



The Blue Economy: India and COG

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Abstract

We have always lived in a VUCA world. That is to say that our world is characterised by vulnerability, uncertainty, & [{]|^φic^hæ} ðhæ { ài* ~òc^ÉhU~ íÁ]|æ)^c^h { æ}z^•c^hc@z•hæ||hc [[h [-c^}hâ}h { ^'iæðh, æ^•Éh} [, @^!^hà^cc^!h^c^ {]|è, ^ðhc@æ}hâ}h &æ}hà^hæâç^!•^|~h

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Change and the last to do anything about. All of which point to a better way in which to govern the ocean in order to derive the best economic benefits from this, the last frontier and our best hope.

Ocean is our past, our present and our best hope for the future and we must look after it. Sadly, as Roger Revelle famously said 'We know less about the ocean's bottom than about the moon's back side'. Hence the renewed efforts to improve our understanding of the Ocean and complete the knowledge gaps through the United Nations International Decade of Ocean Science 2021-30. We also know too well that the conflicting demands of people, planet and profit must be balanced to achieve equity, justice and peace – Pacem in Maribus leading to Pacem in Terra.

is depicted in the six circles underneath the logo of the consultancy service operated by the authors.

Some Definitions

The World Bank defines the Blue Economy as sustainable use of ocean resources for economic growth, improved livelihoods, and jobs while preserving the health of ocean ecosystem. One that simultaneously promotes economic growth, environmental sustainability (including preservation and protection of the ocean ecosystems) and social inclusion. One that operates within the regulatory framework provided by the UNCLOS and other national, regional and multilateral as well as sectoral governance regimes [5]. One that can contribute to addressing issues of vulnerability, including those associated with remoteness and natural disasters, by fostering international and regional cooperation.

The European Commission defines Blue Economy as all economic activities related to oceans, seas and coasts. It covers a wide range of interlinked established and emerging sectors. The EU approaches Blue Economy primarily from an economic perspective with specific regard to jobs and skills creation, investments and economic growth. While the EU still talks of environmental protection and sustainability, their primary focus takes us back to the age-old profit motive which would be deterrent to the environment.

According to the Commonwealth, the 'Blue Economy' is an emerging concept which encourages better stewardship of our ocean or 'blue' resources. It underpins the thinking behind the Commonwealth Blue Charter, highlighting in particular the close linkages among the ocean, climate change, and the wellbeing of the people of the Commonwealth [6]. At its heart, it reaffirms the values of the Commonwealth, including equity and public participation in marine and coastal decision-making. It supports all of the United Nations' Sustainable Development Goals (SDGs), especially SDG14 'Life Below Water', and recognises that this will require ambitious, co-ordinated actions to sustainably manage, protect and preserve our ocean now, for the sake of present and future generations. Given the Commonwealth and UN OHRLS have significant overlap of membership, there seems to be an appropriate focus on issues of people and sustainability.

Discussion

Ocean Governance

Ocean Governance is the conduct of the policy, actions and affairs regarding the world's ocean. Much has been written on this topic but this section talks about the perspective of one author developed in 2002

fast growing and successful large economy in the years to come.

'Unity in Diversity' has always been a motto of India alongside 'The World is One Family' from the Sanskrit – Vasudhaiva Kutumbakam, reinforcing the concept of One Planet, One Ocean. Jawaharlal Nehru the first Prime Minister of India and the leader of the Indian National Congress, vigorously promoted unity and diversity as an idea and ideal essential to national consolidation and progress. Nehru wrote extensively on this topic exploring it and exhorting it in detail in his work the Discovery of India. A similar idea is later emulated in the European motto and ideal of In Varietate Concordia – meaning United in Diversity – adopted in 2000 from the Latin phrase coined by the Italian Nobel literature laureate Ernesto Teodoro Moneta. Likewise, Mahatma Gandhi had always talked of Sarvodaya meaning development of all through Antyodaya, the uplifting of the weakest in society, borrowing from John Ruskin's 1860 book 'Unto the Last'.

More recently, Prime Minister Narendra Modi has broadened these concepts by the coining the word SAGAR – an acronym for Security and Growth for the entire Region – which also is the Sanskrit word for the Ocean. India has been trying to consolidate its strengths through geopolitical, economic and strategic alliances in the region and beyond by being associated with many regional and international alliances right since their inception or soon thereafter – South Asian Association for Regional Cooperation (SAARC), Indian Ocean Rim Association (IORA), Antarctica Treaty System (ATS), the Arctic Council, the Commonwealth, United Nations Convention on the Law of the Sea (UNCLOS), International Maritime Organisation (IMO), just to name a few.

In addition, India is a member of the G20, an observer at the Organisation for Economic Cooperation and Development (OECD) and a strategic partner of the European Union, apart from being a member of almost all the UN agencies and organisations, most since their inception and a plethora of other regional and sub-regional bodies. India is also party to a vast range of multilateral environmental agreements (MEAs) most of which have a tremendous influence on the Ocean system.

Within the federation, 9 states and 4 union territories are coastal and the others are landlocked. Two of those 4 union territories are archipelagos in the form of Lakshadweep in the Arabian Sea and Andaman and Nicobar in the Bay of Bengal. Two of the large global marine ecosystems (LMEs) namely the Arabian Sea and the Bay of Bengal flank India. As Admiral Robin Dhowan says, in one of his recent talks, one can get a true perspective of how the sea surrounds India is by looking at the map upside down. One can then get an idea of how India needs to be open to the ocean to give and receive goods and services and to benefit from the riches that the maritime domain has to offer and at the same time realise our obligation to protect and preserve the marine environment.

Peninsular India (2nd largest peninsula in the world) is also strategically surrounded by the the Bay of Bengal (biggest bay in the world) to the East, the Indian Ocean to the South and the Arabian Sea to the West and is endowed with a coastline of 7517 km (18th longest in the world) as against a land frontier of 15,200 km. The provisions of the UNCLOS mean that India has a claim to 2,305,143 sq km of Exclusive Economic Zone (also 18th largest in the world) and the Commission of the Limits of Continental Shelf has granted 700,000 sq km continental shelves in the Arabian Sea and the Bay of Bengal put together. This

the coastal zones and being great carbon sinks.

Unfortunately, India has fallen prey to fail to recognize the effective value of the unique mangrove system. The mangroves are the beginning and the end of the oceans. A healthy ocean starts in the tropics with healthy mangrove forests, moves to healthy seagrass beds, and ends with healthy coral reefs [16]. All three of these ecosystems belong together and must not be destroyed by human greed. Also, our future medicines will come from these three areas and will surpass all known artificial medicines by far.

Framework for Ocean Activity

The Council for Scientific and Industrial Research (CSIR) is an apex body that conducts research activities under the Ministry/Department of Science and Technology (DST/MST) of the Government of India and has pre-independence origins dating back to 1942. Since then, prominent research institutes and laboratories were created under the aegis of the CSIR. The National Institute of Oceanography (NIO) Goa, established in 1966, is one of the 37 constituent laboratories and the premier ocean research institute under the CSIR which itself is under DST/MST. The Central Marine Fisheries Research Institute (CMFRI) Kerala, established just before independence in 1947, is one of 101 institutes under the Indian Council for Agricultural Research (ICAR) since 1967, which comes under the purview of the Ministry of Agriculture and Farmers Welfare (MoAFW) [17]. This is just to give an example of fragmented governance of the ocean related activities in India.

The Department of Ocean Development (DoD) was created in July 1981 as a part of the Cabinet Secretariat directly under the charge of the Prime Minister and came into existence as a separate Department in March 1982. This was an attempt to unify all ocean related activities under one umbrella organisation. The DoD functioned as a nodal Ministry for organizing, coordinating and promoting ocean development activities in the country. In 1982 the DoD prepared the Ocean Policy Statement which was debated and approved in both Houses of the Indian Parliament.

Department of Ocean Development

In 1981, when the idea of launching to Antarctica was being considered, there was a lot of scepticism and uncertainty about the venture. However, the indomitable spirit of Indian scientists prevailed upon the policy makers and the possibility of sending the first scientific expedition to Antarctica, which combined science with adventure, became a reality. The expedition successfully landed on 12 January, 1982 in Antarctica, Syed Zahoor Qasim as leader of the expedition.

To date, 17 scientific expeditions to Antarctica have been launched, one every year. The first Indian permanent station was established in the year 1983 on the Antarctic ice shelf, and was named Dakshin Gangotri. As is true of any material life on the ice, the station slowly sank down. By the time its warranty period for safe living was over, a new station in the rocky hill ranges, known as Schirmacher Ranges about, 100 km further south, was established and named Maitri.

Maitri is an international, round the year station. It is capable of accommodating about 25 persons comfortably, and is well furnished with living space, laboratories and modern amenities, which offer excellent infrastructure for carrying out front-ranking research in several areas of science. Communication between India and Maitri is well established through satellite and Internet communication. In 1983, India was selected a Consultative Member of the Antarctic Treaty followed by its election as a Member of the Scientific Committee on

Antarctic Research (SCAR) in 1984.

Scientific work in the areas of atmospheric sciences and meteorology, geology and geophysics, biology and oceanography, and environmental physiology and medicines are some of the interesting subjects in which India is conducting its various programmes. Polar research which was not known in the country until the first expedition landed, has gained considerable interest and today there are nearly 25 institutions working on the data, material and samples collected from Antarctica.

A new institute for Antarctic research was established in 1998 and is now renamed National Centre for Polar and Ocean Research (NCPOR)

Tripolar World

India, with its interests in the Arctic and the Antarctica, as discussed above, is increasingly preoccupied with the third largest body of ice to its north in the form of the Himalayas and wants to develop an idea of a tripolar world. India is quite a distance away from the Earth's poles, but its Polar programme is over 30 years old and has resulted in the establishment of three research stations in Antarctica (Bharati, Maitri and Dakshin Gangotri), and one in the Arctic (Himadri) [18].

The Hindu Kush-Himalayan region is the storehouse of the third largest body of snow and ice on our planet after the Antarctic and the Arctic. In 2016, the Indian Government built a high-altitude research base Himansh in the Himalayas. Because of similarities between the Antarctic, Arctic and Himalaya, scientists are now describing these three regions as the 'Three Poles' with the Himalayan system as the third Pole.

Manganese Nodules Programme

The first successful cruises for polymetallic nodules were undertaken from December 1980 to January 1981 in the Indian Ocean on board the Indian built Research Vessel Gaveshani of the National Institute of Oceanography (NIO). The first nodule sample was lifted from a depth of about 5 km. This was followed by numerous samples of nodules from the Indian Ocean. The success of these cruises, and the others which soon followed generated a great deal of interest within the scientific community of India. The Government of India directed the newly established Department of Ocean Development to act as a nodal agency in the country for policy, co-ordination, promotion of research and to give a new thrust to the overall development in the ocean sector.

The Department identified the programme of the exploration of polymetallic nodules as one of the major thrust areas. India was the first among the developing countries to launch a massive effort to the oceanographic programme dedicated to manganese nodule exploration. Based on the result of the exploration carried out by the NIO, India became a "Pioneer Investor" in the field of deep-sea mining in 1987. A prime area of 4 million sq km was initially demarcated in the Central Indian Ocean Basin (CIOB) in which extensive work had to be conducted to identify the most promising mine site.

These efforts led to the demarcation of a total application area of 300,000 sq km. which was divided into two regions of 150,000 sq km of each of equal estimated commercial values. The Indian claim for a mine site in the Central Indian Ocean was thus led with the Preparatory Commission of the International Seabed Authority (PREPCOM) in January 1984. After prolonged negotiations among the first group of pioneer investors (India, France, Japan and the then FSU) and with the PREPCOM, the Indian application was registered by the PREPCOM and an area of 150,000 sq. km was allotted to India. Thus, India became

the first country in the world to have the registration of a mine site. This event was regarded as an important landmark in the history of Indian Oceanography.

In March 1983, the Department of Ocean Development acquired a most sophisticated and highly advanced oceanographic research vessel "Sagar Kanya". Designed and built in the then Federal Republic of Germany, it has full capabilities to work in the field of physical and chemical oceanography, meteorology, marine biology, marine geophysics and marine geology. The ship has been fitted with a Multi-Sea Beam System, along with underwater TV camera, to study the sea bottom and obtain photographs [19]. The ship has so far completed

Ministry of Industry; Ministry of Education; Ministry of Agriculture; Ministry of Renewable Energy; Ministry of Ports, Shipping and Waterways; Ministry of

Industries (FICCI) has suggested that the government should create a new Ministry of Marine Resources, as the erstwhile Ministry of Fisheries and Aquaculture is unable to handle the challenges following the thoughts, all related, some conflicting, others complementary. It will involve safeguarding the marine ecosystem.

Urgent attention needs to be paid to linkages between human health and marine resources. Climate-driven species redistribution is one of the major challenges in the 21st century.

Indians can play the equivalent of the corporate social responsibility in the internal sense by being altruistic without being big brother.

It is not only the oceans but also the humans but hope is on the horizon. Alongside the fact that a large population creates demand, there are opportunities through the pursuit of sustainable development.

recognise also through the words of Baruch Spinoza (1632-1677) it

'Revolution in the Ocean', his vision was based on two fundamental principles: first that all aspects of ocean space are interrelated and should be treated as an integral whole; and second, that the seabed beyond national jurisdiction and its resources are the common heritage of mankind – a striking departure from earlier thinking on ocean space. Was he perhaps naïve to think the ocean regime would perhaps be mostly Freedom of the High Seas in the waters and the Common Heritage of Mankind in the Seabed with a rather narrow part of the sea in the form of Territorial Sea under national jurisdiction? This question arises given the carving up of the Ocean with over 40% of the Ocean under national jurisdiction (Territorial Sea, Contiguous Zone, Exclusive Economic Zone, Continental Shelf, Extended Continental Shelf, Archipelagic Waters) with little concern hitherto for the other 60% which is beyond national jurisdiction (High Seas and International Seabed Area or, simply, the Area).

Both the Areas beyond National Jurisdiction (ABNJ) and the regime for International Seabed Area are currently under intense scrutiny by the world community, and quite rightly so. The former through the Intergovernmental Conference on an international legally binding instrument under the United Nations Convention on the Law of the Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction and the latter through the range of studies being conducted under the aegis of the International Seabed Authority through a range of rigorous environmental impact assessments and development of code of conduct for any future ocean mining.

The other area that is receiving a lot more attention is our efforts to learn more about the Ocean. The recently launched United Nations International Decade of Ocean Science for Sustainable Development, with the logo the science we need for the Ocean we want will give us many clues as to how ocean functions and how we can allow it to function better. As we say, our whole thinking must change and the change must come from within. It is also important that each one of us must be that agent of change for better and further that we must all do the right thing because it is the right thing to do.

Conclusion

One of the possible solutions could be to create an Indian National Centre for Ocean Governance (COG) for education, training, consultancy and knowledge creation and dissemination in this area. Complementary to COG and, possibly, even integral to it is another

