CHAPTER- II

INDIA’S MARITIME RESOURCES AND CAPABILITIES

Ocean and Seas form the largest ‘No man’s Land’ that is yet to be fully harnessed. While assessing the importance of the oceans, Late President Richard Nixon, in his report to the congress had said, “the oceans covered two third of the earth. Mans use of this common asset is now undergoing a transformation. New technique exists or are being developed which led to a vastly increased exploitation of the minerals and living resources of the ocean.”

The industrial and economic well being of a nation is not possible unless her maritime assets are safeguarded and exploited effectively. According to GOM report on National Security, submitted to the Prime Minister on 26 Feb. 2001, ‘little has been done over the years to understand or take action to create the infrastructure for the protection of India’s vast coastal areas.

India is blessed with a long coastline of 7615 km. Though it falls halfway to nation land frontiers of 15000 kms., yet by adding up waterways comprising territorial sea area of 12nm, Contiguous zone of 24nm, Exclusive Economic Zone (EEZ) of 200nm and a Continental Shelf of 350nm, India’s coastal jurisdiction goes up by several folds. Unlike seen

2 Chaudhury, Rahul Roy, India’s Maritime Security, Knowledge World, New Delhi, June 2000,p-48
as an encroachment on the hinterland this additional sea mass extend to the country’s sovereign rights over all the living and non living resources away from the shores, besides exclusive control with regard to activities related to economic exploration and exploitation of the sea.

It was until 13th Century, that India was most flourishing by utilising her sea resources and possessed a strong sea power. However, the neglect of maritime security which earlier resulted India losing her independence, there was no reason why it had not changed despite a rich history of 5000 years. According to Adam Smith, the Architect of Mercantilism, ‘the ability of a nation to wage war is best measured in terms of its productive capacity.’ For him, Britain must be prepared to wage war because an industrious and upon that account a wealthy nation of all nations is the most likely to be attacked. While Smith repudiated the war loan as principle means of financing wars, he recommended Navigation Act and Fisheries at the heart of mercantilism. In fact, growth in economic system was linked to the national security and for national unification and national power.

In British mercantilism it was Geo-economics turning into geo-politics. But the geo-politics of 21st century may well turn out to be the geo-politics of maritime environment. In this regard, India’s sea potential and

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its scope of merchandising is abreast with multiple inadequacies. Britain for that matter do not possess geo-political or geo-strategic location. In size it is less than the state of Punjab (India). But being an island country, it was her sheer goal of becoming a world maritime power, that it harnessed its maritime potential, signifying relationship between economy and power where country’s naval strength was not enhanced for the force projection, but more as a protectorate of managing trade.

This vast sea area offers an enormous potential for generating opulence both in terms of meeting domestic requirements and enrichment through trade. But as is said, ‘fishes only grow old in India’. India has not made much of headway in advancing its maritime interests. For instance, despite India’s long coastline and claimed habitat India’s contribution to fish trade was just around 1 percent in 2008 with nothing much appreciable after that. China on the other hand, has consolidated its position as a top sea food trading country of the world accounting for over 10 percent of the global export market.

Unlike Britain, India has a coastline which is 15th longest in the world. According to Indian National Centre for Ocean Information Service, there are around six million fishermen in the country amongst them nearly 2.4 million are full time, 1.45 million part time and rest are occasional,

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6There are only 9 Indian States that have Coastlines. The total length of coastline of India including the coastlines of Lakshwadweep Islands in the Arabian Sea and Andaman and Nicobar Islands in the Bay of Bengal is 7516 km. While the length of Coastline of Indian mainland is 6100 km. The state in India with the largest coastline is Gujarat. Andhra Pradesh is the second state having largest coastline. Goa is the state having smallest coastline in India. See: http://generalknowledgequizblog.com/2011/04/9-indian-states-having coastline.html Accessed on April 9, 2011.
deriving their livelihood from the 3600 fishing villages situated along the Indian coastline. Again out of the total country’s population of more than one billion, the population of 11 coastal states is less than half, but then there is a need to explore the percentage of people engaged in maritime activities. On the other hand, the Indian fishing fleet consist of nearly 2,40,000 boats of which only 47,000 are mechanised.

Table 2.1 Marine Fishing Statistics

<table>
<thead>
<tr>
<th>Marine Fishermen population</th>
<th>3mn</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marine Fishermen households</td>
<td>0.50mn</td>
</tr>
<tr>
<td>No. of active Fishermen</td>
<td>1.025mn</td>
</tr>
<tr>
<td>Marine Fishing Villages</td>
<td>3,638</td>
</tr>
<tr>
<td>Fish Landing centres</td>
<td>2,251</td>
</tr>
</tbody>
</table>

Source: Central Marine Fisheries Research Institute (www.cmfri.com)

Further, according to The Planning Commission Report on Fisheries, India is one of the major fish producing countries in the world incl., in aquaculture. Her vast fisheries resources apart from the 7516 km coastline add 2.02 million kilometre of EEZ and 530 million kilometre of Continental shelf. The inland fisheries resources include rivers and canals (1.95 lakh kilometre reservoirs, 3.15 million hectares flood plain wet land, 0.35 million hectare estuaries, 0.26 million hectare fresh water waters and 2.14 million hectares of like). It is further documented in the

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report that nearly 14 million people are engaged in fishing, aquaculture and ancillary activities. While the demand for fish and fishing product is on considerable ascend both at domestic and export level, the projected demand for fish by 2012 is 9.74 million tonnes. In this regard, the establishment of the National Fisheries Development Board during the 10th plan would give a major push to the Indian fisheries sector.\(^9\)

![Marine Products Export Growth in US $ Terms](image)

**Fig. 2.1**

Source: Central Marine Fisheries Research Institute (www.cmfri.com)

Engaging sea is becoming a necessity for India than an option to sustain nearly 16 percent of the global population with 2.4 percent of land and

4.2 percent of sea of the whole world\textsuperscript{10}. However, going by fish from sea phenomena, only the vast marine and inland water resources of India have traditionally been tapped. This is besides the substantial area acquiescent in the medium and high altitudes of the Himalayan belts for cold water fisheries. India contributes 5.5 percent to the global fish production and the second largest producer of fish through aquaculture in the world after China. The total fish production achieved during 2010-11(provisional) is at 8.03 million metric tonnes in which the inland fisheries alone contributed 5.07 million metric tonnes. According to the Central Statistical Organisation (CSO), the values of output from fisheries sector at current price during 2009-10 was 67,913 crore. The provisional figures for 2010-11 shows the volume of fish and fish products exported to 7,52,791 tonnes worth 12,100 crore.\textsuperscript{11}

India however is developing capabilities to undertake deep sea exploration by going as deep as 5000 meters or 5 kilometres brought out by National Institute of Ocean Technology (NIOT). It is a technologically challenging area due to the depth of water and weather conditions, but resource high potential for further exploration.\textsuperscript{12} The cash phrase however

\textsuperscript{10}Report of the Working Group on Fisheries for The Eleventh Five Year Plan 2007-2012, opcit p-10


that why go out to deep sea when you can get what you want in shallow waters is keeping coastal and inland shipping more operational.

Further, in the export of marine products there was a registered growth of 18.96 percent during the year April-March, 2010-11, as compared to the last year. In this, the frozen Shrimp continued to be the major export item accounting for 44.26 percent of the total US $ earnings. The major destination countries are USA (with a registered growth of about 85.60 percent in volume and 139.92 percent in US$ terms) and Japan (17.03 percent in volume and 40.01 percent in US$ terms). According to Foreign Trade Policy 2009-14 released by the Government of India, the country has witnessed a robust growth in the last five years from US$ 63 billion in 2003-04 to US$168 billion in 2008-09. Our share of global merchandise trade rose from 0.83 percent in 2003 to 1.45 percent in 2008.

**Table 2.2 Exports during 2009-10 and 2010-11**

<table>
<thead>
<tr>
<th>Export details</th>
<th>April-March 2009-10</th>
<th>April-March 2010-11 (Provisional)</th>
<th>Growth%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Quantity tones</td>
<td>678436</td>
<td>807063</td>
<td>18.96</td>
</tr>
<tr>
<td>Value Rs.crore</td>
<td>10048.53</td>
<td>12825.96</td>
<td>27.64</td>
</tr>
<tr>
<td>US$ Million</td>
<td>2132.84</td>
<td>2840.22</td>
<td>33.17</td>
</tr>
</tbody>
</table>

Source: Central Marine Fisheries Research Institute (www.cmfri.com)

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MARINE MINERAL WEALTH

India has a tremendous marine mineral wealth. The Indian Ocean possesses furrow manganese nodules resource which is second in the world in terms of abundance and metal contents. India search in this area began in early 80’s when National Institute of Oceanography initiated exploration of such manganese nodules deposits in the Indian Ocean. It was however way back in 1955 that Shri Rajendra Prasad, the then President of India, while underlying importance of sea bed resources had said, ‘... India has, and always had, full and exclusive sovereign rights over the sea bed and sub soil of continental shelf, adjoining its territory and beyond its territorial waters.\(^{15}\)

The poly-metallic nodule programme\(^{16}\), which was initiated in 1987 aimed towards the refinement in assessment of nodules and extraction of metals from nodules. The potato shaped nodules have been estimated to

\(^{15}\) Nair, R.R and Pratima Jauri, ‘ Polymetallic Nodule Resources Of The Indian Ocean’ Science and Quality of Life NIO, Goa p-1-2

\(^{16}\) The Polymetallic Nodule programme is one of the major R&D efforts in India towards the development and use of Ocean Science & Technology for the exploration of the marine non-living resources for the socio-economic benefit of the society. This multi-disciplinary programme is being executed by multi-institutional participation. On 26th January, 1981 the Indian Oceanographic Vessel "Gaveshni" collected the first sample of polymetallic nodule from Indian Ocean. Continued Indian efforts succeeded in identifying a prospective site with polymetallic nodules in Indian Ocean and recognition of India as a pioneer investor in 1982. Subsequently, India became the first Registered Pioneer Investor in August, 1987 along with Japan, France and the Soviet Union (now Russia). Today India is the only country with the mine site allocated in Central Indian Ocean Basin while all others are in Pacific Ocean. In this programme, survey & exploration, mining technology, extractive metallurgy and environmental impact analysis are the four areas where the Indian efforts are directed.

metals from nodules. The potato shaped nodules have been estimated to contain manganese, iron, nickel, copper, cobalt, lead, molybdenum, cadmium, vanadium, titanium. The nodules are found mostly at the depth ranging from 3500m to 6000m where some of these metals like cobalt, copper and manganese are considered to be of enormous economic and strategic potential. The survey conducted by the Ministry of Earth Sciences (GOI) has confirmed that about 15 million sq. Km of Indian Ocean have nodules of different size and quality. Until now about 1000 quintal of poly-metallic nodules has been excavated for being processed at Hindustan Zinc Limited with the objective of extracting nickel, copper and cobalt.\textsuperscript{17} The programme has gone well in conformity with 21\textsuperscript{st} century which too has initiated extraction and processing of poly-metallic nodules.

The Government of India established the Department of Ocean Development in 1981. It was to promote and coordinate many endeavours required for the development of oceanic resources and preservation of marine environment as well; and to develop the emerging frontiers of Antarctic Research and Deep seabed mining. In the year 1982, India along with France, Japan and erstwhile Soviet Union and four multinational corporations (Consortia of Belgium, Canada, Germany, Italy, Netherlands, UK and USA) was adjudged as pioneer investor in deep sea bed mining- a recognition extended to a sole developing

\textsuperscript{17} So far no country has succeeded in extracting Cobalt, Nickle and Copper from the nodules. The process is going on at laboratory level in India. According to Mr. S.K.Das Advisor in the Department of Ocean Development, 500 kg per day capacity poly-metallic nodule processing plant has been established at Hindustan Zinc Limited at Udaipur. See: http://pib.nic.in/feature/feyr2001/ffeb2001/f070220011.html. Accessed on September 12, 2010.
nation. Through this status India was allotted 150,000 sq km of area to extract huge deposits of minerals in the Central Indian Ocean by the Preparatory Commission for the International Seabed Authority (ISA). As per the rules of the ISA, India has now retained exclusive rights of exploitation of an area of 75,000 sq km which defines the fifty percent of the original area surveyed. The rest of the area had been surrendered to ISBA in 2002.18

Later, in order to have deep understanding of oceanic processes India has established two permanent stations in Antarctica – Dakshin Gangotri in 1983 and Maitri in 1989. While these serves as research laboratories, the later is also equipped with satellite linkages for data transfers and voice communication. In order to address the geopolitical, economic and scientific needs, India plans to have another station at Antarctica.19

Further, under the auspices of Ocean Development Department and the National Institute of Oceanography as many as 37 institutions and research laboratories of the Council of Scientific and Industrial Research (CSIR), different universities, government departments and public sector units are involved in the programme.

18 Maritime India, opcit. p-39
19 India is all set to commission and occupy a third station named Bharati in Antarctica by March 2012. It will facilitate the scientific studies incl. Environmental monitoring having all state of the art laboratories facilities. See: ‘India to Commission its Third research Centre in Antarctica’, The Tribune, Chandigarh, November 8, 2011.
Research Vessels:

For exploration and excavation of its maritime interests, India has developed vessel facilities going as deep as 5000 meters or 5 Kilometres. In this regard, Gaveshani20 an indigenous (1900) tons medium class research ship credited India as a first third world nation to bring out nodules from a depth of 4500 meters between Lakshadweep islands and Mauritius, well within country’s exclusive Economic Zone.21

Another research vehicle ‘Sagar Kanya’22 is extensively utilized for oceanographic investigations and research in physical, chemical, geological, biological oceanography. The vessel is fitted with state of the art machinery and equipments to obtain & carry deep sea investigations. Consequently, vital environmental data, baseline oceanographic data on physical, chemical and biological map parameters has also been collected. Five pilot campaigns at National Metallurgical Laboratory, Jamshedpur and Regional Research Laboratory, Bhubaneshwar for obtaining material and energy balance under the extractive metallurgy project have been

20 Gaveshani was the first research vessel acquired by India in December 1975. In her 19 years of service she undertook 246 cruises. In 1994 she went into dry dock after accidently caught fire during refit and modernisation. She was then declared unservicable in December 1995. See National Institute of Oceanography. http://nio.org. Accessed on November, 15, 2010.

21 Only six other nations in the world have nodule mining capability such as US, Russia (Erstwhile USSR), UK, West Germany, France and Japan. See ‘Nodules From the Sea’, Business Report, Economic And Political Weekly, Vol. 16, No. 15, April 11, 1981, pp 640-641. See also Kumar, Vijay., ‘India and the Common Heritage Concept in International Sea Bed Area’, Current Science, Vol. 86, No. 6, 25 March 2004. pp-78-88.

22 Oceanographic Research Vessel (ORV) Sagar Kanya was commissioned in 1983 which is being managed by National Centre for Antarctic and Ocean Research (NCAOR), Goa and run, operated and maintained by Shipping Corporation of India Ltd, Mumbai, at a cost of Rs.15-16 crores as per annum which is met under the Non-Plan (OCS). See: Ministry of Earth Sciences: Right to Information Act 2005,p-17 http://dod.nic.in/1.pdf. Accessed on November 15, 2010.
completed. With newly installed launching & retrieving system (12 tonnes capacity), in the vessel it has been recently used to test Remotely Operated Underwater Vehicle (ROV) and crawler. A Dynamic Positioning System enables the ship to maintain a designated position to launch ROV safely and efficiently.\(^{23}\)

The Vessel Management Cell (VMC) of National Institute of Ocean Technology operates, maintains and manages two coastal research vessels, namely Sagar Purvi and Sagar Paschimi. These vessels are being used for pollution monitoring under Coastal Ocean Monitoring and Prediction System (COMPAS), data buoy programmes and also for Integrated Coastal and Marine Area Management Programme. However, the induction of Buoy Tender cum Research Vessel “Sagar Manjusha”\(^{24}\) on 14th June 2006, into the services of National Institute of Ocean Technology (NIOT) has further supported the National Databuoy Programme (NDBP) of the country.

The Sagar Sampada,\(^{25}\) the Fishery Oceanographic Research Vessel (FORV) which was commissioned in 1984 is fully utilized for Marine


\(^{24}\) Sagar Manjusha has been acquired for operation and maintenance of buoys. Data Buoy Programme has been started to design, develop, produce, deploy, operate and maintain a network of 40 buoys in the Seas around India for acquiring data in real-time. The construction of Buoy Tender cum Research Vessel Sagar Manjusha was completed at M/s. Hindustan Shipyard Ltd., Visakhapatnam. http://niot.res.in/ op/vms/vesselmanagement facilities.php. Accessed on November 15, 2010.

\(^{25}\) The vessel for its scientific operations is managed by Centre For Marine Living Resources & Ecology (CMLRE), Kochi and its operation, maintenance and running is done by Shipping Corporation of India Ltd, Mumbai with the total annual expenditure of rupees between Rs. 10-11 crores which is met from the Non-plan (OCS). See: Ministry of Earth Sciences: Right to Information Act 2005,p-17 http://dod.nic.in/1.pdf. Accessed on November 15, 2010.
Living Resources (MLR) surveys. The Centre for Marine Living Resources & Ecology (CMLRE) is the nodal agency managing the scientific operation of the vessel. The vessel has undertaken 254 scientific cruises covering 25 thousand (approx) nautical miles and occupying 344 numbers of stations. These are conducted for collection of sediments samples from the continental slope area for studies on benthos, fishery survey, and for plankton biodiversity.

The country has lately acquired from Italy Sagarnidhi costing Rs.232 crores as a high tech offshore laboratory. The new oceanography research vehicle can dig up 6000 meters deep in the sea to perform multiple functions, besides use in deep sea mining, desalination to shovel up poly-metallic nodules incl. gas hydrates from the sea bed. Moreover, new initiatives has also strengthened India’s research programme in the oceans.

- *Comprehensive Swath Bathymetric Survey of entire Indian EEZ*: The programme aims towards scientific mapping of the entire EEZ of India and to identify the potential resources lying beneath the ocean. It also

26 ORV Sagar Nidhi is an ice class multi disciplinary vessel operated by the National Institute of Ocean Technology, India. It was constructed at Fincantieri, Italy. The 104 metre long vessel has fully automatic diesel-electric propulsion equipped with dynamic positioning system, azimuth thrusters, and a winch to hoist 60 tonnes from a depth of 6,000 metres. The vessel is capable of carrying out geo-scientific, meteorological and oceanographic research, and is designed with blue-water capability with ranges of up to 10,000 nautical miles (19,000 km) for voyages lasting up to 45 days. She is expected to support research in the Indian- and Antarctic Oceans. See:http://en.wikipedia.org/ wiki/ ORV_Sagar_Nidhi. Also:http://niot.res.in /op/ vms/ vesselmanagement_ introduction. php. Accessed on November 20, 2010.
aims to identify the causes of various hazards in the Indian Ocean affecting India.

- Geophysical Study of Laxmi Basins: The Laxmi Ridge is a prominent bathymetric feature off the northeastern Arabian Sea. The programme aims toward extensive exploration of the region and the detailed geophysical survey along the entire West Coast.

- Gas Hydrates Exploration and Technology Development: During the Xth Plan a programme on ‘studies on Gas Hydrates and Exploration’ was taken up for implementation to gaze the immense potential of gas hydrates in relation to providing total energy security to the nation. The Ministry, in association with CSIR and other laboratories, is focusing on scientific research with special emphasis on resource extent evaluation and environmental impacts and development of technology for detection and qualification of gas hydrates in sediments. Further, two Indo-Russian scientific expeditions were carried out in Lake Baikal. Under technology component, ROSUB-2500 was designed and developed and currently being tested at various depths. 27

Echoing the same concern over sea exploration, late Shri Rajiv Gandhi stated in the parliament on 26th August 1987 that the registration of our claim for a deep sea bed mine site indeed provides a concrete indication of indigenous scientific capabilities and achievements... 28


OIL AND GAS EXPLORATION

India’s exploration of hydrocarbon potential since 1950s has given discovery of several petroliferous basins both inshore and offshore with vast accumulation of oil and natural gas of commercial value. At present, there are 20 refineries operating in the country, out of which 17 are in public sector and 3 are in private sector. Out of the 17 public sector refineries, 8 are owned by Indian Oil Corporation Limited (IOCL), 2 each by Chennai Petroleum Corporation Limited (a subsidiary of IOCL), Hindustan Petroleum Corporation Limited (HPCL), Bharat Petroleum Corporation Limited (BPCL) and Oil and Natural Gas Corporation Limited (ONGC) and 1 by Numaligarh Refinery Limited (a subsidiary of BPCL). The private sector refineries belongs to Reliance Industries Limited and Essar Oil Limited. The present refining capacity is 182.086 Million Metric Tonnes Per Annum (MMTPA) comprising of 107.456 MMTPA by PSUs and 72.50 MTPA by private sector.\(^{29}\)

The onshore fields are in Assam and Nagaland, Arunachal Pradesh, Gujarat, and Tamil Nadu and Andhra Pradesh. Further, Oil India Limited (OIL) and Oil and Natural Gas Commission (ONGC) have the onshore field for crude oil production.\(^{30}\) The offshore production occur at Bombay High\(^{31}\) is run by ONGC and Private/Joint Venture companies. As per the


\(^{30}\) Ibid

\(^{31}\) Bombay High is an offshore oilfield 160 kilometres (99 mi) off the coast of Mumbai (Bombay), India. The oil operations are run by India's Oil and Natural Gas Corporation(ONGC). Bombay High field was discovered by a Russian and Indian oil exploration team operating from the seismic exploration vessel Academic Arkhangelsky during mapping of the Gulf of Khambhat (earlier Cambay) in 1964-67. See: http://en.wikipedia.org/wiki/Bombay_High. Accessed on December, 2, 2010.
reports of the Ministry of Petroleum and Natural Gas 2009-10, India has total reserves of 1201 million metric tonnes (MMT) of crude oil and 1437 billion cubic metres of natural gas. The country has 428 onshore and offshore exploratory wells incl. 1019 thousand metres of metreage drilling. In the year 2009-10, India has produced 33.69 MMT of crude oil which is 0.55% higher as compared to 2008-09 production i.e., 33.51MMT.32

These offshore oilfields properties are of great significance to the country. Any disruption in production could adversely affect the long term strategic planning of the national economy, thereby demanding suitable surveillance and protection. Interestingly, India ranks sixth in the world in terms of energy demand. The country imports nearly 70 percent of its oil requirement which could go to 85 percent by 2012. India’s oil consumption is expected to rise to 245 million tons annually by 2020 making it the single largest importer of oil by 2050.33

Taking into account the oil security concerns of India, the Government has decided to set up a Strategic Crude Oil Storage with a capacity of 5 million metric tonnes (MMT) at three locations in the country viz.

33 Address on, ‘Maritime Dimension of India’s Foreign Policy’ by Foreign Secretary, Strategic Digest, Volume 41, Number 8, Institute for Defence Studies and Analyses, August 2011.
Visakhapatnam, Mangalore and Padur. The project involves a capital cost of approximately Rs. 2400 crore and crude oil cost of approximately Rs. 9000 crore (as estimated in September 2005). The project is likely to be completed by the end 2012. The government has appointed a High Power Committee, which will have the right to release crude oil from the reserves during any emergency leading to the disruption in oil supplies, a natural calamity or any global incident causing abnormal increase in oil prices. The development and growth of maritime infrastructure in particular is significant as it plays an important role in nation’s overall economic development. This is keeping in view India’s International Trade of which more than 95 percent is undertaken through the maritime route.

**New Exploration Licensing Policy (NELP)**

New Exploration Licensing Policy (NELP) provides an international class fiscal and contract framework for exploration and production of hydrocarbons. In the first seven rounds of NELP spanning 2000-2009, Production Sharing Contracts (PSCs) for 203 exploration blocks have been signed. Under NELP, 77 oil and gas discoveries have already been

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34 The Visakhapatnam project is being executed on 68 acres of land wherein 38 acres belonging to Visakhapatnam Port Trust and 30 acres belonging to Eastern Naval Command. The project site has the capacity of 1.33 MMT and is expected to be completed by November 2011. See: http://petroleum.nic.in/crudeoil.pdf. Accessed on December 3, 2010.

35 Ibid., The Mangalore project is being executed over 100 acres land taken from Mangalore Special Economic Zone Limited (MSEZL). With the storage capacity of 1.5 MMT the project is expected to be completed by November 2012. See: Ibid.

36 Ibid., The Padur project is being executed on approx. 160 acres of Government/private land at Padur. The project is building with a capacity of 2.5 MMT and is expected to be completed by December 2012.

37 Ibid.
made by private/joint venture (JV) companies in 23 blocks. The largest natural gas discovery in the country has been made in KG deepwater, from where production has commenced in April 2009, which is currently at 60 Million Metric Standard Cubic Metre Per Day (MMSCMD).38

Of late, driven by fast development of country’s GDP, India’s trade sector is exhibiting a long term and sustainable high growth,. This trend is expected to continue by attracting world capital inflows into manufacturing and trade tie up by building blocks with the developed countries. India is projected to become the 4th largest economy in the world by 2020, after China, Japan and the US said the Foreign Secretary in his address to National Maritime Foundation.39 Also 77% of our trade by value and over 90% by volume is carried by sea. Our dependence on sea borne trade is going to increase exponentially. In this context, reforms in the years past by have resulted in a liberalised Indian Economy giving push to the overseas trade with increasingly interdependence with global economy where India’s mercantile trade constitute 41% of our GDP.40

INDIAN SHIPPING INDUSTRY AND MERCHANT SHIPPING

At the time of independence three major ship yards were set up; the Hindustan Shipyard, Vishakhapattanam; the Garden Reach Shipyard, Calcutta and Mezagon Docks, Bombay. Some other privately owned

39 Foreign Secretary Address on ‘Maritime Dimension of India’s Foreign Policy”. Op cit. p-789
40 Ibid p- 789.
yards had started building fisheries, trawlers, barrages, powered boats and small crafts less warships. Over the period, however, the number of shipyards have increased from 30 to 40 of which 27 are being actively operational under Centre, State and Private sector. India has one of the largest merchant shipping fleet and is ranked 16th among the maritime countries. While the number of vessels have gone up to a nearly 912, the gross Indian Shipping tonnage is 9.3 million GTS with an average age of a ship currently around 18 years which is higher than the world average of 12 years.

Looking at Indian ships participation in India’s overseas trade, it is declining over the years and standing much low to the level envisaged by the government at the time of independence. This perhaps was also the reason for not according infrastructure status to shipping as it was found convenient to hire ships from other countries. The shipping industry which is otherwise instrumental in earning substantial amount of foreign exchange for the country was rather seen expendable on foreign exchange reserve. India is losing on the competitive edge in ship building due to lack of subsidy, multiplicity of taxes, high cost of financing, materials,

42 The Global ship building industry is estimated to be 20 billion $ and is together being dominated by Korea, Japan and China accounting for 75% of global output. In post world war period ship building was dominated by the US and the European Union. However, high labour cost lead to the gradual shift of this industry to the Asian Nations. See: ‘Indian Shipbuilding Industry’, i-Maritime Consultancy, http://imaritime.com/ knowledge-center/ shipyard.php. Also See: http://knowindia.net /infraindia4. html Accessed on December 25, 2010.
rigid laws, and regulations with only eleven percent of total fleet built in our yards.\textsuperscript{43}

In this context, the formulation of comprehensive National Maritime Policy has facilitated enhanced private investment, improve service quality and promote competitiveness to meet the medium and long term objectives. In addition, National Maritime Development Programme which came up in 2000 augmented the capacity and transport efficiency, besides giving concrete shape to the vision and strategy laid down in the policy document. It aimed at focused and accelerated investment in specific infrastructures, tonnage acquisition and institutional capacity building. It related to projects/schemes incl. completion of ongoing/ new projects and projects to be completed by 2014-15. At present NMDP is handling 276 projects\textsuperscript{44} in different categories viz, tonnage acquisition, maritime training, coastal shipping, aids to navigation, shipbuilding /ship repair and IWT entailing an investment of Rs 44,535 crore. According to the Indian Ports Association (IPA) data, as many as 48 Major Port projects costing Rs 5,545.78 crore, had been completed under the National Maritime Development Programme (NMDP) on November 31,

\textsuperscript{43} Shipbuilding Nations around the world has been enjoying as high as 40 percent from their respective governments. Chinese on the other hand are taking away an increasingly larger market share of building ship contracts. See: Chittora, Madhu., - ‘India’s lost competitive edge in ship building’, Project Monitor, August 8, 2005. http://http://projectsmonitor.com/detailnews.asp?newsid=9474 Accessed on December 25, 2010.

\textsuperscript{44} Annual Report 2008-09, Ministry of Shipping, GOI.
2009. Earlier, during the 10th plan period, SCI acquired 39 vessels of 2.06 GT, with Rs 8000 crore investment. The acquisition would improve SCI’s fleet, to 96 vessels of 4 million GT by the end of 11th plan period.

The shipping corporation of India is the largest shipping company with its fleet of 84 vessels of 2.8 million GT (4.9 DWT,) and shares about 30 percent of Indian tonnage under NMDP. India has a total of 963 ships (657 coastal and 306 overseas) with 9.4 million gross tonnage (GT) and 15.5 million deadweight (DWT). The government of India has conferred ‘Navratna’ status to Shipping Corporation of India on August 1, 2008 and enhanced autonomy and delegation of power to the company towards capital expenditure, formation of joint ventures, merges etc.

45 As of 31 May 2010, 52 projects had been completed of the planned 276 projects, with an investment of US$ 11.6 billion, adding a capacity of 464.7 MTPA. Additionally, 76 projects were being implemented, while 17 had received the approval to commence work, but had not been awarded; 106 projects were still at the approval or preliminary stage and 25 had been cancelled. In the Eleventh Plan, the Government has set aside a budget of US$ 3.9 billion (INR 185.3 billion) to develop India’s major ports See: Annual Report 2008–09 and 2009-10 Ministry of Shipping.; Sector focus: Ports and shipping, Indian Infrastructure. Accessed on August 19, 2010

46 SCI currently owns 81 ships of 5.1 million DWT besides managing 60 vessels of 0.2 million DWT. Further according to Chairman SCI plans are afoot to buy a total of 37 vessels of which 31 would be purchased by 2012. SCI has been financing its project through a mix of equity and debt in the ratio of 20:80 i.e. 80 percent through commercial loans and 20 percent through internal resources. No budgetary support from govt. is required for the working of these projects. See: http://shipindia.com Accessed on August 18, 2010.

### Table 2.3 Vessels Information

<table>
<thead>
<tr>
<th>Types of vessels</th>
<th>No. of Vessels</th>
<th>G.T</th>
<th>DWT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Vessels (Overseas Trade)</td>
<td>306</td>
<td>8421449</td>
<td>14513350</td>
</tr>
<tr>
<td>Total Coastal Vessels</td>
<td>657</td>
<td>991715</td>
<td>1019370</td>
</tr>
<tr>
<td>Grand Total (Overseas &amp; Coastal Vessels)</td>
<td>963</td>
<td>9413164</td>
<td>15532720</td>
</tr>
</tbody>
</table>

While unexpected increase in global trade has raised the demand for more ships, there is corresponding concern over shortage of skilled man power. However, keeping in view the strong case for reviving merchant ship building in the country, the internal market of producing 10 sea going ships and 20 coastal ships every year should provide the necessary incentives. It may be mentioned that the replacement for the ageing ships in the country would entail investment of over US$ 500 billion.48

While the ship building may be vital to the country’s maritime power its cost effectiveness is proving it prohibited. At the same time, the availability of the foreign ships is seen rather more economical. A strong ship building and repair base will not only provide value based manufacturing and services at competitive price, its strategic significance as a second line of defence cannot be undermined. It became more facilitated when the government liberalised its policies leading to

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globalisation and opened doors to foreign lines unrestrictedly. India’s export have grown from $44 billion in 2002 to US$163 billion in 2008 and import from US$51 to $251 billion. This has equally augured well for shipping industry and ship building activity as India aspires to be a leading player by 2020, expanding it to US$20 billion. In this regard, India’s ship building sector has grown by 72 percent during the current 11th five year plan from an average rate of 15 percent per year during the last 10th plan i.e, 2002-2007. In contrast it was only 4.5 percent during 9th plan i.e., 1997-2002.49

Of late, India along with Vietnam has emerged in the area of ship building. This is significantly because ship building giants such as South Korea, Japan and China are already full with global orders in ship building until 2015. The Indian trade has the volume potential and the markets. The challenge is to upgrade the hardware and harness the local growth area. Along with ship making India has also emphasised on developing ship repair capacity with countries like Singapore, Dubai, Bahrain and Colombo in the lead. In fact, existing ship repair facility is grossly inadequate thereby unable to meet a one stop solution to shipping.

Currently, more than 50 percent of Indian fleet is repaired abroad resulting substantial loss to foreign exchange and employment opportunities in the area. Recently a US based ship repair firm M/S Golten has entered India targeting US$440 million market. In fact, ship

building and ship repair have a complimentary role. In both the cases there is a large requirement of building ancillary sector which binds the two and further provide fillip to the coastal development plans. Until now, India has been adjudged as the third largest ship graveyard of the world. Locating at Alang, Gujarat, it largely suffers from lack of modernisation drive in upgrading ship breaking tools or habitats or logistic facilities. Consequently, ships have started turning to China and Vietnam for their last rites. In this regard, the investment of Rs. 7195 crore have been earmarked for the modernization and enhancing the capacity of the public sector shipyards and also for setting up of two international shipyards. The budgetary support from the government would be Rs. 3235 crore while Rs960 crore would be from the internal resources of the PSUs and Rs.3000 crore will come from private sector and other sources.\(^5^0\)

**INDIAN PORT STRUCTURE**

At the time of partition India had five major ports viz, Calcutta, Bombay, Madras, Cochin and Vishakhapatnam. Kandla was developed as the 6th major port during 1955 to 1957. The port of Mormangoa came under the category of major ports in December 1961, when the Portuguese colonial rule ended. In April 1966, Paradeep opened as the 8th major port to handle iron ore and two Southern ports like Manglore on the West coast and Tuticorin on the East coast were added to the list of major ports. At

present there are 13 major ports and 176 minor ports. In addition out of 176 minor ports there are 45 functioning non major ports and the rest are private ports contributing to the marine trade. These ports are located along the country’s long coastline of around 7516 km and also along the islands, handling about 77 percent maritime cargo of the country.

Lately however, with the infusion of new technologies and capacity building, the congestion at Indian ports has reduced considerably with improved operational efficiency, integrated development, connectivity, organizational and institutional arrangements needed for the development of port sector. About 95 percent by volume and 70 percent by value of the country’s international trade is carried through the maritime transport handled at ports. The total volume of traffic handled by all Indian ports during 2003-04 was around 458 million tonnes, of which 344.80 million tonnes was handled by major ports which showed a growth rate of around 10 percent over the previous year i.e., 258.65 million ton and remaining 113.41 handled by non major ports. During 2005-06 the volume of traffic had increased with 568.93 million tonnes of which 74 percent, i.e. 423.41 Mt. was handled by major ports and remaining by non major

51 The 13 Ports are namely 1) Kolkata Port Trust 2) Paradip Port Trust 3) Visakhapatnam Port Trust 4) Chennai Port Trust 5) Tuticorin Port Trust 6) Cochin Port Trust 7) New Mangalore Port Trust 8) Mormugao Port Trust 9) Mumbai Port Trust 10) Jawaharlal Nehru Port Trust 11) Kandla Port Trust 12) Port Blair Port Trust (Port Blair Port Trust which was declared as a Major Port on 1-06-2010) and 13) Ennore Port Ltd. which are directly under the Central Government – out of these, 12 Major Ports are governed by the Major Port Trusts Act, 1963, and one (Ennore Port Limited) was incorporated as a company under the Companies Act, 1956 and is governed by Indian Ports Act, 1908. See Maritime Agenda 2010-20, op. cit p-1, 138.


ports. This included petroleum, crude and products maintaining the largest share of 33 percent, iron 20 percent and coal and container 14 percent and the rest included general cargo. The highest rate of traffic is maintained by Vishakhapatnam port i.e., 50.15 million tonnes followed by Chennai port with 43.18 million tonnes of cargo.

As far the cargo handling capacity of major port was concerned it was seen that from 1999 to 2001, there had not been any appreciable rise in the capacity and traffic at major ports. For instance, in 1999 the capacity was 271.92 million tonnes and traffic was 258.05 million tonnes. In 2001 it rose to 291.45 capacity and 281.11 million tonnes traffic. The phenomenon continued even in 2003-04, as the capacity went upto 389.50 and traffic handled was 344.80 million tonnes. During 2004-05 there was further increase of 383.75 million tonnes of traffic against 397.50 million tonnes of capacity.

Table 2.4 Traffic at Major Ports

<table>
<thead>
<tr>
<th>Existing traffic at major ports during 2004-05 (million tonnes)</th>
<th>Existing capacity at major ports 2006-07 (million tonnes)</th>
<th>Projected traffic for major ports 2013-14 (million tonnes)</th>
<th>Overall capacity requirement by 2013-14 (million tonnes)</th>
<th>Additional capacity to be created by 2013-14 (million tonnes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>463.78</td>
<td>504.75</td>
<td>705.84</td>
<td>917.59</td>
<td>528.09</td>
</tr>
</tbody>
</table>

54 Indian Ports Association, Coordination of business plans for major ports in India

55 Consolidated port development plan, Volume 1 Main Report, final version, Port of Rotterdam Authority, September 2007

51 Annual Report, 2009-10, Ministry of Shipping, Government of India.
Further, in order to realize the trade growth potential, attention needs to be given to the development and modernization of economic infrastructure in the country. Ever since, the announcement of guidelines for participation of private sector, 24 projects involving private investment of over Rs. 6400 crore have been approved. Of these 16 projects have already started operations including 7 under implementation while 17 projects involving more than Rs 3300 crores of private investments are under consideration. In this regard, the public:

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Investment include deepening and maintenance of port channels, construction of breakwaters and internal circulation system of cargos within the port, rail, road connectivity from port to hinterland. Besides, the private investment would extend in the areas like construction, management and operation of berths/terminals etc., holding of commercial value.

Further, with the assistance of international consultants, a 20 years perspective plan for each major port has been prepared. In addition as policy initiative, the government has realised that port restructuring is significant if Indian exporters are to be given adequate facilities vis-a-vis their competitors elsewhere. In this context, there was a need for massive private investment in building additional port capacity. It was therefore decided to adopt the concept of land lord ports incl. issuing policy guidelines for the following:

- Leasing out existing assets of ports.
- Creation of additional assets like construction and operation of container terminals.
- Construction and operation of multipurpose and specialised cargo berths.
- Warehousing stations and handling equipment.
- Dry docking and ship repair facilities to mention a few.

In addition to private investment, a skilled manpower is needed in world shipping. For India to emerge as a major human resource supplier, high quality training should be imparted to personnel in India. At present, the country has 4 training institutes in public sector and 124 in private sector
capable of producing 11,164 sea farers (4575 officers and 6589 ratings) annually.\textsuperscript{57}

Lately however, for upgradation of maritime training in India, two projects have been undertaken namely-

1. Establishment of Indian Maritime University (IMU)

2. Acquisition of two training ships with a budgetary support of Rs 300.00 and Rs. 400.00 crores respectively.

The Indian Institute of Port Management (IIPM), Chennai will together form five campuses of proposed Indian maritime university (IMU) in which Rs 200 crore will be utilized for land acquisition, building, fitting/furnishing, vehicles, simulators, computer network etc., and 100 crore for acquiring a old training ship and its associated training equipments.\textsuperscript{58}

For the promotion of maritime training, education, research and extension work, there is an urgent need for the acquisition of two training ships. These will provide maritime education and training in all sectors viz. rating, engineers and navigators. India has few good shores based

\textsuperscript{57} It comprises only 6\% of India’s share out of total population of sea fares compared to Far East countries providing about 37\% of the work force. Further, the Baltic and International Maritime council / International Shipping federation (BIMCO/ISF) manpower updates had predicted a shortage of world shipboard officers to be escalating to 46000 in 2010, due to phasing out of Organization for Economic Cooperation and Development (OCED) officers, expansion of world shipping etc. See: http://ipa.nic.in Accessed on September 22, 2010.

maritime training facilities, which produces about 6000 ratings and 4000 officers’ trainers annually. For studies like oceanography, fishery, port operations and management, dredging, meteorology and search and rescue operation could also be done under practical conditions.\(^5^9\)

The Indian maritime sector in 2010 has reached a size of $19 billion and shall go up to $80 billion by 2020. Looking at India’s freight transport system it carries approx. 1000 billion tons. in which percentage of share distributed is- road 60-65 percent, rail 30-32 percent and coastal shipping has 6-7 percentage. The coastal shipping has a very less share as compared to the European Union, which puts it at 40 percent to other mediums of transport.\(^6^0\)

With the growing Indian economy, the freight transport demand is likely to grow up to 2000 billion tonnes in the next 8-10 years. In this the Coastal shipping is the integral part of the country’s transport infrastructure. However, due to the lack of infrastructural status, this sector has degraded over the period. Thus for the promotion of coastal shipping the government has proposed two projects\(^6^1\) i.e.,

1. Coastal Shipping Development Fund (CSDF) for soft lending for acquisition of coastal vessels, requiring an investment of Rs. 10,000 crore. The funding pattern would be Rs. 500.00 crore from the financial

\(^{60}\) Maritime Agenda: 2010-20 opcit. pp 4-5.  
\(^{61}\) Ibid. pp 144-146.
institutions and Rs 8000.00 crore from private investment. The fund is proposed to be administered through a fund manager to be selected from amongst the established financial institutions having expertise in the field.

2. Centrally Sponsored schemes (CSS) for development of coastal shipping infrastructure: Like capital dredging, breakwater, berths, backup areas. There is already congestion at major ports hence, the development of minor ports is necessary for easy flow of traffic and to encourage coastal shipping. It is necessary to boost up the State Governments in order to take up the infrastructure works at minor ports which would promote coastal shipping and also generate interest of private sector to participate actively and make investment in these areas. The development of minor ports in order to decrease the congestion has been proposed in each maritime state, such as- 1. Gopalpur (Orissa) 2. Azhikkal (Kerala) 3. Malpe (Karnataka) 4. Dharamtar (Maharashtra) 5. Magdalla (Gujarat) 6. Cuddalore (Tamil Nadu) 7. Gangavaram (Andhra Pradesh).  

The total estimated cost of the development of these minor ports would be around Rs. 1500.00 crore in which the central assistance would be limited to 33 percent by way of grant in aid, contributed by the respective maritime State Governments. The scheme was made operational for five years 2006-07 to 2011-12. under the Director General Coastal Shipping Cell who was to scrutinize the project from technical angle while, the

\[62 \text{Maritime Agenda: 2010-20, opcit. pp 122-126}\]
ministry would be guided by his recommendation for the sanction of the project.63

Further, to ensure an integrated development of major and minor ports, a maritime development council was set up. A National Maritime Development Programme was formulated for major ports and shipping for accelerated development of ports, tonnage acquisition, capacity building and containerisation.64 To cut down on transportation both in terms of time duration and cargo handling, China has started harnessing inland water ways. In India, the inland water ways distance by way of canal, lakes, rivers, creeks and back waters run nearly double to country’s coastline leaving lot of scope for improvement by the Inland Waterways Authority.65 The country doesn’t have fury lines or passenger liners ships despite a large habitat of archipelago of islands on the two shores catering for supporting and serving the nation. Recently, in order to address intercontinental demand the container and cargo ships have been ordered from South Korea. The country has a limited capacity in dredging

63 Maritime Agenda: 2010-20, opcit. p- 336
64 Ibid. pp 22-23.
65 Ibid. p- 413.,The Inland Waterways Authority of India (IWAI) was set up in 1986 for development and regulation of inland waterways. For executing projects for development of NWs, IWAI receives grant from Ministry of Shipping (MoS). For inland waterways to become a commercially viable mode of transport, it is necessary that three basic infrastructural facilities are developed and maintained. These are: (i) depth and width required for movement of inland vessels for round the year operation; (ii) terminals for loading and un-loading of cargo; and (iii) navigation aids for safe navigation during day and night. Once these basic infrastructures are provided/ maintained with adequate reliability only then one can expect that the forth critical element, ‘the inland vessels for carriage of cargo’ shall be developed mainly with private sector’s investment.
capability and is far too short to meet internal dredging requirement. Dredging is being carried out by companies in international collaborations or with dredgers leased from international companies. The Deep Sea trawlers have not taken off in India either from public or private undertakings resulting vast source of resources remaining untapped. The country is importing more than 70 percent of its energy requirement. In this regard, oceans have much role to play other than facilitating transfer through sea. There is a lot of scope for harnessing wind, sunlight, oceanic tidal waves towards energy generation. Fostering tourism through aqua sports and aquatic flora and fauna around the island territories will not only develop the infrastructure, but also call for enhanced security and protective measures in the coastal areas both on the mainland and in island territories.

**NAVIGABLE WATERWAYS**

India has approximately 15000 km of navigable waterway out of which 3 stretches covering 2700 kms have been declared as national waterways.

Two waterways have been declared as new National Waterways namely:

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66 The National Maritime Development Programme envisages the capital dredging requirement of major ports and navy to the tune of Rs 6,304 crores. The Phase I of the NMDP consists of 17 projects concerning deepening of channels/berths with a projected investment of Rs. 3,118 crore and the second phase envisages further investment of Rs. 3,186 crore for 8 projects. See: Krishnan, Padmanabhan., ‘India’s Maritime Transport Services- Global Opportunities and Challenges’, 44*th* National Maritime Day Celebration, 2007.

67 There are five NWs namely (i) the Ganga from Haldia to Allahabad (NW-1, 1620 km), (ii) the Brahmaputra from Dhubri to Sadiya (NW-2, 891 km), (iii) the West Coast Canal from Kottapuram to Kollam along with Udyogmandal and Champakara canals (NW-3, 205 km), (iv) the Kakinada-Puducherry stretch of Canals with Godavari and Krishna rivers (NW-4, 1078 km) and (v) the East Coast Canal with Brahmani river and Mahanadi delta (NW-5, 588 km). These waterways were declared as NWs in 1986, 1988, 1993, 2008 and 2008 respectively. In addition, declaration of Barak river from Lakhipur to Bhanga (121 km) as sixth NW is under consideration of the Ministry. See: MaritiemAgenda 2010-20, opcit pp-415-416.
(i) the Kakinada-Puducherry stretch of Canals and the Kaluvelly Tank, Bhadrachalam-Rajahmundry stretch of River Godavari and Wazirabad-Vijayawada stretch of River Krishna (1095 kms) and (ii) the Talcher-Dhamra stretch of river Brahmani, Geonkhali-Charbatia stretch of East Coast Canal, Charbatia-Dhamra stretch of Matai river and Mangalgudi-Paradip stretch of Mahanadi delta rivers (623 Kms). Indian IWT. Fleet comprises of around 350 vessels aggregating to 3.5 lakh DWT. At present the share of IWT in India is only 0.17percent of total inland cargo transportation in terms of tonne- km per DWT. However, with the developed IWT infrastructure it is very much possible that the IWT operation could be commercially viable in which the private sector will be the main player in ownership and operation of IWT vessels.

**Fig 2.2- Map Showing Important Waterways**

Source: http://iwai.nic.in
Under NMDP it was proposed that the 4 basic components for a developed IW system Viz. fareway, navigational aids, terminals would be entirely developed by the state and the private sector will invest in the 4th component i.e. vessels. IWT operation are currently limited to a few stretches in the Ganga, Bhagirathi – Hoogli rivers, Brahmaputra, the barrack river, the rivers in Goa, the backwaters in Kerala and the Deltic regions of Godavari and Krishna rivers. As per Indian constitution, central government can develop and regulate only national waterways. Therefore under NMDP it is proposed that states would be encouraged and provided financial assistance through Centrally Sponsored Schemes for the development of other waterways.68

The project will work in two phases in which 1st phase deal with the making of national waterways (Ganga, Brahmaputra, West coast canal fully functional) and in the 2nd phase there will be upgradation of national waterways along with the development in various other sectors related to IWT. The project will cost 10500 crore approx. in which public and private funding will be Rs 8200 and Rs. 2300 crore respectively. For strengthening of the Indian maritime administration, exercise will be done in phased manner.69


69 In the first phase, it was proposed to set up five NMD offices (incl. three existing offices). More NMD offices are required covering 202 revenue districts of 9 coastal states out of which 13 offices(incl. 9 existing offices)were proposed to set up to cover these revenue district. See http://shipping.nic.in Accessed on October 18,2010.
Moreover, the Information and Communication Technology sector will have a crucial role for rapid growth in the maritime sector. It is expected to reach a size of US$19 billion by 2010 and US$80 billion by 2020. The innovations in Information and Communication Technology have brought out rapid technological changes in the maritime industry. To meet the rising demand and efficiency of port operations high degree of automation is aimed at the ports world over. Hence, application of Information Technology is one of the key issues in the modernization of Ports. Indian IT companies are employing around 500 software professionals on maritime and logistics related projects for their global clients. The International Maritime companies like Maersk, Royal Nedlloyd have set up offices in India and given employment to around 155 people. Availability of sophisticated IT solution will also help improving efficiency of the entire logistic chain incl. port and shipping infrastructure and would also facilitate integration of the maritime industry with the IT intensive logistic industry.70

In the recent past, the government has approved the proposal for award of contract for the development of International Container Trans-shipment Terminal at Cochin on BOT basis to M/S Dubai Port International (DPI) renamed as Dubai World. Accordingly the license agreement between COPT and Indian Gateway Terminal Private Limited, a 100 percent subsidiary of DPI was signed on 31st January 2005. The Jawaharlal Nehru Port has also signed a license agreement with the Gateway Terminals India Pvt. Ltd., a joint venture company formed by

Maersk A/S- CONCOR consortium for operation of the third container terminals on BOT basis. The process of developing fourth container terminal at JNPT has also been initiated. The introduction of tonnage Tax System from the financial year 2004-05 has also been laid to the development of Indian Shipping Companies. Indian tonnage as on 01.06.2004 was 7.05 million Gross tonnage, which had increased to 7.69 million GT on 31.12.2004 with a further increase to 9.38 million GT on 01.12.2009 and has been increasing with every subsequent year.

Dredgers have also been included in the tonnage Tax regime w.e.f. 2005-06. Accordingly dredging firms will have to pay 10 percent service tax for providing dredging services. It will be recovered from the port trust while using dredgers. It is interesting to mention that the country has thirty dredgers of which 17 are Indian and others are from Netherland and Belgium. The Indian government has approved the implementation of the Sethu Samundram Ship Channel Project of the Tamil Nadu coast at a

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71 Maritime Agenda 2010-20, Op cit p-13
72 11th Plan, Ministry of Finance, Government of India, ‘Exemption or tax for construction’.
73 Originally proposed by the Britisher Commander A.D. Taylor of the Indian Marine in 1860, there has been no real progress. In 1955, the government of India set up the Sethu Samundram Project Committee under Sri Ramaswamy Mudaliar. It was again revived in 1999 and finally it was approved after nearly 150 years i.e., in 2005. The funds for Rs2427.40 crore would be through equity contribution by Union government, Port Trusts, Shipping Corporation of India, dredging corporation and others. About Rs.266 crore would be mobilized through initial public offer of private placement. The project involved the dredging of 12 to 13 million cubic meters in the palk straits adjoining the Bay of Bengal. The project has been studied by CSIR’s National Environmental Engineering Research Institute (NEERI) and found that it would have no environmental impact, but the environmentalist had alleged that the flora and fauna would be destroyed and that the livelihood of fishing communities would be affected. The 10,500 sq.km Gulf of Mannar(GOM) area along which the canal proposed, was notified as a Marine National Park in 1986. See: Sethu Samundram Project http://tamilnation.org. Accessed on December 22,2010
cost of Rs.2427.40 crore envisaging dredging of a ship channel across the Palk strait between India and the Sri Lanka.

Even though running into controversy the Sethu Samundram Project would give India a firm grip on one of the world’s most strategic and busiest sea lanes. It would eventually provide the country a remarkable leverage in its relations with China, Japan and the U.S. It was more than five decades that Sh. K.M.Panikkar, the architect of India’s Maritime Doctrine argued that New Delhi should recognise the significance of the Indian Ocean for the development of its commercial activities and trade. India’s plan for the rapid economic growth however depends upon exploring and exploiting its sea resources to feed burgeoning industry besides enhancing adequate naval capabilities. Regrettably however, the events dictate that there has been unfortunate tendency to overlook the sea with consequential effects on economy.