Role of Science Diplomacy – The Indo-Mauritian Collaboration

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Introduction

Mauritius, being a small island developing state, cannot sustain its development on its own as many countries in the world can. Collaboration can purely be of social and economic nature or can as well be of scientific and technical nature. The focus of this paper is to give an insight of the scientific nature of the cooperation and collaboration between Mauritius and India.

Collaboration of the scientific nature among countries has been existing since a long time but the term Science Diplomacy, recently coined, is categorized into the following three broad aspects according to the American Association for the Advancement of Science (AAAS)– diplomacy for science, science in diplomacy, and science for diplomacy.

Although at present, Mauritius has oversea missions in around 20 countries, it is worthy to note that the connection between Mauritius and India dates back to 1730. It established Diplomatic relations in 1948, well before Mauritius was declared Independent in 1968. After being occupied by the Dutch (1638-1710), French (1715-1810) and by the British (1810-1968), the country achieved freedom on 12 March 1968. Around half a million Indian indentured labourers were brought into Mauritius between 1834 and early decades of the 20th century, and out of them about two-thirds settled permanently in Mauritius. At present, 68 percent of the Mauritian population is of Indian origin.

India and Mauritius have been celebrating close collaboration since many years. India having a strong science and technology has been helping Mauritius in areas as diverse as Information and Communication Technology, Biotechnology, Environment,

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Hydrography, Legal Meteorology, Telemetry and Education.

As far as Tertiary Education is concerned, India is one of the most preferred host-country every year for Mauritian students for higher studies (undergraduate and postgraduate); around 90 scholarships are offered every year to Mauritian students to pursue studies in Indian Institutions.

With the above background, it is very clear to understand that post-independence, the priority of the country was to build a robust education system. To make education accessible to less fortunate ones, education was made free in 1976 and more recently in 2005; even transport facility has been made freely available to school students. Lots of efforts have been made over years to move the country towards a fully literate and technologically empowered nation.

Over the years, the literacy rate growth in Mauritius has been quite impressive; in 2011, the adult literacy rate was around 90 percent. However, considering science literacy, scenario is not quite encouraging (See Table below).

Science is a universal subject, and is a must for growth of the country. The nation needs critical mass of engineers, medical doctors, architects and other professionals as well as technical resource to meet future socio-economic challenges of the country. Even for those not opting for science as a career, its basic knowledge is crucial for better understanding of body for its proper healthy nutrition and for mitigation of abrupt climatic changes.

So there was an urgent need to address the issue of low science enrolment rate, and among the various measures, the proposal for setting-up a science centre was initiated, leading to the setting- up of the Rajiv Gandhi Science Centre in Mauritius.

Rajiv Gandhi Science Centre

This was set up on 3 October 1998 based on the Memorandum of Understanding between the then Ministry of Education and Human Resource Development, Mauritius and the National Council of Science Museums of India. Accordingly, the Government of India provided expertise in designing of exhibition galleries, supplied all exhibits and teaching aids and the Mauritius Government's main role was to provide land, construct building and run the Centre thereafter.

Considering India's vast expertise, the National Council of Science Museums (NSCM), Kolkata, was mandated to design and fabricate exhibits for exhibition galleries, outdoor science park, and a Mobile Science Exhibition. The NCSM was closely involved in planning of the Science Centre while interacting on technical matters relating to building construction

The RGSC was inaugurated on 30 November 2004 by Mrs Sonia Gandhi, and since then, the Centre has received more than 400,000 visitors. Presently, operational under the aegis of the Ministry of Education, Human Resources, Tertiary Education, Science, Research and Technology, the RGSC has one of its objectives, to inculcate scientific awareness in current and relevant fields and arouse curiosity among the public, in general.

Percentage of Students Opting Science Subjects

	Physics	Chemistry	Biology	Computer Science	Total Number of Students Examined
2012	30	32	25	33	15,918
2013	27	27	21	32	17,336
2014	25	25	19	34	17,102
2015	23	22	16	31	18,231
2016	24	22	13	34	17,506

Source : Mauritius Examination Syndicate

After 13 years of successful operation, the RGSC has realized its vision of becoming a Centre of Excellence in the communication and promotion of Science and Technology (S&T).

Wide Range of Activities and Achievements

The Rajiv Gandhi Science Centre set up on 5.3 acres, has a building on 4000 m^2, and has following objectives.

- Promote science and technology through various programmes, activities and exhibitions
- Supplement school education in a non-formal way through science demonstration lectures, science fairs and seminars for school students
- Inculcate scientific awareness in current and relevant fields and curiosity among public in general.

Visit to the Science Centre is not the only service the Rajiv Gandhi Science Centre has to offer. With a view to reach out a large number of students, the Centre is much more activity driven and conducts number of programmes.

Over the years to ensure repeat visitors to the Centre, the RGSC is involved in developing new

Activities	Audience Reached out
Develop and acquire new exhibits on emerging areas of technology—Chemical Weapon Corner and Rise of Digital India	11,200
Encourage students to undertake science projects that would enhance their Creativity, Reasoning ability and Skills — Model Glider Competition, Young Scientist in Action, Science Quest Competition, Kiddy Science Fair etc.	5,875
Organize lectures, seminars and workshops for various target groups—Workshops, Seminars, etc.	2,177
Develop interactive educational programmes in Science and Technology-Science Fairs, Biology Exploration Camp and Junior Mobile Science	2,706
Create awareness in impact of Science and Technology in Society—Sky Observation Programmes, Transit of Mercury, Solar Eclipse, National Science Week, etc.	11,555
Acquire and disseminate latest information in science and technology—Rajiv Gandhi Memorial Lecture, Science Popularizing Public Lecture	480
Collaborate with other Institutions for the promoting of Science and Technology—Africa Code Week, Science demonstrations, Setting- up of STEM Network, etc.	12,060
	Total : 46,053

Source: Rajiv Gandhi Science Centre

exhibitions in the fields of interest. Last year, there was an exhibition related to impacts and use of Chemical Weapon. A travelling exhibition was also hosted at the RGSC entitled "Rise of Digital India". The exhibition showcased phenomenal rise of Computer Sector and Digital Technologies in India after Independence.

As a means to support school curriculum in a non-formal way, the RGSC also organizes programmes to encourage creativity, reasoning ability skills like Science Quest, Model Glider

Competition Programme around celestial events, like transit of venus that was visible from Mauritius and Solar eclipses, attract visitors. On regular basis, the RGSC organizes sky observation programmes in different locations of the country. The solar eclipse in September 2016 attracted around 5,000 visitors to the Centre, and around 17,000 special solar eclipse glasses were sold to school -students and public.

The RGSC also creates awareness to specific groups of audience on specific areas through public lectures. The Rajiv Gandhi Memorial Lecture ,being a traditional annual event, was delivered last year by Dr Ramesh Caussy, Chief Executive Officer and Founder, Partenering Robotics on a topic entitled " Economie numérique et cognitive : Innover ou être Disrupté " to an audience of 120 science professionals, administrators and general public.

Forthcoming collaboration – Setting up of a Satellite Centre

The setting up of the Rajiv Gandhi Science Centre was the end of the collaboration between the RGSC and the NCSM through their respective governments.

At the 10th Session of the Indo-Mauritian Joint Commission, held in December 2007 in Mauritius, the proposal to set up a Planetarium for the Rajiv Gandhi Science Centre, was retained and approved by the then Minister of Finance and Economic Development, Mauritius, Hon. R. Sithanen, and the then Minister for External Affairs of India, Shri P.Mukherjee.

During the state visit ofthe Honourable Navinchandra Ramgoolam, GCSK, FRCP, Prime Minister of Mauritius, to India in February 2012, a second Memorandum of Understanding was signed between the Government of the Republic of India through the National Council of Science Museums and the Government of the Republic of Mauritius through the Rajiv Gandhi Science Centre Trust Fund for the Planetarium.

The agreement says that two countries would help in setting up a satellite centre, including construction of a 12 diameter Digital Planetarium with latest technological projection systems, two new exhibition galleries, and revamping of old galleries at the Centre.

Based on the similar agreement for the phase 1, the responsibility of the Government of Mauritius is for building construction. The Government of India would be providing all equipment for the digital planetarium, exhibits for new and existing galleries, which would be costing INR 104.6 Million. The Planetarium would indeed be unique in the Indian Ocean and would attract Mauritians as well as other tourists.

The land where the Planetarium would be constructed has already been earmarked; it would be near the university campus at Réduit. The satellite centre would have following objectives.

- Introducing people in Mauritius to the world of astronomy and making them aware of celestial phenomena;
- Offering non-formal education in Astronomy, Earth Sciences , Geography, etc;
- Providing a supporting toll for teaching of astronomy to students;
- Turning RGSC into a suitable location to hold regional conferences and workshops in astronomy and related subjects.

The Planetarium complex would have a medium size planetarium (125-seater), supported by some exhibits on astronomy and astrophysics through which visitors to the Planetarium can validate their experience. Attractive planetarium programmes would be throughout the year, supplemented by special participatory activities on astronomy.

Conclusion

The case of the Rajiv Gandhi Science Centre is an excellent example of Science Diplomacy, more precisely Science in Diplomacy, whereby professional expertise has been provided to a country with lesser experience in the field of science popularization and promotion. Some collaborations take substantial time to materialize. This is where diplomacy would play an important role; mainly in getting through with the agreements and expediting matter tactfully.

References

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