	208	p406	288	271	508	p346	p400	p275	p418	p376

(a) Excludes potatoes and onions. (b) Represents only such imported commodities as are included in the Wholesale Price Index and does not measure changes in the prices of all imports.

EXPORT PRICES AND PRICE INDEXES

§ 2. The Current Export Price Index

Index Numbers, p. 424.—Index numbers for each of the groups and "All Groups" for the year 1964-65 and for the months March to August, 1965, are shown in the table below.

EXPORT PRICE INDEX NUMBERS

(Base of each Index: Year 1959-60 = 100)

Period	Wool	Meats	Dairy Produce	Cereals	Dried and Canned Fruits	Sugar	Hides and Tallow	Metals and Coal	Gold	All Groups
1964-65..	102	p110	94	107	p100	p96	91	p123	101	p105
1965—										
March	94	p110	95	104	100	p77	94	129	101	p100
April ..	94	p111	96	104	100	p75	98	127	101	p100
May ..	96	p112	93	104	100	p84	100	122	101	p101
June ..	96	p110	91	104	p100	p84	99	p117	101	p100
July ..	p98	p114	90	104	p102	p98	100	p117	101	p102
Aug. . .	p98	p115	89	104	p102	p96	102	p117	101	p102

WAGES

§ 2. Rates of Wage and Hours of Work

Weekly Wage Rates, pp. 430 and 433.—The following table shows for each State and Australia the weighted average minimum weekly rates of wage payable, and the index numbers based thereon, for adult males and for adult females, at 31st March and 30th June, 1965.

WEEKLY WAGE RATES: ADULT MALES AND FEMALES

WEIGHTED AVERAGE MINIMUM WEEKLY RATES PAYABLE FOR A FULL WEEK'S WORK
(EXCLUDING OVERTIME) AND INDEX NUMBERS OF WAGE RATES

Date	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	Aust.
------	--------	------	--------	----------	----------	------	-------

ADULT MALES—RATES OF WAGE

	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
31st March, 1965 ..	402	8	395	7	406	0	387	4	388	11
30th June, 1965 ..	404	0	396	2	408	6	387	11	392	10
	397	3	398	8	400	0				

ADULT MALES—INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

31st March, 1965 ..	142.6	140.1	143.8	137.1	137.7	140.7	141.2
30th June, 1965 ..	143.0	140.3	144.6	137.4	139.1	140.8	141.6

ADULT FEMALES—RATES OF WAGE

	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>	<i>s.</i>	<i>d.</i>
31st March, 1965 ..	292	7	276	9	283	10	272	11	277	0
30th June, 1965 ..	293	6	278	3	285	1	273	10	279	11
	271	9	283	8	285	0				

ADULT FEMALES—INDEX NUMBERS

(Base: Weighted Average Weekly Wage Rate for Australia, 1954 = 100)

31st March, 1965 ..	147.0	139.0	142.6	137.1	139.1	136.5	142.5
30th June, 1965 ..	147.4	139.8	143.2	137.6	140.6	137.2	143.1

§ 3. Average Weekly Earnings

Average Weekly Earnings, p. 438.—Particulars of average weekly earnings per employed male unit for the year 1964-65 were: New South Wales, £28.28; Victoria, £28.15; Queensland £25.21; South Australia, £25.86; Western Australia, £24.62; Tasmania, £25.42; Australia, £27.28.

Index Numbers, p. 438.—Index numbers for "All industries" and for "Manufacturing" for 1964-65 were as follows.

INDEXES OF AVERAGE WEEKLY EARNINGS: AUSTRALIA

SEASONALLY ADJUSTED

(Base of each series: 1953-54 = 100)

Year	All industries	Manufacturing	Quarter	All industries	Manufacturing
1964-65	167.1	166.7	1964-65—		
			September	r163.3	r165.0
			December	r165.1	163.7
			March	169.4	168.0
			June	170.4	170.1

§ 5. Basic Wages in Australia

National Wage Cases of 1965, p. 458.—Hearing in these cases commenced on 2nd March, 1965, before Kirby C.J., Gallagher, Moore, Sweeney and Nimmo J.J., of the Commonwealth Conciliation and Arbitration Commission. Claims by the employers and the trade unions were heard concurrently.

The employers' claim (Part A) was for the abolition of the concepts of the basic wage and margins, and the introduction into the Metal Trades Award of an obligation to pay a total wage made up of the sum of the amounts expressed in terms of the basic wage and a margin, plus an amount equivalent to one per cent. of such sum. The employers also asked (Part B) that, in respect of the ensuing twelve months, the level of the basic wage and the level of margins, in so far as the latter is determined upon general economic grounds, should be decided simultaneously. It was open to the Commission under Part B of these claims to decide whether there should be an increase in (a) the basic wage element alone; (b) the marginal element alone; or (c) both the basic wage and marginal elements, to whatever extent, in respect of each element, the Commission deemed proper.

The trade unions sought new basic wage rates incorporating increases proportionate to the rises in the Consumer Price Index. For the Six Capital Cities basic wage the increase claimed was 12s. a week for adult males.

The Commission announced its decision on 29th June, 1965, when three separate judgments were handed down—a joint judgment by Gallagher, Sweeney and Nimmo J.J. and separate judgments by Kirby C.J. and by Moore J. In accordance with the opinion of the majority (namely, that of Gallagher, Sweeney and Nimmo J.J.), the order of the Commission was to the effect:

- (a) Part A of the employers' application was refused;
- (b) With regard to Part B of the employers' application—
 - (i) there would be no alteration in the basic wage,
 - (ii) with effect from the first pay period commencing on or after 1st July, 1965, each margin in Clause 4 of the Metal Trades Award was increased by an amount equal to $1\frac{1}{4}$ per cent. of the sum of the Six Capital Cities basic wage and that margin;
- (c) the application of the unions for an increase in the basic wage was refused.

The majority judgment anticipated that, subject to the question of capacity of a particular industry and the question of those margins which had already been increased on general economic grounds (since 1963), the increases awarded would be speedily reflected throughout the awards of the Commission.

A summary of the proceedings and of the reasons for the judgments will be contained in the next issue of the Year Book.

State Basic Wages, p. 466.—The following table shows State basic wages operative in September, 1965.

STATE BASIC WAGES: WEEKLY RATES

State and locality	September, 1965		
	Date of operation(a)	Males	Females
		s. d.	s. d.
New South Wales	19.6.64	315 0	236 0
Victoria(b)	June, 1964(c)	307 0	230 0
Queensland—			
Southern Division—			
Eastern District, including Brisbane ..	20.9.65	314 0	235 6
Western District	20.9.65	324 6	243 6
Mackay Division	20.9.65	323 0	242 3
Northern Division—			
Eastern District	20.9.65	324 6	243 6
Western District	20.9.65	346 6	260 0
South Australia(d)	22.6.64	303 0	227 0
Western Australia(e)	26.7.65	317 10	238 5
Tasmania(b)	June, 1964(c)	314 0	235 6

(a) Rates are operative from the beginning of the first pay-period commencing after the date shown, or during the month shown. (b) No basic wage declared. Rates shown are those adopted by most Wages Boards. (c) Wages Boards adopted the Commonwealth rate. (d) The "living wage" declared for the metropolitan area is also adopted for country areas, except at Whyalla and nearby areas, where a loading of 5s. for adult males is generally payable. (e) Differential rates abolished as from 22nd September, 1964.

The Commonwealth basic wage rates for September, 1965, were still the same as those operative from 19th June, 1964 (see p. 459).

CHAPTER XIV. OVERSEA TRADE

§ 8. Direction of Oversea Trade

According to Countries, p. 502.—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 1964-65.

**VALUES OF AUSTRALIAN IMPORTS AND EXPORTS: COUNTRIES OF
ORIGIN OR CONSIGNMENT, 1964-65 p**
(£A. '000 f.o.b.)

Country	Imports	Exports	Country	Imports	Exports
United Kingdom	380,707	257,610	Czechoslovakia	3,264	6,167
Australian Territories—			France	33,448	55,891
Papua-New Guinea	9,861	29,281	Germany, Federal Republic of	80,511	41,150
Other	5,398	3,569	Indonesia	31,929	3,645
Brunei	2,924	63	Iran	13,275	9,225
Canada	58,508	20,056	Iraq	6,339	2,372
Ceylon	8,640	9,337	Italy	25,281	42,597
Hong Kong	12,180	27,378	Japan	129,323	220,837
India	20,573	27,701	Mexico	2,000	9,346
Malaysia	26,586	41,565	Netherlands	18,380	10,355
New Zealand	23,255	79,277	Norway	4,417	2,902
Pakistan	6,593	4,625	Poland	1,230	7,190
Other Commonwealth countries	22,725	36,319	South Africa	8,397	12,394
<i>Total, Commonwealth Countries</i>	<i>577,950</i>	<i>536,781</i>	Sweden	26,799	4,293
Arabian States	52,062	7,027	Switzerland	17,732	2,067
Austria	4,105	1,753	United States of America	346,131	132,063
Belgium-Luxembourg	12,437	29,458	Other foreign countries(a)	46,187	121,084
China (Mainland)	11,426	67,347	<i>Total, Foreign Countries</i>	<i>874,673</i>	<i>789,163</i>
			<i>Total, All Countries</i>	<i>1,452,623</i>	<i>1,325,944</i>

(a) Includes shipments made "for orders" and imports of unknown origin.

According to Major Groups of Countries, p. 504-5.—The following table shows the trade of Australia during 1964-65 according to major groups of countries.

**OVERSEA TRADE OF AUSTRALIA WITH MAJOR GROUPS OF COUNTRIES(a),
1964-65 p**

Major groups of countries	£A. '000 f.o.b.	Major groups of countries	£A. '000 f.o.b.
STERLING		OTHER NON-STERLING	
Imports—		Imports—	
From—United Kingdom	380,707	From—Countries of the E.E.C. ..	172,571
Other Sterling Area Countries	174,244	Countries of the E.F.T.A. ..	66,816
		Other Countries	253,554
Total	554,951	Total	492,941
Exports—		Exports—	
To—United Kingdom	257,610	To—Countries of the E.E.C. ..	191,809
Other Sterling Area Countries	277,263	Countries of the E.F.T.A. ..	16,635
Total	534,873	Other Countries	428,903
Excess of Exports (+) or Imports (—)	—20,078	Total	637,347
NON-STERLING—NORTH AMERICA		Excess of Exports (+) or Imports (—)	+144,406
Imports—			
From—Canada	58,508		
United States of America(b)	346,223		
Total	404,731		
Exports—		ALL GROUPS	
To—Canada	20,056	Total Imports	1,452,623
United States of America(b) ..	133,668	Total Exports	1,325,944
Total	153,724	Excess of Exports (+) or Imports (—)	—126,679
Excess of Exports (+) or Imports (—)	—251,007		

(a) For a list of the countries in each group, see p. 504.

(b) Includes U.S.A., territories and dependencies.

§ 12. Classified Summary of Australian Oversea Trade

Statistical Classes, p. 519.—The following table shows the values of total imports and total exports in statistical classes for the year 1964–65.

VALUE OF OVERSEA TRADE OF AUSTRALIA: CLASSES, 1964-65 p (£A. '000 f.o.b.)

Class	Imports	Exports	Class	Imports	Exports
I. Animal foodstuffs, etc. . .	15,660	213,720	XIII. Rubber and leather, etc. . .	33,154	5,790
II. Vegetable foodstuffs; non-alcoholic beverages, etc. . .	33,106	302,424	XIV. Wood and wicker, etc. . .	23,780	2,833
III. Alcoholic liquors, etc. . .	5,363	3,129	XV. Earthenware, etc. . .	23,666	1,893
IV. Tobacco, etc. . .	12,433	962	XVI. Paper and stationery . .	78,283	7,280
V. Live animals . . .	1,247	2,099	XVII. Jewellery etc. . .	18,683	5,448
VI. Animal substances, etc. . .	7,351	444,874	XVIII. Optical, surgical and scientific instruments	24,610	4,689
VII. Vegetable substances, etc. . .	31,415	2,048	XIX. Chemicals, medicinal products, fertilizers, etc. . .	92,364	17,101
VIII. Apparel, textiles, etc. . .	136,092	7,763	XX. Miscellaneous . . .	125,618	48,009
IX. Oils, fats and waxes . . .	130,120	21,785	<i>Total, Merchandise</i>	<i>1,450,432</i>	<i>1,315,626</i>
X. Pigments, paints and varnishes . . .	6,561	1,419	XXI. Gold and silver; bronze specie . . .	2,191	10,318
XI. Rocks, minerals, etc. . .	13,367	68,920	Grand Total	1,452,623	1,325,944
XII. Metals, metal manufactures and machinery . .	637,559	153,440			

Imports of Principal Articles, p. 520.—The following table shows the values of the principal articles imported into Australia during 1964–65.

IMPORTS OF PRINCIPAL ARTICLES: AUSTRALIA, 1964-65 p

Article	Value
	£A. '000 f.o.b.
Aircraft and parts	42,997
Apparel	12,684
Arms, explosives, military stores, etc.	11,503
Bags and sacks	10,510
Chemicals, medicinal and pharmaceutical products, essential oils and fertilizers	92,364
Cotton, raw, excluding linters and waste	8,008
Electrical machinery, appliances and equipment	69,610
Fibres, excluding cotton	13,688
Glass and glassware	10,851
Iron and steel—	
Bar and rod	16,634
Plate and sheet	14,948
Machines and machinery—	
Motive power	80,410
Other	172,475
Motor vehicles complete; components and parts	137,892
Paper, printing	24,605
Petroleum and shale oils	120,419
Piece-goods—	
Cotton and linen	39,807
Other	27,603
Plastics materials	26,697
Rubber and rubber manufactures	29,993
Stationery and paper manufactures	25,113
Tea	13,512
Timber, undressed, including logs	19,372
Tobacco	10,130
All other articles	420,798
Total Imports	1,452,623

Exports of Principal Articles of Australian Produce, p. 521.—The following table shows the quantities and values of the principal articles of Australian produce exported during 1964-65.

EXPORTS OF PRINCIPAL ARTICLES OF AUSTRALIAN PRODUCE, 1964-65 p

Article	Quantity	Value
		£A. '000 f.o.b.
Butter tons	90,275	31,083
Cheese "	27,199	7,099
Chemicals, drugs, fertilizers "	..	15,243
Coal tons	6,028,025	25,454
Fruit—		
Dried "	73,932	12,050
Fresh, including frozen '000 bus.	9,779	15,325
Preserved in airtight containers tons	101,376	13,744
Gold "	..	9,203
Grains and cereals—		
Barley tons	363,307	8,998
Flour (wheaten), plain white tons(a)	572,046	18,676
Wheat tons	5,624,462	148,599
Hides and skins "	..	40,023
Lead, unwrought, n.e.i. tons	153,211	21,346
Machines and machinery (except dynamo electrical) "	..	21,194
Meats preserved by cold process—		
Beef and veal tons	316,046	100,230
Lamb "	24,165	5,416
Mutton "	72,458	14,754
Pork "	365	162
Meats, tinned "	27,004	7,906
Milk and cream '000 lb.	167,867	11,852
Ores and concentrates tons	1,677,187	40,490
Sugar (cane) "	1,269,119	56,340
Wool(b) '000 lb.	1,553,773	403,072
All other articles "	..	262,915
Total Exports (Australian Produce) "	..	1,291,174

(a) 2,000 lb.

(b) Quantity in terms of greasy wool.

§ 20. Balance of Payments, p. 529-34

The following tables show, in summary form, revised balance of payments estimates for the years 1962-63 and 1963-64, and preliminary estimates for 1964-65. Further details will be found in the mimeographed publication *Balance of Payments, 1960-61 to 1964-65*.

BALANCE OF PAYMENTS ON CURRENT ACCOUNT

(£ million)

Particulars	1962-63 r	1963-64 r	1964-65
1. Exports f.o.b.(a)	1,064.8	1,369.8	1,293.0
2. Imports f.o.b.(a)	1,037.9	1,125.2	1,377.4
<i>Balance of Trade</i>	26.9	244.6	-84.4
Invisible Credits—			
3. Gold production	15.9	14.4	13.4
4. Transportation—			
Expenditure of oversea carriers	74.1	85.6	94.0
Australian carriers	11.3	13.9	19.3
	85.4	99.5	113.3
5. Travel	14.5	17.8	22.3
6. Property income—			
Undistributed income	4.4	7.1	7.5
Royalties and copyrights	1.0	1.4	1.3
Other	32.5	38.7	47.3
	37.9	47.2	56.1
7. Government—			
Australian Government receipts	11.8	15.4	13.4
Foreign government expenditure	11.8	15.7	16.0
	23.6	31.1	29.4
8. Miscellaneous—			
Business expenses	8.5	10.5	14.8
Other	9.4	11.1	12.8
9. Donations, etc.—			
Immigrants' funds	17.9	21.6	27.6
Other	27.8	40.3	47.0
	11.2	16.2	16.3
	39.0	56.5	63.3
<i>Total Invisible Credits</i>	234.2	288.1	325.4
Invisible Debits—			
10. Transportation(b)—			
Freight	118.0	130.0	151.0
Other	38.4	45.4	49.1
	156.4	175.4	200.1
11. Travel	45.0	50.9	56.7
12. Property income—			
Public authority interest	33.0	35.0	35.3
Direct investment	62.7	59.8	53.0
Undistributed income	53.0	65.1	65.0
Royalties and copyrights	16.2	19.9	22.8
Other	15.1	17.0	22.0
	180.0	196.8	198.1
13. Government—			
Defence	9.7	10.0	15.2
Other	18.2	23.8	27.6
	27.9	33.8	42.8
14. Miscellaneous—			
Business expenses	11.6	16.2	21.1
Other	15.3	17.1	21.6
15. Donations, etc.—			
Government—			
Papua and New Guinea	25.4	32.3	35.9
Other foreign aid	7.3	5.4	12.1
Private	30.1	34.5	38.0
	62.8	72.2	86.0
<i>Total Invisible Debits</i>	499.0	562.4	626.4
Balance on Current Account	-237.9	-29.7	-385.4

(a) The amounts shown represent the recorded trade figures adjusted for balance of payments purposes. Adjustments affect both coverage and valuation. (b) Total freight and insurance on imports, whether payable overseas or in Australia, is estimated at £129 million in 1962-63, £142 million in 1963-64 and £167 million in 1964-65.

NOTE.—Minus sign (-) denotes deficit.

BALANCE OF PAYMENTS ON CAPITAL ACCOUNT
(£ million)

Particulars	1962-63 r	1963-64 r	1964-65
CHANGES IN ASSETS			
1. International reserves	64.9	228.0	-157.8
2. International Monetary Fund ..	..	..	..
3. Other international financial agencies	1.7	1.7	1.7
4. Other government	1.0	26.0	8.1
5. Marketing authorities	-5.1	-15.1	30.0
6. Portfolio investment	-2.8	-3.8	*
7. Direct investment—			
Branches—			
Unremitted profits	0.2	0.3	0.5
Other	-2.2	1.3	*
Subsidiaries—			
Undistributed profits	4.2	6.8	7.0
Other	4.2	-3.5	*
	6.4	4.9	7.5(a)
8. Life insurance	0.1	2.2	-5.1
<i>Total</i>	<u>66.2</u>	<u>243.9</u>	<u>-115.6</u>
CHANGES IN LIABILITIES			
9. Government loans—			
International Bank for Recon- struction and Development ..	6.0	3.3	-0.4
Other central government ..	43.3	7.9	-7.3
Local government and semi- governmental	-1.2	-0.2	-3.2
Discounts, etc.	-1.4	-0.1	0.6
	46.7	10.9	-10.3
10. International Monetary Fund ..	-11.5	..	-11.2
11. Other international financial agencies	-2.3	-2.4	0.4
12. Foreign banks	2.6	-1.4	0.5
13. Portfolio investment—			
Government securities	-4.8	-1.4	-2.0
Companies, etc.	40.5	13.6	*
	35.7	12.2	-2.0(a)
14. Direct investment—			
Branches—			
Unremitted profits	8.2	9.9	} 225.0
Other	2.8	21.3	
Subsidiaries—			
Undistributed profits	44.8	55.2	} 225.0
Other	125.2	114.4	
	181.0	200.8	225.0(b)
15. Balancing item	51.9	53.5	67.4(c)
<i>Total</i>	<u>304.1</u>	<u>273.6</u>	<u>269.8</u>
Balance on Capital Account	237.9	29.7	385.4

(a) Excludes items marked *, for which information is not yet available and which are, therefore, included in the balancing item. (b) Of which, unremitted profits of branches and undistributed profits of subsidiaries are tentatively estimated to be £65 million. (c) Includes items marked *.

CHAPTER XV. TRANSPORT AND COMMUNICATION

SHIPPING

§ 3. Oversea Shipping

Total Oversea Shipping, States, p. 538.—The following table shows particulars of the entrances and clearances of vessels direct from, and to, overseas countries during 1964–65.

OVERSEA SHIPPING: ENTRANCES AND CLEARANCES
OF VESSELS DIRECT, 1964-65 p

Particulars		N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	Aust.
Entrances	No.	1,317	520	751	299	790	83	53	3,813
	'000 net tons	7,690	3,341	3,086	2,332	4,787	281	172	21,689
Clearances	No.	1,159	526	886	311	810	58	38	3,788
	'000 net tons	7,270	4,287	3,678	1,351	4,640	237	143	21,606

§ 6. Shipping Cargo

Oversea and Interstate Cargo, p. 544.—The following table shows the quantity of shipping cargo discharged and shipped, according to States, during 1964–65.

CARGO DISCHARGED AND SHIPPED: STATES, 1964-65 p
(‘000 Tons)

State or Territory	Discharged				Shipped			
	Oversea		Interstate		Oversea		Interstate	
	Wt	Meas.	Wt	Meas.	Wt	Meas.	Wt	Meas.
New South Wales ..	7,980	1,897	7,662	226	8,344	667	3,793	101
Victoria ..	7,238	1,523	2,498	682	2,742	664	1,325	700
Queensland ..	881	361	1,449	102	3,942	104	969	25
South Australia ..	2,425	422	1,586	41	2,571	220	6,317	17
Western Australia ..	4,178	168	745	73	2,616	127	3,037	38
Tasmania ..	389	72	1,015	597	195	198	662	518
Northern Territory ..	120	..	93	..	14	..	3	..
Australia ..	23,211	4,443	15,048	1,721	20,424	1,980	16,106	1,399

GOVERNMENT RAILWAYS

Summary of Operations, pp. 555-64.—The following table shows a summary of the operations of government railways for the nine months ended 31st March, 1965.

**GOVERNMENT RAILWAYS: SUMMARY OF OPERATIONS,
NINE MONTHS ENDED MARCH, 1965**

Particulars	C'wth	N.S.W.	Vic.	Old (a)	S.A. (b)	W.A. (b)	Tas.	Aust.
Route miles open ..	2,252	6,055	4,242	5,716	2,514	3,954	500	25,233
Train-miles .. '000	2,167	30,253	15,350	13,036	4,908	5,481	953	72,148
Earnings(c)—								
Coaching (passengers, parcels, mails, etc.) £'000	1,040	21,829	11,533	4,114	1,628	1,332	133	41,609
Goods, including livestock and minerals ..	4,955	56,384	23,528	25,876	8,568	10,810	1,923	132,044
Miscellaneous ..	548	126	2,234	(d)	870	886	71	4,735
Total Earnings(c) ..	6,543	78,339	37,295	29,990	11,066	13,028	2,127	178,388
Working expenses £'000	5,845	64,436	36,820	28,550	11,747	12,376	2,397	162,171
Net earnings ..	+698	+13,903	+475	+1,440	-681	+652	-270	+16,217
Ratio of working expenses to earnings .. %	89.33	82.25	98.72	95.20	106.16	94.99	112.71	90.90
Earnings per train-mile ..	60s. 4d.	51s. 9d.	48s. 7d.	46s. 0d.	45s. 1d.	47s. 6d.	44s. 8d.	49s. 5d.
Working expenses per train-mile ..	53s. 11d.	42s. 7d.	48s. 0d.	43s. 10d.	47s. 10d.	45s. 2d.	50s. 4d.	44s. 11d.
Passenger-journeys '000	253	195,828	113,269	19,701	10,527	7,809	980	348,367
Freight carried—								
Livestock '000 tons	42	420	265	457	105	82	15	1,386
Coal and coke ..	1,429	7,977	1,647	2,041	11	571	98	13,774
Other minerals ..	40	1,982	89	988	1,033	658	22	4,812
Other goods ..	554	10,457	7,348	4,038	2,536	2,341	682	27,956
Total Freight ..	2,065	20,836	9,349	7,524	3,685	3,652	817	47,928

(a) Excludes South Brisbane-Border section of the uniform gauge line (69 route miles). (b) Financial details include road motors. (c) Excludes government grants. (d) Included with coaching. Minus sign (-) denotes loss.

NOTE.—The foregoing table is prepared from quarterly statements supplied by each Government railway, and figures therein are not completely comparable with those shown in Chapter XV. Transport and Communication, which are derived, in the main, from the annual reports of the Government railways.

MOTOR VEHICLES

§ 1. Motor Vehicles on Register

Motor Vehicles on Register, etc., p. 572.—The following table shows the number of motor vehicles on register at 31st December, 1964.

MOTOR VEHICLES ON REGISTER(a), 31st DECEMBER, 1964

State or Territory	Motor cars(b) and station wagons	Utilities, panel vans, trucks(c) and omnibuses	Motor cycles	Total(d)
New South Wales ..	969,093	289,706	18,063	1,276,862
Victoria ..	789,327	217,163	13,051	1,019,541
Queensland(e) ..	358,285	154,888	13,027	526,200
South Australia(e) ..	276,902	85,084	14,107	376,093
Western Australia ..	195,818	78,470	9,602	283,890
Tasmania ..	88,084	29,005	1,586	118,675
Northern Territory ..	7,706	5,733	305	13,744
Australian Capital Territory ..	25,019	4,571	313	29,903
Australia ..	2,710,234	864,620	70,054	3,644,908

(a) All figures are subject to revision. (b) Includes ambulances and hearses. (c) Includes other truck-type vehicles. (d) Excludes tractors, trailers, plant and equipment, etc. (e) Interim figures only.

§ 3. Registration of New Motor Vehicles

New Vehicles Registered, p. 574.—New motor vehicles registered during the six months ended June, 1965, were as follows.

NEW MOTOR VEHICLES REGISTERED, SIX MONTHS ENDED JUNE, 1965(a)

State or Territory	Motor cars(b)	Other vehicles (c)	Motor cycles	Total
New South Wales	62,703	11,316	1,630	75,649
Victoria	48,312	8,172	534	57,018
Queensland	23,448	5,825	866	30,139
South Australia	18,235	3,130	607	21,972
Western Australia	11,668	3,324	287	15,279
Tasmania	5,257	1,087	54	6,398
Northern Territory	526	335	38	899
Australian Capital Territory ..	2,042	331	74	2,447
Australia	172,191	33,520	4,090	209,801

(a) Excludes defence service vehicles, trailers, road tractors, etc., and dealers' plates. (b) Includes taxis, hire cars and station wagons. (c) Includes utilities, panel vans, lorries, omnibuses, ambulances and hearses.

CIVIL AVIATION

Statistical Summaries, p. 582-3.—The following table shows particulars of the operations of regular internal services and overseas services for the nine months ended 31st March, 1965.

CIVIL AVIATION: OPERATIONS OF REGULAR INTERNAL SERVICES AND OVERSEA SERVICES, NINE MONTHS ENDED MARCH, 1965

Particulars	Regular internal services(a)	Oversea services(b)
Route miles (unduplicated)(c)	68,901	79,150
Hours flown	191,714	50,173
Miles flown	38,872	20,670
Paying passengers	2,771,942	330,213
Paying passenger-miles	1,210,584	1,115,643
Freight—		
Tons(d)	52,035	7,250
Ton-miles(d)	25,073	36,949
Mail—		
Tons(d)	5,869	2,301
Ton-miles(d)	3,090	15,475

(a) Includes only services operating within the Australian mainland and Tasmania. (b) Airlines wholly or partly owned by Australian interests. (c) At 31st March, 1965. (d) In terms of short tons (2,000 lb.).

BROADCASTING AND TELEVISION

§ 4. Licences, etc.

Broadcast Listeners' and Television Viewers' Licences, p. 601.—Broadcast listeners' licences in force at 30th June, 1965, were as follows:—New South Wales, 686,781; Victoria, 512,205; Queensland, 301,862; South Australia, 219,064; Western Australia, 144,773; Tasmania, 62,943; Australia, 1,927,628. 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, 1965, were as follows:—New South Wales, 624,997; Victoria, 488,583; Queensland, 202,121; South Australia, 158,666; Western Australia, 93,071; Tasmania, 47,173; Australia, 1,614,611.

A person who has both broadcast and television receivers at the one address is required to take out a combined receiving licence, provision for which was introduced by legislation effective from 1st April, 1965. Combined licences in force at 30th June, 1965, were as follows:—New South Wales, 162,510; Victoria, 132,413; Queensland, 41,539; South Australia, 49,976; Western Australia, 30,670; Tasmania, 12,906; Australia, 430,014.

CHAPTER XVI. WELFARE SERVICES

§ 2. Expenditure on Welfare Services

Commonwealth Expenditure on Welfare Services—The National Welfare Fund, p. 604.—The following table sets out expenditure from the fund on social and health services in each State during 1964–65.

COMMONWEALTH EXPENDITURE FROM NATIONAL WELFARE FUND
ON SOCIAL AND HEALTH SERVICES, 1964–65
(£'000)

Service	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.(a)	A.C.T. (a)	Abroad	Aust.
Social Services—										
Age and invalid pensions ..	83,863	53,704	34,059	19,254	14,707	6,592	505	389	226	213,299
Child endowment ^b	29,948	24,009	13,077	8,282	6,703	3,153	502	715	26	86,415
Commonwealth Rehabilitation Service ..	247	216	116	106	87	30	..	..	..	802
Funeral benefits	174	112	65	38	30	13	..	1	..	433
Maternity allowances ..	1,284	1,029	546	333	267	126	27	32	3	3,647
Unemployment benefits ..	1,114	580	793	195	421	292	1	8	..	3,404
Sickness benefits	1,341	822	474	237	256	101	6	11	..	3,249
Special benefits(c)	174	273	86	33	23	26	1	1	..	617
Widows' pensions	8,868	5,882	3,797	2,226	1,732	849	66	74	28	23,522
National Health Services—										
Hospital benefits	12,126	6,634	4,497	2,580	2,493	906	55	105	..	29,395
Medical benefits	7,119	4,480	1,875	2,137	1,528	500	..	..	..	17,638
Medical benefits for pensioners	1,886	1,206	650	449	330	128	..	11	..	4,660
Milk for school children ..	1,438	1,033	606	378	319	190	36	30	..	4,030
Pharmaceutical benefits ..	11,246	9,278	4,400	2,555	1,912	853	..	(d) 75	..	30,319
Pharmaceutical benefits for pensioners ..	4,547	2,583	1,635	994	735	289	..	..	..	10,782
Tuberculosis Campaign—										
Allowances ..	262	148	181	53	40	38	6	1	..	729
Maintenance and surveys(e)	1,825	1,350	1,018	319	371	181	..	9	..	5,073
Miscellaneous(f)	74	81	173	9	15	33	36	(g) 1,008	..	1,430
Rental Losses ..	..	..	65	..	..	..	..	..	..	65
Home Savings Grants (h) ..	2,027	1,768	729	563	349	182	3	54	..	5,675
Total ..	169,563	115,189	68,840	46,741	32,317	14,481	1,244	2,524	283	445,183

(a) Payments for some Health Services to residents of the Northern Territory and the Australian Capital Territory are included in the amounts shown for States. (b) Includes payments for student children aged 16 to 21 years and endowed children in institutions. (c) Includes special benefits to migrants in reception and training centres. (d) Includes payments to Flying Doctor Service and Bush Nursing Centres. (e) Paid to the State Governments as a contribution towards the cost of surveys and the maintenance of institutions for the treatment of tuberculosis. (f) This item includes the cost of the Commonwealth Health Laboratory services, £433,000; the cost of radio-active isotopes provided under the National Health Act, £34,000; and hearing aids for school children, £26,000. (g) Includes running expenses of the Blood Fractionation Plant at the Commonwealth Serum Laboratory, £335,000, subsidies to Home Nursing Services, £232,000, purchase of poliomyelitis vaccine, £370,000 and part cost of Commonwealth Health Laboratories, £71,000. (h) Under the Home Savings Grant Act 1964.

§ 3. Commonwealth Social Services, pp. 608-19

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 1964-65.

SOCIAL SERVICES: SUMMARY, 1964-65

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	N.T.	A.C.T.	Aust.
Age pensioners at end of year	243,793	162,108	100,054	58,308	42,706	18,892	1,253	986	628,100
Invalid pensioners at end of year	41,985	26,794	17,402	8,490	8,615	3,532	404	251	107,473
Child endowment at end of year—									
Family claims in force	620,517	482,347	238,800	166,756	125,776	56,694	6,562	13,742	1,711,442
Endowed children (b)	1,308,632	1,023,594	548,783	359,962	288,846	130,670	20,528	29,425	3,710,616 ^(c)
Maternity allowances—									
Claims paid during year	80,592	64,424	33,963	20,820	16,667	7,821	1,661	2,015	228,139
Unemployment, sickness and special benefits—									
Persons admitted to benefit—									
Unemployment benefit	28,321	11,394	26,310	6,711	10,175	5,255	133	213	88,512
Sickness benefit	26,653	15,682	12,140	5,685	5,862	2,238	146	231	68,637
Special benefit—									
Ordinary	966	2,029	672	124	84	122	3	9	4,009
Migrants	442	2,090	..	178	..	..	..	..	2,710
Persons on benefit at end of year—									
Unemployment benefit	4,667	1,960	3,239	703	1,137	926	6	18	12,656
Sickness benefit	4,144	2,677	1,484	731	817	272	21	41	10,187
Special benefit—									
Ordinary	675	1,060	348	118	99	120	1	2	2,423
Migrants	13	77	..	..	..	..	..	..	90
Widows' pensions at end of year—									
Total pensions in force	24,861	16,426	10,280	6,241	4,926	2,248	182	234	65,398
Class "A" pensions in force(d)	10,951	7,311	4,991	2,868	2,221	1,159	90	122	29,713

(a) Families with both endowees under 16 years and student endowees 16 to 21 years are counted twice. (b) Includes children in approved institutions. (c) Includes claims paid abroad. (d) Pensions paid to widows who maintain at least one child under 16 years of age.

CHAPTER XVII. PUBLIC JUSTICE

§ 7. Divorce and Other Matrimonial Relief

Duration of Marriages Dissolved and Number of Children, p. 639.—The following table shows the number of dissolutions of marriage granted in 1964, classified according to the legal duration of the marriage and number of children.

**DURATION OF MARRIAGES DISSOLVED AND NUMBER OF CHILDREN:
AUSTRALIA, 1964**

Duration of marriage (years)	Dissolutions of marriages with—										Total dissolutions of marriage	Total children (a)		
	No children	1 child	2 children	3 children	4 children	5 children	6 children	7 children	8 children	9 children			10 children	
Under 1 year	1			1								2	3	
1 year and under 2	21	1	2	1	1							26	12	
2 years and under 3	37	11	2									50	15	
3 " " " " 4	77	32		1								115	45	
4 " " " " 5	172	104	26	6								308	174	
5 " " " " 6	190	127	45	10								375	261	
6 " " " " 7	164	138	63	19	2	1						387	334	
7 " " " " 8	166	143	82	22	1							414	377	
8 " " " " 9	155	116	106	35	8	1						421	470	
9 " " " " 10	112	137	87	33	13	1						383	467	
10 " " " " 11	101	105	82	44	5	2						339	431	
11 " " " " 12	97	90	91	42	18							338	470	
12 " " " " 13	97	95	97	43	24	4						364	559	
13 " " " " 14	95	85	88	42	21	10						343	533	
14 " " " " 15	84	83	101	56	21	11						357	598	
15 " " " " 16	78	66	76	48	23	6						300	504	
16 " " " " 17	66	66	91	58	23	11						319	595	
17 " " " " 18	78	69	96	65	22	8						341	602	
18 " " " " 19	52	69	90	45	24	9						298	585	
19 " " " " 20	43	50	66	34	15	5						216	387	
20 " " " " 21	31	32	52	31	10	2						170	349	
21 " " " " 25	202	178	216	128	58	20						814	1,406	
25 " " " " 30	288	168	113	38	15	4						633	636	
30 " " " " 35	216	64	22	6	3	1						312	143	
35 " " " " 40	143	20	4	2								170	38	
40 " " " " 45	70	1										71	1	
45 " " " " and over	49											49	2	
Not stated		2												2
Total Dissolutions of Marriage	2,885	2,052	1,703	810	309	104	35	12	5	1	1	7,917	..	
Total Children(a) .. .. .	..	2,052	3,406	2,430	1,236	520	210	84	40	9	10	..	9,997

(a) The term "children" used in the Commonwealth legislation refers to living "children of the marriage" under 21 years, but the table above includes a small number of dissolutions granted to petitions filed under old legislation i.e. prior to 1961, in which the term "children" was used differently. For former definitions of children see Year Book, No. 48, p. 652.

CHAPTER XXI. PRIVATE FINANCE

CURRENCY

§ 4. Pre-decimal Coinage

Net Issues of Australian Coins, p. 815.—The net issues of Australian coins to 30th June, 1965, were:—silver, £50,249,000; bronze, £4,311,000; total £54,560,000.

§ 5. Pre-decimal Notes System

The Australian Note Issue, p. 817.—The average value of notes in circulation for the year 1964-65 was £445,806,000. This amount was distributed in denominations as follows:—10s., £14,131,000; £1, £72,259,000; £5, £201,952,000; £10, £154,712,000; £20, £2,000; £50, £23,000; £100, £21,000; and £1,000, £2,706,000. The amount held by the banks was £71,687,000 and by the public £374,119,000.

BANKING

§ 2. The Reserve Bank of Australia

Liabilities and Assets, pp. 821-2.—The liabilities of the Reserve Bank at 30th June, 1965 amounted to £1,257,778,000. Capital and reserve funds amounted to £38,040,000; notes on issue to £431,207,000; statutory reserve deposit accounts of trading banks to £327,337,000; other deposits of trading banks to £50,221,000; term loan fund accounts of trading banks to £21,848,000; deposits of savings banks to £214,823,000; other liabilities to £174,300,000.

Particulars of the assets were as follows:—gold and balances held abroad, £443,664,000; other oversea securities, £205,637,000; Australian notes and coin, £5,061,000; cheques and bills of other banks, £16,301,000; government and other securities (including treasury bills), £401,136,000; bills receivable and remittances in transit, £21,546,000; and other assets, £164,432,000.

§ 3. The Commonwealth Development Bank of Australia

Liabilities and Assets, pp. 823-4.—The liabilities of the Commonwealth Development Bank at 30th June, 1965, amounted to £75,410,000. Capital amounted to £30,857,000; reserve funds to £9,486,000; balances due to other banks to £22,495,000; deposits, bills payable and all other liabilities to £12,572,000.

The assets amounted to £75,410,000. Cash and cash balances amounted to £158,000; Australian Government securities to £596,000; other securities to £179,000; loans to authorized dealers in the short-term money market to £350,000; cheques and bills of other banks to £479,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted to £73,419,000; other assets £230,000.

§ 4. Cheque-paying Banks

Average Liabilities and Assets within Australia, pp. 830-1.—The average liabilities of the Major Trading Banks for June, 1965, were £2,452,474,000. Deposits not bearing interest amounted to £1,325,582,000; deposits bearing interest to £1,047,604,000; balances due to other banks to £17,288,000; other liabilities to £62,000,000.

The average assets of the Major Trading Banks for June, 1965, were £2,413,566,000. Cash and cash balances amounted to £79,946,000; Australian Government securities to £10,321,000; other Commonwealth and State Government securities to £435,583,000; loans to authorized dealers in the short-term money market to £38,700,000; statutory reserve deposits with Reserve Bank to £328,040,000; cheques, bills and balances with other banks to £67,659,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted to £1,315,548,000; other assets to £137,769,000.

The average liabilities of the Other Banks for June, 1965, were £201,216,000. Deposits not bearing interest amounted to £62,282,000; deposits bearing interest to £83,730,000; balances due to other banks to £2,421,000; other liabilities to £52,783,000.

The average assets of the Other Banks for June, 1965, were £234,679,000. Cash and cash balances amounted to £4,242,000; Australian Government securities to £792,000; other Commonwealth and State Government securities to £40,401,000; loans to authorized dealers in the short-term money market to £8,165,000; statutory reserve deposits with Reserve Bank to £547,000; cheques, bills and balances with other banks to £4,292,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted to £162,005,000; other assets to £14,235,000.

The average liabilities of All Banks for June, 1965, were £2,653,690,000. Deposits not bearing interest amounted to £1,387,864,000; deposits bearing interest to £1,131,334,000; balances due to other banks to £19,709,000; other liabilities to £114,783,000.

The average assets of All Banks for June, 1965, were £2,648,245,000. Cash and cash balances amounted to £84,188,000; Australian Government securities to £11,113,000; other Commonwealth and State Government securities to £475,984,000; loans to authorized dealers in the short-term money market to £46,865,000; statutory reserve deposits with Reserve Bank to £328,587,000; cheques, bills and balances with other banks to £71,951,000; loans (other than loans to authorized dealers in the short-term money market), advances and bills discounted to £1,477,553,000; other assets to £152,004,000.

Debits to Customers' Accounts—Cheque-paying Banks, p. 845.—The average weekly debits to customers' accounts in each State for the year 1964–65 for all cheque-paying banks (excluding debits to accounts of Australian Governments in capital cities) were as follows:—New South Wales, £476,579,000; Victoria, £420,601,000; Queensland, £118,682,000; South Australia, £86,843,000; Western Australia, £54,159,000; Tasmania, £21,067,000; Northern Territory, £1,740,000; Australian Capital Territory, £7,392,000; total, £1,187,063,000.

§ 5. Savings Banks

Number of Operative Accounts and Business Transacted, p. 852.—The numbers of operative accounts in the several States at end of June, 1965, were:—New South Wales, 4,076,000; Victoria, 3,630,000; Queensland, 1,541,000; South Australia, 1,254,000; Western Australia, 786,000; Tasmania, 379,000; Northern Territory, 29,000; and Australian Capital Territory, 74,000; total, 11,769,000. The amounts on deposit in the several States at 30th June, 1965, were:—New South Wales, £859,822,000; Victoria, £810,204,000; Queensland, £296,513,000; South Australia, £259,634,000; Western Australia, £130,827,000; Tasmania, £67,868,000; Northern Territory, £4,590,000; and Australian Capital Territory, £13,824,000; total, £2,443,282,000. Total excess of deposits over withdrawals during 1964–65 was £135,252,000; and interest added was £69,906,000.

INSURANCE

§ 2. Life Insurance

New Policies Issued, Policies Discontinued, etc., Premiums and Claims, Australia, pp. 858-65.—The following is a summary of the life insurance business transacted in Australia during 1964 (figures for 1963 in parentheses) compiled from monthly returns collected from the 42 (42) companies registered under the *Life Insurance Act 1945-1961*, 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 XXI., which are derived from annual returns and include business of the State Government Offices.

Ordinary, Industrial, and Superannuation Businesses, respectively:—*New policies issued in Australia*—numbers, 345,656 (327,103), 127,200 (128,886), 77,834 (78,354); sums insured, £758,853,000 (£674,677,000), £57,454,000 (£53,570,000), £385,395,000 (£286,433,000); *policies discontinued or reduced in Australia*—numbers, 216,838 (230,779), 227,070 (250,180), 74,720 (69,074); sums insured, £261,104,000 (£262,855,000), £34,658,000 (£36,231,000), £150,276,000 (£120,232,000). Particulars of annuities are excluded.

Premium receipts in Australia of Ordinary, Industrial, and Superannuation Businesses, respectively, amounted to £119,789,000 (£109,340,000); £16,682,000 (£16,381,000); £47,326,000 (£42,297,000); *claims, etc., paid* amounted to—£51,674,000 (£47,175,000); £12,548,000 (£12,263,000); £20,696,000 (£16,414,000). Particulars of annuities are included.

OVERSEA INVESTMENT BY PRIVATE INVESTORS

Annual Flow of Oversea Investment, pp. 879-84.—The annual inflow of private overseas investment in companies in Australia amounted to £A.214.4 million in 1963-64. Of this total, £A.200.8 million was in the form of direct investment (including £A.65.1 million undistributed income), while portfolio investment was £A.13.6 million. The inflow by domicile of investor was; United Kingdom, £A.96.5 million; United States of America and Canada, £A.96.0 million; New Zealand, £A.4.1 million; and other countries, £A.17.8 million. The outflow of Australian investment in companies overseas was £A.1.1 million in 1963-64.

CHAPTER XXII. PUBLIC FINANCE

COMMONWEALTH FINANCE

§ 2. Commonwealth Public Account

Summary of Receipts and Expenditure, p. 902.—The following table provides a summary of the transactions on the Commonwealth Public Account for 1964-65.

COMMONWEALTH PUBLIC ACCOUNT: SUMMARY OF TRANSACTIONS
(£ million)

Particulars	1964-65
Expenditure—	
Consolidated Revenue Fund(a)	2,097.7
Loan Fund—	
Defence Services .. .. .	..
State Works and Housing Programmes	279.7
War Service Land Settlement	3.6
Mount Isa Railway Agreement	1.5
Snowy Mountains Hydro-electric Authority	9.8
<i>Total Expenditure</i>	2,392.3
Receipts—	
Consolidated Revenue Fund	2,209.1
National Debt Sinking Fund	96.3
Net Movement in Cash Balances of Other Trust Funds	8.5
<i>Total Receipts</i>	2,313.9
<i>Excess of Expenditure over Receipts to be met from Borrowings</i>	78.4
Add Redemptions, etc.(b)—	
Australia	118.3
Overseas	40.1
<i>Total</i>	158.4
Total Call on Borrowings	236.8
Borrowings, etc.—	
Loan Proceeds(c)—	
Australia	234.0
Overseas—	
Public loans	11.0
Drawings on International Bank Loans	10.6
<i>Total Loan Proceeds</i>	255.6
Net Movement in Temporary Borrowings and Cash Balances—	
Treasury Notes	-36.1
Treasury Bills	(d) 19.0
Cash Balances	-1.8
<i>Total Net Movement in Temporary Borrowings, etc.</i>	-18.9
Total Borrowings	236.8

(a) Excludes payment to Loan Consolidation and Investment Reserve, £111.4 million. (b) Includes redemptions from the Canadian Loan Trust Account. Excludes losses on realization of investments by the National Debt Sinking Fund which have been included in net increase in other balances. (c) Excludes State domestic raisings. Loan flotation expenses, net of recoveries, have been deducted from loan proceeds. (d) Because of the funding of £50,000,000 Treasury Bills during 1964-65, there was a net reduction of £31,000,000 in the Treasury Bill issue during the year.

§ 3. Commonwealth Consolidated Revenue Fund

Revenue and Expenditure, pp. 902 and 911.—The table below, which can be reconciled directly with the Commonwealth Finance Statement, shows details of revenue and expenditure for the year 1964-65.

COMMONWEALTH CONSOLIDATED REVENUE FUND: REVENUE AND EXPENDITURE, 1964-65

(£'000)

Revenue		Expenditure	
Particulars	Amount	Particulars	Amount
Taxation—		Debt charges	71,277
Income tax—		Defence services	304,491
Individuals	785,262	War and repatriation services ..	119,517
Companies	354,522	National Welfare Fund—	
Dividend (withholding) ..	8,020	Expenditure on social services	445,183
Customs	134,240	Loan consolidation and investment reserve trust account ..	111,372
Excise	315,581	Business undertakings—	
Sales tax	181,428	Postmaster-General	127,162
Pay-roll tax	75,039	Broadcasting and television services	17,875
Estate duty	20,765	Railways	3,688
Other taxes	3,654		
<i>Total</i>	<i>1,878,511</i>	<i>Total</i>	<i>148,725</i>
Business undertakings—		Territories	47,903
Postmaster-General	186,324	Capital works and services—	
Broadcasting and television services	16,971	Business undertakings	88,811
Railways	8,679	Other	104,710
<i>Total</i>	<i>211,974</i>	<i>Total</i>	<i>193,521</i>
Territories	11,906	Payments to or for States	497,939
Other revenue	106,698	Other expenditure	269,161
<i>Grand Total</i>	<i>2,209,089</i>	<i>Grand Total</i>	<i>2,209,089</i>

COMMONWEALTH AND STATE FINANCE

Revenue and Expenditure, p. 945.—Preliminary information relating to Commonwealth and State revenue and expenditure during 1964-65 is given in the following table.

COMMONWEALTH AND STATE REVENUE AND EXPENDITURE, 1964-65 p

(£'000)

Government of—	Consolidated Revenue Fund		
	Revenue	Expenditure	Surplus (+) or deficit (-)
New South Wales	(a) 364,545	(a) 367,080	-2,535
Victoria	240,334	240,334	..
Queensland	133,570	135,608	-2,038
South Australia	107,090	108,401	-1,311
Western Australia	90,072	92,420	-2,348
Tasmania	37,423	38,232	-809
<i>Six States</i>	973,034	982,075	-9,041
Commonwealth	2,209,089	2,209,089	..
Grand Total—Unadjusted	3,182,123	3,191,164	-9,041
Adjusted(b)	2,793,407	2,802,448	-9,041

(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, financial assistance grants, 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.

GOVERNMENT SECURITIES ON ISSUE: COMMONWEALTH AND STATES

§ 2. Government Securities on Issue: Commonwealth and States

Securities on Issue and Annual Interest Payable, p. 947.—The following table shows details of the government securities on issue on account of the Commonwealth and States and the annual interest payable thereon at 30th June, 1965.

GOVERNMENT SECURITIES ON ISSUE AND ANNUAL INTEREST PAYABLE AT 30th JUNE, 1965: COMMONWEALTH AND STATES

Particulars	Currency in which repayable						Australian currency equivalent(a)		
	Australian currency	Sterling	United States dollars	Canadian dollars	Swiss francs	Netherlands guilders	German Deutsche marks	Total amount on issue	Total interest liability
	£A.'000	£Stg.'000	U.S. \$'000	Can. \$'000	Sw. fr. '000	f.'000	D.M.'000	£A.'000	£A.'000
Commonwealth ..	1,256,444	76,253	368,641	49,665	194,288	7,150	84,596	1,566,998	59,854
States ..	3,091,160	268,670	229,884	15,633	50,296	32,850	..	3,545,267	161,258
Grand Total ..	4,347,604	344,924	598,525	65,298	244,584	40,000	84,596	5,112,264	221,112

(a) Converted at rates of exchange ruling at 30th June, 1965.

TAXES ON INCOME

Commonwealth Income Tax Assessments, pp. 977-8.—The following table shows particulars for resident individuals for the 1962-63 income year.

COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT INDIVIDUALS

(Income derived in the year 1962-63)

Grade of actual income and State or Territory of assessment		Number of tax-payers	Actual income (a)	Taxable income(b)		Net Income Tax assessed
				Salary and wages	Total	
£	£		£'000	£'000	£'000	£'000
105- 199		166,450	25,879	20,362	24,635	192
200- 299		187,461	46,783	34,556	42,956	729
300- 399		210,437	73,708	54,091	66,331	1,922
400- 499		238,236	107,290	77,882	95,076	3,809
500- 599		256,636	141,031	99,900	123,555	6,274
600- 699		289,893	188,448	135,945	163,984	9,925
700- 799		288,192	215,964	152,896	184,790	12,709
800- 899		290,223	246,997	168,418	203,432	15,339
900- 999		329,293	313,001	209,300	247,094	19,922
1,000-1,099		348,614	365,981	241,636	281,318	24,338
1,100-1,199		326,268	374,819	243,115	282,913	26,096
1,200-1,299		281,785	351,898	224,178	263,585	25,904
1,300-1,399		240,493	324,038	203,204	241,949	25,220
1,400-1,499		189,299	273,984	168,082	204,435	22,573
1,500-1,999		510,518	867,403	497,681	652,604	82,469
2,000-2,999		261,794	620,283	282,910	483,623	80,028
3,000-3,999		70,656	241,258	78,205	197,669	42,762
4,000-4,999		29,680	131,679	33,799	111,320	28,987
5,000-9,999		32,382	210,491	42,117	183,689	63,051
10,000-14,999		3,780	44,778	7,591	39,783	17,709
15,000-19,999		905	15,419	2,767	13,636	6,682
20,000-29,999		488	11,551	1,910	9,869	5,207
30,000-49,999		168	6,130	662	5,138	2,893
50,000 and over		69	5,455	355	4,450	2,614
Total, Residents		4,553,720	5,204,268	2,981,559	4,127,834	527,353
Central Office		15,956	49,524	9,546	41,929	12,901
New South Wales		1,707,089	1,984,501	1,191,624	1,581,668	202,967
Victoria		1,319,590	1,511,303	883,891	1,211,430	155,747
Queensland		596,836	652,654	333,555	502,162	61,353
South Australia		425,851	462,020	259,389	366,368	42,876
Western Australia		305,937	337,326	179,476	264,782	32,262
Tasmania		139,423	148,714	86,826	114,565	12,924
Northern Territory		9,795	13,810	7,493	9,042	1,127
Australian Capital Territory		33,243	44,415	29,759	35,888	5,196
Total, Residents		4,553,720	5,204,268	2,981,559	4,127,834	527,353

(a) Actual income is defined briefly as "Gross income including exempt income less expenses incurred in gaining that income". (b) Taxable income is the income remaining after deducting from assessable income all allowable deductions.

The following table shows particulars for resident and non-resident companies for the 1962-63 income year.

COMMONWEALTH INCOME TAX ASSESSMENTS: RESIDENT AND NON-RESIDENT COMPANIES.

(Income derived in the year 1962-63)

Grade of Taxable Income (£)	Number of Tax-payers	Taxable Income (a)	Net Tax (b)	Dividends Included in Assessable Income	Deductions			
					Investment Allowance (Sec. 62AA.) (c)	Export Market Development Allowance (Sec. 51AC.)	Contributions to Pension Funds (Secs. 66 and 79)	Gifts
		(£'000)	(£'000)	(£'000)	(£'000)	(£'000)	(£'000)	(£'000)
PRIVATE—TAXABLE								
1- 999 ..	14,506	5,650	1,310	564	143	38	686	39
1,000- 4,999 ..	19,674	52,573	11,744	5,983	512	140	1,949	110
5,000- 9,999 ..	7,140	48,853	11,811	6,347	441	152	1,232	92
10,000- 19,999 ..	3,373	46,359	12,274	7,400	468	133	1,051	78
20,000- 49,999 ..	1,598	47,151	12,796	8,809	536	276	1,014	93
50,000- 99,999 ..	394	26,049	7,481	4,160	314	76	627	64
100,000-199,999 ..	105	14,337	4,171	2,375	146	70	326	29
200,000-499,999 ..	38	10,911	3,219	1,420	140	158	248	28
500,000-999,999 ..	4	2,262	627	546	57	1	40	2
1,000,000 and over ..	2	2,667	932	..	25	..	28	2
Total	46,834	256,814	66,367	37,604	2,781	1,044	7,202	537

NON-PRIVATE—TAXABLE								
1- 999 ..	2,075	602	203	30	52	20	153	53
1,000- 4,999 ..	2,062	5,949	1,968	363	333	86	317	13
5,000- 9,999 ..	1,471	10,202	3,469	739	235	71	399	16
10,000- 19,999 ..	1,188	16,910	5,702	2,031	474	83	534	23
20,000- 49,999 ..	1,289	41,141	13,432	7,251	894	208	1,319	44
50,000- 99,999 ..	731	51,697	16,405	10,448	1,020	297	1,452	69
100,000-199,999 ..	499	69,511	21,552	15,387	1,135	293	1,814	117
200,000-499,999 ..	367	112,377	33,575	28,110	2,208	395	2,997	178
500,000-999,999 ..	101	68,021	21,865	13,211	1,348	213	2,519	160
1,000,000 and over ..	121	355,863	109,471	72,225	9,800	795	14,473	968
Total	9,904	732,274	227,642	149,795	17,500	2,459	25,978	1,641

ALL COMPANIES—TAXABLE								
Private and Non-private ..	56,738	989,088	294,009	187,399	20,281	3,504	33,179	2,177
Special Section ..	1,414	10,290	3,909	2	..	..	..	..
Non-profit ..	532	1,931	642	34	..	..	113	70
Co-operative ..	1,968	4,176	1,427	366	409	33	274	26
Total	60,652	1,005,485	299,986	187,801	20,690	3,537	33,567	2,273

ALL COMPANIES—NON-TAXABLE								
Private and Non-private ..	40,155	65,182	<i>86,908</i>	69,749	2,738	469	2,805	107
Special Section ..	1	..	1	..	..	..	..	..
Non-profit ..	798	21	142	7	..	..	25	55
Co-operative ..	315	4	522	40	135	33	70	..
Total	41,269	65,206	87,572	69,796	2,873	502	2,901	163

(a) Non-taxable companies having a taxable income have been made non-taxable by rebates of tax.
 (b) For non-taxable companies the figures shown in italics are the losses for year. (c) Special 20 per cent. deduction on new manufacturing plant available from 7th February, 1962.

NOTE.—Any discrepancies between totals and sums of components in the foregoing tables are due to rounding.

CHAPTER XXIII. RURAL INDUSTRY
AGRICULTURAL PRODUCTION

§ 2. Distribution, Production and Value of Crops

Distribution and Production, pp. 990-3.—The following table shows preliminary figures for the area and production of major crops in Australia during the season 1964-65.

AREA AND PRODUCTION OF CROPS: AUSTRALIA, 1964-65 p

Crop	Area	Production	Crop	Area	Production
Cereals for grain—			Industrial crops—		
Barley	2,064	49,315	Cotton	35	
Maize	213		Flax (for linseed) ..	133	46
Oats	3,497	70,403	Peanuts	52	
Rice	62	8,030	Sugar cane (for		
Sorghum	346	7,164	crushing)	470	15,070
Wheat	17,919	368,779	Tobacco	26	
Other	125		Other	232	
Total	24,226		Total	948	
		'000 tons	Potatoes	89	
Hay	2,784	4,958	Vineyards, orchards,		
Green fodder	5,613		etc.	745	
Grass seed	253		Grand Total ..	(a)34,658	

(a) Includes an estimate for particulars not yet available.

Total area of crops in each State and Territory during 1964-65 was:—New South Wales, 10,331,000 acres; Victoria, 6,476,000 acres; Queensland, 3,964,000 acres; South Australia, 5,964,000 acres; Western Australia, 7,505,000 acres; Tasmania, 404,000 acres; Northern Territory, 4,000 acres; Australian Capital Territory, 9,000 acres.

PASTORAL PRODUCTION

§ 1. Introduction

Livestock Numbers, p. 1044.—The following table shows, for each State and Territory, the numbers of livestock at 31st March, 1965.

LIVESTOCK NUMBERS, 31st MARCH, 1965 p

('000)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Horses	158	56	201	(a) 24	37	7	36	1	(b) 520
Cattle	4,619	3,316	7,393	697	1,258	451	1,029	14	18,777
Sheep	72,396	30,437	24,016	17,289	22,392	3,793	7	290	170,620
Pigs	449	378	406	196	137	93	2	(c)	(d) 1,661

(a) Estimated.

(b) See footnote (a) to South Australia.

(c) Not available for publication.

(d) Incomplete; see footnote (c) to Australian Capital Territory.

§ 5. Pastoral Products: Wool

Wool Production, p. 1055.—The estimated production of wool (greasy basis) in Australia during 1964-65 was 1,799,400,000 lb.

§ 6. Pastoral Products: Meat

Production of Meat, pp. 1064 and 1066.—The following table shows, for each State and Territory, the production of meat during 1964-65.

PRODUCTION OF MEAT, 1964-65 p (Tons Carcass Weight)

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	N.T.	A.C.T.	Aust.
Beef and veal ..	303,014	245,920	324,697	37,268	57,596	26,464	8,420	2,179	1,005,558
Mutton and lamb	195,785	229,404	48,231	55,392	36,962	18,122	87	1,856	585,839
Total meat (incl. pigmeats) ..	530,298	503,705	404,307	105,316	104,514	51,137	8,593	4,253	1,712,123

OTHER RURAL INDUSTRIES: DAIRYING, POULTRY AND BEE-FARMING

§ 1. The Dairying Industry

Principal Dairy Products, pp. 1076 and 1084.—Particulars of the total production of these commodities in each State and the Australian Capital Territory during 1964-65 are shown below.

PRINCIPAL DAIRY PRODUCTS, 1964-65 p

Particulars	N.S.W.	Vic.	Q'land	S. Aust.	W. Aust.	Tas.	A.C.T.	Aust.(a)
Total whole milk								
'000 gals.	297,878	730,620	226,249	103,676	61,702	87,381	1,086	1,508,690
Butter(b) .. tons	29,948	111,282	32,832	7,687	7,809	13,906	..	203,464
Cheese(b) .. tons	4,129	27,270	8,493	17,338	1,783	2,344	..	61,357
Pigmeats .. tons	31,499	28,381	31,379	12,656	9,956	6,551	218	120,726

(a) Includes Northern Territory.

(b) Factory production only.

CHAPTER XXVI. MINERAL INDUSTRY

§ 4. Mining and Quarrying Commodity Statistics, § 18. Value of Production

Quantity and Value of Production, pp. 1147 and 1185.—In the following table particulars are given of the local value of production of metal and other mining for Australia in 1964, together with the quantities of the principal minerals produced during 1964.

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA, 1964 p METALLIC MINERALS

Principal contents of metallic minerals produced								Local value of production—metal mining
Copper	Gold	Iron	Lead	Silver	Tin	Tungsten (a)	Zinc	
'000 tons	'000 fine oz.	'000 tons	'000 tons	'000 fine oz.	tons	tons	'000 tons	£'000
105	966	3,655	376	18,153	3,638	996	345	122,748

(a) In terms of WO₃ (tungstic oxide).

MINERAL PRODUCTION: QUANTITIES AND VALUES, AUSTRALIA, 1964 p
—continued

NON-METALLIC AND FUEL MINERALS

Quantities produced						Local value of production —non-metal and fuel mining
Coal		Asbestos	Gypsum	Limestone(a)	Salt	
Black	Brown					
'000 tons 27,402	'000 tons 19,033	short tons 13,545	tons 786,503	'000 tons 7,240	tons 545,433	£'000 88,110

(a) Excludes limestone used as a construction material.

§ 5. Gold, § 6. Lead, Silver and Zinc, § 7. Copper, § 8. Tin,
pp. 1150, 1158, 1161 and 1163

Smelter and refinery production of the principal metals treated in Australia during the year 1964 is shown below.

SMELTER AND REFINERY PRODUCTION OF PRINCIPAL METALS: AUSTRALIA, 1964

Refined gold	Refined silver (a)	Refined lead (a)	Lead content of lead bullion produced for export (a)	Refined zinc (a)	Refined copper (a)	Refined tin (a)
'000 fine oz. 1,053	'000 fine oz. 9,258	tons 203,101	tons 78,304	tons 185,531	tons 82,248	tons 3,021

(a) Source: Bureau of Mineral Resources.

CHAPTER XXVIII. REPATRIATION

§ 2. War Pensions, § 3. Service Pensions, pp. 1213-1218

The following table gives a summary of war and service pensions current at 30th June, 1965, and of the amounts paid in pensions during the year 1964-65.

WAR AND SERVICE PENSIONS: SUMMARY, 1964-65

Particulars	N.S.W.	Vic.	Qld	S.A.	W.A.	Tas.	Abroad	Total
Number of pensions in force at 30th June(a)—								
War pensions ..	223,269	186,563	98,446	63,831	55,881	27,101	4,297	659,388
Service pensions ..	20,609	16,011	11,115	6,752	7,779	2,658	..	64,924
Miscellaneous war and service pensions ..	315	168	671	95	40	8	6	1,303
Amounts paid (£'000)—								
War pensions(b) ..	26,483	22,567	11,669	6,620	5,723	3,107	734	76,902
Service pensions(c) ..	4,247	2,987	2,024	1,383	1,660	452	1	12,754

(a) Includes dependants of eligible pensioners.

(b) Includes miscellaneous war pensions.

(c) Includes miscellaneous service pensions.

CHAPTER XXX. MISCELLANEOUS

§ 4. Retail Trade

Value of Retail Sales in Each Commodity Group, Australia, p. 1246.—The following table shows the value of retail sales of goods in each of the commodity groups specified in the years 1960–61 to 1964–65 on a comparable basis throughout. The figures for the year 1961–62 were obtained from the census taken in respect of that year, whereas figures for the other years shown are estimates based on sample surveys.

VALUE OF RETAIL SALES: COMMODITY GROUPS, AUSTRALIA(a)

(£ million)

Commodity group	1960–61	1961–62	1962–63	1963–64 r	1964–65
Groceries	416.5	429.2	445.8	469.5	509.2
Butchers' meat	210.7	211.1	221.9	232.9	253.0
Other food(b)	352.6	365.0	381.6	395.9	423.7
<i>Total, Food and Groceries</i>	<i>979.8</i>	<i>1,005.3</i>	<i>1,049.3</i>	<i>1,098.3</i>	<i>1,185.9</i>
Beer, wine and spirits(c)	269.3	273.0	287.1	295.8	314.8
Clothing and drapery	450.4	450.0	464.0	504.3	534.4
Footwear	76.7	77.2	81.0	85.4	88.5
Hardware(d)	72.6	73.0	77.5	76.7	82.1
Electrical goods(e)	177.3	174.0	182.5	191.9	205.8
Furniture and floor coverings	117.0	115.0	122.1	134.8	148.8
Chemists' goods	121.5	132.9	142.1	152.9	167.3
Newspapers, books and stationery	80.1	83.2	85.9	95.1	100.9
Other goods(f)	241.8	245.0	257.9	274.7	295.2
<i>Total (excluding Motor Vehicles)</i>	<i>2,586.5</i>	<i>2,628.6</i>	<i>2,749.4</i>	<i>2,909.9</i>	<i>3,123.7</i>
Motor vehicles, parts, petrol, etc.(g)	824.9	801.5	988.5	1,079.4	1,155.5

(a) Excludes Northern Territory and Australian Capital Territory. (b) Includes fresh fruit and vegetables, confectionery, soft drinks, ice cream, cakes, pastry, cooked provisions, fish, etc., but excludes some delivered milk and bread. (c) Excludes sales made by licensed clubs. (d) Excludes basic building materials, builders' hardware, and supplies such as tools of trade, paint, etc. (e) Includes radios, television and accessories, musical instruments, domestic refrigerators, etc. (f) Includes tobacco, cigarettes, jewellery, sporting goods, etc., but excludes grain and produce and business machines. (g) Includes new and used motor vehicles, parts, petrol, etc., but excludes tractors, farm machinery and implements, earth-moving equipment, etc.

DECIMAL CURRENCY CONVERSION TABLES

As from 14th February, 1966, under the *Currency Act 1965*, a dollar/cent currency system, with one dollar equal to 100 cents, will operate in Australia (see pp. 809-11). To facilitate conversion of figures expressed in £ s. d. in this Year Book into dollars and cents, and for general use, conversion tables issued by the Decimal Currency Board are reproduced hereunder.

EXACT EQUIVALENTS TABLE
CONVERSION OF AMOUNTS OF £ s. d. TO DOLLARS AND CENTS

Pence	Cents*	Shillings	Cents	£ s. d.	\$
1	$\frac{1}{8}$ or .83333	1	10	10 0	1.00
2	$1\frac{3}{4}$ 1.66667	2	20	11 0	1.10
3	$2\frac{1}{2}$ 2.5	3	30	12 0	1.20
4	$3\frac{1}{4}$ 3.33333	4	40	13 0	1.30
5	$4\frac{1}{2}$ 4.16667	5	50	14 0	1.40
6	5 5	6	60	15 0	1.50
7	$5\frac{5}{8}$ 5.83333	7	70	16 0	1.60
8	$6\frac{3}{4}$ 6.66667	8	80	17 0	1.70
9	$7\frac{1}{2}$ 7.5	9	90	18 0	1.80
10	$8\frac{1}{4}$ 8.33333	10	100	19 0	1.90
11	$9\frac{1}{8}$ 9.16667	..	..	1 0 0	2.00
12	10 10	..	..	..	..

* Taken to nearest 5th decimal place.

The Exact Equivalents Table shows the relationships between pounds, shillings and pence, and dollars and cents as prescribed in the *Currency Act 1965*, namely:—

1 pound = 2 dollars 1 shilling = 10 cents 1 penny = $\frac{1}{8}$ ths of a cent

This table should be used where it is necessary to obtain exact equivalents in decimal currency of amounts expressed in £ s. d. For example, where rates or unit prices are expressed in £ s. d. in agreements between contracting parties, this table may be used to convert them to their exact equivalents in decimal currency.

BANKING AND ACCOUNTING TABLE
CONVERSION OF AMOUNTS OF £ s. d. TO DOLLARS AND WHOLE CENTS

Pence	Cents	Shillings	Cents	£ s. d.	\$
1	1	1	10	10 0	1.00
2	2	2	20	11 0	1.10
3	2	3	30	12 0	1.20
4	3	4	40	13 0	1.30
5	4	5	50	14 0	1.40
6	5	6	60	15 0	1.50
7	6	7	70	16 0	1.60
8	7	8	80	17 0	1.70
9	8	9	90	18 0	1.80
10	8	10	100	19 0	1.90
11	9	..	..	1 0 0	2.00
12	10	..	..	..	..

The Banking and Accounting Table converts £ s. d. amounts expressed in whole pence to decimal currency amounts expressed in whole cents. To convert an amount of £ s. d. to dollars and cents—multiply the pounds by two—to give dollars. Add the equivalent of the shillings and pence.

$$\begin{aligned}
 &\text{e.g., } \text{£}23 \text{ 17s. 10d.} \\
 &\quad \text{£}23 (\times 2) = \$46.00 \\
 &\quad \quad \quad 17\text{s. 10d.} = \$1.78 \text{ (from table)} \\
 &\quad \quad \quad \hline
 &\quad \text{£}23 \text{ 17s. 10d.} = \underline{\underline{\$47.78}}
 \end{aligned}$$

COMPREHENSIVE CONVERSION TABLE
CONVERSION OF AMOUNTS OF £ s. d. INTO DECIMAL CURRENCY TO
NEAREST WHOLE CENT

NOTE.—The Comprehensive Conversion Table is in no sense designed to give official direction as to how prices expressed in £ s. d. should be converted into dollars and cents after the changeover to decimal currency. The Decimal Currency Board has no authority to fix prices or other charges and the Comprehensive Conversion Table merely shows the nearest whole cent equivalent of various £ s. d. amounts expressed to the nearest halfpenny. The only exceptions are threepence and ninepence where the cent equivalent is shown as half a cent below the exact value in the case of the threepence and half a cent higher in the case of the ninepence. Because the Comprehensive Conversion Table in most cases gives approximations only, it is not suitable for converting unit rates or prices. It should be used only for converting the final balance of an account or the amount due for payment by a debtor.

<i>s.</i>	<i>d.</i>	Cents	<i>s.</i>	<i>d.</i>	Cents	<i>s.</i>	<i>d.</i>	Cents	<i>s.</i>	<i>d.</i>	Cents	<i>s.</i>	<i>d.</i>	Cents
..	..	1 0½	10	2 0½	20	3 0½	30	4 0½	40	5 0½	50	5 0½	50	50
1	1	1 1	11	2 1	21	3 1	31	4 1	41	5 1	51	5 1	51	51
1½	1	1 1½	11	2 1½	21	3 1½	31	4 1½	41	5 1½	51	5 1½	51	51
2	2	1 2	12	2 2	22	3 2	32	4 2	42	5 2	52	5 2	52	52
2½	2	1 2½	12	2 2½	22	3 2½	32	4 2½	42	5 2½	52	5 2½	52	52
3	2	1 3	12	2 3	22	3 3	32	4 3	42	5 3	52	5 3	52	52
3½	3	1 3½	13	2 3½	23	3 3½	33	4 3½	43	5 3½	53	5 3½	53	53
4	3	1 4	13	2 4	23	3 4	33	4 4	43	5 4	53	5 4	53	53
4½	4	1 4½	14	2 4½	24	3 4½	34	4 4½	44	5 4½	54	5 4½	54	54
5	4	1 5	14	2 5	24	3 5	34	4 5	44	5 5	54	5 5	54	54
5½	5	1 5½	15	2 5½	25	3 5½	35	4 5½	45	5 5½	55	5 5½	55	55
6	5	1 6	15	2 6	25	3 6	35	4 6	45	5 6	55	5 6	55	55
6½	5	1 6½	15	2 6½	25	3 6½	35	4 6½	45	5 6½	55	5 6½	55	55
7	5	1 7	16	2 7	26	3 7	36	4 7	46	5 7	56	5 7	56	56
7½	6	1 7½	16	2 7½	26	3 7½	36	4 7½	46	5 7½	56	5 7½	56	56
8	7	1 8	17	2 8	27	3 8	37	4 8	47	5 8	57	5 8	57	57
8½	7	1 8½	17	2 8½	27	3 8½	37	4 8½	47	5 8½	57	5 8½	57	57
9	8	1 9	18	2 9	28	3 9	38	4 9	48	5 9	58	5 9	58	58
9½	8	1 9½	18	2 9½	28	3 9½	38	4 9½	48	5 9½	58	5 9½	58	58
10	8	1 10	18	2 10	28	3 10	38	4 10	48	5 10	58	5 10	58	58
10½	9	1 10½	19	2 10½	29	3 10½	39	4 10½	49	5 10½	59	5 10½	59	59
11	9	1 11	19	2 11	29	3 11	39	4 11	49	5 11	59	5 11	59	59
11½	10	1 11½	20	2 11½	30	3 11½	40	4 11½	50	5 11½	60	5 11½	60	60
1 0	10	2 0	20	3 0	30	4 0	40	5 0	50	6 0	60	6 0	60	60
								<i>s.</i>	<i>d.</i>	\$	£	\$		
6 0½	60	7 0½	70	8 0½	80	9 0½	90	10 0	1.00	1	2.00	2.00		
6 1	61	7 1	71	8 1	81	9 1	91	11 0	1.10	2	4.00	4.00		
6 1½	61	7 1½	71	8 1½	81	9 1½	91	12 0	1.20	3	6.00	6.00		
6 2	62	7 2	72	8 2	82	9 2	92	13 0	1.30	4	8.00	8.00		
6 2½	62	7 2½	72	8 2½	82	9 2½	92	14 0	1.40	5	10.00	10.00		
6 3	62	7 3	72	8 3	82	9 3	92	15 0	1.50	6	12.00	12.00		
6 3½	63	7 3½	73	8 3½	83	9 3½	93	16 0	1.60	7	14.00	14.00		
6 4	63	7 4	73	8 4	83	9 4	93	17 0	1.70	8	16.00	16.00		
6 4½	64	7 4½	74	8 4½	84	9 4½	94	18 0	1.80	9	18.00	18.00		
6 5	64	7 5	74	8 5	84	9 5	94	19 0	1.90	10	20.00	20.00		
6 5½	65	7 5½	75	8 5½	85	9 5½	95	..	..	..	..	..
6 6	65	7 6	75	8 6	85	9 6	95	..	..	..	..	..
6 6½	65	7 6½	75	8 6½	85	9 6½	95	..	..	..	..	..
6 7	66	7 7	76	8 7	86	9 7	96	..	..	..	..	..
6 7½	66	7 7½	76	8 7½	86	9 7½	96	..	..	..	..	..
6 8	67	7 8	77	8 8	87	9 8	97	..	..	..	..	..
6 8½	67	7 8½	77	8 8½	87	9 8½	97	..	..	..	..	..
6 9	68	7 9	78	8 9	88	9 9	98	..	..	..	..	..
6 9½	68	7 9½	78	8 9½	88	9 9½	98	..	..	..	..	..
6 10	68	7 10	78	8 10	88	9 10	98	..	..	..	..	..
6 10½	69	7 10½	79	8 10½	89	9 10½	99	..	..	..	..	..
6 11	69	7 11	79	8 11	89	9 11	99		
6 11½	70	7 11½	80	8 11½	90	9 11½	100		
7 0	70	8 0	80	9 0	90	10 0	100		

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NOTE.—This index is preceded by a list of the special articles, etc., which have appeared in previous issues of the Year Book. A list of the illustrations contained in this issue will be found on page ix. Area, population, etc., of particular localities are indexed under the locality concerned. Subject matter extending continuously over more than one page is indexed according to the first page only. *Where more than one reference to a subject is given, the chief reference, wherever it has been possible to determine it, is indicated by italic type. Two references to a subject so indicated signify major, and approximately equal, importance.*

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