भारत के पत्तन क्षेत्र का अदयतन

UPDATE ON INDIAN PORT SECTOR

(30.09.2017)

परिवहन अनुसंधान प्रभाग

TRANSPORT RESEARCH WING

पोत परिवहन मंत्रालय

MINISTRY OF SHIPPING

भारत सरकार

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PREFACE

The Transport Research Wing in the Ministry of Shipping has been bringing out regularly the biannual publication ***"Update on Indian Port Sector"***. The present issue with data upto September, 2017 is thirtieth in the series of this publication. The last issue contained data up to March, 2017.

The current issue of this publication includes the information on the performance of Major and Non-Major Ports for the period upto the end of September, 2017. The list of private sector/captive/joint sector port projects under implementation/consideration at Major Ports and Non-Major Ports have also been included. The cooperation extended by the concerned source authorities is gratefully acknowledged.

Gopal Krishna

New Delhi
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PORT-LED PROSPERITY

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UPDATE ON INDIAN PORT SECTOR

(UP TO 30.09.2017)

C O N T E N T S

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1. RECENT TRENDS IN CARGO TRAFFIC AND POLICY INITIATIVES

1.1 INDIA AND WORLD ECONOMY

1.1.1 The global upswing in economic activity is strengthening. Global growth, which was 3.2% in 2016 and is projected to rise to 3.6 percent in 2017 and to 3.7 percent in 2018. The global pickup in activity that started in the second half of 2016 gained further momentum in the first half of 2017. Growth is projected to rise over this year and next in emerging market and developing economies, supported by improved external factors—a benign global financial environment and a recovery in advanced economies (International Monetary Fund, October, 2017) .

However, the recovery is not complete: although the baseline outlook is better, growth remains weak in many countries. The outlook for advanced economies has improved, notably for the euro area, but in many countries inflation remains weak, indicating that slack has yet to be eliminated, and prospects for growth in GDP per capita are held back by weak productivity growth and rising old-age dependency ratios. Prospects for many emerging market and developing economies in sub-Saharan Africa, the Middle East, and Latin America are lackluster, with several experiencing stagnant per capita incomes.

Growth in China and other parts of emerging Asia remains strong, and the still-difficult conditions faced by several commodity exporters in Latin America, the Commonwealth of Independent States, and sub-Saharan Africa show some signs of improvement. In advanced economies, the 2017 growth pickup is broad based, with stronger activity in the United States and Canada, the euro area, and Japan. Prospects for medium-term growth are more subdued, as demographic factors and weak productivity weigh on potential growth.

1.1.2 Growth prospects for emerging and developing economies are marked up by 0.1 percentage point for both 2017 and 2018 relative to April, primarily owing to a stronger growth projection for China. The 2017 forecast (6.8 percent, against 6.6 percent in April) of China reflects stronger growth outturns in the first half of 2017 as well as more buoyant external demand. For 2018, the revision mainly reflects an expectation that the authorities will maintain a sufficiently expansionary policy mix to meet their target of doubling real GDP between 2010 and 2020. Growth

forecasts have also been marked up for emerging Europe for 2017, reflecting stronger growth in Turkey and other countries in the region, for Russia for 2017 and 2018, and Brazil in 2017.

1.1.3 Among advanced economies, domestic demand and output grew faster in the first half of 2017 than in the second half of 2016. In the United States, weakness in consumption in the first quarter turned out to be temporary, while business investment continued to strengthen, partly reflecting a recovery in the energy sector. In the euro area and Japan, stronger private consumption, investment, and external demand bolstered overall growth momentum in the first half of the year. Growth in most of the other advanced economies, with the notable exception of the United Kingdom, picked up in the first half of 2017 from its pace in the second half of 2016, with both domestic and external demand contributing.

1.1.4 Among emerging market and developing economies, higher domestic demand in China and continued recovery in key emerging market economies supported growth in the first half of 2017. India's economic outlook projections for the year 2017 and 2018 were 6.7% and 7.4% (International Monetary Fund report, October, 2017). But in India, growth momentum slowed in 2017-18, reflecting the lingering impact of the authorities' currency exchange initiative as well as uncertainty related to the midyear introduction of the country-wide Goods and Services Tax. The latter move, which promises the unification of India's vast domestic market, is among several key structural reforms under implementation that are expected to help push growth above 8 percent in the medium term.

1.1.5 The growth rate for emerging market and developing economies is forecast to rise to 4.6 percent in 2017, 4.9 percent in 2018, and about 5 percent over the medium term. In per capita terms, growth rates are about 1.3 percentage points lower, but substantially above the per capita growth rate for advanced economies (1.4 percent, on average, during 2017–22), implying a gradual convergence in GDP per capita between the two country groups. The projected aggregate growth rate over 2017–22 is sustained by fast growth in the two largest countries, China and India, which account for more than 40 percent of GDP (whether measured at purchasing power parity or market rates) and more than 40 percent of the population of emerging market and developing economies.

1.1.6 **Table 1** gives the growth of cargo at Indian ports and related parameters of Indian and world trade.

Table 1: Growth in Cargo handled at Indian Ports and related parameters (in %)								
Parameters	**2011-12**	**2012-13**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**April-September**	
							2016-17	**2017-18**
Trends in India's Select : Macro Parameters								
I. Total Cargo	3.2	2.2	4.1	8.2	1.9	5.7	5.1	2.4
(a) Major Ports	-1.7	-2.6	1.8	4.7	4.3	6.8	5.2	3.2
(b) Non Major Ports	12.2	9.7	7.5	13.0	-1.0	4.2	4.9	1.4
II.GVA overall	n.a	n.a	6.6	6.0	7.9	6.6	7.2	5.8
(a) Agriculture	n.a	n.a	3.7	1.7	0.7	4.9	3.2	2.0
(b) Industry	n.a	n.a	4.5	4.5	8.8	5.6	6.7	3.6
(c) Services	n.a	n.a	9.1	8.4	9.7	7.7	8.4	7.9
III. Foreign Trade								
(a) Export in $ value	21.8	-1.8	4.7	-1.2	-15.9	4.7	-1.7	11.5
(b) Import in $ value	32.3	0.3	-8.3	-0.6	-15.3	-0.2	-13.8	25.1
Trends in Select : Global Indicators								
IV. World Output	4.2	3.5	3.3	3.4	3.2	3.2	3.6F	3.7f
(a) Advanced Economies	1.7	1.2	1.2	1.8	2.1	1.7	2.2F	2.0f
(b) Developing Economies	6.3	5.3	4.9	4.6	4.0	4.3	4.6F	4.9f
V. World Economic Growth	2.8	2.2	2.2	2.5	2.6	2.2	2.6F	-
(a) Advanced Economies	1.4	1.1	1.1	1.7	2.2	1.7	1.9F	-
(b) Developing Economies	6.0	4.7	4.6	4.4	3.8	3.6	4.2F	-
(c) Transition Economies	4.7	3.3	2.0	0.9	-2.2	0.4	1.8F	-
VI. World Trade Volume (Goods)	6.9	2.5	3.1	3.3	2.6	2.4	4.2F	4.0f
VII. Export Volume growth (Goods)								
(a) Advanced Economies	6.0	1.9	2.6	3.3	3.6	2.2	3.8F	3.6f
(b) Developing Economies	8.1	4.2	4.3	2.9	1.3	2.5	4.8F	4.5f
VIII. Import Volume (Goods)								
(a) Advanced Economies	5.3	0.3	1.8	3.4	4.2	2.7	4.0F	3.8f
(b) Developing Economies	10.5	5.4	4.8	3.6	-0.6	2.0	4.4F	4.9f
IX. World Seaborne Trade*	4.3	4.6	3.4	3.5	2.0	2.4	NA	NA
(a) Goods Loaded	4.5	4.7	3.4	3.4	2.1	2.4	NA	NA
(b) Goods Unloaded	4.2	4.4	3.4	3.5	2.0	2.5	NA	NA
I. Based on data from Major Ports and Non Major Ports								
II. Figures - 2015-16 onwards based on Press Release of Gross Value Added (GVA) at Factor Cost (2011-12 Prices), Central Statistical Office, dated 30.11.2017. Comparable figures for the back series are not available.								
III. Based on Department of Commerce, DGCI&S and RBI Bulletin								
IV,VI, VII & VIII Based on World Economic Outlook, October, 2017, IMF;								
V & IX. Based on Review of Maritime Transport, 2017 (November), UNCTAD								
Note : MT: Million Tonnes; For item Nos IV, VI, VII &VIII year 2009-10 refers to calendar year 2009 and so on; **F** refers to forecast for 2017 and **f** refers to forecast for the year 2018;								
* Growth in total goods loaded plus unloaded; NA ; Not Available (P) Provisional								

Selected Emerging Trends Affecting Seaborne Trade

1.1.7 World merchandise trade underperformed in 2016 with volumes (that is, trade in value terms but adjusted to account for inflation and exchange rate movements), expanding by a modest 1.9 per cent (average growth rate of imports and exports), up from 1.7 per cent in 2015. Weaker trade is both a cause and an effect of a slowdown in global economic activity in view of the strong linkages between investment, growth and trade. World export volumes and import demand both accelerated in 2016, compared with 2015. Exports expanded at the faster rate of 1.7 per cent up from 1.4 per cent in 2015, while the import demand increased by 2.1 per cent, up from 1.9 per cent in 2015.

1.1.8 Maritime transport is the backbone of globalization and lies at the heart of cross-border transport networks that support supply chains and enable international trade. An economic sector in its own right that generates employment, income and revenue, transport – including maritime transport – is cross-cutting and permeates other sectors and activities. Maritime transport enables industrial development by supporting manufacturing growth; bringing together consumers and intermediate and capital goods industries; and promoting regional economic and trade integration. From shipbuilding to cargo routes to the future of seafaring, the maritime sector continues to evolve in response to economic, political, demographic, and technological trends. Understanding these trends is critical to improving the performance of the industry's capital investment as well as operational efficiency, and provides the backdrop for successful long-term maritime trade strategy.

1.1.9 In line with developments in the world economy, demand for shipping services improved in 2016, albeit only moderately. World seaborne trade expanded by 2.4 per cent, up from 2.0 per cent in 2015, which is below the historical average of 3 per cent recorded over the past four decades. Goods total loaded volumes reached 10.3 billion tons, reflecting the addition of over 260 million tons of cargo, about half of which was attributed to tanker trade. Strong import demand in China in 2016 continued to support world maritime seaborne trade, although overall growth was offset by limited expansion in the import demand of other developing regions. International Seaborne Trade loaded during last 16 years may be seen in **Table 2 (a)**.

Table 2 (a): Developments in International Seaborne Trade (Million Tonnes Loaded)				
Year	**Oil and gas**	**Main Bulk#**	**Dry cargo other than main bulks Cargo**	**Total**
2000	2163	1295	2526	5984
2006	2698	1814	3188	7700
2007	2747	1953	3334	8034
2008	2742	2065	3422	8229
2009	2642	2085	3131	7858
2010	2772	2335	3302	8409
2011	2794	2486	3505	8785
2012	2841	2742	3614	9197
2013	2829	2923	3762	9514
2014	2825	2985	4033	9843
2015	2932	3121	3971	10023
2016	3055	3172	4059	10287
# Iron ore, grain, coal, bauxite/alumina and phosphate rock.				
Source: Review of Maritime Transport, 2017, UNCTAD				

1.1.10 Seaborne dry cargo shipments totalled 7.23 billion tons in 2016, reflecting an increase of 2.0% over the previous year **(Table 2 (a)).** The share of the major bulk commodities (coal, iron ore, grain and bauxite/alumina/phosphate rock) amounted to about 43.9% of total dry cargo volumes, followed by containerized trade (23.8%) and minor bulks (23.7%). Remaining volumes were accounted for by "other" dry cargo, namely break bulk shipments. In 2016, the major bulk commodities increased by 1.6%, while other dry cargo expanded by 2.2%.

1.1.11 In 2016, distance-adjusted seaborne trade continued to grow but at a slightly faster pace than seaborne trade in tons. Despite the particularly weak import demand and limited exports in many economies, developing economies as a group continued, nevertheless, to account for most of world seaborne cargo shipments in 2016. Developing economies accounted for 59 per cent of world goods loaded (outbound/exports) and nearly two thirds of goods unloaded (inbound/imports), respectively. Since the 1970s, participation of developing economies in world seaborne trade has shifted, reflecting their rise as major importers and exporters. For over four decades, developing

economies' share of goods unloaded has increased significantly, while their share of goods loaded has also increased, albeit at a slower rate, before stabilizing at about 60 per cent since 2010.

Developing economies are no longer only a source of supply for raw materials and fossil fuel energy, but are also key players in globalized manufacturing processes and a growing source of consumption import demand, including of raw materials, such as oil. In terms of geographical influence, Asia remained the main global cargo loading and unloading area in 2016.

Seaborne Trade by Cargo Type

Crude Oil and Petroleum products

1.1.12 In 2016, world seaborne tanker trade – crude oil, refined petroleum products and gas – continued to grow amid a surplus in oil market supply and low oil prices. Total volumes reached 3.1 billion tons, reflecting an increase of 4.2 per cent over the previous year. Oil imports for inventory building continued unabated for crude oil and refined oil products, and resulted in record high storage levels. These positive trends were underpinned by strong demand for crude oil imports in China, India and the United States and a high level of exported petroleum products from China and India. An overview of global players in oil and gas production, consumption and volumes shipped in 2016, is presented in **table 2(b)**.

The import demand in China, India and United States; for the second consecutive year; crude oil shipments expanded by 4.3 per cent in 2016, reaching an estimated total volume of 1.8 billion tons. Imports into North America increased, reflecting reduced domestic production, while growing imports into China reflected additions to refinery capacity. Exports from Western Asia rose steadily, owing to growing shipments from the Islamic Republic of Iran following the end of economic sanctions. In the United States, shipments of crude oil increased as the 40-year ban on oil exports was lifted. In Nigeria, exports dropped sharply, owing to disruptions in production.

Table 2(b) Major producers and consumption of Oil and Natural gas, 2016
(World market share in percentage)

Production

S. No.	World	World Oil Production	Oil Refinery Capacities	World Natural Gas Production
1	Africa	9%	4%	6%
2	Asia Pacific	9%	34%	16%
3	Developing America	11%	7%	6%
4	Europe	4%	15%	6%
5	North America	18%	21%	26%
6	Transition Economies	15%	9%	22%
7	Western Asia	34%	10%	18%
	Total	**100%**	**100%**	**100%**

Consumption

S. No.	World	World Oil Consumption	Oil Refinery Throughout	World Natural Gas Consumption
1	Africa	4%	2%	4%
2	Asia Pacific	35%	34%	20%
3	Developing America	9%	7%	8%
4	Europe	14%	15%	12%
5	North America	23%	22%	25%
6	Transition Economies	4%	9%	16%
7	Western Asia	11%	11%	15%
	Total	**100%**	**100%**	**100%**

Source: UNCTAD secretariat calculations based on the data from British Petroleum, 2017

1.1.13 Together, refined oil products and gas trade volumes expanded by 4 per cent, taking total shipments to 1.2 billion tons in 2016. Demand for refined oil products was generally supported by a low oil price environment, with growth driven by increased exports from Western Asia, China and India, as well as by a recovery in Europe's import demand. While demand for refined oil products grew in China, India and the United States, weak economic growth in Japan and developing America, has nevertheless, constrained global imports of refined oil products. Volumes were supported by stronger gasoline demand, while diesel demand declined as a result of weak global industrial activity. Only India, the Republic of Korea and Europe recorded strong increases in diesel oil demand, mostly for transportation use.

Natural Gas and liquefied gases

1.1.14 With regard to gas trade, liquefied natural gas shipments were estimated to have expanded by 7.2 percent in 2016, with shipments reaching 268 million tons (Clarksons Research, 2017b). Expansion was led by increased exports from Australia and the United States, which saw new liquefaction terminals come online. Volumes of imports into China, India and other Asian developing economies, notably in Western Asia, grew steadily. These positive developments helped offset declines in the import volumes of the Republic of Korea and Japan.

Liquefied petroleum gas trade rose by 10.1 percent, with volumes reaching 87 million tons in 2016 (Clarksons Research, 2017b). Volumes were supported by the continued strong expansion in exports from the United States and Western Asia and robust import demand in China and India. The growing needs of the petrochemical industry and the household sector were the primary source of demand in both countries. For the liquefied petroleum gas sector, the opening in June 2016 of the expanded Panama Canal allowed for the passage of gas carriers, thus shortening the distance travelled on the United States–China route as compared with the Cape of Good Hope.

Dry Cargo Trades

Dry Bulk Shipments: Major and minor dry bulks

1.1.15 In 2016, world demand for dry bulk commodities grew at a modest rate of 1.3 percent, taking total shipments to 4.9 billion tons. China remained the primary source of growth, owing to the positive impact of the stimulus measures introduced during the year. Within the dry bulk segment, trade in the major bulk commodities increased by 1.6 per cent. Iron ore trade showed the strongest growth with volumes expanding by 3.4 per cent, reaching 1.4 billion tons in 2016. Imports into China; increased by over 7 per cent, reflecting the country's steel output growth, falling domestic iron ore production, growing stockpiling activity and access to affordable, high-quality iron ore from Australia and Brazil. In contrast, iron ore imports into Europe and other Asian countries declined, in the wake of low steel prices.

1.1.16 Coal trade diminished in 2016, owing to flat demand for coal. Total volumes were estimated at 1.14 billion tons, with both coking coal and thermal coal volumes stagnating at 249 million tons and 890 million tons, respectively. A marginal increase in coking coal volumes reflected higher import demand in China and Japan. These were offset by declining import volumes

in India, the Republic of Korea and Europe. Declining imports of thermal coal into India, Japan, the Republic of Korea and Europe were offset by a 4 per cent increase in other Asian countries imports, notably China, where import volumes surged by over 28 per cent.

1.1.17 Given, limited growth in the minor bulks trade, volumes remained static at an estimated 1.7 billion tons. The drag on volumes reflects the decline in steel products trade, as well as the reduction in bauxite and nickel ore shipments resulting from a bauxite-mining ban in Malaysia and nickel ore mine closures in the Philippines. However, trade in some other minor bulk commodities such as cement, petroleum coke and sugar was positive and helped offset slightly the decline in nickel ore and bauxite shipments.

Other Dry Cargo Trades

Containerized Trade

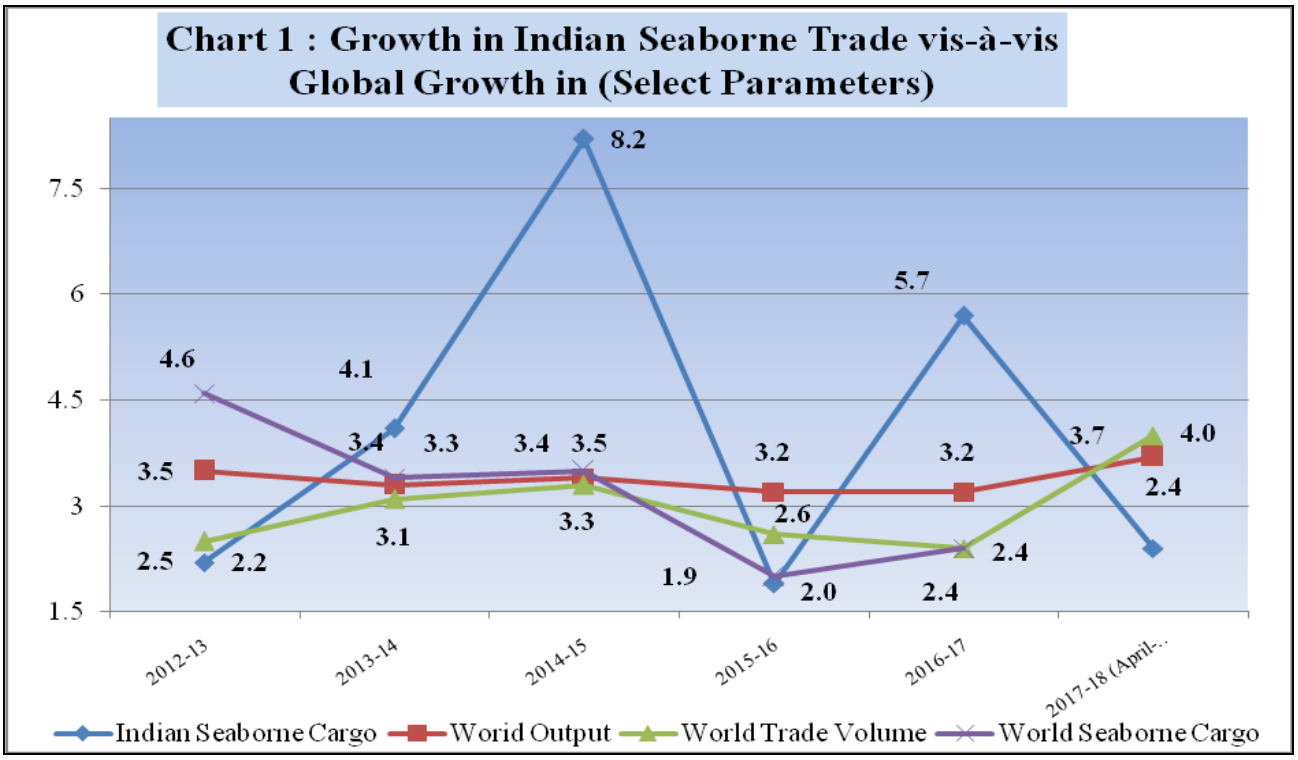
1.1.18 Global containerized trade expanded at a faster rate of 3.1 per cent in 2016, with volumes attaining an estimated 140 million 20-foot equivalent units (TEUs) (MDS Transmodal, 2017). Recovery was driven by volume growth in the peak leg of the Asia–Europe trade, where volumes contracted in 2015. Other contributing factors were accelerated growth in intra-Asian cargo flows and positive trends in the trans-Pacific. Together, these developments contributed to raising overall containerized trade volumes. In contrast, limited growth on North–South trade routes caused by reduced import demand of key fuel and non-fuel commodity exporters hindered overall growth.

1.1.19 Intraregional trade continued to growth steadily (5.1 per cent) in 2016. To a large extent, intraregional trade has been gaining market share due to the rapid expansion in intra-Asian containerized trade, driven by the movement of intermediate goods and the value chains involving China and its neighbouring Asian countries. South–South trade contracted; by 3.1% and 2.9% in 2015 and 2016 respectively. In this respect, the impact of lower commodity prices on developing economies' purchasing power may play a part in this development. However, given the small volumes associated with South–South containerized trade, the impact on overall trade appears to be marginal. Falling commodity prices continued to undermine North–South trade and hinder flows on secondary East–West trade routes. There were fewer imports into Western Asia, owing to the

negative impact of lower oil prices on the purchasing power of the region. Offsetting this trend, however, was the strong import demand in Southern Asia.

1.2 India: Seaborne Cargo Traffic

1.2.1 The growth in India's Port traffic and growth in World output, export volume and seaborne trade (loadings and unloading) since 2012-13 is given in **Chart I.**



1.3 Cargo Traffic at Indian Ports

1.3.1 During first six months (April-September) of 2017-18, Major and Non-major Ports in India have accomplished a total cargo throughput of 574.72 million tonnes reflecting an increase of 2.4% over the corresponding period of the previous year 2016-17 (Table 3). The growth in cargo handled at Major and Non-major ports in first six months (April-September) of 2017-18, were 3.2% and 1.4% respectively. The share of Major Port in the total traffic handled at Indian Port increased from 56.3% in first six months (April-September), 2016-17 to 56.8% in the same six months of 2017-18. Trend in traffic handled at Major and Non-major Ports is given below in **Table 3.**

Table 3 : Trends in Cargo Handled at Major & Non-Major Ports (Million Tonnes)							
Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	545.84	555.49	581.34	605.89	647.76	316.14	326.38
	-(2.6)	(1.8)	(4.7)	(4.2)	(6.9)		(3.2)
Non-Major Ports	387.93	416.97	470.89	465.99	485.33	244.95	248.34
	(9.7)	(7.5)	(12.9)	-(1.0)	(4.1)		(1.4)
All Ports	**933.77**	**972.46**	**1052.23**	**1071.90**	**1133.08**	**561.09**	**574.72**
	(2.2)	**(4.1)**	**(8.2)**	**(1.9)**	**(5.7)**		**(2.4)**

Note: Figures in brackets indicate growth over previous year.

1.4 Cargo Traffic at Major Ports

1.4.1 The volume of seaborne cargo traffic handled by ports is mainly shaped by the levels and changes in both the global and domestic activity. Cargo traffic at India's 12 major ports during first six months (April-September) of 2017-18 was 326.38 million tonnes achieving growth of 3.2% over the previous year.

1.4.2 During first six months (April-September) of 2017-18, Cochin Port recorded highest growth in traffic 19.6% followed by Haldia Dockyard Complex (17.7%), New Mangalore Port (11.7%), Paradip Port (11.6%), JNPT (6.2%), Mumbai Port (1.4%), Chennai Port (1.2%) and KDS (0.7%). Major ports which recorded **negative growth** in traffic during first six months (April-September) of 2017-18 were: Chidambaranar Port (10.5%), Kamarajar Port (7.0%), Mormugao Port (3.0%), Vishakapatnam Port (1.7%) and Kandla Port (1.3%).

1.4.3 Amongst the Major Ports, Kandla Port handled the maximum Cargo of 53.29 million tonnes with a share of 16.3% in total cargo handled at major ports followed by Paradip Port (14.6%), JNPT (10.0%), Mumbai Port (9.6%), Vishakhapatnam Port (9.2%), Chennai Port (8.0%), NMPT (6.0%), Haldia Dockyard Complex (5.9%), Chidambaranar (5.3%), Cochin Port (4.4%), Kamarajar Port (4.2%), Mormugao Port (3.9%) and Kolkata Dock System (2.6%) during first six months (April-September) of 2017-18.**(Table 4).**

Table 4 : Traffic Handled at Major Ports

(Thousand Tonnes)

Ports	2013-14	2014-15	2015-16	2016-17 (P)	April-September (P)		
					2016-17	2017-18	% change April-September
1	2	3	4	5	6	7	8
Kolkata	41386	46293	50289	50314	24623	27565	11.9
Kolkata DS	12875	15283	16782	16173	8381	8441	0.7
Haldia DC	28511	31010	33507	34141	16242	19124	17.7
Paradip	68003	71011	76397	88955	42668	47605	11.6
Vizag	58504	58004	57035	61020	30670	30149	-1.7
Kamarajar	27337	30251	32206	30020	14891	13847	-7.0
Chennai	51105	52541	50058	50214	25925	26236	1.2
Chidambaranar	28642	32414	36849	38463	19321	17286	-10.5
Cochin	20886	21595	22095	25007	11924	14264	19.6
New Mangalore	39365	36566	35582	39945	17499	19549	11.7
Mormugao	11739	14711	20776	33179	13064	12670	-3.0
Mumbai	59184	61660	61119	63049	30813	31234	1.4
JNPT	62333	63801	64027	62151	30781	32692	6.2
Kandla	87005	92497	99458	105442	53963	53287	-1.3
All Ports	**555489**	**581344**	**605891**	**647759**	**316142**	**326384**	**3.2**

Source: IPA, (P): Provisional

Commodity-wise growth of cargo traffic at Major Ports

1.4.4 At a broad commodity level, during first six months (April-September) of 2017-18, Food grains posted growth rate of 55% followed by Iron Ore (28.6%), coking coal (14.9%), POL (7.1%), Container (6.6%) and other commodity (2.2%). The other commodities such as Thermal Coal, Fertilizer Finished and FRM Dry were affected during first six months of 2017-18 and dropped by 19.7%, 4.5% and 1.5% respectively. Table 5 gives the details of Commodity wise traffic handled at Major Port during 2013-14 to 2017-18.

Table 5 : Commodity wise Traffic Handled at Major Ports

(Thousand Tonnes)

Commodities	2013-14	2014-15	2015-16	2016-17 (P)	April-September (P)		% change April-September 2016-17/ 2017-18
					2016-17	2017-18	
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
POL	181055	181020	186360	212356	103620	110938	7.1
Iron Ore	24616	18002	15315	42540	14260	18342	28.6
Fertiliser	**13784**	**16291**	**16023**	**14004**	**7865**	**7621**	-3.1
1. Finished	6149	7926	8493	7003	4191	4003	-4.5
2. Raw (DRY)	7635	8365	7530	7001	3674	3618	-1.5
Coal	**104271**	**119474**	**134056**	**117636**	**60387**	**53271**	-11.8
1. Thermal Coal	71651	87119	100252	88575	46572	37399	-19.7
2. Coking Coal	32620	32355	33804	29061	13815	15872	14.9
Food Grain	4796	3089	2373	6327	1142	1770	55.0
Container (Tonnes)	114672	119441	123168	124575	61919	66005	6.6
Others	112295	124027	128596	130321	66949	68437	2.2
Total	**555489**	**581344**	**605891**	**647759**	**316142**	**326384**	**3.2**

1.4.5 In terms of composition of cargo traffic handled during first six months (April-September) of 2017-18 at major ports, the largest commodity group (with share in percent in total cargo handled) was POL (34.0%), Others cargo (21.0%), Container traffic (20.2%), Coal (16.3%), Iron ore (5.6%) , Fertilizer & FRM (2.3%) and Food Grain (0.5%) in **Table 5.**

1.4.6 The Port-wise and Commodity-wise shares in total cargo traffic during first six months (April-September) of 2017-18 are depicted in the **Charts II and III** respectively.

Chart-II Major Ports-Port-wise share in Traffic Handled during First Six months (April-September), 2017-18 in India

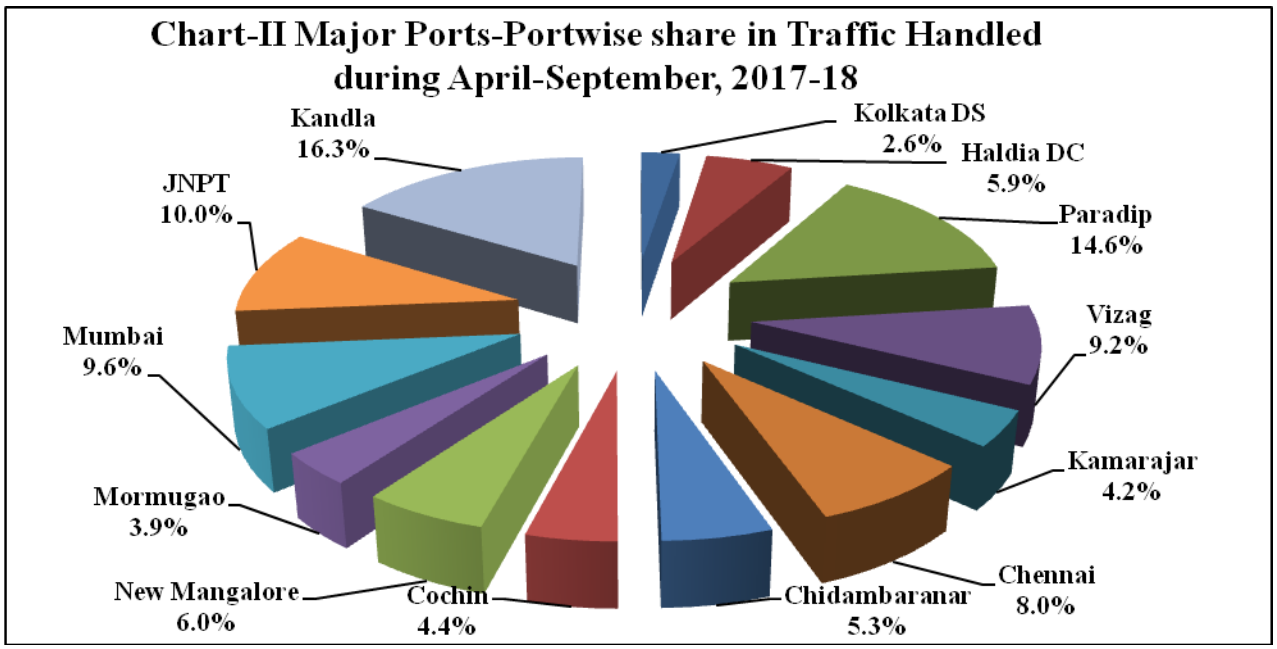
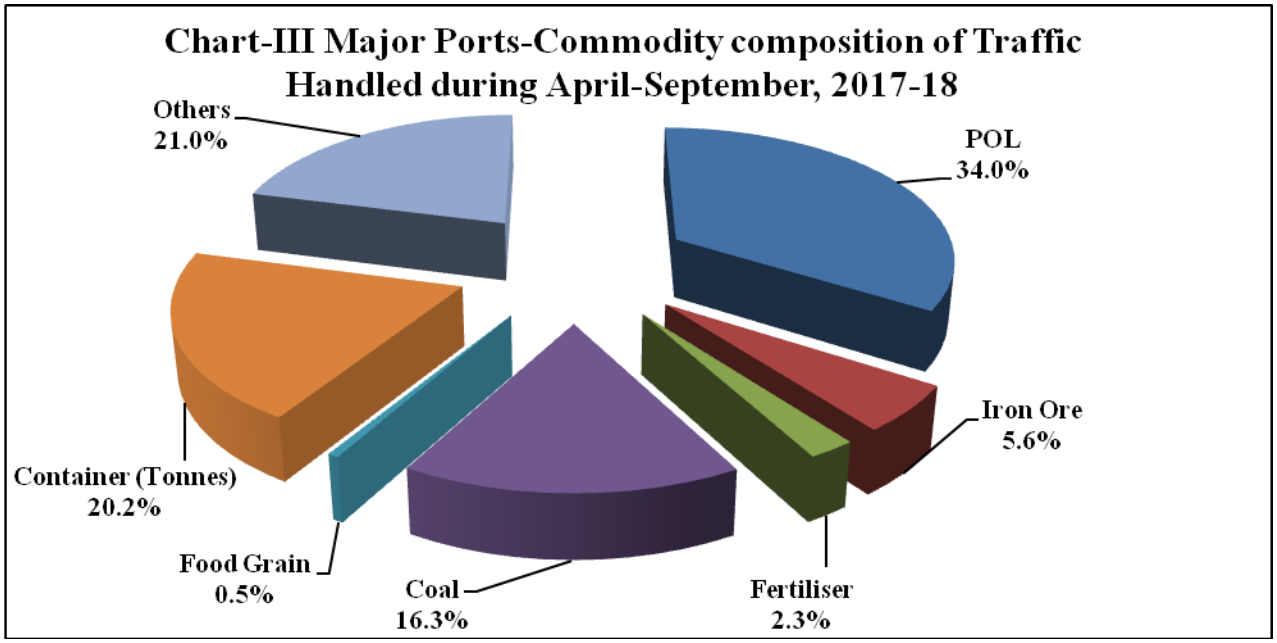


Chart-III Major Ports-Commodity composition of Traffic Handled during First Six months (April-September), 2017-18 in India



1.4.7 The Port-wise & commodity-wise traffic handled at major ports from 2015-16 onwards are given in **Annex –II.**

Container Traffic

1.4.8 Growth in container traffic (in million tonnes) which reflects largely trade in manufactures and components, at 6.6% during first six months of 2017-18 is higher compared to 0.7% achieved in the corresponding periods of the year 2016-17. In terms of Twenty Foot Equivalent Units (TEUs), containers handled by Major Ports during first six months of 2017-18 recorded 6.7% growth as compared to 3.3% in the same period of the 2016-17. Amongst the major ports, the ports at Kolkata Dock System and Vishakhapatnam witnessed fall in container traffic. JNPT is continues to be the leading container handling port in the country with a share of 43.5% in terms of tonnage and 53.2% in terms of TEUs in the total container traffic at major ports during first six months (April-September), 2017-18 (**Table 6**). Chennai port which handled 23.1% of container cargo is the second largest container handling port followed by Chidambaranar (10.4%), Kolkata Dockyard System (7.4%), Cochin Port (5.6%) and Visakhapatnam Port (4.9%).

Table 6: Container Traffic at Major Ports (in thousand tonnes/TEUs)

PORT	2014-15		2015-16		2016-17 (P)		April-September (P)				% change 2017-18/ 2016-17	
							2016-17		2017-18		April-September	
	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU
1	2	3	4	5	6	7	8	9	10	11	12	13
Kolkatta DS	8110	528	9263	578	9887	636	5105	333	4880	318	-4.4	-4.5
Haldia DC	1958	102	1376	85	2467	136	718	49	1254	70	74.7	42.9
Paradip	67	4	132	5	37	2	29	1	34	3	17.2	200.0
Vizag	4372	248	5145	243	6428	367	3274	188	3259	189	-0.5	0.5
Chennai	29945	1552	30207	1565	28850	1595	14444	748	15240	790	5.5	5.6
Ennore	0	0	1	0	1	0	1	0	0	0	-100.0	0.0
Tuticorin	11034	560	12388	612	12991	642	6586	325	6863	337	4.2	3.7
Cochin	5246	366	5785	419	6840	460	3370	242	3717	268	10.3	10.7
New Mangalore	920	63	1105	76	1411	95	646	44	781	51	20.9	15.9
Mormugao	312	25	345	26	400	30	190	14	191	14	0.5	0.0
JNPT	56933	4467	56791	4491	54530	4500	27187	2262	28700	2403	5.6	6.2
Mumbai	544	45	574	43	558	42	287	23	316	23	10.1	0.0
Kandla	0	0	56	3	175	10	82	4	770	49	839.0	1125
All Ports	**119441**	**7960**	**123168**	**8146**	**124575**	**8515**	**61919**	**4233**	**66005**	**4515**	**6.6**	**6.7**

Note: CP - Corresponding period of previous year; (P) - Provisional; Tn - tonnes; TEU –twenty foot equivalent unit
Source; IPA

1.5 Cargo Traffic at Non-Major Ports

1.5.1 Non–major ports handled 43.2% of total maritime freight traffic of the country during first six months (April-September) of 2017-18.

1.5.2 **Table 7** presents maritime state-wise share and growth of traffic handled at Non-major Ports from 2012-13 onwards.

Table 7 : Traffic Handled by Non-Major Ports by Maritime States/UTs

(000'Tonnes)

Maritime State/UT	2012-13	2013-14	2014-15	2015-16	2016-17(P)	April-September			
						2016-17 (P)	2017-18 (P)	% Change over previous year	
								2016-17 (P)	2017-18 (P)
Gujarat	287817	309945	336095	339778	345739	168635	178075	1.3	5.6
	(74.2)	(74.3)	(71.4)	(72.9)	(71.2)	(68.8)	(71.7)		
Maharashtra	24198	24664	27295	28849	34894	15552	14810	26.7	-4.8
	(6.2)	(5.9)	(5.8)	(6.2)	(7.2)	(6.3)	(6.0)		
Andhra Pradesh	51811	58692	83418	72733	69602	34057	37717	-1.1	10.7
	(13.4)	(14.1)	(17.7)	(15.6)	(14.3)	(13.9)	(15.2)		
Goa	3389	284	760	430	117	54	5	-	-
	(0.9)	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.1)		
Tamil Nadu	933	866	825	856	1170	483	513	16.9	6.2
	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)		
Karnataka	610	509	651	835	691	315	290	-7.1	-7.9
	(0.2)	(0.1)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)		
Other States/UTs	19165	22010	21844	22509	33113	25849	16921	50.1	-34.5
	(4.9)	(5.3)	(4.6)	(4.8)	(6.8)	(10.6)	(6.7)		
All States/UTs	**387923**	**416970**	**470888**	**465990**	**485326**	**244945**	**248331**	**4.9**	**1.4**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**		

Note: Figure in parenthesis is the percentage share of traffic handled by the maritime state to the total traffic handled by all the maritime states; P- Provisional

1.5.3 The growth in cargo handled by the non-major ports during first six months (April-September) of 2017-18 was 1.4% compared to 4.9% recorded in the corresponding period of previous year. **Table 7** provides traffic handled by non-major ports in terms of maritime states (geographic location) and **Table 8** gives a glimpse of commodity profile of the cargo handled. The above table reflects that Gujarat accounted for (71.7%) of the traffic handled by the non-major ports followed by Andhra Pradesh (15.2%) and Maharashtra (6.0%). Three maritime States, viz, Gujarat,

Andhra Pradesh and Maharashtra together accounted for 92.9% of the total cargo traffic handled by the non-major ports in first six months (April-September) of 2017-18.

1.5.4 Two commodities, viz. POL and Coal accounted for more than two-third of the total cargo handled at the non-major ports during April-September, 2017-18 (**Table 8**). The percentage share of Iron Ore, building materials, Fertilizer & FRM and other commodities are 6.5%, 2.5%, 3.0% and 21.6% respectively during first six months of 2017-18.

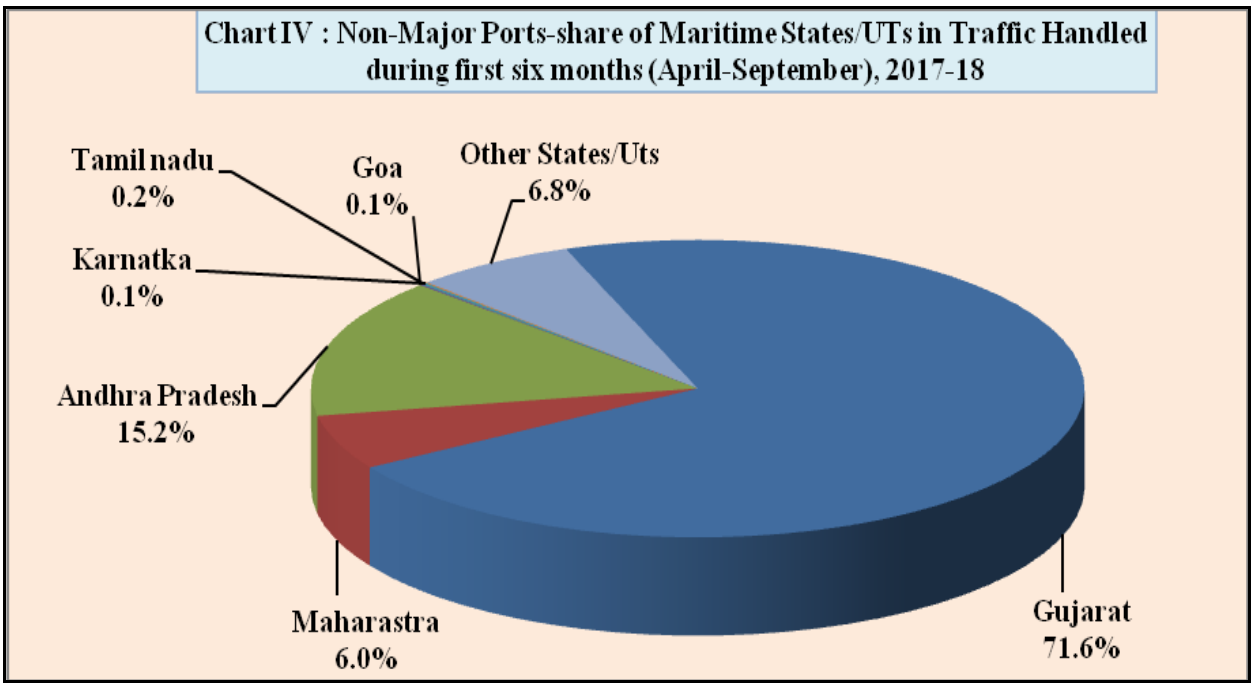
Table 8: Commodity-wise Traffic Handled by Non-Major Ports

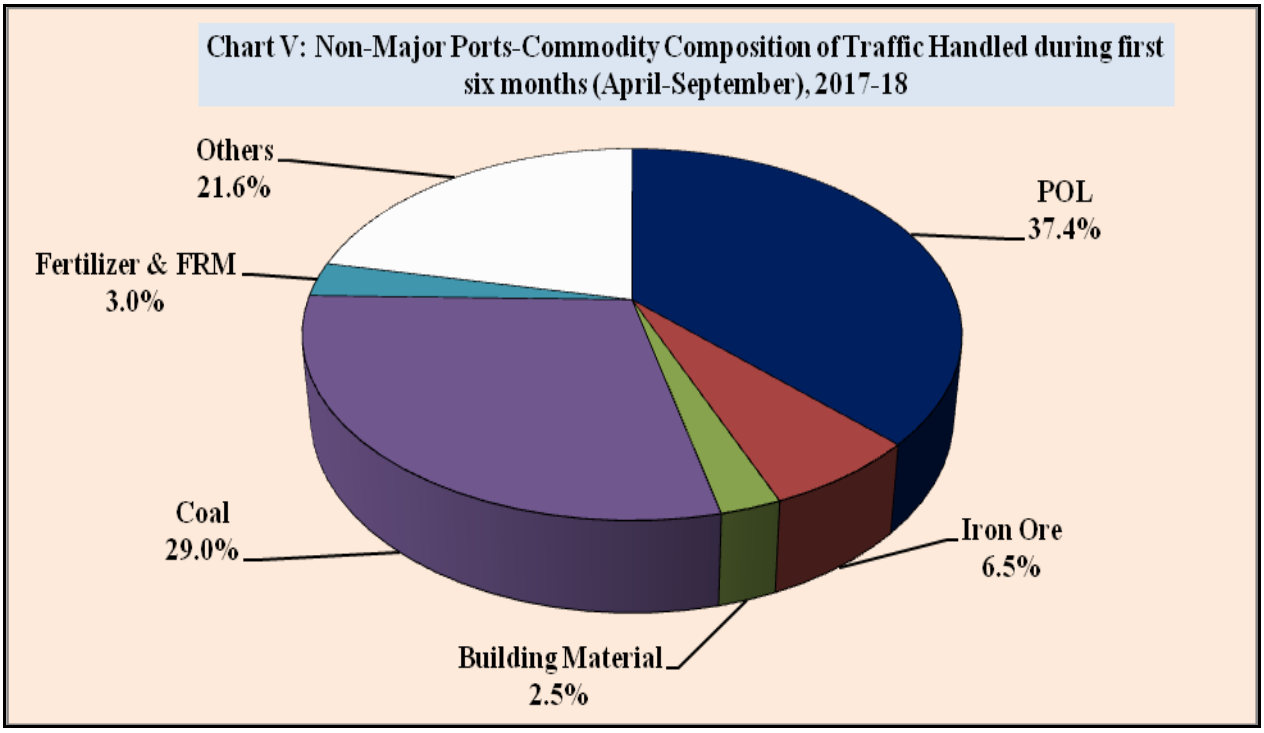
(000'Tonnes)

Commodity	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September			
						2016-17 (P)	2017-18 (P)	% Change over previous year	
								2016-17 (P)	2017-18 (P)
POL	168565	169777	167278	180672	185887	90030	92819	2.6	3.1
	(43.5)	(40.7)	(35.5)	(38.8)	(38.3)	(36.8)	(37.4)		
Iron Ore	21855	18338	26794	17384	32461	18567	16107	85.8	-13.2
	(5.6)	(4.4)	(5.7)	(3.7)	(6.7)	(7.6)	(6.5)		
Building Material	11953	14178	14224	14205	14675	7958	6277	5.6	-21.1
	(3.1)	(3.4)	(3.0)	(3.0)	(3.0)	(3.2)	(2.5)		
Coal	109264	126321	156737	141874	132816	77704	71963	0.7	-7.4
	(28.2)	(30.3)	(33.3)	(30.4)	(27.4)	(31.7)	(29.0)		
Fertilizer & FRM	12548	12010	13952	16946	12241	7066	7405	18.1	4.8
	(3.2)	(2.9)	(3.0)	(3.6)	(2.5)	(2.9)	(3.0)		
Others	63738	76346	91903	94910	107246	43620	53760	8.0	23.2
	(16.4)	(18.3)	(19.5)	(20.4)	(22.1)	(17.8)	(21.6)		
All	**387923**	**416970**	**470888**	**465991**	**485326**	**244945**	**248331**	**4.9**	**1.4**
	(100.0)	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**	**(100.0)**		

Note: Figure in parenthesis is the percentage share of major commodity groups in the total traffic handled by all the Non- major ports. P:- Provisional

1.5.5 The share of Maritime States/UTs in the total traffic and Commodity-wise composition of traffic during first six months (April-September) of 2017-18 is depicted in the pie **Charts IV and V** respectively.





1.5.6 Maritime State-wise & commodity-wise traffic handled at non-major ports during the last few years is given in **Annex III.**

1.6 Impact of Global Macro Developments on Maritime Trade

1.6.1 Impact of growth on India's seaborne cargo

1.6.1.1 India's Maritime Transport growth is driven by developments in the world economy viz. growth in world output & trade as well as in Indian economy. Thus volume of seaborne cargo traffic is essentially in the nature of derived demand and is mainly shaped by the levels and changes in both the global and domestic activity. During first six months of 2016-17, Indian economy has continued to grow of GVA growth 7.2%, as achieved during the corresponding period of the previous year. However, the growth of Indian economy has gone down and reached to 5.8% in the first six months of 2017-18. The growth of Indian economy is down mainly due to the growth of Industry sector has down from 6.7% to 3.6% from first six months of 2017-18 to corresponding period of 2016-17.

1.6.1.2 Cargo traffic handled by India's 12 major ports (which accounts for 57.4% of India's total seaborne cargo) during April-September, 2017-18 was 326.38 million tonnes compared to 316.14 million tonnes recorded corresponding period of 2016-17 showing a growth of 3.2%. The trajectory of growth in cargo handled at India's major ports comes into sharp focus when these growth rates are viewed in terms of quarterly growth trajectories. The Industry sector which is a major factor influencing seaborne container cargo traffic posted a GVA growth of 3.6% in first six months (April-September), 2017-18 as compared to 6.7% in corresponding period of 2016-17. GVA of Industry sector recorded growth of 7.4% and 5.9% in the first two quarters of 2016-17 while, growth in first two quarters of 2017-18 was goes down to 1.6% and 5.8% respectively.

1.6.1.3 Trends in POL, coal and fertilizers are largely driven by the dynamics of domestic demand supply and those of container traffic and "other cargo" in particular is largely shaped by the state of global demand and economic activity in India. Iron ore traffic has been impacted by the judicial intervention. The growth in Iron Ore traffic, in the first six months of 2015-16 posted negative growth of 21.0%, while in the year 2016-17 (April-September) posted a growth of 107.3% respectively with re-starting of iron ore mining in Goa. The growth of Iron ore traffic in the first six months of 2017-18 was 23.5%. The growth of POL products in the first six months of 2017-18 has

reached to 7.1% compared to 5.4% in the corresponding period of 2016-17. The growth of container commodity increased in the first six months of 2017-18 and reached to 6.6% compared to 0.8% posted in the corresponding period of 2016-17. In terms of TEUs the growth of container traffic has also increased from 3.5% to 6.7% in the first six months of 2017-18. The growth of Cargo handled by major ports in first two quarters of 2016-17 was 6.4% and 4.3% respectively was higher of 5.0% and 1.5% achieved in corresponding period of 2017-18.

1.6.1.4 **Table 9** gives Quarter wise trend in growth of cargo traffic handled at Major ports, GVA overall and GVA of Industry sector during Q1 and Q2 and half yearly growth of 2015-16, 2016-17 and 2017-18.

Table -9 - Quarter-wise trend in growth of Cargo Traffic at Major Ports and GVA

Commodities/ Year	2015-16			2016-17			2017-18		
	Q1	Q2	Half Yearly Growth	Q1	Q2	Half Yearly Growth	Q1	Q2	Half Yearly Growth
POL	17.9	17.9	17.5	2.4	8.4	5.4	8.9	5.5	7.1
Iron Ore	-29.0	20.5	-21.0	159	66.9	107.3	33.4	11.5	23.5
Coal	43.9	30.4	36.8	0.7	-8.2	-3.6	-9.8	-10.1	-9.9
Fertilizer	1.0	21.4	12.0	-9.3	-13.7	-11.9	6.8	-11.2	-3.4
Container									
In Tonnes	1.2	1.4	1.3	3.1	-1.5	0.8	5.6	7.6	6.6
In TEUs	2.3	1.2	1.8	6.4	0.7	3.5	6.5	6.9	6.7
Other cargo	-43.2	-44.1	-40.9	9.1	16.1	12.6	8.8	-2.0	3.3
All Cargo	4.5	3.8	4.2	6.4	4.3	5.4	5.0	1.5	3.2
GVA overall	**7.6**	**8.2**	**7.9**	**7.6**	**6.8**	**7.2**	**5.6**	**6.1**	**5.8**
GVA -Industry	**7.3**	**7.1**	**8.8**	**7.4**	**5.9**	**6.7**	**1.6**	**5.8**	**3.6**

GVA: Gross Value Addition at factor cost at 2011-12 prices.

1.6.2 Recent Developments in Global Ocean Freight Rates

It covers the development of freight rates and transport costs in 2016 and early 2017, describing relevant developments in maritime markets, namely supply and demand in container ships, dry bulk carriers and tankers. It highlights significant events leading to major freight rate fluctuations, discusses recent industry trends and gives a selective outlook on future developments of freight markets. It explores the recent trend towards consolidation that developed in the container ship market, both in the form of new mergers and acquisitions, as well as through the emergence of mega liner shipping alliances and their implication on the market.

1. Container freight rates

2016 was a challenging year for the container ship sector, although market fundamentals balance improved for the first time since 2011, with growth in demand outpacing that of supply. The overall market demand growth rate for containers shipping grew by 3 per cent in 2016, slightly better than the 2 per cent annual growth in 2015. In contrast, container supply capacity went up by 1 percent, compared with 8 percent in 2015. This improvement was mainly prompted by a substantial slowdown in fleet growth and a more positive trend in demand, namely in the second half of the year. The supply–demand balance was supported by a deep contraction in supply capacity, which was principally driven by a drop in deliveries totaling less than 904,000 TEUs – almost half, compared with the 1.7 million deliveries in 2015, and a high level of container ship demolition activities – especially of Panamax ships – that more than tripled in 2016, compared with 2015, reaching a high record of about 0.7 million TEUs. Idle capacity was also high, at 7 per cent at the end of 2016 (Clarksons Research, 2017a).

On the other hand, increase in demand was mainly steered by improvements in main-lane trade routes, mainly the Far East–Europe trade route (about 1 per cent), which had experienced low levels in 2015, and a good expansion on intra-Asian trade routes (about 5 per cent), which was boosted by positive trends in the Chinese economy. However, the improvement in the supply and demand fundamentals was not sufficient to generate better market conditions and improve freight rates. Overall, growth in demand was limited by a continuous slowdown in world economic growth and a weak commodity price environment, and the level of surplus capacity remained high from excess built up over recent years.

The freight rates market remained under pressure, and carriers struggled to recover operating costs on certain trade routes. Container spot freight rates were generally low and unstable throughout 2016, witnessing record declines in the first part of the year and more positive trends in the second half. The momentum gained in the second half of 2016 was mainly driven by measures taken by shipping lines to manage supply side through network optimization, scrapping and more careful vessels deployment around the peak season (Baltic and International Maritime Council, 2017a).

The first quarter of 2017 saw some improvement in the container ship market. Both the freight and charter markets showed positive trends, partly supported by improved demand trends and limited fleet growth. The container ship charter market also started to some improvement in March 2017, having remained at historically low levels throughout 2016 and early 2017 (Clarksons Research, 2017c).

2. Tanker freight rates

In 2016, freight rates in all tanker segments went down from the high level of 2015, but were not far from the five-year average across most segments. Market conditions were altered with the arrival of new vessels and a slowdown in oil demand growth. As shown in table 10, the average dirty tanker index declined to 726 in 2016, compared with 821 in 2015. This represents a decrease of 12 per cent. The average Baltic Exchange clean tanker index reached a low of 487 points in 2016, compared with 638 in 2015, 24 percent less than the annual average in 2015. Market fundamentals worsened in the crude tanker segment in 2016, as the fleet expanded rapidly, surpassing demand. This led to steep declines in freight rates.

Contributing factors included a sharp rise in oil imports into China, India and the United States, as well as the lifting of oil sanctions on the Islamic Republic of Iran, which increased export shipments from the Middle East. At the same time, global tanker deliveries also increased. Carriers of liquefied natural gas and other types of gas continued their high growth (+9.7 percent); oil tankers grew at 5.8 per cent and chemical tankers, at 4.7 per cent, following several years of low growth. Freight rates for product tankers also fell in 2016 as market fundamentals deteriorated. The market observed about 4.6 per cent growth in the demand for seaborne products trade, together with fast growth of about 6.1 per cent in the product tanker fleet (Clarksons Research, 2017b).

Table 10 - Baltic Exchange tanker indices, 2007-2017											
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**%age change 2016/ 2015)**	**2017 (First Half)**
Dirty Tanker Index	1510	581	896	782	719	642	777	821	726	-12	838
Clean Tanker Index	1155	485	732	720	641	605	601	638	487	-24.0	631
Source : Review of Maritime Transport -2017											
Note: The Baltic Exchange dirty tanker index is an index of charter rates for crude oil tankers on selected routes published by the Baltic Exchange. The Baltic Exchange clean tanker index is an index of charter rates for product tankers on selected routes published by the Baltic Exchange. Dirty tankers generally carry heavier oils – heavy fuel oils or crude oil – than clean tankers. The latter generally carry refined petroleum products such as gasoline, kerosene or jet fuels, or chemicals.											

These imbalances in markets fundamentals had a repercussion on earnings which came under further pressure, particularly in the last six months of the year. Overall, tanker earnings averaged about $17,917 per day in 2016, a 42 per cent decline, compared with 2015. This decline was affected by the rise in crude oil prices, which also had an impact on bunker costs. (Clarksons Research, 2017b).

In 2016, the oil tanker segment experienced a difficult year, spilling over to 2017 as freight rates for all crude oil and product tankers continued their decline, following a brief improvement at the end of 2106. The outlook appears challenging in the short term, given expectations for continued strong supply growth and numerous risks to the demand side.

3. Dry bulk freight rates

2016 was another difficult year for the dry bulk sector, which continued to face overcapacity and weak growth in demand. The year started with historically low freight rates as demand remained weak and the inflow of new vessels continued. The Baltic Exchange dry index experienced record lows in 2016. It reached its lowest average – 307 in February. Dry bulk demand, especially for iron ore, improved towards year's end, when Chinese imports expanded in response to a new round of fiscal and financial stimuli launched by the Government to boost economic growth (Clarksons

Research, 2017d). This mainly benefited the Capesize bulk carriers as they transported the key commodity of iron ore into China.

The industry continued taking steps to limit fleet supply growth through increased scrapping and postponing or reducing deliveries of new vessels during 2016. As previously noted, the fleet capacity of bulk carriers grew by 2.22 per cent, one of its lowest rates of growth since 1999 (Clarksons Research, 2017d). As such, the management of supply growth and the boost in demand supported freight rates as they increased in the second half of the year, with the Baltic Exchange dry index reaching 1,050 in December 2016. Nevertheless, freight rates remained relatively low compared with historical data. As a result of market imbalance in the dry bulk market, average earnings fell in all fleet segments, with figures dropping below $4,000 per day (Clarksons Research, 2017d).

Market conditions in smaller bulk carrier sectors were poor in 2016, with high levels of supply growth impaired by relatively slow demand growth in minor bulk trade and coal. As in other segments, the first half of the year was challenging; as a result, rates decreased and owners were compelled to lay up ships, delay new-building deliveries and cancel orders. Adjustments in supply, combined with renewed demand for raw materials (coal, iron ore and grain), led to market recovery and better freight rates in the second half of the year.

1.6.3 Trends in Global Top 20 Cargo/Container Ports

1.6.3.1 Growth in cargo and container traffic at world's top major ports/container terminals is a barometer of trends in seaborne trade. The growth in cargo traffic (million tonnes) at world's top 20 ports was at 0.9% in 2015 as compared to 6.3% in 2014. The growth in container traffic (million TEUs) was 1.8 % in 2016 as compared to 0.4% in 2015.

1.6.3.2 Recent trends in Top 20 World Major Ports (in Million Tonnes) and Container Ports (in million TEUs) are given in **Table 11** and **Table 12** respectively.

Table 11 - Top 20 World Major Ports

(in Million Tonnes)

S. No.	Port	Country	2013	2014	2015
1	Ningbo & Zhoushan	China	809.8	873.0	889.0
2	Shanghai	China	776.0	755.3	717.4
3	Singapore	Singapore	560.8	581.3	574.9
4	Tianjin	China	500.6	540.0	541.0
5	Suzhou	China	454.0	480.0	540.0
6	Guangzhou	China	454.7	500.4	519.9
7	Qingdao	China	450.0	480.0	500.0
8	Tangshan	China	446.2	500.8	490.0
9	Rotterdam	Netherlands	440.5	444.7	466.4
10	Port Hedland	Australia	326.0	421.8	452.9
11	Dalian	China	408.4	420.0	415.0
12	Rizhao	China	309.2	353.0	361.0
13	Yingkou	China	330.0	330.7	338.5
14	Busan	Republic of Korea	292.4	312.0	323.7
15	South Louisiana	United States	241.5	264.7	265.6
16	Hong Kong	China	276.1	297.7	256.6
17	Qinhuangdao	China	272.6	274.0	253.1
18	Port Klang	Malaysia	200.2	217.2	219.8
19	Shenzen	China	234.0	223.2	217.1
20	Xiamen	China	191.0	205.0	210.0
Total of Top 20 Ports			**7974.0**	**8474.8**	**8551.9**

Source: Port Statistics, Port of Rotterdam Authority; PRC: Peoples Republic of China;

Table 12 - Top 20 World Container Ports

(in Million TEUs)

S. No.	Port	Country	2013	2014	2015	2016
1	Shanghai	China	33.6	35.3	36.5	37.1
2	Singapore	Singapore	32.6	33.9	30.9	30.9
3	Shenzhen	China	23.3	24	24.2	24.0
4	Ningbo & Zhoushan	China	17.4	19.5	20.6	21.6
5	Hong Kong	China	22.4	22.2	20.1	19.6
6	Busan	Republic of Korea	17.7	18.7	19.3	19.4
7	Guangzhou	China	15.3	16.6	17.5	18.9
8	Qingdao	China	15.5	16.6	17.5	18.1
9	Dubai Ports	United Arab Emirates	13.6	15.2	15.6	14.8
10	Tianjin	China	13.0	14.1	14.1	14.5
11	Port Kelang	Malaysia	10.4	10.9	11.9	13.2
12	Rotterdam	Netherlands	11.6	12.3	12.2	12.4
13	Kaohsiung	Taiwan	9.9	10.6	10.3	10.5
14	Antwerp	Belgium	8.6	9.0	9.7	10.0
15	Xiamen	China	8.0	8.6	9.2	9.6
16	Dalian	China	10	10.1	9.5	9.6
17	Hamburg	Germany	9.3	9.7	8.8	8.9
18	Los Angeles	United State of America	7.9	8.3	8.2	8.9
19	Tanjung Pelepas	Malaysia	7.6	8.5	8.8	8.0
20	Cat Lai	Vietnam	6.3	6.6	6.9	7.5
Total of Top 20 Ports			**294.0**	**310.7**	**311.8**	**317.5**

Source: Review of Maritime Transport 2017, UNCTAD
1) Including river trade

1.7 Policy Initiatives - Central Government

1.7.1 In October 1996, the then Ministry of Surface Transport issued guidelines for Private Sector participation in Major Ports. The guidelines were intended to precisely define the options for the involvement of private sector in the Major Ports.

1.7.2 Government also issued guidelines on joint venture formation in Major Ports which came into effect from 1.9.2000. In order to attract private sector investment, model bid documents were finalized for private sector projects laying down transparent bidding procedure, qualifications

and selection criteria, bid evaluation procedure, termination payment, dispute resolution process etc. and detailed terms and conditions of the License Agreement, to ensure bankability, uniformity and reduction in time taken to select the private parties.

1.7.3 The Major Port Trust Act, 1963 was further amended in the year 2000 for allowing Major Ports to form joint ventures with Non-Major/Foreign Ports as well as companies.

1.7.4 Measures for increasing the capacity of Major Ports which are under the control of Central Government are taken as part of an ongoing process, keeping in view the demands of maritime trade through implementation of development plans for the ports, improvement in productivity, etc. At the end of April, 2017; the cargo handling capacity of Major Ports was 1065.83 Million Tonnes. Commodity-wise capacity of Major Ports at the end of March 2009 to 2016 is given in Annex IV.

Private Sector Participation

1.7.5 With opening up of the Indian economy, the Government of India has allowed private sector participation in Major Ports to infuse funds, induct latest technology, improved management practices and above all addition of capacity. Foreign direct investment upto 100% under automatic route is permitted for construction and maintenance of Ports and Harbours. Maritime States have also identified projects for development of non-major ports for creation of additional capacity. Private sector is envisaged to fund most of the projects through PPP or BOT or BOOT basis. It is envisaged that private sector will mainly contribute towards the cost of development of ports in India.

1.7.6 To encourage private sector participation uniformity, clarity and transparency in the bidding process is of the prime importance. The Ministry of Shipping has already put in place guidelines for private sector participation. To ensure uniformity in short listing and bidding Model RFQ and RFP documents have been finalized. A Model Concession Agreement has also been finalized which attempts to bring in uniformity to the agreements to be signed by the Major Ports as Concessioning Authority with the various private operators as concessionaire. During the year 2015-16, 30 projects (10 Public private Partnership (PPP) and 20 Non-PPP) were awarded at an estimated investment of Rs. 15334.77 crore for capacity addition of 162.10 Million Tonnes in the major ports comprising construction of berths and terminals, mechanization of existing berths etc.

However, during the year 2016-17, 57 projects (2 PPP and 55 Non-PPP) were awarded at an estimated investment of Rs. 9490.51 crore for addition capacity of 103.52 Million Tonnes in the Major Port.

1.7.7 The preferred route for private sector participation is through open competitive bidding in which the bidder offering the highest percentage of revenue share out of the operation of the facility which is licensed out is selected. The tariff fixation is carried out by TAMP which is an independent Regulatory Body. At present the tariffs are fixed upfront which act as a ceiling before a project is bidded out on revenue share basis as explained above. The private operators are free to charge below the ceiling.

Areas of private investment

1.7.8 The following areas which are indicative in nature have been identified for participation/investment by private sector:-

(a) Leasing out existing assets of the Port.

(b) Construction/creation of additional assets, such as:

- ❖ Construction and operation of container terminals.
- ❖ Construction and operation of bulk, break bulk, multipurpose and specialized cargo berths.
- ❖ Warehousing, container freight stations, storage facilities and tank farms.
- ❖ Carnage/handling equipment.
- ❖ Setting up of captive power plants.
- ❖ Dry docking and ship repair facilities.

(c) Leasing of equipment for port handling and leasing of floating crafts from the private sector.

(d) Pilotage.

(e) Captive facilities for port based industries.

National Transport Development Policy Committee (NTDPC)

1.7.9 The Government of India had constituted National Transport Development Policy Committee (NTDPC) in 2010 under the Chairmanship of Dr. Rakesh Mohan to formulate a long term Transport Policy. The Committee has inter-alia made several recommendations for Port Sector

with the intent to provide a long term direction to the future development and governance of Indian ports and to incentivise and integrate water based transport for it to play an increasing role in the national transport network. Key recommendations of the Committee are:

a) Strategic view on port investment

(i) Mega ports

1.7.10 A key government priority should be to invest in 4 to 6 Mega ports over the next 20 years, with 2 to 3 on each coast to substantially cater to our foreign trade and the estimated requirement of raw material imports and exports by 2030. These mega ports can be established either by transforming some of the existing major (or non-major) ports into mega ports, if feasible, by combining some major and minor ports, or by setting up totally new mega ports. The location of the proposed mega ports should be harmonised with plans for the NHDP as well as with the upcoming and future DFCs.

(ii) Drafts

1.7.11 (a) A minimum draft availability of 14 mtrs in Major Ports has been targeted during the 12th Plan period. The targets for two hub ports, one each on the east coast and west coast are 17 mtrs. Plans to undertake capital dredging work to enhance the draft availability at channels and berths have been formulated by each major port. Presently, channels at Paradip, the outer harbour of Visakhapatnam, Chennai, Kamarajar, Cochin, New Mangalore, Mormugao and Jawaharlal Nehru ports have a draft of 14 mtrs or above, Proposals are in hand to raise the draft at Mormugao port and Kamarajar (Ennore) port to 18 mtrs and at Jawaharlal Nehru port to 15 mtrs.

b) Strategic Institutional shift – Landlord model of port governance

1.7.12 The ports in India, essentially the major-ports, widely follow a hybrid format of the long obsolete service port model and the preferred landlord model. The hybrid approach has resulted in a conflict of interest between the port trusts and the private sector. There is immediate need to make appropriate legislative and policy changes to expedite the move to the landlord model and to transform the port trusts to statutory landlord port authorities through specific legislation. All the terminal operations of port trusts would need to be corporatized as public sector corporations. Then,

both private- and corporatized public-sector terminal operators would compete under the aegis of the landlord port authority. The corporatized public sector terminal operators could potentially be disinvested, listed, and possibly privatised at a later stage. The landlord port authority would carry out all public sector services and operations such as the award of bids for containers and other terminals, dredging etc.

Any progressive regulatory shift should attempt to bring in the cooperation and participation of maritime states. New Land Policy Guidelines have since been issued in January, 2014. These guidelines provide an open and transparent framework for managing Port Lands. The Policy will ensure that land resources of the Ports are put to optimum use and all leasing of port lands is done through a transparent tender-cum-auction methodology. This has brought in accountability and minimized the element of discretion and arbitrariness at port level.

c) Role of TAMP

1.7.13 Tariff Authority for Major Ports (TAMP) regulates all tariffs in respect of Major Port Trusts and the private operators located therein. Necessary modifications in the Tariff Guidelines are made from time to time to promote the development of the Major Ports, Keeping in view the interest of the various stakeholders. In order to allow the competitive market forces to play a greater role in determination of tariff at Major Ports Trusts, the Government issued two new sets of Tariff Guidelines namely Guidelines for Determination of Tariffs for projects at Major Ports, 2013 and Guidelines for Port Charges, 2015. These Guidelines impart flexibility to the PPP operators as well as Major Ports owned terminals in determining their tariffs.

d) Coastal Shipping

1.7.14 With a view to promote coastal shipping, the Ministry of Shipping has taken a set of policy initiatives. One such initiative is to have a Green Channel clearance for cargo in major Ports as coastal cargo does not require customs clearance and only information needs to be filed with the customs. All the Major Ports are required to identify suitable infrastructure so that Green Channel clearance for coastal cargo can be made operational. Green Channel clearance has already become operational in 8 Major Ports. Presently because of lack of exclusive berth, storage area and gates for coastal cargo in the ports, there is considerable delay in clearance of these cargoes. The Ministry of Shipping has given a policy directive to all the major ports to have exclusive berths with associated storage space and separate gates for coastal cargo. A new scheme for setting up of coastal berths at

Major Ports has been approved. The Cabinet has also given approval to create a special purchase vehicle (SPV) to focus on providing different evacuation system in Major Ports and their connectivity.

Existing Coastal Berth Scheme has been revamped under Sagarmala project to provide financial support by way of grant to:

(a) Construction/ up-gradation of exclusive coastal berths for coastal cargo
(b) berths/Jetties for passenger ferries in Major/Non major Ports
(c) Construction of platforms/ jetties for hovercrafts/ seaplanes by ports (Major/Non-major ports/State government) in port waters
(d) Construction of berths/jetties in National Waterways and Inland of State governments concerned.
(e) Mechanization of Coastal berths for major ports and non-major ports
(f) Capital dredging grant for operative non-major ports and
(g) Construction of break water for existing and green filed ports

Assistance under the proposed revised scheme would be given up to 50% of the total cost of the project subject to a maximum of Rs. 25 crores for projects of construction/ upgradation of coastal berths.

e) Sagarmala Project

1.7.15 The project has been launched with an objective of modernising the ports along India's Coastline and achieving rapid expansion of port capacity and development in land and coastal navigation. The initiative aims at supporting port led development through appropriate policy and institutional interventions, port infrastructure enhancement including modernisation and setting up of new ports and efficient evacuation to and from hinterland. The work under the project will be done in close coordination with Maritime States/ UT governments.

f) A New Central Sector Scheme has been formulated for providing financial assistance to Major Ports for Green Port Initiatives.

1.7.16 The objective of the New Central Sector Scheme is to support Major Ports by way of financial assistance to formulate an Environmental Management and Monitoring Plan (EMMP) or

Green Plan as also to acquire equipments for monitoring the environmental pollution and take mitigating measures to keep the pollution within accepted regulatory standards/norms. It is also proposed to give financial assistance for taking up projects for energy generation from renewable energy resources as also for other projects for addressing Green Port Initiatives like water re-cycling, ecologically friendly garbage disposal, Green curtains, water curtains etc. Financial assistance under the Scheme would be given in the form of grant-in-aid. It would be given to the extent of Rs.50% of the cost of the project with the balance to be contributed by the concerned Major Port.

g) New Central Sector Scheme for providing assistance to Major Ports and oil handling Non-Major Ports under State Maritime Boards/ State Government for combating oil pollution and for mitigating measures

1.7.17 Government has formulated a new Central Sector Scheme for providing assistance to Major Ports and 26 oil handling Non-Major Ports under State Maritime Boards/ State Governments for combating oil pollution/spills and for mitigating measures. Financial assistance under the Scheme would be given in the form of grant-in-aid to help these ports procure pollution response (PR) equipments/ materials necessary for combating Tier-I oil spills in their port waters. Based on the risk of oil spill, these Ports have been divided in 3 categories viz category A, B, & C and for procurements of requisite Pollution Response equipments /materials. The estimate cost is Rs. 15 Cr., Rs. 2.50 cr and Rs. 1.00 cr. respectively. Assistance under the Scheme would be given upto 50% of the total cost of the procurement of pollution response (PR) equipments/ materials in 2 equal instalments and the balance 50% to be contributed by the respective port from its' own resources.

h) Stevedoring Policy

1.7.18 The Ministry of Shipping has formulated a new Stevedoring and Shore handling policy for Major Ports. The policy has been prepared in consultation with Major Ports and other Stake-holders. The policy shall come into effect in all the Major Ports except Haldia Dock Complex (HDC) not later than 01.04.2016. The policy envisages an open and transparent auction system based on the TAMP notified tariff to give licenses for stevedoring and shore handling on revenue sharing basis for a period of three years. It is expected that the policy will bring in competition amongst the service providers and enable qualitative and cost effective services to the Trade.

i) Benchmarking Study of Major Ports (Project UNNATI)

1.7.19 An international consultant was engaged 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.

1.7.20 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' 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.

1.7.21 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.

1.7.22 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.

j) Coastal Transportation of Vehicles by Ro-Ro Vessels

1.7.23 To promote Coastal Transportation of vehicles by Ro-Ro Vessels, the rebate on vessel related charge (VRC) and cargo related charge (CRC) at Major Ports has been increased from existing 40% to 80% for two years w. e. f. 20th September, 2016.

2. POLICY AND PERFORMANCE OF MARITIME STATES

2.1 Ports are economic and service provision units of a remarkable importance since they act as a place for the interchange of two transport modes, maritime and land, whether by rail or road. Therefore, the essential aspect of ports lies in their intermodal nature. India has a coast-line of over 7517 Kms with 12 major ports and 205 notified non-major (minor/intermediate) ports along the coast-line and sea-islands. These 205 Non-major ports are located in Gujarat (46), Maharashtra (48), Goa (5), Daman & Diu (2), Karnataka (9), Kerala (17), Lakshadweep (10), Tamil Nadu (16), Puducherry (3), Andhra Pradesh (12), Odisha (13), West Bengal (1) and Andaman & Nicobar Island (23). Out of these 205 Non-major ports, only some ports are well developed and provide all-weather berthing facilities for cargo handling. In 2016-17, only 71 Non-major Ports were reported to have handled cargo traffic. **Chart-VI** gives the geographical location of the Major and prime Non-Major Ports. The Maritime Ports operate within the statutory framework of the Indian Ports Act 1908 which applies to all the ports. However, the Major Ports Act 1963 applies only to Major Ports. Each Major Port is administered by a 'Port Trust' except for the port of Kamarajar (Ennore) which is a corporatized entity.

Chart - VI

Source: http://www.mapsofindia.com

2.2 The Major Ports are under the purview of the Centre while the Non-Major Ports are under the purview of the States. Port development in the Central Sector has emphasized additions to capacity as well as provision of commodity specific handling facilities (at Major Ports) as per the Plan Schemes. With the liberalization of the economy, private sector participation in development of Major Ports has been encouraged. The Maritime States are also actively pursuing the development of Non-Major Ports to meet the growing needs of the sea borne trade.

2.3 Maritime States Development Council (MSDC)

2.3.1 With a view to have an integrated approach for the development of both Major and Non-Major Ports, the **Maritime States Development Council (MSDC)** was constituted in May, 1997 under the Chairmanship of the Hon'ble Minister of Shipping. The Ministers in-charge of Ports in all Maritime States, Union Territories of Puducherry, Andaman's & Nicobar Administration, Daman & Diu and Lakshadweep are its members. The deliberations and decisions of the MSDC provide the institutional framework for coordinated development of Major and Non-Major ports. So far sixteen meetings of MSDC have been held.

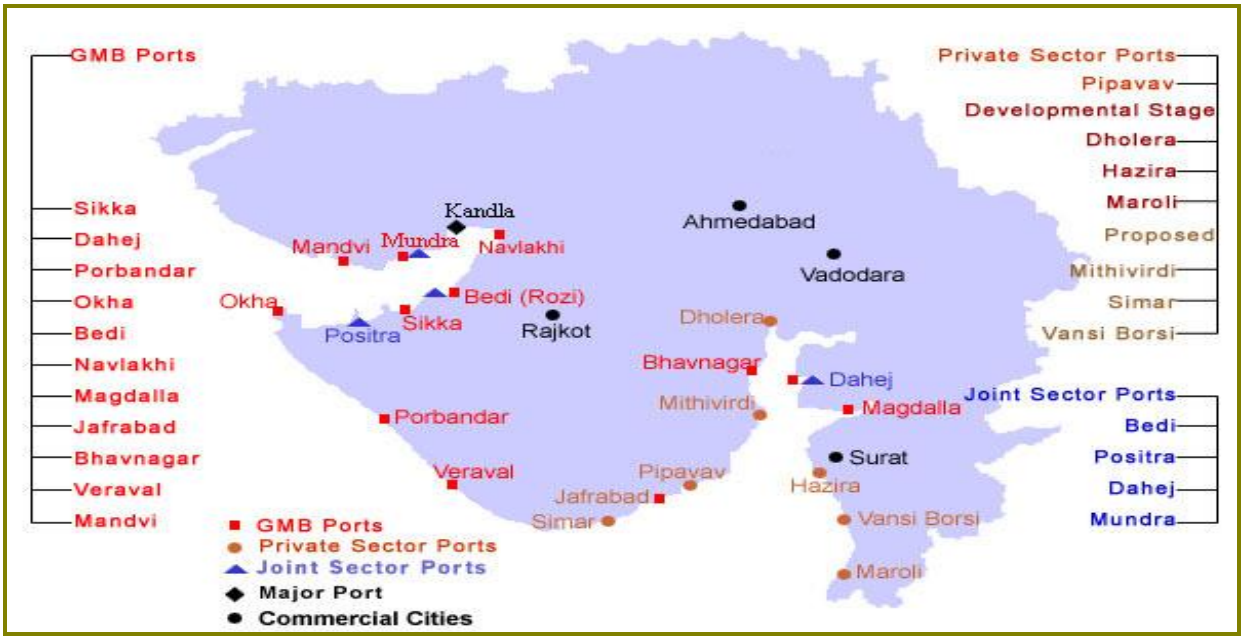
2.4 Maritime States – Non-Major Ports

2.4.1 Non-major ports in India collectively handled 248.33 million tonnes of traffic during first six months of 2017-18 as compared to 244.95 million tonnes of cargo handled in the same six months of 2016-17 recording growth of 1.4%.

2.4.2 GUJARAT

2.4.2.1 The state of Gujarat is endowed with 1215 km length of coastline which constitutes about one-sixth of the total Indian coastline. Out of 47 ports located along its coastline, 46 are non major ports while one port, viz. Kandla is a major port. Out of 46 non-major ports, 18 non-major ports in the State are handling cargo. The remaining 28 non-major ports are used for fishing activities and have negligible traffic. A snap view of the location of ports in Gujarat is given in **Chart –VII**

Chart – VII: Gujarat: Major and Minor Ports



Source : http://www.gmbports.org/port_pog.htm

2.4.2.2 The trends in the cargo handled at both major and non-major ports of the State during the last few years and first six months of the current and previous year are given in **Table 13**.

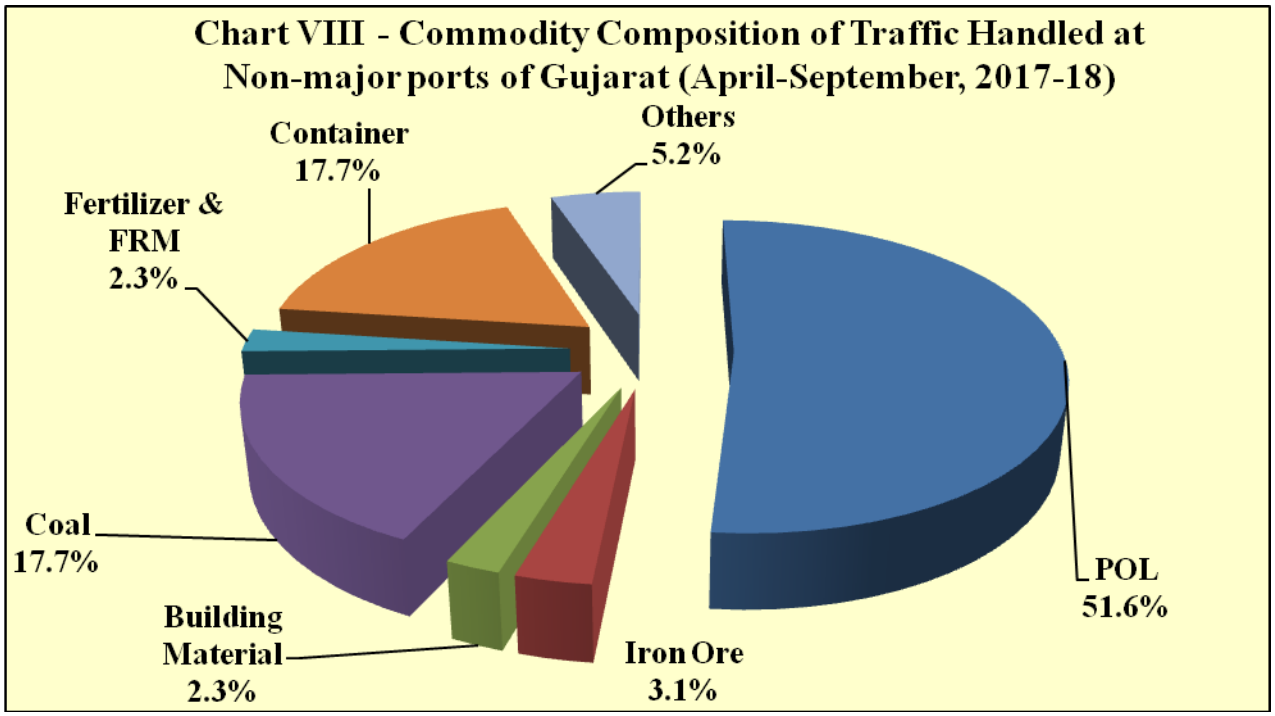
Table 13 - Gujarat: Trends in Cargo Handled at Major & Non-Major Ports
(MillionTonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	93.62	87.01	92.50	99.46	105.44	53.96	53.29
	(13.5)	-(7.1)	(6.3)	(7.5)	(6.0)		-(1.3)
Non-Major Ports	287.82	309.95	336.10	339.78	345.74	168.64	178.08
	(11.1)	(7.7)	(8.4)	(1.1)	(1.8)		(5.6)
All Ports	381.44	396.96	428.59	439.24	451.18	222.60	231.36
	(11.7)	(4.1)	(8.0)	(2.5)	(2.7)		(3.9)

Figures in bracket represent percentage change over the previous year/period.
(P) Provisional

2.4.2.3 It is noteworthy that all ports (major and non-major) located along the coast of Gujarat handled 40.3% of the total cargo handled by Indian ports in the first six months (April-September) of 2017-18. The total cargo traffic handled at the major and non-major ports of Gujarat during first six months (April-September) of 2017-18 was of the order of 231.36 million tonnes as against 222.60 million tonnes in the same periods of 2016-17, reflecting an increase of 3.9%. In particular, non-major ports of Gujarat alone handled more than 70% of total cargo traffic at India's non-major ports during first six months (April-September) of 2017-18.

2.4.2.4 Amongst the Maritime States of India, Gujarat is one of the States, which has played a proactive role in the development of non major ports on its coastline. The share of commodity-wise traffic handled by non-major ports of Gujarat is shown in **Chart VIII.**



2.4.2.5 Recent trends in cargo handled and capacity creation in non-major ports of Gujarat are captured in the **Table 14**. It indicates sustained increase in cargo throughout and capacity addition. During the year 2015-16, 35 million tonnes of capacity was added taking the total cargo handling

capacity in the non- major port sector in the Gujarat to 501 million tonnes in the year 2016-17. Gujarat Maritime Board (GMB) is the nodal agency for regulation and development of the State's maritime activities. The table indicates that from the year 2012-13 onwards the capacity of Non-major Ports increases every year. However, the capacity utilization of Non-major Ports in Gujarat decreased overtime. In 2013-14, the capacity utilization was 80.1% and it goes down to 79.6% in 2014-15 and further decreased to 72.9% and 69.0% in 2015-16 and 2016-17 respectively.

Table 14 - Gujarat: Non Major Ports - Capacity & Utilization

(Million Tonnes)

Item	2012-13	2013-14	2014-15	2015-16	2016-17 (P)
Capacity*	366	387	422	466	501
	(13.3)	(5.7)	(9.0)	(10.4)	(7.5)
Cargo Handled	287.82	309.95	336.10	339.78	345.74
% Utilization	78.6	80.1	79.6	72.9	69.0

Source: Gujarat Maritime Board

* Including Lighterage Port Capacity;

Figures within parenthesis indicate capacity addition in % age during the year

P:- Provisional

2.4.2.6 As per the port policy, Gujarat Maritime Board (GMB) has selected 11 Green Field sites for development of new ports as "All weather Deep Water Direct Berthing Ports". Amongst 11 ports, 6 ports are to be developed through private investment and remaining 5 ports in the joint sector.

2.4.3 MAHARASHTRA

2.4.3.1 The State has a coastline of around 653 km, with 2 major ports viz. Mumbai port and Jawahar Lal Nehru Port Trust (JNPT) and 48 non-major ports. Out of 48 non-major ports only 14 ports handle cargo. Maharashtra Maritime Board (MMB) is the nodal agency for regulation and development of the State's maritime activities. Total cargo handled during first six months of 2017-18 was 78.74 Million Tonnes compared to 77.15 Million Tonnes handled during same period of 2016-17 with the growth of 2.1%. However, the share of the cargo handled in two Major Ports of Maharashtra State in the Total cargo was 81.2% while share of Non-major Ports was only 18.8%.

The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 15.**

Table 15 - Maharashtra: Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	122.53	121.52	125.46	125.15	125.20	61.59	63.93
	(0.5)	-(0.8)	(3.2)	-(0.2)	(0.0)		(3.8)
Non-Major Ports	24.20	24.66	27.30	28.85	34.89	15.55	14.81
	(21.3)	(1.9)	(10.7)	(5.7)	(20.9)		-(4.8)
All Ports	146.73	146.18	152.76	154.00	160.09	77.15	78.74
	(3.4)	-(0.4)	(4.5)	(0.8)	(4.0)		(2.1)

Figures in bracket represent percentage change over the previous year/period.
P- Provisional

2.4.4 GOA

2.4.4.1 Goa with a coastline of about 118 kms is criss-crossed by 7 rivers. Apart from the major port at Mormugao, there are five non-major ports all of which are riverine ports with an average depth of about 2 meters except Panaji (which is the lone cargo handling non-major port) with a depth of 4 meters. In Goa State, the cargo handled at Non-major Ports was very less compared to Major Port. The percentage share of Major port in the total cargo handled in the Goa state was 99.9%.

The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 16.**

Table 16: Goa : Trends in Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	17.74	11.74	14.71	20.78	33.18	13.06	12.67
	-(54.6)	-(33.8)	(25.3)	(41.3)	(59.7)		-(3.0)
Non-Major Ports	3.39	0.28	0.76	0.43	0.117	0.1	0.01
	-(76.6)	-(91.6)	(167.6)	-(43.4)	-(72.8)		-(90.7)
All Ports	21.13	12.024	15.47	21.21	33.30	13.11	12.68
	-(60.5)	-(43.1)	(28.7)	(37.1)	(57.0)		-(3.3)

Figures in bracket represent percentage change over the previous year/period.
(P) Provisional.

2.4.5 KARNATAKA

2.4.5.1 Karnataka has a coastline of about 280 kms. At present, there is one major sea port, the New Mangalore Port and 9 non-major ports in Karnataka. Out of 9 non-major ports, 4 ports handle cargo in the state which is: Mangalore, Malpe, Hangarkatta and Karwar port. During 2016-17, non- major ports in the State handled 0.69 million tonnes of cargo traffic as compared to 0.84 million tonnes in 2015-16 reflecting a decresase of 17.4%. However, during first six months (April-September) of 2017-18, non-major ports in the State handled 0.29 million tonnes of cargo traffic as compared to 0.32 million tonnes in same period of 2016-17 reflecting decline of 7.9%. The percentage share of Major port in the total cargo handled in the Karnataka state was 98.5%.

2.4.5.2 The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 17.**

Table 17 - Karnataka: Trends in Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	37.04	39.36	36.57	35.58	39.95	17.50	19.55
	(12.4)	(6.3)	-(7.1)	-(2.7)	(12.3)		(11.7)
Non-Major Ports	0.61	0.51	0.65	0.84	0.69	0.32	0.29
	(3.4)	-(16.6)	(27.9)	(28.3)	-(17.4)		-(7.9)
All Ports	37.65	39.87	37.22	36.42	40.64	17.81	19.84
	(12.3)	(5.9)	-(6.7)	-(2.2)	(11.6)		(11.4)

Figures in bracket represent percentage change over the previous year/period.
(P) Provisional.

2.4.6 KERALA

2.4.6.1 Kerala has a coastline of 570 kms, with one major port at Cochin and 17 other non-major ports. The Vallarpadam Container Terminal Project in Cochin has been promoted on BOT basis through public private participation. In Kerala, there are four non-major ports; handling cargo are Kovalam /Vizhinjam, Kollam / Neendakara, Beypore and Azhikkal. The total cargo handled during first six months of 2017-18 in the Kerala State was 14.32 Million Tonnes as compared to

11.97 million tonnes cargo handled during same period of 2016-17 with the growth of 19.6%. The total cargo handled at Kerala over the year has been increased from 2013-14 onwards.

2.4.6.2 The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 18**.

Table 18 - Kerala : Trends in Cargo Handled at Major & Non-Major Ports

(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	19.84	20.89	21.60	22.10	25.01	11.92	14.26
	-(1.2)	(5.3)	(3.4)	(2.3)	(13.2)		(19.6)
Non-Major Ports	0.10	0.09	0.16	0.14	0.14	0.05	0.06
	-(4.0)	-(6.3)	(76.7)	-(9.4)	-(2.8)		(20.0)
All Ports	19.94	20.98	21.75	22.24	25.15	11.97	14.32
	-(1.3)	(5.2)	(3.7)	(2.3)	(13.1)		(19.6)

Figures in bracket represent percentage change over the previous year/period.

(P) Provisional.

2.4.7 TAMIL NADU

2.4.7.1 Tamil Nadu has a coastline of about 906 km, with 3 major ports at Chennai, Kamarajar (Ennore) and Chidambaranar (Tuticorin) and 16 non-major ports. Out of 16 non-major ports, only 5 ports handled Cargo are Cuddalore, Nagapattinam, Ennore, Kattupalli and Thirukkadaiyur. A Port Policy for promoting private investment for the development of minor ports in Tamil Nadu has been formulated. Its main objectives are to provide exclusive port facilities for import of Coal/Naphtha/Oil/Natural Gas for shore based thermal power plants, promote export oriented and port based industries along the coastal districts of Tamil Nadu, encourage ship-repairing, ship-breaking and manufacture of cranes and floating cranes. In addition, leisure tourism and water sports along the coastline are also aimed.

2.4.7.2 During first six months (April-September), 2017-18, the non-major ports in Tamil Nadu collectively handled 0.51 million tonnes of cargo traffic as compared to 0.48 million tonnes in the

same period of 2016-17 showing a growth of 6.2%. The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 19.**

Table 19 - Tamil Nadu: Trends in Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	99.55	107.08	115.21	119.11	118.70	60.14	57.37
	(0.8)	(7.6)	(7.6)	(3.4)	-(0.3)		-(4.6)
Non-Major Ports	0.93	0.87	0.83	0.86	1.17	0.48	0.51
	-(23.1)	-(6.9)	-(4.7)	(3.8)	(36.7)		(6.2)
All Ports	100.48	107.95	116.03	119.97	119.87	60.62	57.88
	(0.5)	(7.4)	(7.5)	(3.4)	-(0.1)		-(4.5)

Figures in bracket represent percentage change over the previous year/period.
(P) Provisional.

2.4.8 ANDHRA PRADESH

2.4.8.1 Andhra Pradesh has one major port at Visakhapatnam besides 12 non-major port locations: Bhavanapadu, Meghavaram, Bheemunipatnam, Gangavaram, Kakinada SEZ, Kakinada Deep Water, Rawa, Narsapur, Machilipatnam, Nizamapatnam, Vodarevu , Mutyalammapalem and Krishnapatnam. In addition, the department of ports is taking up limited operations at the Kakinada anchorage port.

2.4.8.2 Ports in Andhra Pradesh collectively handled 67.9 million tonnes of cargo during first six months (April-September) of 2017-18 compared with 64.7 million tonnes in the same six months of 2016-17 thus registering increase of 4.8% in traffic handled by major and non-major ports of Andhra Pradesh. Non-major ports in Andhra Pradesh posted positive growth of 10.7% in the first six months (April-September) of 2017-18 from 34.06 million tonnes to 37.72 million tonnes in the year 2017-18. The trend in the cargo handled at both major and non-major ports of the state during the last few years and current year is given in **Table- 20.**

Table 20 - Andhra Pradesh: Trends in Cargo Handled at Major & Non-Major Ports (Million Tonnes)							
Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	59.04	58.50	58.00	57.04	61.02	30.67	30.15
	-(12.4)	-(0.9)	-(0.8)	-(1.7)	(7.0)		-(1.7)
Non-Major Ports	51.81	58.69	83.42	72.73	69.60	34.06	37.72
	(13.5)	(13.3)	(42.1)	-(12.8)	-(4.3)		(10.7)
All Ports	110.85	117.2	141.4	129.8	130.6	64.7	67.9
	-(1.9)	(5.7)	(20.7)	-(8.2)	(0.7)		(4.8)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.							

2.4.9 ORISSA

2.4.9.1 Orissa has a Coast line of 480 Kms. from Andhra Pradesh border in Ganjam District to West Bengal border in Balasore District. It is endowed with conducive, unique, natural and strategic port locations. The Government of Orissa identified 14 potential sites for development of Minor Ports. To facilitate developers for development of Minor Ports, Government of Orissa framed the Port Policy during the year 2004.

2.4.9.2 The advantages for development of sea ports in Orissa includes availability of a vast hinterland generating cargo, comprising of other developing Eastern and Central Indian States, mineral rich hinterland which offers long term potential for cargo which need seaport facility in Orissa. Paradip port is the only major port in the State under the control of Government of India which is packed to accommodate increasing traffic.

2.4.9.3 Non-major ports in Orissa collectively handled 12.55 million tonnes of cargo during first six months (April-September) of 2017-18 compared to 20.37 million tonnes in the corresponding period of 2016-17 registering a decrease of 38.4% in traffic. However, the total cargo handled during first six months of 2017-18 was 60.16 million tonnes compared to 63.04 million tonnes in the corresponding period of 2016-17 registering a decrease of 4.6% in traffic. The cargo handled at Major port has increased a growth of 11.6% from 42.67 million tonnes to 47.61 million tonnes in

the same period of 2017-18. The trends in the cargo handled at both major and non-major ports of the State during the last few years and current year are given in **Table 21**.

Table 21 - Orissa : Trends in Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	56.55	68.00	71.01	76.40	88.96	42.67	47.61
	(4.2)	(20.2)	(4.4)	(7.6)	(16.4)		(11.6)
Non-Major Ports	11.07	14.37	15.45	14.95	22.47	20.37	12.55
	(117.9)	(29.8)	(7.5)	-(3.3)	(50.3)		-(38.4)
All Ports	67.62	82.37	86.46	91.35	111.43	63.04	60.16
	(14.0)	(21.8)	(5.0)	(5.7)	(22.0)		-(4.6)

Figures in bracket represent percentage change over the previous year/period.
(P) Provisional.

2.4.10 WEST BENGAL

2.4.10.1 The State of West Bengal has a coastline of about 158 kms which has two Docks at Kolkata Port Trust and Haldia Port Trust under a single major port and one non- major port. The trends in the cargo handled at both major and non-major ports of the State during the last few years and current year are given in **Table 22.**

Table 22 - West Bengal :Trends in Cargo Handled at Major & Non-Major Ports
(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Major Ports	39.93	41.39	46.29	50.29	50.31	24.62	27.57
	-(7.7)	(3.7)	(11.8)	(8.6)	(0.0)		(11.9)
Non-Major Ports	0	0	0	0	0	0	0
All Ports	39.93	41.39	46.29	50.29	50.31	24.62	27.57
	-(7.68)	(3.66)	(11.85)	(8.63)	(0.04)		(11.95)

Figures in bracket represent percentage change over the previous year/period.
P- Provisional

2.4.11 OTHER NON-MAJOR PORTS

2.4.11.1 The other non-major ports are spread across the Union Territories (UTs) of Daman & Diu, Puducherry, Lakshadweep and Andaman & Nicobar Islands. These ports in the UTs are administered through their respective Departments. Andaman & Nicobar Islands administration has constituted a 'Port Management Board' for the development of ports in the Islands. The two non-major ports of Daman & Diu are not handling any cargo traffic for the last few years.

2.4.11.2 The trends in the cargo handled at both major and non-major ports of the Andaman & Nicobar Islands during the last few years and current year are given in **Table 23**.

Table 23 - Union Territory: Trends in Cargo Handled at A & N Islands Port

(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Andaman & Nicobar Islands	1.07	1.15	1.16	1.32	1.28	0.84	0.91
	-(11.6)	(7.5)	(0.5)	(14.4)	(1.3)		(8.0)

Figures in bracket represent percentage change over the previous year/period.
P- Provisional

2.4.11.3 In January 2006, the Government of Puducherry entered into a concession agreement with private developers for the development of deep water ports on BOT basis at Puducherry and Kariakal. The commercial operations started in April 2009.

2.4.11.4 The trends in the cargo handled at both major and non-major ports of the State during the last few years and current year are given in **Table 24**.

Table 24 - Union Territories: Trends in Cargo Handled at Non-Major Ports

(Million Tonnes)

Major/Non-Major	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April-September	
						2016-17 (P)	2017-18 (P)
Lakshadweep	0.03	0.12	0.12	0.12	0.12	0.00	0.00
	(0.0)	(296.7)	(0.0)	(0.0)	(0.0)		(0.0)
Puducherry	6.91	6.28	4.96	5.97	9.11	4.59	3.41
	(7.6)	-(9.1)	-(21.1)	(20.5)	(52.5)		-(25.7)

Figures in bracket represent percentage change over the previous year/period.
P- Provisional

3: PERFORMANCE INDICATORS

3.1 Capacity Utilization

3.1.1 Over the years, cargo handling capacity of major ports has steadily increased to cater to the growing volume of internal and external trade. The capacity of the ports which was 172.59 million tonnes at the end of 1993-94 increased to a level of 1065.83 tonnes at the end of 2016-17. The port-wise capacity for 2016-17 and traffic handled during first six months of 2017-18 is brought out in **Table 25.**

Table 25-Major Port-wise Capacity Utilization during April-September, 2017-18 (Million Tonnes)

S. No.	Name of Ports	Capacity*	Traffic	Capacity Utilization (%)
1	Kolkata Ports of Trust	26.21	8.4	32.0
2	Haldia Dock Complex	69.89	19.1	27.3
3	Paradip Port Trust	143.44	47.6	33.2
4	Visakhapatnam Port Trust	110.75	30.1	27.2
5	Kamarajar Ports Limited	57.00	13.8	24.2
6	Chennai Port Trust	93.44	26.2	28.0
7	VOC-Chidambaranar Port Trust	65.90	17.3	26.3
8	Cochin Port Trust	56.57	14.3	25.3
9	New Mangalore Port Trust	87.63	19.6	22.4
10	Mormugao Port Trust	50.04	12.7	25.4
11	Mumbai Port Trust	65.33	31.2	47.8
12	Jawaharlal Nehru Port Trust	89.37	32.7	36.6
13	Kandla Port Trust	150.26	53.3	35.5
	Total	**1065.83**	**326.3**	**30.6**

Note: *The capacity for major ports has not been received for the year 2017-18. Hence the capacity has been used same for the last year capacity i.e. 2016-17.

3.2 Cargo Traffic Targets during 2016-17 & achievement upto September, 2017 for Major ports.

3.2.1 Achievement upto September, 2017 against the projected targets of 2016-17 is given in **Table-26.**

Table 26: Annual Cargo Traffic Targets during 2016-17 and achievement upto September, 2017 (In Million Tonnes)				
S. No.	Name of Ports	Targets 2016-17	Traffic upto April-September, 2017	% age Achievement
1	Kolkata Ports of Trust	16.3	8.4	51.5
2	Haldia Dock Complex	37.5	19.1	50.9
3	Paradip Port Trust	83.1	47.6	57.3
4	Visakhapatnam Port Trust	60.0	30.1	50.2
5	Kamarajar Ports Limited	36.0	13.8	38.3
6	Chennai Port Trust	55.6	26.2	47.1
7	VOC-Chidambaranar Port Trust	39.5	17.3	43.8
8	Cochin Port Trust	25.0	14.3	57.2
9	New Mangalore Port Trust	37.3	19.6	52.5
10	Mormugao Port Trust	19.4	12.7	65.5
11	Mumbai Port Trust	62.0	31.2	50.3
12	Jawaharlal Nehru Port Trust	67.5	32.7	48.4
13	Kandla Port Trust	105.0	53.3	50.8
	Total	**644.2**	**326.3**	50.7

Note: *The target for major ports has not been received for the year 2017-18. Hence the target of major port has been used same for the last year target i.e. 2016-17.

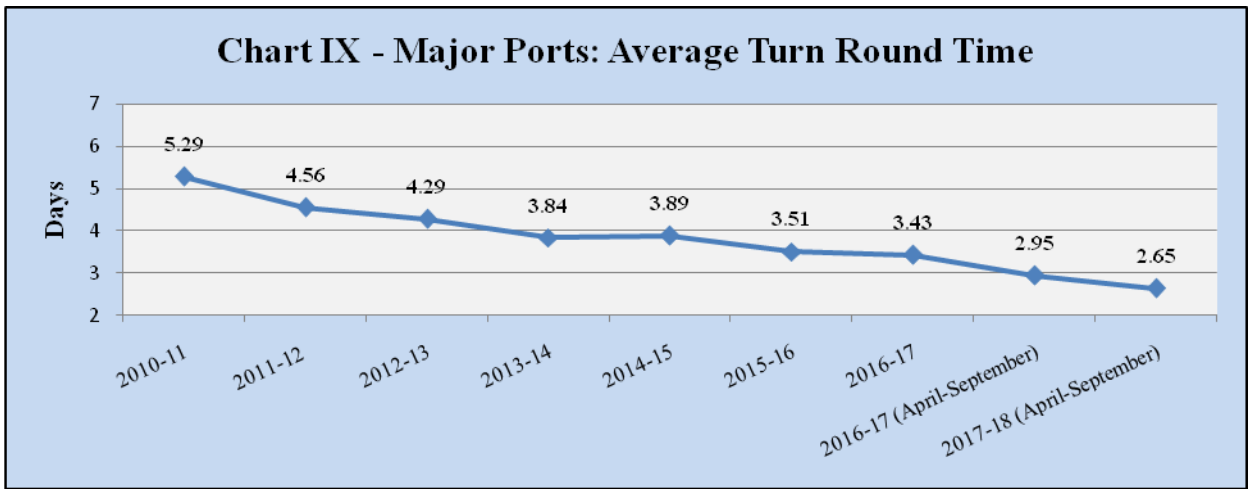
3.3 Port Efficiency

3.3.1 Efficiency at ports has an impact on transaction cost of shipping lines. Major Ports have improved their efficiency of operations as reflected in select physical performance indicators over the last several years. Some key operational indicators of physical performance pertaining to major ports for the select years are elaborated below.

Average Turn-Round Time (TRT)

3.3.2 This parameter has improved significantly during the past one and half decades for all the major ports. Average TRT for all major ports improved from 8.10 days in 1990-91 to 3.63 days in 2005-06. Thereafter the TRT has increased steadily to 4.56 days in 2011-12. In 2012-13, the average TRT declined to 4.29 days and further to 3.84 days in 2013-14. However, TRT increased to 3.89 during 2014-15. TRT declined to 3.51 days in 2015-16 and declined to 3.43 days in 2016-17. The TRT declined to 2.65 during first six months of 2017-18. The TRT varied in the range between 1.99 days at Cochin Port to 4.99 at Paradip port during 2016-17. It has been improved the TRT in the first six months of 2017-18. The TRT varied in the range between 1.60 days at Cochin Port to 4.61 at Kolkata Port Trust during April-September, 2017-18. Amongst the 12 major ports, improvement in TRT during April-September, 2017-18

compared to corresponding period of 2016-17 is reflected in all Major Ports except Kolkata, Chidambaranar, Cochin, New Mangalore and Jawaharlal Nehru. Port-wise TRT for select years are given in **Table 27**. Average Turn Round Time at major ports for select years since 2010-11 to 2017-18 (upto September, 2017) is presented in the **Chart IX** below.



Turn-Round Time - Total time spent by a ship since its entry till its departure.

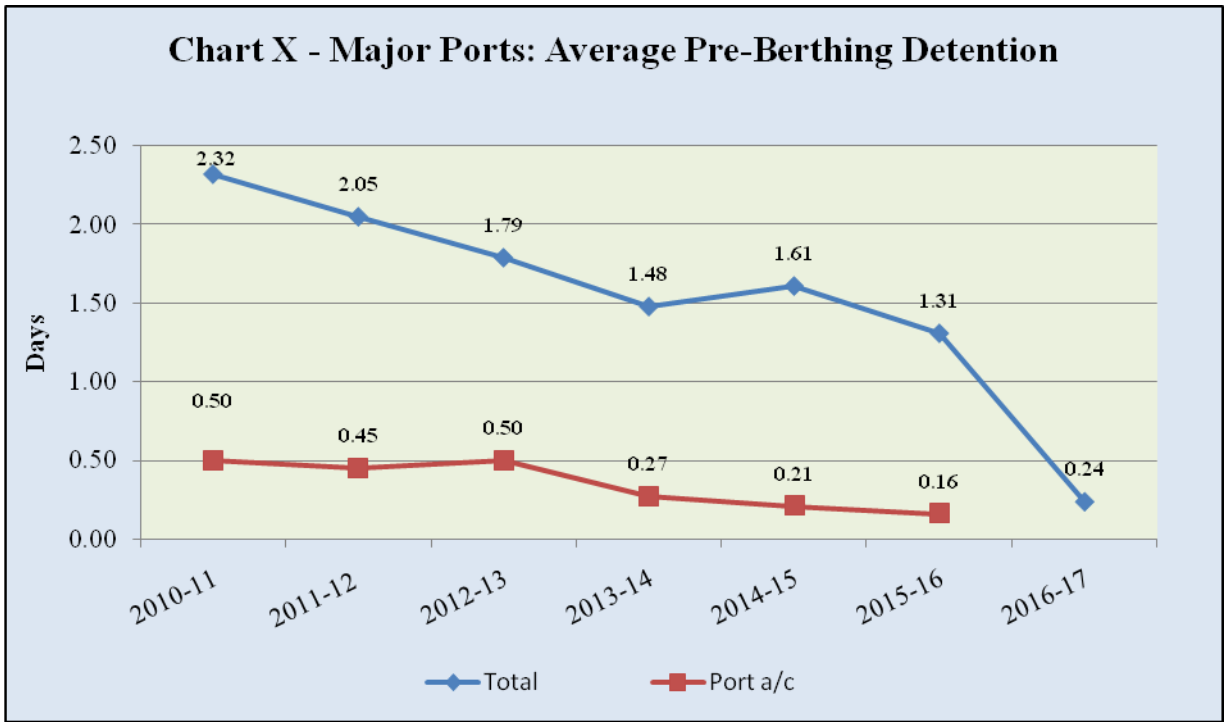
Table 27: Average Turn Round Time (days)

Port	2012-13	2013-14	2014-15	2015-16	2016-17(P)	April- September	
						2016-17 (P)	2017-18 (P)
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Kolkata D.S	4.72	4.51	4.97	4.78	4.73	4.41	4.61
Haldia D.C	3.95	3.77	3.36	3.27	3.45	4.97	3.00
Paradip	4.39	4.62	7.01	4.50	4.99	3.46	3.37
Vishakhapatnam	5.39	4.73	5.67	3.84	3.75	2.59	2.42
Ennore (Kamarajar)	2.95	4.24	4.32	6.87	2.70	2.74	2.61
Chennai	3.24	2.46	2.54	2.53	2.51	2.69	2.27
Tuticorin (Chidambaranar)	4.31	3.92	3.37	3.53	4.40	2.32	2.33
Cochin	1.58	1.76	1.69	2.18	1.99	1.46	1.60
New Mangalore	3.29	3.18	2.46	2.63	2.35	1.73	1.98
Mormugao	5.06	4.50	3.97	3.37	4.51	5.54	2.76
J.L.Nehru	2.48	2.26	2.24	2.31	2.01	2.01	2.32
Mumbai	5.58	4.25	4.09	3.29	3.27	3.38	2.91
Kandla	6.33	5.66	4.90	4.28	4.40	2.74	2.52
All Ports	**4.29**	**3.84**	**3.89**	**3.51**	**3.43**	**2.95**	**2.65**

Source: Major Ports / Indian Ports Association (IPA)

Average Pre Berthing Detention Time (PBDT)

3.3.3 The average overall pre berthing detention time for all major ports declined from 2.16 days in 1990-91 to 1.63 days in 2008-09. However, in 2009-10 and 2010-11, the average PBDT edged up to 2.16 days and 2.32 days respectively. In contrast, average PBDT on port account has seen a sharper decline from 2.10 days in 1990-91 to 0.50 day in 2010-11. Average PBDT on port account were at 0.45 and 0.50 days in 2011-12 and 2012-13 respectively. In 2013-14, the Average PBDT declined to 0.27 days and further declined to 0.21 days and 0.16 days in 2014-15 and 2015-16 respectively. Average PBDT on port account in the current year (upto September, 2017-18) recorded 0.24 days. Port-wise PBDT for select years is indicated in **Table 28.** The trajectory of weighted average of pre berthing detention time at Major ports- total and on port since 2010-11 to 2016-17 is shown in **Chart X** below.



Pre-Berthing Detention - The time for which a ship waits before getting entry into berth.

Table 28 : Average Pre-Berthing Detention(Days)

Port	2012-13	2013-14	2014-15	2015-16	2016-17 (P)*	April-September*	
						2016-17 (P)	2017-18 (P)
1	3	4	5	6	7	8	9
Kolkata D.S	0.61	0.56	0.71	0.50	0.03	0.01	0.00
Haldia D.C	2.29	2.21	1.43	0.66	0.88	0.75	0.59
Paradip	1.65	1.94	4.11	2.05	0.58	0.86	0.83
Vishakhapatnam	2.50	1.84	2.59	1.47	0.02	0.02	0.02
Ennore (Kamarajar)	1.33	2.38	2.51	4.73	0.00	0.00	0.00
Chennai	0.80	0.41	0.41	0.44	0.04	0.03	0.04
Tuticorin (Chidambaranar)	1.31	1.19	1.07	1.33	0.37	0.60	0.23
Cochin	1.09	0.97	0.81	0.66	0.24	0.00	0.00
New Mangalore	1.04	0.81	0.60	0.76	0.14	0.16	0.13
Mormugao	1.62	1.47	1.61	1.38	0.40	0.48	0.50
J.L.Nehru	1.31	1.08	0.80	1.17	0.29	0.30	0.40
Mumbai	1.62	1.18	1.69	1.27	0.09	0.07	0.05
Kandla	3.58	2.72	2.52	1.98	0.09	0.10	0.08
All Ports	**1.79**	**1.48**	**1.61**	**1.31**	**0.24**	**0.27**	**0.24**

Source: Major Ports/ Indian Ports Association (IPA) - * - Relates to Ports A/c only.

Average Output Per Ship Berth-day

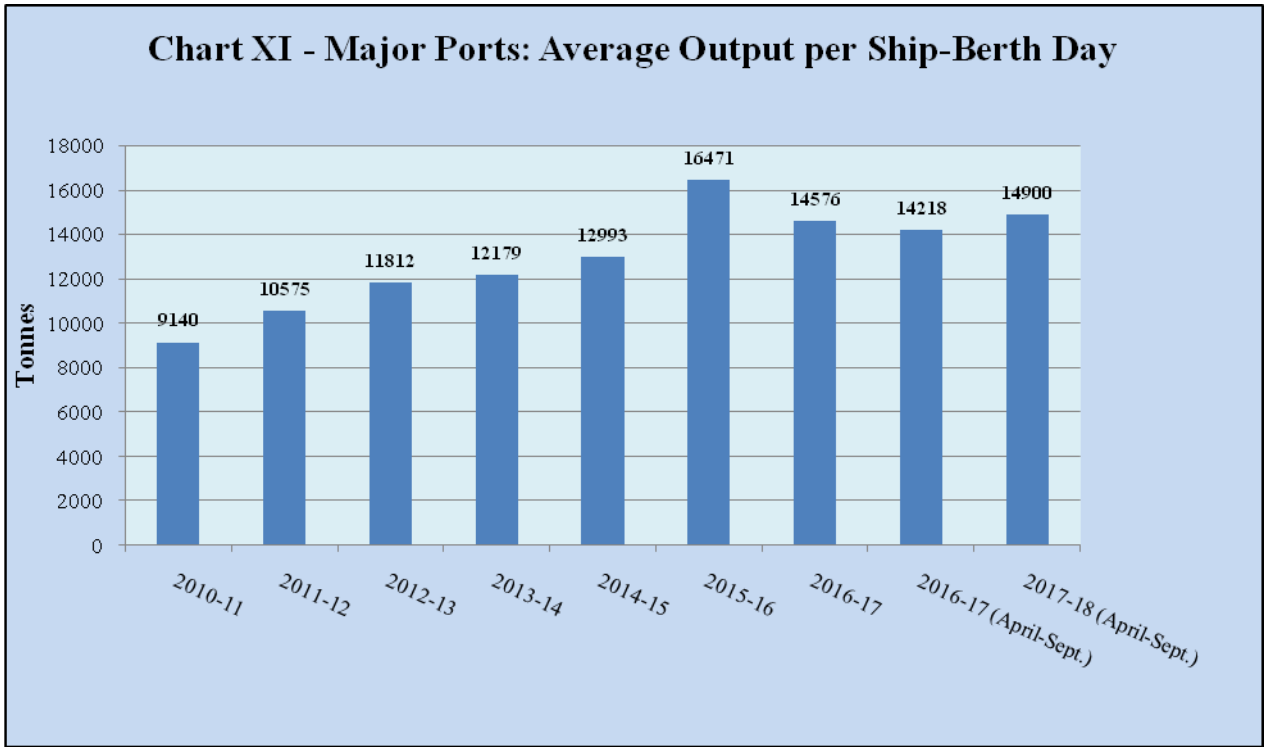
3.3.4 During the last 25 years this indicator has seen a tremendous improvement. Average Output per Ship-berth day has increased more than four times from 3,372 tonnes in 1990-91 to 14576 tonnes in 2016-17 for major ports and further increased to 14900 in 2017-18 (upto September, 2017). However, average output per ship berth-day during April-September, 2017-18 is marked by substantial variation across major ports ranging from a high 24330 tonnes in case of Paradip port to a low of 4263 tonnes at Kolkata Dock System. This variation reflects the type of cargo being handled, level of mechanization and labour practices. Amongst the 12 major ports, improvement in average Output per Ship Berth-day during first six months of 2017-18 (Upto September, 2017-18) over the corresponding period of the previous year is visible in all the ports except New Mangalore and J. L. Nehru Port. Average Output per Ship-berth-day during 2017-18 (upto September, 2017) is 14900 tonnes compared to 14218 tonnes over the corresponding period of the previous year. Port-wise average output per Ship-berth-day for select years and latest period are given in **Table 29.**

Table 29 : Average Output per Ship Berth-day (Tonnes)

Port	2012-13	2013-14	2014-15	2015-16	2016-17 (P)	April- September (P)	
						2016-17	2017-18
1	**2**	**3**	**4**	**5**	**6**	**7**	**8**
Kolkata D.S	2762	2963	3084	3201	4200	4174	4263
Haldia D.C	6078	6130	6802	9126	7491	7739	8426
Paradip	16625	18179	17736	26965	23727	22214	24330
Visakhapatnam	10641	10925	10640	17179	13069	12889	13687
Ennore (Kamarajar)	27741	22357	22613	31106	22924	22241	24092
Chennai	12046	14268	14464	18976	15888	15739	15774
Tuticorin (Chidambaranar)	7452	9633	10468	13619	10456	10653	11313
Cochin	15878	15881	16906	20962	17450	16394	19440
New Mangalore	15921	16314	19856	16165	17094	16465	15673
Mormugao	11484	10018	12272	21542	13461	12984	14872
J.L.Nehru	23319	23014	21310	23792	23316	22802	22331
Mumbai	8709	7057	11055	18020	8413	8065	8071
Kandla	15728	15729	15159	16538	18464	17789	18101
All Ports	**11812**	**12179**	**12993**	**16471**	**14576**	**14218**	**14900**

Source: Major Ports/Indian Port Association (IPA)

3.3.5 The average output per ship-berth-day for the selected years since 2010-11 to 2017-18 (Upto April-September, 2017-18) is presented in the chart XI below.



4. PRIVATE SECTOR/CAPTIVE/JOINT SECTOR PORT PROJECTS

4.1 Brief details of the ongoing Private Sector/Captive/Joint Sector Port Projects and a list of these projects under consideration as on 30.9.2016 are brought out in Appendix-I & Appendix-II in respect of Major Ports and in Appendix-III & Appendix-IV for Non – Major Ports.

APPENDICES

I. On going Private Sector/Capative/ Joint Venture Port Projects at Major Ports

II. Under Formulation Private Sector/Capative/ Joint Venture Port Projects at Major Ports

III. On going Private Sector/Capative/ Joint Venture Port Projects at Non-Major Ports

IV. Under Formulation Private Sector/Capative/ Joint Venture Port Projects at Non- Major Ports

Appendix – I

Ongoing Private Sector/Captive/Joint venture Port Projects
(Major Ports)

Sl. No	Project Name	Port Name	Capacity (Million Tonnes)	Project Cost (Rs. Crores)	Project Status
1	2	3	4	5	6
1.	Development of Container Terminal on DBFOT basis	Kamarajar Port Ltd	16.8MTPA (Phase I - 9.6 MTPA Phase II- 7.2 MTPA)	1270	* Phase I of the project commissioned on 09.06.2017.
2.	Development of Multi Cargo Terminal on DBFOT basis	Kamarajar Port Ltd	2.00	151.00	Project commissioned on 09.06.2017.
3.	Construction of Coal Berth No.3	Kamarajar Port Ltd	9.00	246.96	*Physical Progress-95%. *Targeted for completion for construction of berth by 31.10.2017.
4	Construction of Coal Berth-4	Kamarajar Port Ltd	9.00	261.18	*Physical progress-87.94% * Targeted for completion for construction of berth by 31.12.2017.
5.	Development of LNG Terminal on Captive Basis.	Kamarajar Port Ltd	5.00	5151.00	*Physical progress-78.10%. *Date of commissioning -30.12.2018.
6.	NTPL Captive Berth North cargo berth-I	V.O. Chidambaranar Tuticorin	6.30 MTPA	43.72	Berth was constructed by Port on deposit basis and handled over to NTPL on 04.10.2012 for installation of Shore reception facility. The concession agreement finalized and yet to be signed.

7.	Construction of two New Off-shore Container berths & Development of Container Terminal berth on BOT basis in Mumbai Harbour.	Mumbai Port Trust	9.60 MTPA (1.00 Mn TEUs)	2098	Project stalled since 2013. Efforts on to revive the same by altering the cargo mix to Ro-Ro, steel, containers by re-bidding, keeping the minimum revenue share same (35.06 %) & giving RoFR to existing license. Draft cabinet note circulated. Proposal concurred by SFC in its meeting held on 12.09.2017. RFQ will be invited once government clears restructuring of the project.
8.	Multi-User Liquid Terminal (MULT) at Puthuvypeen SEZ (International Bunkering Terminal at Cochin)	Cochin Port Trust	4.52 MMTPA	240	GoI's in principle approval for assigning the MULT projects to IOCL on nomination basis given on 11.03.2013. The concession Agreement between CoPT & IOCL was signed on 04.04.2014. M/s IOCL have entrusted CoPT with execution of construction of MULT jetty and its associated facilities, on deposit terms. Environmental Clearance to the project was accorded by MoEF & CC on 12.02.2016. M/s L&T Ramboll Consulting Engineers Ltd. Chennai was entrusted with preparation of FEED document and Bid document for the Development of MULT. The Construction of MULT including MULT Jetty and Barge Berth was awarded to the Contractor, M/s. RKEC Projects Pvt. Ltd, Visakhapatnam for Rs.217.33 Crores on 23.07.2015. Works of MULT Jetty is in progress. All marine civil works of Barge Jetty completed on 20.08.2017. Physical progress achieved is 75.2%. The tentative date of completion is February 2018. For Capital Dredging for MULT Basin, Letter of Intent has been issued to M/s DCI on 17.08.2015.
9.	Mechanized of berth No. 18(old no.12) for providing equipments for handling Bulk Cargo at NMPT basis.	New Mangalore Port Trust	6.73 MTPA	469.46	*Concession Agreement signed with M/s Chettinad Mangalore Coal Terminal Private Limited on 18.03.2016. *The MoEF issued the amendment to EC vide letter dated 14.12.2016. *Date of award of concession on 31.01.2017. *Works are under progress.

10.	Development of Barge handling facility at Bharathi Dock under PPP model	Chennai Port Trust	1.35 MTPA	27.29	Project awarded to CBTPL (construction of IMC Ltd.) on 30.01.2013, but due to non-fulfillment of conditions precedent, termination order issued in Feb-2016. Arbitration and court case proceeding in progress. Alternative in-house project will be awarded after the completion of arbitration proceeding on the PPP Berge project.
11.	Development of EQ-1A berth on south side of EQ-1 berth in Inner Harbour for handling Thermal coal and Steam coal on DBFOT basis.	Visakhapatnam Port	7.36	3133.90	Project was awarded on 08.08.2012. Termination Notice issued to the Concessionaire on 03.04.2017 since the Concessionaire failed to cure the event of default by 31.03.2017. Concessionaire filed petition in Hon'ble City Civil Court, Hyderabad. The city civil court has dismissed the petition and VPT encashed Bank Guarantee of Rs. 15.76 crores. Legal opinion is being taken from Auditor General regarding lenders charge on assets by the Concessionaire
12.	Installation of mechanical unloading facilities for fertilizers at EQ-7 berth in Inner Harbor.	Visakhapatnam Port	5.21	2175.80	Concession agreement was signed on 08.08.2012. VPT Board in the meeting held on 17.06.2016 resolved vide Resolution No. 35/2016-17 to terminate the project on mutual consent by a special instrument called the Cancellation Agreement. A retired District Judge has been appointed for delivering the expert opinion on the dispute. The termination procedure is in process.
13.	Up-gradation of the existing facility (OHC) and creating new facility (WQ-1) for handling iron ore on DBFOT basis.	Visakhapatnam Port	23.00	8454.10	Project was awarded on 14.05.2015. Phase-I of the project construction is under progress and is likely to be completed by December 2017.
14.	Extension of existing Container terminal in outer harbor on DBFOT basis.	Visakhapatnam Port	0.54 MTEUs	6331.10	Concession agreement was signed on 17.12.2014. Fulfilling of conditions precedent is under progressing. VPT Board accorded approval up to 28.02.2018 for financial closure. Project will be awarded in 2017-18 subject to achievement of financial closure.

15.	Development of Multi-Purpose berths to handle clean cargo including container on BOT basis at Paradip Port.	Paradip Port Trust	5.0 MTPA	430.78	*Award of concession has been issued to Paradip International Cargo Terminal Pvt. Ltd. (PICTPL) on 04.04.2016. Work is progress. *Physical progress- 38%.
16.	Development of New Iron Berth for handling of iron ore export at Paradip Port on BOT basis.	Paradip Port Trust	10.00	740.19	*Award of concession has been issued to JSW Paradip Terminal Pvt. Ltd. on 12.04.2016. *Work is in progress. Physical progress- 60%.
17.	Mechanization of EQ 1 to EQ 3 berths at Paradip Port on BOT basis.	Paradip Port Trust	30.00	1437.76	Concession Agreement has been signed with Paradip East Quay Coal Terminal Pvt. Ltd. (PEQCTPL) on 02.05.2016. Draft financial closure documents have been submitted by PEQCTPL and are under scrutiny.
18.	Development of New Coal Berth for handling of coal imports at Paradip Port on BOT basis.	Paradip Port Trust	10.00	655.56	Concession Agreement has been signed with by Kalinga International Coal Terminal Paradip Pvt. Ltd. (KICTPPL) on 04.08.2017. Financial closure by KICTPPL is awaited.
19.	Development of fourth container terminal at JNP on DBFOT basis.	JNPT	Phase-1 30MTPA Phase-II 30MTPA Total-60MTPA	7915	The work is in progress and schedule date of commissioning of Phase-I is on 22.12.2017. The scheduled commissioning of phase-II is December, 2022. As of today 91% overall progress is achieved.
20.	Development of standalone handling facility with a quay length of 330m to the North at JNPT	JNPT	10 MTPA	600	The Terminal is already commissioned on 1st July 2016.
21.	Redevelopment of Berths 8,9 and Barge Berth at the Port of Mormugao, Goa	Mormugao Port Trust	19.22 MTPA	1145.36	Letter of Award is issued to M/s Sterlite Port Ltd, Tuticorin on 29.03.2016. Concession Agreement signed on 22.09.2016. The process for EC clearance on public hearing completed on 05.05.2017. Appraisal committee Meeting of Goa coastal Zone Management Authority (GCZMA) held on 19.09.2017 for CRZ clearance. Their recommendation is awaited, Then Port will submit proposal to MOEF for EC clearance.

22.	Development of liquid/POL/LPG Berth at Vasco Bay	Mormugao Port Trust	2.0 MTPA	155.9	Approval for TOR for EIA studies received on 08.05.2017. Draft EIA is under process.
23.	Setting up of Liquid Cargo Handling Jetty alongwith associated facilities at Shalukkhali, Haldia Dock-II, Haldia Dock Complex, Kolkata Port Trust.	HDC of KoPT	2.43	172.52	*LoA has been issued to M/s. IMC Ltd. on 31.08.2017. *M/s. IMC Ltd. will form a SPV by 30.11.2017 to execute the project facility. *Concession Agreement will be signed between KoPT and SPV by 15.12.2017. *Completion expected by March, 2021.
24.	Setting up of Outer Riverine Terminal (OT-II) (Berth Construction)	HDC of KoPT	2.0 MMTPA [Assessed by IPA]	The total capital cost of the Project (Civil, Mechanical, Electrical work including Fire fighting system) = Rs.150 crores. (Prepared by IIT, Madras). Work Order value: Rs.74.23 Cr.	*LOI issued to viz. Srishaila – Unison Joint Venture (JV) on 07.06.2017 for a contract amount of Rs.74.23 crores. *The work will start after the Environmental Clearance, which is expected by end November'2017. *LoA will be placed after receipt of EC. *Target date of Project completion: 24 months from date of issuance of LoA (Oct'2019).
BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer.					

Appendix – II

Private Sector/Captive/Joint Venture Port Projects Under Formulation (Major Ports)

Sl. No	Project	Port Name	Capacity (Million Tonnes)	Project Cost (Rs. In crores)	Project Status
1	**2**	**3**	**4**	**5**	**6**
1.	Barge handling facilities at Khori Creek	Deendayal Port Trust	4.00	100.00	Scheme dropped.
2.	Construction of T shape Jetty at Tekra (Phase-II)	Deendayal Port Trust	14.00	1500.00	The scheme will spill over in 13th five year plan. Under planning stage.
3.	Setting up of barge jetty at Tuna on captive use basis	Deendayal Port Trust	1.5	22.00	Scheme dropped.
4.	Construction of barge jetty at Tuna on BOT basis	Deendayal Port Trust	5.49	255.30	Feasibility Report, RFQ and TAMP proposal under approval.
5.	Development of Port based multi product SEZ	Deendayal Port Trust	-	1095	The Deendayal Port Trust is not perusing the proposal any more due to poor response from potential investors and since Gujarat Coastal Zone Management Authority has classified a major portion of land earmarked for SEZ under CEZ-1(a) where no industrial activity is permissible.
6.	Construction of 1 No. Shallow water berth for handling Construction material	VOCPT	2.00	65.37	*Court Order received to award the work to M/s. Indian Port Terminal, Tuticorin· *VOC Port Board on 03.02.2017 accorded approval for issue of LOA to M/s. Indian Port Terminal, Tuticorin based on court order subjected to withdrawal of Court cases by the firm. *LOA issued on 20.02.2017. Signing of agreement under process.
7.	Development of Multi-Purpose berths to handle clean cargo including container on BOT basis at Paradip Port.	Paradip Port Trust	5.0 MTPA	430.78	Concession Agreement has been signed with the SPV "Paradip International Cargo Terminal (Pvt.) Ltd (PICTPL) on 07.03.2015 with revenue share of 11.044%. PICTPL has sought time till 12.12.2015 for fulfillment of condition precedents.
8.	Mechanization of EQ 1 to EQ 3 berths at Paradip Port on BOT basis.	Paradip Port Trust	30	1437.76	Fresh RFQ has been floated on 14.08.2015 with due date of RFQ as 28.09.2015.

9.	Development of Deep Draught Iron Ore Berth on BOT basis at Paradip Pot.	Paradip Port Trust	10	740.19	Letter of Award has been issued in favour of H1 bidder i.e. consortium of JSW Infrastructure Ltd. & South West Port Ltd. on 5.2.15 at 21 % revenue share to the Port. The Project is in the stage of fulfillment of condition precedent including financial closure.
10.	Dredging & Infrastructure development for handling bigger ships at 18 to 22 ID Harbour Wall Berths.	Mumbai Port Trust	8.00 MT	613	Due to poor response to the project as suggested by M/s RITES, it is proposed to scrap the project.
11	Development of Outer Harbour at Chennai Port (Previously called as Development of mega Container Terminal) Under PPP mode on DBFOT basis.	Chennai Port Trust	32	5100	Mega Container Terminal project failed to take of due to low revenue share quoted by bidder and subsequent invitation did not receive offers. Even after being restructured as Outer Horbour Terminal, there was no response to bid invitation on account of high captive cost. Meanwhile, Navy requested berths at the proposed new Outer Horbour. Study in Progress.
12.	Development of Rajiv Gandhi Dry Port and Multi Modal Logistic Hub for Chennai Port in SIPCOT industrial park at Mappedu, Sriperumpudur under PPP mode	Chennai Port Trust	-	415	121.74 acres of land at Mappedu acquired on long terms (99 years) lease from SIPCOT, GoTN. Due to global recession and poor road connectivity, PPP bids failed .Bids was invited on land lease model for all the three parcels of land. However, port received offer only for 14.91 acres land parcel and bidder withdrew his offer after SIPCOT imposed Sub-lease charges. Alternative use of the land being discussed with prospective bidders for better investors' response. NHAI is also proposing a DFR on an 80 acre land parcel at MAPPEDU, to develop Multi-Model Logistics park at Mappedu.
13.	Development of Bharthi Dock - 2(BD-II) as co- terminal in Chennai Port Trust	Chennai Port Trust	5MTPA	180	After examine options, it was decided to develop a coal Terminal through PPP made in case of favorable recommendation from the Empowered Committee, this projects will be taken up. Since EC issued the report, the Port has to comply with the report. Necessary recommended measures will be implemented. A final decision on implementation of the project can be taken only on compliance with the measures contained in the EC report.

14.	Development of JD (East) berths for handling of bulk and break bulk cargoes excluding project cargoes at Chennai Port under PPP mode.	Chennai Port Trust	8 MTPA	360	After examining options, it was decided to develop a coal Terminal through PPP made. In case of favorable recommendation from the Empowered Committee this projects will be taken up. Since EC issued the report, the Port has to comply with the report. Necessary recommended measures will be implemented. A final decision on implementation of the project can be taken only on compliance with the measures contained in the EC report.
15.	Development of Dry Dock facility at Timber pond/Boat basin in Chennai Port	Chennai Port Trust	--	315	Indian coast guard expressed interest to develop the facility on their own. Draft MoU between ChPT and ICG send by ICG to MoD in March, 2015 and is under consideration. Response awaited. After being given time upto September, 2017, ICG has again requested time limit of the offer for development of the Dry Dock will be extended for 6 months till March 2018.
16.	Setting up of Outer Terminal-I alongwith all required associated facilities on "DBFOT" basis" at Haldia Dock Complex for a concession period of thirty (30) years	HDC of KoPT	5.11 MMTPA [based on Gross Berth Output of 20,000 tones per day for 255.5 days of actual working]	Rs. 481.47 crores (as per final restructured TEFR submitted by IPA).	*RFQ issued on 10.10.2017. *Pre Bid meeting is on 24.11.2017. Receipt of Application against RFQ is 11.12.2017. *LOI is expected by 31.03.2017
17.	Development of Vasco Bay, (a)Development Fishing Harbour	Mormugao Port Trust	….	104	DPR submitted on 15.02.2017, TOR for EIA studies approved by MOEF in May'2017. Estimate revised based on acceptance of layout of fishing harbour by CICEF. EIA studies are in progress.
18.	(b) Development of passenger Jetty	Mormugao Port Trust	….	21	DPR Submitted on 15.02.2017, TOR for EIA studies approved by MOEF in May 2017. EIA study is in progress.
19.	(c) Genral Cargo Berth	Mormugao Port Trust	….	203	DPR Submitted on 15.02.2017, TOR for EIA studies approved by MOEF in May 2017. EIA study is in progress.
20.	Construction of RO-RO cum GCB-2(own)	Kamarajar Port Limited	3 MTPA	320.00	*LoI issued on 29.03.2016. *Awaiting Environmental Clearance for commencement of work.

21.	Development of Captive Jetty by IOCL.	Kamarajar Port Limited	3 MTPA	465.00	*Concession Agreement signed on 09.06.2016. *Condition precedent compliance is in progress. *KPL is in the process of floating tender document for Appointing Independent Engineer.
22.	Development of Marin Liquid Terminal-II on DBFOT Basis.	Kamarajar Port Limited	3 MTPA	393.00	*RFP received from Single bidder (BPCL & HPCL Consortium) on 17.05.2017. *RFP document was opened on 03.10.2017. *RFP document evaluation is in progress by Transactional Advisors.
23.	Development of facilities for handling Thermal Coal for SPIC Electric power corporation Pvt.Ltd.(SEPC)	V.O. Chidambaramnar	2.5 MTPA	214.50	*Agreement signed on 28.12.2016 between SEPC and VOCPT. *Construction of plant & conveyor system work is under progress. *The new berth location has been communicated to M/s SEPC on 27.07.2017 and the berth construction yet to start. *Expected date of completion of the project is March, 2019.
24.	Up-gradation of CJI&II	V.O. Chidambaramnar	24 MTPA	97.76	*LOI was issued to M/s. SYS-Emjoy (Joint venture) on 06.02.2017 for Civil Work. *Scheduled date of completion of work is August 2018. *TANGEDCO not yet handed over the berth.
25.	Construction of No. shallow water berth for handling construction material.	V.O.Chidambaramnar	2.00 MTPA	65.37	Court case filed by M/s Indian Port Terminal, Tuticorin. The matter is in Hon,ble Madras High Court, Chennai.
26.	Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT*	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer.					

Appendix – III

Ongoing Private Sector/Captive/Joint venture Port Projects
(Non-Major Ports)

Sl. No.	Project Name	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	Development of Mundra Port	Mundra (Gujarat)	185	12305	Construction of 4 berths along with backup facilities has been completed. **Phase-I of the Project completed & Operational** 1. 810 m Multipurpose jetty 2. 1843 m container terminal & T-2 3. 1 SBM and other back up facilities **Phase-2:** 1. 1510 m Coal Terminal, Wandh-Operational 2. 810 m Container Terminal Operational 3. Second SBM Operational 4. 3 Multipurpose berth Operational 5. 650m Container Terminal Operational 6. Construction of 650.50m Container Terminal has been completed 7. Construction of one LNG berth has been commenced.
2.	Hazira Port Pvt. Ltd (HPPL)	Hazira, (Gujarat)	2.50 (MMTPA)	1180.4	Phase 1 A (LNG Terminal) completed and operational.
3.	Petronet LNG Ltd.2nd jetty	Dahej (Gujarat)	2.5	612	Construction completed & operational
4.	Development of BGCT under phase I B at Hazira Development of Phase-II assets	Hazira, (Gujarat)	30	186	Completion of construction of the following: 1. 2 container berths and 3 general cargo berths 2. Breakwater 3. Backup facility for handling the cargo. Out of two Multipurpose berths under Phase-II, construction of one berth of total 180m quay length has been completed and operational.
5.	Development of Solid Cargo Port Terminal	Dahej (Gujarat)	15	980	Two solid cargo berths with cranes completed 1. Backup area constructed 2. Conveyor system for berth no.1 completed as per DPR.
6.	Captive Jetty by Jp Assoiates limited jakhau port	Jakhau (Gujarat)	3	140	Made operational. But JAL jetty is taken over by Ultra-Tech Cement and jetty became non-operational since June 2013. Recently, GMB has granted the change of company.

7.	Captive Jetty by Essar Salaya Bulk Terminal Limited.	Salaya (Gujarat)	7	600	The Construction of Jetty is completed. Approach bund is under construction.
8.	Captive Jetty by ABG Cement Ltd	Hazira Mora (Gujarat)	2	100	Construction permission granted. Extension in construction period is granted by the Board.
9.	Captive Jetty by M/s. Essar Bulk Terminal Ltd. -1100m (3rd Expansion)	Hazira (Gujarat)	25	2321	Construction of 600m jetty is completed and made operational.
10.	Captive Jetty by M/s Godrej – Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej (Gujarat)	1	5.9	Construction permission granted by the Board in its meeting held on September 2015. Construction is completed.
11.	Captive Jetty by M/s ISGEC – Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej (Gujarat)	1	55	Construction permission granted by the Board in its meeting held on September 2015. Construction is completed.
12.	Multipurpose jetty terminal at Mankhurd (Dist. Mumbai Suburban) in Vashi creek by M/s Yogayatan Ports Pvt. Ltd.	Trombay	4.5	75	Construction of one jetty in Phase-1A completed and expected to commence cargo operations by March-2018. Obtaining EC for other phases in progress. The port capacity will be 0.20 Million tonnes for the 1st year which will reach 4.5 MTPA by 20th year.
13.	Multipurpose jetty terminal at village change (Tal. Uran, Dist. Raigad) in Karanja creek by M/s Karanja Terminal & Logistics Pvt. Ltd.	Karanja	4.8	1000	Construction of berth and related facilities, dredging in progress. The port is expected to commence operations by December-2017. Port capacity will be 4.8 MTPA in FY-2017-18. The ultimate capacity of 8.48 MTPA will be achieved by FY-2032.
14	Expansion of existing captive jetty facilities at village Vave (Tal. Pen, Dist. Raigad) in Dharamtar creek by M/s JSW Dharamtar Port Pvt. Ltd	Dharamtar	35.0	280	Construction of berth and related facilities, in progress. Out of proposed 1750 Mtrs. Of quay length, about 1000 mtrs. is ready. While, the capacity of 2017-18 is 15 MTPA, the projected capacity of 35 MTPA will be achieved by FY2022.
15	Expansion of JSW Jaigad Port in Ratnagiri district by JSW Jaigarh Port Ltd.	Jaigad	80.0	2800	Two berths in Phase-1 and three berths in Phase-11 of the Port project are operational. Three berths (Which include LNG berth and POL) are under construction. The current capacity of 2017-18 is 50 MTPA and expected capacity is 80 MTPA will be achieved by FY 2022.
16.	Construction of Terminal building	Panaji Port	--	28.33	GSIDC informed that new estimate is being worked out with new GST rates; once it is finalized work will be tendered.
17.	Establishing a captive port at Parangipettai by M/s IL &FS Limited	Parangipettai Tamil Nadu#	13 MMTPA	1349	Construction yet to commence.

18.	Kakinada Deep Water Port in East Godavari District, Andhra Pradesh State	Kakinada Deep Water Port, Andhra Pradesh	25	1320	Under Operation.
19.	Development of Krishnapatnam Port in SPS Nellore Dist. Andhra Pradesh State	Krishnapatnam Port Andhra Pradesh	82	7200	Under Operation.
20.	Development of Gangavaram Port in Vishakhapatnam District, Andhra Pradesh State	Gangavaram Port	64	2970	Under Operation.
21.	Dhamra Chandbali Port Project	Dhamra Port, Orissa#	25 MMT	3639	2 Berths Completed
22.	Expansion, Development and operation of Gopalpur Port	Gopalpur Port, Orissa	10 MTPA	1360	1. All weather direct berthing port declared open for commercial traffic with effect from 29th March, 2013. 2. Port operation suspended with effect from 12th October, 2013 due to the effect of very severe Cyclone "Phailin". 3. Port re-commissioned its commercial traffic with effect from 30th October, 2015. 4. Work on additional 2 berths construction, completion of breakwater, stockyards, Development of internal roads and railway siding underway.
23.	Development of Karaikal Port through private investment on BOT basis	Karaikal, Puducherry	Phase – 2A 21.5 Phase 2AE 6.5	1600 500	Phase -2A and 2AE Works are in progress.
24.	Development of Pondicherry Port through private investment on BOT basis Development of Pondicherry Port as a Feeder Port to Chennai Port in association with Chennai Port Trust	Pondicherry Pondicherry	Phase – 1 16.2 Phase - II 10.8 0.35	2785 N.A NIL	Arbitration ended with declaration of a NIL. Award in July 2016. A MoU was signed with Chennai Port Trust on 15.03.2017: Cargo handling operations likely to start in July 2017 soon after dredging works are completed.
25.	Passenger cum Container Terminal Construction	Kollam, Kerala	--	14.0	Work under progress.

Source: Maritime State/Maritime Boards

Note:- #The updated status of project name at S. No. 17 and 21 has not been received as on 30.09.2017. Hence last year status has been updated.

Appendix – IV

Private Sector/Captive/Joint Venture Port Projects Under Formulation (Non-Major Ports)

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	GCPTL Proposed 2nd liquid jetty & allied infrastructure.	Dahej (Gujarat)	2.5-3.5 (estimated)	2500 (estimated)	Techno- Commercial Feasibility study is under progress.
2.	Sterling Port Limited	Dahej (Gujarat)	41 (Phase -I)	2501.8	Under Construction.
3.	Development of Chhara Port	Chhara (Gujarat)	8	1200	CA signed on 29.1.2015. Construction permission has been granted.
4.	Development of Modhawa port	Modhawa (Gujarat)	Developer Under selection at GoG Level.		
5.	Development of Khambhat port by M/s. IL & FS	Khambhat (Gujarat)	Kept on hold due to Kalpsar Project.		
6.	Development of Dholera port by Ms. JK Cement Group	Dholera (Gujarat)	Kept on hold due to Kalpsar Project.		
7.	Development of Nargol Port	Valsad (Gujarat)	20	4300 (Estimated)	Environment Clearance and financial closure is awaited.
8.	LNG Terminal by Swan Energy Ltd.	Jafrabad, Pipavav, Gujarat	5	4000	DPR approved. Environment Clearance received. Financial Closure & Concession Agreement is under discussion.
9.	Captive jetty expansion by M/s. Sanghi CEMENT Ltd.	Jakhau, Gujarat	2	150	Environmental clearance is awaited.
10.	Captive jetty by M/s Archna Chemical Budh Bunder	Jakhau, Gujarat	2	135	In principle approval has been granted by GoG. Studies & investigations for DPR are under progress.
11.	Multi-purpose jetty at Sikka by Reliance Industries Ltd.	Sikka, (Gujarat)	15	1000	Studies are under progress.
12.	Captive jetty by M/s Universal Success Enterprise Ltd	(Bhogat) Gujarat)	5	126	Environmental clearance is awaited.
13.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Coal Jetty & Multipurpose Jetty under Gujarat SEZ act	Nana Layja, Kutch, Gujarat	17	1000	In principle approval is granted by GoG (December 2014). DPR submitted.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
14.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Multipurpose Jetty under Gujarat SEZ Act.	Nana Layja, Kutch, Gujarat	3	256	In principle approval is granted by GoG (September 2015). DPR submitted.
15.	Captive jetty by M/s Reliance Ports Terminal Ltd. – 6th oil tanker berth at Sikka –A2	Sikka, Gujarat	7	180	Construction permission granted.
16.	SPM no. 2 at Hazira by Reliance Industry Ltd.	Hazira, Gujarat	4	100	Studies are under progress.
17.	Devolpment of Port at Redi (Tal. Vengurla, Dist. Sawantwadi) by Redi Port Ltd.	Redi Port Maharashtra	5.16	716	MMB has taken over two existing jetties, being operated by port developer M/s Redi Port Ltd. (RPL) w.e.f December- 2016 and Port is currently operated by MMB. New Port Project proposed by RPL is awaiting EC (which is pending due to forest land issue). Redi port will have a capacity of 5.16 MTPA in Phase-I (2014-17) which will ultimately reach up to 33.38 MTPA in Phase-V (2032-46).
18.	Development of Port at Vijaydurg (Tal. Devgad, Dist. Sawantwadi) by Vijaydurg Ports Pvt. Ltd.	Vijaydurg Port, Maharashtra	12.94	1059	The project proponent has obtained Terms of Reference (ToR) from MoEF vide letter dated 28.04.2015. The PP is required to revise DPR as per the recommendations in ToR and conduct EIA/EMP studies for submission of proposal for EC. Currently, the Zero date for the project has been extended up to 30.04.2019. It is estimated that if the construction of ports starts in FY-2018, the Phase-I will be completed by FY-2022 to achieve Port capacity of 12.94 MTPA. During the meeting held on 25.07.2017 under chairmanship of Hon'ble Chief Minister, GoM and in the presence of Hon'ble Union Minister of Shipping, it has been decided to develop Vijaydurg Port Jointly by MbPT, MMB and Goa Port Trust.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
19.	Construction of Captive jetty at Village Nandgaon (Tal. Satpati, Dist. Palghar) by JSW Infrastructure Ltd.	Satpati/Nawapur	8.0	3048	All project related studies completed. Project has received EC on 09.02.2016. Project could not move ahead due to a legal matter pending in the court.
20.	Construction of Captive Jetty at Village Korlai (Tal. Murud-Janjira, Dist. Raigad) in Revdanda creek by M/s Indo Energy International Ltd.	Revdanda	11.75	437	All project related studies completed. Proposal for EC under consideration of MCZMA for onward submission to MoEF.
21.	Construction of Captive Jetty at village Vadhveera (Tal. Alibag, Dist. Raigad) in Dharamtar creek by M/s Gajanana Industries Ltd.	Dharamtar	1.0	28	Letter of intent issued to Project Proponent on 07.06.2017. PP to prepare DPR and obtain EC with 24 months from date of LoI.
22.	Construction of Captive Jetty at village Nate (Tal. Rajapur, Dist. Ratnagiri) by M/s I-Log Ports Ltd.	Jaitapur	5.0	135	All project related studies are completed. Proposal for EC under consideration of MCZMA.
23.	Construction of Multipurpose jetty at Village Aronda-Kiranpani (Tal. Sawantwadi, Dist. Sindhudurg) by M/s White Orchid Estate Pvt. Ltd.	Kiranpanni	0.5	28	Construction of jetty facilities completed. However, port operations are kept in abeyance due to legal matters pending in the Court/NGT.
24.	Captive port facility by M/s. Udangudi Power Corporation Ltd.	Udangudi Thoothukudi Tamil Nadu#	6	9083	Port has been notified. Statutory clearances. Financial closure pending
25.	Captive port facility by M/s. Coastal Tamil Nadu Power Ltd.	Cheyyur Kancheepuram Tamil Nadu#	13	1832	Notification of Port limits under process
26.	Captive port by M/s. Chettinad Power Corporation Ltd.	Tharangambadi Taluk Nagapattinam Tamil Nadu#	3.5	1000	Port has been notified. Development under process.
27.	Captive port permitted to handled other commercial cargo by M/s. Nagarjuna Oil Corporation Ltd.	Thiruchopuram in Cuddalore Tamil Nadu#	9.3	384 (Captive facility only)	Port has been notified. Development has temporarily been stopped due to financial issues.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
28.	Development of Bhavanapadu Port in Srikakulam District, Andhra Pradesh State under PPP model	Bhavanapadu Port, Andhra Pradesh	30.57	3390	M/s. Aadani Ports & SEZ Ltd. Is the lowest bidder as a Concessionaire for development of this project. The same is under examination by Government of Andhra Prasedh. Agreement yet to be concluded.
29.	Development of Machilipatnam Deep Water in Krishna District, Andhra Pradesh State	Machilipatnam Port, Andhra Pradesh	45	6778	Land acquisition is in Progress. Project yet to be grounded.
30.	Development of Port and setting up trade warehousing Zone at Belekeri.	Belekeri Port Karnataka	10	172	Govt of Karnataka initiated to development of Free Trade & Warehousing zone at Belekeri Port and prepared RFP, Pre-feasibility report and Draft concessional agreement through i-deck. Ministry of Shipping, Government of India has also shown interest for development of Belekeri Port as a Satellite port to NMPT and prepared Techno Economical Feasibility report. State Government has given concurrence to GOI for development of Belekeri Port as a Satellite port to NMPT.
31.	Development of Modern Sea Port at Tadri.	Tadri Port Karnataka	34	380	Infrastrusture Development Department (IDD) has prepared detailed project report and Environment Impact Assessment studies for development of Tadri Port with 34MTPA at an estimated cost of Rs. 380 Crore..
32.	Development of Captive Jetty at Pavinakurve at Kumta	Pavinakurve Port Karnataka	10	160	Government of Karnataka received proposals from M/s JSW Mumbai for development of Pavinakurve Port under Swiss challenge model and M/s JSW has prepared & submitted the detailed project report to Government. As per Government directions the department has requested i-Deck to provide consultancy service for revision and updating of DPR prepared by M/S JSW.
33.	Development of Bulk Liquid Berth for handling L.N.G.	Karaikal Port Puducherry	5.0	1948	Applied for Environmental Clearance.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
34.	Development of Port at Subarnarekha Mouth (Kirtannia)- PPP Mode	Subarnarekha Mouth (Kirtannia) Port, Orissa	25 MTPA to 55 MTPA	2345	Land acquisition/alienation process is in progress.
35.	Development of Port at Astaranga- PPP Mode	Astaranga Port, Orissa	17.70 MTPA to 71.30 MTPA	7342	Land acquisition/alienation process is in progress.
36.	Development of Riverine Port on river Mahanadi- PPP Mode	Riverine Port, Orissa	18 MTPA to 44 MTPA	2110	Bidding process is under progress.

Source: Maritime State/Maritime Boards

Note:-#The updated status of project name at S. No. from 24 to 27 has not been received as on 30.09.2017. Hence last year status has been updated.

Annex-I

Commodity-wise Traffic Handled at Major Ports

(000 Tonnes)

Port	Period	POL & its Products	Iron Ore	Thermal Coal	Coking Coal	Ferti.& FRM (Dry)	Food grain	Container	TEUs	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12
Kolkata	2015-16	664	12	1660	297	201	14	9263	578	4671	16782
	2016-17(P)	904	0	0	0	20	352	9887	636	5010	16173
April-	2016-17(P)	380	0	0	0	24	1	5105	333	2871	8381
September	2017-18(P)	368	0	4	0	46	69	4880	318	3074	8441
Haldia	2015-16	5067	869	1552	5722	638	0	1376	85	18283	33507
	2016-17(P)	6785	1159	1818	5523	467	0	2467	136	15922	34141
April-	2016-17(P)	3200	190	730	2996	180	0	718	49	8228	16242
September	2017-18(P)	4134	792	904	3166	394	0	1254	70	8480	19124
Paradip	2015-16	20567	2889	31250	8221	4361	0	132	5	8977	76397
	2016-17(P)	27696	11045	25845	10162	4067	0	37	2	10103	88955
April-	2016-17(P)	12636	4000	13912	4373	2144	0	28	1	5575	42668
September	2017-18(P)	17024	5447	11975	5046	2142	0	35	3	5936	47605
Visakhapatnam	2015-16	14873	6088	3393	5108	2795	86	5145	243	19547	57035
	2016-17(P)	16604	11620	3471	4335	2662	551	6428	367	15349	61020
April-	2016-17(P)	7984	5368	1758	2201	1607	46	3275	188	8431	30670
September	2017-18(P)	8079	5183	1486	2550	1604	75	3258	189	7914	30149
Chennai	2015-16	11891	0	0	0	260	0	30207	1565	7700	50058
	2016-17(P)	12208	0	0	0	268	665	28850	1595	8223	50214
April-	2016-17(P)	6505	0	0	0	113	26	14444	748	4837	25925
September	2017-18(P)	6765	0	0	0	92	97	15240	790	4042	26236
Kamarajar	2015-16	2443	0	25537	75	0	0	1	0	4150	32206
	2016-17(P)	4059	0	23018	79	0	0	1	0	2863	30020
April-	2016-17(P)	2034	0	11433	79	0	0	1	0	1344	14891
September	2017-18(P)	2079	0	10597	0	0	0	0	0	1171	13847
Chidambaranar	2015-16	475	86	11491	3305	1511	378	12388	612	7215	36849
	2016-17(P)	667	0	10824	0	1641	1906	12991	642	10434	38463
April-	2016-17(P)	364	0	5510	0	901	448	6586	325	5512	19321
September	2017-18(P)	368	0	3975	0	589	667	6863	337	4824	17286
Cochin	2015-16	13773	0	88	0	252	95	5785	419	2102	22095
	2016-17(P)	16223	0	44	0	252	174	6840	460	1474	25007
April-	2016-17(P)	7609	0	44	0	144	33	3370	242	724	11924
September	2017-18(P)	9724	0	0	0	133	0	3717	268	690	14264
New Mangalore	2015-16	21966	454	3319	3051	811	27	1105	76	4849	35582
	2016-17(P)	25104	2928	3533	0	489	248	1411	95	6232	39945
April-	2016-17(P)	11533	384	1549	0	232	27	646	44	3128	17499
September	2017-18(P)	11376	2379	589	0	262	0	781	51	4162	19549
Mormugao	2015-16	559	3965	3727	7808	223	0	345	26	4149	20776
	2016-17(P)	627	15053	2514	8466	199	0	400	30	5920	33179
April-	2016-17(P)	300	4119	1587	3996	68	0	190	14	2804	13064
September	2017-18(P)	308	3960	1011	4967	82	0	191	14	2151	12670
J. L. Nehru	2015-16	3419	0	0	0	0	0	56791	4491	3817	64027
	2016-17(P)	4490	0	0	0	0	0	54530	4500	3131	62151
April-	2016-17(P)	2049	0	0	0	0	0	27187	2262	1545	30781
September	2017-18(P)	2266	0	0	0	0	0	28700	2403	1726	32692
Mumbai	2015-16	35669	0	3451	0	439	961	574	43	20025	61119
	2016-17(P)	36649	0	2445	0	283	1601	558	42	21513	63049
April-	2016-17(P)	18530	0	1361	0	115	256	287	23	10264	30813
September	2017-18(P)	18485	0	1320	0	129	488	316	23	10496	31234
Kandla	2015-16	54994	952	14784	217	4532	812	56	3	23111	99458
	2016-17(P)	60340	735	15062	496	3656	830	175	10	24148	105442
April-	2016-17(P)	30496	199	8688	170	2337	305	82	4	11686	53963
September	2017-18(P)	29962	581	5538	143	2148	374	770	49	13771	53287
All Ports	2015-16	186360	15315	100252	33804	16023	2373	123168	8146	128596	605891
	2016-17(P)	212356	42540	88574	29061	14004	6327	124575	8515	130322	647759
April-	2016-17(P)	103620	14260	46572	13815	7865	1142	61919	4233	66949	316142
September	2017-18(P)	110938	18342	37399	15872	7621	1770	66005	4515	68437	326384

P : Provisional

Source: BPS, Major Ports and Indian Ports Association.

Annex-II

Commodity-wise Traffic Handled at Non-Major Ports

(000 Tonnes)

State/UTs Maritime	Period	POL	Iron Ore	Building Material	Coal	Fertiliser & FRM	Container	Others	Total
1	2	3	4	5	6	7	8	9	10
Gujarat	2015-16	174875	7511	9075	65903	10331	47930	24153	339778
	2016-17 (P)	183092	9378	9622	62130	6998	53124	21395	345739
April-September	2016-17 (P)	89187	4671	5997	32152	3656	26114	6858	168635
	2017-18 (P)	91829	5571	4058	31601	4166	31538	9312	178075
Maharashtra	2015-16	3225	7611	2243	12173	151	0	3446	28849
	2016-17 (P)	0	15093	1937	10667	0	0	7197	34894
April-September	2016-17 (P)	0	6535	874	5812	0	0	2331	15552
	2017-18 (P)	0	4730	920	6275	0	0	2885	14810
Andhra pradesh	2015-16	1428	1620	1978	46203	5956	1807	13741	72733
	2016-17 (P)	1347	2966	1039	39394	4963	4246	15647	69602
April-September	2016-17 (P)	136	798	443	22480	3205	1450	5545	34057
	2017-18 (P)	269	2136	443	22988	3217	1512	7152	37717
Goa	2015-16	0	260	0	170	0	0	0	430
	2016-17 (P)	0	102	0	15	0	0	0	117
April-September	2016-17 (P)	0	54	0	0	0	0	0	54
	2017-18 (P)	0	5	0	0	0	0	0	5
Tamil Nadu	2015-16	546	0	4	0	30	0	276	856
	2016-17 (P)	603	0	398	0	36	0	133	1170
April-September	2016-17 (P)	286	0	8	0	26	0	163	483
	2017-18 (P)	334	0	14	0	10	0	155	513
Karnataka	2015-16	82	0	81	0	57	0	615	835
	2016-17 (P)	332	0	74	0	41	0	244	691
April-September	2016-17 (P)	130	0	15	0	20	0	150	315
	2017-18 (P)	201	0	17	0	0	0	72	290
Other states/UTs	2015-16	516	381	824	17425	421	375	2567	22509
	2016-17 (P)	513	4922	1605	20610	203	442	4818	33113
April-September	2016-17 (P)	291	6509	621	17260	159	214	795	25849
	2017-18 (P)	186	3665	825	11099	12	232	902	16921
All Non Major Ports	**2015-16**	**180672**	**17384**	**14205**	**141874**	**16946**	**50112**	**44798**	**465989**
	2016-17 (P)	**185887**	**32461**	**14675**	**132816**	**12241**	**57812**	**49434**	**485326**
April-September	**2016-17 (P)**	**90030**	**18567**	**7958**	**77704**	**7066**	**27778**	**15842**	**244945**
	2017-18 (P)	**92819**	**16107**	**6277**	**71963**	**7405**	**33282**	**20478**	**248331**

Source: State/UTs Maritime Board

Commodity-Wise Capacity Available at Major Ports

(In Million Tonnes)

Commodities	KDS	HDC	PPT	VPT	EPL	ChPT	V.O.C.	CoPT	NMPT	MoPT	MbPT	KPT	JNPT	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
POL														
As on 31.3.13	4.50	17.00	43.00	17.65	3.00	17.67	2.30	19.01	49.17	1.50	32.00	66.60	5.50	**278.90**
As on 31.3.14	4.50	17.00	43.00	25.65	3.00	17.67	2.30	24.01	49.17	1.50	32.00	66.60	5.50	**291.90**
As on 31.3.15	4.50	17.00	53.00	27.49	4.00	17.67	2.30	24.01	49.17	1.50	32.00	66.60	6.50	**305.74**
As on 31.3.16	4.50	17.00	54.50	27.49	4.00	17.67	3.15	24.01	49.17	1.50	34.50	70.82	6.50	**314.81**
As on 31.3.17	9.10	18.00	54.50	27.49	4.00	17.67	3.15	30.26	49.17	1.50	44.50	89.02	6.50	**354.86**
Iron Ore														
As on 31.3.13	-	6.00	4.50	12.50	6.00	8.00	-	-	7.50	27.50	-	-	-	**72.00**
As on 31.3.14	-	6.00	4.50	12.50	6.00	8.00	-	-	7.50	27.50	-	-	-	**72.00**
As on 31.3.15	-	6.00	4.50	12.50	6.00	8.00	-	-	7.50	27.50	-	-	-	**72.00**
As on 31.3.16	-	6.00	6.39	12.50	6.00	8.00	-	-	7.50	27.50	-	-	-	**73.89**
As on 31.3.17	-	6.00	6.39	12.50	6.00	8.00	-	-	7.50	27.50	-	-	-	**73.89**
Coal														
As on 31.3.13	-	7.00	20.00	-	21.00	-	12.55	-	5.40	-	-	-	-	**65.95**
As on 31.3.14	-	7.00	20.00	-	21.00	-	12.55	-	5.40	-	-	-	-	**65.95**
As on 31.3.15	-	7.00	21.00	-	24.00	-	12.55	-	5.40	4.61	-	-	-	**74.56**
As on 31.3.16	-	9.00	21.00	-	32.00	-	24.18	-	5.40	8.94	-	-	-	**100.52**
As on 31.3.17	-	10.00	32.00	-	32.00	-	26.82	-	7.67	8.94	-	-	-	**117.43**
Fertiliser														
As on 31.3.13	-	-	7.50	1.00	-	-	-	0.80	-	-	-	-	-	**9.30**
As on 31.3.14	-	-	7.50	1.00	-	-	-	0.80	-	-	-	2.00	-	**11.30**
As on 31.3.15	-	-	7.50	1.00	-	-	-	0.80	-	-	-	2.00	-	**11.30**
As on 31.3.16	-	-	7.50	1.87	-	-	-	0.80	-	-	-	2.00	-	**12.17**
As on 31.3.17	-	-	8.00	1.87	-	-	-	1.13	-	-	-	2.00	-	**13.00**
Break-Bulk Cargo														
As on 31.3.13	6.74	12.75	27.30	33.50	1.00	17.92	13.49	12.35	14.70	7.40	11.53	19.42	0.90	**179.00**
As on 31.3.14	6.74	15.75	33.80	47.09	1.00	17.92	22.21	12.35	15.70	7.65	11.53	26.52 *	0.90	**219.16**
As on 31.3.15	6.74	15.75	33.80	53.09	3.00	17.92	24.70	12.35	15.70	10.15	11.53	45.63	0.90	**251.26**
As on 31.3.16	6.74	29.89	37.55	59.69	3.00	22.92	24.70	12.35	15.70	10.85	14.83	51.04	0.90	**290.16**
As on 31.3.17	7.25	31.89	42.55	62.69	5.00	22.92	28.70	12.68	23.29	12.10	20.83	52.04	0.90	**322.84**
Container														
As on 31.3.13	5.90	4.00	-	2.68	-	42.00	5.00	12.50	-	-	1.00	7.20	59.48 @	**139.76**
As on 31.3.14	5.90	4.00	-	2.68	-	42.45	5.00	12.50	-	-	1.00	7.20	59.48 @	**140.21**
As on 31.3.15	9.86	4.00	-	2.68	-	42.45	5.00	12.50	-	-	1.00	7.20	71.97@	**156.66**
As on 31.3.16	9.86	4.00	-	6.20	-	44.85	7.23	12.50	-	-	-	7.20	81.97	**173.81**
As on 31.3.17	9.86	4.00	-	6.20	10.00	44.85	7.23	12.50	-	-	-	7.20	81.97	**183.81**
TOTAL														
As on 31.3.13	17.14	46.75	102.30	67.33	31.00	85.59	33.34	44.66	76.77	36.40	44.53	93.22	65.88	**744.91**
As on 31.3.14	17.14	49.75	108.80	88.92	31.00	86.04	42.06	49.66	77.77	36.65	44.53	102.32	65.88	**800.52**
As on 31.3.15	21.10	49.75	119.80	96.76	37.00	86.04	44.55	49.66	77.77	43.76	44.53	121.43	79.37	**871.52**
As on 31.3.16	21.10	65.89	126.94	107.75	45.00	93.44	59.26	49.66	77.77	48.79	49.33	131.06	89.37	965.36
As on 31.3.17	**26.21**	**69.89**	**143.44**	**110.75**	**57.00**	**93.44**	**65.90**	**56.57**	**87.63**	**50.04**	**65.33**	**150.26**	**89.37**	**1065.83**

Figure in the parenthesis indicate the number of berths. BJ Barge jetties, T-Transhippers, A-Anchorages, SBM-Single Buoy Mooring

@ : Capacity of JNP Container Termnal (3berths), NSICT (2berths), GTIPL (3berths) and shallow water berth (1 no) has been taken as 21.57 MT, 17.40 MT, 31.80 MT and 1.20 MT respectively. Capacity of one shallow water berth at JNPT is 0.90 MT for dry bulk cargo.

Capacity of Iron Ore berth has been taken as 6.0MT at Ennore Poert. After full fledged commissioning, balance capacity of 6.0 MT will be added.

Only BPS berth of Mumbai Port is considered as dedicated container berth. Assessed capacity of BPS (Dedicated) container berth of Mumbai Port is 1.0MT. Berth No.6, 7/8 ID are used as holding berths of MbPT crafts and no capacity has been accounted

* After accounting the capacity due to productivity, addition of berth No. 13 & 15,MHC, Floating cranes

Source : Development Wing - Department of Shipping.