

भारत के पत्तन क्षेत्र का अद्यतन
UPDATE ON INDIAN PORT SECTOR
(30.09.2018)



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PREFACE

The Transport Research Wing in the Ministry of Shipping has been bringing out the biannual publication “*Update on Indian Port Sector*”. Present issue (**upto September, 2018**) is thirty second in the series of the publication “*Update on Indian Port Sector*”. The last issue contained data up to March, 2018.

The current issue of the “Update on Indian Port Sector” includes the information on the performance of Major and Non-Major Ports for the period up to 30th September, 2018. 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.

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**UPDATE ON INDIAN PORT SECTOR
(UP TO 30.09.2018)**

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1. RECENT TRENDS IN CARGO TRAFFIC AND POLICY INITIATIVES

1.1 INDIA AND WORLD ECONOMY

1.1.1 The global growth is projected at 3.7% for 2018-19, 0.2 percentage point lower for both years than forecast in April. The downward revision reflects surprises that suppressed activity in early 2018 in some major advanced economies, the negative effects of the trade measures implemented or approved between April and mid September, as well as a weaker outlook for some key emerging market and developing economies arising from country specific factors, tighter financial conditions, geopolitical tensions, and higher oil import bills. The strong momentum registered in the second half of the last year has shown some moderation in the first half of 2018, and the expansion became less synchronized across countries. Activity moderated more than expected in some large advanced economies from its strong pace last year, while the emerging market and developing economy group continued to expand at broadly the same pace as in 2017.

1.1.2 Aggregate growth in the emerging market and developing economy group stabilized in the first half of 2018. Emerging Asia continued to register strong growth, supported by a domestic demand-led pickup in the Indian economy from a four-year-low pace of expansion in 2017, even as activity in China moderated in the second quarter in response to regulatory tightening of the property sector and nonbank financial intermediation. Higher oil prices lifted growth among fuel-exporting economies in sub-Saharan Africa and the Middle East. The recovery in Latin America continued, though at a more subdued pace than anticipated as tighter financial conditions and a drought weighed on growth in Argentina and a nationwide truckers strike disrupted production in Brazil (World Economic Outlook, October, 2018 report).

1.1.3 As per World Economic Outlook report, October 2018, global growth is projected at 3.7 percent in 2018 and 2019, 0.2 percentage point below the April 2018 WEO; even though well above its level during 2012-16. Global growth is expected to remain steady at 3.7 percent in 2020, as the decline in advanced economy growth with the unwinding of the US fiscal stimulus and the fading of the favorable spillovers from US demand to trading partners is offset by a pickup in emerging market and developing economy growth. Thereafter, global growth is projected to slow to

3.6 percent by 2022⁶²³, largely reflecting a moderation in advanced economy growth toward the potential of that group.

1.1.4 Growth in advanced economies will remain well above trend at 2.4 percent in 2018, before softening to 2.1 percent in 2019. The forecast for both years is 0.1 percentage point weaker than in the April 2018 WEO. Growth is expected to decline to 1.8 percent in 2020 as the US fiscal stimulus begins to unwind and euro area growth moderates toward its medium-term potential. With emerging Asia continuing to expand at a strong pace⁶ despite a 0.3 percentage point downward revision to the 2019 growth forecast mostly driven by recently announced trade measures⁶ and activity in commodity exporters firming, growth in the emerging market and developing economy group is set to remain steady at 4.7 percent in 2018⁶¹⁹.

1.1.5 Beyond 2019, the aggregate growth rate for the group reflects offsetting developments as growth moderates to a sustainable pace in China, while it improves in India (owing to structural reforms and a still-favorable demographic dividend), commodity exporters (though to rates below the average of recent decades), and some economies experiencing macroeconomic stress in 2018⁶¹⁹. For 2018⁶¹⁹, the main sources of the downward revision are the negative expected impact of the trade measures implemented since the April 2018 WEO on activity in China and other economies in emerging Asia, much weaker activity in Iran following the reimposition of US sanctions, a sharp projected slowdown in Turkey following the ongoing market turmoil, and a more subdued outlook for large economies in Latin America (Argentina, Brazil, Mexico).

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	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (P)	April-September 2017-18	2018-19
Trends in India's Select : Macro Parameters								
I. Total Cargo	2.2	4.1	8.2	1.9	5.8	6.6	3.2	7.8
(a) Major Ports	-2.6	1.8	4.7	4.2	7.0	4.8	3.3	5.1
(b) Non Major Ports	9.7	7.5	12.9	-1.1	4.2	9.1	3.0	11.4
II.GVA overall	5.4	6.1	7.2	8.1	7.1	6.5	5.8	7.4
(a) Agriculture	1.5	5.6	-0.2	0.6	6.3	3.4	2.8	4.6
(b) Industry	3.3	3.8	7.0	9.8	6.8	5.5	3.1	8.6
(c) Services	8.3	7.7	9.8	9.6	7.5	7.9	8.1	7.4
III. Foreign Trade								
(a) Export in \$ value	-1.8	4.7	-1.3	-15.5	5.2	10.0	11.5	12.54
(b) Import in \$ value	0.3	-8.3	-0.5	-15.0	0.9	21.1	25.1	16.16
Trends in Select : Global Indicators								
IV. World Output	3.5	3.5	3.6	3.5	3.3	3.7	3.7F	3.7F
(a) Advanced Economies	1.2	1.4	2.1	2.3	1.7	2.3	2.4F	2.1F
(b) Developing Economies	5.3	5.1	4.7	4.3	4.4	4.7	4.7F	4.7F
V. World Economic Growth	2.2	2.2	2.5	2.6	2.5	3.1	-	-
(a) Advanced Economies	1.1	1.1	1.7	2.2	1.7	2.3	-	-
(b) Developing Economies	4.7	4.6	4.4	3.8	3.9	4.5	-	-
(c) Transition Economies	3.3	2.0	0.9	-2.2	0.3	2.1	-	-
VI. World Trade Volume (Goods)	3.0	3.5	3.8	2.7	2.3	4.9	5.1F	4.7F
VII. Export Volume growth (Goods)								
(a) Advanced Economies	2.9	3.2	3.9	3.8	1.8	4.4	3.4F	3.1F
(b) Developing Economies	3.5	4.7	3.2	1.6	3.0	6.9	4.7F	4.8F
VIII. Import Volume (Goods)								
(a) Advanced Economies	1.7	2.5	3.9	4.8	2.4	4.2	3.7F	4.0F
(b) Developing Economies	5.3	5.1	4.2	-0.9	1.8	7.0	6.0F	4.8F
IX. World Seaborne Trade*	4.6	3.4	3.5	1.8	2.6	3.9	NA	NA
(a) Goods Loaded	4.7	3.4	3.5	1.8	2.6	4.0	NA	NA
(b) Goods Unloaded	4.4	3.4	3.5	1.8	2.6	3.8	NA	NA
I. Based on data from Major Ports and Non Major Ports								
II. Based on Annual Estimates of GDP at constant prices, 2011-12 Series & Press note on estimates of GDP for the second quarter (2018-19), Central Statistical Office, dated 30.11.2018.								
III. Based on Department of Commerce, DGCIS and RBI Bulletin								
IV, VI, VII & VIII Based on World Economic Outlook, April, 2018, IMF;								
V & IX. Based on Review of Maritime Transport, 2018 (October), UNCTAD								
Note : MT: Million Tonnes; For item Nos IV, VI, VII & VIII year 2012-13 refers to calendar year 2012 and so on;								
* growth in total goods loaded plus unloaded; NA ; Not Available (P) Provisional; F-Forecast								

Selected Emerging Trends Affecting Seaborne Trade

1.1.6 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. But in the year 2017; International seaborne trade gathered momentum, with volumes expanding by 4 percent. This was the fastest growth in five years. Reflecting the world economic recovery and improved global merchandise trade, UNCTAD estimates world seaborne trade volumes at 10.7 billion tons in 2017 (**table 2(a)**). Dry bulk commodities have powered nearly half of the volume increase.

Table 2 (a) : Developments in International Seaborne Trade				
(Million Tonnes Loaded)				
Year	Oil	Main Bulk#	Other Dry Cargo	Total
2000	2163	1295	2526	5984
2007	2747	1840	3447	8034
2008	2742	1946	3541	8229
2009	2642	2022	3194	7858
2010	2772	2259	3378	8409
2011	2794	2392	3599	8785
2012	2841	2594	3762	9197
2013	2829	2761	3924	9514
2014	2825	2988	4030	9843
2015	2932	2961	4131	10024
2016	3055	3041	4193	10289
2017	3146	3196	4360	10702
# Main bulk includes data on Iron ore, grain, coal, bauxite/alumina and phosphate rock				
Source: Review of Maritime Transport, 2018, UNCTAD				

1.1.7 Developing countries continue to account for most global seaborne trade flows, both in terms of exports (goods loaded) and imports (goods unloaded). These countries shipped 60 per cent of world merchandise trade by sea in 2017 and unloaded 63 per cent of this total. By contrast, developed countries saw their share of both types of traffic decline over the years, representing

about one third of world seaborne imports and exports (34 per cent of goods loaded and 36 per cent, unloaded). Transition economies continue to be heavily reliant on the export of bulky raw materials and commodities (6 per cent), while they hold a marginal share of global seaborne imports (1 per cent).

1.1.8 Major dry bulk commodities ó coal, iron ore and grain ó accounted for 42.3 per cent of total dry cargo shipments, which were estimated at 7.6 billion tons in 2017. Containerized trade and minor bulks represented 24.3 per cent and 25.4 per cent of the total, respectively. Remaining volumes were made of other dry cargo, including break-bulk shipments. Tanker trade shipments accounted for less than one third of total seaborne trade volume, in line with the persistent shift in the structure of seaborne trade observed over the past four decades. The share of tanker trade dropped from around 55 per cent in 1970 to 29.4 per cent in 2017. Between 1980 and 2017, global tanker trade expanded at an annual average growth rate of 1.4 per cent, while major dry bulks rose by 4.6 per cent. The fastest growing segment was containerized trade, with volumes expanding over nearly four decades at an annual average growth rate of 8.1 per cent.

1.1.9 Historically; developing countries have been the main suppliers of high-volume, low-value raw materials; this has, however, changed over the years. As shown in **table 2 (b)**, developing countries have emerged as prominent world exporters and importers. A milestone was reached in 2014 when developing countries' share of goods unloaded (imports), surpassed, for the first time, the group's share of goods loaded (exports). This shift underscores the strategic importance of developing countries as the main driver of global seaborne trade, as well as their growing participation in global value chains.

Table 2 (b): World Seaborne Trade by type of Cargo & country group, 2016-17

Country Group	YEAR	Good loaded				Good unloaded				
		Total	Crude Oil	Petroleum Products & gas	Dry Cargo	Total	Crude Oil	Petroleum Products & gas	Dry Cargo	
Millions of tons										
World	2016	10288.6	1831.4	1223.7	7233.5		10279.9	1999	1235.7	7054.1
	2017	10702.1	1874.9	1271.2	7555.9		10666	2035	1281.5	7349.4
Developed Economies	2016	3492.9	150.5	453	2889.4		3840.4	1001.3	507.6	2331.5
	2017	3675	162.6	478.3	3034.2		3838.3	956.8	509.1	2372.5
Transition Economies	2016	637.3	176.3	40.2	420.7		59.6	0.3	4	55.3
	2017	664.5	190.7	48.3	425.6		65.9	0.8	3.4	61.7
Developing Economies	2016	6158.4	1504.5	730.5	3923.4		6379.9	988.5	724.2	4667.3
	2017	6362.5	1521.6	744.7	4096.2		6761.7	1077.4	769.1	4915.3
Africa	2016	692.7	271.3	58.8	362.6		492.9	38.7	80.8	373.4
	2017	726.2	288	60	378.2		499.8	33.9	90.5	375.4
America	2016	1336.8	232.5	75.9	1028.4		566	51.9	128.2	385.8
	2017	1379.4	227.3	71.9	1080.2		608.3	54.7	141.8	411.8
Asia	2016	4121.2	999.1	594.9	2527.2		5307.6	897	510.9	3899.7
	2017	4248.8	1004.6	611.8	2632.4		5640.1	988	532.5	4119.6
Oceania	2016	7.7	1.7	0.9	5.2		13.5	0.8	4.2	8.4
	2017	8	1.7	0.9	5.4		13.5	0.8	4.2	8.4

1.1.10 While, the participation of developing countries, notably those of East Asia, in global value chains may have played a part in increasing their contribution to global goods unloaded, observed deceleration over recent years in vertical specialization suggests that factors other than participation in global value chains may also be driving growth in developing countries' seaborne imports. Overall decline in the vertical specialization process is evident when considering trade in intermediate goods. The share of intermediate imports of China as a proportion of its exports of manufacturing goods – a measure of the reliance of the manufacturing sector on imported inputs – has declined consistently over the last decade, from almost 60 per cent in 2002 to less than 40 per cent in 2014 (UNCTAD, 2016). The share of the value chain created by production abroad as a percentage of global exports is estimated to have gradually diminished since 2011, suggesting some deceleration in globalization (Berenberg and Hamburg Institute of International Economics,

2018). UNCTAD (2018c) finds that the rate of expansion of international production is slowing down, and international production and cross-border exchanges of factors of production are gradually shifting from tangible to intangible forms.

Seaborne Trade by Cargo Type

Crude Oil and Petroleum products

1.1.11 The year 2017 witnessed the geographical dispersion of Oil trade, as Oil trade patterns became less centred on usual suppliers from Western Asia and benefited from increased trade flows from the Atlantic basin to East Asia. These trends have supported and boosted long-haul tankers demand. Crude oil seaborne trade expanded at a slower pace 2.4 percent in 2017 as compared with stronger growth 4 percent in 2016. UNCTAD estimates the World crude oil trade in 2017 at 1.87 billion tons, supported by increasing exports from the United State, rising global refining activity - especially in Asia - declining oil inventories and steady crude oil shipments from Western Asia. Crude oil trade benefited from the growing export volumes originating in the Atlantic basin and destined to Asia, most notably China, where rising demand from independent refiners and growing state refinery capacity boosted demand growth. An overview of global players in the oil and gas sector is presented in (table 2(c)). In view of the two- digit growth rate recorded in 2016 and 9.1 per cent growth experienced in 2017, China is clearly emerging as a leading importer of crude oil. Its main Crude Oil suppliers were Angola, the Islamic Republic of Iran, Iraq, the Russian Federation, Saudi Arabia and the Bolivarian Republic of Venezuela.

Table 2(c) Major producers and consumers of Oil and Natural gas, 2017 (World market share in percentage)

Production				
S. No.	World	World Oil Production	Oil Refinery Capacity	World Natural Gas Production
1	Africa	9%	3%	5%
2	Asia Pacific	9%	34%	17%
3	Developing America	10%	8%	6%
4	Europe	4%	15%	7%
5	North America	19%	21%	25%
6	Transition Economies	15%	9%	22%
7	Western Asia	34%	10%	18%
	Total	100%	100%	100%

Consumption

S. No.	World	World Oil Production	Oil Refinery Capacity	World Natural Gas Production
1	Africa	4%	3%	4%
2	Asia Pacific	35%	35%	21%
3	Developing America	9%	6%	7%
4	Europe	15%	16%	14%
5	North America	23%	22%	23%
6	Transition Economies	4%	8%	16%
7	Western Asia	10%	10%	15%
	Total	100%	100%	100%

Source: UNCTAD secretariat calculation, based on data from British Petroleum, 2018.

1.1.12 Together, refined petroleum products and gas volumes increased by 3.9 per cent in 2017; growth in petroleum products was supported by rising demand in developing America and growing intra-Asian trade. However, elevated global inventory and stocks undermined arbitrage opportunities for some products and hindered growth during the year. At the same time, drawdowns on inventories weighed on the import demand in some regions, including Europe (Clarksons Research, 2018a). On the supply side, higher levels of refinery throughput lifted export volumes from Europe and Asia, including Western Asia and China. The United States contributed to export growth, and shipments of oil products expanded by 9.5 per cent (Clarksons Research, 2018b). United States exports to developing America partly benefited from the continued decline in refinery activity in Brazil, Mexico and the Bolivarian Republic of Venezuela.

Natural Gas and liquefied gases

1.1.13 Shipments of liquefied natural gas totalled 293.8 million tons in 2017, following a 9.6 per cent increase over the previous year (Clarksons Research, 2018b). Increased demand, the highest in six years, originated mostly in Asia, where energy policy shifts are under way. Imports of the commodity to China increased by 47.3 per cent in 2017, owing to weather conditions and stronger demand. The country's demand for liquefied natural gas was partly supported by the growing importance of the environmental agenda. Further, the continued expansion of liquefied natural gas regasification capacity in China highlights the potential for further expansion in imports of the commodity.

1.1.14 Shipments of liquefied petroleum gas expanded at a slower pace (2.0 per cent) in 2017, down from 11.2 per cent in 2016 (Clarksons Research, 2018b). The main factors restricting growth included a decline in Western Asian exports, which was offset somewhat by growing exports from the United States. Demand for imports in China was key, with import volumes expanding by 14.7 per cent. This pace is, however, less than half of that in 2016 (34.4 per cent), reflecting the end of the recent wave of propane dehydrogenation plant expansions (Danish Ship Finance, 2017). Imports of liquefied petroleum gas to India increased in 2017, supported by a subsidy programme of the Government promoting households' switch to cleaner fuels. In contrast, imports of the commodity to Europe declined, owing in part to competition from ethane.

Dry Cargo Trades

Dry Bulk Shipments: Major and minor dry bulks

1.1.15 A limited expansion in 2015⁶2016, global dry bulk trade grew by about 4 per cent in 2017, bringing total volumes to 5.1 billion tons (UNCTAD, Review of Maritime Transport, 2018). A sharp increase in iron ore imports to China, a rebound in global coal trade and improved growth in minor bulk trades supported the expansion. Overall, strong import demand in China remained the main factor behind growth in global dry bulk trade. Iron ore imports to China increased by 5 per cent in 2017, bringing total volumes to nearly 1.1 billion tons. With a market share of more than 70 per cent, China remains the main source of global iron ore demand. A rise in steel production and the closure of more than 100 million tons per annum of outdated steelmaking capacity in 2016⁶2017 boosted the country's demand for imports. Further, the increased use of higher grade imported iron ore displaced domestic supplies. The leading iron ore exporters were Australia, Brazil and South Africa; Australia and Brazil supplied over 85 per cent of the demand for imports in China. Nevertheless, Australia is by far the largest exporter, supplying nearly two thirds of iron ore requirements in China.

1.1.16 Global coal trade resumed growth in 2017, increasing by 5.8 per cent following a limited expansion in 2016 and a significant decline in 2015. Higher import demand in China, the Republic of Korea and a number of South-East Asian countries supported the volume increase. Coal imports to China continued to provide strong support for dry bulk shipping demand. China, India, Japan, Malaysia, and the Republic of Korea are major importers of coal, while Australia and

Indonesia are major exporters of the commodity. Growing coal exports from the United States to China are benefiting dry bulk shipping. One factor is the uncertainty over the Indian coal trade. On the one hand, India plans to increase domestic production, which may alter the balance between locally sourced and imported coal. On the other hand, growing demand from the steel sector in India may boost seaborne imports of coking coal (Barry Rogliano Salles, 2018).

1.1.17 Growing manufacturing activity and construction demand supported a 2.2 per cent increase in minor bulks commodity trade. Rising demand for commodities such as bauxite, scrap and nickel ore pushed volumes to 1.9 billion tons. However, the large drop (less 30.8 per cent) in exports of steel products from China due to reforms in the country's steel sector undermined the expansion to some extent. Bauxite shipments expanded by 19.5 per cent, accounting for 13 per cent of minor dry bulks commodities trade in 2017. The continued rise in Chinese aluminium production and the availability of bauxite ore, following years of export disruptions, led to an expansion in bauxite trade. While China dominates the import side with a market share of more than two thirds, key players on the supply side are more varied and include Australia, Brazil, Guinea and India.

Other Dry Cargo Trades

Containerized Trade

1.1.18 Following the difficult years of 2015 and 2016 when containerized trade grew modestly at 1.1 per cent and 3.1 per cent, respectively, container market conditions improved in 2017, and strong growth in volumes was recorded across all routes. World containerized trade volumes expanded by a strong 6.4 per cent in 2017, the fastest rate since 2011. Global volumes reached 148 million TEUs (UNCTAD Review of Maritime Transport, 2018), supported by various positive trends. The modest global recovery was central to the rise in containerized volumes. In addition, factors such as a recession in Brazil and the Russian Federation, increased consumption requirements in the United States, improved commodity prices, strong import demand from China and the rapid growth of intra-Asian trade reflecting the effect of regional integration and participation in global value chains, contributed to the recovery.

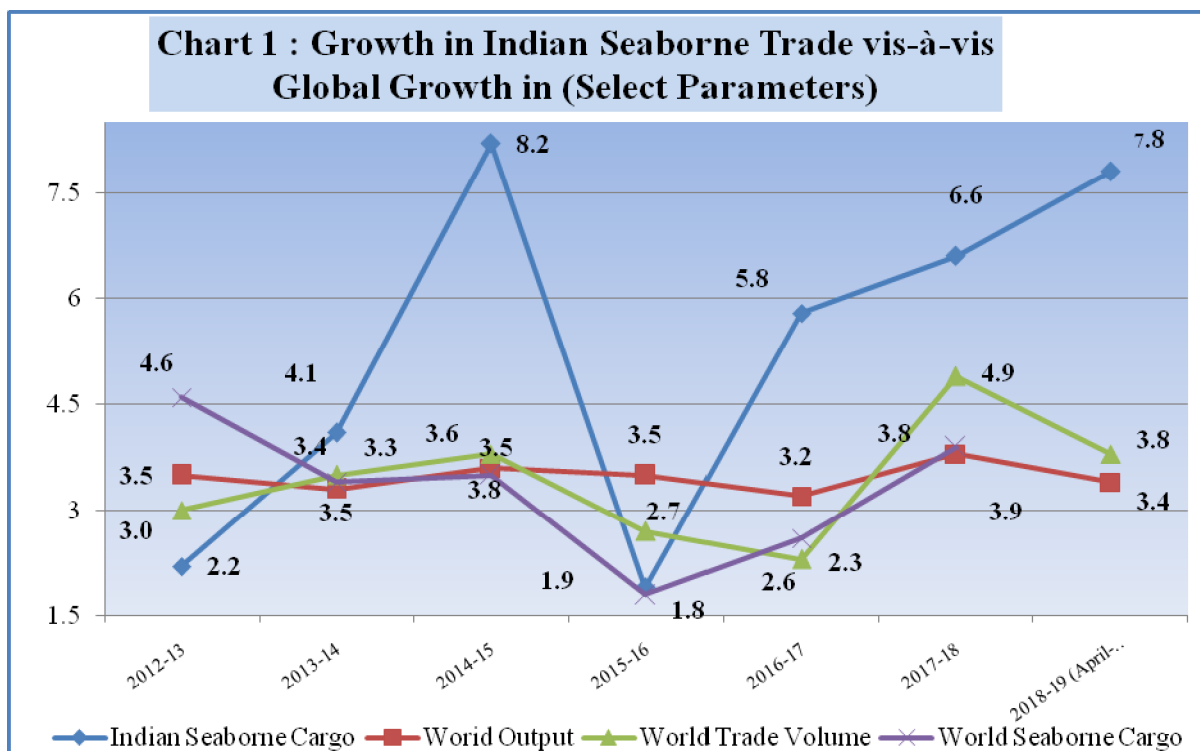
Seaborne Trade Development Forecast

1.1.19 Global seaborne trade is doing well, helped by the upswing in the world economy. Prospects for the short and medium term are positive overall as global GDP is expected to grow by more than 3.0 per cent over the 2018-2023 period (International Monetary Fund, 2018), and merchandise trade volumes are set to rise by 4.4 per cent in 2018 and 4 per cent in 2019 (World Trade Organization, 2018). In line with projected economic growth and based on the income elasticity of seaborne trade estimated for the 2000-2017 period, UNCTAD expects world seaborne trade volumes to expand by 4.0 per cent in 2018. According to UNCTAD projections, world seaborne trade will expand at a compound annual growth of 3.8 per cent during that period, based on calculated elasticities and the latest figures of GDP growth forecast by the International Monetary Fund for 2018-2023.

1.1.20 In 2018, UNCTAD forecasts indicate that contingent on continued economic conditions in the global economy, volumes across all segments are set to expand; it is expected that containerized and dry bulk commodities trades will record the fastest growth. Tanker trade volumes should increase, although at a slightly slower pace than other cargo types. Dry bulk commodities are projected to experience a compound annual growth rate of 4.9 per cent between 2018 and 2023, while containerized shipments are expected to rise by 6 per cent, supported by positive economic trends, imports of metal ores to China and steady growth on the non-mainline trade routes. Further, crude oil trade is forecast to grow by 1.7 per cent between 2018 and 2023, and combined petroleum products and gas volumes, by 2.6 per cent.

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 2018-19, Major and Non-major Ports in India have accomplished a total cargo throughput of 624.3 million tonnes reflecting an increase of 7.8% over the corresponding period of the previous year 2017-18 (Table 3). The growth in cargo handled at Major and Non-major ports in first six months (April-September) of 2018-19, were 5.1% and 11.4% respectively. The share of Non-major Port in the total traffic handled at Indian Port increased from 43.6% in first six months (April-September), 2017-18 to 45.02% in the same six months of 2018-19. Trend in traffic handled at Major and Non-major Ports is given below in **Table 3**.

Table 3- Traffic Handled at Indian Ports						(Million Tonnes)	
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19 (P)
Major Ports	555.49	581.34	605.89	648.47	679.37	326.54	343.26
	(1.8)	(4.7)	(4.2)	(7.0)	(4.8)	(3.3)	(5.1)
Non-Major Ports	416.97	470.89	465.87	485.21	529.57	252.39	281.04
	(7.5)	(12.9)	(-1.1)	(4.2)	(9.1)	(3.0)	(11.4)
All Ports	972.46	1052.23	1071.76	1133.69	1208.94	578.93	624.30
	(4.1)	(8.2)	(1.9)	(5.8)	(6.6)	(3.2)	(7.8)

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 2018-19 was 343.26 million tonnes achieving a growth of 5.1% over the previous year.

1.4.2 During first six months (April-September) of 2018-19, Kamarajar Port recorded highest growth in traffic 19.7% followed by Cochin Port (11.5%), Paradip Port (11.1%), Haldia Dockyard Complex (10.1%), Deen Dayal Port (10.0%), JNPT (6.5%), Visakhapatnam Port (5.3%), KDS (3.8%), Chennai Port (3.4%) and New Mangalore Port (3.2%). Major ports which recorded **negative growth** in traffic during first six months (April-September) of 2018-19 were: Mormugao Port (27.1%), Mumbai Port (5.9%) and Chidambaranar Port (2.9%).

1.4.3 Amongst the Major Ports, Deen Dayal (Kandla) Port handled the maximum Cargo of 58.63 million tonnes with a share of 17.1% in total cargo handled at major ports followed by Paradip Port (15.4%), JNPT (10.1%), Vishakhapatnam Port (9.3%), Mumbai Port (8.6%), Chennai Port (7.9%), Haldia Dockyard Complex (6.1%), NMPT (5.9%), Chidambaranar Port (4.9%), Kamarajar Port (4.8%), Cochin Port (4.6%), Mormugao Port (2.7%) and Kolkata Dock System (2.6%) during first six months (April-September) of 2018-19 (**Table 4**).

Table 4 : Traffic Handled at Major Ports								
(Thousand Tonnes)								
Ports	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September		% change 18-19/ 17-18
						2017-18 (P)	2018-19(P)	
1	2	3	4	5	6	7	8	9
Kolkata	41386	46293	50289	50951	57886	27716	29969	8.1
Kolkata DS	12875	15283	16782	16810	17390	8592	8920	3.8
Haldia DC	28511	31010	33507	34141	40496	19124	21049	10.1
Paradip	68003	71011	76397	88959	102013	47605	52898	11.1
Vizag	58504	58004	57035	61020	63537	30149	31761	5.3
Kamarajar	27337	30251	32206	30020	30446	13847	16570	19.7
Chennai	51105	52541	50058	50214	51881	26236	27137	3.4
Chidambaranar	28642	32414	36849	38463	36583	17286	16778	-2.9
Cochin	20886	21595	22095	25007	29138	14264	15906	11.5
New Mangalore	39365	36566	35582	39936	42055	19549	20179	3.2
Mormugao	11739	14711	20776	33181	26897	12658	9229	-27.1
Mumbai	59184	61660	61119	63129	62828	31234	29392	-5.9
JNPT	62333	63801	64027	62152	66004	32704	34814	6.5
Deen Dayal	87005	92497	99458	105442	110099	53287	58630	10.0
All Ports	555489	581344	605891	648474	679367	326535	343263	5.1
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 2018-19, Thermal Coal, posted highest growth rate of 18.9% followed by Container (9.1%), Other Cargo (4.9%), POL (3.3%) and Coking Coal (3.1%). The other commodities such as Food grain, FRM Dry, Fertilizer Finished and Iron ore were affected during first six months of 2018-19 and dropped by 74.3%, 7.7%, 1.9% and 9.2% 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								
Commodities	2013-14	2014-15	2015-16	2016-17	2017-18 (P)	April-September		% change 18-19/17-18
						2017-18 (P)	2018-19 (P)	
1	2	3	4	5	6	7	8	9
POL	180507	181020	186360	200225	226660	110967	114608	3.3
Iron Ore	23037	18002	15315	41765	41052	21753	19744	-9.2
Fertiliser	13783	16291	16023	14057	14888	7613	7259	-4.6
1. Finished	6148	7926	8493	7043	7380	3995	3919	-1.9
2. Raw (DRY)	7635	8365	7530	7014	7508	3618	3340	-7.7
Coal	104271	119474	134056	126177	118530	55248	62891	13.8
1. Thermal Coal	71651	87119	100252	90329	85411	37558	44661	18.9
2. Coking Coal	32620	32355	33804	35848	33119	17690	18230	3.1
Food Grain	4794	3089	2373	6504	3019	1774	456	-74.3
Container (Tonnes)	114672	119441	123168	124663	133635	66025	72034	9.1
Others	114425	124027	128596	135083	141583	63155	66271	4.9
Total	555489	581334	605891	648474	679367	326535	343263	5.1
Source: IPA, (P): Provisional								

1.4.5 In terms of composition of cargo traffic handled during first six months (April-September) of 2018-19 at major ports, the largest commodity group (with share in percent in total cargo handled) was POL (33.4%), Container traffic (21.0%), Others cargo (19.3%), Coal (18.3%), Iron ore (5.8%) , Fertilizer & FRM (2.1%) and Food Grain (0.1%).

1.4.6 The Port-wise and Commodity-wise shares in total cargo traffic during first six months (April-September) of 2018-19 are depicted in the **Charts II and III** respectively.

Chart-II Port-wise share in Traffic Handled during First Six months (April-September), 2018-19 in India

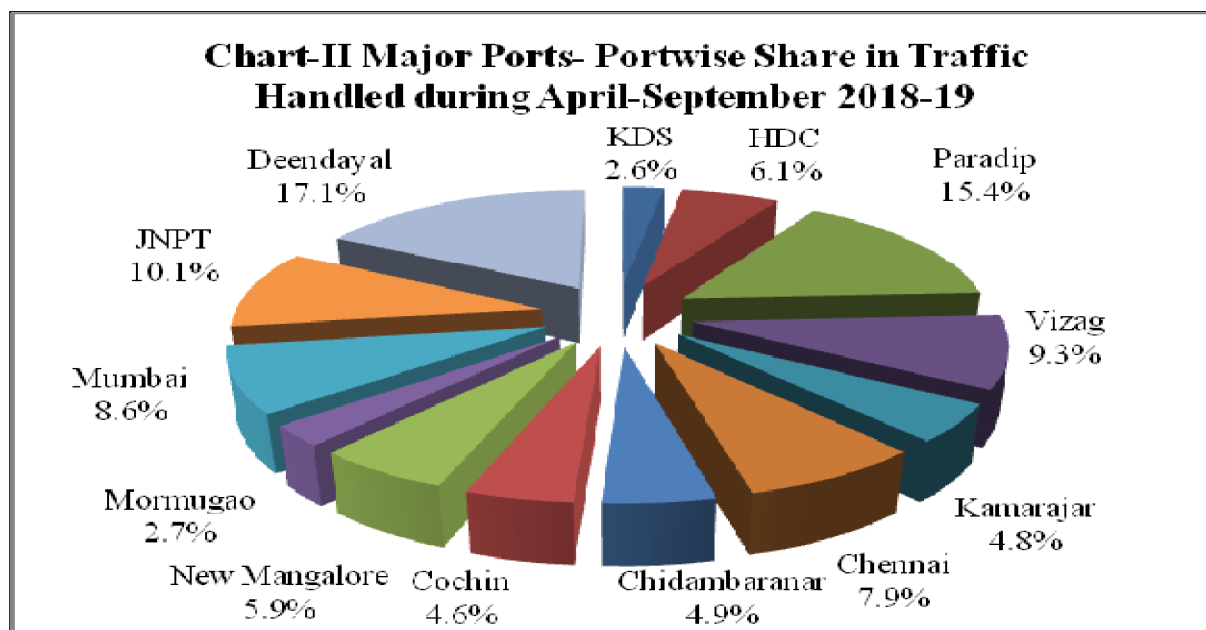
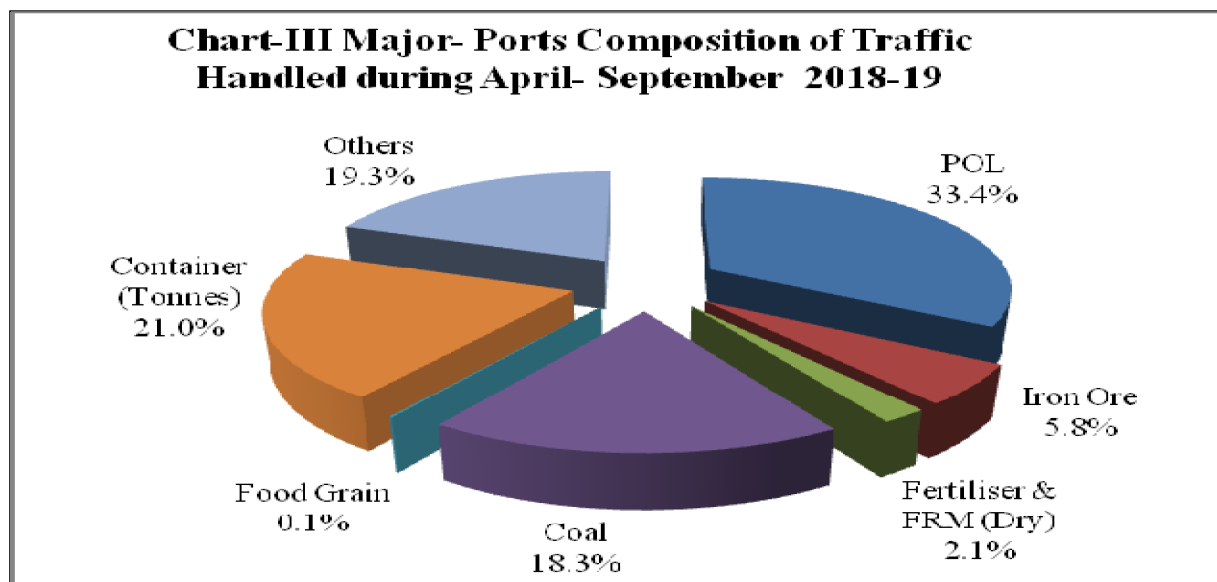


Chart-III Commodity composition of Traffic Handled during First Six months (April-September), 2018 - 19 in India



1.4.7 The Port-wise & commodity-wise traffic handled at major ports from 2016-17 onwards are given in **Annex –I**.

Container Traffic

1.4.8 Growth in container traffic (in million tonnes), which reflects largely trade in manufactures and components, at 9.1% during first six months of 2018-19 is higher compared to 6.6% achieved in the corresponding period of the year 2017-18. In terms of Twenty Foot Equivalent Units (TEUs), containers handled by Major Ports during first six months of 2017-18 recorded 7.7% growth as compared to 6.7% in the same period of the 2017-18.

Amongst the major ports, Mumbai port has witnessed fall in container traffic. JNPT continues to be the leading container handling port in the country with a share of 42.6% in terms of tonnage and 51.7% in terms of TEUs in the total container traffic at major ports during first six months (April-September) of 2018-19 (**Table 6**). Chennai port which handled 22.3% of container cargo is the second largest container handling port followed by Chidambaranar (10.5%), Kolkata Dockyard System (7.1%), Visakhapatnam Port (5.5%) and Cochin Port (5.3%).

Table 6: Container Traffic at Major Ports												
(in thousand tonnes/TEUs)												
PORT	2015-16		2016-17		2017-18(P)		April-September				% change 2018-19/ 2017-18	
							2017-18 (P)		2018-19 (P)			
	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
Kolkata DS	9263	578	9887	636	9760	640	4898	320	5092	338	4.0	5.6
Haldia DC	1376	85	2467	136	2672	156	1254	70	1544	90	23.1	28.6
Paradip	132	5	42	2	98	7	35	3	83	6	137.1	100.0
Vizag	5145	245	6428	367	6835	389	3258	189	3987	227	22.4	20.1
Chennai	30207	1565	28850	1495	29905	1549	15240	790	16093	834	5.6	5.6
Kamarajar	1	0	1	0	52	3	0	0	0	0	-	-
V.O.C	12388	612	12991	642	14192	698	6863	337	7576	371	10.4	10.1
Cochin	5785	419	6840	491	7692	556	3717	268	3814	279	2.6	4.1
New Mangalore	1105	76	1411	95	1743	115	781	51	1013	68	29.7	33.3
Mormugao	345	26	402	30	425	32	193	14	227	18	17.6	28.6
JNPT	56791	4492	54530	4500	57867	4834	28700	2403	30718	2518	7.0	4.8
Mumbai	574	43	639	43	556	42	316	23	175	14	-44.6	-39.1
Deendayal	56	3	175	5	1838	118	770	49	1712	103	122.3	110.2
All Ports	123168	8149	124663	8442	133635	9139	66025	4517	72034	4866	9.1	7.7
Note: (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 45% of total maritime freight traffic of the country during first six months (April-September) of 2018-19.

1.5.2 The following table (Table 7) presents maritime State-wise share and growth of traffic handled at Non-major Ports from 2013-14 and onwards.

Maritime State/UT	2013-14	2014-15	2015-16	2016-17	2017-18 (P)	April- September		% Change over previous year	
						2017-18	2018-19(P)	2017-18	2018-19(P)
Gujarat	309945	336095	339778	345739	370769	178075	193053	5.6	8.4
	(74.4)	(71.4)	(72.9)	(71.3)	(70.0)	(70.6)	(68.7)		
Maharashtra	24664	27295	28849	34894	37906	14810	20118	-4.8	35.8
	(5.9)	(5.8)	(6.2)	(7.2)	(7.2)	(5.9)	(7.2)		
Andhra Pradesh	58692	83418	72733	69603	86288	41779	52813	17.7	26.4
	(14.1)	(17.7)	(15.6)	(14.3)	(16.3)	(16.6)	(18.8)		
Goa	284	760	430	117	72	5	4	-90.7	-20.0
	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.0)	(0.0)		
Tamil Nadu	866	825	856	1152	1103	513	371	6.2	-27.7
	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.1)		
Karnataka	509	651	835	707	680	290	361	-7.9	24.5
	(0.1)	(0.1)	(0.2)	(0.1)	(0.1)	(0.1)	(0.1)		
A&N	1149	1156	1323	1276	1903	907	961	8.0	6.0
	(0.3)	(0.2)	(0.3)	(0.3)	(0.4)	(0.4)	(0.3)		
Odisha	14371	15452	14949	22473	22595	12551	9652	-38.4	-23.1
	(3.4)	(3.3)	(3.2)	(4.6)	(4.3)	(5.0)	(3.4)		
Kerala	90	159	144	141	138	55	51	14.6	-7.3
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)		
Puducherry	6281	4958	5974	9112	8121	3408	3654	-25.8	7.2
	(1.5)	(1.1)	(1.3)	(1.9)	(1.5)	(1.4)	(1.3)		
All M. States/UTs*	416970	470888	465871	485214	529575	252393	281037	2.4	11.3
	(100.0)	(100.0)	(100.0)	100	(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

*Includes 119 ('000) tonnes cargo handled at Lakshadweep during 2013-14 & 2014-15 .

1.5.3 The growth in cargo handled by the non-major ports during first six months (April-September) of 2018-19 was 11.3% compared to 2.4% recorded in the corresponding period of previous year. Gujarat accounted for 68.7% of the traffic handled by the non-major ports followed by Andhra Pradesh (18.8%) and Maharashtra (7.2%). Three maritime States, viz, Gujarat, Andhra

Pradesh and Maharashtra together accounted for 94.7% of the total cargo traffic handled by the non-major ports in first six months (April-September) of 2018-19. Maharashtra State has highest growth of 35.8% in the first six months of 2018-19 compared to same period of the previous year followed by Andhra Pradesh (26.4%), Karnataka (24.5%), Gujarat (8.4%) and Puducherry (7.2%).

1.5.4 Table 8 below gives a glimpse of commodity profile of the cargo handled. The table shows the 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, 2018-19. The percentage share of Iron Ore, building materials, Fertilizer & FRM and other commodities are 8.0%, 2.8%, 2.8% and 23.1% respectively during first six months of 2018-19. Iron ore registered the highest growth of 39.1% in the first six months of 2018-19 compared to same period of the previous year followed by Building Materials (22.0%), Coal (12.3%), Fertilizer & FRM (11.9%), Others commodities (10.7%) and POL (5.5%).

Table 8: Commodity-wise Traffic Handled by Non-Major Ports								(000Tonnes)	
Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	April-September		% Change over previous year	
						2017-18	2018-19(P)	2017-18	2018-19 (P)
POL	169777	167278	180641	186069	195214	93265	98403	3.6	5.5
	(40.7)	(35.5)	(38.8)	(38.3)	(36.9)	(37.0)	(35.0)		
Iron Ore	18338	26794	17383	34455	37037	16099	22393	-13.3	39.1
	(4.4)	(5.7)	(3.7)	(7.1)	(7.0)	(6.4)	(8.0)		
Building Material	14178	14224	14173	15123	14818	6454	7871	-18.9	22.0
	(3.4)	(3.0)	(3.0)	(3.1)	(2.8)	(2.6)	(2.8)		
Coal	126321	156737	141874	133754	145388	70950	79647	-8.7	12.3
	(30.3)	(33.3)	(30.5)	(27.6)	(27.5)	(28.1)	(28.3)		
Fertilizer & FRM	12010	13952	16946	14237	13256	7057	7897	-0.1	11.9
	(2.9)	(3.0)	(3.6)	(2.9)	(2.5)	(2.8)	(2.8)		
Others	76346	91903	94854	101576	123862	58568	64827	34.3	10.7
	(18.3)	(19.5)	(20.4)	(20.9)	(23.4)	(23.2)	(23.1)		
All	416970	470888	465871	485214	529575	252393	281037	2.4	11.3
	(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 the Non major ports									

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 2018-19 is depicted in the pie Charts IV and V respectively.

Chart IV : Non-Major Ports-share of Maritime States/UTs in Traffic Handled during April- September 2018-19

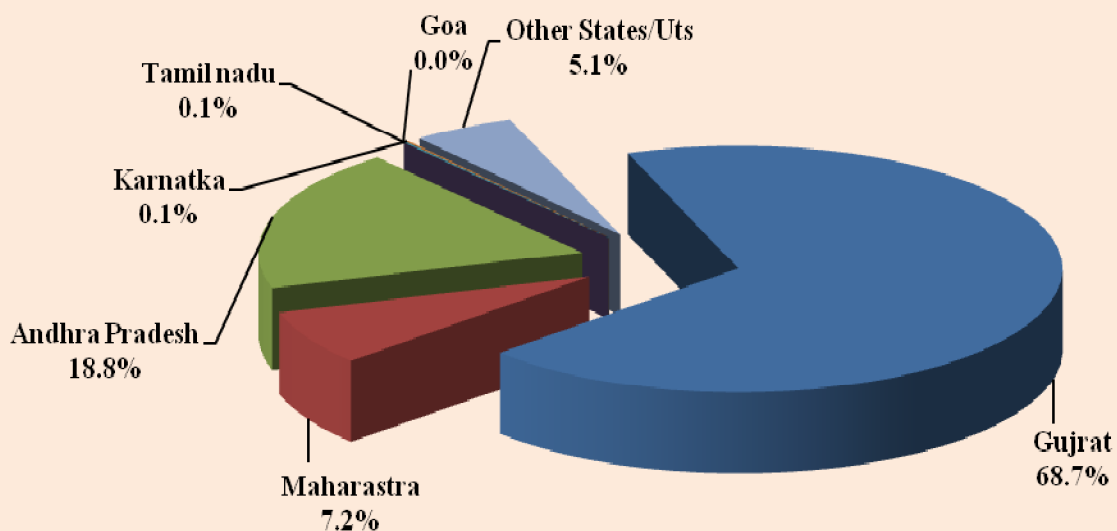
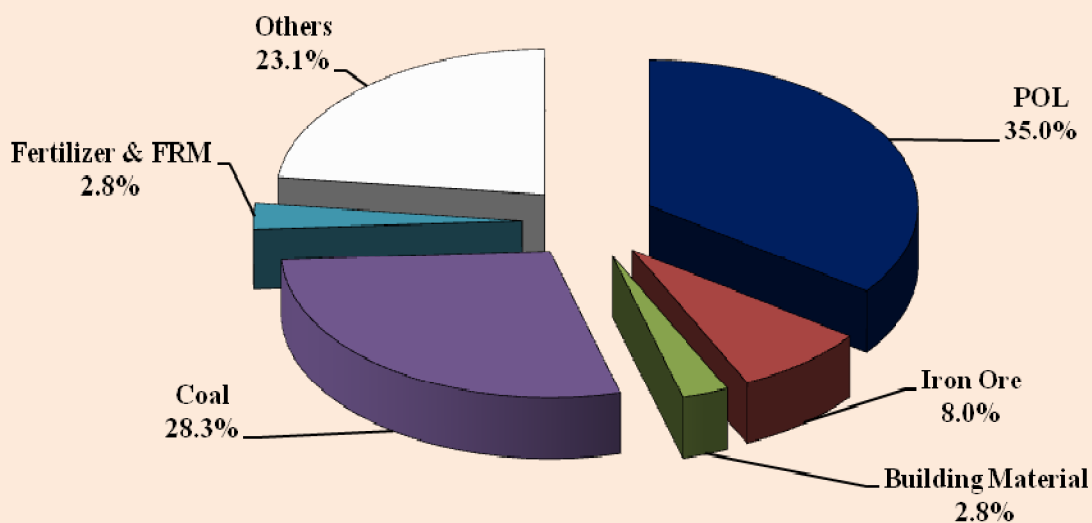


Chart V: Non-Major Ports-Commodity Composition of Traffic Handled during April September 2018-19



1.5.6 Maritime State-wise & commodity-wise traffic handled at non-major ports during (April-September) for the last two years and current financial year 2018-19 is given in **Annex II**.

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 2018-19, the Indian economy achieved a growth of 7.4%, as compared to growth of 5.8% during the corresponding period of the 2017-18. This growth of Indian economy is mainly due to increase in growth of Industry sector from 3.1% to 8.6% during first six months of 2018-19 as compared to corresponding period of 2017-18.

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, 2018-19 was 343.26 million tonnes as compared to 326.54 million tonnes recorded during corresponding period of 2017-18 showing a growth of 5.1%. 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 8.6% in first six months (April-September), 2018-19 as compared to 3.1% in corresponding period of 2017-18. GVA of Industry sector recorded growth of 10.3% and 6.8% in the first two quarters of 2018-19 while, growth in first two quarters of 2017-18 was 0.1% and 6.1% 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 Iron Ore traffic, in the first six months of 2017-18, posted a growth of 23.5%, while in the year 2018-19 (April-September) it posted a negative growth of 10.6%. The growth of POL products in the first six months of 2018-19 has reached to 2.5% compared to 8.0% in the corresponding period of 2017-18. The growth of coal in the first six months of 2018-19 has reached to 18.5% compared to negative growth of 10.4% in the corresponding period of 2017-18. The growth of container commodity increased in the first six months of 2018-19 and reached to

9.1% compared to 6.6% & 0.8% posted in the corresponding period of 2017-18 & 2016-17 respectively. In terms of TEUs the growth of container traffic has also increased from 3.5% to 6.8% in the first six months of 2017-18 and further increased to 7.7% in the first six months of 2018-19. The growth of Cargo handled by major ports in first two quarters of 2018-19 was 3.9% and 6.4% respectively as compared to growth of 5.1% and 1.4% achieved during corresponding period in 2017-18.

Table 9 below 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 2016-17, 2017-18 and 2018-19.

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

Commodities/ Year	2016-17			2017-18			2018-19		
	Q1	Q2	Half Yearly Growth	Q1	Q2	Half Yearly Growth	Q1	Q2	Half Yearly Growth
POL	2.4	8.4	5.4	10.2	6.0	8.0	1.1	3.9	2.5
Iron Ore	159.3	66.9	107.3	33.4	11.6	23.5	-12.2	-8.5	-10.6
Coal	0.7	-8.3	-3.6	-10.5	-10.3	-10.4	14.9	22.9	18.5
Fertilizer	-9.3	-14.5	-11.9	6.9	-12.3	-4.0	10.7	-13.1	-1.6
Container									
In tonnes	3.1	-1.4	0.8	5.7	7.6	6.6	9.1	9.1	9.1
In TEUs	6.4	0.4	3.5	6.6	7.1	6.8	6.5	9.0	7.7
Other cargo	9.1	16.6	12.6	7.4	-3.4	1.8	-6.2	-4.8	-5.5
All Cargo	6.4	4.3	5.4	5.1	1.4	3.3	3.9	6.4	5.1
GVA overall	8.3	7.2	7.8	5.6	6.1	5.8	8.0	6.9	7.4
GVA -Industry	8.3	6.8	7.5	0.1	6.1	3.1	10.3	6.8	8.6

GVA: Gross Value Addition at basic price (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 2017 and early 2018, 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

The container freight market improved considerably, following a difficult market environment in 2016. As per UNCTAD Review of Maritime Transport 2018 report, global container demand grew at 6.4 per cent in 2017, taking total volumes to an estimated 148 million TEUs. The strong development in global container shipping demand in 2017 reflects a fundamental improvement in the global economic environment. Demand growth was particularly high in the first three quarters of the year, although it slowed down in the last quarter. UNCTAD projects global containerized trade to expand at a compound annual growth rate of 6.4 per cent in 2018 supported by the positive economic trends.

Global supply of container ship-carrying capacity, on the other hand, grew at an estimate of 2.8 percent, bringing the total global capacity to 256 million dwt. Although supply growth was relatively moderate, the container market continued, nevertheless, to struggle with the delivery of mega container ships and surplus capacity among the larger vessels (exceeding 14,000 TEUs). World fleet capacity is projected to rise by 3 per cent in 2018 (Review of Maritime Transport, October, 2018 report).

Eventhough the supply of global container ship capacity continued in 2017, freight rates made a remarkable recovery from the lows recorded in 2016. This performance was supported by the upturn in the global demand for container transport services in 2017 across all trade lanes. Freight rates on the mainlane trades routes went up, although they remained volatile, with a drop in the second half due to low demand growth. The surge was driven mainly by positive market trends in the developed regions.

With regard to the intra-Asian routes, the Shanghaió Singapore route averaged \$148 per TEU, compared with \$70 per TEU in 2016, a 111.4 per cent increase. These rates were supported by continued positive trends in the Chinese economy, as well as in other emerging economies in the region. In line with developments concerning demand, supply and spot rates, the shipping charter market also improved in 2017, as rates increased in most sectors over the year, with some volatility and variation across vessel sizes. The 12-month charter rate increased to an average of 378 points, compared with 325 average points in 2016 (Review of Maritime Transport, October, 2018 report). Partly sustained by stronger container demand, this surge reflected the start of the new alliance structures requiring carriers to charter vessels to fill gaps while their networks were being formed. Another factor that drove up the rates was that carriers needed to fill short-term capacity requirements, while awaiting the delivery of new ships.

The container ship charter market got off to a good start in 2018. The new ConTex index increased to an average of close to 500 points in April 2018, the highest since August 2015. Nevertheless, there are still concerns about the potential cascading effect of larger vessel sizes with the delivery of new mega vessels, as well as the impact of market consolidation on vessel employment by major carriers, which may seek to rationalize supply capacity, or use their own tonnage and seek to off-hire chartered ships to control fleet supply (The Loadstar, 2018).

2. Tanker freight rates

Overall, 2017 proved to be a challenging year for the tanker market, mainly because of the pressure faced by markets from continuous growth in supply capacity, particularly in the crude tanker sector that was matched by a relative deceleration in demand growth. It is estimated that global tanker trade expanded at an annual average growth rate of 3.0 per cent in 2017 (Review of Maritime Transport, October, 2018 report); the crude oil tanker fleet grew by 5 per cent and the product tanker fleet grew by 4.2 per cent (Clarksons Research, 2018c). Rapid growth in the capacity of tankers carrying crude oil and products has further affected market balance, particularly in the crude oil sector.

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 ó heavy fuel oils or crude oil ó than clean tankers. The latter generally carry refined petroleum products such as gasoline, kerosene or jet fuels, or chemicals.

The Baltic index for crude oil (Baltic Exchange dirty tanker index) recorded 8 percent growth in 2017, reaching 787 points. The Baltic Exchange clean tanker index progressed by 24 percent from the low level of 2016, reaching 606 points (table 10). Freight rates also remained weak for both crude and products transports during most parts of 2017.

Table 10 - Baltic Exchange Rate Index											
	2009	2010	2011	2012	2013	2014	2015	2016	2017	%age change (2017/16)	2018 first half year
Dirty Tanker Index	581	896	782	719	642	777	821	726	787	8	667
Clean Tanker Index	485	732	720	641	605	601	638	487	606	24	577

Source : Review of Maritime Transport óOctober, 2018

Performance on key crude tanker trades was poor, largely attributable to a reduction in Western Asia's exports in line with production cuts led by the Organization of the Petroleum Exporting Countries, coupled with rapid growth and oversupply in the crude tanker fleet (Hellenic Shipping News, 2018).

In 2018, tanker trade volumes are projected to increase, although at a slightly slower pace than other market segments. However, oversupply capacity should be effectively managed to improve market balance and freight rates. Reflecting positive trends in demand and better management of the supply side, global shipping freight rates improved, despite some variations by market segment. The overall outlook remains positive in view of improved market fundamentals. However, for these prospects to materialize, the prevailing downside risks need to be effectively contained.

3. Dry bulk freight rates

The dry bulk market underwent a remarkable recovery in 2017. Growth in demand for seaborne dry bulk surpassed the fleet growth, as demand for commodities went up, while the surplus of vessels gradually continued to diminish. As per UNCTAD Review of Maritime Transport report, 2018, seaborne dry cargo shipments increased by 4.4 per cent in 2017, up from 2.0 per cent in 2016. Bulk carrier fleet growth, on the other hand, remained manageable at 3.0 per cent in 2017; deliveries declined to almost 20 million gross tons, and scrapping activities increased to more than 8 million gross tons.

Consequently, the Baltic Exchange Dry Index rebounded, especially after having experienced one of the weakest years in 2016 since the financial crisis. As a result, average earnings increased in all fleet segments, averaging \$10,986 per day in 2017, up by 77 per cent from the depressed levels of 2016 (Clarksons Research, 2018b). The sector experienced a strong rebound in charter rates as growth in demand for commodities exceeded fleet expansion.

The Capesize market improved significantly in 2017, driven largely by the surge in growth in the iron ore imports of China and a rebound in coal trade, which helped curb the level of supply capacity. Charter and freight rates improved substantially, as illustrated by the average Baltic Capesize Index of the four and five time charter routes, which recorded a high daily level of \$14,227 and \$15,291, respectively, twice the average rates of 2016.

Market conditions in the Panamax sector also improved markedly from the historically depressed levels of 2016, supported by an improvement in the supply-demand balance. The Baltic Panamax Index of the four time charter routes averaged at \$10,570 per day in 2017, up by 75 per cent from the 2016 average. Improved demand supported by an expansion in coal and grain shipments and firm growth in key minor bulk commodities trade, prompted positive trends. At the same time, growth on the supply side remained moderate as the fleet increased by 2.7 per cent (Clarksons Research, 2018b).

1.6.3 Trends in Global Top 20 Cargo/Container Ports

1.6.3.1 As key players in international trade and logistics and critical nodes in global supply chains, seaports continue to underpin globalized production processes, market access and effective integration in the global economy. World seaports are principal infrastructural assets that service shipping and trade, and their performance is largely determined by developments in the world

economy and trade. Cargo-handling activity and throughput in global ports, which reflected a recovery in the global economy and a rebound in trade volumes that boosted shipping demand and seaborne trade in 2017, showed overall improvement and promising trends.

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	2016	2017	Growth %
1	Ningbo-Zhoushan	China	918	1007	9.7
2	Shanghai	China	700	706	0.9
3	Singapore	Singapore	593	626	5.6
4	Suzhou	China	574	608	5.9
5	Guangzhou	China	522	566	8.4
6	Tangshan	China	516	565	9.5
7	Qingdao	China	501	508	1.4
8	Port Hedland	Australia	485	505	4.1
9	Tianjin	China	549	503	-8.4
10	Rotterdam	Netherlands	461	467	1.3
11	Dalian	China	429	451	5.1
12	Busan	Korea	362	401	10.8
13	Yingkou	China	347	363	4.6
14	Rizhao	China	351	360	2.6
15	South Louisiana	Mexico	295	308	4.4
16	Gwangyang	Korea	283	292	3.2
17	Yantai	China	265	286	7.9
18	Hong Kong SAR	China	257	282	9.7
19	Zhanjiang	China	255	282	10.6
20	Huanghua	China	245	270	10.2
Total of Top 20 Ports			8908	9356	5.0
Source: UNCTAD Review of Maritime Transport 2018					

1.6.3.3 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 5.0% in 2017 as compared to 4.2% in 2016. The growth in container traffic (million TEUs) was 5.9% in 2017 as compared to 2.0% in 2016.

1.6.3.4 Container port throughput is driven to a large extent by developments in the world economy and global demand, including investment, production and consumption requirements. Trans-shipment is a major area of container port activity that results in particular from hub-and-

spoke container networks and could be enhanced by the further deployment of ultralarge container vessels. Trends in 2016 and 2017; point to the strategic importance of containerized port activity.

Table: 12 Top 20 World Container Ports					
(In Million TEUS)					
S. No.	Port	Country	2016	2017	Percentage change
1	Shanghai	China	37.1	40.2	8.3
2	Singapore	Singapore	30.9	33.7	9.0
3	Shenzhen	China	24.0	25.2	5.1
4	Ningbo-Zhoushan	China	21.6	24.6	14.1
5	Busan	Republic of Korea	19.9	21.4	7.8
6	Hong Kong	Hong Kong SAR	19.8	20.8	4.8
7	Guangzhou (Nansha)	China	18.9	20.4	8.0
8	Qingdao	China	18.0	18.3	1.4
9	Dubai	United Arab Emirates	14.8	15.4	4.5
10	Tianjin	China	14.5	15.2	5.0
11	Rotterdam	Netherlands	12.4	13.6	9.8
12	Port Klang	Malaysia	13.2	12.1	-8.4
13	Antwerp	Belgium	10.0	10.5	4.1
14	Xiamen	China	9.6	10.4	8.0
15	Kaohsiung	Taiwan Province of China	10.5	10.2	-2.2
16	Dalian	China	9.6	9.7	1.0
17	Hamburg	Germany	8.9	9.6	7.7
18	Los Angeles	United States	8.9	9.3	5.5
19	Tanjung Pelepas	Malaysia	8.3	8.3	0.6
20	Laem Chabang	Thailand	7.2	7.8	7.4
Total of Top 20 Ports			317.9	336.6	5.9
Source: UNCTAD Review of Maritime Transport 2018					

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 March, 2018; the cargo handling capacity of Major Ports was 1451.19 Million Tonnes. Commodity-wise capacity of Major Ports at the end of March 2013 to 2018 is given in Annex III.

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, improve 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. Bidding documents like Request for Qualification (RFQ), Request for Proposal (RFP) and Model Concession Agreement (MCA) have been standardized. Model Concession Agreement (MCA) gives the various parameters for the implementation and maintenance of PPP projects. The PPP projects are concluded by the Major Ports as per provisions of MCA. The MCA has been amended in January, 2018 with a view to obviate the problems being faced in execution of PPP Projects on account of certain provisions of the earlier MCA of 2008 in order to enhance confidence of investors and make the investments in the Port Sector attractive. At present, a total of 41 PPP projects are operational and 16 more PPP projects are under implementation/construction.

Areas of private investment

1.7.7 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.
 - ❖ Cranage/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)

1.7.8 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

1.7.9 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 National Highway Development Project (NHDP) as well as with the upcoming and future Dedicated Freight Corridors (DFCs).

(ii) Drafts

1.7.10 A minimum draft availability of 14 meters 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 meters. Plans to undertake capital dredging work to enhance the draft availability at channels and berths have been formulated by each major port. Presently, 10 Major Ports have a draft of 14 meters or above. Proposals are in hand to raise the draft at Mormugao port and Kamarajar (Ennore) port to 18 meters and at Jawaharlal Nehru port to 15 meters.

b) Strategic Institutional shift – Landlord model of port governance

1.7.11 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

1.7.12 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

1.7.13 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 Purpose 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 field 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

1.7.14 The project has been launched with an objective of modernizing 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 modernization 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.

1.7.15 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 recycling, 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 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

1.7.16 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 estimated 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

1.7.17 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)

1.7.18 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.

1.7.19 The benchmarking study focused on identifying how efficiently capacity is utilized and underlying operational performance metrics across commodities. The low berth productivity and crane productivity across container terminals at Major Ports along with potential to drive 15-20% higher volumes of coal across ports, just by replicating 'Best Demonstrated Performance

(BDP)' consistently was studied. Potential to double volumes of POL by replicating BDP and reducing non working time and high costs of labour and maintenance dredging across ports was also analyzed.

1.7.20 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.

1.7.21 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, 91 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

1.7.22 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 2017-18, only 68 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 & 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.

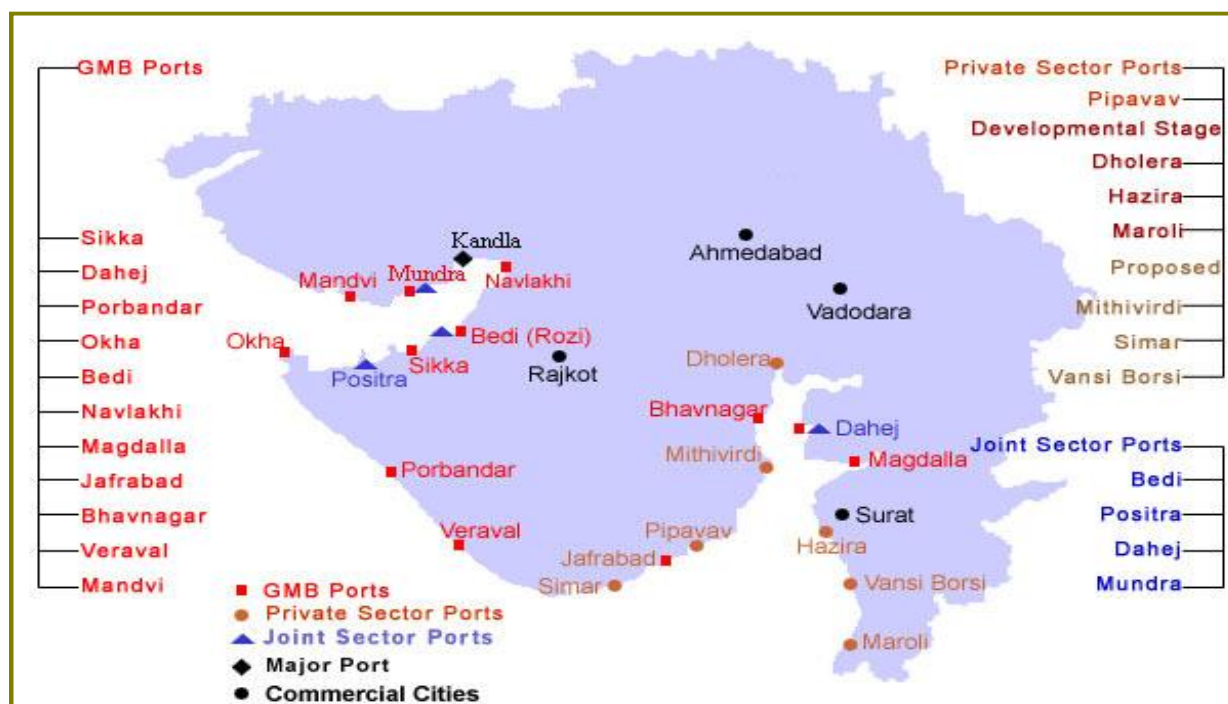
2.4 Maritime States – Non-Major Ports

2.4.1 Non-major ports in India collectively handled 281.04 million tonnes of traffic during first six months of 2018-19 as compared to 252.39 million tonnes of cargo handled in the same six months of 2017-18 recording growth of 11.3%.

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. Deendayal (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

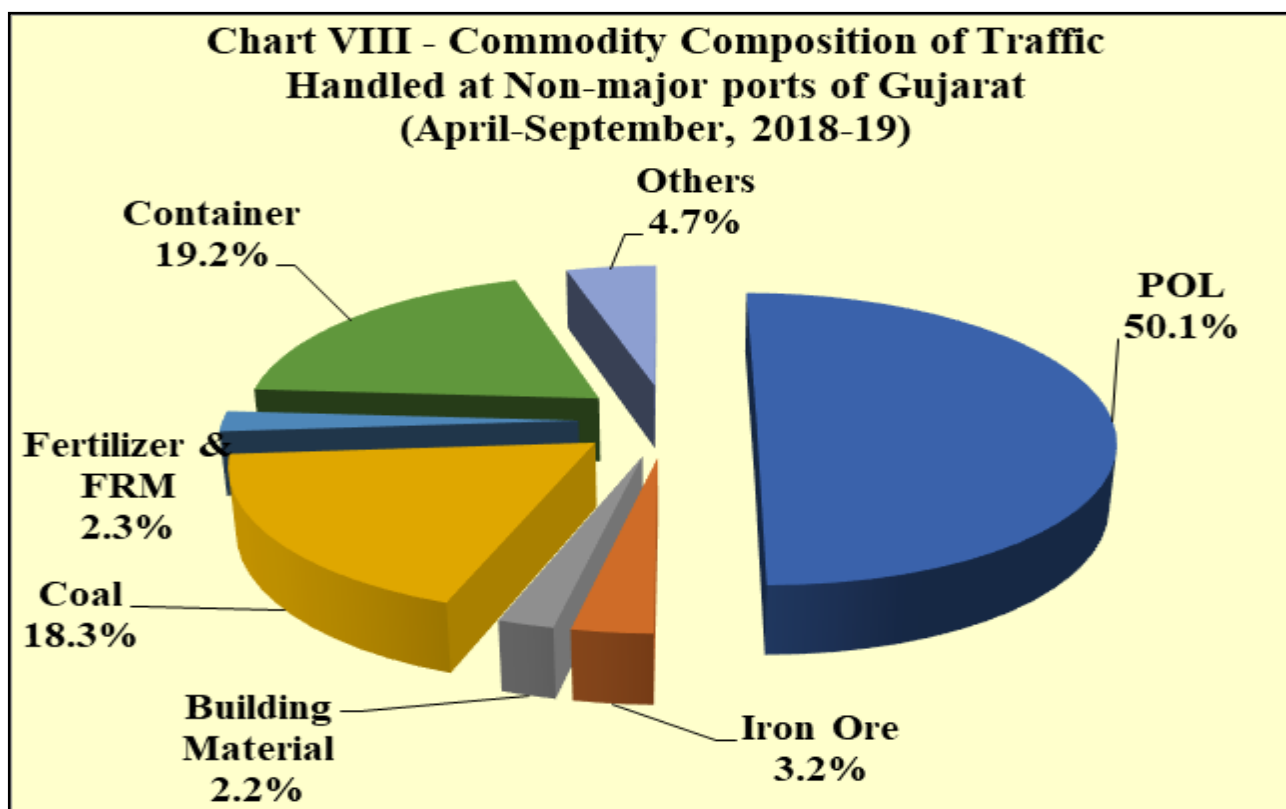
2.4.2.2 The trends in the cargo handled at both major and non-major ports of the State during the last few years and first six months of the current and previous year are given in **Table 13**.

Table 13 - Gujarat: Trends in Cargo Handled at Major & Non-Major Ports (MillionTonnes)							
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	87.01 -(7.1)	92.50 (6.3)	99.46 (7.5)	105.44 (6.0)	110.10 (4.4)	53.29 -(1.2)	58.63 (10.0)
Non-Major Ports	309.95 (7.7)	336.10 (8.4)	339.78 (1.1)	345.74 (1.8)	370.77 (7.2)	178.08 (5.6)	193.05 (8.4)
All Ports	396.95 (4.1)	428.59 (8.0)	439.24 (2.5)	451.18 (2.7)	480.87 (6.6)	231.36 (3.9)	251.68 (8.78)
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 2018-19. The total cargo traffic handled at the major and non-major ports of Gujarat

during first six months (April-September) of 2018-19 was of the order of 251.68 million tonnes as against 231.36 million tonnes in the same periods of 2017-18, reflecting an increase of 8.8%. In particular, non-major ports of Gujarat alone handled around 70% of total cargo traffic at India's non-major ports during first six months (April-September) of 2018-19.

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 during first six months of 2018-19 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 throughput and capacity addition. During the year 2016-17, 22 million tonnes of capacity was added taking the total cargo handling capacity in the non- major port sector in Gujarat to 523 million tonnes in the year 2017-18. 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 increased 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 69.0% in 2016-17 but it has improved to 70.9% in 2017-18.

Table 14 - Gujarat: Non Major Ports - Capacity & Utilization						
	(Million Tonnes)					
Item	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18 (P)
Capacity*	366 (50.0)	387 (5.7)	422 (9.0)	466 (10.4)	501 (7.5)	523 (4.4)
Cargo Handled	287.82	309.95	336.09	339.78	345.74	370.77
% Utilization	78.6	80.1	79.6	72.9	69.0	70.9
* Including Lighterage Port Capacity; Figures within parenthesis indicate capacity addition in % age during the year						

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 2018-19 was 84.32 Million Tonnes compared to 78.75 Million Tonnes handled during same period of 2017-18 with the growth of 7.1%. However, the share of the cargo handled at the two Major Ports of Maharashtra State in the Total cargo was 76.1 % while share of Non-major Ports was only 23.9%.

2.4.3.2 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 15**.

Table 15 - Maharashtra: Cargo Handled at Major & Non-Major Ports							
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	(Million Tonnes) April-September	
						2017-18 (P)	2018-19(P)
Major Ports	121.52 -(0.8)	125.46 (3.2)	125.15 -(0.3)	125.28 (0.1)	128.83 (2.8)	63.94 (3.8)	64.21 (0.4)
Non-Major Ports	24.66 (1.9)	27.30 (10.7)	28.85 (5.7)	34.89 (21.0)	37.91 (8.6)	14.81 -(4.8)	20.12 (35.8)
All Ports	146.184 -(0.4)	152.76 (4.5)	154.00 (0.8)	160.18 (4.0)	166.74 (4.1)	78.75 (2.1)	84.32 (7.1)
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%.

2.4.4.2 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 16**.

Table 16: Goa : Trends in Cargo Handled at Major & Non-Major Ports							
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	(MillionTonnes) April-September	
						2017-18 (P)	2018-19(P)
Major Ports	11.74 -(33.8)	14.71 (25.3)	20.78 (41.2)	33.18 (59.7)	26.90 -(18.9)	12.66 -(3.1)	9.23 -(27.1)
Non-Major Ports	0.28 -(91.6)	0.76 (167.6)	0.43 -(43.4)	0.117 -(72.8)	0.072 -(38.5)	0.01 -(90.0)	0.004 -(20.0)
All Ports	12.02 -(43.1)	15.47 (28.7)	21.21 (37.1)	33.30 (57.0)	26.97 -(19.0)	12.66 -(3.4)	9.23 -(27.1)
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 2017-18, non-major ports in the State handled 0.68 million tonnes of cargo traffic as compared to 0.71 million tonnes in 2016-17 reflecting a decrease of 3.8%. However, during first six months (April-September) of 2018-19, non-major ports in the State handled 0.36 million tonnes of cargo traffic as compared to 0.29 million tonnes in same period of 2017-18 reflecting increase of 24.5%. The percentage share of Major port in the total cargo handled in the Karnataka state was 98.2%.

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	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	39.37 (6.3)	36.57 -(7.1)	35.58 -(2.7)	39.94 (12.2)	42.06 (5.3)	19.55 (11.7)	20.18 (3.2)
Non-Major Ports	0.51 -(16.6)	0.65 (27.9)	0.84 (28.3)	0.71 -(15.3)	0.68 -(3.8)	0.29 -(7.9)	0.36 (24.5)
All Ports	39.87 (5.9)	37.22 -(6.7)	36.42 -(2.1)	40.64 (11.6)	42.74 (5.1)	19.84 (11.4)	20.54 (3.5)
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 non-major ports. The Vallarpadam Container Terminal Project in Cochin has been promoted on BOT basis through public private participation. In Kerala, the four non-major ports handling cargo are: Kovalam /Vizhinjam, Kollam / Neendakara, Beypore and Azhikkal. The total cargo handled during

first six months of 2018-19 in the Kerala State was 15.96 Million Tonnes as compared to 14.32 million tonnes handled during same period of 2017-18 with a growth of 11.4%.

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	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	20.89 (5.2)	21.60 (3.4)	22.10 (2.3)	25.01 (13.2)	29.14 (16.5)	14.26 (19.7)	15.91 (11.5)
Non-Major Ports	0.09 (-6.3)	0.16 (76.7)	0.14 (-9.4)	0.14 (-2.1)	0.14 (-2.1)	0.06 (14.6)	0.05 (-7.3)
All Ports	20.98 (5.2)	21.75 (3.7)	22.24 (2.2)	25.15 (13.1)	29.28 (16.4)	14.32 (19.6)	15.96 (11.4)
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), 2018-19, the non-major ports in Tamil Nadu collectively handled 0.37 million tonnes of cargo traffic as compared to 0.51 million tonnes in the same period of 2017-18 showing decline of 27.7%. However, the total cargo in TamilNadu state has been increased from 57.88 million tonnes to 60.86 million tonnes during first six months

of 2018-19 compared to same period of pervious year. 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	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	107.08 (7.6)	115.21 (7.6)	119.11 (3.4)	118.70 (-0.3)	118.91 (0.2)	57.369 (-4.6)	60.485 (5.4)
Non-Major Ports	0.87 (-7.2)	0.83 (-4.7)	0.86 (3.8)	1.15 (34.6)	1.10 (-4.3)	0.51 (6.9)	0.37 (-27.7)
All Ports	107.95 (7.4)	116.03 (7.5)	119.97 (3.4)	119.85 (-0.1)	120.01 (0.1)	57.88 (-4.5)	60.86 (5.1)
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 ports located at Bhavanapadu, Meghavaram, Bheemunipatnam, Gangavaram, Kakinada SEZ, Kakinada Deep Water, Rawa, Narsapur, Machilipatnam, Nizamapatnam, Vodarevu Mutyalammappalem and Krishnapatnam. Out of 12 non-major Ports; 5 Ports having cargo handled in the States are: Kakinada Deep Water, Krishnapatnam, Gangavaram, Rawa and Kakinada Anchorage Port. 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 84.6 million tonnes of cargo during first six months (April-September) of 2018-19 compared with 71.9 million tonnes in the same six months of 2017-18 thus registering increase of 17.6% in traffic handled by major and non-major ports of Andhra Pradesh. Non-major ports in Andhra Pradesh posted positive growth of 26.4% in the first six months (April-September) of 2018-19 as compared to the same period of the year 2017-18.

2.4.8.3 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	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	58.50 -(0.9)	58.00 -(0.8)	57.03 -(1.7)	61.02 (7.0)	63.54 (4.1)	30.15 -(1.7)	31.76 (5.3)
Non-Major Ports	58.69 (13.3)	83.42 (42.1)	72.73 -(12.8)	69.60 -(04.3)	86.29 (24.0)	41.78 (17.7)	52.81 (26.4)
All Ports	117.192 (5.7)	141.42 (20.7)	129.77 -(8.2)	130.62 (0.7)	149.83 (14.7)	71.9 (8.7)	84.6 (17.6)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.							

2.4.9 ODISHA

2.4.9.1 Odisha 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 Odisha 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 Odisha. Paradip port is the only major port in the State under the control of Government of India. Out of 13 non-major Ports; only two ports handled cargo traffic in Odisha which are Gopalpur and Dhamra Port.

2.4.9.3 Non-major ports in Odisha collectively handled 9.65 million tonnes of cargo during first six months (April-September) of 2018-19 compared to 12.55 million tonnes in the corresponding period of 2017-18 registering a decrease of 23.1% in traffic. However, the total cargo handled during first six months of 2018-19 was 62.55 million tonnes compared to 60.16 million tonnes in the corresponding period of 2017-18 registering an increase of 4% in traffic. The cargo handled at Major port has registered increase in growth by 11.1% during 2018-19 as compared to same period of 2017-18.

2.4.9.4 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 21**.

Table 21 - Odisha : Trends in Cargo Handled at Major & Non-Major Ports							
(Million Tonnes)							
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	68.00 (20.2)	71.01 (4.4)	76.40 (7.6)	88.96 (16.4)	102.01 (14.7)	47.61 (11.6)	52.90 (11.1)
Non-Major Ports	14.37 (29.8)	15.45 (7.5)	14.95 (-3.3)	22.47 (50.3)	22.60 (0.5)	12.55 (-38.4)	9.65 (-23.1)
All Ports	82.37 (21.8)	86.46 (5.0)	91.35 (5.6)	111.43 (22.0)	124.61 (11.8)	60.16 (-4.6)	62.55 (4.0)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional. *: Dhamra Port has started operations in May 2011.							

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 major ports of the State during the last few years and current financial year are given in **Table 22**.

Table 22 - West Bengal :Trends in Cargo Handled at Major Ports							
(Million Tonnes)							
Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Major Ports	41.39 (3.7)	46.29 (11.8)	50.29 (8.6)	50.95 (1.3)	57.89 (13.6)	27.72 (12.6)	29.97 (8.1)
All Ports	41.39 (3.7)	46.29 (11.8)	50.29 (8.6)	50.95 (1.3)	57.89 (13.6)	27.72 (12.6)	29.97 (8.1)
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 three non-major ports of Daman & Diu and Lakshadweep are not handling any cargo traffic for the last few years.

2.4.11.2 The trends in the cargo handled at 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)							
Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Andaman & Nicobar Islands	1.15 (7.5)	1.16 (0.5)	1.32 (14.4)	1.28 (-3.6)	1.90 (49.1)	0.91 (8.0)	0.96 (6.0)
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 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)							
Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18(P)	April-September	
						2017-18 (P)	2018-19(P)
Lakshadweep	0.12	0.12	0.00	0.00	0.00	0	0
Puducherry	6.28 (-9.1)	4.96 (-21.1)	5.97 (20.5)	9.11 (52.5)	8.12 (-10.9)	3.40 (-25.9)	3.65 (7.4)

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 would be increased to a level of 1477.22 million tonnes at the end of 2018-19 (Provisionally). The provisional port-wise capacity during 2018-19 and traffic handled during April- September 2018-19 is brought out in **Table 25**.

Table 25-Major Port-wise Capacity Utilisation during April-September, 2018-19				
(Million Tonnes)				
S. No.	Name of Ports	Capacity 2018-19 Provisional	Traffic (As on 30.09.2018)	Capacity Utilisation (%)
1	Kolkata Ports of Trust*	82.57	30.0	36.3
2	Paradip Port Trust	239.00	52.9	22.1
3	Visakhapatnam Port Trust	131.09	31.8	24.2
4	Kamarajar Ports Limited	84.00	16.6	19.7
5	Chennai Port Trust	134.00	27.1	20.3
6	VOC-Chidambaranar Port Trust	111.46	16.8	15.1
7	Cochin Port Trust	78.60	15.9	20.2
8	New Mangalore Port Trust	98.00	20.2	20.6
9	Mormugao Port Trust	63.40	9.2	14.6
10	Mumbai Port Trust	79.00	29.4	37.2
11	Jawaharlal Nehru Port Trust	118.00	34.8	29.5
12	Deendayal Port Trust	258.10	58.6	22.7
	Total	1477.22	343.3	23.2

Note:- *Haldia dock complex included

The table shows that only 23% capacity has been utilized at Major Ports during first half of 2018-19(P). The highest capacity utilization i.e. 37.2% is achieved at Mumbai port followed by Kolkata Port Trust including Haldia Dock Complex (36.3%), JNPT (29.5%) and Visakhapatnam Port Trust (24.2%) during first half of 2018-19. The least capacity utilization was at Mormugao Port which was 14.6% only during first half of 2018-19.

3.2 Cargo Traffic Targets during 2018-19 & achievement upto September, 2018-19 for Major ports.

3.2.1 Achievement upto September, 2018-19 against the projected targets of 2018-19 is given in Table-26.

Table 26: Annual Cargo Traffic Targets during 2018-19 and achievement upto April-September, 2018-19				
(In Million Tonnes)				
S. No.	Name of Ports	Targets 2018-19	Traffic upto April-September, 2018-19	% age Achievement
1	Kolkata Ports of Trust	19.0	8.9	46.9
2	Haldia Dock Complex	43.0	21.0	49.0
3	Paradip Port Trust	110.0	52.9	48.1
4	Visakhapatnam Port Trust	66.0	31.8	48.1
5	Kamarajar Ports Limited	36.0	16.6	46.0
6	Chennai Port Trust	53.0	27.1	51.2
7	VOC-Chidambaranar Port Trust	38.0	16.8	44.2
8	Cochin Port Trust	32.0	15.9	49.7
9	New Mangalore Port Trust	44.0	20.2	45.9
10	Mormugao Port Trust	20.0	9.2	46.1
11	Mumbai Port Trust	60.0	29.4	49.0
12	Jawaharlal Nehru Port Trust	71.0	34.8	49.0
13	Deendayal Port Trust	112.0	58.6	52.3
	Total	704.0	343.3	48.8

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 4.29 days in 2012-13. In 2013-14, the average TRT was 3.84 days and further increased to 3.89 days in 2014-15. However, TRT declined to 3.48 days in 2016-17 and 2.68 days in 2017-18. The TRT has been reported at 2.99 days during first six months of 2018-19.

Table 27: Average Turn Round Time (days)

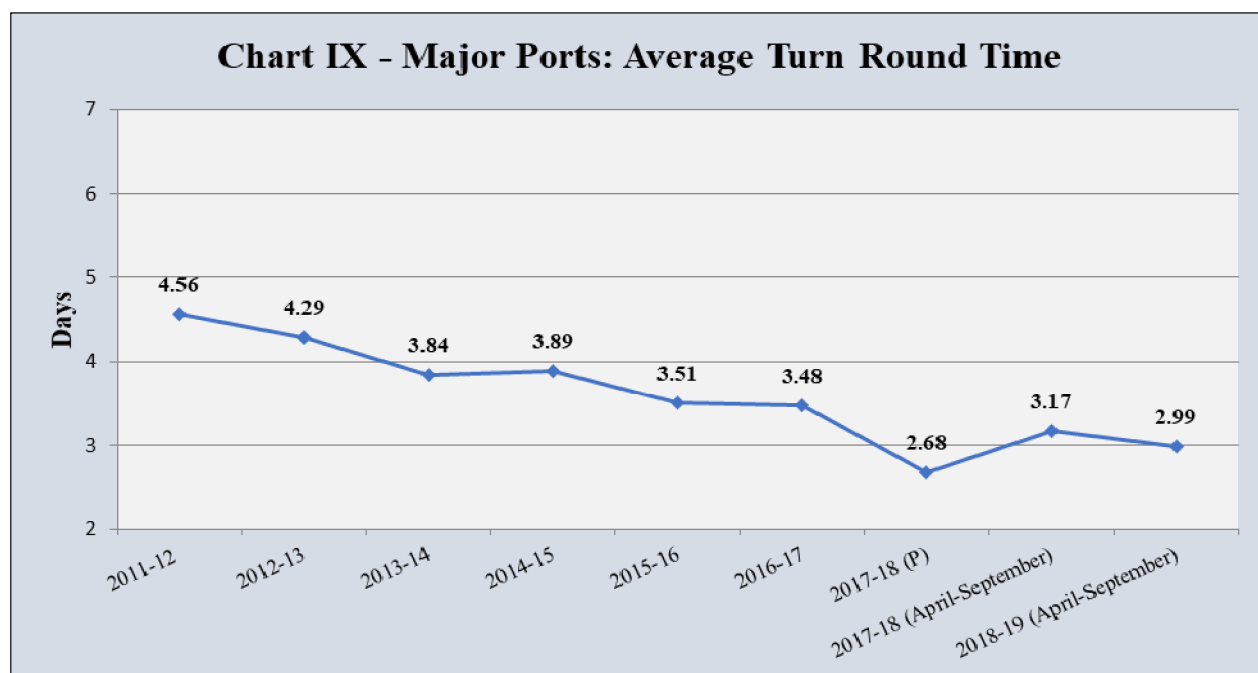
Port	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18(P)*	April- September	
							2017-18 (P)	2018-19 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	4.72	4.51	4.97	4.78	4.43	3.80	4.51	3.75
Haldia D.C	3.95	3.77	3.36	3.27	5.47	3.76	3.00	2.84
Paradip	4.39	4.62	7.01	4.50	4.99	3.31	3.37	2.68
Vishakhapatnam	5.39	4.73	5.67	3.84	3.75	2.58	2.42	2.60
Ennore (Kamarajar)	2.95	4.24	4.32	6.87	2.63	2.20	2.61	1.94
Chennai	3.24	2.46	2.54	2.53	2.51	2.21	2.27	1.94
Tuticorin (Chidambaranar)	4.31	3.92	3.37	3.53	4.00	2.69	2.56	1.97
Cochin	1.58	1.76	1.69	2.18	1.99	1.54	1.52	1.51
New Mangalore	3.29	3.18	2.46	2.63	2.35	2.04	1.98	2.03
Mormugao	5.06	4.50	3.97	3.37	3.43	2.63	2.76	4.17
J.L.Nehru	2.48	2.26	2.24	2.31	1.96	2.24	2.32	2.13
Mumbai	5.58	4.25	4.09	3.29	2.48	2.73	2.83	2.51
Deendayal (Kandla)	6.33	5.66	4.90	4.28	4.51	2.51	2.52	2.96
All Ports	4.29	3.84	3.89	3.51	3.48	2.68	3.17	2.99

* For 2017-18 and onwards a new definition of Turn Around Time (TRT) is calculated based on the previous TRT by deducting of non port a/c pre berthing delay of vessel and post completion delay a/c non port of vessels at non working berth where port has no control.

Source: Major Ports / Indian Ports Association (IPA)

The TRT varied in the range between 1.54 days at Cochin Port to 3.80 days at Kolkata port during 2017-18. However, during the first six months of 2018-19, the TRT varied in the range between 1.51 days at Cochin Port to 4.17 days at Mormugao Port Trust. Amongst the 12 major ports, improvement in TRT compared to corresponding period of 2017-18 is reflected in all Major Ports

except Visakhapatnam Port, New Mangalore Port, Mormugao and Deendayal Port. Port-wise TRT for select years are given in **Table 27**. Average Turn Round Time at major ports for select years since 2012-13 to 2018-19 (upto September, 2018) is presented in the **Chart IX** below.

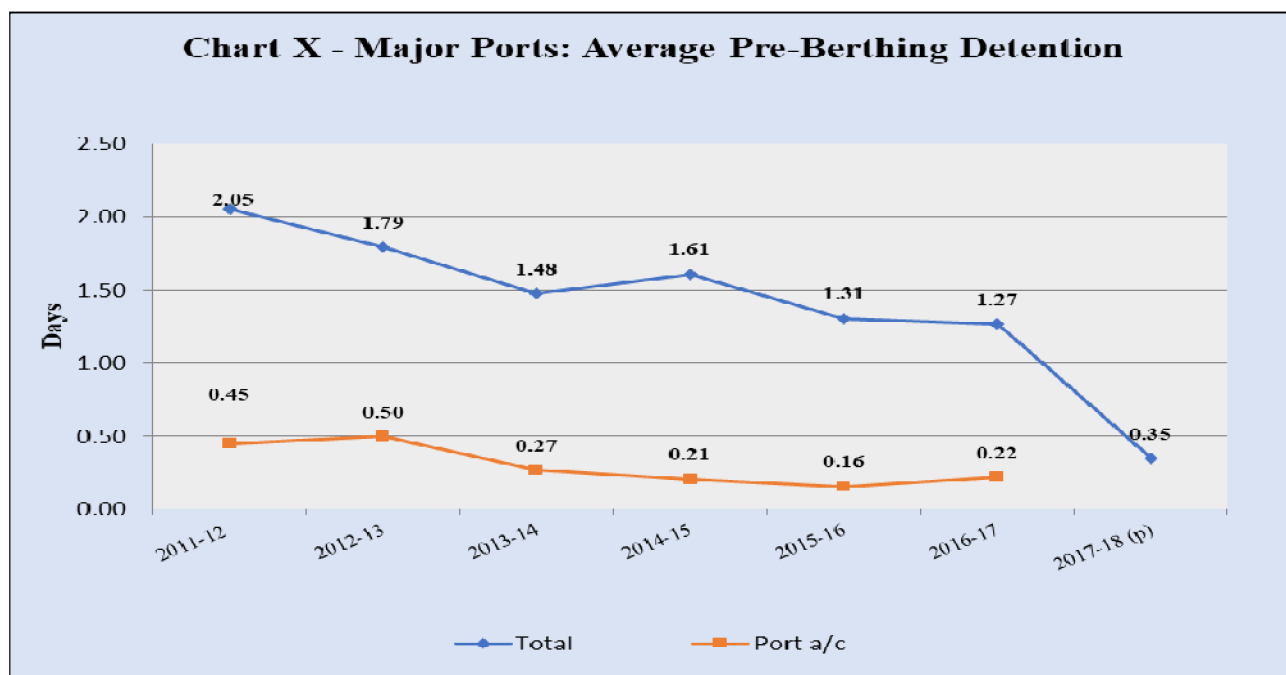


* For 2017-18 and onwards Turn Around Time (TRT) is calculated based on the previous TRT by deducting of non port a/c pre berthing delay of vessel and post completion delay a/c non port of vessels at non working berth where port has no control.

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 0.50 and 0.27 days in 2012-13 and 2013-14 respectively. In 2014-15 the Average PBDT on port account declined to 0.21 days and further to 0.16 days and 0.22 days in 2015-16 and 2016-17 respectively. Average PBDT for the year 2017-18 recorded 0.35 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 2012-13 to 2018-19 (upto September, 2018) 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	2017-18(P)	April- September	
							2017-18 (P)	2018-19 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	0.61	0.56	0.71	0.50	0.57	0.00	0.00	0.00
Haldia D.C	2.29	2.21	1.43	0.66	2.49	1.33	0.59	0.58
Paradip	1.65	1.94	4.11	2.05	2.47	0.87	0.83	0.34
Vishakhapatnam	2.50	1.84	2.59	1.47	1.22	0.10	0.02	0.05
Ennore (Kamarajar)	1.33	2.38	2.51	4.73	0.96	0.00	0.00	0.00
Chennai	0.80	0.41	0.41	0.44	0.38	0.04	0.04	0.03
Tuticorin (Chidambaranar)	1.31	1.19	1.07	1.33	1.80	0.39	0.23	0.10
Cochin	1.09	0.97	0.81	0.66	0.48	0.00	0.00	0.00
New Mangalore	1.04	0.81	0.60	0.76	0.00	0.28	0.13	0.41
Mormugao	1.62	1.47	1.61	1.38	1.67	0.39	0.50	0.24
J.L.Nehru	1.31	1.08	0.80	1.17	0.77	0.37	0.40	0.28
Mumbai	1.62	1.18	1.69	1.27	0.46	0.02	0.05	0.00
Deendayal (Kandla)	3.58	2.72	2.52	1.98	2.02	0.12	0.09	0.36
All Ports	1.79	1.48	1.61	1.31	1.27	0.35	0.29	0.26

Source: Major Ports/ Indian Ports Association (IPA)

Average Output Per Ship Berth-day

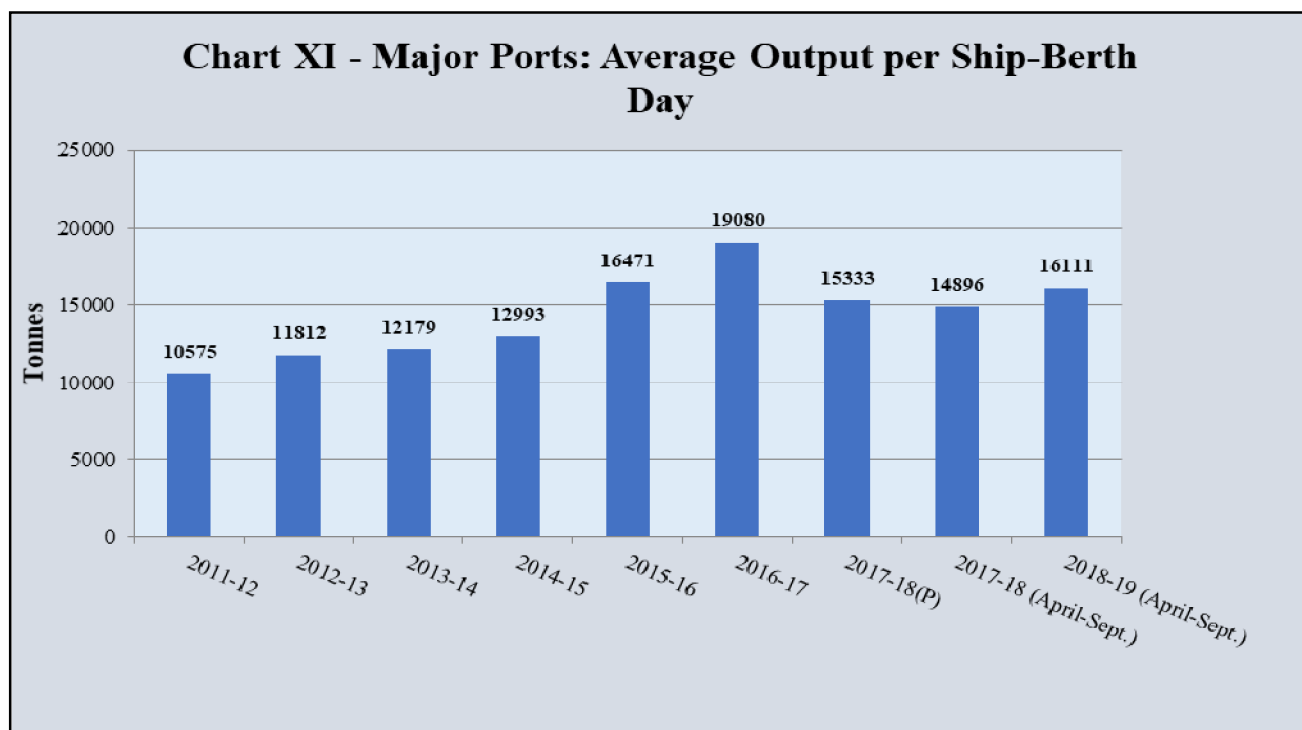
3.3.4 During the last 25 years this indicator has seen a tremendous improvement. Average Output per Ship-berth day has increased more than four times from 3,372 tonnes in 1990-91 to 15333 tonnes in 2017-18 for major ports and further increased to 16111 in 2018-19 (upto September, 2018). However, average output per ship berth-day during April-September, 2018-19 is marked by substantial variation across major ports ranging from a high 24597 tonnes in case of Paradip port to a low of 4389 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 2018-19 (Upto September, 2018-19) over the corresponding period of the previous year is visible in all the ports except Visakhapatnam port, Kamarajar and Mormugao Port. Average Output per Ship-berth-day during 2018-19 (upto September, 2018) is 16111 tonnes compared to 14896 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	2017-18(P)	April- September	
							2017-18 (P)	2018-19 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	2762	2963	3084	3201	6080	4132	4268	4389
Haldia D.C	6078	6130	6802	9126	12537	8332	8426	9541
Paradip	16625	18179	17736	26965	30245	24810	24330	24597
Visakhapatnam	10641	10925	10640	17179	16823	13528	13687	12871
Ennore (Kamarajar)	27741	22357	22613	31106	26235	24590	24092	23181
Chennai	12046	14268	14464	18976	19220	16014	15774	18231
Tuticorin (Chidambaranar)	7452	9633	10468	13619	13612	11961	11313	14997
Cochin	15878	15881	16906	20962	23539	20880	19440	23979
New Mangalore	15921	16314	19856	16165	17094	16378	15671	17091
Mormugao	11484	10018	12272	21542	30414	14525	14874	11636
J.L.Nehru	23319	23014	21310	23792	23897	23417	22331	23260
Mumbai	8709	7057	11055	18020	20915	9043	8040	9905
Deendayal (Kandla)	15728	15729	15159	16538	18235	18530	18101	18130
All Ports	11812	12179	12993	16471	19080	15333	14896	16111

Source: Major Ports /Indian Ports Association (IPA).

3.3.5 The average output per ship-berth-day for the selected years since 2011-12 to 2018-19 (Upto April-September, 2018) 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 30.9.2018 are brought out in Appendix-I & Appendix-II in respect of Major Ports and in Appendix-III & Appendix-IV for Non ó Major Ports.

Private Sector/Captive/Joint Sector Port Projects

Appendix I.	On going Private Sector/Captive/ Joint Venture Port Projects at Major Ports
Appendix II.	Under Formulation Private Sector/Captive/ Joint Venture Port Projects at Major Ports
Appendix III.	On going Private Sector/Captive/ Joint Venture Port Projects at Non-Major Ports
Appendix IV.	Under Formulation Private Sector/Captive/ 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*	16.8MT (Phase I -9.6 MTPA Phase II-7.2 MTPA)	1270	*Phase I-Operational since Octø 17.
2.	Development of Multi Cargo Terminal on DBFOT basis	Kamarajar Port Ltd*	2.00	151.00	Terminal operation commenced from Augø 17.
3.	Construction of Coal Berth No.3	Kamarajar Port Ltd*	9.00	255.02	. Berth construction completed. . Top loading facilities to be erected by TANGEDCO.
4	Construction of Coal Berth-4	Kamarajar Port Ltd*	9.00	275.98	Berth construction completed and handed over to TANGEDCO by Aug 2018 for erection of Top loading facilities.
5.	Development of LNG Terminal on Captive Basis.	Kamarajar Port Ltd*	5.00	5151.00	*Physical progress-90% Scheduled completion: March 2019
6.	Construction of two New Off-shore Container berths & Development of Container Terminal berth on BOT basis in Mumbai Harbour.	Mumbai Port	9.60MTPA (1.00 Mn TEUs)	1461	BOT Component- Entire Approach jetty is ready. Berth structure completed. Total investment till date is Rs. 627.25 crores. M/s. ICPTL has proposed to procure container handling equipment from 2 Chinese vendors. Details of vendors have been forwarded to ministry on 31.7.14 for security clearance. Development of containeryard in Pricess Dock is in progress. MbPT component- Fresh tenders for balance work of dredging and filing dock enclosure have been invited. i) The Board in its meeting held on 25.4.14 has accepted the bid of M/s International Seaport Dredging Ltd., for award of work subject to Govt. sanction to RCE, which is yet to be received.

					<p>ii) Work order for balance filling work and dock closure placed on 4.4.14. Work of Princes Dock filling completed. Victoria Dock filling work is in progress. RCD work is in progress.</p> <p>iii) Trial operation of berth facilities has been successfully done on 26.11.14. The Board on 16.1.15 has approved alternate use of OCT project for handling automobiles with revenue sharing on trial basis for a period of 3 months.</p>
7.	Mechanized of berth No. 18(old no.12) for providing equipments for handling Bulk Cargo at NMPT on DBFOT basis.	New Mangalore Port Trust*	6.73 MTPA	469.46	The civil work is under progress and expected to be completed by March 2019.
8.	Development of Barge handling facility at Bharathi Dock under PPP model	Chennai*	1.35 MTPA	27.29	<p>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.</p> <p>Consequently, the PPP operator initiated arbitration proceedings. The Arbitral award was issued by the tribunal on 30.03.2018.</p> <p>The Claimant has filed appeal against the arbitral ward and hearing is going on. Work was awarded as in-house project on 31.03.2018 and preliminary work commenced.</p>
9.	Development of EQ-1A berth on south side of EQ-1 berth in Inner Harbour for handling Thermal coal and Steam coal at IH.	Visakhapatnam*	7.36	313.39	Project terminated as per the provisions of Concession agreement.
10.	Installation of mechanized Fertilizer handling facilities at EQ-7 at IH.	Visakhapatnam*	5.21	217.58	This can be deleted, since the concession agreement stands cancelled by an agreement of "Deed of mutual cancellation" on 21.02.2017
11.	Up-gradation of the existing facility (OHC) and creating new facility (WQ-1) for iron ore handling.	Visakhapatnam*	23	845.41	The Completion certificate for Phase-I, of the subject project was issued on 29.09.2018 by Independent Engineer (M/s. Mecon Ltd).
12.	Extension of existing Container terminal in outer harbor.	Visakhapatnam*	0.54 MTEUs	633.11	<p>Fulfillment of conditions precedent by the concessionaire is in progress. The Board has allowed a final time extension for financial closure by 30.06.2018.</p> <p>Award in 2018-19 is subject to achievement of financial closure for the project by the concessionaire.</p>

13.	Multipurpose Clean Cargo Berth on BOT basis. (PPP Operation : PICTPL)	Paradip Port trust*	5	430.78	Stipulated completion April, 2019. PC issued in March 2018 and it is now Operational Overall completion Expected by October 2018.
14.	New Iron Ore Berth on BOT basis.	Paradip Port trust*	10	740.19	Stipulated completion April, 2019.
15.	Mechanization of EQ-1,2 &3 (3Berths) for handling export Coal Cargo (PPP Operator : JSW)	Paradip Port trust*	30	1437.76	Stipulated completion December,2020.
16.	Development of new Coal Berth for handling Import Coal Cargo. (PPP Operator; Kakinada Port JV)	Paradip Port trust*	10	655.56	Stipulated completion April, 2021
17.	Development of fourth container terminal	JNPT*	60	791.50	On December, 2014 JNPT awarded the concession for the prestigious 4 th container terminal to M/s. Bharat Mumbai container (Subsidiary of PSA, Singapore) on DBFOT basis with a capacity of 4.8 million tones with quay length of 2 kms. The project is taken up in 2 phases. The construction of Phases 1 is completed and operation was commenced from 22.12.2017. The scheduled completion of phase 2 is 22.12.2022
18.	Redevelopment of Berths 8,9 and Barge Berths at the Port of Mormugao, Goa	Mormugao*	19.22 MTPA	1145.35	Letter of Award is issued to M/s Sterlite Port Ltd., Tuticorin on 29.03.2016. Concession Agreement signed with M/s Goa Sea Port Pvt. on 22.09.2016. (iii) Proposed extended date for land to be handed over to the concessioners 15/11/2018.
19.	Construction of North Cargo berth-II for handling bulk cargoes on DBFOT basis-Tuticorin	VOCPT*	7.00	335	M/s TCTPCL failed to restore the performance security BG within 30 days from encashment as per the concession agreement and not commenced the balance works for commencement of full-fledged commercial operation. Port issued consultation notice to M/s TCTPL on 01.09.2018 as per the concession agreement.
20.	Construction dedicated berth for handling coastal cargo at V.O.C. Port Trust	VOCPT*	1	38.91	Completed on 19.12.2017
21.	Design, Construction and maintenance of Truck parking terminal at the Port Land opposite to Fisheries college in	VOCPT*	-	23.69	Completed on 06.12.2018

	V.O. Chidambaram port. (Sagarmala Project)				
22.	Up gradation of CJ-I and CJ-II (berth construction)	VOCPT*	18.00	97.76	35% work completed Scheduled date of Completion. Jan,2021
23.	Construction of shallow draught berth for handling construction material on PPP mode	VOCPT*	2.00	65.37	. Port gave time up to 27.07.2018 to take over the project site assets and fulfill conditions precedent as per CA . The concessionaire requested the Port to grant additional time to fulfill the conditions precedent. . Port granted extension of time up to 15.09.2018 still the conditions precedent has not been fulfilled.
24.	Construction North cargo Berth-III under EPC mode.	VOCPT*	10.22	36.52	Work completed.
25.	Dredging in front of Coastal Berth	VOCPT*	-	96.34	Work completed on 04.04.2018.
26.	Widening of the Existing Korampallam surplus course bridge and ROB	VOCPT*	-	41.55	LOI issued on 10.04.2018 30% of work has been completed
27.	Development of fourth container terminal	JNPT *	60	7915.00	On December, 2014 JNPT awarded the concession for the prestigious 4rt container terminal to M/s. Bharat Mumbai Container (Subsidiary of PSA, Singapore) on DBFOT basis with a capacity of 4.8 MT with Quay length of 2 kms. The project is taken up in 2 phases. The construction of Phase-I is completed and operation was commenced from 22.12.2017.The scheduled completion of phase-II is 22.12.2022.
28.	Setting up of a liquid cargo handling jetty alongwith associated facilities at Shalukkali, Haldia Dock ó II, Haldia Dock Complex, Kolkata Port Trust , on Design, Build, Finance, Operate and Transfer (DBFOT) basis for a Concession period of 30 years/	Haldia Dock Complex, Kolkata Port Trust *	2.43 MTPA	172.52	Agreement signed with Hooghly Oil and Gas Terminal Pvt. Ltd. On 15.02.2018 <ul style="list-style-type: none"> The EAC in its meeting held on 01/07/2018 has recommended the amended TOR. The approval of MoEF&CC to the amended TOR is yet to be obtained. However, the Consultant engaged by KoPT is preparing the EIR Report etc. on the basis of TOR recommended by the EOC. Construction work will commence after obtaining EC.
<p>BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer. Note: - *The project status of Project name at S. No. from 1 to 5 and 7 to 28 is updated on 30th September 2018. Source: Major Ports</p>					

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.	Mechanization of CQ-1 & 2(2 Berths) for handling (Capacity of 20 MTPA)	Paradip Port*	20 MT	1103	To be initiated after commissioning of Development of New Coal Berth based on Techno-Economic viability.
2.	Optimization of inner harbor and construction of western dock on Captive Basis.	Paradip Port*	30 MT	2725	RFQ floated on 12/10/2018.
3.	Construction of Outer Harbour	Paradip Port*	144 MT	8767	DPR completed.
4.	Dredging & Infrastructure development for handling bigger ships at 18 to 22 ID Harbour Wall Berths.	Mumbai	8.00 MT	613	Due to poor response to the project as suggested by M/s RITES, it is proposed to scrap the project.
5.	Barge handling facilities at Khori Creek	Kandla	4	100	Under planning stage.
6.	Construction of T shape Jetty at Tekra (Phase-II)	Kandla	14	1500	The scheme will spill over in 13 th five year plan. Under planning stage.
7.	Setting up of barge jetty at Tuna on captive use basis	Kandla	1.5	22	EOI invited. Only M/s Shree Renuka Sugars has submitted application till due date. Committee recommended the proposal submitted by M/s Shree Ranuka Sugars and also recommended to put up to the Board for approval.
8.	Construction of barge jetty at Tuna on BOT basis	Kandla	5.49	255.3	Feasibility Report, RFQ and TAMP proposal under approval.
9.	Strengthening of oil jetty 1 at KPT	Kandla	0.78	14.29	LOA issued to M/s Indiana build infrastructure pvt. Ltd., Mumbai on 18.03.14. Work order issued on 20.5.2014. Work has been completed.
10.	Development of Port based multi product SEZ	Kandla	-	1095	In-principle approval from MoS for formation of SPV is awaited. Concurrence of GoG is still awaited. KPT has appointed NIO, Mumbai for carrying out EIA studies.
11.	Capital dredging of the dock basin in front of Coal Jetty-I, Coal Jetty of	VOCPT*	51.95 MTPA	3090.28	Revised PIB Memo submitted on: 17.04.2018 Issued of LOA for Dredging June, 2018 Completion for work (28 months): Oct., 2020.

	II, Berth 3 & 4, Berth -7, Berth-8, Berth- 9, NCB 6I, NCB-II, and NCB 6III up to (-) 16.50 m depth and approach Chennai up to (-) 17.20 m depth for a length of 10,350 m and widening of Port entrance channel from existing 153 m to 230m.				
12.	Development of Outer Barbour at Chennai Port (previously called Development of Mega Container Terminal). Under PPP mode on DBFOT basis.	Chennai Port Trust *	(32 MTPA)	5100	Mega container terminal project failed to take off due to low revenue share quoted by bidders and subsequent invitation did not receive offers. Even after restructured as Outer Harbor terminal there was no response to bid invitation on account on high capital cost and long gestation period. Meanwhile, Navy Commissioned a study through IIT --- M for developing berths at new Outer Harbour. Details of the report of the IIT --- M are awaited from the Navy.
13.	Development of Rajiv Gandhi Dry Port and Multi Modal Logistic Hub for Chennai Port in SIPCOT industrial park at Mappedu, Sriperrumbudur; under PPP mode	Chennai Port Trust*	18.45 MTPA	415	121.74 acres of land at Mappedu acquired for long terms (99 years) lease from Sipcot, GoTN. Due to global recession and poor road connectivity PPP bids failed .Bids invited on land lease model was also fruitful as SIPCOT imposed sub-lease charges. NHAI & MoRTH have proposed to develop Multi Modal Logisitics Park at 80 acres of lands owned by ChPT at Mappedu and ChPTahs given consent for preparing Feasibility report and NHAI has appointed consultant for Feasibility report and NHAI has appointed Consultant for Feasibility Study. MoS through SDCL invited RFP for selecting a consultant to prepare a DPR and Master Plan for Establishment of Maritime Cluster in Tamil Nadu, the land at Mappedu is one of the the suggested locations in the RFP. The appointment of Consultant is in the evaluation stage.
14.	Development of Dry Dock/ Ship Repair facility at Timber pond/Boat basin in Chennai Port	Chennai Port Trust*		315	Open tenders were invited during December 2013 and November 2014 based on the Land lease Model for the Dry dock Facility failed to yield any response. Subsequently, as iCG offered to develop the Dry Dock on a 30 years lease, a draft MoU was sent to ICG during march 2015 and is still under the consideration of MoD. The request of ICG for further extension upto 31.03.2019 accepted and granted. Based on the directions of MoS, IIT-M had submitted a proposal for conducting Feasibility study for converting a part of JD to Dry Dock. Upgrading the slipway is also under consideration.

					Meanwhile IPA has floated RFP for appointing Consultant to explore the opportunity development of ship repair facilities for DBFOT on PPP (Feasibility Report) in 3 ports viz., ChPT, VOC and VoCPT. Tender opened and under evaluation.
15.	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 ode to subject to favorable recommendations from the empowered committee constituted by Honøble Supreme Court. The port is taking measures to comply with the recommendations of the Empowered Committee. After requirements on the EC report satisfied, TNPCCB will be approached for resumption of Pollution free coal handling at this port. Meanwhile, a proposal for developing a Bulk cargo terminal at BD-II as a captive facility/ other mode is also under formulation/ consideration.
16.	Development of JD (East) berths for handling bulk and break bulk cargoes excluding project cargoes at Chennai Port under PPP model	Chennai Port Trust*	8 MTPA	360	As no bids were received for the development of Container terminal and multi cargo terminal, it is now proposed to utilize the berth for handling of coal and other dusty cargoes. Work will be taken up along with Development of BD II as coal terminals.
17.	Development of Vasco Bay, (a)Development Fishing Harbour	Mormugao*	í .	104	(a) DPR submitted to ministry in Feb. 2017 (b) Work order issued to IIT Madras for preparation of DBR & BOQ for fishing harbor & passenger jetty and POL berth in Jan 2018 and they have submitted Draft DBR for POL Fire fighting and BOQ for fishing & passenger jetty in august 2018. (c) Public hearing held on 5-10-2018,6.10.2018 and 8-10-2018
18.	(b) Development of passenger Jetty	Mormugao*	í .	21	(d) DPR submitted to ministry in Feb. 2017 (e) Work order issued to IIT Madras for preparation of DBR & BOQ for fishing harbor & passenger jetty and POL berth in Jan 2018 and they have submitted Draft DBR for POL Fire fighting and BOQ for fishing & passenger jetty in august 2018. (f) Public hearing held on 5-10-2018,6.10.2018 and 8-10-2018
19.	c) Development of Liquid /POL/LPG Berth at Vasco Bay.	Mormugao*	í .	181	(g) DPR submitted to ministry in Feb. 2017 (h) Work order issued to IIT Madras for preparation of DBR & BOQ for fishing harbor & passenger jetty and POL berth in Jan 2018 and they have submitted Draft DBR for POL Fire fighting and BOQ for fishing & passenger jetty in august 2018.

					(i) Public hearing held on 5-10-2018,6.10.2018 and 8-10-2018
20.	(d) General Cargo Berth	Mormugao*	1	203	(j) DPR submitted to ministry in Feb. 2017 (k) Work order issued to IIT Madras for preparation of DBR & BOQ for fishing harbor & passenger jetty and POL berth in Jan 2018 and they have submitted Draft DBR for POL Fire fighting and BOQ for fishing & passenger jetty in august 2018. (l) Public hearing held on 5-10-2018,6.10.2018 and 8-10-2018
21.	Development of Captive Jetty by IOCL.	Kamarajar Port Limited*	3 MTPA	480.00	* Concession Agreement signed on 09.06.2016. * Condition precedent compliance is in progress. * Awaiting Environmental Clearance for Commencement of work.
22.	Development of Marin Liquid Terminal-II on DBFOT Basis.	Kamarajar Port Limited*	3 MTPA	393.00	* KPL issued LOA to the Consortium BPCL-HPCL on 14.02.2018. *Concession Agreement signing to be executed by KPL & BPCL-HPCL. Awaiting Environmental clearance for commencement of work.
23.	Mechanization of Berth No. 14 for handling containers and other clean cargo on PPP mode at NMPT	New Mangalore Port Trust*	6.02 MTPA	280.71	RFQ invited. 6 bids received in which 5 bids are responsive. Bids forwarded to the Ministry for security clearance. Traffic Proposal submitted for TAMP notification.
BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer. Note: - *The project status of project name at S. No. from 1 to 3 and 11 to 23 is updated on 30 th September 2018. Source: Major Ports					

**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 alongwith 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 4. 1510 m Coal Terminal, Wandh-Operational Phase-2: 1. 810 m Container Terminal Operational 2. Second SBM Operational 3. 3 Multipurpose Berth Operational 4. 650m Container Terminal Operational. 5. Construction of 650.50 m Container Terminal has been completed. 6. Construction of one LNG had been completed. Phase 2 Completed.
2.	Hazira Port Pvt. Ltd (HPPL)	Hazira, (Gujarat)*	2.50 (MMTPA)	1180.4	Phase 1 A (LNG Terminal) completed and operational.
3.	Development of BGCT under phase I B at Hazira	Hazira, (Gujarat)*	30	186	Completion of construction of the following: 1) 2 container berths are 3 general berths 2) breakwater 3) Backup facility for handling the cargo. Out of two Multipurpose Berths under Phase-II, Construction of One berth of Total 180 m quay length has been completed and operational.
4.	Development of Solid Cargo Port Terminal	Dahej (Gujrat)*	15	980	Two solid cargo berths cranes completed. 1) Backup area constructed. 2) Conveyor system for berth no. 1 completed as per DPR.

5.	2 nd Major Expansions Phase-I - Gujarat Pipapav Port Ltd.	Pipavav (Gujarat)*	20	1837	Construction is in Progress
6.	2 nd Stand by jetty Petronet LNG Ltd.	Dahej (Gujarat)*	5	830	Construction completed and operational.
7.	Captive Jetty by JpAssociates 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.
8.	Captive Jetty by Essar Bulk Terminal Limited.	Salaya (Gujarat)*	7	600	The Construction of Jetty is completed. And cargo operation commenced.
9.	Captive Jetty by M/s. Essar Bulk Terminal Ltd. -1100m (3 rd Expansion)	Hazira (Gujarat)*	25	2321	The Construction of Jetty is completed. And cargo operation commenced.
10.	Captive Jetty by M/s Godrej ó 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 ó 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.
12.	Multipurpose jetty terminal at village chane (Tal. Uran, Dist. Raigad) in Karanja creek by M/s Karanja Terminal & Logistics Pvt.Ltd.	Karanja, (Maharashtra)	4.8	1000	The jetty facility is ready and awaiting Customer clearance. It is expected to commence operations by October-2018. Port capacity will be 4.8 MTPA in FY-2017-18. The ultimate capacity of 8.48 MTPA will be achieved by FY-2032.
13.	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 (Maharashtra)	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.
14.	Expansion of JSW Jaigad Port in Ratnagiri district by JSW Jaigarh Port Ltd.	Jaigad (Maharashtra)	80.0	2800	Two berths in Phase-I and two berths in Phase-II(Total 04 berths) are operational. Construction of three berths in phasr-II including LNG Terminal is in progress. Construction of two berths is yet to commence. The current capacity of 2017-18 is 50 MTPA and expected capacity is 80 MTPA will be achieved by FY 2022.
15.	Establishing a captive port at Parangipettai by M/s IL &FS Limited	Parangipettai Tamil Nadu*	13 MMTA	1349	Port has been notified. Construction of Port Structure Commenced.

16.	Captive Port facility M/s. Udangudi Power Corporation Limited.	Udangudi in Thoothukudi *	6 MMTPA	1254.61	Port has been notified. Construction of Port Structure Commenced.
17.	Kakinada Deep Water Port, in East Godavari District, Andhra Pradesh	Kakinada Deep Water Port, Andhra Pradesh*	25	1320	Under Operation
18.	Development of Gangavaram Port in Visakhapatnam District Andhra Pradesh	Gangavaram Port, AP*	64	2970	Under Operation
19.	Development of Krishnapatnam Port in SPS Nellore District Andhra Pradesh Stat	Krishnapatnam Port Andhra Pradesh*	82	7200	Under Operation
20.	Phase-II Development of Krishnapatnam	Krishnapatnam Port, AP*	44.3 MTPA of Non-Container cargo+3.3 MTEUpa of container cargo.	10800	70% work completed.
21.	Development of Karaikal Port through private investment on BOT basis	Karaikal, Puducherry*	Phase 1 2A 21.5 Phase 2AE 6.5	1600 500	Phase -2A and 2AE Works are in progress.
22.	Development of Pondicherry Port as a Feeder Port to Chennai Port in association with Chennai Port Trust	Pondicherry*	0.35	NIL	Trail run of handling Container cargo successfully carried out on 24.02.2018. Cargo handling operations on regular basis to commence soon after dredging works are completed.

23.	Captive Port owned by M/s ChemplastSanmar, Chennai	Captive Marine Terminal Facility, Karaikal.*	0.35	NIL	Commercial operations had commenced in 2007 and are functioning.
24.	Karaikal Port- Phase 2A Development	Karaikal Port*	21.5	1.6	Work in progress
25.	Karaikal Port- Phase 2AE Development	Karaikal Port*	6.5	5	Work in progress
26.	Phase II expansion of Dhamra port	Dhamra Bhadrak*	100 million tonnes per annum	3000	Under Execution
27.	Development of LNG Terminal at Dhamra	Dhamra Bhadrak*	Nominal 5 mtpa,Expandable to 10mtpa	5500 (Phase I)	Under Execution
28.	Development of LPG Terminal at Dhamra	Dhamra Bhadrak*	Nominal 1.34mtpa, Expandable to 3.54mtpa	1200 (Phase I)	Under Execution
29.	Dhamra Port Railway doubling works	Dhamra Bhadrak*	App. Length 62 km	650	Under Execution
30.	Expansion, Development and Operation of Gopalpur Port	Gopalpur Port Ltd*	14	20	<ol style="list-style-type: none"> 1. All Weather Direct Berthing Port declared open for commercial Traffic with effect from 29th March 2013. 2. Port Operational suspended with effect from 12th Oct 2013 due to the effect of very severe cyclone oPhaflinö 3. Port Re-commissioned its commercial Trffic with effect from 30th Oct, 2015. 4. Work on additional 2 Berths Construction, Completion of Breakwater, stockyards, Development of Internal Roads, and Railway siding underway.
31.	Construction of Oil Spill vessel	Panaji Port*	N.A.	4.18	Under construction
32.	Construction of Work Boat	Panaji Port*	N.A.	1.15	Under Construction.

33.	Removal of Debris of Work Boat	Panaji Port *	N.A.	1.46	Completed, However completion certificate yet to issue.
34.	E.I.A. Study of Sal	Panaji Port*	N.A.	1.08	Work Under Process, 50% Payment already made.
35.	E.I.A. Study of Talpona	Panaji Port*	N.A.	0.85	Work Under Process, 75% Payment already made.
36.	E.I.A. Study of Dalgibag	Panaji Port*	N.A.	0.7	Work Under Process, 50% Payment already made.
37.	3 New Ferry Boats	Panaji Port*	N.A.	1.910	90% of Payment Done.
38.	Divar Ferry Ramp	Panaji Port*	N.A.	0.24	70% of Payment Done.

Source: Maritime State/Maritime Boards

Note: *The project status of Project name at S. No. from 1 to 11, 15 to 38 is updated on 30th September, 2018.

**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)	DPR is being prepared by the Company.
2.	M/s. Shree Cement Ltd.	Dhunay, Kutch*	3	300	GMB has granted permission for Marine Survey. In principal approval is yet to be granted.
3.	Development of Chhara Port	Chhara (Gujarat)*	8	1200	CA signed on 29.1.2015. Construction permission has been constructed is in progress.
4.	HPCL Rajasthan Refinery Ltd.	Modhva, Gujarat*	9	500	GMB has granted permission for Marine Survey. In principal approval is yet to be granted in January, 2018
5.	HPCL --- Mittal Pipelines ltd. (HMPL)	Mandavi, Gujarat*	9	500	GMB has granted permission for Marine Survey. In principal approval is yet to be granted on 21.12.2017.
6.	Development of Modhawa port.	Modhawa (Gujarat)*	Bidding Process to be initiate for selection of developer.		
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	Concessionaire agreement signed and construction is in progress.
9.	Captive jetty expansion by M/s. Sanghi CEMENT Ltd.	Jakhau, Gujarat*	2	150	Environmental clearance is awaited.
10.	Captive jetty by M/s Archan Chemical Budh Bunder	Jakhau, Gujarat*	2	135	In principle approval has been granted by GoG. Studies & investigations for DPR are under progress.
11.	M/s. Satyesh Brinechem Privated Ltd.	Dhunay, Kutch*	4.5	134	Board GMB had granted in Principal Approval for captive jetty in its meeting held on 30.30.2017 and proposal is submitted to GoG for approval.
12.	M/s Adani Cemnetation Ltd.	Dhnuay, Kutch*	5.8	300	Board of HMB had granted in Principal approval for captive jetty in its meeting held on 30.03.2017 and proposal is submitted to GoG for approval.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
13.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Coal Jetty &Multypurpose Jetty under Gujarat SEZ act	Nana Layja, Kutch, Gujarat*	17	1000	In principle approval is granted by GoG (December 2014). DPR submitted which is under scrutiny.
14.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Multypurpose Jetty under Gujarat SEZ Act.	Nana Layja, Kutch, Gujarat*	3	256	In principle approval is granted by GoG (December 2014). DPR submitted which is under scrutiny.
15.	Six berth at Sikka for product jetty by M/s Reliance Ports Terminal Ltd.	Sikka, Gujarat*	7	180	Construction Permission granted and will be commenced soon.
16.	Construction of Captive Jetty by RSPL	Kurang, Devbhumi, Dwarka Gujarat*	11	249	Proposal has been submitted to Port and Transport Department, GoG for approval.
17.	Redi Port Ltd	Redi Port Maharashtra	33.38 MTPA & 1.74 m/EU	3634	Awaiting Environmental Clearance from MOEF
18.	Vijaydurg Ports Pvt Ltd	Vijaydurg Port, Maharashtra	78	4000	TORs received from MOEF
19..	Rewas Port Ltd	Redi Port Maharashtra	Phase1 - 66m.ton	Phase1 7000	
			Phase1! - 185 m.ton		Permission for Right of Way yet not received from MbPT
			Phase111 óover 400 m.ton		
20.	Construction of 9 Jetties	Panaji Port*	N.A.	73	Preparation of Detailed Project Report (DPR) under progress.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
21.	Construction 4 of floating Jetties in Mandovi and Chapora River	Panaji Port*	N.A.	12	Funded by IWAI, awaiting signing of MoU to commence the process.
22.	Construction of Terminal Building	Panaji Port*	N.A.	28.061	Tender has been floated by GSIDC.
23.	Construction of 3 Ferry Boats	Panaji Port*	N.A.	2.2	Submitted for Administrative Approval.
24.	Construction of Sarmanas&Betim Ramp and Beautification of Panaji Ferry Ramp.	Panaji Port*	N.A.	1.5	Submitted for expenditure sanction from Finance Department.
25.	Captive port facility by M/s. Coastal Tamil Nadu Power Ltd.	Panaiyur Kancheepuram Tamil Nadu*	13 MMTA	1832	Port has been notified. Development under process.
26.	Captive port by M/s Chettinad Power corporation Ltd.	Tharangambadi Taluk in Nagapattinam District*	3.5 MMPTA	1000	Port has been notified. Development under process.
27.	Development of Machilipatnam Deep Water Port in Krishna District, Andhra Pradesh	Machilipatnam Port Andhra Pradesh*	45	6778	Land acquisition is in progress. Project yet to be grounded.
28.	Development of Bhavanapadu Port in Srikakulam District, Andhra Pradesh State.	Bhavanapadu Port, Andhra Pradesh*	30.57	3390	M/s. Aadani Ports & SEZ Ltd. Is the lowest bidder as a Concessionaire for development of Port. A letter of Award(LOA) has been issued to M/s Adani Ports SEZ Ltd., Ahmedabad during March 2018.
29.	Development of Captive jetty at Pavinakurve Port	Povinakurve Port Karnataka*	10	1600	M/s JSW Mumbai has submitted proposal to develop Pavinakurve Port under swiss challenge method. Govt of Karnataka has considered this proposal and M/s JSW, Mumbai prepared and submitted the DPR. The i-deck, the state Government appointed consultant is reviewed and updated the DPR, M/s JSW has prepared final DPR and submitted to same.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
30.	Development of captive jetty at Pavinkurva, Kumta	Pavinkurve Port(Newly declared port)*	10	160	M/s JSW, Mumbai has submitted proposal to develop Pavinkurve port under Swiss challenge method. Government of Karnataka has considered this proposal and M/s JSW, Mumbai prepared and submitted the DPR. The i-deck, the State Government under is to review and update the DPR..
31.	Development of Bulk Liquid Berth for handling L.N.G.	Karaikal Port Puducherry*	5.0	1948	Applied for Environmental Clearance.

Source: Maritime State/Maritime Boards

Note: The project status of Project name at S. No. from 1 to 16, and 20 to 31 is updated on 30th September, 2018.

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
Kolkata	2016-17	905	0	0	20	86	2030	9887	636	3882	16810
	2017-18(P)	781	0	4	16	140	151	9760	640	6538	17390
April - September	2017-18	396	0	4	0	47	73	4898	320	3174	8592
	2018-19(P)	383	0	0	248	32	3	5092	338	3162	8920
Haldia	2016-17	4766	1160	1818	5523	467	0	2467	136	17940	34141
	2017-18(P)	8141	1576	2181	7317	703	0	2672	156	17906	40496
April - September	2017-18	4134	792	904	3166	394	0	1254	70	8480	19124
	2018-19(P)	4149	219	1087	4262	364	0	1544	90	9424	21049
Paradip	2016-17	27695	10250	25845	10162	4064	0	42	2	10901	88959
	2017-18(P)	33775	12189	29047	10625	4453	0	98	7	11826	102013
April - September	2017-18	17024	5447	11975	5046	2142	0	35	3	5936	47605
	2018-19(P)	17813	5546	16009	5410	2201	0	83	6	5836	52898
Visakhapatnam	2016-17	13051	11620	3471	4289	2664	559	6428	367	18938	61020
	2017-18(P)	16050	10872	2948	5764	2873	76	6835	389	18119	63537
April - September	2017-18	8079	5183	1486	2550	1604	75	3258	189	7914	30149
	2018-19(P)	7792	4651	1210	2870	1297	52	3987	227	9902	31761
Chennai	2016-17	12216	0	0	0	268	571	28850	1495	8309	50214
	2017-18(P)	13503	0	0	0	229	154	29905	1549	8090	51881
April - September	2017-18	6765	0	0	0	92	97	15240	790	4042	26236
	2018-19(P)	6785	0	0	0	83	0	16093	834	4176	27137
Kamarajar	2016-17	2648	0	23017	79	0	0	1	0	4275	30020
	2017-18(P)	4338	0	22970	199	0	55	52	3	2832	30446
April - September	2017-18	2079	0	10597	0	0	0	0	0	1171	13847
	2018-19(P)	2384	0	11799	763	0	0	0	0	1624	16570
V.O.Chidambaranar	2016-17	439	0	10824	3426	1641	1906	12991	642	7236	38463
	2017-18(P)	639	0	9795	0	1401	1161	14192	698	9395	36583
April - September	2017-18	369	0	3975	0	589	667	6863	337	4823	17286
	2018-19(P)	314	99	4450	0	322	0	7576	371	4017	16778
Cochin	2016-17	15740	0	44	0	252	174	6840	491	1957	25007
	2017-18(P)	19570	0	44	0	223	0	7692	556	1609	29138
April - September	2017-18	9724	0	0	0	133	0	3717	268	690	14264
	2018-19(P)	11219	0	43	0	100	0	3814	279	730	15906
New Mangalore	2016-17	23032	2947	3533	3387	488	248	1411	95	4890	39936
	2017-18(P)	24716	4893	709	138	692	51	1743	115	9113	42055
April - September	2017-18	11376	2379	589	0	262	0	781	51	4162	19549
	2018-19(P)	11774	2061	74	86	309	1	1013	68	4861	20179
Mormugao	2016-17	627	15053	2514	8466	199	0	402	30	5920	33181
	2017-18(P)	629	10259	1999	8514	182	0	425	32	4889	26897
April - September	2017-18	308	3960	1170	4808	73	0	193	14	2146	12658
	2018-19(P)	299	3188	558	2853	124	0	227	18	1980	9229
J. L. Nehru	2016-17	3829	0	0	0	0	0	54530	4500	3793	62152
	2017-18(P)	4642	0	0	0	0	0	57867	4834	3495	66004
April - September	2017-18	2266	0	0	0	0	0	28700	2403	1738	32704
	2017-18(P)	2196	0	0	0	0	0	30718	2518	1900	34814
Mumbai	2016-17	35761	0	2608	1596	283	430	639	43	21812	63129
	2017-18(P)	37680	0	2473	0	288	772	556	42	21059	62828
April - September	2017-18	18485	3411	1320	1977	129	488	316	23	5108	31234
	2018-19(P)	18190	3304	1298	1346	193	0	175	14	4886	29392
Deendayal (Kandla)	2016-17	59516	735	15059	496	3645	586	175	5	25230	105442
	2017-18(P)	62196	1263	13241	546	3704	599	1838	118	26712	110099
April - September	2017-18	29962	581	5538	143	2148	374	770	49	13771	53287
	2018-19(P)	31310	676	8133	392	2234	400	1712	103	13773	58630
All Ports	2016-17	200225	41765	88733	37444	14057	6504	124663	8442	135083	648474
	2017-18(P)	226660	41052	85411	33119	14888	3019	133635	9139	141583	679367
April - September	2017-18	110967	21753	37558	17690	7613	1774	66025	4517	63155	326535
	2018-19(P)	114608	19744	44661	18230	7259	456	72034	4866	66271	343263

P : Provisional

Source: BPS and 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	2016-17	180315	9379	9730	62421	8704	53124	22066	345739
	2017-18	189713	11582	9338	65411	7316	66312	21097	370769
April-September	2017-18	91829	5571	4058	31601	4166	31538	9312	178075
	2018-19	96728	6090	4254	35405	4352	37155	9069	193053
Maharashtra	2016-17	2161	15049	2506	11136	243	0	3799	34894
	2017-18	2478	13808	2192	14809	481	0	4138	37906
April-September	2017-18	0	4730	920	6275	0	0	2885	14810
	2018-19	444	8576	983	7879	269	0	1967	20118
Andhra pradesh	2016-17	2711	2983	1657	39521	4870	4246	13615	69603
	2017-18	1459	5933	1414	45179	5194	7793	19316	86288
April-September	2017-18	715	2127	620	21976	2869	3747	9724	41779
	2018-19	630	5716	684	28084	2809	4028	10862	52813
Goa	2016-17	0	117	0	0	0	0	0	117
	2017-18	0	72	0	0	0	0	0	72
April-September	2017-18	0	5	0	0	0	0	0	5
	2018-19	0	4	0	0	0	0	0	4
Tamil Nadu	2016-17	302	0	0	0	36	0	814	1152
	2017-18	706	0	300	0	32	0	65	1103
April-September	2017-18	334	0	14	0	11	0	155	513
	2018-19	302	0	7	0	24	0	38	371
Karnataka	2016-17	111	0	86	0	40	0	470	707
	2017-18	447	0	47	0	36	0	150	680
April-September	2017-18	201	0	17	0	0	0	73	290
	2018-19	173	0	7	0	26	0	156	361
A&N	2016-17	178	0	386	0	0	0	712	1276
	2017-18	217	0	697	25	1	485	478	1903
April-September	2017-18	103	0	280	0	0	232	292	907
	2018-19	107	0	265	0	1	290	298	961
Odisha	2016-17	0	6428	0	13709	281	0	2055	22473
	2017-18	0	4946	0	13870	134	0	3645	22595
April-September	2017-18	0	3447	95	8570	0	0	438	12551
	2018-19	0	1750	1170	5656	220	0	856	9652
Kerala	2016-17	19	0	0	0	0	0	122	141
	2017-18	22	0	0	0	0	0	116	138
April-September	2017-18	11	0	0	0	0	0	44	55
	2018-19	9	0	0	0	0	0	42	51
Puducherry	2016-17	272	499	758	6967	63	0	553	9112
	2017-18	172	696	830	6094	62	1	266	8121
April-September	2017-18	72	218	450	2528	12	0	128	3408
	2018-19	10	258	501	2623	198	0	65	3654
All Non Major Ports	2016-17	186069	34455	15123	133754	14237	57370	44206	485214
	2017-18	195214	37037	14818	145388	13256	74591	49271	529575
April-September	2017-18	93265	16099	6454	70950	7057	35517	23050	252393
	2018-19	98403	22393	7871	79647	7897	41474	23353	281037

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/DPT	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
As on 31.3.18														
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
As on 31.3.18														
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
As on 31.3.18														
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
As on 31.3.18														
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
As on 31.3.18														
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
As on 31.3.18														
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
As on 31.3.18	31.57	51.00	239.00	131.09	84.00	134.00	94.83	74.50	98.00	63.00	79.00	253.20	118.00	1451.19

(*) Port capacity re-rated by Ministry based on Berthing Policy as per international norms.

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

@ : Capacity of JNP Container Terminal (3berths), NSICT (2berths), GTPL (3berths) and shallow water berth (1 no) has been taken as 21.57 MT, 17.40 MT, 31.

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

**Port capacity re-rated by Ministry based on berthing policy as per international norms. Major Ports re-rated capacity during 2016-17 was 1359 MTPA (Kolkata-27, Haldia-51, Paradip-234, Vizag-121, Kamarajar-66, Chennai-134, VOC-79, Cochin-74, NMPT-98, MPT-63, MbPT-78, JNPT-88 & DPT-246)

Source : Development Wing - Department of Shipping.