



Release of National Perspective Plan Sagarmala Programme



**GOVERNMENT OF INDIA
MINISTRY OF SHIPPING
NEW DELHI**

**ANNUAL REPORT
2016-17**

Modern Infrastructure at Indian Ports



ANNUAL REPORT 2016-17



सत्यमेव जयते

**MINISTRY OF SHIPPING
GOVERNMENT OF INDIA
NEW DELHI**

CONTENTS

CHAPTER	SUBJECT	PAGE NO.
I	Introduction	1-3
II	Year at a Glance	4-17
III	Sagarmala	18-22
IV	Ports	23-32
V	Shipping	33-44
VI	Functioning of Organizations	45-66
VII	Inland Waterways Transport	67-73
VIII	Transport Research	74
IX	International Cooperation	75-81
X	Administration and Finance	82-87
XI	Official Language	88-89
XII	List of Annexure	90-99

CHAPTER – I

INTRODUCTION



Press Briefing by Hon'ble Ministers

1.1 The Ministry of Shipping was formed in 2009 by bifurcating the erstwhile Ministry of Shipping, Road Transport and Highways into two independent Ministries.

1.2 Maritime Transport is a critical infrastructure for the economic development of a country. It influences the pace, structure and pattern of development. The Ministry of Shipping encompasses shipping, Major Port & Inland Water Transport sectors. It also includes shipbuilding, ship repair, lighthouses and Indian Maritime University. The Ministry has been entrusted with the responsibility to formulate policies and programmes for these sectors and support them in strategic implementation.

1.3 A comprehensive policy package is necessary to address the diverse issues facing the maritime transport sector. The capacity of the ports in terms of their berths and cargo

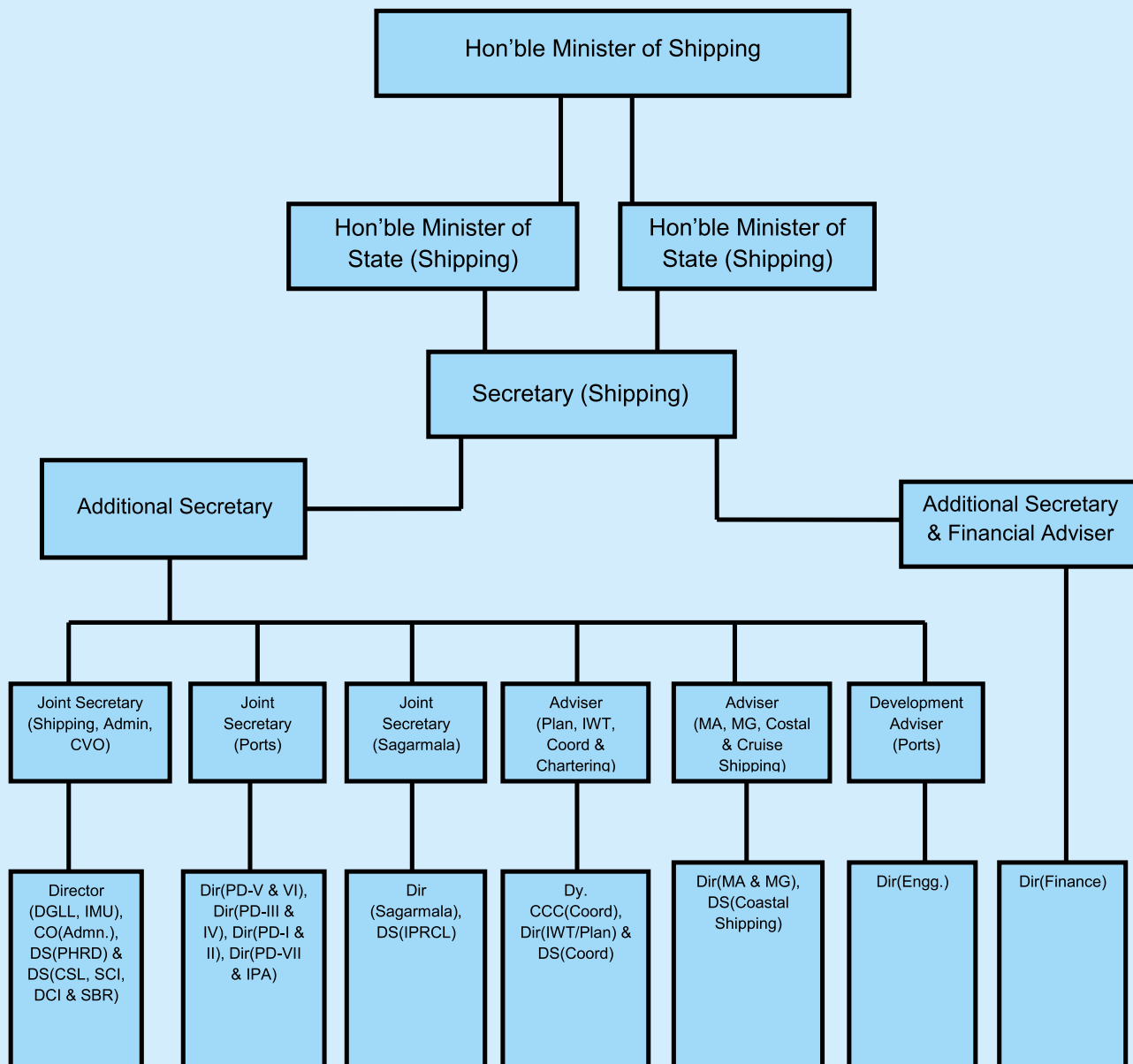
handling equipment need to keep pace with the growing requirements of the overseas trade. The shipping industry must be enabled to carry higher shares of the sea-borne trade in indigenous bottoms.

1.4 Historically, investments in the transport sector, particularly in the ports, have been made by the State, mainly because of the large resources required, long gestation period, uncertain returns and a number of externalities associated with this infrastructure sector. However, the growing resource requirements and the concern for managerial efficiency and consumer responsiveness have led to the active involvement of the private sector in infrastructure services in recent times. To encourage private sector participation, Ministry of Shipping has laid down comprehensive policy guidelines for private sector participation in the Major ports.

FUNCTIONS

1.5 The subjects allocated to the Ministry of Shipping are listed at Annexure-I.

ORGANIZATIONAL SET-UP



1.6 Shri Nitin Jairam Gadkari is the Union Minister of Shipping.

1.7 Shri Pon. Radhakrishnan and Shri Mansukh L. Mandaviya are Ministers of State for Shipping.

1.8 Secretary (Shipping) is assisted by Additional Secretary, Joint Secretary (Shipping),

Joint Secretary (Ports), Joint Secretary (Sagarmala), Adviser (Economic), Adviser (Statistics), Development Adviser (Ports), officers at the level of Directors, Deputy Secretaries, Under Secretaries and other Secretariat/ Technical Officers.

1.9 The Finance Wing is headed by Additional

Secretary & Financial Adviser who assists in formulating and processing of all policies and other proposals having financial implications.

1.10 The Accounts Section is headed by the Chief Controller of Accounts who is, inter-alia, responsible for accounting, payment, budget, internal audit and cash management.

1.11 Adviser (Transport Research) renders necessary data support to various Wings of the Ministry for policy planning, transport coordination, economic & statistical analysis on various modes of transport with which the Ministry is concerned.

1.12 The Finance Wing, Accounts Wing and Transport Research Wing are common to the Ministry of Road Transport & Highways.

1.13 The Development Adviser (Ports) provides technical advice on matters relating to the development of Major Port Projects, Andaman & Lakshadweep Harbour Works (ALHW) and the Dredging Corporation of India. He is also associated with processing technical and administrative matters related to the International Navigation Association – Permanent International Association for Navigational Congress (INA-PIANC) of which India is a member country. Development Adviser (Ports) also coordinates the Research Committee works of the Ministry in respect of Ports, Shipping and Inland Water Transport (IWT) sectors.

1.14 The following attached/subordinate offices, autonomous organisations, societies/associations and public sector undertaking are functioning under the administrative control of the Ministry of Shipping:

(A) ATTACHED/SUBORDINATE OFFICES

1. Director General of Shipping
2. Andaman, Lakshadweep Harbour Works
3. Directorate General of Lighthouses and Lightships

(B) AUTONOMOUS BODIES

1. Tariff Authority of Major Ports (TAMP)
2. Port Trusts at Mumbai, Kolkata, Kochi, Kandla, Chennai, Mormugao, Jawaharlal Nehru, Paradip, V.O. Chidambaranar (Tuticorin), Visakhapatnam and New Mangalore
3. Kolkata Dock Labour Board
4. Inland Waterways Authority of India
5. Seamen's Provident Fund Organisation
6. Indian Maritime University
7. Seafarer's Welfare Fund Society
8. National Shipping Board

(C) ASSOCIATIONS

1. Indian Ports Association.

(D) PUBLIC SECTOR UNDERTAKINGS

1. Shipping Corporation of India Limited
2. Cochin Shipyard Limited
3. Central Inland Water Transport Corporation Limited
4. Dredging Corporation of India Limited
5. Hooghly Dock and Ports Engineers Limited
6. Kamarajar Port Ltd., Ennore
7. Sethusamudram Corporation Limited.
8. Sagarmala Development Company Limited
9. Indian Port and Rail Company Limited
10. Indian Port Global Private Limited

CHAPTER – II

YEAR AT A GLANCE

**BACKGROUND**

2.1 The Maritime Sector in India comprises of Ports, Shipping, Shipbuilding and Ship repair and Inland Water Transport Systems. India has 12 Major ports and 200 non major ports. Indian Shipping Industry has over the years played a crucial role in the transport sector of India's economy. Approximately 95% of the country's trade by volume and 68% by value is moved through Maritime Transport. Therefore, shipping and ocean resources, ship design and construction, ports and harbours, issues relating to human resource development, finance, ancillaries and new technologies need to keep pace in the light of the emerging scenario. Shipping continues to remain unchallenged as the world's most efficient means of transportation there is need to recognize and promote quality within the industry.

GEOGRAPHICAL FEATURES

2.2 India has a long coastline of about 7517 km, spread on the western and eastern shelves of the mainland and also along the Islands. It is an important natural resource for the country's trade.

TWELFTH FIVE YEAR PLAN

2.3 Planning Commission approved a Gross Budgetary Support (GBS) (at current prices) of Rs 6,960 crore for the Ministry of Shipping for the 12th Plan period (2012-2017). This implies a 108.5% increase in GBS allocation to the Ministry during the current Plan compared to 11th Plan allocation of Rs. 3337.58 crore. Out of GBS of Rs 6960.00 crore approved by Planning Commission, the share of Ports, Shipping and IWT sectors are Rs. 3057.47 crore, Rs. 2402.53 crore and Rs. 1500.00 crore respectively.

2.4 A comparison of 11th Plan actual expenditure and 12th Plan allocation of GBS and IEBR is given below at **Table-1**:

ANNUAL PLAN 2016-17

2.5 The Budget Estimate of GBS for FY 2016-17 was Rs 1000.00 crore for the Ministry. However, at the stage of Revised Estimate (RE), this has been reduced to Rs. 952.96 crore. Against the RE allocation of Rs. 952.96

crore, actual expenditure as on 31.12.2016 was Rs.704.84 crore.

2.6 Summary of Annual Plan 2016-17 is given below at **Table-2**:

OUTLAY FOR 2017-18

2.7 The details of total outlay plan for the Ministry and IEBR for the year 2017-18 are given at **Table 3**.

(Rs in crore)

Table 1						
Sector	GBS		IEBR		TOTAL	
	11th Plan-Actual	12th Plan-Allocation	11th Plan-Actual	12th Plan-Allocation	11th Plan-Actual	12th Plan-Allocation
Ports	1227.90	3057.47	5676.66	12706.96	6904.56	15764.43
Shipping	388.38	2402.53	8864.76	6239.22	9253.14	8641.75
IWT	535.25	1500.00	0.00	0.00	535.25	1500.00
Total	2151.53	6960.00	14541.42	18946.18	16692.95	25906.18

(Rs in crore)

Table 2					
Sector	2016-17 (BE)		2016-17 (RE)		Actual Exp. (2016-17) *
	GBS	IEBR	GBS	IEBR	GBS
Ports& Lighthouses	601.77	1832.09	611.32	2327.84	423.28
Shipping	48.23	351.05	45.34	1107.03	42.05
IWAI	350.00	1000.00	296.30	1000.00	239.51
Total	1000.00	3183.14	952.96	4434.87	704.84

* upto 31st December, 2016

Table 3			
Sector	2017-18 (BE)		Total
	GBS	IEBR	
Ports & Lighthouses	865.55	3969.66	4835.21
Shipping	268.41	832.59	1101.00
IWAI	303.00	00.00	303.00
Others	336.04	00.00	336.04
Total	1773.00	4802.25	6575.25

2.8 Out of the GBS of Rs. 1773.00 crore, Rs. 126.00 crore have been earmarked for the North Eastern Region.

PORT SECTOR

Cargo Traffic at Indian Ports

2.9 During April, 2016 – December 2016, major and non-major ports in India handled a total cargo throughput of around 837 Million Tonnes (MT). The traffic grew by 4.6% over the corresponding period of previous year. The 12 Major Ports handled a traffic of 481.20 MT during April – December 2016, representing an increase of about 7.55% over the corresponding period of previous year. Of the 12 Major Ports,

cargo handled during April – December 2016 at 9 ports showed positive growth. Amongst these 9 major ports, growth in throughput at Mormugao was the highest at 62.51% followed by Paradip (17.75%), New Mangalore (15.04%), Cochin (10.58%), Kandla (9.60%), Visakhapatnam (8.80%) and V.O. Chidambarnar (4.18%).

Commodity-wise Cargo Traffic at Major Ports

2.10 During 2016-17 upto December 2016, 12 Major Ports handled 481.20 MT of traffic as against 447.43 MT over the corresponding period of previous year. The composition of the cargo is given below at **Table 4**.

(In Million Tonnes)

Year	POL	Iron Ore	F & RM	Coal	Container (In Million TEUs)	Other Cargo	Total
2005-06	142.09	79.17	12.19	58.76	61.98 (4.61)	69.38	423.57
2006-07	154.34	80.58	14.13	59.98	73.44 (5.54)	81.31	463.78
2007-08	168.75	91.80	16.63	64.93	92.27 (6.71)	84.94	519.31
2008-09	176.14	94.04	18.23	70.40	93.14 (6.59)	78.59	530.53
2009-10	175.09	100.33	17.72	71.71	101.24 (6.90)	95.00	561.09
2010-11	179.17	87.06	19.99	72.73	113.93 (7.52)	96.97	570.03
2011-12	179.10	60.40	20.39	78.78	120.10 (7.78)	101.36	560.14
2012-13	185.98	28.47	14.74	86.66	119.82 (7.70)	110.12	545.79
2013-14	187.31	24.66	13.74	104.73	114.64 (7.46)	110.42	555.50
2014-15	188.77	17.91	16.20	117.86	119.44 (7.96)	121.16	581.34
2015-16	195.94	15.35	15.90	125.96	123.12 (8.20)	130.20	606.47
April-Dec. 2016	158.25	32.46	11.60	106.38	92.13 (6.32)	80.38	481.20

2.11 While the commodities viz. Coal and POL are showing steady growth, there has been fluctuation in traffic of Iron Ore, Fertilizer and Containers during the last few years. However, steep increase has been noticed in Iron Ore Traffic. The other general traffic continued

to grow. Jawaharlal Nehru Port Trust (JNPT) continued to be the leading container handling port in the country with a share of about 44% followed by Chennai (24%) and the remaining share of 32% being handled by other major ports.

Cargo Traffic at Non-major Ports

2.12 During the Eleventh Five Year Plan (2007-12), the traffic at non-major ports increased at annual rate of close to 14.75%. Non Major ports handled around 43% of the total maritime freight traffic of the country during April to December, 2016. Gujarat accounted for around three fourth of the total traffic handled by non-major ports followed by Andhra Pradesh (14%) and Maharashtra (7%). Three maritime states namely Gujarat, Maharashtra and Andhra Pradesh together accounted for close to 93% of the total estimated traffic by the non-major ports in the current year i.e. during April-December, 2016.

Port Efficiency

2.13 Efficiency at ports has an important bearing on the transaction cost of the shipping lines. Major ports have improved their efficiency of operation particularly in terms of turnaround time (TRT). Amongst the 12 Major ports, improvement in TRT during 2015-16 in comparison to 2014-15 was discernible in most of the major ports. The Average Turnaround Time (Port A/c) improved from 4.24 days in 2000-01 to 2.11 days during 2016-17 (upto December, 2016).

Eleventh Five Year Plan target

2.14 The Eleventh Five year plan envisaged an increase in capacity of major ports to 1,016.55 MT by the end of 2011-12 from the pre-plan base level of 504.75 MT. Average annual growth in capacity addition was envisaged at 15 per cent. Actual capacity addition during the plan (2006-07 to 2011-12) was however moderate and showed a growth of 6.65 per cent per annum.

Twelfth Five Year Plan target

2.15 The projected capacity during the terminal year of Twelfth Plan period for the Major ports would be 1229.24 MT, nearly, 1.53 times of the existing capacity. The expected demand by

the end of the 12th year plan in terms of cargo handling at major Ports as per the Twelfth five year plan is 943.06 MT with an estimated annual growth of 10.98%. The cargo handling capacity in Major Ports at the end of December 2016 was 1005.00 MT.

Maritime Agenda 2010-20

2.16 In the Maritime Agenda 2010-20, a target of 3,130 MT port capacity has been set for the year 2020. More than 50 per cent of this capacity is to be created in the non-major ports as the traffic handling by these ports is expected to increase to 1,280 MT. The objective of the Maritime Agenda is not only creating more capacity but augmenting port performance. This enlarged scale of operation is expected to reduce transaction costs considerably and make Indian ports globally competitive. The proposed investment in major and non-major ports by 2020 is expected to be around Rs. 277380 crore. Most of this investment has to come from the private sector including foreign direct investment (FDI). FDI up to 100 percent under the automatic route is permitted for construction and maintenance of ports. Private-sector participation will not only increase investment in the ports infrastructure, but also efficiencies in ports through induction of latest technology and better management practices. Public funds will be mainly deployed for common use infrastructure facilities like deepening of port channels, rail and road connectivity from ports to hinterland etc.

Maritime India Summit



2.17 Maritime India Summit 2016 (MIS 2016) was held during 14-16 April 2016 in Mumbai. MIS was the maiden effort by the Ministry to showcase investment opportunities offered by the India's maritime sector. Republic of Korea was the partner country in the summit.

2.18 The Summit was attended by more than 5000 domestic and international delegates from more than 40 countries. Nearly 200 companies participated in the exhibition that accompanied the Summit.



Showcasing at Maritime India Summit, 2016

2.19 The Summit was inaugurated by Shri Narendra Modi, Hon'ble Prime Minister of India and was addressed by a galaxy of speakers including Union Ministers, Chief Ministers, Ministers of State Governments, senior officials, industry experts, bankers and consultants. In his inaugural address Prime Minister called upon the maritime community to take advantage of investment opportunities offered by India's maritime space. He assured of all possible support from the Government for seamless growth of the sector. Prime Minister also released the National Prospective Plan (NPP) of Saragmala on the occasion.

2.20 A delegation from Republic of Korea led by Minister of Oceans and Fisheries along with two Deputy Ministers, senior Government officials and representatives of over 50 maritime sector companies participated in the

Summit. Maharashtra was the host state for the summit and provided all necessary support for successfully hosting the summit in Mumbai.



Discussion with Korean Delegation

2.21 Secretary General of International Maritime Organisation, Mr. Kitack Lim and Minister of Oceans and Fisheries, Republic of Korea, Mr. Kim-Young Suk also addressed the gathering during the Inaugural Session. Shri Rajnath Singh, Hon'ble Home Minister was the Chief Guest at the Valedictory session.

2.22 Various issues concerning the maritime sector were discussed during the 12 thematic sessions spread over two days. These included:

- Promoting Port Led Development in India
- Shipbuilding, Ship Repair and Ship Breaking
- Skill development through Maritime Education and Training
- Inland Water Transportation and Coastal Shipping
- Cruise Shipping and Lighthouse Tourism
- Hinterland Connectivity and Multi-Modal Logistics
- Maritime Financing
- Island Development and Aquatic Resources
- Maritime Security

2.23 An Investment Catalogue containing details of 240 projects identified for investment in coming years was shared with delegates.

2.24 141 business agreements entailing investments worth Rs. 83000 crore were signed during the summit. Of these 11 projects worth approx INR 825 Crore have already been completed. An Investment Facilitation Cell called, India Maritime Plus has been set up in Indian Ports Association which is following up on the progress of the remaining business agreements.

Private-sector Participation

2.25 Maritime Agenda 2010-20 has estimated that investment required in new projects of major ports will be Rs. 1,09,449.40 crore of which Rs. 72,878.20 crore is expected to come through private sector participation and the balance Rs. 36,571.20 crore to be funded through internal and extra budgetary support. States have also identified projects for development of non-major ports at an estimated cost of Rs. 1,67,930.80 crore for creation of additional capacity of 1293.60 MT. The private sector is envisaged to fund most of the projects through PPP basis viz. Design Build Finance Operate and Transfer (DBFOT basis) or Build Operate Own and Transfer (BOOT basis) etc.

2.26 During 2016-17, upto December, 2016, 25 projects have been awarded/approved involving an investment of Rs. 3318.55 crore and additional capacity of 19.64 MTPA.

2.27 Recent policy reforms and initiatives: The following initiatives have been taken for improving the efficiency and productivity of Major Ports:

A. Major Port Authorities Bill

2.28 The Government has introduced a bill in the Winter Session of the Parliament in Lok Sabha on 16th December, 2016, to modernize the institutional structure of the Major Ports so that they are in a position to perform efficiently in the competitive port sector. To this effect, it has been decided to replace the Major Ports Act, 1963 which governs the Major Ports by

the Major Ports Authority Bill, 2016 to provide greater autonomy to Ports.

2.29 With a view to promote the expansion of port infrastructure and facilitate trade and commerce, the proposed bill aims at decentralizing decision making and to infuse professional approach in governance of ports. The new Major Ports Authority Bill, 2016 would help to impart faster and transparent decision making benefiting the stakeholders and better project execution capability. This will eliminate the need of Government approvals for operational decisions. The Bill is aimed at reorienting the governance model in central Ports to landlord port model in line with the successful global practice. This will also help in bringing transparency in operations of Major Ports.

2.30 The proposed Bill has been prepared after extensive consultation with the stakeholders and Ministries/Departments. The salient features of the Major Ports Authority Bill are as under:

- Port Authorities have been notified in the Bill instead of Port Trusts.
- The Bill is more compact in comparison to the Major Port Trusts Act, 1963 as the number of sections has been reduced to 65 from 134 by eliminating overlapping and obsolete Sections.
- The new Bill has proposed a simplified composition of the Board of Port Authority which will comprise of 11 members from the present 17 to 19 Members representing various interests. A compact Board with professional independent members will strengthen decision making and strategic planning. Provision has been made for inclusion of representative of the State Government in which the Major Port is situated, Ministry of Railways, Ministry of Defence, Customs and Department of Revenue as Members in the Board apart

from a Government Nominee Member and a Member representing the employees of the Major Ports Authority.

- The role of Tariff Authority for Major Ports [TAMP] has been redefined as it is one of the critical factors hindering the growth and development of Major Ports. Port Authority has now been given powers to fix tariff which will act as a reference tariff for purposes of bidding for PPP projects. PPP operators will be free to fix tariff based on market conditions and notified by the Port Authority. The Board of the Port Authority has been delegated the power to fix the scale of rates for other port services and assets like land.
- An independent Review Board has been proposed to be created to carry out the residual function of the erstwhile TAMP for Major Ports, to look into disputes between ports and PPP concessionaires, to review stressed PPP projects and suggest measures to review stressed PPP projects and suggest measures to revive such projects and to look into complaints regarding services rendered by the ports/private operators operating within the ports would be constituted.
- The Boards of the Port Authority have been delegated full powers to enter into contracts, planning and development, fixing of tariff except in national interest, security and emergency arising out of inaction and default. In the present MPT Act, 1963 prior approval of the Central Government was required in 22 cases.
- Empowers the Board to make its own Master Plan in respect of the area within the port limits to the exclusion of any State or local regulations and to construct within port limits Pipelines, Telephones, Communication towers, electricity supply or transmission equipments. The Board is empowered to lease land for Port related

use for upto 40 years and for any purpose other than the purposes specified in section 22 for upto 20 years beyond which the approval of the Central Government is required.

- Provisions of CSR & development of infrastructure by Port Authority have been introduced.

B. Model Concession Agreement for Port Sector, 2008

2.31 Model Concession Agreement (MCA) gives the various parameters for the implementation and maintenance of PPP projects. The MCA which is presently in vogue was earlier approved by the Cabinet in January, 2008.

2.32 More than 50 PPP Projects have since been awarded by Major Ports based on this MCA after following due procedure. Though PPP mode has been largely successful in Port Sector, some PPP Projects have experienced difficulties during operations, which have necessitated a review of the MCA. Keeping in view the experience gained in managing PPP projects, a revised draft MCA has been proposed by the Ministry of Shipping.

2.33 The salient changes proposed in the revised MCA are:

- Change in equity holding requirements to provide Exit Route to developers.
- Payment of Royalty by private operators to Port on “per Metric Tonnes of cargo handled” basis instead of “% of Gross Revenue”
- Provision for Additional Land
- Improved utilization of Project Assets and higher Productivity
- Amendment in Definition of “Change in Law”
- Provision for Commercial Operation before commencement date of operation
- Providing for Refinancing Provision in MCA

- Provision for Mitigation Measures – Constitution of a Board

C. Captive Policy

2.34 In July, 2016 Cabinet has approved a policy for facilitating the process of allotment of waterfront and associated land for development and operation of port facilities/services by any industry substantially dependent on a Major Port for import and/or export of cargo for carrying out their legitimate business operations within the larger PPP framework. This policy will replace the existing guidelines for allotment of land and waterfront for port based industries.

D. New Stevedoring and Shore Handling Policy

2.35 This policy has been made effective from 31st July, 2016. This policy will increase competitiveness by creating value for the trade through reduced logistics cost. Policy will also apply to Mumbai Port and Haldia where stevedoring is carried out by the Ports.

E. New Berthing Policy for Dry Bulk

2.36 This policy has been made effective from 20th August, 2016. This will provide a standardized framework for calculation of norms, specific to the commodity handled and the infrastructure available on the berth. This will help to standardize anchorage charges to reduce berthing time & overall turn-around time of ships and help to drive higher cargo throughput using the available infrastructure in the Major Ports.

F. Deep draft berth at Major Ports

2.37 With a view to enable Major Ports to handle larger vessels the Ministry has prepared an action plan for increasing the draft in Major Ports. The outer harbour in Visakhapatnam Port has very deep draft of more than 18 mtrs. It is proposed to create a draft of more than 18 mtrs, in Mormugao Port, Kamarajar Port (Ennore).

G. Ease of Doing Business

2.38 For promoting Ease of Doing Business, Ministry of Shipping has identified 10 parameters which include elimination of Form 11 & 13, Accommodation for laboratories to Participating Government agencies (PGAs), Direct Port Delivery, installation of container scanners, E-delivery orders, RFID based Gate-automation System etc. These parameters have already been implemented at JNPT and other Major Ports. For implementation of these measures at ground level which involve multiple stakeholders to carry out specific tasks, at times with overlapping jurisdictions, a joint Committee of Managing Director, Indian Port Association (IPA) and Joint Secretary (Customs) was set up by the Ministry of Shipping to work out the tasks & responsibilities of all the stakeholders to enable reduction in cost and dwell time in Ports. The Committee has recommended 42 action points specifying responsibility of concerned stakeholders/agency in respect of each action point with specific reference to Jawaharlal Nehru Port.

H. Project Unnati

2.39 An exercise was undertaken to prepare a Quantitative Benchmarking Module which covered the operational, financial, human resources and efficiency related parameters for benchmarking of efficiency and productivity of Major Ports in India against international standards and define Key Performance Indicators for the ports and terminals. The study covered marine operations, stevedoring, jetty operations, vessel operations Yard performance, Labor productivity, Cargo storage (containers & dry bulk only), rake operations (loading/unloading of rakes), maintenance (Equipment uptime and breakdowns), Gate-In and Gate-out operations, safety, customs and penetration of IT.

2.40 The benchmarking study focused on identifying how efficiently capacity is utilized and underlying operational performance metrics across commodities. The low berth productivity

and crane productivity across container terminals at Major Ports along with potential to drive 15-20% higher volumes of coal across ports, just by replicating 'best demonstrated performance' (BDP) consistently was studied. Potential to double volumes of POL by replicating BDP and reducing non working time and high costs of labour and maintenance dredging across ports was also analyzed. On the basis of the quantitative and qualitative benchmarking carried out, a clear roadmap for improvement for each port has been laid out covering changes in the areas of core business processes, equipment, organization structure, people skills, information technology and infrastructure.

2.41 A total number of 116 new initiatives for 12 Major Ports has been identified which would increase the volume of traffic significantly and also avoidance of capital expenditure. The roadmap for improvement has been suggested along with the timelines, approach and methodology for implementation. All the 116 recommendations are to be implemented by December 2019. Out of these, 69 have already been implemented. The implementation of these initiatives will further improve the efficiency and performance of the Ports.

I. Master Planning of all Major Ports

2.42 142 port projects have been identified after a detailed Master Planning of all Major Port with an investment of 93000 crs. and capacity of 890 MTPA. Out of this 95 projects with an investment of Rs. 43000 crs. are to be taken up by 2019. The Capacity of the Indian Ports will increase to 2190 MTPA by 2018-19. Major Ports : [965 MTPA (2016) to 1222 MTPA (2019) Non-Major Ports: 750 MTPA (2016) to 968 MTPA (2019)].

SHIPPING SECTOR

2.43 Shipping is an important indicator of both commodity and services trade of any country. It plays an important role in the Indian economy

with around 95% of India's trade by volume and 68% in terms of value being transported by sea. As on November 30, 2016, India had a fleet strength of 1297 ships with Gross Tonnage (GT) of 11.29 million, with the public-sector Shipping Corporation of India having (3.27 MGT) the largest share of 28.96%. Of this, 400 ships with 9.77 million GT cater to India's overseas trade and the rest to coastal trade.

2.44 As of January 1, 2016, Panama, Liberia and the Marshall Islands are the largest vessel registries. Together, they account for 41.00% share of world tonnage. Marshall Islands recorded an impressive growth of over 12.03% year on year. More than three quarters of world fleet is registered in developing countries including many open registries. Open registries are those where the owner does not need to be of the same nationality as the country where the ship is registered. The tonnage registered under a foreign flag (where the nationality of the owner is different from the flag flown by the vessel) is 70.20% of the world total.

2.45 Greece continues to be the largest ship owning country, accounting for 16.36% of the world total, followed by Japan, China, Germany and Singapore. Together, the top five ship-owning countries control half of the world tonnage (DWT). Five of the top ten ship-owning countries are from Asia, three are European and two are from the North America.

2.46 Europe and Asia share in Control as well as Registration is consistent. Both account for over 90% of the world fleet i.e. both by Country of Control or Country of Registration. However Latin and South America continent while enjoying share of 25 % of the world tonnage by registration of country, it has control of only 1.6% of the world tonnage.

2.47 In South America, the largest ship owning country (in DWT) continues to be Brazil, followed by Mexico, Chile and Argentina. The

African country with the largest fleet ownership is Angola followed by Nigeria and Egypt.

2.48 India ranked 18th in the world in terms of world tonnage ownership with a share of only 1.21% as on January 1, 2016. In comparison, China ranked 3rd with a share of 8.87%.

2.49 As on March 31, 2016, 43.89% of the Indian fleet was over 20 years of age and 12.37% in the age group of 15-19 years. The international average age of ships is 14 years. While India's overseas seaborne trade has been growing exponentially over the years, there is a sharp decline in the share of Indian ships in the carriage of India's overseas trade from about 40% in the late 1980s to 7.45% in 2014-15.

2.50 The global shipping industry has been experiencing turbulent waters since the year 2012 due to the continued economic downturn. Indian shipping companies faced problems of restricted cash inflows due to very low charter hire and freight rates in all segments of shipping.

2.51 Shipping plays an important role in the economic development of the country, especially in India's international trade. The Indian shipping industry also plays an important role in the energy security of the country, as energy resources, such as coal, crude oil and natural gas are mainly transported by ships. Further, during crisis situation, Indian shipping contributes to the uninterrupted supply of essentials, and can serve as second line of defence. Approximately, 95% of the country's trade by volume and 68% in terms of value, is being transported by sea.

2.52 India's shipping tonnage was only 1.92 lakh Gross Tonnage (GT) on the eve of independence. Now India has one of the largest merchant shipping fleet among the developing countries and ranks 17th amongst the countries with the largest cargo carrying fleet with 11.29 million G.T. as on November 30, 2016 and average age of the fleet being 18.03 years. Indian maritime sector

facilitates not only transportation of national and international cargoes but also provides a variety of other services such as cargo handling services, shipbuilding and ship repairing, freight forwarding, light house facilities and training of marine personnel, etc. Indian shipping tonnage (capacity) was practically stagnant at around 7 million gross tonnage (GT) till the beginning of 2004-05. However, the tonnage tax regime introduced by the Government of India in that year boosted the growth of the Indian fleet as well as its tonnage.

SHIPPING LEGISLATIONS

(a) Revamped Merchant Shipping Bill to replace Merchant Shipping Act, 1958

2.53 In order to promote ease of doing business to meet new challenges facing merchant shipping sector – to increase tonnage under Indian flag and share of Indian seafarers, safeguard rights and privileges of seafarers, enhance safety and security of vessels and life at sea, to develop Indian coastal shipping and trade and to ensure compliance of India's obligations under International conventions and to replace old redundant provisions with contemporaneous provisions, the Merchant Shipping Bill, 2016 is being introduced in Parliament to replace existing MS Act, 1958. This Bill was introduced in the Lok Sabha on 16.12.2016. The main features of the MS Bill, 2016 are:

- To register all seagoing vessels, whether propelled or not including certain residuary category of vessels not covered under any statute;
- To allow substantially-owned vessels and vessels chartered on Bareboat Charter-cum-Demise (BBCD) contract by Indian entities to be registered as Indian flag vessels; to recognize Indian controlled tonnage as a separate category; and dispense with the requirement for issuing

licences to Indian flag vessels for coastal operation, so as to facilitate augmentation of Indian tonnage and promotion of coastal shipping;

- To make the insurance of crew engaged on vessels including fishing, sailing without mechanical means of propulsion and whose net tonnage is less than fifteen compulsory by the owner of the vessel; and to dispense with the requirement with respect to signing of articles of agreement by the crew before the Shipping Master, so as to ensure welfare of seafarers;
- To make provisions for security-related aspects, which will enable identification and ensure coastal security;
- To give effect to IMO convention provisions not covered in the existing act.
- Repeal of Coastal Vessel Act, 1838.

(b) The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016

2.54 The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016 has been introduced in the Parliament in the winter sessions of the Parliament on 21 November, 2016. Admiralty jurisdiction relates to powers of the High Courts in respect of claims associated with transport by sea and navigable waterways. Under the present statutory framework, the admiralty jurisdiction of Indian courts flow from laws enacted in the British era. The proposed Bill consolidates the existing laws relating to admiralty jurisdiction of courts, admiralty proceedings on maritime claims, arrest of vessels and related issues and repeals five obsolete British statutes on admiralty jurisdiction in civil matters. The Bill confers admiralty jurisdiction on High Courts located in coastal states of India and this jurisdiction extends upto territorial waters. This legislative proposal will fulfil a long-standing demand of the maritime legal fraternity.

2.55 In order to provide the Indian shipping industry a level playing field and make it competitive at international level, the government implemented certain policies as mentioned below:

(i) Exclusion of services of transportation of import cargo by ships on voyage charter from Negative List.

2.56 Freight charged by the shipping companies for import of goods into India has been excluded from the Negative List and permitted availment of CENVAT credit on inputs used for providing such service. This will bridge the competitive gap between Indian and foreign shipping lines in the taxation sphere. This positive change puts India on par with the major progressive maritime jurisdictions, which already give full credit of taxes paid on inputs used for import cargo.

(ii) Zero rating of services of transportation of export cargo by Indian ships.

2.57 The transport service for export of cargo was not being treated as export and CENVAT credit was also not available for export of goods, which made the service costlier for Indian flag ships. It has now been proposed that the services provided by Indian shipping lines by way of transportation of goods by a vessel to outside India shall be zero rated with effect from March 1, 2016 along with the availability of CENVAT credit for inputs used in providing the service. This will reduce transportation cost and puts India at par with the major progressive maritime jurisdictions which have zero rates of taxation on maritime services and also provide full credit of taxes paid on inputs used in the maritime services.

(iii) Reduction of service tax incidence on coastal shipping.

2.58 Realizing the need for encouraging transportation of goods through coastal shipping

rather than road or rail, the Government, in the Union Budget 2015-2016, had brought the abatement of service tax at par with road and rail i.e. 70%. However, due to lack of CENVAT credit on inputs used in the service in case the benefit of abatement is availed, the shipping companies were not able to provide services to the customers at lower costs. In the Union Budget 2016-17, the Government has rectified this anomaly and allowed shipping companies to charge service tax at abated rate on freight income and avail CENVAT credit on input services.

(iv) Reduction of Central Excise duty on capital goods, raw materials and spares used for repair of ocean going vessels.

2.59 This would reduce the material cost used for repair of the ocean going vessels by 4%, if domestically procured. This amendment also permits the shipyards to procure capital goods for ship repair of ocean going vessels at NIL rate of duty from the existing 12.5%. With the proposed amendment, cost of ship repair and dry-docking in India will reduce.

(iv) Infrastructure status for shipyards.

2.60 Government of India has, on April 13, 2016, notified inclusion of stand-alone shipyards undertaking activities such as shipbuilding and ship-repair under the Harmonized List of Infrastructure sectors.

(v) Financial assistance and eligibility support for Indian shipyards.

2.61 To promote Indian shipyards, the Union Cabinet has on December 9, 2015 approved Shipbuilding Financial Assistance policy for Indian shipyards for contracts signed during a ten year period, viz. 2016-2026. Necessary guidelines have since been formulated and uploaded on the website of the Ministry on June 16, 2016 for wide circulation and operationalization.

(vi) Guidelines for Domestic Eligibility Criteria.

2.62 Revision of domestic eligibility criteria has been approved to ensure that all the government departments or governmental agencies such as CPSUs procuring vessels for governmental purposes or for own purposes shall undertake bulk tendering for their vessel related requirements with deliveries starting from 2017-2018 with a Right of First Refusal (RoFR) for Indian shipyards and shall ensure that from 2025 onwards, only Indian-built vessels are procured for governmental purpose or for own purpose. Similar relaxation will be applicable for repair of their vessels. Necessary guidelines have since been formulated and uploaded on the website of the Ministry on May 31, 2016 for wide circulation and operationalization.

2.63 Other initiatives that have been taken in the recent past include the following:-

(a) Simplification of procedure to avail Customs and Central Excise duty exemption on procurement of goods for shipbuilding and ship repair.

2.64 The procedure for procuring goods at concessional/NIL rate of Central Excise and Customs duty for the Ship Building and Ship repair has been considerably streamlined. The new procedure only requires intimation to be sent to the Excise Department instead of their approval for procuring goods at a concessional /NIL rate. This would enable the ease of doing business.

(b) Exemption of Central Excise duty on inputs used in Ship Repair.

2.65 In the Union Budget 2016-2017, Government has exempted Central Excise duty on inputs such as capital goods, raw materials and components used in ship repair.

SHIP BREAKING

2.66 The subject of “Ship Breaking” has been transferred to the Ministry of Shipping. Guidelines have been put in place for utilization of Ferrous Scrap Development Fund for ship breaking activities. The proposal for modernization of Alang Sasia ship breaking yard (Gujarat) has been posed to JICA for funding the upgradation of existing ship recycling yards; make them environmentally sound; develop hazardous material removal and pre-treatment facility and development of labour welfare infrastructure and health facilities.

Revision of Shipbreaking Code

2.67 Ministry of Steel had formulated and notified a comprehensive code for ship breaking and ship recycling, namely Shipbreaking Code, 2013, on 7th March, 2013, in pursuance of the directions of the Hon’ble Supreme Court in CWP 657 of 1995, in the matter of Research Foundation for Science Vs Union of India and another. Some changes in the Code are being considered based on the practical experience of the users and suggestions received from different stakeholders, viz, shipbreaking industry, State Maritime Boards/Port authorities and other regulatory agencies to ensure environmentally sound and safe ship recycling. A copy of the Code, indicating the proposed changes has been uploaded on the website of the Ministry. (www.shipping.nic.in). Final decision will be taken after taking into consideration the comments received in this matter.

INLAND WATER TRANSPORT

2.68 Various projects for development and maintenance of National Waterways 1, 2, 3, 4 & 5 (Ganga, Brahmaputra, West Coast Canal, Krishna – Godavari rivers alongwith canal system between Kakinada and Puducherry; and Brahmani river - East Coast Canal, Matai river and Mahanadi delta rivers) were implemented by Inland Waterways Authority of India (IWAI)

for providing / upgrading / maintaining Inland Water Transport (IWT) infrastructure as per requirement.

2.69 Transportation of imported coal from Sand heads in Bay of Bengal for NTPC, STPP, Farakka which started in October 2013, continued during 2016-17.

Jal Marg Vikas Project

2.70 The implementation of Jal Marg Vikas Project for capacity augmentation on NW-1 for navigation from Haldia to Allahabad (1620 km) has commenced with an estimated cost of Rs. 5,639 crore with proposed 50% loan assistance from the World Bank. The following significant developments have taken place:-

- Most of the studies by the Consultants for technical feasibility / detailed engineering; environmental and social impact assessment of the project; and traffic potential and forecast model on account of the proposed development work have been completed and a few are in progress as per the stipulated timelines.
- On land acquisition for major projects, administrative and financial approvals were accorded for construction of Phase-I (A) of the multimodal terminal at Varanasi on a plot of land measuring 5.586 hectare already in the possession of IWAI; for acquisition of 195 acres of land for construction of the multimodal terminal at Sahibganj at an estimated cost of Rs. 187.00 crore; transfer of 14.86 hectare of land from Farakka Barrage Project to Ministry of shipping with IWAI as its custodian at a cost of Rs. 2.36 crore for construction of the new navigational lock at Farakka; and transfer of 61 acres of land in Haldia Dock Complex to IWAI on 30 years lease at an upfront premium of Rs. 40.21 crore for construction of the multimodal terminal at Haldia.

- Tenders were awarded for construction of Phase-I of the multimodal terminals at Varanasi, Sahibganj and Haldia and construction of navigational lock at Farakka. Bids received for the tender for provision of Least Available Depth (LAD) on the Farakka-Kahalgaon stretch were under evaluation.
- Acquisition of 1.415 hectare of land for road connectivity of the Varanasi terminal with NH-7 and 27.754 hectare of land for construction of Phase-II of the Varanasi terminal achieved substantial progress.
- The National Waterways Act, 2016 for declaration of 106 new waterways as 'National Waterways' has been passed by both the Houses of Parliament and notified in the Gazette of India, dated 26th March, 2016 as an Act No. 17 of 2016. The Act has come into force with effect from 12th April, 2016. Now, a total 111 waterways has been declared as National Waterways in the country.
- International Finance Corporation (IFC), an arm of World Bank has been appointed as consultant to identify & develop IWT terminals on PPP mode.

- Capital dredging in NW – 3 was completed due to which a navigation channel with 2.0 m depth is now available in the entire 205 km length of the waterway.

Development of New National Waterways

2.71 Based on the feasibility reports and technical viability, it has been decided to undertake developemnt of 32 new NWs declared under the National Waterways Act, 2016, in the next three years. These include NW-16 (Barak), NW-68 (Mandovi), NW-111 (Zuari), NW-27 (Cumberjua), NW-40 (Ghagra), NW-37 (Gandak), NW-58 (Kosi) and NW-97 (Sundarbans).

2.72 New conference room “Sagar Manthan”.



CHAPTER – III

SAGARMALA



SAGARMALA PROGRAMME

3.1 Sagarmala Programme is now moving from the conceptualization and planning to the implementation stage. As part of the programme, the National Perspective Plan has been prepared and was released on 14th April 2016 at the maiden Maritime India Summit –

2016 by the Hon'ble PM.

3.2 More than 400 projects, at an estimated infrastructure investment of Rs. 8 Lac Cr, have been identified (Table 1) under Sagarmala. Out of these, 199 focus projects are to be taken up between FY 16-17 & FY 18-19 (Table 2).

Table 1: Summary of projects under Sagarmala

S. No.	Project Theme	FY 15-16		FY 16-17		FY 17-18		FY 18-19		FY 19-20 to FY 24-25		FY 25-26 to FY 34-35		Total	
		#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)
1	Port Modernisation	62	27,700	46	22,670	13	2,193	20	35,512	27	26,588	21	28,165	189	142,828
2	Connectivity Enhancement	30	15,881	58	28,924	28	16,641	26	139,715	17	21,182	11	8,233	170	230,576
3	Port-Linked Industrialisation	2	325	1	3,000	2	5,000	17	94,426	11	318,130	-	-	33	420,881
4	Coastal Community Development	4	79	4	529	3	119	4	688	8	2,800	-	-	23	4,216
Total		98	43,985	109	55,123	46	23,953	67	270,341	63	368,700	32	36,398	415	798,500

Table 2: Summary of Focus Projects under Sagarmala

S.No.	Project Theme	FY 16-17		FY 17-18		FY 18-19		Total	
		#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)	#	Project Cost (Rs. Cr)
1	Port Modernisation	39	19,220	13	2,193	20	35,512	72	56,925
2	Connectivity Enhancement	43	14,504	28	16,641	26	139,715	97	170,860
3	Port-Linked Industrialisation	1	3,000	2	5,000	17	94,426	20	102,426
4	Coastal Community Development	3	516	3	119	4	688	10	1,373
Total		86	37,240	46	23,953	67	270,341	199	331,534

3.3 Projects worth Rs. 1 Lac Crore are already under various stages of implementation and development. Rs. 242.9 Cr has been released for 14 projects taken up in FY 15-16 & FY 16-17. This includes unique and innovative projects such as Gogha-Dahej RO-Pax Ferry Services Project (Rs. 117 Cr sanctioned and Rs. 58.5 Cr released) and RO-RO Services Project at Mandwa (Rs. 57.5 Cr sanctioned and Rs. 43.76 Cr released). In addition, TEFR is under preparation for development of underwater viewing gallery and restaurant at BeytDwarka Island and the consultant is being selected for preparing DPR for the National Maritime Heritage Centre proposed at Lothal.

3.4 Projects under Sagarmala will be implemented by relevant Central Ministries, State Governments, Ports and other agencies primarily through the private or PPP mode. The Sagarmala Development Company (SDC) was incorporated on 31st August 2016, after receiving Cabinet approval on 20th July 2016, for providing funding support to project SPVs and residual projects under Sagarmala.

PORT MODERNIZATION & NEW PORT DEVELOPMENT

3.5 Master Plans have been finalized for the 12 major ports. Based on the same, 142 port capacity expansion projects (total cost: Rs. 91,434 Cr) have been identified for implementation over the next 20 years. Out of this, 31 projects have been identified for implementation starting FY

16-17. Out of this, 4 projects have been awarded, 7 projects are under development stage and 19 projects are expected to be awarded by March 2017.

3.6 In addition, 6 new port locations (Vadhavan, Enayam, Sagar Island, Paradip Outer Harbour, Sirkazhi, Belekeri) have been identified and their Techno-Economic Feasibility Reports have been finalized. DPR has been prepared for new port at Sagar Island and EFC approval was obtained on 5th August 2016. DPR is under preparation for Vadhavan, Paradip Outer Harbor and Enayam. Note seeking in-principle approval for setting up a major port at Enayam has been approved on 5th July 2016 by the Cabinet. Cabinet approval is awaited for setting up a major port at Vadhavan.

Port Connectivity Enhancement

3.7 Indian Port Rail Corporation Limited (IPRCL) has taken up 25 works (Total cost: Rs. 5,284.38 Cr) across 9 major ports. Out of this, 8 works (Total cost: Rs. 159.24 Cr) have already been awarded and 4 more are targeted for award in remaining part of FY 16-17. Out of the remaining 13 works, DPR has been prepared for 6 works (Total cost: Rs. 228.01 Cr) and is under preparation for 7 works (Total cost: Rs. 4326 Cr).

3.8 Out of the final list of rail connectivity projects identified under Sagarmala, 21 projects (~3300 Km, total cost: Rs. 28,000 Cr) are being taken up by Ministry of Railways and 4 projects

(~151 Km, total cost: Rs. 3,590 Cr) are to be taken up either in Non-Government Rail (NGR) or JV model through Indian Port Rail Corporation Limited.

3.9 Out of 79 road connectivity projects identified under Sagarmala, 45 projects (cost: Rs. 1, 54,258 Cr) will be done by MoRTH / NHAI, including 18 projects under the Bharatmala scheme. The remaining 34 projects (cost: Rs. 10,923 Cr) will be done by State PWD, Port Authorities, NHAI and SDC.

3.10 Additional coastal shipping potential of 130 MMTPA by 2025 has been identified under Sagarmala. Multiple steps have been taken to promote coastal shipping. Cabotage has been relaxed for 5 years for specialized vessels (RO-RO, RO-PAX). Scope of the Coastal Berth Scheme has been expanded and was also integrated into the Sagarmala Programme. 30 proposals have been considered in FY 16-17 and Rs. 25.9 Cr has been sanctioned for 9 projects so far.

3.11 An Inter-Ministerial Committee (IMC) has also been constituted to develop a strategy and implementation roadmap for the coastal shipping of coal and other commodities/product. Four meetings of the IMC have been held so far (22nd March 2016, 3rd May 2016, 1st June 2016 and 14th October 2016). Based on the recommendations of IMC, DPR is under preparation for the heavy haul rail corridor between Talcher & Paradip.

Port-linked Industrialization

3.12 For promoting port-led industrialization, 14 Coastal Economic Zones (CEZs) covering all the Maritime States and Union Territories have been proposed. CEZ perspective plans have been prepared and Detailed Master Plans will be prepared for 4 pilot CEZs in the first phase of development (i.e. Gujarat, Maharashtra, Tamil Nadu and Andhra Pradesh).

3.13 Vision of the Sagarmala Programme is to reduce logistics cost and time for the movement of EXIM and domestic cargo and development of port-proximate future industrial capacities near the coast is a step in this direction. In this regard, 29 potential port-linked industrial clusters across three sectors, namely – Energy, Materials and Discrete Manufacturing, have been identified under Sagarmala. These include 13 bulk clusters for basic input industries such as Power, Refineries & Petrochemicals, Steel and Cement, 2 Maritime clusters and 14 discrete manufacturing clusters, in the labour intensive sectors of Electronics, Apparel, Leather Products, Furniture and Food-Processing etc. The master plans for the proposed Maritime Clusters in Gujarat and Tamil Nadu have been prepared.

3.14. Based on availability of land with the Major Ports, Ministry of Shipping is developing a SEZ at JNPT, Free Trade Warehousing Zone (FTWZ) at Ennore and has also identified Kandla and Paradip for development of Smart Port Industrial Cities (SPICs).

Coastal Community Development

3.15 Coastal community development is an important objective of the Sagarmala Programme. In this regard, Ministry of Shipping is taking up a number of initiatives/projects in the areas of coastal community skill development and development of fishermen community. Budget of Rs. 100 Cr has been allocated under Sagarmala for coastal community development activities.

3.16 On the skill development front, Ministry is undertaking skill gap analysis in 21 coastal districts to identify the skilling requirements and develop a roadmap for addressing the same. These districts were identified from the Maritime States based on the availability of port & maritime infrastructure. Interim report and action plan has been prepared for 6 districts of Gujarat, Maharashtra, Andhra Pradesh and

63 projects identified in the same will be taken up under the Sagarmala and DDU-GKY starting March 2017. The report for all 21 districts will be finalized by February 2017.

3.17 Consultant has also been appointed for conducting cutting-edge skill training in ports & maritime sector. Primary research is currently underway and the first pilot batch of training is expected to start by March 2017. To provide skilling for port & port user community, Ministry is also taking action to set up a Multi-Skill Development Centre linked to JNPT and a Centre of Excellence in Shipbuilding.

3.18 While a concrete skill development action plan is being chalked out, Rs. 23.8 Cr has already been sanctioned under Sagarmala, for the following skilling projects:

- Safety training for workers in Alang-Sosiya Shipyard: 20,000 workers to be covered in 3 years
- Sagarmala and DDU-GKY Convergence Skill Training Project: 2,130 candidates targeted for training across 20 coastal districts in Phase 1. 340 candidates have already been trained and 135 have been placed. 350 candidates are currently undergoing training.

3.19 To support the development of fishermen community, Ministry is part-funding select fishing harbour projects under Sagarmala in convergence with Department of Animal Husbandry Dairying & Fisheries (DADF). In this regard, Rs. 63.02 Cr has been sanctioned for 8 projects, across Karnataka, Kerala, Tamil Nadu and Maharashtra. Key projects under consideration include modernization of Kulai, Veraval, Mangrol and Vasco da Gama fishing harbors. In-principle approval has also been given for development of deep sea fishing vessels and fish processing centres in convergence with DADF.

Potential Impact

3.20 The projects identified under Sagarmala Programme are expected to mobilize more than Rs. 8 Lac Cr of infrastructure investment, double the share of domestic waterways (inland & coastal) in the modal mix, generate logistic cost savings of Rs. 35,000-40,000 Cr per annum, boost merchandise exports by USD 110 Billion and enable creation of 1 Cr new jobs, including 40 Lac direct jobs, in the next 10 years.

INDIAN PORT RAIL CORPORATION LID

About IPRCL

3.21 IPRCL, a first of its kind Joint Venture Company (JVC) between the Major Ports under the Ministry of Shipping and RVNL with the objective to provide efficient rail evacuation systems to Major Ports and Minor ports thereby enhance their capacity and throughput. The company was registered on 10th July, 2015 as a Public Limited Company under the Companies Act, 2013.

3.22 IPRCL will strengthen second pillar of Sagarmala Programme, a flagship programme of Ministry of Shipping with core theme of Port Led development.

3.23 Some of the key accomplishments of IPRCL are:

- During the financial year 2016-17, 26 railway projects have been taken up across nine (9) Major ports at a total cost Rs 6000 Crores (approx.). Work on 10 Projects costing Rs 340 Crores has already commenced. Bids for three more projects costing Rs 300 crores are under process.
- Completed the pre-feasibility study of a heavy haul rail corridor from Ib Valley-Talcher to Paradip and Dhamra to evacuate coal mines of Mahanadi Coal Ltd (MCL) to the ports for shipping them to the southern states of India through the Coastal route.

On above mentioned corridor IPRCL is taking up the third and fourth line from Salegoan to Paradip that will be dedicated to freight. The development of this project will give a major fillip to the Government's initiative to promote multi-modal logistics and coastal shipping. DPR of the Project is being drawn by engaging M/s RITES.

- The company has taken up the task of preparation of DPR for Rail and Road connectivity of the proposed Major Port at Colachel (Enayam) in Tamil Nadu.
- Taken up feasibility and financial modeling of two mega projects; JNPT/Mumbai-Manmad-Indore and Kandla Port-Jaisalmer. The Project costs are Rs 10,000 Crores and 2,000 Crores respectively.

3.24 Other highlights of the company during 2016-17

- Business Plan of the Company for 2016-17 and 2017-18 has been approved by the board.

- The Company will provide end-to-end services in developing rail evacuation infrastructure at various Major and Minor Ports of India.

SAGARMALA DEVELOPMENT COMPANY LTD.

3.25 As part of the efforts to promote port-led development in the country, the Sagarmala Development Company (SDC) has been incorporated under the Companies Act, 2013. The company was registered as a Public Limited Company on 31st August, 2016. It will have an initial authorized share capital of Rs. 1,000 crore and a subscribed share capital of Rs. 90 crore. The main objective of the company is to identify port-led development projects under the Sagarmala Programme and provide equity support for the project Special Purpose Vehicles (SPVs) set up by the Ports / State / Central Ministries and funding window and /or implement only those residual projects which cannot be funded by any other means / mode. The process for appointment of a regular Managing Director and Functional Directors in SDC has been initiated.



Inauguration of Sagarmala Development Company

CHAPTER – IV

PORTS**INTRODUCTION**

4.1 Ports provide an interface between the ocean transport and land-based transport. There are 12 Major Ports in India out of which 6

are located on the East Coast and 6 on the West Coast.

MAJOR PORTS IN INDIA

Kolkata Port

4.2 Kolkata Port is the only riverine major port in India having an existence of about 138 years. It has a vast hinterland comprising the entire Eastern India including West Bengal, Bihar, Jharkhand, UP, MP, Assam, North East Hill States and the two landlocked neighbouring countries namely, Nepal and Bhutan. The port has twin dock systems viz. Kolkata Dock System (KDS) on the eastern bank and Haldia Dock Complex (HDC) on the western bank of river Hooghly.

4.3 Kolkata Port handled tonnes of 36.49 Million Tonnes (MT) traffic in 2016-17 (upto December, 2016). While KDS handled traffic of 11.65, HDC handled 24.84 Million Tonnes (MT). The port has 50 berths (KDS – 33 and HDC – 17) handling various types of cargos including containers with a capacity of 86.99 MTs. Important projects awarded during the year are Deployment of 2 floating cranes near Sagar, Development of hardstand storage area of 1.13 Lakh sqm inside dock, Replacement of Fendering system of Lead-in-Jetty and Maintenance dredging for a period of 5 years. Projects relating to Supply, Operation & Maintenance of different cargo handling equipment at berth Nos. 2 & 8 of HDC for shore handling on contract basis, Creation of edible oil handling facilities at 3rd Oil jetty and Installation of 2 MHCs at Berth Nos. 13 work were completed during the year.

4.4 Bio-Diesel dispensing unit has been installed at HDC and the bio-diesel is being used by all the equipments/vehicles operated at HDC by Port and Port users as per Government guidelines. Use of Eco-friendly Biodiesel will reduce green house emission levels and offer operational benefits through increased fuel lubricity. 5

Paradip Port

4.5 Paradip Port is one of the major ports in India. Government of India took over the management of the port from the State

Government on 1st June, 1965. The Government of India declared Paradip Port Trust (PPT) as the eighth major port in India on 18th April, 1966 making it the first major port in the East Coast commissioned in independent India. Paradip Port is situated 210 nautical miles south of Kolkata and 260 nautical miles north of Visakhapatnam at Latitude 20 – 15'58.63 N and Longitude 86' – 40-27".34 E.

4.6 The Port handled traffic of 64.92 Million Tonnes (MT) during the year 2016-17 (upto December, 2016). The port has 16 berths/jetties(including SPM, Ro-Ro Jetty) for handling different types of cargoes with a capacity of 126.94 MT. Important Projects relating to 2 nos of harbour mobile cranes and Design, Engineering, Procurement & Supply, Erection, testing, Commissioning and O&M for 10 years of 10MW solar power plant were awarded during the year. Projects relating to Unlocking of capacities at CB1 and CB2 work were completed during the year.

New Mangalore Port

4.7 New Mangalore Port was declared as the 9th Major Port on 4th May 1974 and was formally inaugurated on 11th January 1975. Over the years, the Port has grown from the level of handling less than a lakh tonnes of cargo to 35.58 million tonnes handled during the year 2015-2016. During the year 2016-17 the port has handled a traffic of 29.09 million tonnes (upto December, 2016). The major commodities imported through the Port are POL Crude for Mangalore Refinery and Petrochemicals Limited (MRPL), coal, iron ore fines, LPG, fertilizer, edible oil, limestone, wooden logs, cement, liquid chemicals, containerized cargo etc. and the major export cargo are POL products, Iron Ore Pellets, granite stone, maize, wheat, containerized cargo like coffee, cashew kernels, etc.

4.8 The port has 16 berths and 1 Single Point Mooring (SPM) with a total capacity of 82.77

MTPA. Important project awarded during the year is Development of 30 acres of stack yard and ancillary roads for parking of Ro-Ro cargoes and cars. Projects relating to Construction of berth no. 12 in western dock Arm work were completed during the year.

Cochin Port

4.9 The modern Port of Cochin was developed during the period 1920-1940 due to the untiring efforts of Sir Robert Bristow. The port of Cochin is located on the Willington island at Latitude 9°58" North and 76°14' East on the South-West coast of India about 930 KM south of Mumbai and 320 KM North of Kanyakumari. With its strategic location on the South-West Coast of India and at a commanding position at the cross roads of the East-West Ocean trade, the port is a natural gateway to the vast industrial and agricultural produce markets of the South-West India. The hinterland of the Port includes the whole of Kerala State and parts of Tamil Nadu and Karnataka States. A study carried out on the traffic flow in the hinterland of the Port indicates that about 97% of the total volume of traffic is accounted for by Kerala State. Cochin with its proximity to the international sea route between Europe and the Far East and Australia can attract a large number of container lines offering immense business opportunities.



Review meeting with Cochin Port Trust

4.10 Cochin Port has 19 berths plus a single point mooring and a capacity of 49.66 MTPA.

The port handled 18.23 million tonnes of traffic during 2016-17 (upto December, 2016). The cargo handled by the port includes break bulk, container, dry bulk, liquid bulk. The container handling grew to 3.67 lakh TEUs (Upto December, 2016) as against 3.06 lakhs TEUs during the corresponding period of the preceding year (2015-16). Important project awarded during the year is Procurement of oil spill response equipment. Project relating to Gunting work to Q2 and Q3 berths Mattanchery wharf work was completed during the year.

Jawaharlal Nehru Port

4.11 Constructed in the mid 1980's and commissioned on 26th May, 1989, Jawaharlal Nehru Port has come a long way by becoming a world-class international container handling port. It is situated in between 18°56'43" North and 72°56'24" East along the eastern shore of Mumbai harbour off Elephanta Island.

4.12 Jawaharlal Nehru Port is an all weather tidal Port having 12 berths with a capacity of 89.37 MTPA. The port handled a traffic of 46.15 MT during 2016-17 (upto December, 2016) of which containerised cargo account for 40.57 MT. Important project awarded during the year is SEZ Phase – EPC Contract for infrastructure development.

Mumbai Port

4.13 Mumbai Port is the second oldest Major Port in India after Kolkata. It is situated almost midway (Latitude 18° 54'N, Longitude 72° 49' E) on the west coast of India. The port has long been the principal gateway of India. Strategic location is one factor in its special favour. It lies midway along the West Coast of India and is gifted with a natural deep-water harbour of 400 sq. Kms. protected by mainland of Konkan on its east and island of Mumbai on its west. The deep waters in the harbour provide secure and ample shelter for shipping throughout the year.

4.14 Originally a general cargo port, today Mumbai Port is a multi-purpose port handling all types of cargo viz break bulk, dry bulk, liquid bulk and containers. The Port has extensive wet and dry dock accommodation to meet the normal needs of ships using the port. The port provides services/facilities from pilotage to berthing, storage to delivery of cargo and ancillary services of running Container Freight Station (CFS), Port Railways as also maintenance of crafts, equipment and building.

4.15 The port has 33 berths with a total capacity of 49.33 million tonnes. The port handled a traffic of 47.66 million tonnes during 2016-17 (upto December, 2016). The major cargo commodity handled is POL (58.82% of the total traffic). Important projects awarded during the year include Grant of Licence for deployment of floating cranes at port lighter age area and Construction of breakwater at Mandwa (Maharashtra Maritime Board).

Kamarajar Port Limited (Ennore)

4.16 Kamarajar Port Limited (KPL), the 12th major port under the Ministry of Shipping was commissioned in 2001, primarily as a Coal Port dedicated to handling Thermal Coal requirements of Tamil Nadu Electricity Board (TNEB). KPL has the distinction of being the only corporate port amongst the Major Ports administered by the Central Government.

4.17 Over the years, the port which was initially primarily handling coal has developed as a multi cargo port and now has created facilities for handling liquid bulk, Iron Ore, auto mobiles and general cargo. The port has 6 berths with a total capacity of 45 MT. The port handled a traffic of 22.18 MT during 2016-17 (upto December, 2016) which includes Coal, POL, and other cargo. Important projects relating to Conversion of SIOTL Iron Ore Terminal to Coal handling, Improvement to internal roads and gate complex and Widening of NCTPS and Port Access Road to

4 lane from the existing 2 lane road (7 kms) have been awarded during the year.

4.18 Some of the notable achievements of the Port during the year (upto December, 2016) include commissioning of Online pass and RFID access control system for all cargos and person, providing of Rail connectivity to Container and Multi Cargo berths, award of Enterprise Resource Planning (ERP) Project.

Chennai Port

4.19 Chennai Port is an all weather artificial harbour with one Outer Harbour and one Inner Harbour with a wet Dock and a Boat Basin with round the clock navigation facilities. The Port was established in 1875 located at 130 06' N latitude and 800 18' E-longitudes on the Bay of Bengal.

4.20 Chennai Port has 24 berths with a total capacity of 93.44 MTPA. The port handled a cargo of 38.00 MT during the year 2016-17 (upto December, 2016). The cargo handled comprises (container – 21.67 MT, POL – 9.63 MT, Fertiliser – 0.20 MT and others – 6.50 MT). Projects relating to Development of Coastal Terminal, Installation of 400 kw Solar power plant on building roof tops and Paving have been awarded during the year.

4.21 A number of projects have been taken up by the port for implementation during the year. These are:

- a) Development of Marine Highway along East coast connecting Chennai and Kamarajar (Ennore) Ports.
- b) Project relating to ERP in the Port Trust
- c) Construction of EXIM Godown- 2 nos for storage of export and import cargo alongwith allied structures.
- d) Construction of Coastal Road Protection Work.

Mormugao Port

4.22 Mormugao Port, situated on the west coast of India, is more than a century old port. It has modern infrastructure capable of handling a wide variety of cargo. It is a natural harbour protected by a breakwater and also by a mole. The Port has excellent infrastructure and a conducive work culture. A deep draft channel with 14.4 mtrs. depth permits large vessels to enter the harbour.



Inauguration of RFID Gate System

4.23 Mormugao port has 7 berths plus 3 trans-shipment with a total capacity of 48.79 MT. The port handled a traffic of 22.58 MT during the year (upto December, 2016). Projects relating to Balance 5.2 km stretch as part of 4 lane Port Connectivity Road NH-17 B from Verna Junction to Varunapuri junction and Capital dredging of the approach channel, turning circle, Berths 5,6,7 & approaches for capsized vessels at Mormugao Port were awarded during the year. Project relating to Development of area behind T2 shed for storage of cargo including improvement of drainage was completed during the year. Project relating to redevelopment of berths 8,9 and barge berths was also taken up for implementation.

V.O. Chidambaranar Port

4.24 V.O. Chidambaranar Port is located strategically close to the East- West International

sea routes on the South Eastern coast of India at latitude 80 45'N and longitude 780 13'E. located in the Gulf of Mannar, with Sri Lanka on the South East and the large land mass of India on the West. The Port is well sheltered from the fury of storms and cyclonic winds and is operational round-the-clock all through the year.

4.25 The Port has 15 berths with a total capacity of 59.26 MTPA. It handled a traffic of 28.97 MT during the year 2016-17 (upto December, 2016). Important projects relating to Deployment of Additional Harbour Mobile Cranes at III & IV berth, Truck parking terminal, Providing railway track between Marshalling Yard and Hare Island and Supply, installation, commissioning and maintenance of 5 MW Solar power plant at VOCPT for a period of 10 years on power purchase system were awarded during the year. Projects relating to Mechanisation of cargo evacuation from 9th berth to coal yard on license basis for 10 years period under revenue share mode was completed during the year, adding 5.92 MTPA additional capacity.

Kandla Port

4.26 Kandla Port was established in the year 1950 as a Central Government Project and Union Government took over Kandla for its development as a Major Port. Kandla Port has 25 berths including oil jetties & dry cargo berths and an off-shore terminal at Vadinar plus 3 single buoy mooring with a capacity of 131.06 MMTA. The port handled 80.97 MMT of traffic during 2016-17 (upto December, 2016). Important projects completed were Modification and Strengthening of Existing Berth no. 6. (46 to 51 panel) (through internal resources) and Capacity addition due to mechanization/upgradation work at SPM/Jetties at Vadinar during the year. The port received the "Samundra Manthan Award" for the Best Major Port of the year 2015.

Visakhapatnam Port

4.27 Port of Visakhapatnam, a natural harbour is located almost between Kolkata and Chennai on the East coast of India at latitude 17°41' and longitude 83°17'. It was opened to commercial shipping on 7th October, 1933. The Visakhapatnam Port is the only Indian Port possessing three international accreditations viz. ISO 14001; 2004 (EMS)/OHSAS 18001 and ISO 9001:2000 (QMS). The Port has mechanized handling facilities for iron ore, iron pellets, alumina, fertilizer raw material, crude oil & POL products, liquid ammonia, Phosphoric acid, edible oil, caustic soda and other liquid cargoes. The inner harbor can accommodate fully laden Panamax vessels of draft upto 14.5 meters and the outer harbor can accommodate

Supercapex vessels of 200,000 DWT with a draft upto 18.1 meters. The port has the distinction of possessing Supercapex handling facility and the deepest container terminal among Major Ports of India.

4.28 Visakhapatnam Port has 24 berths plus 1 single point mooring with a total capacity of 107.75 MTPA. The port handled traffic of 45.96 MMT during the year 2016-17 (upto December, 2016). Important project relating to Replacement of two MHC in EQ 5&6 in Inner Harbour has been awarded during the year. Project relating to Supply, Erection, Testing and commissioning of 124 T HMCS at east quay berth and Mechanisation of cargo evacuation from 9th berth to coal yard on license basis have been completed during the year.

PERFORMANCE OF MAJOR PORTS

4.29 Traffic handled at Major Ports:

(In million tonnes)

S. No.	Port	Actual 2015-16	Provisional 2016-17 (upto December, 2016)
1	Kolkata	16.78	11.65
2	Haldia	33.51	24.84
3	Paradip	76.39	64.92
4	Visakhapatnam	57.03	45.96
5	Chennai	50.06	38.00
6	V.O. Chidambaranar	36.85	28.97
7	Cochin	22.10	18.23
8	New Mangalore	35.58	29.09
9	Mormugao	20.77	22.58
10	Jawaharlal Nehru	64.03	46.15
11	Mumbai	61.11	47.66
12	Kandla	100.05	80.97
13	Kamarajar (Ennore)	32.21	22.18
	Total	606.47	481.20

4.30 Cargo Handled at Major Ports

(In Million tonnes)

S. No.	Commodity	Actual 2015-16	Provisional 2016-17 (upto December, 2016)
1	POL	195.94	158.25
2	Iron Ore	15.35	32.46
3	Fert. Raw Materials	15.90	11.60
4	Coal	125.96	106.38
5	Containerised Cargo	123.12	92.13
6	Others	130.20	80.38
	Total	606.47	481.20

4.31 The details of important performance indicators of the Ports are given below:

(i) Average Pre-Berthing detention and Average Turn Round time:

S. No	Port	Average Pre-Berthing Detention- on Port/ Account (Hours)		Average Turn round Time/(Days)	
		2015-16	2016-17 (upto December, 2016 (*))	2015-16	2016-17 (upto December, 2016 (*))
1	Kolkata	0.31	0.53	2.55	2.84
2	Haldia	3.57	16.54	2.33	2.47
3	Paradip	4.75	17.20	2.15	2.81
4	Visakhapatnam	0.96	0.51	1.97	2.07
5	Chennai	0.81	0.83	1.61	1.70
6	V.O.Chidambaranar	6.48	15.60	2.28	2.71
7	Cochin	1.39	0	1.14	1.05
8	New Mangalore	0.96	3.55	1.54	1.48
9	Mormugao	4.23	11.54	1.93	2.63
10	Jawaharlal Nehru	8.53	7.20	1.60	1.52
11	Mumbai	7.41	1.59	2.90	2.53
12	Kandla	3.60	2.40	2.19	2.15
13	Kamarajar (Ennore)	0.04	0.03	1.79	1.76

(*)Provisional

(ii) Average Output per Ship Berth Day:

(In Tonnes)

S. No.	Port	Average Output Per Ship Berth Day	
		2015-16	2016-17 (upto December, 2016)(*)
1	Kolkata	4186	4076
2	Haldia	7806	7750
3	Paradip	21139	22370
4	Visakhapatnam	12802	12827
5	Chennai	15754	16023
6	V.O.Chidambaranar	10239	10402
7	Cochin	15661	16630
8	New Mangalore	16165	16926
9	Mormugao	13885	12149
10	Jawaharlal Nehru	21287	23162
11	Mumbai	7922	8184
12	Kandla	16655	18075
13	Kamarajar (Ennore)	31080	22261
	Total (All Ports)	13156	14043

(*)Provisional

MAJOR DEVELOPMENTS IN PORTS**4.32 Capacity at Major Ports**

(In Million tonnes)

S. No.	Year	Port capacity	Traffic Handled
1	2001-02	343.95	287.58
2	2002-03	362.75	313.55
3	2003-04	389.50	344.80
4	2004-05	397.50	383.75
5	2005-06	456.20	423.41
6	2006-07	504.75	463.78
7	2007-08	532.07	519.31
8	2008-09	574.77	530.53
9	2009-10	616.73	561.09
10	2010-11	670.13	570.03
11	2011-12	689.83	560.14
12	2012-13	744.91	545.68
13	2013-14	800.52	555.50
14	2014-15	871.52	581.34
15	2015-16	965.36	606.47
16	2016-17 (upto December, 2016 (*))	1005.00	481.20

(*)Provisional

OTHER PORT RELATED ORGANIZATIONS

(A) Sethusamudram Corporation Limited

4.33 Sethusamudram Ship Channel Project, which is being implemented through the Special Purpose Vehicle namely, Sethusamudram Corporation Limited, envisages dredging of a ship channel in the shallow portion of sea to connect the Gulf of Mannar and Bay of Bengal through Palk bay to enable the ships moving between east and west coasts of India to have a continuous navigable sea route around the peninsula within India's territorial waters.

4.34 Dredging work of the Sethusamudram Ship Channel was awarded to M/s Dredging Corporation of India, a Government of India enterprise on nomination basis. The project was inaugurated on 02.07.2005. Subsequently based on PILs filed in the Supreme Court, the dredging work in Adam's bridge was stopped on 17.09.2007. At present the project work is kept in abeyance as the matter is sub-judice in the Supreme Court of India.

(B) Tariff Authority for Major Ports

Establishment of TAMP

4.35 The Tariff Authority for Major Ports (TAMP) was constituted in April 1997 to provide for an independent Authority to regulate all tariffs, both vessel related and cargo related, and rates for lease of properties in respect of Major Port Trusts and the private operators therein. The Major Ports Trust Act, 1963 was amended by Port Laws (Amendment) Act 1997 to constitute TAMP. TAMP is an ISO 9001:2008 and 27001:2013 compliant organization.

Role and Functions of the Authority

4.36 The Authority has jurisdiction only over major port trusts and private terminals therein. It is responsible for prescribing the rates for

services provided and facilities extended by them and also rates for lease of port trust properties. The Authority is empowered not only to notify the rates but also the conditionality's governing application of the rates.

4.37 The Authority consists of a Chairman and two Members. The Chairman is of the rank of the Secretary to the Government of India, one Member from amongst economists and one Member with experience in finance.

Guidelines issued by Government of India as policy directions for determination of tariff of the Major Port Trusts and Private Terminals operating thereat

4.38 The Authority follows the following guidelines issued by the Government of India as policy direction u/s 111 of the Major Port Trusts Act, 1963 for regulating tariff of Major Port Trusts and Private Terminals operating thereat.

Sr. No.	Guidelines	Notification Date & Gazette No.
(i).	Tariff Guidelines, 2005	31/03/2005 vide G. No. 39
(ii).	Upfront Tariff Guidelines, 2008	26/02/2008 vide G. No. 27
(iii).	Reference Tariff Guidelines, 2013	30/09/2013 vide G.No. 254
(iv).	Policy for Determination of Tariff for Major Port Trusts, 2015	27/01/2015 vide G.No. 30

Land Policy Guidelines issued by Government of India

4.39 This Authority is mandated to follow the Land policy guidelines issued by the Government from time to time in the matter of regulating lease rentals at the major ports. The Land Policy Guidelines, 2014 were announced by the Ministry of Shipping in January 2014 and subsequently, the Ministry vide its communication dated 14 October 2015 forwarded the clarification and

amendments to the Land Policy Guidelines 2014.

Consultative Process and Position relating to Tariff Cases

4.40 The Authority has adopted a definite procedure for disposal of tariff cases. In order to promote participative approach in tariff fixing, special care is taken to give adequate opportunities to users to furnish written and / or oral submissions. Port-level joint hearings are organized to facilitate maximum participation of the greatest number of users to hear their arguments on all tariff proposals and final decisions are taken in the Authority meetings and tariff Orders are notified in the Gazette of India.

4.41 The Authority since inception has disposed of 842 cases till 31 December, 2016. Every notification, declaration, order and regulation of the Authority made under the MPT Act is published in the Gazette of India.

(c) India Ports Global Private Limited

4.42 As per the directions of the Ministry of Shipping (MoS), Government of India, India Ports Global Private Limited (IPGPL) was formed

as a joint venture between Jawaharlal Nehru Port Trust (JNPT) and Kandla Port Trust (KPT), created and incorporated on 22nd January 2015 under the Indian Companies Act, 2013, for development of the ports overseas. The Ministry of Shipping has presently assigned IPGPL the task of equipping and operating Container / Multi-purpose Terminals at Chabahar in Iran. The central point of the deal is the construction of the Chabahar Port by India in two phases. The Company has an authorized capital of Rs.10 crores and a paid up capital of Rs.5 crores, and is headquartered at Mumbai.

4.43 India, Iran and Afghanistan have signed a historic trilateral contract for the establishment of a transport and transit corridor among the three countries. The deal was signed at the visit of Prime Minister of India, Shri Narendra Modi where he met Iran's President Mr. Hassan Rouhani and Afghan President Mr. Ashraf Ghani.

India's India Ports Global Private Limited (IPGPL) and Iran's Ports and Maritime Organization (PMO) have signed the agreement for the construction of the port. IPGPL will develop two terminals and five multi-cargo berths in Phase-1 of the Chabahar project with an initial investment by India.

CHAPTER – V

SHIPPING



5.1 Shipping industry is one of the most globalised industries operating in a highly competitive business environment that is far more liberalized than most of the other industries and is, thus, intricately linked to the world economy and trade. Shipping plays an important role in the transport sector of India's economy especially in EXIM trade. Approximately 95% of the country's trade in terms of volume and 68% in terms of value is moved by sea.

5.2 India's shipping tonnage was only 1.92 lakh Gross Tonnage (GT) on the eve of independence. Now India has one of the largest merchant shipping fleet among the developing countries and ranks 17th amongst the countries with the largest cargo carrying fleet with 11.29 million G.T. as on November 30, 2016 and average age of the fleet being 18.03 years. Indian maritime sector facilitates not only transportation of national and international cargoes but also provides a variety of other services such as cargo handling

services, shipbuilding and ship repairing, freight forwarding, light house facilities and training of marine personnel, etc.

5.3 The salient features of India's shipping policy are the promotion of national shipping to increase self-reliance in the carriage of country's overseas trade and protection of stakeholder's interest in EXIM trade. India's national flag-ship provides an essential means of transport for crude oil and petroleum product imports. National shipping makes significant contribution to the foreign exchange earnings of the country.

5.4 India has been a founder member of the International Maritime Organization (IMO), a specialized agency set up under the United Nations primarily dealing with the technical aspects of shipping relating to Maritime Safety, Protection of Marine Environment, Standards of Training and related legal matters. India has been participating in various meeting of the

IMO Committee, Sub-Committees, Council and Assembly and has actively contributed towards the development of various Conventions, Protocols, Code and Guidelines developed by the IMO.

5.5 To promote Indian tonnage and to save precious foreign exchange, the Cabinet on December 10, 1957 had decided that in all negotiations for large contracts involving shipping arrangements by Central Government Departments, State Government Departments and Public Sector Undertakings (PSUs) under them, the Department of Transport would invariably be consulted and all such import contracts were to be finalised on FOB/FAS basis and those for exports on C&F/CIF (Cost and Freight/Cost, Insurance and freight) basis and in case of departure there from, prior permission was required to be obtained from Department of Transport on a case-to-case basis.

5.6 In the changed context of economic liberalisation and new thrust on competitiveness and performance improvement of PSUs, the Government on November 15, 2001 decided that while the existing policy for placing import contract on FOB/FAS basis will continue, the policy was relaxed in case of exports. Government Departments/PSUs were permitted to finalise export contracts on FOB/FAS basis without seeking prior clearance from the Ministry of Shipping.

5.7 However, despite government support for import contracts being on FOB/FAS basis, while India's EXIM trade has been steadily growing at Compounded Annual Growth Rate (CAGR) of 19.46%, from 1987-88 to 2013-14, the share of Indian ships in the carriage of India's EXIM trade has drastically declined from 40.7% in 1987-88 to about 7.5% in 2015-16.

5.8 Exports have come to be regarded as an engine of economic growth in the wake of liberalization and structural reforms in the

economy. According to sources from Ministry of Commerce, India's exports in value terms fell by -15.8% from US\$310.33billion in 2014-15 to US\$262.29billion in 2015-16, while imports fell by -14.95% from US\$ 447.96 in 2014-15 to US\$ 381 billion in 2015-16.

5.9 Over a period of time, though the movement of traffic in terms of export and import cargoes has witnessed a growth, the capacity of Indian shipping has not kept pace with the same. Consequently, the dependence on the foreign flag ships for the carriage of overseas trade is becoming higher and higher. Continued slippages in the share of Indian shipping in the carriage of India's overseas trade is resulting in increasing dependence on foreign flag ships for the carriage of overseas trade and in turn causing a drain on precious foreign exchange in terms of payment of freight charges, which could otherwise be used for other high priority imports or for building up indigenous infrastructure. There is tremendous potential for increasing earnings/savings of Indian shipping companies by increasing the share of national shipping in India's overseas trade from the present.

5.10 According to a study conducted by the National Council of Applied Economic Research (NCAER), shipping as a single industry is one of the largest contributors to the foreign exchange pool of India and, it is expected, on the basis of the NCAER's analysis of the trade and freight data, that a 5% increase in the national shipping tonnage saves or earns an additional 17% of the freight bill. Thus the need to augment the Indian tonnage and increase the quantity of cargo carried on Indian ships, which also calls for cargo support. The emerging sectors, where there is a potential for enhancing trade (exports and imports), need to be focused upon and ways to open up sea routes on these sectors need to be considered. Some examples are the International North-South Transport Corridor (INSTC) route which would considerably shorten the distance from India to Commonwealth of Independent

States (CIS) through Iranian ports; the routes to South East Asian countries which still have the scope for development like Thailand, Vietnam etc. akin to the sea routes which were opened up for Bangladesh and Myanmar (as part of Act East Policy of the Government). Keeping in view the strategic importance of a sector specific service, commencement of such services could be considered with the help of a subsidy and assured cargo support.

5.11 During the years, India's overseas trade has expanded considerably both in terms of composition and direction due to the policy of export promotion being pursued by the Government. At the same time, efforts are being made to provide and improve the trade related infrastructure, especially the transport, to facilitate the movement of traffic more efficiently. So far as the movement of traffic by ships to overseas destinations is concerned, both Indian as well as the foreign flag ships operating consortium liner shipping services have been providing the services either directly or through transshipment arrangements for the general cargo in break-bulk or containerized form. Similarly for the bulk cargo moving either as imports or exports, the services of tramp ships both Indian and foreign usually engaged on chartering basis are available to all the destinations.

5.12 Improvement in export related infrastructure has been a consistent endeavour to promote exports. Inadequacies in seamless transport through road, rail, ports and airports are obstacles faced in the infrastructure development for promoting exports. However, it is a fact that in the transport sector, most of the funding in our country has been towards the railways and road and highways sectors. Against a total expenditure of Rs. 7.32 lakh crore for the entire transport sector (roads, railways, shipping and ports and civil aviation in the period) from the Fifth Five Year Plan till the Eleventh Five Year Plan, the expenditure in

railways has been Rs. 3.77 lakh crore (i.e. around 51.33% of total expenditure in transport sector), while the expenditure in the same period on roads and highways has been Rs. 2.38 lakh crore (i.e. around 32.5% of the total expenditure in transport sector). The expenditure in the civil aviation sector has been Rs. 69,290 crore (i.e. around 9.5% of the total expenditure in transport sector). Compared to these sub-sectors, the expenditure in the shipping sector comprising of shipping, ports and inland waterways has been Rs. 47,391 crore (i.e. around 6.5% of the total expenditure in transport sector) in the same period through central government's budgetary support. While the importance of roads and railways in the economy is undeniable, there is also a greater need to encourage the maritime sector to enable it to achieve its full potential. Thus there is a strong case for supporting waterway transportation.

SHIPBUILDING AND SHIP REPAIR



Construction of aircraft carrier at Cochin Shipyard Limited

5.13 The Ministry of Shipping is the nodal ministry for formulating policy measures for the promotion of Indian Shipbuilding and Ship-repair Industry.

5.14 A strong and diverse shipping fleet is very important for securing energy requirements of the country. It is a well-known fact that 100% of Japanese LNG and almost 90% of their crude

is transported in Japanese ships. Even USA has adopted special measures like “Military Sealift Command” to ensure energy security for the nation. Thus to reduce dependence on foreign countries, India needs to carry its transportation requirements on its own built ships. Moreover, Indian Navy has embarked on an ambitious defence indigenization programme which needs to be implemented through all active Indian shipyards.

5.15 There are 27 Shipyards in the country, 6 under Central Public Sector, 2 under State Governments and 19 under private Sector. The breakup of the government owned, controlled shipyards is as under:

(a) Ministry of Shipping, Government of India

- Cochin Shipyard Limited, Kochi
- Hooghly Dock and Port Engineers Limited, Kolkata

(b) Ministry of Defence, Government of India

- Mazagaon Dock Limited, Mumbai
- Garden Reach Shipbuilders and Engineers Limited, Kolkata
- Goa Shipyard Limited, Goa
- Hindustan Shipyard Limited, Visakhapatnam

(c) State Governments

- (i) Under Government of Gujarat
 - Alock Ashdown Co. Ltd.
- (ii) Under Government of West Bengal
 - Shalimar Works Limited, Kolkata.

5.16 The list of private shipyards is given below:

Sl. No	Name of the Private Companies into shipbuilding
1.	ABG Shipyard Ltd. Bhupati Chambers (5th Floor). 13, Mathew Road, Opera House, Mumbai – 400 004.
2.	A.C. Roy & Company 23, Marquis Street, 1st Floor, Kolkata – 700 016
3.	Bharati Shipyard Ltd. Oberoi Chambers II, 1st Floor, Link Road, Near Laxmi Indl. Estate, Opp. Adhikari Brothers, Andheri (West). Mumbai - 400 053.
4.	Chowgule & Company Ltd. Shipbuilding Division, Loutulim Yard, Near Borim Bridge, Salcete - GOA – 403718.
5.	Dempo Engineering Works Ltd. Dempo House, Campal, Panjim, Goa - 403 001
6.	IL&FS Maritime Infrastructure Company Limited 5th Floor, Tower 2, TVH Belicia Towers, No 94 MRC Nagar, Chennai - 600 028.
7.	L & T Shipbuilding Limited 10 Club House Road, Anna Salai, Chennai - 600002.
8.	Modest Infrastructure Ltd. Dempo House, Campal, Panjim, Goa - 403 001
9.	Mandovi Dry Docks Ltd. 204, Damodar Chambers, 2nd Floor, Opp. Syndicate Bank, Vasco-da-Gama, Goa-403802.
10.	N.N. Shipbuilders & Engineers Pvt. Ltd. Plot No. 201, 2nd Floor, Siddesh Wararced, Opposite Suraj Water Park, Waghbilnaka

Sl. No	Name of the Private Companies into shipbuilding
11.	Reliance Defence Ltd. (formerly Pipavav Shipyard). Pipavav Port, Post - Ucchahiya Via Rajula, District - Amreli - 365 560. Gujarat.
12.	Sembmarine Kakinada Ltd. 1st Floor, OSV Complex, Kakinada Deep Water Port, Beach Road, Kakinada– 533 007 (A.P)
13.	Shoft Shipyard Pvt. Ltd. 3rd Floor, Plot No. A-365,Road No.26, Near Wagle Bus Depot, Wagle Industrial Estate, THANE – 400 604.
14.	Tebma Shipyards Ltd. , M.T.RAJEN'S PROPERTIES, 2nd FLOOR, No.40, BAZULLAH ROAD, NEAR MADRAS COFFEE HOUSE. NAGAR, CHENNAI – 600 017
15.	Titagarh Marine Ltd. Titagarh House, 756 Anandpur, E.M. Bypass, Kolkata – 700017.
16.	Timblo Drydocks Pvt. Ltd. Subhash Timblo Bhavan. P.O. Box 242, Margao – 403 601. Goa
17.	Waterways Shipyard Pvt. Ltd. S-4, Ground floor, Dempo Odyssey Building, Non-Mon, Vasco-Da-Gama. Goa - 403 802
18.	West Coast Shipyard Ltd. 1st Floor, Tilak Comm. Complex, F.L. Gomes Road, Vasco da Gama, Goa – 403 802
19.	Vijai Marine Services Rassaim, P.O – Loutolim, Salcete, Goa – 403 718

Shipbuilding

5.17 Ship-building is a mother-manufacturing industry endowed with the unique feature of having nearly 65 percent value addition coming from other technology/ancillary industries. Another characteristic feature of ship-building is that unlike other manufacturing industries which pre-dominantly follow make-to-stock inventory model, shipbuilding is an order-driven industry where each vessel is custom built on receipt of the ship-building order. Thus, building an order book is essential for growth and sustenance of the shipbuilding industry. Order book growth for commercial ships is largely driven by the growth in world trade and commerce, which spurs demand for new ships. The evolving environment-friendly international regulations also trigger demands for replacement of old ships. Ship-repair service, a supplementary service provided by most of the shipyards, is also a labour-intensive activity that utilizes the

existing ship-building infrastructure to provide additional returns on the capital invested.

5.18 A robust and vibrant domestic ship-building industry is important for the following reasons, namely:-

- Nearly 65% value of the built ship is contributed by heavy engineering industry such as steel, electronics, engineering and electrical equipment, port infrastructure as well as trade and shipping services. Promotion of shipbuilding industry develops these ancillary industries.
- Due to its dependence on a number of industries, this industry has huge multiplier effect on investment, employment and turnover (being 11.6, 6.4 and 4.2 respectively as per KPMG's 2007 'Report on Shipbuilding: Economic Benefits and Benchmarking Government Support across

Countries') similar to that of industries in the 'infrastructure' sector and hence has been a starting point of industrialization for countries around the world including Japan, South Korea and China.

- (c) The shipbuilding industry is labour intensive and this works in favor of countries like India with large and relatively cheap workforce. In India this industry employs over 30,000 people directly. However, over the years, the industry has developed a large number of ancillary units and subcontractors around them employing lakhs of people. Without supporting the industry, the employed workforce would soon lose its skills as well as its means of livelihood.
- (d) Since this industry is primarily based in coastal areas, its promotion or neglect is strongly linked to the prosperity of the poor and rural populations residing therein.
- (e) The infrastructural facilities developed till date in our shipyards primarily cater to shipbuilding including design set up, huge fabrication and assembly shops, CNC machines, hydraulic presses etc. which cannot be used for any other purposes. Discontinuation of shipbuilding would be a huge waste of the resources and skill sets.
- (f) It promotes indigenous development of complex design and engineering skills which are essential for sustenance and growth of indigenous defence capabilities. Without establishing a competitive shipbuilding capability, India cannot become a maritime force.

5.7 On account of the above positive spin-offs of the shipbuilding industry, it has been identified as one of the four key sectors of strategic importance (in addition to Defence, Aero-space and Capital Goods) in the "Manufacturing Plan – Strategies for Accelerating Growth of

Manufacturing in India in the 12th Five Year Plan and Beyond" by the erstwhile Planning Commission and is most eminently suited for consideration under 'Make in India' initiative of the Government of India.

5.19 Shipbuilding is primarily an order-driven industry and each vessel is built-to-order. Most of the shipyards also utilize the existing shipbuilding infrastructure to offer ship-repair services to generate additional returns on the invested capital. Globally, the shipbuilding industry is dominated by three countries - South Korea, China & Japan, which together have more than 90% share of the shipbuilding market. Major shipbuilding nations support their industry through various means such as the following, namely:-

- **Financing:** Loans and loan guarantees at favourable conditions (low interest rate, high leverage ratio) are provided to shipyards to finance their ongoing operations, and to ship buyers to finance their orders. Also export guarantee is provided.
- **Subsidies:** Subsidies are provided on procurement or import of raw materials at cheaper costs as well as on building specific categories of ships including for domestic market. Steel (~30% of total ship cost) is usually provided at subsidized cost in many countries.
- **Fiscal incentives:** Tax concessions are provided on import of key components and equipment, for vessel export, domestic shipbuilding; accelerated depreciation; income tax concession for investment in shipbuilding and in M& A activities; tax credit on R&D undertaken.
- **Investments:** Countries provide investment in R&D on futuristic ship designs and advanced technology and equipment as well as participate in shipbuilding to promote the sector (e.g.,

Italian Government has a participation in Fincantieri, French Government owns 30% of shares of STX in St. Nazaire).

5.20 India has a number of advantages when it comes to shipbuilding industry. These include:

- Vast coastline.
- Lower labor cost and abundance of labor.
- Leadership position in IT and ITeS Sector.
- Availability of technical knowhow, knowledge base and technically qualified manpower.
- Growth in global trade.
- Market potential for inland waterway transportation.
- Increased containerization.
- High potential for dredging vessels.
- Requirement of specialized vessels.
- Replacement requirement of ageing Indian fleet.
- Proximity to International Trade lanes (promotes ship repair).
- Large number of domestic vessels (promotes ship repair).

5.21 Government has been implementing a shipbuilding subsidy scheme for Central Public Sector Shipyards since 1971 with some gaps and modifications from time to time. The scheme was extended, for both export and domestic orders, to all the Indian Shipyards including private sector shipyards on October 25, 2002 and was valid till August 14, 2007. The broad features of the scheme were:

- (a) 30% subsidy to be paid for all export orders irrespective of size and type, but limited to sea going merchant vessels of and over 80 meters in length for domestic orders.
- (b) Prices to be determined by the global tender in case of domestic orders.

(c) In case of export orders obtained on price negotiation a "Price Reasonableness Certificate" to be issued by DG (Shipping) as basis for grant of subsidy.

(d) In case of Public Sector Shipyards, subsidy is payable on stage payments received by the shipyard while in case of Private Sector Shipyards, subsidy is payable after the delivery of the vessel.

5.22 The above scheme had expired on August 14, 2007 but Government decided to make payments for eligible shipbuilding subsidy claims upto March 31, 2014 in respect of shipbuilding contract signed upto August 14, 2007.

5.23 The scheme was quite successful and resulted in Indian shipyards securing ship-building orders worth 1.24% of global commercial ship-building orders in 2007. The shipyards received direct subsidy of Rs. 1,483.08 Crore from the Government between 2002-2014 while the shipyards have paid various taxes to the Government. Subsequently, many Indian shipyards borrowed funds and invested in new capacity addition.

5.24 However, the global economic meltdown in 2008-2009 started contracting EXIM trade, thereby creating a slump in the global shipping market resulting in fall of demand for new ships. The timely completion of vessels under-construction suffered due to inability of the buyers to make the scheduled stage-wise payments resulting in delayed delivery of vessels. Also, the vessel prices dropped giving rise to customers either re-negotiating the prices or deferring deliveries and even cancelling the contracts. As a result, cash flows of the Indian shipyards from orders in hand were adversely affected. Invocation of bank guarantees arising out of cancelled orders and default in repayment of long term loans led to freeze on working capital limits thus crippling the financial health of the industry. Till December, 2016, the order book of Indian shipbuilding industry stood at

paltry 0.1%, which is same as its share in pre-2002 period. The Indian Shipbuilding industry still remains under acute financial stress and hence is being focused under the 'Make in India' initiative.

5.25 Certain elements of monetary policy of RBI have also impacted the sector. The industry requires a substantial amount of capital investment with the shipyards requiring long term loans (say up to 20-25 years) to build the required capacity. However, the Indian banks and financial institutions are constrained in their ability to grant such long term loans and only sanction loans of tenure ranging from 5 to 7 years. Therefore, the shipyards have to start repayment of loans much before the infrastructure being created, is even operational leading to structural imbalances. This is the reason why despite 100% FDI, not enough foreign investment has come into the sector.

5.26 Even though ship-building is a cyclical industry with a typical global cycle of 5 years, it is for the first time that the slump in global market has continued beyond six years thereby hurting the fortunes of global shipbuilding industry badly. Unlike India, other countries have continued to support their shipyards directly and indirectly. Two countries least affected from the crisis, China and Brazil, have provided significant financing and investment support. In China, in December, 2013, "special funds" were offered that gives shippers subsidies of around USD 235 per GT to replace old vessels. In South Korea, financial support worth USD 22 Billion had been offered to the industry in 2013. In Japan, financial support worth USD 4.3 Billion had been offered to the industry in 2011. Russia is investing between USD 500 million to USD 1 billion to restructure its state-owned OSK shipyard conglomerate. In contrast, post the subsidy scheme of 2007, there has been a lack of any concerted support to the industry from the Indian government till 01.04.2016.

5.27 The Union Cabinet approved the Shipbuilding Financial Assistance Policy for Indian Shipyards on December 09, 2015. The guidelines for Shipbuilding Financial Assistance Policy have been uploaded on the website of Ministry of Shipping on 16.06.2016. The Government of India has introduced a Rs. 4000 Crores Shipbuilding Financial Assistance Policy for 10 years to encourage domestic shipbuilding. Financial assistance will be granted to Indian Shipyards equal to 20% of the lower of "Contract Price" or the "Fair Price" (as assessed by three international valuers) of each vessel built by them for a period of at least 10 years commencing 2015-16 for eligible shipbuilding contracts signed from 01.04.2016 upto 31.03.2026. This rate of 20% will be reduced by 3% every three years. The Guidelines for Shipbuilding Financial Assistance Policy has been provided at <http://shipmin.gov.in/showfile.php?lid=2307>.

5.28 In India, in the transport sector, most of the funding in our country has been towards the railways and road and highways sectors. Against a total expenditure of Rs. 7.32 lakh crore for the entire transport sector (roads, railways, shipping and ports and civil aviation in the period) from the Fifth Five Year Plan till the Eleventh Five Year Plan, the expenditure in railways has been Rs. 3.77 lakh crore (i.e. around 51.33% of total expenditure in transport sector), while the expenditure in the same period on roads and highways has been Rs. 2.38 lakh crore (i.e. around 32.5% of the total expenditure in transport sector). The expenditure in the civil aviation sector has been Rs. 69,290 Crores (i.e. around 9.5% of the total expenditure in transport sector). Compared to these sub-sectors, the expenditure in the shipping sector comprising of shipping, ports and inland waterways has been Rs. 47,391 Crores (i.e. around 6.5% of the total expenditure in transport sector) in the same period through central government's budgetary support. While the importance of roads and railways in the economy is undeniable, there is also a greater need to encourage the maritime

sector to enable it to achieve its full potential.

5.29 Due to this lack of public investment and supportive ecosystem, over a period of time, the industry has been facing a number of challenges on a number of fronts, which include:

- Lack of competitive advantage due to heavy subsidies being provided by other shipbuilding countries to their shipbuilding industry.
- Lack of economies of scale due to small order-book and due to lack of dedicated domestic shipbuilding orders.
- Lack of cheaper and long term flexible financing support from the domestic banking system for infrastructure investment and modernization.
- Lack of access to cheaper working capital (including that available globally) due to restrictive External Commercial Borrowing norms.
- Lack of support to restructure/refinance non-performing assets, resulting from cancellation of orders, through cheaper long term loans.
- Lack of import tariff protection for procurement of fully built ships in the domestic market.
- Lack of supportive tax structure, which discourages manufacture for domestic market.
- Lack of competitive and domestic ancillary industry in the domestic industry due to small size and scale of the domestic shipbuilding industry thereby depending more on imports of shipbuilding components and equipment as well as reducing bargaining power on procurement of inputs.
- Lack of capital infusion in the sector due to subdued investor confidence and pessimistic domestic outlook.

5.30 As per the XII Plan Working Group Report on Shipbuilding and Ship-repair, all the above challenges translate into Indian shipyards facing cost disadvantages of about 20%-35% in comparison to foreign shipyards primarily due to fiscal and monetary policies of the government. The break-up of the cost disadvantages is as under:

S. No.	Cost Elements	% Cost Differential versus Competition
1.	Taxation and Duties	4% - 10%
2.	Freight Charges	2% - 3%
3.	Bulk Discount	5% - 10%
4.	Design	2% - 4%
5.	Interest Costs	5% - 6%
6.	Other Costs	2% - 3%
	Total Cost Disadvantage	20% - 35%

5.31 Ship-building and Ship-repair are also essential components for the success of the flagship 'Sagarmala' project of the Government which aims to bring about port-led development by focusing on setting up Coastal Economic Zones (CEZs) and developing connectivity along the long coastline of India through a network of roads, rails and the waterways (including coastal and inland waterway network) between CEZs and hinterland. All this will be possible through a larger number of vessels, which would, in turn, require design and development of vessels catering to the specific requirements of the coastal areas and the economic regions along the coast. Such an objective can be achieved through a strong shipbuilding and ship-repair industry.

SHIP REPAIR

POTENTIAL OF SHIP-REPAIR INDUSTRY

5.32 We have a sizable number of 1297 ships on coastal and overseas trade of GT of 1,12,93,189 till 30.11.2016. Fleet expansion by domestic shipping is envisaged. Focus is also required in

the following categories:

- (i). Commercial ships visiting Indian Ports
- (ii). Coastal vessels / service crafts
- (iii). Dredgers operating in Indian Coast
- (iv). Offshore rigs (Presently 38 rigs and 27 Jackup rigs, the number is likely to go up to 65 in next 10 years) conversion and complete refurbishment jobs.
- (v). Naval and Coast Guard ships.

5.33 India is located strategically on the international trade route, whereby it can attract ships plying from west to east in the trade route for its ship-repair activity. This represents increasing market potential for the ship-repair business, as ship owners prefer to repair their ships without deviating from their trade routes as much as possible.



Dry docking at Cochin Shipyard Limited

5.34 The strengths of Indian ship repair industry are as under:

- (a) **Geostrategic location of India.** A long coast line with number of all weather ports which are not subjected to severe weather conditions and naturally protected is the primary advantage. With strategic location in the trade route of tanker/bulk carrier traffic on east & west and ready availability of trained workforce, there are tremendous opportunities for huge revenue generation.

- (b) **Abundance of labour.** All the resources required for the Ship Repair Units to function efficiently are available and there is a huge untapped potential. The ship repair industry promises relatively continuous flow of revenue and employment for all segments of labour class (from highly skilled to unskilled). Most of the existing and new ship repair yards in India concentrate on new building and providing services to naval and coastal vessels.
- (c) **Competitive labour rates.** The subcontract labour rates for steel work, pipe work, blasting and painting, mechanical and electrical works are very cheap in India and are comparable to labour rates in Indonesia and Vietnam. In fact it is 10 to 15% lower than subcontract labour rates of Indonesia and 25% lower than Philippines.
- (d) **Quality of work.** The speed of execution and quality of work is comparable to that of Indonesia, Philippines and Vietnam who have a significant presence in the world ship repair industry.

5.35 Ship repair, both globally and locally, is an evergreen industry. Though historically India was largest Ship Repairer in Asia, over the years we lost this business to neighboring countries like Singapore, Sri Lanka, China, UAE, Bahrain and Turkey. The weaknesses of Indian ship repair industry are as under:

- (a). **Higher waiting times.** Tendering process of government owned shipyards for ship repair activity is too long in case of India and it is not commercially viable for the ship owners to keep their vessels waiting for that long.
- (b). **Non-uniform processes and Reliance on sub-contractors.** India possesses the requisite skills for undertaking ship repairs except in 2 areas: (i) Ship repair planning and project management, and, (ii) Safety Management Systems. While

the Public Sector yards are burdened with a tedious decision making process, private sector ship repair yards are relying entirely on sub-contractors and each yard follows its own style of execution. The success of Singapore shipyards is largely due to a uniform project management and safety management systems. A ship owner dry-docking his vessel in Singapore, would notice that while the people and subcontractors may be different, the repair process and management is uniform across all the repair yards.

- (c). **Domestic Taxation.** Currently Service Tax, Sales tax of centre and state governments are applicable. Leading ship repairing nations in Singapore and GCC countries do not charge any tax on their service. If India has to attract foreign vessels then the Ship repair yards must get a level playing field. Waiver of tax will greatly improve India's competitiveness.

RECENT INITIATIVES IN THE SECTOR TAKEN BY MINISTRY OF SHIPPING/ GOVERNMENT OF INDIA ARE AS UNDER:

- (i) To promote shipbuilding in Indian shipyards, the Union Cabinet has on December 9, 2015 approved New Shipbuilding Financial Assistance policy for Indian shipyards for contracts signed during a ten year period, viz. 2016-2026.
- (ii) The Union Cabinet has also approved that all government departments or agencies including CPSUs have to provide Right of First Refusal to Indian shipyards while procuring or repairing vessels meant for governmental or own use till 2025 after which only Indian shipyards would build and repair vessels.
- (iii) The Department of Economic Affairs has notified the inclusion of standalone 'Shipyards' in the Harmonized Master List of Infrastructure Sub-sectors on 13.04.2016

- (iv) To promote ease of doing business in the sector, Government has issued simplified procedure for tax compliance for the shipyards while procuring duty free goods for shipbuilding in the Union Budget 2016-2017.

COASTAL SHIPPING

5.36 Coastal Shipping is fuel efficient, environment friendly mode that can ease traffic congestion and arrest loss of human lives caused due to accident. The share of waterway transportation in domestic freight traffic is a mere 7% which is very low compared to developed countries. The aim of the Government is to increase the share of waterway transportation to 10% by 2019-20. A Consultant appointed for Sagarmala has identified additional coastal cargo transportation potential of 130 million tonnes. The low share of waterway transportation of domestic freight traffic compared to road and rail results from certain intrinsic impediments such as absence of assured return cargo, high manning costs, high duties on bunker fuel, absence of last-mile connectivity etc.

5.37 Several steps for the promotion of coastal shipping have been taken in the last two years. These include scheme for construction of coastal berths, cabotage relaxation for specialized vessels, increase in discount in vessels and cargo related charges for Ro-RO vessels from 40% to 80%, exemption of Central Excise and Customs duty on bunker fuel for container vessels and simplification of procedures in consultation with



RO-RO Jetty

customs, immigration and health authorities. In addition, 40% reduction in Vessel and Cargo related charges for coastal cargo excluding coal; petroleum, oil and lubricants (POL) and iron and exemption of coastal vessels from Light house dues are continuing.

Cruise Shipping



Passenger Ship Kavaratti

5.38 Cruise shipping is a fast growing component of the leisure industry worldwide. It has potential to earn huge amount of foreign exchange and generation of employment. Tourism is the driver of growth in the areas touched by it. Indian population size and its enormous popularity as tourism destination are major factors that can sustain cruise tourism in India. Ocean cruises have impact on ports and the area within 50 kms driving distance of the port. River cruises have the potential to foster economic development along the route. Currently Indian ports are primarily ports of call for cruise lines. In 2015-16, cruise vessels made 128 calls at ports in Mumbai, Cochin, Goa, New Mangalore and Chennai.

5.39 Highest contribution to economy comes from being a home port for cruise ships which leads to creation of direct job opportunities in various sectors like tourism, handicrafts, travel, duty free retail, logistics, constructions and indirect job opportunities in real estate, transport etc. Average employment generation on a cruise ship is 1 job for 3-4 passengers which translate into major employment on board ships which use Indian ports as home ports.

To promote cruise shipping in the country, the following initiatives have been taken :

- (i) The Government constituted a Task Force to promote cruise tourism in the country under the Chairmanship of Secretary (Tourism) with Secretary (Shipping) as Co-Chairman
- (ii) Standard Operating Procedure (SOPs) for cruise vessels finalized in consultation with Bureau of Immigration (BOI), MHA, CBEC, CISF and Port Authorities; Ministry of Tourism has issued orders for implementation of new Standard Operating Procedures (SoPs) excluding immigration.
- (iii) Major ports are offering minimum rebate of 30% on port charges for cruise vessels and not levy any priority/ousting/shifting charging for berthing cruise vessels if informed 30 days in advance.
- (iv) Additional rebate of 25% for coastal cruise movement for making major ports as home port and provide walk-in/preferential berthing to home port cruise without extra charge.
- (v) Cruise terminal is under development at Chennai in addition to the existing terminals at Cochin, Mumbai, Mormugao and New Mangalore Port.
- (vi) Ministry of Shipping has appointed a Consultant for preparation of action plan for development of cruise tourism in India.

5.40 Costa Neo Classica cruise ship has made Mumbai port as home port involving embarkation and disembarkation of approx. 1400 passengers per voyage, 3 days of stay of cruise vessel at port and will also visit to New Mangalore, Goa and Cochin ports in its itinerary while going to Maldives. 7 voyages confirmed once in every fortnight with 1st voyage on 22nd December, 2016 to 7th voyage on 18th March, 2017.

CHAPTER – VI

FUNCTIONING OF ORGANIZATIONS**DIRECTORATE GENERAL OF SHIPPING, MUMBAI**

6.1 The Directorate General of Shipping, an attached office of the Ministry of Shipping, Government of India was established in 1949 for administering the Indian Merchant Shipping Act, 1958 on all matters relating to shipping policy and legislation, implementation of various International Conventions relating to safety, prevention of pollution and other mandatory regulations of the International Maritime Organizations, promotion of maritime education and training, examination & certification, supervision of other subordinate offices for their effective functioning etc. The Director General of Shipping enjoys statutory recognition under section 7 of the Merchant Shipping Act, 1958.

6.2 The Director General of Shipping's administrative secretariat consists of Additional Director General of Shipping and Deputy Directors General of Shipping (non-technical). On the technical side, he is assisted by the Nautical Adviser, on the Engineering side by the Chief Surveyor and on the Naval Architecture side, by the Chief Ship Surveyor. The field formation of Directorate General of Shipping is headed by Principal Officers who are assisted by surveyor of Engineering and Nautical side. The Heads of allied offices supported by their subordinate officers also assist the Director General of Shipping in the overall discharge of various statutory functions. The Nautical Adviser and Chief Surveyor are also Chief Examiners of Master/Mates and Engineers respectively.

Functions of offices under the administrative control of the Directorate General of Shipping

6.3 The Mercantile Marine Departments (MMDs) were set up in 1929 with Headquarters

at Mumbai, Kolkata and Chennai. Two new MMDs at Kochi and Kandla were opened in 2005. These Departments were directly under the Ministry till the establishment of the Directorate General of Shipping at Mumbai in 1949. The main functions of MMDs are to administer the various Merchant Shipping laws and rules relating to safety of ships and life at sea, registration of ships, tonnage measurement, crew accommodation, survey for load line, safety construction, prevention of pollution, enquiries into shipping casualty and wrecks, surveys of passenger ships, radio equipments on board, inspection and approval of statutory equipment for life saving and fire fighting appliances, wireless telegraphy, global maritime distress and safety systems, navigational aids, pollution prevention equipments, supervision of repairs and construction of ship on behalf of State and Central Government organizations, Port State Control inspection, examination and certification of various grades of certificates of competency as per relevant examination rules under Merchant Shipping Act, 1958 etc.

6.4 The additional responsibilities imposed from time to time in the form of new statutes like Multimodal Transportation of goods Act, Admiralty Act, Recruitment and Placement of Seafarers Rules and so on and also various International Conventions. Surveys, inspections & Certification relating to safety of ships have been delegated to the Classification societies/ Recognised Organisation with selective supervisory role for the DGS on important surveys.

Passengers Ship Survey

6.5 All passenger ships are subjected to survey of hull, Machinery, equipment etc. during construction and there after annually.

On completion of survey, Certificates such as Passengers Ship Safety Certificate, Space Certificate, Special Trade Ship Safety Certificate, Exemption Certificate, 'A' Certificate and Certificate of Survey are issued.

Cargo Ship Safety Construction (CSSC) Surveys

6.6 Under the requirements of SOLAS 74 Convention as amended, administration is responsible for conduct of CSSC Surveys of various types of Cargo Ships under construction and periodical and annual surveys thereafter. The task of surveys of Cargo Ships under constructions/re-construction abroad and subsequent periodical/annual surveys has been delegated to recognized Classification Societies. The inspection reports submitted by the Classification Societies are scrutinized by MMDs and thereafter certificates with appropriate validity are issued.

Safety Equipment Surveys

6.7 The Department carries out the Surveys of Safety Equipment on board ships under the requirements of SOLAS Convention 1974 as amended and the M.S. (Fire Fighting Appliances) Rules, 1990 and M.S. (Life Saving Appliances) Rules, 1991. This Survey is mandatorily carried out by the Department.

International Oil Pollution Prevention (IOPP) Surveys

6.8 The Department is also responsible for survey and certification for Oil Pollution under the various Annexes of MARPOL 73/38 Convention. In this survey, inspection of pollution prevention equipment is undertaken to protect and safeguard the marine environment. This survey is also entrusted to authorized classification societies and on receipt of their report, the Department issues the IOPP Certificate after scrutinizing the said report.

Certificate of Fitness and International Pollution Prevention Certificate (IPPC)

6.9 The Certificate of Fitness / IPPC for the carriage of Noxious Liquid Substances in Bulk are issued after survey is carried out under Annex – II of the MARPOL and the Gas and Chemical Codes formulated by the International Maritime Organizations. This survey is usually carried out by the Classification Societies on behalf of the Department and the certificate is issued to the vessel on the basis of their report.

Safety Radio Telegraphy Survey (SRTS)

6.10 All Sea going vessels over 300 G.T. are required to be surveyed and issued with a Safety Radio Telegraphy/Telephony Certificate in compliance with the M.S. (Radio) Rules, 1983 and Chapter IV of SOLAS 74 as amended from time to time. The survey consists of checking of Radio equipment for distress, safety and normal communication on board. With the harmonization of Certificates, the Safety Radio Certificate is issued.

Examinations

6.11 The MMDs conduct various grades of Certificate of competence Examinations in Nautical and Engineering disciplines under the International Convention of STCW '78, as amended in '95 under M.S. (STCW) Rules '98, Fishing Grade Examinations and the Examinations for various Certificates of Competency under IV Act. As on 27.12.2016, 4052 fresh Certificates of competency were issued in nautical disciplines and 4876 fresh Certificate of Competency were issued in Engineering discipline. A Committee has been set up to review the process of distribution of examination fees to examiners/surveyors.

Inspection of Training Institutes

6.12 The Pre-Sea and Post-Sea Maritime Training Institutes in the private sector are inspected by the MMDs at various stages before and after approval by the DGS.

Registration of Ships

6.13 There is consistent increase in the vessels registered under Indian flag as evident from the chart below:

Sl. no	Period	Coastal	Overseas	Total
1	2014	847	358	1205
2	2015	874	373	1247
3	2016	897	406	1303

6.14 The main functions of the Government Shipping Offices established under Section 11 of the Merchant Shipping Act, 1958 are:

- (i) To provide means for securing the presence on-board at proper times of the seamen who are so engaged.
- (ii) To facilitate making of apprenticeship to the sea service.
- (iii) To hear and decide disputes under Section 132 between a Master, owner or agent of a ship and any of the crew of the ship.
- (iv) Issue of Continuous Discharge Certificate-cum-Seafarers Identity Document (CDC).

6.15 In the year 2016, CDCs issued were as under;

Fresh CDC	11,521
Renewal CDC	4,962
Duplicate CDC	433
Replacement CDC	14,020

6.16 Issuances of Certificate of Competency (Cook). In the year 2016, COC(cook) certificates were issued as under

Cook (Certificate)	559
Duplicate (Certificate)	320

Seamen's Employment Office Mumbai/ Kolkata/ Chennai

6.17 The Seamen's Employment Office, Kolkata/ Mumbai/Chennai established under section 12

of the Merchant Shipping Act 1958, continued to function in accordance with the provisions contained in Section 95 to 98 of the M.S. Act and as guided by the instructions and orders issued by the Directorate from time to time. In term of the amended section 95 of the M.S. Act, 1958 the business of the Seamen Employment Offices includes:-

- (i) Issuance of license, regulating and controlling the recruitment and placement service providers.
- (ii) Ensuring that no fees or other charges for recruitment or placement of seafarers are borne directly or indirectly or in whole or in part, by the seafarers.
- (iii) Ensuring that adequate machinery and procedure exist for the investigation, if necessary, of complaints concerning the activities of recruitment and placement service providers.

Maritime Training in India

6.18 India has a long maritime tradition. India is the 20th largest maritime country in the world. The single largest contribution factor to this glorious tradition is the presence of a strong, dedicated, efficient and reliable reservoir of officers and ratings of Merchant Navy in India. The safety and efficiency of ships are crucially dependent upon professional ability and dedication of well trained seafarers. Great importance has always been attached to the maintenance of high quality training imparted to maritime personnel in India, which has facilitated India to emerge as a major manpower supply nation to the world-wide shipping. The ever increasing demand of the India seafarers world-wide is testament of the quality of education and training received in India.

6.19 There are 134 Training Institutes at present. The summary of the capacity of the various pre-sea training institutes is given as under:-

6.20 Annual intake of Pre-sea Courses:

Pre-sea Training	Total approved annual capacity
Pre-sea training for Nautical discipline	4418
Pre-sea training for Engineer discipline	4467
Pre-sea training for polyvalent discipline	31
Pre-sea training for GP Rating	5520
Certification course in Maritime Catering	1076
Orientation Course in Maritime Catering	2720
NCV (Deck)/(Engine)	80
Pre-Sea Training Electro Technical Officers	880
Total	19192

6.21 Region-wise annual intake of pre-sea courses:

Region	No of Pre sea Institutes	Name of the Course	Approved intake
Eastern Region	11	Pre Sea training for Nautical Discipline	310
		Pre Sea training for Engineer Discipline	490
		Pre sea training for GP Rating	600
		Certificate Course in Maritime Catering	160
		Orientation course in Maritime Catering	160
		Pre Sea training for Electro Technical Officers	120
		TOTAL	1840
Western Region	24	Pre Sea training for Nautical Discipline	1972
		Pre Sea training for Engineer Discipline	1575
		Pre-sea training for Polyvalent discipline	31
		Pre sea training for GP Rating	1800
		Certificate Course in Maritime Catering	756
		Orientation Course in Maritime Catering	720
		NCV (Deck)	80
		Pre-sea for Electro Technical Officers	280
		TOTAL	7214
South West Region	4	Pre Sea training for Nautical Discipline	40
		Pre Sea training for Engineer Discipline	410
		Pre sea training for GP Rating	220
		Certificate Course in Maritime Catering	80
		Orientation Course in Maritime Catering	80
		TOTAL	830

Region	No of Pre sea Institutes	Name of the Course	Approved intake
Southern Region	31	Pre Sea training for Nautical Discipline	1616
		Pre Sea training for Engineer Discipline	2000
		Pre sea training for GP Rating	2220
		Certificate Course in Maritime Catering	80
		Orientation Course in Maritime Catering	720
		Pre Sea Course for Electro Technical Officer	360
		TOTAL	6976
Northern Region	8	Pre Sea training for Nautical Discipline	360
		Pre Sea training for Engineer Discipline	100
		Pre sea training for GP Rating	544
		Certificate Course in Maritime Catering	00
		Orientation Course in Maritime Catering	400
		TOTAL	1404
North East Region	1	Pre sea training for GP Rating	160
		TOTAL	160
TOTAL	79	GRAND TOTAL	18444
TOTAL NO. OF MARITIME TRAINING INSTITUTES : 134			
No of Pre Sea Institutes : 79			
No of Post Sea Institutes : 55			

6.22 Region wise post sea institutes:-

Region	Post Sea Institute Competency
North	12
East	7
West	19
South	17
Total	55

Seamen's Provident Fund Organization, Mumbai.

6.23 The Seamen's Provident Fund Scheme, the first social security scheme for Indian Merchant Navy Seamen, brought under statute by enactment of the Seamen's Provident Fund Act, 1966 (4 of 1966) was introduced retrospectively with effect from 1st July, 1964, to provide for the institution of a provident fund for seamen as old

age retirement benefit and their family members in the event of death of seamen members. The Seamen's Provident Fund is vested in and administered by the Board of Trustees consisting of the Chairman and three representatives each of the Government, Employers and Employees. The Director General of Shipping is an ex-officio Chairman of the Board of Trustees and the Commissioner is the Chief Executive Officer and the Secretary to the Board.

National Welfare Board for Seafarers

6.24 As provided under Section 218 of Merchant Shipping Act, 1958 the Government of India has constituted a National Welfare Board for Seafarers headed by the Union Minister of Shipping for advising the Government on the measure to be taken for promoting the welfare of Seamen whether on shore or aboard. The

Board functions with Minister of shipping as the chairman and Minister of state for shipping as Vice Chairman. It comprises of 2 Members of Parliament (one from Lok Sabha and one from Rajya Sabha), 4 representatives from Central Government, 3 representatives each of Ship-owners and Seafarers, 2 representatives from Port Trusts, 1 non-official Member from the field of Seamen's Welfare of Public, representative from Society interested in Seamen's Welfare.

Seafarers' Welfare Fund Society

6.25 The SWF Society is set up as a Central Organization for the Welfare of Indian Seafarers and their families. It is registered under the Societies Registration Act 1860 and as a Trust under the Bombay Public Trust Act 1950. The Society represents various interests connected with Indian Shipping which includes representatives of Indian and Foreign Ship-owners and also of Seafarers' Unions separately for officers and seamen. The control of business and affairs of the Society is vested with the Committee of Management of which the Director General of Shipping is the ex-officio Chairman.

Minor Ports Survey Organization

6.26 Minor Ports Survey Organization (MPSO) is a subordinate office under the Ministry of Shipping, entrusted with the responsibilities of carrying out Hydrographic surveys in minor/major ports and inland waters on agreed program. The Senior Hydrographic Surveyor is the Head of the Office with its Head Quarters at Navi Mumbai. The Director General of Shipping, Mumbai is its Head of the Department. MPSO is unable to sustain on its core principle of 'No Profit No Loss'. Since 2005-06, there has been huge mismatch between expenditure and revenue making the organisation financially unviable and due to the fact that major survey companies are providing all types of hydrographic surveys and soil investigations in the port sector, the MPSO has been wound up and ceased to exist from 01.07.2016.

National Shipping Board

6.27 The National Shipping Board is permanent Statutory Body established in 1959 under Section 4 of the Merchant Shipping Act, 1958 to advise the Government of India on matters related to Shipping including development thereof. In terms of the aforesaid provision, the Board is re-constituted after every two years. The Board comprises of 6 Members of Parliament (4 from Lok Sabha and 2 from Rajya Sabha), 5 representatives of the Central Government, 3 representatives each of ship-owners and seamen and 5 representatives of other interests including its Chairman. The Board has been reconstituted for a period of 2 years from 01st December, 2014.

New initiatives taken by the Directorate General of Shipping

E-Governance initiatives

6.28 Directorate General of Shipping has undertaken several measures to provide its services to its stakeholders on an e-platform. The e-governance project by the name e-samudra was conceived by the DGS in the year 2004. In the past two years, these e-samudra modules have been revamped/upgraded in accordance with the new requirements. Thereby many of the services of DGS are now brought on an e-Platform. These are as under:

- a) **Issuance of Continuous Discharge Certificates:** Indian seafarers are required to possess a certificate called Continuous Discharge Certificate (CDC) to be able to work on an Indian flag ship. Approximately 24,000 such certificates are issued annually by the DGS. Entire process of issuance of CDC is made online since June, 2015. 49,478 numbers seafarers have utilised this facility till end of December, 2016.
- b) **Registration of ships:** The DGS through its field offices [Mercantile Marine Departments] functions as the registrar

of Indian flag ships. The entire process of registration of Indian ships and related processes such as alteration of name, change in mortgage etc., has been made online since May, 2015 onwards. 480 Indian ships have utilized this facility till end of December, 2016.

- c) **Issuance of chartering permissions:** The filing of an application for permission, processing of such application, payment of fee and issuance of such permission is completely online, since November, 2013. 4,684 applications have been so processed till end of December, 2016.
- d) **Tablet based examinations-** The conduct of CoC exams is being moved from a paper based format to the smart tablet based template [paperless] to be done through such a systems based approach. To begin with, the Engineering examinations for all grades on Near Coastal Vessels are being carried out on tablets. Gradually the engineering examination on other vessels and examinations on nautical stream would be conducted on tablets.
- e) **Concurrent feedback system:** A concurrent feedback mechanism has been developed and hosted on the official website of the DGS to receive feedback / inputs from service users on various services provided by DGS. The said feedback mechanism also provides for receiving grievances from other stakeholders and enables their redressal. Concurrent feedback mechanism allows the users of the service to rate the service utilized and also to provide descriptive comments on the same. The concurrent feedback mechanism has now been converted into a robust Grievance Redressal Mechanism. A four member team has been constituted to monitor the redressal of grievances. Total 1480 number of feedbacks were received in the year 2016 of which 1476 stand resolved till end of December, 2016 and action is being

taken to redress the remaining grievances. It is observed that there is reduction in number of grievances and improvement in overall gradings in the last five months. DGS endeavours to identify those areas where the performance is poor and take necessary corrective action to improve the grading in such areas.

Initiatives on Merchant Shipping Laws

Revamped Merchant Shipping Bill to replace Merchant Shipping Act, 1958

6.29 In order to promote ease of doing business to meet new challenges facing merchant shipping sector – to increase tonnage under Indian flag and share of Indian seafarers, safeguard rights and privileges of seafarers, enhance safety and security of vessels and life at sea, to develop Indian coastal shipping and trade and to ensure compliance of India's obligations under International conventions and to replace old redundant provisions with contemporaneous provisions, the Merchant Shipping Bill, 2016 is being introduced in Parliament to replace existing MS Act, 1958. This Bill was introduced in the Lok Sabha on 16.12.2016. The main features of the MS Bill, 2016 are:

- (i) To register all seagoing vessels, whether propelled or not including certain residuary category of vessels not covered under any statute;
- (ii) To allow substantially-owned vessels and vessels chartered on Bareboat Charter-cum-Demise (BBCD) contract by Indian entities to be registered as Indian flag vessels; to recognize Indian controlled tonnage as a separate category; and dispense with the requirement for issuing licences to Indian flag vessels for coastal operation, so as to facilitate augmentation of Indian tonnage and promotion of coastal shipping;
- (iii) To make the insurance of crew engaged on vessels including fishing, sailing without

mechanical means of propulsion and whose net tonnage is less than fifteen compulsory by the owner of the vessel; and to dispense with the requirement with respect to signing of articles of agreement by the crew before the Shipping Master, so as to ensure welfare of seafarers;

- (iv) To make provisions for security-related aspects, which will enable identification and ensure coastal security;
- (v) To give effect to IMO convention provisions not covered in the existing act.
- (vi) Repeal of Coastal Vessel Act, 1838.

The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016

6.30 The Admiralty (Jurisdiction and Settlement of Maritime Claims) Bill, 2016 has been introduced in the Parliament in the winter sessions of the Parliament on 21 November, 2016. Admiralty jurisdiction relates to powers of the High Courts in respect of claims associated with transport by sea and navigable waterways. Under the present statutory framework, the admiralty jurisdiction of Indian courts flow from laws enacted in the British era. The proposed Bill consolidates the existing laws relating to admiralty jurisdiction of courts, admiralty proceedings on maritime claims, arrest of vessels and related issues and repeals five obsolete British statutes on admiralty jurisdiction in civil matters. The Bill confers admiralty jurisdiction on High Courts located in coastal states of India and this jurisdiction extends upto territorial waters. This legislative proposal will fulfil a long-standing demand of the maritime legal fraternity.

Merchant Shipping Rules notified

6.31 The following 6 new merchant shipping rules have been framed and notified:

1. Merchant Shipping (Control of Anti-fouling Systems) Rules, 2016 notified in January, 2016.

2. Merchant Shipping (Medical Examination) Amendment Rules, 2016 notified in January, 2016.
3. Merchant Shipping (Maritime Labour) Rules, 2016 notified in February, 2016.
4. Merchant Shipping (Recruitment and Placement of Seafarers) Rules, 2016 notified in February, 2016.
5. Merchant Shipping (Seafarers' Bio-metric Identity Document) Rules, 2016 notified in April, 2016.
6. Merchant Shipping (Seafarer Accommodation) Rules, 2016 has been notified in the official gazette of India on 26.08.16.

Undertaking between India and Korea on Mutual Recognition of Certificates for Seafarers, 1978

6.32 The Union Cabinet had on 28.09.16 approved the signing of an Undertaking between India and South Korea on Mutual Recognition of Certificates. It is in pursuance of the Regulation 1/10 of International Convention on Standards of Training, Certification and Watch keeping (STCW) for Seafarers, 1978, as amended. Signing of the Undertaking will pave way for mutual recognition of certificate of competencies [CoCs] issued to the seafarers of two countries. This will increase the employment opportunities of Indian seafarers on South Korean flag ships.

Exemption to Vessel Sharing Agreements [VSAs] from the provisions of Competition Act, 2002

6.33 Exemption to Vessel sharing agreements [VSAs] has been extended again for one more year w.e.f. the 2nd of March, 2016 upto the 1st of March, 2017, vide Ministry of Corporate Affairs, Government of India's, Notification S.O. 646 (E) dated 02.03.16, for fostering an ease of doing business in the liner shipping industry in India without, however, compromising the core anti-competition principles.

DIRECTORATE GENERAL OF LIGHTHOUSES & LIGHTSHIPS

Role of the Directorate General of Lighthouses and Lightships (DGLL)



6.34 In the vast ocean, a mariner is not sure of his position unless he is guided by some signal from the land/space. DGLL provides service to enable the mariners to know their position with respect to a fixed point on the land with the help of Visual Aids to Navigation such as lighthouses, light vessels, buoys, beacons and Radio Aids to Navigation like Differential Global Positioning System (DGPS), Radar Beacons (Racons), Vessel Traffic Service (VTS) & Automatic Identification System (AIS) etc. DGLL has projected schemes under Maritime Agenda (Vision 2020) of Rs.1594 crores to deliver reliable, accurate, efficient, State of the Art matrix of Aids to Marine Navigation

Service, for the mariners, plying in the Coastal and Exclusive Economic Zone (EEZ) Waters.

Governing Act/Mandate

6.35 Headquarters of the Directorate, situated at Noida, is headed by the Director General of Lighthouses & Lightships. All policy matters concerning administration, development, planning etc. are decided at headquarters in consultation with Ministry of Shipping. For the purpose of effective superintendence of Lighthouses and other Aids to Marine Navigation, the Indian coast is divided into nine regional Directorates known as Lighthouse Districts with their headquarters at Gandhidham, Jamnagar, Mumbai, Goa, Cochin, Chennai, Visakhapatnam, Kolkata and Port Blair. Regional Lighthouse Directorate is headed by a Director, who reports on the technical matters to the Deputy Director General and who finally report to the DGLL. A team of qualified Engineers, Technical and Ministerial staff assists the Director in effective superintendence and management of lighthouses and Marine Aids to Navigation.

6.36 An outlay of Rs. 53.50 crore is approved during the current financial year 2016-17. Important schemes under implementation are:

Sl. No.	Name of the Schemes	Status
1.	Establishment of Office Building at Gandhidham	Works completed on 31/05/2016 at an estimated cost of Rs. 5.57 Cr.
2.	Establishment of Office Building and Staff quarters at Vishakhapatnam	The work is in final stage and will be completed by 31st Dec, 2016 at an estimated cost of Rs. 7.79 Cr.
3.	Establishment of new Lighthouses at Vembar	Works almost completed and will be put on trial run by end of December-16 at an estimated cost of Rs. 3 Cr.
4.	Promotion of Tourism at Lighthouses	Action has been taken to promote tourism at 08 Lighthouses. For obtaining CRZ clearance for the envisaged project, EIA consultant has been engaged and for preparation of architectural drawings, preparation/ review of RFQ/RFP, Project Development Consultant (PDC) has been engaged for Lighthouses.

Sl. No.	Name of the Schemes	Status
5.	Recapitalization of DGPS Phase-I	Work order has been issued to L1 bidder at a cost of Rs. 30.71 Cr.
6.	Tapping of Solar Energy (Green Energy)	Solarization of 180 Lighthouses out of 193 has been completed. At present approx 6.0 MWh energy per day is being generated and 5.5 Ton of green house gases per day is being reduced.
7.	Estt. of Lighthouse at Sister Island	Works under progress.
8.	Estt. of Lighthouse at Tries Island	Works under progress.
9.	Estt. of Lighthouse at Honiph Rock	Works under progress.
10.	Estt. of Lighthouse at Maipura	Works under progress.
11.	Estt. of Lighthouse at Valayikkal	Works under progress.
12.	Upgradation of Training Centre at Kolkata	Construction works under progress. Work order has been issued for supply, installation and commissioning of VTS simulator.
13.	Replacement of RACONS	7 no. of RACONS has been replaced in Phase I.

Infrastructure

6.37 There were 17 lighthouses at the time of Independence. As on date, the details of Aids to Navigation maintained by the DGLL are as shown below:

Sl. No.	Aid to Navigation	Nos.
1.	Lighthouses	193
2.	Lightship	01
3.	DGPS Stations	23
4.	Racons	64
5.	Deep Sea Lighted Buoys	21
6.	Wreck Marking Buoys	05
7.	National Automatic Identification System (AIS) Physical Shore Stations (PSS)	87
8.	Vessel Traffic Service - Gulf of Kachchh(9 Radar +4 AIS Base Stations & 2 Direction finder)	01
9.	Lighthouse Tender Vessels	04 (one vessel is under disposal at Port Blair)
10.	National Navtex Chain (7 Tx. Stations, 7 Monitoring Stations & Navtex Control Centre at Mumbai & Vizag.)	01

6.38 For proper maintenance of Lighthouses in the islands and floating Aids to Navigation, 4 Lighthouse Tender Vessels are also in the inventory of DGLL. These are also used to monitor performance of ATOns in the Indian waters, established by the DGLL.

Lighthouses

6.39 A Lighthouse is a structure on land, close to the shore line or in the water. The Lighthouse tower serve as a day mark with its colour scheme and a powerful light with a specific character serve the mariners during the night. A lighthouse may be used to indicate dangerous Shoals, Sand Bank, Rock etc to obtain a Line of Position and to indicate Landfalls, Headlands, entrance to estuaries/ports etc.



Lighthouse

6.40 The Directorate has embarked into a policy of utilization of solar and wind energy so that consumption of fossil fuel are almost insignificant. In this process, about 25 KW solar energy is being generated to power 63 lighted beacons and 13 island lighthouses. The Directorate has established 5 KW solar- wind hybrid energy at False Point. Directorate has solarised 180 Lighthouses out of 193. Solarization

of DEEP Bhawan Noida, Jamnagar, Mumbai, Cochin, Chennai, Vishakapatnam, Kolkata, Port Blair have been completed.

Lightship

6.41 A Lightship serves the same purpose as lighthouse and is positioned in the sea, where it is not feasible to construct a lighthouse. DGLL maintains a lightship "PERIGEE" off the Bhavnagar coast, in Gujarat.



Lightship

Differential Global Positioning System

6.42 It is a Satellite based system, where errors in Global Positioning System (GPS) are accurately calculated at a fixed surveyed point and then corrections are transmitted by MF Beacon (283.5 to 325 KHz Marine band). In the coverage area, which is generally 100 - 150 NM, the position can be fixed by the mariners to an accuracy of better than 5 meter. In Recapitalisation of DGPS phase I, 13 stations are being upgraded to DGNSS.



Concept of DGPS

Racon (Radar Beacon)

6.43 Racon operates on Microwave frequency. It responds to a Radar pulse by sending a characteristic pulse thereby indicating range, bearing and identification information on Radar Screen of the vessel. It is an all weather Aid to Navigation. It does not need any additional equipment on board and is a versatile aid, during Coastal Phase of Navigation.



Racon along with display of its Character on a Radar screen

Deep Sea Lighted Buoys

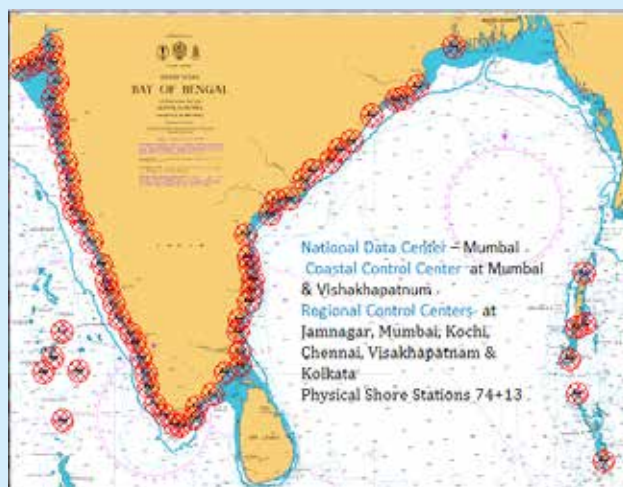
6.44 Buoys are floating aids used for marking of channel in the deep sea with a character of light. Colour scheme of the buoy serves as a day mark to the mariners. Buoys are used to indicate dangerous shoals, sand bank, submerged rock etc to obtain a line of position, to indicate Landfalls, Headlands, entrance to estuaries/ ports etc.



Deep Sea Lighted Buoys

National AIS Network

6.55 Automatic Identification System (AIS) is a ship to ship and ship to shore based data broadcast system, for maritime safety and collision avoidance. DGLL has established National AIS Network with 87 Physical Shore Stations (PSS), which seamlessly provides radio coverage up to a minimum distance of 25 Nautical Miles from the coast including Islands of Andaman & Nicobar and Lakshadweep thus all SOLAS and other vessels equipped with AIS Transponders are tracked. Two Coastal Control Centers at Mumbai and Vishakhapatnam have been established, in addition, to a National Data Centre at Mumbai. For coastal safety and security, terminals are also provided at Directorate General of Shipping, Joint Operation Centre (JOC) Mumbai, Joint Operation Centre (JOC) Vishakhapatnam, Indian Navy Delhi and Indian Coast Guard Delhi.



Map showing NAIS coverage

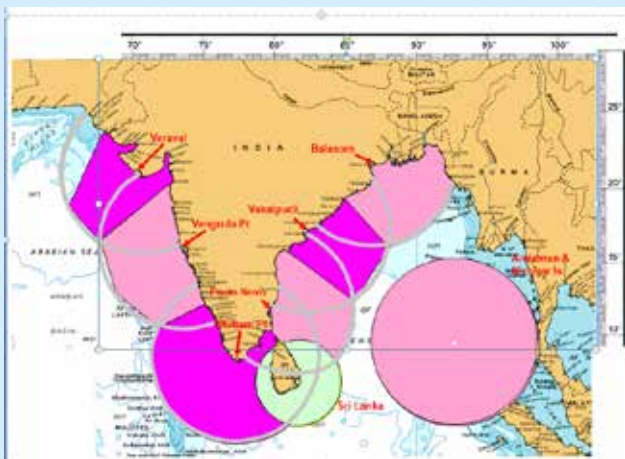


Physical Shore Stations

National Navtex Network

6.66 The Directorate General of Lighthouses & Lightships has established a National NAVTEX Network along the coastline of India in order to meet the International Maritime Organization (IMO), Global Maritime Distress and Safety System (GMDSS) requirement by establishing 07 Transmitting Stations on West Coast, East Coast and in Andaman and Nicobar Islands, at

a cost of Rs. 20.25 crore. The NAVTEX Network envisages broadcast of Maritime Safety Information (ie. Weather Forecast, Weather Warning, Navigation warnings & SAR messages). The data are provided at NAVTEX Centre by the Indian Metrological Department (IMD), National Hydrographic Office Indian Coast Guard (ICG) and Directorate General of Shipping at Mumbai from where it is relayed to various transmitting stations. Presently the system is working on trial basis.



Vessel Traffic Service - Gulf of Kachchh

6.67 A VTS is a service implemented by a Competent Authority, designed to improve safety and efficiency of vessel traffic and to protect the environment. The service should have the capability to interact with the traffic and to respond to traffic situations developing in the VTS area. VTS-Gulf of Kachchh has been established in February, 2012. In terms area of coverage, VTS-GoK is one of the largest VTS systems of the world with a set up of 9 Radars, 4 AIS Base stations, 2 Direction Finders in addition to Hydro and Meteorological Sensors at suitable locations with Master Control Station at Kandla. It is catering to requirement of 6 Ports, with the capability of extension to 10 Ports. VTS Monitoring System have also been provided to the Indian Navy at Okha and Indian Coast Guard at Okha & Jakhau for monitoring the movements of vessels, plying in GoK waters, to enhance maritime security in the Gulf of Kachchh.



Map showing VTS-GOK coverage area

Lighthouse Tender Vessels

6.68 To cater to the need of maintenance of Lighthouses in the islands and for maintaining the channel marking buoys in the Gulf of Kachchh and Gulf of Khambhat, the Directorate is maintaining three ocean-going vessels, M.V. Sagardeep-II, M.V. Deepstambh-II and Indira Point.



Indira Point

Revenue Generation and Expenditure

6.69 The funding pattern of the Directorate is based on cost recovery system and it does not burden the taxpayers. All expenditure on management and development (plan and non-plan) is met out of the revenue collected by levy of light dues and thus the Directorate is a self-sustaining organization. The Central Government,

as per the provisions of the Lighthouse Act, levies light dues on all the foreign going ships arriving at or departing from any port in India. The light dues are charged at the rate of Rs. 92/- per TEU for container vessels and @ of Rs 8/- per ton on NT basis once in 30 days for other Foreign Going Vessels. In order to encourage coastal shipping, the coastal ships have been exempted from the purview of light dues, since October, 2000.

Development of Tourism

6.70 Lighthouses, due to its natural and scenic locations, have tremendous tourist potential. The DGLL is promoting tourism at lighthouses in phased manner. In order to give impetus to promote tourism at Lighthouses, the Ministry has identified 78 lighthouses for development of tourism, on PPP mode. Out of 78 lighthouses 34 lighthouses are in Islands and 44 are from mainland. The following 8 lighthouses have been taken up for promotion of tourism at initial stage. The project is framed for implementation under PPP mode.

1. Kanhoji Angre (Maharashtra)
2. Sunk Rock (Off Mumbai Coast)
3. Aguada (Goa)
4. Muttom Point (Tamil Nadu)
5. Mahabalipuram (Tamil Nadu)
6. Kadalur Point (Kerala)
7. Minicoy (Lakshadweep)
8. Chandrabhaga (Odisha)

THE SHIPPING CORPORATION OF INDIA LIMITED

6.71 During the last 55 years, SCI has been providing yeoman service to the country's economy by meeting its ocean transport requirements. Starting out as a Liner shipping company with 19 vessels with a capacity of mere 0.19 million Dead Weight Tonnage (DWT) in 1961, SCI as on 1.12.2016 owns 69 vessels of 5.85

million DWT, 3.269 million GT and constitutes 34.7% of the Indian tonnage.

Crude Transportation

6.72 India has one of the world's fastest growing energy markets. Energy security is of paramount importance. Looking at nation's immense energy needs for growth, SCI gradually shifted its focus from liner business to energy transportation starting with crude oil transportation in 1964. SCI ordered several crude and product tankers in 1970s to exclusively meet the needs of the Indian Oil Industry. Today SCI has a fleet of 35 crude and product tankers. SCI has five VLCCs and they are mainly employed on voyage charter. SCI's supportive role during the 1970s oil crisis cannot be undermined. Rising up to the occasion in late 1970s, SCI converted its tankers for ONGC to enable storage and offloading of Bombay High crude. With the acquisition of Floating, Production, Storage and Offloading (FPSO) vessels, this need has recently tapered. However, SCI is always in readiness to provide its tanker to ONGC to meet any situational exigencies.

LNG transportation

6.73 In 2004, SCI was the first Indian Shipping Company to have ventured into LNG Transportation and remains the only Indian company operating in LNG sector in India. It co-owns four LNG carriers in consortium with premier Japanese companies and independently manages their techno-commercial operations. The 4th LNG tanker for transportation of LNG to India from Australia is delivered in November 2016. Further, SCI has also signed MOU with GAIL for transportation of LNG from USA to India from 2016-17 where SCI is providing technical consultancy and has step-in right for equity ownership (upto 26%) with the winning bidders. A JV in Hong Kong is formed for managing LNG vessels.

Commodity/Product transportation

6.73 SCI took fullest advantage of the recession in the shipping industry in early 1980 and did massive fleet acquisition (tankers as well as dry bulk vessels) to meet nations growing EXIM trade. In 1991, SCI diversified into cryogenic operations. As of date, SCI has 16 dry bulk carriers. The Bulk Carriers market worldwide is prevailing at all time low levels.

Coastal Coal transportation

6.74 SCI's bulk carriers are actively involved in the transportation of Indian coal to the Indian Power Generating Companies. SCI moved 3.2 m tonnes of coal around the coast in 2015-16.

Container movement

6.75 One of the strengths of SCI lies in their having a diversified fleet. As Liner business was changing from break bulk to containers, SCI was the first Indian Shipping Company to acquire cellular container vessels in 1993. SCI is the only Indian Shipping Company providing container services from India to West as well as East. Though small, SCI today also has a fleet of five container vessels, out of which three are employed on the coast. Presence of SCI in this segment has proved to have a moderating effect on the freight rates thus protecting the interest of Indian exporters.

DRDO Project

6.76 SCI is in the process of providing/ deploying its two offshore vessels which would be provided on long term charter to The Defense Research & Development Organization (DRDO), for their requirement of national importance. In this regard, one MPSV "SCI Sabarmati" has already been acquired by SCI, delivery for which has been taken on 18.11.2016 and acquisition of 2nd vessel is in advanced stages.

Offshore Segment

6.77 SCI entered the offshore segment, by acquisition of 10 Offshore Supply Vessels in 1984-85. The vessels have been providing vital support to the Indian offshore oil industry by way of assisting the E&P companies in their exploration & production activities. ONGC, India's largest E&P operator, has been major client for SCI. These old OSVs have been gradually phased out by SCI and they have been replaced by a young and technologically advanced fleet of vessels. The current offshore fleet of SCI comprises of 3 nos. 80T AHTSVs, 4 nos. 120T AHTSVs, 2 nos. PSVs and 1 no. MPSV which are effectively serving the Indian offshore sector.

Financial health

6.78 SCI had been a continually profit-making organization till financial year 2010-11; however, prolonged depressed market conditions impacted SCI and incurred losses for three years from FY 2011-12 to FY 2013-14. In 2014-15, however, SCI managed a turnaround and posted a profit after tax of Rs.200.93 crore due to the tanker market showing improvement which partly offset the losses of the bulk carrier segment. The judicious cancellation of contracts and control of costs coupled with lower bunker prices helped in SCI posting positive results. SCI has despite the continuing volatility in freight rates, posted a consolidated net profit of Rs.389.40 crore in 2015-16 assisted by the low bunker prices and continuing efforts to control costs.

Financial Performance

6.79 The following table shows the financial performance of SCI during last 3 years:

Financial Year	2013-14	2014-15	2015-16
Total Income (Rs. Crore)	4538.99	4587.60	4277.19*
Net profit (Rs. Crore)	-274.66	200.93	377.29*
Dividend (%)	Nil	Nil	Nil

DREDGING CORPORATION OF INDIA LIMITED

6.80 Dredging Corporation of India Ltd., (DCI) was incorporated in March, 1976 with an authorised capital of ₹30 crore and paid-up capital of ₹28 crore. 1.44% and 20% of the share capital was disinvested by the Government in the years 1991-92 and 2003-2004 respectively. 5% of the share capital was further disinvested by the Government in the year 2014-15. Its shares are listed on Delhi, Mumbai, Kolkata and National Stock Exchanges. The Government holding in the Company is 73.56%. The Company is engaged in providing maintenance and capital dredging services, beach nourishment, land reclamation, shallow water dredging, marine port constructions activities, PMC services to Ports, India Navy etc. Located strategically on the eastern seaboard at Visakhapatnam, DCI helps in attaining and continuous availability of desired depths, in the shipping channels of major and minor ports for fishing harbours, Indian Navy and other maritime organisations.,

Capacity Augmentation

6.81 DCI MUTLICAT an ancillary vessel has been added to the fleet of DCI. DCI has further placed order for an inland cutter suction dredger which will join the fleet very shortly. This would facilitate the Company to take up inland dredging works once again after a long gap. In continuation of the steps taken for capacity augmentation of its core dredging activity, the Detailed Project Report is being prepared for higher capacity trailing suction hopper dredger. The Company is also planning to take up refurbishment of the existing aged Dredgers so as to enhance their life as well as their efficiency. The Company is sure that with the ongoing capacity augmentation, the performance will continue to improve over the years to come.

Dredging Operations

6.82 The Company is catering to the dredging requirements of the Haldia/ Kolkata Port for

the past thirty years. The Company also caters to the maintenance dredging requirements of other major ports/ India Navy etc. The Company is taking up capital dredging assignments depending on the availability of the vessels and other logistic requirements. During the year under review, maintenance dredging contracts were executed for Kolkata Port, Haldia, Kandla, Cochin Port Trust, Ernakulam, RGPPL-Dabhol and NST and its approaches of VPT. Capital Dredging Contracts were executed at Kandla Port, Kamarajar Port and Visakhapatnam Port. The above works were executed either under the existing contracts or renewal of the contracts entered into with the Ports etc., during the previous years or new contracts entered into during the year.

Financial Results

6.83 The Profit after tax of the Company for the year 2015-16 increased to Rs. 7966.80 lakh as compared to 6240.84 lakh for the previous year. The Company's earning per share for the year 2015-16 also increased to Rs. 28.45 as compared to Rs. 22.29 for the previous year. The operational income of the Company for the year is 66585.89 lakh as compared to Rs. 73496.05 lakh for the previous year. The other income for the year is Rs. 1036.27 lakh as compared to 883.25 lakh for the previous year. The total income for the year is Rs.67622.16 lakh as compared to Rs. 74379.30 lakh for the previous year.

Dividend

6.84 Keeping in view the financial performance of the Company and other relevant considerations, the Company has paid dividend @ 30% on the paid up capital of the company i.e ₹3 per equity share of ₹10 each amounting to ₹840 Lakh.

Manpower

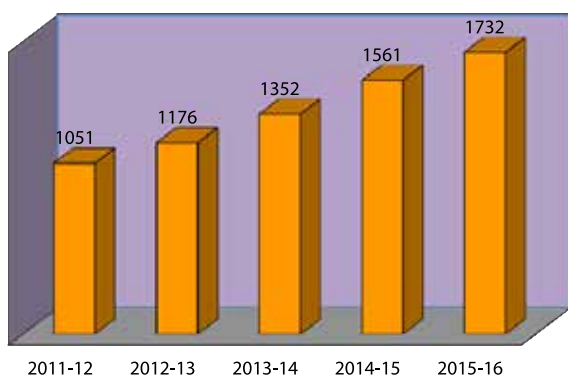
6.85 As on 31st March, 2016, the total number of employees in DCI was 523 as against 566 as on 31st March, 2015.

COCHIN SHIPYARD LIMITED

Financial Highlights

6.86 The Performance of Cochin Shipyard Limited (CSL) continued to be good during the year 2015-16. In spite of the continued global down-turn in shipbuilding industry, the turnover for the year was at Rs. 1995.89 crores as compared to Rs. 1859.51 crores in the year 2014-15. The Profit Before Tax was Rs. 424.08 crores as against Rs. 367.56 crores in the previous year. The net profit was Rs. 275.03 crores as compared to Rs. 235.06 crores for the previous year. This performance is creditable considering the continuing recessionary conditions in the shipping and ship building sector.

Networth (Rs. Crs)

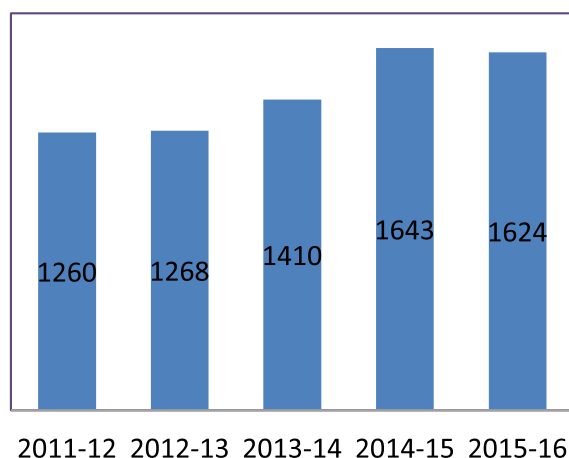


Operational highlights

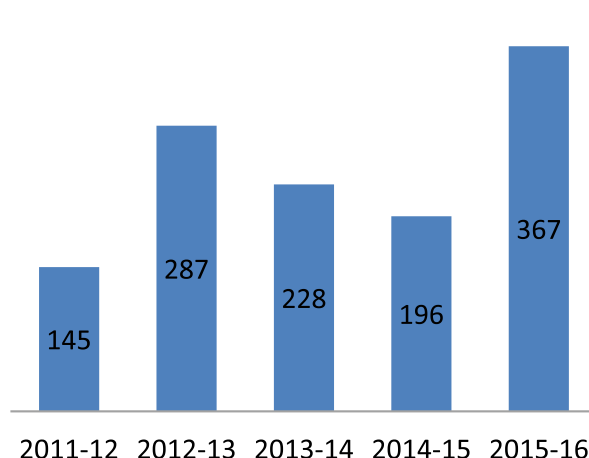
6.87 In the year 2015-16 the Company achieved a total ship building income of Rs. 1623.55 crores as against Rs. 1643.00 crores in 2014-15. During the year 2015-16, the yard delivered one Buoy Tender Vessel to Directorate General of Lighthouses and Lightships (DGLL) and six Fast Patrol Vessels to Indian Coast Guard. CSL also signed shipbuilding contracts for five vessels. A contract for construction of 1 No. Technology Demonstration Vessel for Defence Research and Development Organisation was entered into on 11th August 2015 and contracts with the Andaman and Nicobar Administration was entered into on 21st March 2016 for building of 2 Nos 500 Pax cum 150 Ton Cargo Vessels and 2 Nos 1200 Pax cum 1000 Ton Cargo Vessels.

6.88 In the shiprepair front, the Company achieved a total shiprepair income of Rs. 367.49 crores in 2015-16 as compared to Rs. 195.95 crore in 2014-15. A very well laid out strategy of taking major defence orders on competitive tender and execution of MOUs with DCI and LDCL were instrumental in this achievement. The key repair projects undertaken during the year include INS Shardul, INS Aditya, INS Sukanya, and INS Viraat for Indian Navy, Dredgers for DCI and LDCL Vessels for Union Territory of Lakshadweep.

■ Shipbuilding Income (Rs. Crs)



■ Shiprepair Income (Rs. Crs)



Initiatives for capacity addition

6.89 CSL has taken over about 8.12 hectares of land including the existing ship repair facility of Cochin Port Trust for a lease period of 30 years in order to set up an International Ship Repair Facility (ISRF). This would comprise of shiplift, transfer system & allied facilities at a total cost of Rs. 970 crore. Lease deed for the land and water area (Phase-1) was executed on 12th April 2013. Since then, the dry dock & existing facilities in the leased area has been made operational. Repair activities of eleven vessels have been completed during the financial year 2015-16. Project Management Consultant (PMC) appointed by CSL viz. consortium of M/s. Inros Lackner SE, Germany & M/s. Tata Consulting Engineers Ltd, Mumbai have prepared the Detailed Project Report for the project. Government of India approval for the project has been received on 19th May 2016. Parallely, CSL is in the process of obtaining environmental clearance for the project from the Ministry of Environment, Forests & Climate Change (MoEFCC). All formalities and documentation for obtaining the environmental

clearance have been completed. CSL expects to position Kochi as a major ship repair hub with major operations in the present shiprepair dock coupled with increased capacities that would be available when the ISRF is commissioned.

6.90 CSL is in the process of adding one more dry dock of size 310 x 75/60 x 13 M at a total cost of Rs. 1799 crore to enable the yard to build large ships viz., LNG vessels, large container vessels, new generation aircraft carrier etc. Further, this large dry dock would also enable CSL to undertake repairs of vessels like LNG carriers, semisubmersibles, jack up rigs, drill ships etc., within CSL premises. CSL has appointed M/s. Haskoning DHV India Private Ltd, Mumbai as Client Consultant and they have prepared draft Detailed Project Report for the project. CSL has carried out Environmental Impact Assessment (EIA) study for the project and has obtained environmental clearance from the Ministry of Environment, Forests & Climate Change (MoEFCC) vide their letter F. No. 10-9/2015 – IA III dated 09th November. 2016.



INS Vikramaditya Docking at Cochin Shipyard Limited

Facility upgrade and capital expenditure

6.91 The total capital expenditure incurred in 2015-16 amounted to Rs. 76.90 crore. This related to Renewals and Replacements, Modernization, Expansion and Research and Development Projects.

HOOGLY DOCKING & ENGINEERING LIMITED

6.92 HDPEL, situated at Kolkata, is one of the oldest shipyards in India. It was established in 1819 in the private sector known as Hooghly Docking & Engineering Company Limited. On merger of the Port Engineering Works with Hooghly Docking & Engineering Limited, the Hooghly Dock & Port Engineers Limited was formed by an Act of Parliament titled "The Hooghly Docking and Engineering Company Limited (Acquisition and Transfer of Undertakings) Act, 1984". Government of India has nationalized the ailing company, so as to utilize the available infrastructure through adequate investment for modernization and increase the capacity for Ship Building and Ship Repair in the country. The nationalized Company had remained with the Ministry of Industry till 27.07.1986 and was thereafter transferred to erstwhile Ministry of Surface Transport and now it is under the administrative control of Ministry of Shipping.

Rehabilitation-Cum-Reconstructing of HDPEL

6.93 The Rehabilitation-cum-Restructuring of HDPEL was approved by Government on 13.10.2011. The approval includes the proposition for formation of a Joint Venture with a Private Sector Player through open bidding process, waiver of Govt. Loan and Interest, infusion of fund for Rs. 21.00 Crore for VRS of employees, continuation of Non-plan support for payment of salary & wages and statutory dues of employees till formation of JV etc. Towards implementation of the Cabinet decision, the

line of activity has been initiated viz. the Govt. Loan and Interest for Rs.631.30 crore as on 31.03.2011 has been waived, a fund of Rs.49.06 crore has been released by GOI under the head 'Grant-in-Aid' towards VRS of employees.

6.94 Regarding the formation of JV, EOI was published in the leading Newspapers with a due date for submission by 23.08.2013 where the initial response has come from three Companies.

6.95 In the meantime an exercise by IL&FS (the consultant) shows that SPV process will not generate adequate revenue for meeting salary requirement of present manpower. Accordingly, vide Cabinet approval, Improved Voluntary Retirement Scheme at IDA linked 2007 Pay Scale has been implemented in HDPEL and 269 nos. of employees out of 313 nos. have taken VR under the said scheme.

6.96 The detailed proposal on Rehabilitation-cum-Restructuring of HDPEL by selection of J.V. Partner has been recommended for approval by Standing Finance Committee (SFC) in its meeting dated 14.06.2016 and the same was approved by Competent Authority in end June 2016. Request for Proposal (RFP) has been published in the leading newspapers including our website on 14th July 2016 and the due date for submission of Bid is 21st December, 2016.

ANDAMAN LAKSHADWEEP HARBOUR WORKS (ALHW)

6.97 (ALHW) a sub-ordinate offices under Ministry of Shipping was established during 1965 for the service of A& N islands and Lakshadweep Islands. The ALHW is entrusted with the responsibilities of formulating and implementing the programme of Ministry of Shipping for providing Port and Harbour facilities in Andaman & Nicobar and Lakshadweep Islands. From its inception, ALHW has been implementing the Port development schemes from the funds provided by Ministry of Shipping

under Central Sector Plan schemes starting from the Third Five Year Plan onwards. Apart from the creation of Port infrastructures, ALHW is also entrusted with maintenance of Port structures & Cargo Handling equipments under the funds provided by Andaman & Nicobar Administration and Lakshadweep Administration.

Performance

- Sheltered harbours with breakwater at Rangat in Middle Andaman, Hut Bay in Little Andaman, Campbell Bay in Great Nicobar and Mus in Car Nicobar of A&N Islands and in Androth in Lakshadweep Island..
- Wharves for Mainland ships at Haddo berth no.1 to 4, Chatham, Hope Town, Mayabunder, Hutbay & Campbell Bay (in A&N Islands), Androth, Kalpeni, Minicoy, Kavaratti, Amini & Agathi in Lakshadweep Island i.e. 09 Nos of wharves in A&N Island and 06 Nos in Lakshadweep Islands
- Jetties for Inter island ships at Rangat, Diglipur, Havelock, Little Andaman, Mus, Kamorta, Campbell Bay & Port Blair (in A&N Islands) (ie. 15 nos in A&N Islands & 10 No. in Lakshadweep Islands.
- 49 Nos. of Ferry Jetties /Vehicle Ferry jetties have been constructed in A&N Islands and similarly in Lakshadweep Islands, 15 Nos. of jetties have been constructed to cater to low draught vessels.
- Ship repair facilities such as Dry Dock in Port Blair, Slipways at Port Blair, Mayabunder and Little Andaman

INDIAN MARITIME UNIVERSITY

6.98 IMU is a Teaching-cum-Affiliating University established on 14th November 2008 to provide quality maritime education, training and research. Headquartered in Chennai, it has 5 Regional Campuses at Chennai, Kolkata, Mumbai, Visakhapatnam and Cochin. IMU has 24 Affiliated Institutes across the country

which offers one or more of the following Programmes:

- Diploma/B.Sc in Nautical Science
- B.Sc (Ship Building & Repair)
- B.Tech (Marine Engineering)
- P.G Diploma in Marine Engineering

Education and Admission Details

6.99 IMU is conducting the following Under Graduate and Post Graduate Programmes –

UG Programmes

- (a) B.Tech (Marine Engineering) - 4 years
- (b) B.Tech (Naval Architecture & Ocean Engineering) – 4 years
- (c) B.Sc (Ship Building & Repair) – 3 years
- (d) B.Sc (Maritime Science) – 3 years
- (e) B.Sc (Nautical Science) – 3 years
- (f) Diploma in Nautical Science leading to B.Sc. (Nautical Science) – 1 year

PG Programmes

- (a) MBA (Port and Shipping Management) – 2 years.
- (b) MBA (International Transportation & Logistics Management) – 2 years.
- (c) M.Tech (Naval Architecture and Ocean Engineering) – 2 years.
- (d) M.Tech (Dredging and Harbour Engineering) – 2 years.
- (e) Post Graduate Diploma in Marine Engineering – 1 year.

6.100 In IMU the Academic Year is from 1st August to 31st July of the next year. The Admission details for the Academic Years 2009-10 to 2016-17 are as shown below:

Table 1. Admission Details - Academic Year-wise

2009-10		2010-11		2011-12		2012-13		2013-14		2014-15		2015-16		2016-17 (#)	
IMU	AI	IMU	AI	IMU	AI	IMU	AI	IMU	AI	IMU	AI	IMU	AI	IMU	AI
1361	2289	1222	2355	1353	2364	785	1928	982	1402	740	1198	804	1775	938	1540

IMU = IMU's Campuses; AI= Affiliated Institutes.

(#) Admissions for August 2016 batch only

6.101 There has been almost 50% reduction in student admissions between 2009-10 and 2014-15. This is due to the prolonged recession/slowdown in the global shipping industry since 2009 which is yet to bottom out. However admissions to IMU Campuses have been relatively better in 2015-16 and 2016-17 with

80% of the seats filled up in 2016-17 as against 60% in 2014-15.

6.102 The Programme-wise admission details for the Academic Year 2016-17 in IMU Campuses is as shown below:

Table 2. Admission details in IMU Campuses - Programme-wise

Sl.No.	Programme	Sanctioned Strength	No. of Candidates Admitted
UG			
01.	Diploma in Nautical Science Leading to B. Sc (Applied Nautical Science)	200	91
02.	B.Sc (Nautical Science)	305	279
03.	B.Sc (Maritime Science)	40	28
04.	B.Sc (Ship Building & Repair)	40	29
05.	B.Tech (Marine Engineering)	366	329
06.	B.Tech (Naval Architecture & Ocean Engineering)	40	36
	Total	991	792
PG			
01.	MBA (Port & Shipping Management)	60	36
02.	MBA (International Transportation & Logistics Management)	90	82
03.	M.Tech (Naval Architecture & Ocean Engineering)	20	16
04.	M.Tech (Dredging & Harbour Engineering)	20	12
05.	PG Diploma in Marine Engineering (to commence in January 2017)	160	**
	Total	350	146

6.103 In order to provide opportunities for maritime education and employment, seats have been reserved in UG Courses in IMU Campuses for candidates native to or domiciled for at least 5 years in Andaman & Nicobar Islands (20 seats), Lakshadweep & Minicoy Islands (10 seats), the

8 North Eastern States (40 seats) and Jammu & Kashmir (10 seats).

6.104 As a student-friendly initiative, IMU has introduced a Performance-based Reward Scheme for meritorious students of IMU

Campuses from Academic Year 2015-16 onwards. IMU has introduced (in December 2015) about 200 performance based rewards per year. In each Semester, the 'Toppers' of each batch and of each programme get Rs.1,00,000/- each while students coming within the top ten percentile (other than toppers) get Rs.75,000/- each and students coming in the next ten percentile get Rs.50,000/- each. The

total annual financial commitment is about Rs.5 crore. The 'Performance-based Reward' Scheme has enthused IMU students to perform well academically, helped maintain discipline and good conduct in the Campuses, and is also one of the reasons for the increase in admissions to UG and PG courses for August 2016 batch in IMU Campuses.



Inauguration speech at Indian Maritime University by Hon'ble Minister of State for Shipping

CHAPTER – VII

INLAND WATERWAYS TRANSPORT

7.1 The Inland Water Transport (IWT) mode is widely recognized as a fuel efficient, environment friendly and cost effective mode, especially for bulk goods, over dimensional cargo and hazardous goods. Navigable inland waterways comprising of rivers, lakes, canals, creeks, backwaters etc. extend to about 14,500 km including about 5600 km for navigation by mechanized vessels. The primary requirement for making this mode commercially viable is development of IWT infrastructure (fairway, terminals and navigation aids) and at the same time creating an enabling environment for augmentation of IWT fleet, primarily by the private sector. IWAI is now focused on developing more National Waterways in order to create IWT network across the country to supplement

already congested road and rail networks. Under the National Waterways Act, 2016, 111 Inland Waterways spread over 24 States have been declared as National Waterways.

7.2 The Inland Waterways Authority of India (IWAI) was set up on 27th October 1986 vide Inland Waterways Authority of India Act, 1985, for regulation and development of inland waterways for the purposes of shipping and navigation, and is inter alia responsible for development, maintenance and regulation of National Waterways (NWs). The development and regulation of waterways which are not declared as NWs remain under the domain of the respective State Governments.

National Waterways 1, 2 & 3



Vessel berthed at floating jetty in NW-2

7.3 IWAI has undertaken development and maintenance of IWT related infrastructure facilities (fairway, terminals and navigation aids) on NW-1 (Ganga, Bhagirathi, Hooghly river system), NW-2 (Brahmaputra) and NW-3 (West Coast Canal in Kerala). Since their declaration as National Waterways, various projects for developing and maintaining the following infrastructure on these NWs have been completed/ are in progress.

a)	Fairway with 3 m/2.5m/2 m/1.5 m depth in NW-1, 2.5m/2m/1.5 m depth in NW-2 and 2 m depth in NW-3, including Vessels (dredgers, survey launches, tugs etc.) for developmental works
b)	A combination of fixed and floating terminals at strategic locations with mechanical handling facilities and access and egress by road/rail.
c)	Facilities for day and night navigation with DGPS connectivity on NW-1 to 3 and River Information Service (RIS) on NW-1.

Fairway Development



Dredging through Cutter Suction Dredger in NW-1

7.4 On NW-1 and 2 which are alluvial rivers, dredging and bandalling are to be carried out every year during post monsoon period on shallow areas (called shoals) to maintain targeted Least Available Depth (LAD). On the other hand, in NW-3 being a tidal canal with predictable tidal variation of water levels, once the desired depth is provided by capital dredging, it can be maintained for a number of years by carrying out nominal maintenance dredging. IWAI has deployed 9 Cutter Suction Dredgers (CSD), 1 Hydraulic Surface Dredger (HSD) and 1 Amphibian Dredger (AD) in NW-1, 2 CSDs, and 2 HSD in NW-2 and 4 CSDs (3 CSDs Departmental + 1CSD on contract) and 2 ADs in NW-3. With these 20 dredgers, IWAI aims to provide higher LAD in NW-1 and 2, [3 m in Haldia-Farakka, 2.5 m in Farakka-Barh, 2 m between Barh and Ghazipur for 330 days in NW-1 and 2.5 m between Dhubri and Dibrugarh in NW-2] and assured 2.0 m in entire NW-3. In NW-3, out of 205 km of total length, capital dredging has been completed resulting in availability of 2.0 m LAD in the entire length. However, widening of navigational channel in a small length of about 4 km remains to be done and is in progress now. With these assured depths, IWT on NW-1, 2 and 3 is expected to increase substantially.

Terminals



Vessel berthed at GR-1 floating jetty, Kolkata

7.5 On NW-1, IWAI has constructed low and high level jetties of permanent river terminal at Patna and GR jetty 2 area of Kolkata. Fixed terminals

also exist at Pakur and Farakka. Acquisition of land for terminal construction at Varanasi, Sahibganj and Haldia has been undertaken and work awarded for construction of fixed terminals at these places in 2016-17. On NW-2, low and high level jetties have been provided at Pandu (Guwahati). Pandu terminal has also been provided with broad gauge railway connectivity and is being developed as a multimodal transport hub for North-Eastern sector. An MoU has been signed with Central Rail side Ware House Company Ltd. for utilization of warehouse and railway connectivity at this terminal. Jogighopa is also planned to be developed as a coal handling terminal for which bank protection activity has been completed in the current year through the Water Resource Department, Govt. of Assam. At Dhubri, construction of a fixed Ro-Ro terminal has started in 2014-15 and the progress achieved is 90% by December, 2016. The project is expected to be completed by March, 2017.

7.6 On NW-3, permanent terminals have been constructed at Kottapuram, Aluva, Maradu, Cherthala, Kayamkulam, Vaikom, Trikkunnappuzha and Kollam while construction of terminal at Alappuzha is in near completion with 99% of the work completed. Two Ro-Ro jetties, constructed at Bolghatty and Willingdon islands for seamless connectivity of NW-3 with Vallarpadam Container Transshipment Terminal for container transportation are successfully under operation.



Movement of container in NW-3

7.7 Floating pontoon jetties are also available at various places on NW-1 [Haldia, Kolkata (BISN, Botanical garden), Shantipur, Swaroopganj, Hazardwari, Katwa, downstream Farakka, upstream Farakka, Rajmahal, Sahibganj, Bateswarthen, Bhagalpur, Munger, Semaria, Buxar, Ghazipur, Varanasi (Rajghat) and Allahabad] and on NW-2 [Hatsingimari, Dhubri, Jogighopa, Pandu, Tejpur, Silghat, Vishwanathghat, Neamati, Bogibil, Sengajan, Dibrugarh and Oriumghat]. These floating pontoons can be shifted at any other location depending on demand. To provide a direct link between Assam and Meghalaya avoiding circuitous route of 220 km through Jogighopa, Ro-Ro operation between Dhubri & Hatsingimari has been commenced during February, 2016. To facilitate dry docking repair in NER, a project for construction of slipway at Pandu has been sanctioned at a cost of Rs. 50.75 crore. The project is being constructed and is scheduled to be completed by December, 2018.

Navigation Aids

7.8 IWAI has provided 24 hrs. navigation aids from Haldia to Ballia (1140 km) and day navigation in entire stretch of NW-1 (Haldia-Allahabad), from Dhubri to Silghat (442 km) on NW-2 and entire 205 km in NW-3. Besides, day navigation marks are maintained in balance length of NW-1 and NW-2. To provide state-of-the art computer based navigation aids, IWAI has constructed and commissioned four Differential Global Positioning System (DGPS) stations at Swaroopganj, Bhagalpur, Patna and Varanasi on NW-1 and four DGPS stations at Dhubri, Jogighopa, Silghat and Dibrugarh on NW-2.

7.9 A state of art world class River Information Services (RIS) system in the Sagar- Farakka stretch of NW-1 has been commissioned. Projects for extension of RIS in Farakka- Patna and Patna – Varanasi stretches have also been approved and are being undertaken. The RIS would exchange the information between waterways operators

and users and also give information like, wind speed, fog conditions, danger areas, depth information route details between operators and vessel masters. This would also facilitate enhancement of inland navigation safety in ports and rivers and optimize the resource management of the waterborne transport chain which will enhance the efficiency of inland navigation. IWAI has published navigational charts, navigational atlas and developed a real time navigation software which are being used on NW-1, 2, 3 and Sunderbans waterways for safe navigation. In addition, IWAI provides river pilots on NW-1 and NW-2 on need basis.

National Waterways-4 (NW-4)

7.10 Preparations of Detailed Project Reports (DPR) for the NW-4 was completed in 2010. As the possibility of developing commercially viable stretches under PPP mode as advised by the erstwhile Planning Commission was not found feasible, efforts are now being made to develop these waterways in a phased manner with budgetary support.

7.11 To start the developmental works in NW-4 in Andhra Pradesh, detailed hydrographic survey for assessing hydro-morphological conditions of the waterway has been completed. The tender floated for dredging in the stretch of Sholingnallur to Kallapakkam stretch of South Buckingham Canal (SBC) during January, 2015, was cancelled due to the delayed response of Govt. of Tamil Nadu for land survey for making available the land required for widening, dumping of dredge material & other assistance.

7.12 To start the developmental works in NW-4 in Andhra Pradesh in phases, a Memorandum of Understanding (MoU) with Government of Andhra Pradesh was signed by IWAI on 14th April, 2016. During Phase-I, it is proposed to take up the development of 271 km stretches of Kakinada to Muktyala. The State Government of Andhra Pradesh has completed the delineation

survey and assessment of the land requirement for widening, construction of terminal etc. for developing the existing canal system for navigation on NW-4. Work orders have been issued for carrying out the dredging operation in the Harishchandrapur to Muktyala stretch of Krishna river. Action is being taken for acquisition of land for widening the canals in the Kakinada to Vijayawada stretch and for setting up of a SPV for implementation of the project.

National Waterways-5 (NW-5)

7.13 To start the developmental works in NW-5, a MoU (Memorandum of Understanding) with Government of Odisha, Paradip Port and Dhamra Port Company Ltd. was signed by IWAI on 30th June, 2014 for developing the commercially viable stretch of 332 km in two phases. During Phase-1, it is proposed to take up the development of 201 km stretches of Pankopal/ Jakodia to Paradip and Dhamra. The 131 km stretch between Talcher and Pankopal/ Jakodia and East Coast Canal stretch (Dhamra – Charbatia – Geonkhali) will be taken up in the 2nd Phase. Another MoU was signed with Paradip Port Trust on 28th September, 2016 for the development of NW-5, which includes all the Project Management Consultant (PMC) services.

7.14 Agreements have been signed with contractors for carrying out the dredging work to the tune of 23.50 lakhs Cum. in the non-tidal stretch between Erada to Padanipal. The dredging work commenced on 08.12.2015 and has made significant progress. For setting up temporary terminal facility at Erada, 6.79 acres of land has been taken on lease for a period of 7 years. Work order has also been issued for the procurement of pontoon with gang way for the terminal at Erada. With regard to the development of the tidal stretch between Padanipal and Dhamra/ Paradip, EIA & EMP study for obtaining the environment, CRZ, wild life and forest clearance has been completed. IIT Guwahati has completed the Mathematical

model study for Brahmani River Delta system and has submitted the report on 15th July, 2016.

7.15 To obtain the basic design parameters for the construction of barrages and other cross structures for development of a fairway with LAD of 2.6 m, tender for engagement of Consultant for preparation of Detailed Project Report (DPR) followed by FEED for construction of 03 (three) Weirs cum Barrage with navigational locks, 01 (one) weir cum barrage, 02 Check Dams and 01 Rubber Dam with navigational lock was published on 15.09.2016. Total 9 firms have submitted their bids and technical evaluation of the bids is in progress. Work order is likely to be issued in the month of January, 2017.

106 new National Waterways

7.16 Based on the feasibility reports and technical viability, it has been decided to undertake developemnt of 32 new NWs declared under the National Waterways Act, 2016, in the next three years. These include NW-16 (Barak), NW-68 (Mandovi), NW-111 (Zuari), NW-27 (Cumberjua), NW-40 (Ghagra), NW-37 (Gandak), NW-58 (Kosi) and NW-97 (Sundarbans).

Coal Movement on NWs

7.17 As per the Tripartite Agreement (TPA) between IWAI, NTPC and Jindal ITF, transportation of 3 MMT per annum of imported coal is taking place from Sandheads/ Kanika Sands in Bay of Bengal to Farakka super Thermal Power Plant. This is a first ever project of regular transportation of coal through Inland Waterways in the country.

Kaladan Multimodal Transit Transport Project

7.18 This project was conceptualized by the Ministry of External Affairs (MEA) to provide an alternative connectivity of Mizoram with rest of India through Kaladan River in Myanmar. The project envisages road transport from Mizoram

to Paletwa (Myanmar), thereafter from Paletwa to Sittwe (Myanmar) by IWT and from Sittwe to Haldia or any other part of India through maritime and coastal shipping. The project is piloted and funded by the MEA which appointed IWAI as their Project Development Consultant (PDC) for port and IWT component of the project. Based on IWAI's recommendation, MEA had awarded the work to the successful bidder [M/s Essar Projects (I) Ltd] for construction of port and IWT components at a cost Rs 342 crore. The construction work at Sittwe and Paletwa was started in December, 2010 and is in stage of completion. Physical and Financial progress up to December 2016 is 97% and 92 % respectively. The entire work of Phase-I is targeted to be completed by February / March, 2017.

National Inland Navigation Institute (NINI)

7.19 NINI was constructed by IWAI at Patna and has been functional from February, 2004. Induction courses for deck and engine ratings, preparatory courses for serang and engine drivers, basic and advanced dredging courses, refresher courses for hydrographic surveyors, courses for repair and maintenance of vessels, etc. are conducted in NINI regularly. So far, over 6301 candidates (till 19th, December, 2016) have been trained at NINI. A scheme for placement of NINI trained candidates on board IWAI vessels has also been implemented. An "Inland Vessel Manouvering Simulator" has been setup and commissioned in March, 2010.

7.20 The following courses are also being conducted in NINI, with the approval of DG Shipping.

- a) Elementary First Aid (EFA),
- b) Fire Prevention and Fire Fighting (FPFF),
- c) Personal Survival Technique (PST),
- d) Personal Safety and Social Responsibility (PSSR)
- e) Training of CRPF personnel

f) ECDIS course

g) BTM/ BRM Course

7.21 The administration and management of the Institute has been outsourced by IWAI to M/s ARI, New Delhi. NINI has got ISO 9001:2008 certifications during February, 2010 and the same is being renewed annually.

7.22 As per an MoU signed between IWAI and M/s ARI, a “Marine Simulator Centre” was set up at NINI on 50:50 revenue sharing basis. The first course under this initiative commenced on 15th April, 2012. This Centre has conducted following courses:

- a) Radar Observer Simulator Course (ROSC)
- b) Automatic Radar Plotting Aid (ARPA)
- c) Ship Manoeuvring Simulator (SMS)
- d) Liquid Cargo Handling Simulator (LCHS)
- e) Electronic Chart Display & Information System (ECDIS)
- f) Ship Handling Simulator (SHS)
- g) Risk Management Course (RMC)

7.23 The institute has also assisted Govt. of Bihar in drafting and adopting Boat Rules 2010 and Inland Vessels Rules. The approval process of Diploma Program in IWT from Department of Education & Training (DOET), Ministry of Human Resource Development is also in progress.

Central Sector Scheme for IWT Sector for North Eastern States

7.24 During the 10th Plan, (2002–2007) there was a Centrally Sponsored Scheme for IWT development by the States, but it was discontinued from 1-04-2007 and a new Central Sector Scheme only for NER was operationalized in the 11th Plan. Two projects, one in Mizoram and one in Assam have been completed, while two projects (one each of Tripura, Manipur, Mizoram and Assam) are in progress under this scheme.

River Cruise/ Tourism



River Cruise vessel MV Charidew in NW-2

7.25 River cruise/ tourism has been a regular feature on National Waterways 1 & 2 since the last six years. Various companies namely M/s. Heritage River Cruises Pvt. Ltd., M/s. Vivada Inland Waterways, M/s. Assam Bengal Navigation Co.; Brahmaputra Cruises, operate their cruise vessels on NW-1 and Sunderban waterways. M/s Assam-Bengal Navigation Company and M/s Far Horizons are also operating cruise vessels on NW-2. River tourism on NW-3 is already popular among domestic and foreign tourists. River cruise on NW-1, 2 and 3 has gained momentum and is likely to flourish in future.

Indo-Bangladesh Protocol on Inland Water Transit and Trade

7.26 An Inland Water Transit and Trade Protocol exists between India and Bangladesh under which inland vessels of one country can transit through the specified routes of the other country. The existing protocol routes are (i) Kolkata – Silghat-Kolkata, (ii) Kolkata – Karimganj-Kolkata, (iii) Rajshahi – Dhulian-Rajshahi and (iv) Silghat – Karimganj-Silghat. For inter-country trade, Six ports of call have been designated in each country. These are; Kolkata, Haldia, Karimganj, Dhubri, Pandu, and Silghat in India and Narayanganj, Pangaon, Khulna, Mongla, Sirajganj and Ashuganj in Bangladesh. This Protocol has been extended up to 30.06.2020 with a provision for automatic renewal. During

2015 - 2016, 16.11 lakh tonnes of cargo (fly ash) has been transported in between Kolkata/ Haldia and Bangladesh. A Standard Operating Procedure (SOP) for implementing MoU on Passenger and Cruise Services on the Coastal and Protocol route was finalized by the Govt. of India and forwarded to Bangladesh Govt. for their acceptance. During recent Shipping Secretary level meeting between Bangladesh and India held on 07th December, 2016 at Dhaka, the MoU and SOP have been discussed and firmed up with a view to sign the MoU during the forthcoming high level from Bangladesh.

Cargo Transportation by Inland Waterways

7.27 The details of cargo moved on NW-1, 2 and 3 during 2012-13, 2013-14, 2014-15 and 2015-16 are given below:

(In lakh tonne)

	2012-13	2013-14	2014-15	2015-16
National Waterway – 1	27.16	33.49	41.23	62.37
National Waterway – 2	24.26	24.75	5.19	6.02
National Waterway – 3	12.36	10.66	9.65	10.61
Total	63.78	68.90	56.07	79.00

Movement of over dimensional Cargo by IWT Mode

7.28 There had been many successful movements of Over Dimensional Cargo (ODC) on NW-1, 2 and 3 in the last three years. Considering that IWAI has upgraded IWT infrastructure on NW-1, 2 and 3 and based on interaction with various project promoters and logistic operators, it is expected that ODC movement on NWs will increase substantially in the coming years. ODC

movement on NW-2 is also likely to increase when construction of hydro electric power plants in Arunachal picks up.

Operation and Maintenance IWAI Terminals on PPP Mode

7.29 In tune with evolving economic scenario, IWAI intends to introduce private sector participation for the development of inland water transport sector in India. IWAI is planning to Equip, Operate and Manage some of its terminals through Supply/ Equip, Operate and Manage (SOM) model. This model envisages Equipping, Operating and Managing the terminals by a private terminal operator through a revenue sharing model. This modal is close to the hybrid annuity model (HAM) and is essentially a realignment of risk sharing. The identified O-D pair for the above mentioned model is the cluster of Garden Reach terminals at Kolkata and Gaighat (South bank) & Kalughat (North bank) terminals at Patna. IWAI has floated a tender for the following terminals through SOM (Supply/ Equip, Operate and Manage) mode for a period of 30 years.

- (i) GR Jetty - Kolkata
- (ii) Gaighat & Kalughat - Patna

7.30 The key commodities would be container cargo, bulk cargo and break bulk cargo especially the Nepal bound containers. There is a traffic potential both ways i.e. upstream as well as downstream. The private sector has evinced keen interest in the SOM mode for various projects for the development of National Waterways such as Mandovi & Zuari in Goa and Amba in Maharashtra. The legal, commercial and technical due diligence for developing Transaction Structure for Private participation in the development of these NWs is under process.

CHAPTER – VIII

TRANSPORT RESEARCH WING

8.1 The Transport Research Wing (TRW) renders research and data support to the Ministry of Shipping for policy planning and formulation. TRW is the nodal agency for collection, compilation and dissemination of information and data on Ports, Shipping, Ship-building & Ship-repairing industry and Inland Water Transport (IWT) at the national level. Apart from collection, compilation and publication of transport data pertaining to ports, shipping and inland waterways, it also scrutinizes and validates data received from various primary/ secondary sources for consistency and comparability. TRW is associated with review meetings on policy issues pertaining to Port and IWT Sectors.

8.2 Apart from publications, Transport Research Wing coordinates with various other organizations like Ministry of Finance,

Ministry of Commerce, NITI AAYOG, Ministry of Statistics & Programme Implementation, Central Statistical Organization, National Sample Survey Organization and State Governments etc.

8.3 The following publications have been released during the year 2016-17

- (i) Basic Port Statistics- 2014-15
- (ii) Half-Yearly update on Indian Port Sector for period ending 31st March, 2016 and 30th September 2016.

8.4 The work relating to the preparation of publications “Basic Port Statistics- 2015-16”, “Indian Shipping Statistics 2016”, “Inland Water Transport 2015-16” “Statistics of India’s Ship-building & Ship-repairing Industry 2015-16” is under progress.

CHAPTER – IX

INTERNATIONAL COOPERATION



Shri Alok Srivastava, Additional Secretary and Mr. Mohammad Saeed Nujad, Managing Director, Port and Maritime Organization, Iran signing the Chabahar Port Agreement

Cooperation with Multilateral Organizations

9.1 India became a member of the International Maritime Organization (IMO) in 1959, which is the global standard setting authority for the safety, security and environmental performance of shipping and ensures that such standards are fair and effective and are universally adopted and implemented. India has been an active participant at the IMO. In fact, participation of India in the functioning of IMO has helped India to voice its developmental concerns to the international maritime community. India has been a member of the IMO Council and has again got re-elected as Member of the IMO Council under Category 'B' representing nations with the largest interest in international seaborne trade for biennial 2016-17.

9.2 Out of 58 Conventions/ Protocols of International Maritime Organization (IMO), India has already ratified/acceded to/signed 34 Conventions/Protocols. Out of the remaining 22 Protocols/Conventions, the status is as under:

- Proposal for accession to International Convention on Civil Liability for Bunker Oil Pollution Damage 2001 was approved by the Union Cabinet on June 10, 2015 and the said Conventions will be acceded subsequent to enactment of Merchant Shipping Bill, 2016 which has been introduced in Lok Saha on 16.12.16.
- Proposal for accession to International Convention for the Control and Management of Ships' Ballast Water and Sediments, 2004 (Ballast Water

Management Convention) was approved by the Union Cabinet on April 29, 2015 and the said Conventions will be acceded subsequent to enactment of Merchant Shipping Bill, 2016 which has been introduced in Lok Saha on 16.12.16.

- Ratification of the Hong Kong Convention for Safe and Environmentally Sound Recycling of Ships 2009 is under consideration.
- Conventions related to International Labour Organization (ILO) viz. Maritime Labour Convention (MLC), 2006 and Convention on Seafarer's Identity Document [SID] have also been acceded to by India on October 9, 2015 by way of deposition of an instrument of accession to the ILO.

9.3 Apart from IMO, India has been contributing significantly to the other multilateral organizations/agreements such as Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC); India, Brazil and South Africa (IBSA); Indian Ocean Rim-Association for Regional Cooperation (IORA); International North South Transport Corridor (INSTC), etc.

9.4 India has submitted the following major papers in the Maritime Safety Committee (MSC) of IMO:-

- MSC- 96 Session: New work programme proposal to recognize IRNSS as a part of Worldwide Radio Navigation System and develop standards for receiver equipment: to recognize Indian Regional

Navigation Satellite System (IRNSS) as a future component of the World-Wide Radio navigation System (WWRNS) and develop performance standards for shipborne IRNSS receiver equipment.

- MSC- 97 Session: Proposal for development of an International Regulatory framework for 'Floating Armouries', as a new unplanned output: for institutional framework to regulate floating armouries.

Maritime Transport Cooperation Instruments/Arrangements

A. Unilateral Recognition Agreements.

9.5 For recognition of training and certificates of India Seafarers, India has unilateral agreements with St. Vincent and the Grenadines, Dominica, Georgia, Vanuatu, Liberia, Marshal Islands, Bahamas, Qatar, Barbados, Netherlands, Maldives, Isle of Man, Malta, Norway, Denmark, Ireland, Ghana, Latvia, Antigua and Barbuda, Vietnam, Belgium, Greece, Brunei, Kuwait, Japan, Belize, Jamaica, Luxemburg, Cyprus, France, Bangladesh, Mauritius, Australia, Singapore, Hong Kong and Panama.

B. Bilateral cooperation arrangements.

9.6 India has entered into cooperation instruments/arrangements with other maritime countries and regional groupings by way of Agreements or MoUsto foster growth of Indian maritime sector as well as to safeguard India's maritime interests.

9.7 A brief list and status of these cooperation arrangements is as under, namely:-

Sl. No.	Name of the Country (Year of signing)	Areas of Cooperation
1.	Egypt (02 September, 2016)	Cooperation to develop relationship in the field of International Maritime Transport on the basis of equity and mutual benefits; exchange information between the competent authorities of both the parties on maritime transport; provision of technical assistance for the development of maritime transport by promoting and encouraging the cooperation between the Maritime shipping companies of both the countries; cooperation for developing training programs in institutes of either of the countries in the fields of the marine environment and prevention of the marine pollution and Promotion of Electronic Data Interchange between the two countries with regard to vessels and ports security procedures according to ISPS code requirements.
2.	Spain (05 July, 2016)	Conduct of studies on port traffic demand between the two countries; commercial promotion of maritime transport between the two countries; promotion of the making of agreements on ports and terminals in the network of both countries; promotion of commercial exchange in the context of port activity and transport by sea; planning, management and exploitation of port infrastructures, development of intermodals and port logistics; modernization of existing ports and development of new world class ports; development of Information and Communication Technologies, establishment of one-step shops and other fields improving the simplification of processes and benefit the competitiveness of all operators of the logistics chain; cooperation in the fields of environment and green port initiative; cruise shipping, sea plane and ferry services in Major ports; and promotion of business development in the port context and of the setting up of Indian port enterprises in Spain and of Spanish port enterprises in India.
3.	India, Afghanistan and Iran (23 May, 2016)	Creation of a reliable transport corridor for the smooth transport and transit of goods and passengers through Chabahar Port among Republic of India, Islamic Republic of Afghanistan, and Islamic Republic of Iran; increasing the efficiency of the transport corridor aimed at optimizing transport costs; to attract transit of goods and passengers of other countries through the international transport and transit corridors; to facilitate access to international markets by using land, sea and/or air transportation through Chabahar port and to ensure travel safety and implement safety standards with respect to the transport and transit of goods and passengers, as well as environmental protection among Contracting Parties.
4.	Republic of Korea (13 April, 2016)	To cooperate for strengthening administrative, technical and human resources through exchanges to promote mutual benefits in the fields of port development and operation.
5.	Hashemite Kingdom of Jordan (October 11, 2015)	Cooperation between the shipping organizations and enterprises; exchange and training of staff and students; exchange of information to expedite transportation of commercial goods at sea and at ports; joint ventures in the fields of maritime transportation, shipbuilding and ship repairs, maritime training, maritime information technology including development of simulators, port facilities and related maritime activities.

Sl. No.	Name of the Country (Year of signing)	Areas of Cooperation
6.	Bangladesh (06 June, 2015)	Cooperation between the shipping companies to participate in the transportation of sea and river borne cargo to and from the ports of the contracting countries through their own or chartered vessels, contracting to RSV equivalent standards, on the basis of mutual benefits regardless of the mode of contract (FOB, C&F and CIF etc) and benefits to the shipping companies of either contracting country on port dues and other dues.
7.	Republic of Korea (May 18, 2015)	Cooperation in maritime transport and logistics, including training of seafarers; joint ventures in the fields of maritime transport and logistics; construction of logistics infrastructure linking land-based transport with maritime transport; utilization, development and management of domestic and overseas ports.
8.	Vietnam (May 24, 2013)	Cooperation between the shipping organizations and enterprises; exchange and training of staff and students; exchange of information to expedite transportation of commercial goods at sea and at ports; joint ventures in the fields of maritime transportation, shipbuilding and ship repairs, maritime training, maritime information technology including development of simulators, port facilities and related maritime activities.
9.	Austria (October 3, 2012)	Cooperation on shipping infrastructure in particular by promoting safe, efficient and cost effective shipping and ports infrastructure development as well as operation and maintenance; exchange of information concerning shipping and ports infrastructure as well as benefits from the opportunities offered in the shipping and ports infrastructure sector; expansion of plans in the shipping and ports infrastructure sector and realization of special projects in this area; recognition of the projects in the field of "Maritime Communication Solutions".
10.	Sri Lanka (January 7, 2011)	Passenger services between the ports of Tuticorin and Colombo and between Rameshwaram and Thalaimannar.
11.	The Netherlands (February 12, 2008) (Renewed on May 10, 2011 and May 11, 2014)	Research and Development; shipbuilding; innovation and sustainability; safety and security; port planning and development; simulation of cargo flows between the two countries; government policies; Ports; Maritime transport and logistics.
12.	South Africa (March 23, 2006)	Cooperation between the shipping organizations and enterprises; exchange and training of staff and students; exchange of information to expedite transportation of commercial goods at sea and at ports; joint ventures in the fields of maritime transportation, shipbuilding and ship repairs.
13.	United States of America (April 14, 2015 and April 8, 2015)	Shipping and intermodal operations; Maritime safety and security; Port Management; Dredging and Dredger construction; Ship Recycling; Maritime Training and Education; Technological Development related to Maritime sector; Inland Water Transport and other fields of mutual interest.
14.	Morocco (February 22, 2000)	Cooperation for rendering sustained mutual assistance and advice on merchant shipping and other related matters.
15.	China (November 29, 1996)	Cooperation in the field of Maritime Transport.

Sl. No.	Name of the Country (Year of signing)	Areas of Cooperation
16.	Iran (January 3, 1995)	Maritime transport and port affairs; multimodal transport for transit cargo between the ports of Iran in the Persian Gulf and Caspian Sea through the Asian countries; transit of goods to the third countries through territory of one another; shipping agents and forwarding companies; ship building and ship repair.
17.	Singapore (January 24, 1994)	Maritime Transport.
18.	Russian Federation (December 23, 1994)	Participation of vessels in the carriage of all cargoes between the ports of the two countries; elimination of obstacles that hamper the development of sea trade between the port of their countries; cooperation between the shipping companies, charterers and shippers.
19.	Federal Republic of Germany (June 15, 1966)	Maritime Transport.
20.	Denmark (February 6, 1965)	Recognition of tonnage certificates of Merchant Ships.
21.	Finland (February 20, 1963)	Recognition of tonnage certificates of Merchant Ships.
22.	Poland (June 27, 1960)	Strengthen and develop cooperation in maritime transport.
23.	Pakistan (December 14, 2006)	Protocol on Resumption of Shipping services between India and Pakistan signed on 15 January 1975 to improve direct shipping service between the two countries on the basis of sovereign equality and mutual benefit.
24.	IBSA (Trilateral agreement between India, Brazil and South Africa) (September 13, 2006)	Promote transportation of goods and passengers along the International "North-South" Transport corridor, and, access to the international market through rail, road, sea, river and air transport; assistance in increasing the volume of international transport of passenger and goods; security of travel, safety of goods as well as environmental protection according to the international standards; harmonization of transport policies as well as legal and legislative frameworks.
25.	Belgium (September 24, 1997) (Renewed on September 14, 2012) [MoU]	Maritime transportation and Port development; Promotion of each other's ports through inclusion of promotion material in port exhibitions and by continuous exchange of information/documents; Tailor-made Training programmes.

9.8 Progress has been made on various areas of cooperation with nearby countries in 2015. The status of cooperation is as under:

SRI LANKA

9.9 Ferry Service between Tuticorin and Colombo: The Ferry Service, which was started on June 13, 2011, was discontinued due to some

technical reasons. Efforts are being made to revive and bring the service back in operation.

9.10 Ferry Service between Rameswaram and Talaimannar: A dialogue is on between Sri Lankan Government and Indian Government regarding development of infrastructure in both countries to make this service operational.

9.11 Long Range Identification Tracking (LRIT) service: LRIT services are extended to Sri Lanka in terms of IMO guidelines with effect from October 8, 2014.

BANGLADESH

9.12 India-Bangladesh Shipping Service: An agreement has been entered with Bangladesh on coastal shipping through sea & inland waterways of both the countries on June 6, 2015. A Standard Operating Procedure (SOP) to actionize the said agreement has also been signed on November 15, 2015. The agreement will facilitate an easy movement of cargo from East Coast of India to North Eastern States of India and also between the two countries through River Sea Vessels (RSV).

9.13 Protocol on Inland Water Transit and Trade: In pursuance of the Trade Agreement between Government of Bangladesh and the Government of India, a Protocol on Inland Water Transit and Trade is in existence since 1972 which is renewed by the two countries from time to time. Last such extension for 5 years has been signed on June 6, 2015. Under this Protocol inland vessels of one country can transit through the specified routes of the other country. One country will provide the facilities of "Ports of Call" to the vessels of the other country engaged in inter-country trade and number of such ports of call will be equal in both countries. Accordingly, Narayanganj, Khulna, Mongla, Sirajganj and Ashuganj in Bangladesh and Kolkata, Haldia, Karimganj, Pandu and Silghat in India are identified as Ports of Call.

9.14 MoU for use of Chittagong and Mongla Ports for movement of goods to and from India. An MOU was signed between India and Bangladesh on June 6, 2015 to allow India to use Chittagong and Mongla Ports of Bangladesh for movement of goods to and from India.

SINGAPORE

9.15 A video conference was held on September 3, 2015 with the Singapore authorities to discuss modalities of the proposed Maritime Conference with three broad themes: Port Management and Operations; Cruise and Coastal Shipping; and, Ship Registration and certification. Thereafter Singapore also actively participated in the Maritime India Summit in April, 2016.

MYANMAR

India- Myanmar Direct Shipping Service

9.16 Shipping Corporation of India Limited (SCI) started the India-Myanmar Direct Shipping Service on October 2, 2014 from Chennai with necessary financial assistance from the Ministry of External Affairs.

9.17 SCI has chartered to provide the service between India and Myanmar and the vessel completed 10 voyages between India and Myanmar. Subsequently the vessel was off hired as the subsidy for running of India Myanmar Service exhausted.

9.18 In total SCI has completed 33 voyages between India and Myanmar with details as follows:-

- A subsidy of Rs. 14.33 crores for six months was granted to SCI by MEA on 28.07.2014 for smooth running of India-Myanmar Service which was used for running of India Myanmar Service from 14 October to 15 November.
- Under this subsidy SCI did 23 voyages with SCI Kamal (13 voyages) and Conmar Delta (10 voyages).

9.19 Subsequently additional subsidy of Rs. 3.75 crores was received from MEA in December, 2015.

- SCI did one voyage using MV Lal Bahadur Shastri in the month of February 2016 and subsequently in chartered SSL Trust.

- SSL Trust completed 10 voyages and was off hired as the subsidy for running India Myanmar service got exhausted.

9.20 On the 33 voyages completed by SCI between India and Myanmar SCI carried approx 8500 TEUs from Indian Subcontinent to Yangon and 8200 TEUs from Myanmar to India Subcontinent thus totalling approx 16700 TEUs on India-Myanmar Service.

Trilateral Cooperation arrangements

9.21 A trilateral cooperation framework is under progress between India, Sri Lanka and the Maldives to finalize an Agreement for Trilateral Cooperation between India, Sri Lanka and the Maldives on maritime security for information exchange to enhance Maritime Domain Awareness, training, pollution control, joint exercises and capacity building. Director General of Shipping has extended the Long Range Identification and Tracking (LRIT) facility to Sri Lanka and is in communication with Maldives to offer the same facility within the guidelines of IMO and International Maritime Satellite Organization (IMSO).

Activities undertaken during Maritime India Summit (MIS, 2016)

9.22 A MoU between the Ministry of Shipping of the Republic of India and the Ministry of Oceans and Fisheries of the Republic of Korea in Port Related Industry was signed on April 13, 2016 on the sidelines of Maritime India Summit (MIS, 2016).

9.23 1st meeting of the Joint Maritime Liaison Committee between India and Vietnam held on April 15, 2016 on the sidelines of MIS, 2016. The following issues were discussed during the meeting:-

- Explore possibilities of opening direct Sea routes between India and Vietnam and starting direct containerization.
- Close liaison with Indian Shipping companies for promotion of trade between the two countries
- Extension of ship repair facility to Vietnamese vessels by Cochin Shipyard Limited

9.24 Bilateral meetings held with the following countries on the sidelines of MIS, 2016 for Maritime Cooperation-

- a) Republic of Korea
- b) Maldives
- c) Bangladesh
- d) South Africa
- e) Mauritius
- f) Colombo
- g) Norway
- h) Indonesia
- i) China

JWG Meetings held during the 2016- 17

9.25 1st meeting of the Joint Working Group (JWG) on Shipbuilding between India and Republic of Korea held on June 17, 2016.

9.26 5th meeting of JWG Maritime between India and Norway held on October 14, 2016 through video conferencing.

9.27 1st meeting of the Joint Maritime Liaison Committee between India and Vietnam held on April 15, 2016.

CHAPTER – X

ADMINISTRATION AND FINANCE**ADMINISTRATION**

10.1 Administration Wing of the Ministry of Shipping is headed by Joint Secretary (Administration) who is assisted by Chartering Officer (Administration), Under Secretary (Administration) supervising the work of Establishment Sections, General Administration Section and Cash Section. The Establishment Section is entrusted with the service and administrative matter of 270 regular employees of (Group A, B, and C) of the Ministry. This includes the management of the various Cadres such as Central Secretariat Service (CSS), Central Secretariat Stenographers Service (CSSS), Central Secretariat Clerical Service (CSCS), Development Wing and Chartering Wing. Establishment Section implements all administrative orders issued by Department of Personnel Training, Department of Pension & Pensioners' Welfare, Ministry of Finance, Union Public Service Commission, Central Information Commission, Central Vigilance Commission etc.

10.2 Special efforts have been made by the Ministry to ensure compliance of the orders issued from time to time from reservation for SC/ ST/ OBC to filling up vacant posts in Chartering Wing and Development Wing of this Ministry. Information with regard to the total number of Government Servants, separately for Secretariat and Non – Secretariat side (Group wise) and representation of SC/ ST employees in the Ministry is given in **Annexure – II**.

Welfare

10.3 In the Ministry of Shipping various welfare measures in respect of employees including welfare of women employees of the Ministry were undertaken. There is complaint Committee on sexual harassment to look after

the grievances of women employees relating to sexual/ Gender based harassment. Further, as part of the welfare measure for employees in the Ministry, a new initiative has been started to greet the employees on their birthday by giving a card, flower and a token gift, so as to keep their morale and motivation high.

10.4 To oversee the implementation of the Prohibition of Smoking in Public Places' Rules, 2008 in the Central Govt. Offices/ Buildings, the Ministry of shipping has constituted a Committee for surprise checking in the Ministry. The Ministry of Shipping is one of the few Ministries which has successfully completed online APARs of IAS officers through SPARROW. The Biometric Attendance System has also been implemented in this Ministry.

10.5 Important Days of national importance viz. Anti – Terrorism Day, Communal Harmony Day, Sadbhavana Diwas, Swachhta Diwas, Constitution Day, Vigilance Awareness Week, Red Cross Day, Red Cross Raffle Draw, etc. were observed and "Pledge" taken by the employees of the Ministry of Shipping. Contributions were also raised and collected towards "Flag Day". The essay competitions both in Hindi and English were conducted during Harmony Communal Week / Vigilance Awareness Week. The Participants are rewarded for participating in these events.

E-Office

10.6 E-Office software has been developed by NIC for all the officers and their supporting staff in the Ministry and e-office is presently operational. The Ministry is working in e-filing system under e-Office Module and has completely switched over to e-filing w.e.f. 1st January, 2017.



Plantation by Shri Mansukh L. Mandaviya, Hon'ble Minister of State

Website

10.7 Website (<http://shipmin.nic.in>) of the Ministry is operational. The website has been redesigned and is updated from time to time.

10.7 Right to Information Act

- Detailed information relating to obligations listed in Section 4 of the RTI (Publications of Manuals) has been uploaded / hosted in the websites of the concerned organizations.
- For the implementation of the RTI Act, Ministry of Shipping has exclusively created a new cell and an Information and Facilitation Counter (IFC) at the Reception for the convenience of the public who come personally.
- In the Ministry of Shipping (Main Sectt.), we have appointed/designated 26 CPIOs and 16 Appellate Authorities based on the Divisions, who are in the rank of US, Deputy Secretary and Director and equivalent respectively. Notifications/ Orders indicating the appointment of CPIOs/ Appellate Authorities under the Act have been published and uploaded / hosted on the website of the Ministry of Shipping i.e. www.shipping.nic.in.
- Whenever a request is received from the public/citizen by the CPIO/IFC, the same is passed/transferred to the RTI Cell, where after the application is registered after ensuring that fee has been deposited, thereafter the request is sent to the concerned CPIOs/Appellate Authorities to provide online information to the public as well as disposal of First Appeal and the monthly statement is sent to DoP&T.
- Copies of the RTI Act and circulars received

from DOPT on RTI are being circulated promptly to all the organizations for compliance.

- Useful guidance material/guidelines are also being supplied to CPIOs/ Appellate Authorities.
- An internal procedure has been established and circulated to all the concerned CPIOs/ Appellate Authorities and all Sections for guidance, while dealing with the requests/ appeals from public seeking information.
- All the useful records are duly maintained.
- During the above period a total of 698 applications and 160 appeals were received either directly or by transfer and handled satisfactorily.

DEPARTMENTAL ACCOUNTING ORGANIZATION

10.8 The Accounts and Budget wings of the Ministry of Shipping are functioning under the Pr. Chief Controller of Accounts. The office of the Pr. Chief Controller of Accounts is inter-alia responsible for making all authorized payments of the Ministry, Compilation of Monthly and Annual Accounts, Conduct of internal audit of all the units under the Ministry to ensure compliance of the prescribed Rules, Rendering Technical advice to the Ministry on Financial and accounting Matters, cash management and coordination with the Controller General of Accounts, C&AG, Finance Ministry and other related agencies.

10.9 The Pr. Chief controller of Accounts organization comprises of Pr. Chief Controller of Accounts, one Controller of Accounts, one Deputy Controller of Accounts, Six Pay & Accounts Officers located as 3 in Delhi, 1 in Kolkata, 1 in Mumbai and 1 in Noida. The Budget Section consists of one Under Secretary (Budget).

10.10 The Pr. Chief Controller of Accounts office is primarily responsible for the following major tasks:-

Payments

- Making Sanctioned Payments on behalf of the Ministry after conducting pre-check of bills as per approved Budget.
- Release of authorization to other Ministries to incur the expenditure on behalf of the Department.

Receipts

- Budgeting, accounting and reconciliation of the receipts of Ministry of Shipping.
- Monitoring the repayment of loans and interest thereof received from State Governments and other PSU's. The payment on account of Grants-in-Aid, Loan, Subsidy and equity to Public Sector Undertakings, Port Trusts and International Maritime Organization.

Submission of Accounts and Reports

- Preparation of monthly accounts, Finance Accounts Annual Appropriation Accounts, and Statements of Central Transactions and their submission to the Controller General of Accounts, Ministry of Finance, Department of Expenditure, Government of India.
- Monitoring of Internal Extra Budget Resources (IEBR) and its submission to office of the CGA.
- Monitoring and submission of mandatory information as per Fiscal Responsibility and Budget Management (FRBM) Act and Rules.
- Preparation of Management Information Reports based on accounting, budget & audit data for submission to various authorities.
- Preparation of financial statistics on monthly basis regarding receipts and expenditure for upload on Ministry's website.

Budget

- Preparation and submission of Annual Budget Estimates and Revised Estimates, re-appropriation of funds of the Department of Shipping, Ministry of Shipping, Road Transport and Highways. Coordination with Ministry of Finance and other Departments in all the budget matters.
- Monitoring/disposal of all the Audit Paras and Observations made by the C&AG of India (civil and commercial) and coordination with Monitoring Cell of the Department of Expenditure, M/o Finance for the 'Action Taken Note'.

Internal Audit

- The Internal Audit Wing in the Pr. CCA organization of Ministry of Shipping has been established as an effective tool for identifying the systematic errors/lapses in the functioning of various departments in the Ministry and advising the management for necessary action/rectification. This has proved to be as immense management tool to bring about objectivity and financial property in day to day functioning and by bringing greater sensitivity for financial prudence.
- The Officers of the Internal Audit Wing as well as offices posted in other section have been imparted various trainings related to Internal Audit in the past. This year three AAOs have been imparted training in Risk Bases Audit.
- Consequent upon the effective utilization of Internal Audit mechanism during the past few years by the PrCCA's organization, there has been a significant improvement in maintenance of Accounts in all offices of the Ministry of Shipping.
- Audit paras which involve major irregularities/deficiencies are brought to the notice of Head of Departments and

matter perused for settlement on paras and review meeting are also arranged by Pr. CCA office to take stock of the outstanding paras.

IMPORTANT AUDIT OBSERVATION

10.11 The summary of important audit observations, appearing in the following most recent Audit reports of the year ended March, 2015 is at **Annexure-III**.

COMPUTERISATION OF ACCOUNTS:

10.12 With a view to eliminate the delay in compilation of Accounts and to provide the information on expenditure accounts, on timely, accurate basis, the office of Pr. Chief Controller of Accounts at present is implementing various software packages like COMPACT, E-Lekha, PFMS and GePG etc.

COMPACT

10.13 Comprehensive software package for Expenditure Accounts covering major accounting functions i.e. pre-check, GPF, Budget, Pension and Compilation.

E-Lekha

10.14 A web based application for generating daily/monthly MIS of Accounting information. All the PAOs are uploading data daily on E-lekha. Pr. Account office is submitting the monthly account through E-lekha.

PFMS

10.15 In 2008-09 Hon'ble Finance Minister announced the establishment of Central Plan Schemes Monitoring System (CPSMS), which is now known as Public Financial Management System (PFMS), to provide comprehensive Decision Support and Management Information to various Scheme managers responsible for administering Plan Schemes. Since then the scope of PFMS has been enlarged to cover direct payment to beneficiaries both under selected

Plan and non-Plan Schemes. Today several Scheme managers are using CPSMS to directly credit the bank accounts of implementing agencies and beneficiaries.

10.16 PFMS has operationalized an active interface with 90 banks (26 Public Sector Banks, 59 Regional Rural Banks and 5 major Private Sector Banks) to provide immediate validation of bank accounts, prompt electronic credit to the beneficiary's bank account and bank reconciled expenditure statements to the implementing agencies with 139 Centrally Sponsored Schemes (CSS) and more than 800 Central Sector Schemes (CSS), along with State Plans and Additional Central Assistance (ACA), the CPSMS is managing funds in excess of Rs.3,00,000 crore annually. The system is geared for fund management and e-payments for Plan/non-Plan Schemes of the Government of India and report utilization under these schemes at different levels of implementation on a real time basis.

GE PG

10.17 The Government e-Payment Gateway (GePG) is envisaged to provide a payment gateway for the Civil Ministries and departments with the specific objective of leveraging the existing IT capabilities of the Core Banking Systems and application software functionalities of the CGA's organization towards the development of an integrated payment and accounting system for all levels of usage with seamless interface and data communication. This would result in the elimination of physical cheque processing system and traditional issues associated with it, which would ensure major cost savings for the department by greatly enhancing the overall payment processing efficiency; Online reverse file (payment scroll) giving MIS on unique e-Authorization ID for all e-payment fund transfers; Online auto-reconciliation to facilitate major savings in time and efforts and speed up the compilation of accounting processes; and ensuring a secure single point data capture of

transaction data thereby eliminating duplication of work and data inconsistency.

GRANT NO. 80 – MINISTRY OF SHIPPING.

10.18 The position of savings/excess in respect of above mentioned Grant No. 80 for the year 2016-17 and actual expenditure for the year 2016-17 (upto 31st December, 2016) has been reflected in **Annexure-IV**. The Head-wise Details of Receipts as per the Statement of Central Transaction (SCT) for the last three years have been reflected in **Annexure-V**. Head wise details of expenditure for 2014-15 to 2016-17 (upto 31st December, 2016) is given in **Annexure-VI**. Profile of actual Expenditure in 2016-17 (upto 31st December, 2016) is at **Annexure-VII**.

10.19 The Ministry of Shipping is maintaining two funds viz. Depreciation Reserve Fund and General Reserve Fund for providing certain services required to develop transportation facilities in the country. Details are at **Annexure-VIII**.

VIGILANCE

10.20 The Vigilance Wing of the Ministry coordinates and supervises the vigilance activities within the Ministry as well as the PSUs and autonomous bodies under its administrative control. The Wing is headed by the Chief Vigilance Officer (CVO) of the rank of Joint Secretary appointed with the approval of Chief Vigilance Commission.

10.21 There are 27 attached/subordinate/PSU/autonomous bodies under the Ministry and each organization has either a part-time or full-time CVO. The part-time CVOs are appointed from amongst the officers of the concerned organization in consultation/concurrence with the CVC. The full-time posts of CVOs, wherever such posts exist, are filled-up by officers of organized services through DoP&T.

10.22 The emphasis has been laid on the role of preventive vigilance by taking prompt administrative actions and ensuring transparency including simplification of procedures and use of e-technology etc. Special emphasis was laid on the strengthening of vigilance machinery in various organizations under the Ministry of Shipping particularly the Port Trusts. Punitive action has been taken wherever required in consultation with CVC against the delinquent officials.

10.23 As a result of active monitoring and follow-up, a large number of cases were finalized

during the year.

10.24 During the Vigilance Awareness Week, a pledge was administered to the staff and officers of the Ministry. The banners, posters were displayed at the prime locations of the building and Notice Board of the Ministry.

10.25 Vigilance activities in various organizations under this Ministry are being reviewed periodically through their reports/returns and also through interactions with CVOs/ Head of the Organizations.



Cricket team members of the Ministry with Chairman Goa Port Trust at Goa

CHAPTER – XI

USE OF OFFICIAL LANGUAGE

11.1 Keeping in view the Annual Programme issued by the Department of Official Language, Ministry of Home affairs, for implementation of the Official Language Policy of the Government, Ministry of Shipping continued its efforts towards greater use of Hindi in official work during 2016-2017. The work pertaining to the progressive use of Hindi in the Ministry is under the administrative control of Adviser (Economics), assisted by Joint Director (OL). The Hindi Section consists of one Assistant Director (OL), two Senior Translators, one Junior Translator and two Stenographers. Hindi Section helps in the implementation of official language (Hindi) policy in the Ministry as well as in all subordinate and attached offices under its administrative control.

Implementation of Section 3(3) of the Official Language Act 1963

11.2 In pursuance of the Official Language Policy of the Govt. of India, all documents covered under section 3(3) of the Official Language Act, 1963 are being issued both in English and Hindi.

11.3 Efforts are also being made to reply the letters in Hindi which are received in English from region 'A' & 'B'.

Official Language Implementation Committee (OLIC)

11.4 There is an Official Language Implementation Committee (OLIC) under the Chairmanship of Adviser (Economics) in the Ministry. This Committee regularly reviews the progress made in the use of Hindi in the Ministry. It gives appropriate suggestions and recommends measures to be taken for the effective implementation of the Official Language Policy. Three meetings of the Committee have been held so far in 2016-17.

Inspections to promote use of Hindi

11.5 In pursuance of Official Language Policy in the Ministries/Departments and their Attached/Subordinate Offices etc. of Central Government, Directorate of Light Houses and Light Ships (Cochin), Agatti Light House, Inland Waterways Authority of India, Paradip Port Trust, V.O. Chidambaranar Port Trust, Chennai Port Trust, Shipping Corporation of India, Jawaharlal Nehru Port Trust and Directorate General of Shipping were inspected in the year 2016-17.

Organisation of Hindi Pakhwara (fortnight) and Hindi workshop

11.6 In order to encourage the use of Hindi in official work 'Hindi Pakhwara' was organized in the Ministry from 01-09-2016 to 15-09-2016. During Hindi Pakhwara various competitions were held. Two workshops were also conducted during this period. Prizes were awarded by Hon'ble Minister of Shipping and Additional Secretary to the winners of competitions held during Hindi Pakhwada.

Incentive Schemes

11.7 Under this scheme of Department of Official Language, officers / employees of all categories who write at least twenty thousand words in Hindi in a year in region 'A' and 'B' and ten thousand words in Region 'C' are eligible to participate in the Scheme. Under this Scheme, First, Second and Third prizes are given. Details of the Scheme have been circulated.

In-House Magazine "Nautarni"

11.8 A book named "Hong Kong Samjhouta, 2009 Pot Parichakran Nidhi, Ek Protsahen Yojana" won a prize under the original book writing scheme of the Ministry is under the process of being published as a special edition

of the Ministry's in-house Hindi magazine "Nautarni". Articles are invited for the next issue of the magazine.

Book writing award scheme

11.9 "Award Scheme for the books written on the subjects relating to Indian Ports and Shipping originally in Hindi" and "Award Scheme for book translated from other languages in Hindi on the subject relating to Indian Ports and Shipping" has been instituted. The advertisement of the scheme published in the leading newspapers in all four region of the country and the same has

been uploaded on the website of the Ministry.

Hindi Salahakar Samiti

11.10 With a view to render advice for effective implementation of the Official Language Policy of the Government, the Hindi Salahkar Samiti (Advisory Committee) of the Ministry of Shipping has been reconstituted after the constitution of the 16th Lok Sabha and proposal for seeking date of the second meeting of the committee has been submitted before Hon'ble Minister of Shipping.

MINISTRY OF SHIPPING

I. THE FOLLOWING SUBJECTS WHICH FALL WITHIN LIST 1 OF THE SEVENTH SCHEDULE TO THE CONSTITUTION OF INDIA

1. Maritime shipping and navigation; provision of education and training for the mercantile marine.
2. Lighthouses and lightships.
3. Administration of the Indian Ports Act, 1908, (15 of 1908) and the Major Port Trusts Act, 1963 (38 of 1963) and ports declared as major ports.
4. Shipping and navigation including carriage of passengers and goods on inland waterways declared by Parliament by law to be national waterways as regards mechanically propelled vessels, the rule of the road on such waterways.
5. Ship-building and ship-repair industry.
- 5A. Ship breaking.
6. Fishing vessels industry.
7. Floating craft industry.

II. IN RESPECT OF THE UNION TERRITORIES

8. Inland waterways and traffic thereon.

III. IN RESPECT OF THE UNION TERRITORIES OF THE ANDAMAN AND NICOBAR ISLANDS AND THE LAKSHADWEEP:

9. Organisation and maintenance of mainland islands and inter-island shipping services.

IV. OTHER SUBJECTS WHICH HAVE NOT BEEN INCLUDED UNDER THE PREVIOUS PARTS:

10. Legislation relating to shipping and navigation on inland waterways as regards mechanically propelled vessels and the carriage of passengers and goods on inland waterways.
11. Legislation relating to and coordination of the development of minor and major ports.
12. Administration of the Dock Workers (Regulation of Employment) Act, 1948 (9 of 1948) and the Schemes framed thereunder other than the Dock Workers (Safety, Health and Welfare) Scheme, 1961.
13. To make shipping arrangements for and on behalf of the Government of India/Public Sector Undertakings/State Governments/State Government Public Sector Undertakings and autonomous bodies in respect of import of cargo on Free on Board/Free along Side and export on Cost and Freight/Cost Insurance and Freight basis.
14. Planning of Inland Water Transport.
15. Formulation of the privatisation policy in the infrastructure areas of ports, shipping and inland waterways.
16. The Development of township of Gandhidham.
17. Prevention and control of pollution:
 - (a) Prevention and control of pollution arising from ships, shipwrecks and abandoned ships in the sea, including the port areas;

- (b) Enactment and administration of legislation related to prevention, control and combating of pollution arising from ships; and
- (c) Monitoring and combating of oil pollution in the port areas.

V. SUBORDINATE OFFICES:

- 18. Directorate General of Shipping.
- 19. Andaman Lakshadweep Harbour Works.
- 20. Directorate General of Lighthouses and Lightships.
- 21. Minor Ports Survey Organisation.

VI. AUTONOMOUS BODIES:

- 22. Tariff Authority for Major Ports (TAMP).
- 23. Port Trusts at Mumbai, Kolkata, Kochi, Kandla, Chennai, Mormugao, JawaharLal Nehru(NhavaSheva),Paradip, Tuticorin, Visakhapatnam and New Mangalore.
- 24. Dock Labour Boards at Kolkata
- 25. Inland Waterways Authority of India.
- 26. Seamen's Provident Fund Organisation.
- 27. Seafarers Welfare Fund Society
- 28. Indian Maritime University
- 29. National Shipping Board

VII. ASSOCIATIONS:

- 30. Indian Ports Association

VIII. PUBLIC SECTOR UNDERTAKINGS:

- 31. Shipping Corporation of India.
- 32. Cochin Shipyard Limited.
- 33. Central Inland Water Transport Corporation Limited.
- 34. Dredging Corporation of India.
- 35. Hooghly Dock and Ports Engineers Limited.
- 36. Kamarajar Port Limited.
- 37. Sethusamudram Corporation limited

IX. INTERNATIONAL ASPECTS:

- 38. International Maritime Organisation.

X. ACTS:

- 39. The Indian Ports Act, 1908 (15 of 1908).
- 40. The Inland Vessels Act, 1917 (1 of 1917).
- 41. The Dock Workers (Regulation of Employment) Act, 1948 (9 of 1948).
- 42. The Merchant Shipping Act, 1958 (44 of 1958).
- 43. The Major Port Trusts Act, 1963 (38 of 1963).
- 44. The Seamen's Provident Fund Act, 1966 (4 of 1966).
- 45. The Inland Waterways Authority of India Act, 1985 (82 of 1985).
- 46. The Multimodal Transportation of Goods Act, 1993 (28 of 1993).

Annexure II
(Para 10.2)**TOTAL NO. OF EMPLOYEES IN THE MINISTRY OF SHIPPING (MAIN SECTT) AND NUMBER OF SCHEDULED CASTES, SCHEDULED TRIBES AND O.B.C. (SECRETARIAT SIDE).**

S. No.	Class	Sanctioned strength	Total No. of employees in position	No. of SC employees	% to total employees	No. of ST employees	% to total employees	No. of OBC employees	% to total employees
1	2	3	4	5	6	7	8	9	10
1.	Group 'A'	43	42	02	4.65	02	4.65	03	6.97
2.	Group 'B' (Gaz)	50	27	04	8	05	10	07	14
3.	Group 'B' (Non-Gaz)	87	72	16	18.39	03	3.44	07	8.04
4.	Group 'C' (including Peon, Daftary, Safaiwala/ Frash)	82	59	11	13.41	04	4.87	0	--

TOTAL NO. OF EMPLOYEES IN THE MINISTRY OF SHIPPING AND NUMBER OF SCHEDULED CASTES, SCHEDULED TRIBES AND O.B.C. (NON - SECRETARIAT SIDE).

S. No.	Class	Sanctioned strength	Total No. of employees in position	No. of SC employees	% to total employees	No. of ST employees	% to total employees	No. of OBC employees	% to total employees
1	2	3	4	5	6	7	8	9	10
1.	Group 'A'	14	9	01	7.14	-	-	-	-
2.	Group 'B' (Gaz)	06	02	-	-	-	-	1	--
3.	Group 'B' (Non-Gaz)	04	03	-	-	--	--	--	
4.	Group 'C'	-	-	-	-	-	-	-	-
5.	Group 'D' (including Safaiwala/ Frash)	-	-	-	-	-	-	-	-

**Annexure-III
(Para 10.11)**

IMPORTANT AUDIT OBSERVATIONS

The summary of important audit observations, appearing in the following most recent Audit reports for the year ended March, 2015 are given below:

1. Report No.11 of 2016 Union Government (Civil), Compliance Audit Observations

- (i) V.O. Chidambaranar Port Trust (VOCPT) incurred an injudicious expenditure of Rs. 15.17 crore on repairing of an outlived tug which after unsatisfactory performance was disposed for Rs. 62.57 lakh.

2. Report No.15 of 2016 (Volume II) Union Government (Commercial), Compliance Audit Observations

Review of status of utilization of infrastructure facilities:

- (i) National Waterway-1
 - (a) Under utilization of

Infrastructure created at Gaighat Patna

- (b) Non optimal utilization of the GR Jetty II constructed at Kolkata due to consideration of unrealistic projections

(ii) National Waterway-2

- (a) Underutilization of Low and High Level Jetties at Pandu
- (b) Underutilization of Broad Gauge (BG) Railway siding and alternate road at Pandu terminal

(iii) National Waterway-3

- (a) Underutilization of infrastructure created at NW-3

The infrastructure created at National Waterways 1, 2 and 3 at a cost of Rs. 284.20 crore remained underutilized.

Annexure-IV
(Para 10.18)**GRANT OF THE MINISTRY OF SHIPPING**
FOR THE FINANCIAL YEAR 2016-2017 (upto 31/12/2016)

(Rs in crores)

Grant No. & Name		Original	Supplementary	Total Budget	Actual Expenditure	Saving
Grant No. 80	Revenue Account	1479.15	0.00	1479.15	1016.69	NA
	Capital Account	361.35	0.00	361.35	235.98	
Total		1840.50	0.00	1840.50	1252.67	

Source: Appropriation Accounts

Annexure-V
(Para 10.18)HEADWISE DETAILS OF RECEIPTS AS PER THE STATEMENT OF
CENTRAL TRANSACTION (SCT) FOR THE LAST THREE YEARS

(Rs In Crores)

REVENUE RECEIPTS

Sl. No.	MAJOR HEAD	2014-15	2015-16	2016-17 (upto 31.12.2016)
1.	0021-Taxes on Income other than Corporation Tax	9.21	10.52	9.86
2.	0045-Other Taxes & Duties on Commodities & Services	5.57	9.53	3.19
3.	0049- Interest Receipts	21.20	14.95	9.26
4.	0050-Dividends & Profits	87.59	117.23	132.84
5.	0070-Other Administrative Services	0.00	0.00	0.04
6.	0071-Contribution & Recoveries towards Pension & Other Retirements Benefits	8.05	9.02	9.18
7.	0075-Miscellaneous General Services	0.00	0.00	0.00
8.	0210-Medical & Public Health	0.20	0.20	0.18
9.	0216-Housing	0.27	0.28	0.24
10.	1051-Ports and Light Houses	222.28	281.86	216.64
11.	1052-Shipping	82.61	107.19	103.08
12.	1056-Inland Water Transport	8.02	9.14	12.49
13.	1475 - Other General Economic Services	0.32	0.02	0.00
A	REVENUE RECEIPTS *	445.32	560.04	497.00

CAPITAL RECEIPTS

	MAJOR HEAD	2014-15	2015-16	2016-17 (upto 31.12.2016)
1.	4000- Miscellaneous Capital Receipts	0.00	0.00	0.00
2.	6858- Loans for Engineering Indst.	11.70	0.00	0.00
3.	7051- Loans for Port & Light Houses	50.00	2.89	15.54
4.	7056-Loans for Inland Water Transport	0.00	0.00	0.00
5.	7601-Loans & Advances to State Govt.	0.00	0.00	0.00
6.	7610- Loans to Govt. Servants	0.25	0.32	0.27
	CAPITAL RECEIPTS **	61.95	3.21	15.81

Annexure-VI
(Para 10.18)

Ministry of Shipping
HEADWISE DETAILS OF EXPENDITURE FOR THE LAST THREE YEARS i.e. FROM
2014-15 TO 2016-17 (upto 31/12/2016)

(Rs. in Crores)

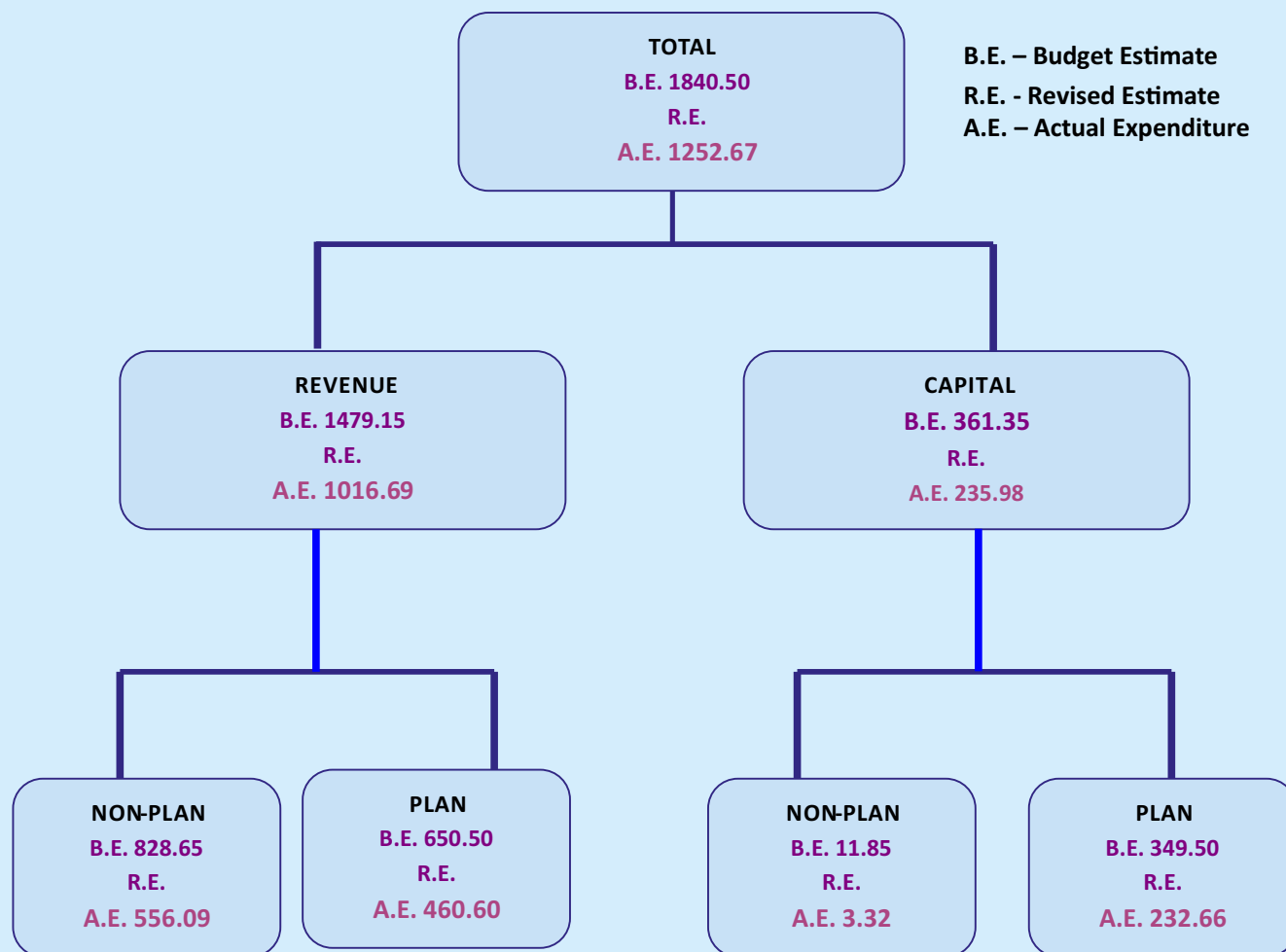
PARTICULARS	2014-15			2015-16			2016-17 (Upto31/12/2016)		
	Plan	N.Plan	Total	Plan	N.PLAN	Total	Plan	N.PLAN	Total
REVENUE EXPENDITURE									
2049-Interest Payment	--	16.64	16.64		7.55	7.55		0.16	0.16
2071-Pension Payment	--	16.99	16.99		17.60	17.60		14.53	14.53
2235-Social, Security & Welfare	--	0.07	0.07		0.03	0.03		0.05	0.05
2852-Industries	0.99	54.44	55.43	4.68	125.90	130.58	1.92	19.00	20.92
3051-Ports&Lighthouses (Gr. No.88)	11.28	632.89	644.17	148.85	553.51	719.25	184.39	335.83	520.22
3051-Ports&Lighthouses (Gr. No.98)	0.49	91.42	91.99	0	14.89		0	0	0
3051-Port&Lighthouses (Gr. No.94)	111.80	72.54	184.34	0	2.00		0	1.17	1.17
3052-Shipping	--	29.09	29.09	75.79	100.63	176.42	35.94	95.67	131.61
3056-Inland Water Transport	1.06	--	1.06	295.52	26.95	322.47	239.51	49.71	289.22
3451-Economic Services	--	--	--	0	42.66	42.66	0	55.88	55.88
3601-Grant-in-aid to State Government	--	--	--	3.20	0	3.20	-1.16	0	-1.16
TOTAL (Revenue Exp.)	125.62	914.08	1039.78	528.03	884.19	1412.22	460.60	572.00	1032.60
CAPITAL EXPENDITURE									
4405-Capital outlay on fisheries	4.50	--	4.50	12.60	0	12.60	0	0	0
4406-Capital outlay on forestry & wildlife	--	--	--	--	--	--	0	0	0
4801-Capital outlay on Power Proj	--	--	--	1.70	0	1.70	0	0	0
5051- Capital outlay on Ports & Lighthouses (Gr.No.89)	290.90	-78.04	212.87	272.53	-82.78	189.75	226.01	1.32	227.33
5051- Capital outlay on Ports & Lighthouses (Gr.No.98)	0.30	--	0.30	26.33	0	26.33	0	0	0
5052-Capital outlay on Shipping (Gr.No.88)	--	--	--	0.35	0	0.35	4.19	0	4.19

5052-Capital outlay on Shipping (Gr.No.98)	3.27	--	3.27	3.55	0	3.55	0	0	0
5053-Capital Outlay on Civil Aviation	--	--	--	--	--	--	0	0	0
5075-Other Transport Services	3.02	--	3.02	2.73	--	2.73	2.46	0	2.46
5452-Capital outlay on tourism (Gr.No.98)	0.05	--	0.05	1.01	--	1.01	0	0	0
6858-Loans for Engineering Industries	--	11.70	11.70	--	11.33	11.33	0	2.00	2.00
7051-Loans for Ports & Light Houses	50.00	--	50.00	13.58	--	13.58	0	0	0
7610-Loans to Govt. servants	--	0.25	0.25	--	0.20	0.20	0	0	0
TOTAL (Capital Exp.)	352.04	-66.09	285.95	334.39	-71.26	263.13	232.66	3.32	235.98
Grand Total (Rev.+Cap.)	477.66	847.99	1325.73	862.42	812.93	1675.35	693.26	575.32	1268.58

Annexure-VII
(Para 10.18)

PROFILE OF ACTUAL EXPENDITURE IN 2016-17 (upto 31/12/2016)

(Rs. in crore)



Source:- Consolidated Classified Abstract

Annexure-VIII
(Para 10.19)

MINISTRY OF SHIPPING

DEPRECIATION RESERVE FUND (8115)	Rs in crore
Opening Balance as on 01.04.2016	218.43
Receipt during Apr-December 2016	19.00
Payment during Apr-December 2016	0
Closing Balance as on 31.12.2016	237.43
GENERAL RESERVE FUND (8121)	
Opening Balance as on 01.04.2016	623.69
Receipt during Apr-December 2016	50.00
Payment during Apr-December 2016	0
Closing Balance as on 31.12.2016	673.69

Source : Classified Consolidated abstract Account

Tug Boats





**GOVERNMENT OF INDIA
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