A National Council for Inner Space (Oceans)

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The earlier laws or rather customs of the seas were structured around the notions of the freedom of the seas which were based on two assumptions. Firstly, the resources of the oceans were considered inexhaustible and secondly the resources were treated as 'res-communis' which is 'belonging to all'. But in practice, this open seas concept was restricted to the privileged few who utilised the oceans as a convenient ambivalence for their own self interests to promote commerce, conversion, and colonisation and generally in that sequence!

THE OCEAN OF DESTINY

The Indian Ocean which is the smallest of the 3 oceans is almost a land-locked sea containing 36 littoral and 11 hinterland states with 3 clusters of islands - Mauritius and Malagassy; Laccadives, Maldives and Chagos; Andaman and Nicobar. In this ocean space hangs peninsular India, as it were, from the roof of the Himalayas with her 6000 miles of coastline jutting out into this embayed ocean encompassing 11 major and 162 minor ports. One fourth of the world's population lives in this region practising all the major religions of the world and with a spectrum of governments from dictatorships and monarchies to many hues of socialism and democracy. Admiral Mahan prophetically termed it as the 'Ocean of Destiny' in the 18th century when he said "whoever controlled the Indian Ocean dominated Asia. This ocean is the key to the seven seas. In the 21st century the destiny of the world will be decided on its waters".

THE EAST WIND

This exotic and highly civilized region hence attracted travellers and traders from all over the world particularly from the fourth century onwards with Adulis (Massawa) being the major entrepot followed by Zinj (Zanzibar) and Malagassy. The Tang, Sung and Ming dynasties of the celestial Chinese empire encouraged trade with East African ports for ivory, Rhinoceros, horns, copper, pearls, camphor, incense and rare animals like the giraffe, zebra and oryx. The Chinese Admiral, Cheng Ho who commanded over 62 ships and 37,000 soldiers made seven voyages to this area. But suddenly in the mid 15th century, Emperor Cheng-t'ung issued an edict prohibiting the

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construction of ships as it was felt that such trading expeditions were wasteful and unnecessary with no great benefit to China. Hence the lofty sails were dramatically furled and the nautical knowledge and technical expertise built up over-centuries were deliberately extinguished. Thereafter the Arab master mariners took over the trade until the advent of the Western Powers in the sixteenth century.

In the Bay of Bengal, the seas were used mainly for migration, conversion and cultural inroads by the Pallavas, Sailendras and Cholas propelling 'Farther India' via the States of Kambuja (Kampuchea), Champa (Thailand), Srivijaya (Malacca and Sumatra) to meet the Chinese civilisation on the banks of the Mekong river in what was aptly called Indo-China.

THE WEST WIND

It was however with Papal authority that the Portuguese opened up India when Vasco-da-Gama discovered the Cape of Good Hope route, thereby breaking the monopoly of the Arab middlemen for transporting goods via the Mediterranean. He was followed by Francisco de Almeida who vanquished the Arabian and Moghul Fleets and was granted trading facilities. But his successor, Alfonso d' Albuquerque had a different strategy. He captured the choke points of Mozambique and Kilwa, Socotra, Aden, Hormuz, Malacca and Goa in the early 16th century and sealed off the Indian Ocean to ensure Portuguese hegemony and also built fortresses, coerced subordinate alliances and encouraged mixed marriages. But with the defeat of the Spanish Armada, a period of interregnum followed with the Maharattas, Dutch and French disputing the Portuguese claim to 'exclusivity' and following it up by capturing Malacca, Java, Mauritius and Pondicherry.

But after the Battle of Trafalgar, Britain also claimed 'exclusivity' by enforcing the concept of 'res-nullius' and India became the brightest jewel in the British crown. It was only at the end of World War II when 47 littoral States gained their freedom that exhausted Britain withdrew from this arena. The Super Powers now moved in and extended their influence through arms supply, proxy governments and renting base facilities such as Diego Garcia and Bahrain.

Similarly, the Soviets entered into a reciprocal escalation for economic and security reasons and befriended nascent nations in their liberation struggles. It is interesting to observe that when the US Seventh Fleet entered the Bay of Bengal in 1971 during the Indo-Pakistan conflict, Admiral Gorshkov surfaced the Soviet Brigade of nuclear submarines in the Indian Ocean for being photographed by the American satellite in order to establish their presence in this conflict arena. Hence this 'Ocean of Peace' deteriorated into

an ~Ocean of Tension'.

NEW OCEAN REGIME

But due to the increasing anxiety of the newly liberated countries to meet the growing needs of their people, they challenged the existing convention of having no rights beyond their territorial limits of 3 miles. Iceland fired the first salvo in the 'Cod war' against Britain to back up her claim for a 50 miles exclusive fishing zone which shocked contemporary maritime nations.

In 1973, the United Nations convened a conference on the Laws of the Seas and after nine years of negotiations, 142 nations accepted the new ocean regime which extended the Exclusive Economic Zone (EEZ) to as much as 200 miles for the conservation, management, exploration and exploitation of living and non-living resources with separate conventions for archipelagic waters, international straits, marine pollution and sea bed authority. Consequently, India peacefully acquired another two million square miles which is nearly two-thirds of her land mass and became the twelfth largest EEZ in the world. In addition, as a 'Pioneer Investor', India was also granted the right to exploit a further 150 thousand square miles in the Central Ocean for the recovery of polymetallic nodules.

FOOD, CHEMICALS AND DRUGS FROM THE SEAS

The Indian Ocean is said to contain an annual catch of 11 million tons of fish of which only one quarter is harvested. Nonetheless, the fishing industry whose production costs are less than cattle, piggery and poultry gives employment to thousands of fishermen, food processors and post harvest activities which bring in crores of rupees in foreign exchange. Hence the urgency to develop fishing harbours, construct fuel efficient trawlers, cold storages, processing plants and credit facilities to enlarge the annual catch which are still proving attractive to the trawlers from far away Taiwan, Korea, Thailand, Japan and the USSR. In addition, acqua-culture and mari-culture have significant potential as seen from the Japanese example, particularly in view of the interest shown by the world Bank and the Indian Ocean Fishery Commission (IOFC).

Among the other marine by-products, seaweeds constitute chemicals such as agar, alignates etc which are used in food, textiles and pharmaceuticals. Seaweeds and phytoplankton are also sources for anti-fertility, anti-viral, anti-bacterial and hypotensive activity. Besides marine chemicals such as salt, bromine, calcium, gypsum, and sulphur are already commercially viable.

ENERGY AND POLYMETALLIC NODULES

Off-shore oil is estimated to be 60 per cent of India's reserves. Hence

from one rig in 1973, there are to-day seven rigs off Bombay together with four seismic, 25 supply and four inspection vessels, 10 helicopters, and over 16 platforms with 600 Kms of submarine pipe line which has saved the country billions of rupees in foreign exchange.

Further harnessing of ocean energy from waves, temperature differences, tidal heights, salinity gradients and Ocean Thermal Energy Conversion (OTEC) will help to support coal, hydel, oil, gas and nuclear power in India's bid to resolve the energy crisis.

The sea bed of the Pacific and Indian Oceans are said to be strewn with trillions of polymetallic nodules like a 'windfall of apples' containing manganese, copper, nickel, iron, aluminium, cobalt, lead, molybdenum, silver, gold and other metals which will last for centuries as against the land reserves of 50 years.

DATA, TECHNOLOGY & HUMAN RESOURCES

The route to these new sources of energy, minerals and food necessitates a hop, step and jump in the trichotomy of materials, instrumentation and environment. The need for self-reliance and selective import of adaptive technology relating to submersibles, seabed mining, corrosion, accoustic tomography and remote sensing presupposes an expanded and centrally locaed ocean data system linked to the World Data Centre (WDC). The creation, therefore, of a self-reliant technological base which is the key to ocean developent is in turn dependent on the availability of more ocean based disciplines in universities and IITs to achieve a scientific spurt comparable to the 'green revolution'. There is, therefore, an urgent requirement to establish an Institute of Marine Technology to augment human resource development in this decade of the seas. The Norwegian Institute at Trondheim, The Sea Grant College Programme of the USA and the Ocean University in Beijing merit a careful study.

SEA TRANSPORTATION AND CONFLICT MANAGEMENT

Cargo transportation by sea is the cheapest mode of transport. More than a lakh of merchant ships continuously ply the oceans transporting nearly 140 million tons of cargo annually to Indian ports. Port development, modernisation, containerisation, inland waterways as also simpler procedures for customs, stevedoring and tariff structures require early implementation.

With regard to conflict management, maritime strategy has much wider ramifications than continental strategy as the oceans have far reaching international repercussions - political, military and economic. The indivisibility of the seas has enabled external powers to base their floating missile platforms

not only in international waters but also within confined waters which in turn has tended to fuse continental and maritime strategies. Therefore sea power is said to be the flexible trip wire for maritime security as seen in the Seychelles, Mauritius, Sri Lanka, Fiji and the Maldives.

ATMOSPHERE, OCEAN HEALTH AND ANTARCTICA

With 5 billion people on earth releasing 18 billion tons of carbon dioxide into the atmosphere together with CFC (Chloro Fluro Carbons) from refrigeration and aerosol systems, a 'hot house' effect is influencing the precipitation patterns. The result is warmer climate, rising sea levels, drought conditions and the depletion of the ozone layer which in time will cause catastrophic damage to the earth's atmosphere.

Again due to the population growth and industrial activity along rivers, estuaries and the coast, the waters are being polluted with sewage and industrial wastes as also by thermal and oil pollution. The oceans are fast becoming a dust-bin for human refuse which is not only threatening living resources but also affecting the multi-million leisure and tourist industries. UNDP has undertaken the Regional Seas Programme in order to improve coastal waters management by monitoring and controlling air, sea and land pollution.

The Continent of Antarctica is the main 'heat sink' of the oceans and contains not only three-fourths of the world's fresh water resources but also has large reserves of minerals and shrimps termed Krill which constitute the basic food for this ecosystem. It is, therefore, necessary that when the Antarctica Treaty comes up for review in 1991, India being the only treaty member from this region, should ensure that the benefits of this fabulous ice continent are not confined to a few affluent nations but are available to developing countries.

NATIONAL COUNCIL FOR INNER SPACE

The oceans have therefore become a fish-pond, rubbish tip, resource mine, international highway and self-effacing battlefield. The key to a dynamic ocean policy will depend on India's ability to marry sophisticated technology with high finance in order to exploit the EEZ which is perhaps the 'panchayati raj' of our ocean regime for both 'garibi hatao' and 'Bekari hatao'. Hence it is necessary to coordinate and harmonise the wide spectrum of ocean activities which in most countries are vested in five to 15 ministries such as India's Surface Transport, Agriculture, Food Processing, Mines, Defence, Revenue, External Affairs, Science and Technology, Environment, Law, Atomic Energy, Off-shore Oil, Natural Gas and Ocean Development. Sri Lanka's National Aquatic Resources Agency (NARA), America's Nation-

al Oceanic and Atmospheric Organisations, France's Ministry of Oceans, Pakistan's National Maritime Affairs Coordination Committee and India's Ocean Science & Technology Agency (OSTA), which sadly lacks muscle, are some of the institutions for coordinating multi-disciplinary ocean activities which are particularly crucial for developing countries in view of their inherent resource crunch. China, on the other hand, has managed to forge ahead after a comparatively late start by putting all ocean activities under one roof in Beijing.

It is, therefore, for consideration that a National Council be constituted for Inner Space (Oceans) under the Chairmanship of the Prime Minister on the same lines as the National Development Council (NDC), Island Development Authority (IDA) or Council for Scientific & Industrial Research (CSIR) with the existing ministries taking sectorial responsibilities for their allotted tasks. This arrangement could be on a three tier structure for policy formulation; planning and coordination; and monitoring and implementation for a wide spectrum of activities, excluding Defence, for more effectively utilising inner space which is perhaps the last frontier of mankind.

CONCLUSION

In conclusion, it will be observed that the emerging dynamics of the ocean emphasises the necessity for planners to invest in the exploitation of the seas and sea-bed, creating multi-disciplinary institutions, enlarging scientific resources, efficiently manage sea transportation, diffuse factors that attract external interests and provide new vistas of employment and economic growth. A Central Ocean Data Base, an Institute for Marine Instrumentation and a National Council for Inner Space could well be the triad on which will depend our ocean destiny. Failure to do so will however, not be instantly visible nor seemingly catastrophic. The back slide will continue to be subtle and gradual but similar to the AIDS synodrome. Therefore, the exploitation of the seas and sea bed for the improvement of our weaker sections may not be the single most important task in the remaining years of this century - but then who knows - it may'!