

भारत के पत्तन क्षेत्र का अद्यतन
UPDATE ON INDIAN PORT SECTOR
(31.03.2019)



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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 March, 2019) is thirty third in the series of the publication "*Update on Indian Port Sector*". The last issue contained data up to September, 2018.

The current issue includes the information on the performance of Major and Non-Major Ports for the period up to end of March, 2019. 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 31.03.2019)

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1. RECENT TRENDS IN CARGO TRAFFIC AND POLICY INITIATIVES

1.1 INDIA AND WORLD ECONOMY

1.1.1 The global upswing in economic activity is strengthening. One year ago economic activity was accelerating in almost all regions of the world and the global economy (World GDP) was projected to grow at 3.9 percent in 2018 and 2019. One year later, much has changed: the escalation of US–China trade tensions, macroeconomic stress in Argentina and Turkey, disruptions to the auto sector in Germany, tighter credit policies in China, and financial tightening alongside the normalization of monetary policy in the larger advanced economies have all contributed to a significantly weakened global expansion, especially in the second half of 2018 (World Economic Outlook, April, 2019). With this weakness expected to persist into the first half of 2019, the *World Economic Outlook* (WEO) projects a decline in growth in 2019 for 70 percent of the global economy (World GDP). Global GDP growth, which peaked at close to 4 percent in 2017, softened to 3.6 percent in 2018, and is projected to decline further to 3.3 percent in 2019. Although a 3.3 percent global expansion is still reasonable, the outlook for many countries is very challenging, with considerable uncertainties in the short term, especially as advanced economy growth rates converge toward their modest long-term potential.

1.1.2 With improvements expected in the second half of 2019, global economic growth (GDP growth) in 2020 is projected to return to 3.6 percent. This return is predicated on a rebound in Argentina and Turkey and some improvement in a set of other stressed emerging market and developing economies, and therefore subject to considerable uncertainty. Beyond 2020 growth will stabilize at around 3.5 percent, bolstered mainly by growth in China and India and their increasing weights in world income. Growth in advanced economies will continue to slow gradually as the impact of US fiscal stimulus fades and growth tends toward the modest potential for the group, given ageing trends and low productivity growth. Growth in emerging market and developing economies will stabilize at around 5 percent; though with considerable variance between countries as subdued commodity prices and civil strife weaken prospects for some (World Economic Outlook, April, 2019).

1.1.3 Growth for 2018 was revised down by 0.1 percentage point relative to the October 2018 *World Economic Outlook* (WEO), reflecting weakness in the second half of the year, and the

forecasts for 2019 and 2020 are now marked down by 0.4 percentage point and 0.1 percentage point respectively. The projected pickup in the second half of 2019 is predicated on an ongoing buildup of policy stimulus in China, recent improvements in global financial market sentiment, the waning of some temporary drags on growth in the euro area, and a gradual stabilization of conditions in stressed emerging market economies, including Argentina and Turkey. Improved momentum for emerging market and developing economies is projected to continue into 2020, primarily reflecting developments in economies currently experiencing macroeconomic distress—a forecast subject to notable uncertainty.

1.1.4 By contrast, activity in advanced economies is projected to continue to slow gradually as the impact of US fiscal stimulus fades and growth tends toward the modest potential for the group. Beyond 2020, global growth is set to plateau at about 3.6 percent over the medium term, sustained by the increase in the relative size of economies, such as those of China and India, which are projected to have robust growth by comparison to slower-growing advanced and emerging market economies.

Growth across emerging market and developing economies is projected to stabilize slightly below 5 percent, though with variations by region and country. The baseline outlook for emerging Asia remains favorable, with China's growth projected to slow gradually toward sustainable levels and convergence in frontier economies toward higher income levels. For other regions, the outlook is complicated by a combination of structural bottlenecks, slower advanced economy growth and, in some cases, high debt and tighter financial conditions. These factors, alongside subdued commodity prices and civil strife or conflict in some cases, contribute to subdued medium-term prospects for Latin America; the Middle East, North Africa, and Pakistan region; and parts of sub-Saharan Africa.

1.1.5 Global economic expansion is the main driver of world shipping demand, and 2017 will be remembered as the year when the world economy and global shipping experienced a cyclical recovery from the historic lows of 2016, nearly a decade after the 2008–2009 global economic and financial crisis. Main economic and shipping indicators trended upward, reflecting growth in global investment, manufacturing activity and merchandise trade. At the same time, a range of upside and downside risks continued to unfold, bringing major implications for shipping and maritime trade.

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

Table 1: Growth in Cargo handled at Indian Ports and related parameters (in %)							
Parameters	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Trends in India's Select : Macro Parameters							
I. Total Cargo	2.2	4.1	8.2	1.9	5.8	6.6	5.9
(a) Major Ports	-2.6	1.8	4.7	4.2	7.0	4.8	2.9
(b) Non Major Ports	9.7	7.5	12.9	-1.1	4.2	9.0	9.9
II.GVA overall	5.4	6.1	7.2	8.0	7.9	6.9	6.6
(a) Agriculture	1.5	5.6	-0.2	0.6	6.3	5.0	2.9
(b) Industry	3.3	3.8	7.0	9.6	7.7	5.9	6.9
(c) Services	8.3	7.7	9.8	9.4	8.4	8.1	7.5
III. Foreign Trade							
(a) Export in \$ value	-1.8	4.7	-1.3	-15.5	5.2	10.0	9.1
(b) Import in \$ value	0.3	-8.3	-0.5	-15.0	0.9	21.1	9.0
Trends in Select : Global Indicators							
IV. World Output[^]	3.5	3.5	3.6	3.4	3.4	3.8	3.6
(a) Advanced Economies	1.2	1.4	2.1	2.3	1.7	2.4	2.2
(b) Developing Economies	5.3	5.1	4.7	4.3	4.6	4.8	4.5
V. World Economic Growth	2.2	2.2	2.5	2.6	2.5	3.1	3.0F
(a) Advanced Economies	1.1	1.1	1.7	2.2	1.7	2.3	2.1F
(b) Developing Economies	4.7	4.6	4.4	3.8	3.9	4.5	4.6F
(c) Transition Economies	3.3	2.0	0.9	-2.2	0.3	2.1	2.2F
VI. World Trade Volume (Goods)	3.1	3.6	3.9	2.8	2.2	5.4	3.8
VII. Export Volume growth (Goods)							
(a) Advanced Economies	2.9	3.2	3.9	3.8	1.8	4.4	3.1
(b) Developing Economies	3.6	4.7	3.2	1.4	2.9	7.2	4.3
VIII. Import Volume (Goods)							
(a) Advanced Economies	1.7	2.5	3.9	4.9	2.5	4.3	3.3
(b) Developing Economies	5.4	5.2	4.3	-1.0	1.8	7.5	5.6
IX. World Seaborne Trade*	4.6	3.4	3.5	1.8	2.6	3.9	NA
(a) Goods Loaded	4.7	3.5	3.5	1.8	2.6	4.0	NA
(b) Goods Unloaded	4.4	3.4	3.5	1.8	2.6	3.8	NA
I. Based on data from Major Ports and Non Major Ports II Based on Statement of Provisional estimates of Annual National Income, 2018-19 & Quarterly estimates of GDP for the fourth Quarter (Q4) of 2018-19 at constant prices, 2011-12 series & press release on estimates of GDP, Central Statistical Office, MOSPI, dated. 31.05.2019 III. Based on Department of Commerce, DGCI&S and RBI Bulletin IV,VI, VII & VIII Based on World Economic Outlook, April,2019, IMF; V & IX. Based on Review of Maritime Transport, 2018 (November), UNCTAD Note: For item Nos. IV, V, VI,VII, VIII & IX year 2012-13 refers to calendar year 2012 and so on. * growth in total goods loaded plus unloaded; NA ; Not Available (P) Provisional [^] Real GDP, F- Forecast for the year 2018							

Selected Emerging Trends Affecting Seaborne Trade

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

1.1.8 International seaborne trade gathered momentum, with volume expanding by 4 percent in the year 2017. 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 tonnes in 2017. In line with developments in the world economy, demand for shipping services improved in 2017. World seaborne trade expanded by 2.6 percent in 2016 and growth reached to 3.9% in the year 2017. Goods total loaded volumes reached 10.7 billion tons in the year 2017, reflecting the addition of over 410 million tons of cargo, about half of which was attributed to tanker trade. Strong import demand in China in 2016 continued to support world maritime seaborne trade, although overall growth was offset by limited expansion in the import demand of other developing regions. International Seaborne Trade loaded during last 17 years may be seen in **Table 2 (a)**.

1.1.9 Major dry bulk commodities – coal, iron ore and grain – 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.

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	2661	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. Starting in 2006, they include data on iron ore, grain and coal only. Data relating to bauxite/alumina and phosphate are included under "Other dry cargo".
Source: Review of Maritime Transport, 2018, UNCTAD

1.1.10 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).

1.1.11 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 and 2017

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

1.1.12 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

1.1.13 The year 2017 witnessed the geographical dispersion of Oil trade, as Oil trade patterns became less concentrated 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). UNCTAD estimated 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) and 2(d)). 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) Oil and Gas trade during 2016 and 2017

(In million tonnes)

S. No.	Commodity	2016	2017	Percentage change
1	Crude Oil	1831.4	1874.9	2.4
2	Other tanker trade	1223.7	1271.2	3.9
	Of which			
2(a)	Liquefied Natural Gas (LNG)	268.1	293.8	9.6
2(b)	Liquefied Petroleum Gas (LPG)	87.5	89.3	2.1
	Total tanker Trade	3055.1	3146.1	3.0

Source: Review of Maritime Transport, 2018, UNCTAD

Table 2(d) Major producers and consumption 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.

1.1.14 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

1.1.15 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.

1.1.16 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

1.1.17 A limited expansion in 2015–2016, 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 2016–2017 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.

Table 2(e) Dry Bulk Trade during 2016 and 2017

(In million tonnes)				
S. No.		2016	2017	Percentage change
1	Main Bulks	3040.9	3196.3	5.1
	Of which			
1(a)	Iron Ore	1418.1	1472.7	3.9
1(b)	Coal	1141.9	1208.5	5.8
1(c)	Grain	480.9	515.1	7.1
2	Minor Bulks	1874.6	1916.5	2.2
	Of which			
2(a)	Steel products	406	390	-3.9
2(b)	Forest products	354.6	363.6	2.5
	Total dry bulks	4915.5	5112.8	4.0

Source: Review of Maritime Transport, 2018, UNCTAD

1.1.18 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).

1.1.19 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

1.1.20 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.

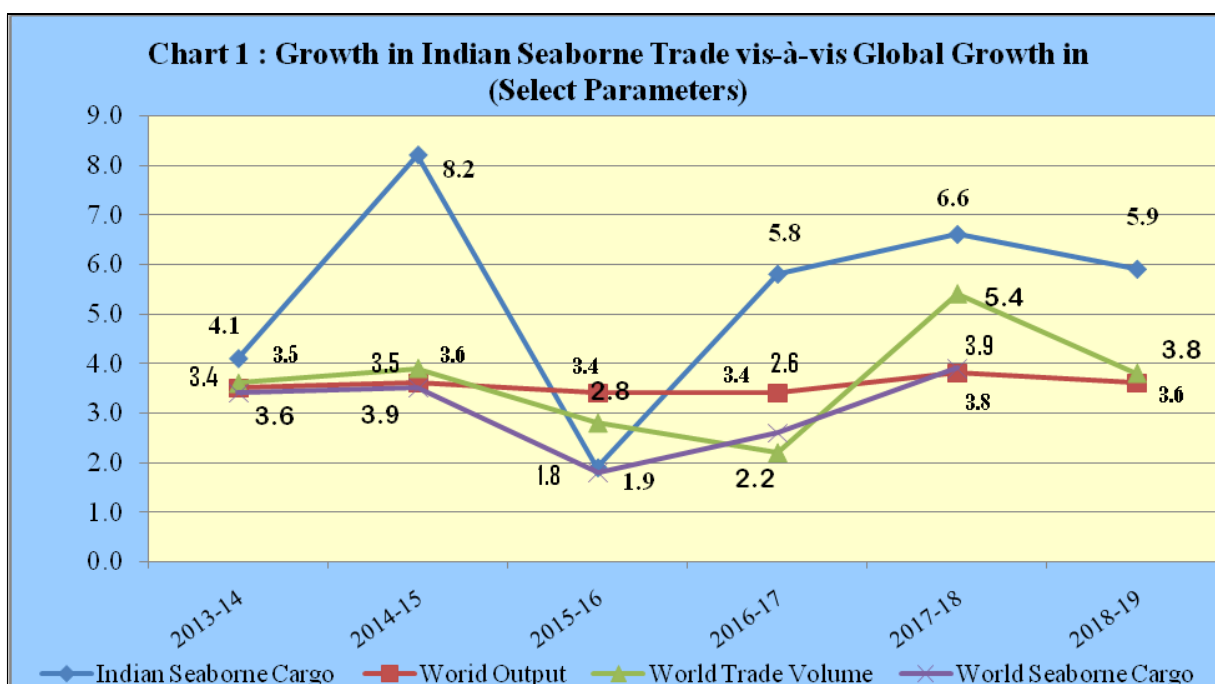
Seaborne Trade Development Forecast

1.1.21 Global seaborne trade is doing well, helped by the upswing in the world economy. Prospects for the short and medium term are positive overall – 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.

1.1.22 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-mainlane 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, World trade volume and World seaborne trade (loadings and unloading) since 2013-14 is given in **Chart I**.



1.3 Cargo Traffic at Indian Ports

1.3.1 During 2018-19, Major and Non-major Ports in India have accomplished a total cargo throughput of 1280.33 million tonnes reflecting an increase of 5.9% over the corresponding period of the previous year 2017-18 (Table 3). The growth in cargo handled at Major and Non-major ports in 2018-19, were 2.9% and 9.9% respectively. The share of Major Port in the total traffic handled at Indian Port decreased from 56.22% in 2017-18 to 54.60% in 2018-19. Trend in traffic handled at Major and Non-major Ports is given below in **Table 3**.

Table 3- Trends in Cargo Handled at Major & Non-Major Ports						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Major Ports	555.50 (1.8)	581.34 (4.7)	605.89 (4.2)	648.47 (7.0)	679.47 (4.8)	699.10 (2.9)
Non-Major Ports	416.97 (7.5)	470.89 (12.9)	465.87 (-1.1)	485.21 (4.2)	529.09 (9.0)	581.22 (9.9)
All Ports	972.47 (4.1)	1052.23 (8.2)	1071.76 (1.9)	1133.69 (5.8)	1208.56 (6.6)	1280.33 (5.9)

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 2018-19 was 699.1 million tonnes achieving growth of 2.9% over the previous year.

1.4.2 During 2018-19, Kamarajar Port recorded highest growth in traffic 13.3 followed by Haldia Dock Complex (HDC) (11.6%), Cochin Port (9.9%), Paradip Port (7.1%), JNPT (7.1%), Kolkata Dock System (KDS) (6.7%), Deendayal Port (4.8%), Vishakhapatnam Port (2.8%), Chennai Port (2.2%) and New Mangalore Port (1.1%). Major ports which recorded **negative growth** in traffic during 2018-19 were: Mormugao Port (34.3%), V.O. Chidambaranar Port (6.1%) and Mumbai Port (3.7%) (Table 4).

Ports	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)	% change18- 19/ 17-18
1	2	3	4	5	6	7	8
Kolkata	41386	46293	50289	50951	57891	63763	10.1
Kolkata DS	12875	15283	16782	16810	17390	18551	6.7
Haldia DC	28511	31010	33507	34141	40501	45212	11.6
Paradip	68003	71011	76397	88958	102028	109275	7.1
Vizag	58504	58004	57035	61020	63537	65301	2.8
Kamarajar	27337	30251	32206	30020	30446	34497	13.3
Chennai	51105	52541	50058	50214	51881	53012	2.2
Chidambaranar	28642	32414	36849	38463	36583	34341	-6.1
Cochin	20886	21595	22095	25007	29143	32022	9.9
New Mangalore	39365	36566	35582	39936	42059	42510	1.1
Mormugao	11739	14711	20776	33181	26897	17683	-34.3
Mumbai	59184	61660	61119	63129	62902	60588	-3.7
JNPT	62333	63801	64027	62152	66004	70706	7.1
Deendayal	87005	92497	99458	105442	110099	115402	4.8
All Ports	555489	581344	605891	648473	679470	699100	2.9

Source: Major Ports
(P): Provisional

1.4.3 Amongst the Major Ports, Deendayal Port handled the maximum Cargo of 115.40 million tonnes with a share of 16.5% in total cargo handled at major ports followed by Paradip Port (15.6%), JNPT (10.1%), Vishakhapatnam Port (9.3%), Mumbai Port (8.7%), Chennai Port (7.6%),

Haldia Dock Complex (6.5%), NMPT (6.1%), Chidambaranar Port (4.9%), Kamarajar Port (4.9%), Cochin Port (4.6%), Kolkata Dock System (KDS) (2.7%) and Mormugao Port (2.5%) during 2018-19.

Commodity-wise growth of cargo traffic at Major Ports

1.4.4 At a broad commodity level, 2018-19, Fertilizer (Finished) posted highest growth of 9.5% followed by Container (8.8%). The other commodities such as Thermal coal, Coking coal, POL and Iron Ore posted growth of 8.0%, 7.9%, 3.6% and 0.4% respectively. Cargo traffic in Food Grain, Fertilizer Raw (Dry) and other commodities was affected in 2018-19 dropped by 66.8%, 7.2% and 5.9% respectively.

1.4.5 In terms of composition of cargo traffic handled during 2018-19 at major ports, the largest commodity group (with share in percent in total cargo handled) was POL (31.6%) followed by Container traffic (20.8%), Other commodities (19.8%), Coal (19.6%), Iron ore (5.9%), Fertilizer & FRM (2.2%) in **Table 5**.

Table 5 : Commodity wise Traffic Handled at Major Ports							
							(Thousand Tonnes)
Commodities	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19 (P)	% change 2018-19/ 2017-18
1	2	3	4	5	6	7	8
POL*	180507	181020	186360	200225	213261	220964	3.6
Iron Ore@	23037	18002	15315	41765	41170	41343	0.4
Fertiliser#	13783	16291	16023	14057	15052	15227	1.2
1. Finished	6148	7926	8493	7043	7523	8241	9.5
2. Raw (DRY)	7635	8365	7530	7014	7529	6986	-7.2
Coal	104271	119474	134056	126177	126725	136845	8.0
1. Thermal Coal	71651	87119	100252	90329	87145	94121	8.0
2. Coking Coal	32620	32355	33804	35848	39580	42724	7.9
Food Grain**	4794	3089	2373	6504	2396	795	-66.8
Container (Tonnes)	114672	119441	123168	124663	133726	145445	8.8
Others	114425	124017	128596	135082	147140	138481	-5.9
Total	555489	581334	605891	648473	679470	699100	2.9
* Includes POL crude and POL Products only @ includes iron ore fine and pellets only # includes Fertilizer finished and FRM-Dry only ** excludes pulses P : Provisional Source: Major Ports							

1.4.6 The Port-wise and Commodity-wise shares in total cargo traffic during 2018-19 are depicted in the **Charts II and III** respectively.

Chart-II Major Ports-Portwise share in Traffic Handled during 2018-19 in India

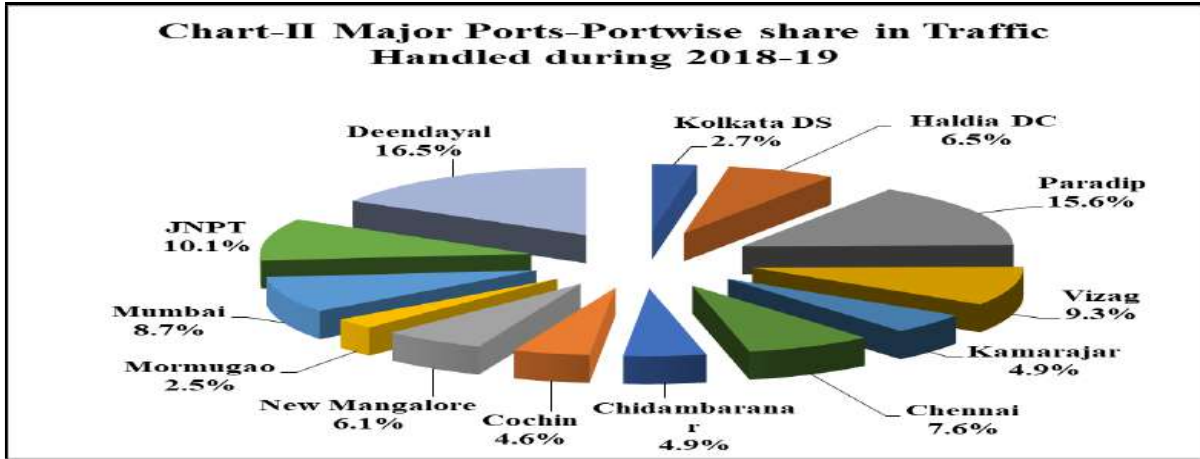
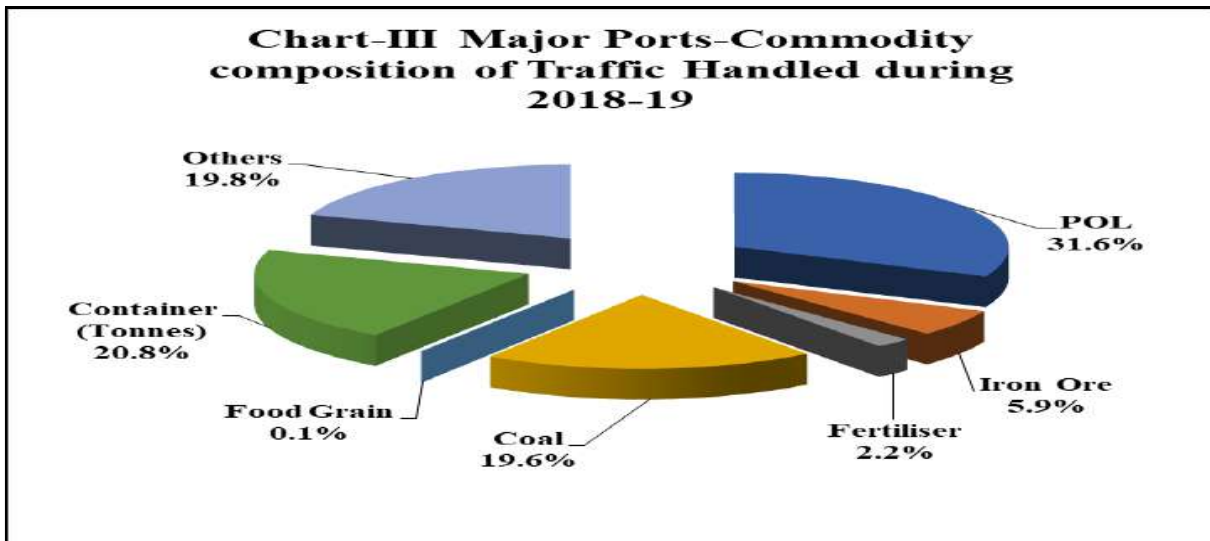


Chart-III Major Ports-Commodity composition of Traffic Handled during 2018-19 in India



1.4.7 The Port-wise & commodity-wise traffic handled at major ports from 2015-16 onwards is 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 8.8% during 2018-19 which is much higher as compared to 7.3% achieved in the year 2017-18. In terms of Twenty Foot Equivalent Units (TEUs), containers handled by Major Ports during 2018-19 recorded growth of 8.1% as compared to 8.8% during 2017-18 (Table 6).

Amongst the major ports, Mumbai Port (47.8%) witnessed fall in container traffic in container traffic in 2018-19 compared to 2017-18. JNPT continues to be the leading container handling port in the country with a share of 42.7% in terms of tonnage and 52.0% in terms of TEUs in the total container traffic at major ports during 2018-19. Chennai port which handled 21.5% of container cargo is the second largest container handling port followed by Chidambaranar Port (10.3%), Cochin Port (5.6%), Vishakhapatnam Port (5.5%) and Deendayal Port (2.7%).

Table 6: Container Traffic at Major Ports										
(in thousand tonnes/TEUs)										
PORT	2015-16		2016-17		2017-18		2018-19(P)		% change 2018-19/ 2017-18	
	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU
1	2	3	4	5	6	7	8	9	10	11
Kolkatta DS	9263	578	9887	636	9760	640	9934	652	1.8	1.9
Haldia DC	1376	85	2467	136	2672	156	3140	178	17.5	14.1
Paradip	132	5	42	2	113	7	194	13	71.7	85.7
Vizag	5145	245	6428	367	6835	389	7958	450	16.4	15.7
Chennai	30207	1565	28850	1495	29905	1549	31263	1620	4.5	4.6
Kamarajar	1	0	1	0	52	3	1101	57	2017.3	1800.0
Chidambanar	12388	612	12991	642	14191	698	14955	739	5.4	5.9
Cochin	5785	419	6840	491	7694	556	8116	594	5.5	6.8
New Mangalore	1105	76	1411	95	1744	115	1920	132	10.1	14.8
Mormugao	345	26	402	30	425	32	467	37	9.9	15.6
JNPT	56791	4491	54530	4500	57866	4833	62114	5133	7.3	6.2
Mumbai	574	43	639	43	630	42	329	27	-47.8	-35.7
Deendayal	56	3	175	5	1839	117	3954	243	115.0	107.7
All Ports	123168	8148	124663	8442	133726	9137	145445	9875	8.8	8.1

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

1.5 Cargo Traffic at Non-Major Ports

1.5.1 Non-major ports handled 45.4% of total maritime freight traffic of the country during 2018-19 as compared to 43.8% during 2017-18.

1.5.2 **Table 7** presents maritime state-wise share and growth of traffic handled at Non-major Ports from 2013-14 onwards.

Table 7 : Traffic Handled by Non-Major Ports by Maritime States/UTs								
(000'Tonnes)								
Maritime State/UT	2013-14*	2014-15*	2015-16	2016-17	2017-18	2018-19(P)	% Change over previous year	
							2017-18	2018-19 (P)
Gujarat	309945	336095	339778	345739	370769	399197	7.2	7.7
	(74.3)	(71.4)	(72.9)	(71.3)	(70.1)	(68.7)		
Maharashtra	24664	27295	28849	34894	37906	44421	8.6	17.2
	(5.9)	(5.8)	(6.2)	(7.2)	(7.2)	(7.6)		
Andhra Pradesh	58692	83418	72733	69603	86285	103333	24.0	19.8
	(14.1)	(17.7)	(15.6)	(14.3)	(16.3)	(17.8)		
Goa	284	760	430	117	72	15	-38.5	-79.2
	(0.1)	(0.2)	(0.1)	(0.0)	(0.0)	(0.0)		
Tamil Nadu	866	825	856	1152	1103	963	-4.3	-12.7
	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)		
Karnataka	509	651	835	707	681	1044	-3.7	53.4
	(0.1)	(0.1)	(0.2)	(0.1)	(0.1)	(0.2)		
A&N	1149	1156	1323	1276	1418	1495	11.1	5.4
	(0.3)	(0.2)	(0.3)	(0.3)	(0.3)	(0.3)		
Odisha	14371	15452	14949	22473	22595	22186	0.5	-1.8
	(3.4)	(3.3)	(3.2)	(4.6)	(4.3)	(3.8)		
Kerala	90	159	144	140	138	201	-1.4	45.7
	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)		
Puducherry	6281	4958	5974	9112	8121	8369	-10.9	3.1
	(1.5)	(1.1)	(1.3)	(1.9)	(1.5)	(1.4)		
All M. States/UTs	416970	470888	465871	485213	529088	581225	9.0	9.9
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)		

Note: Figure in parenthesis is the percentage share of traffic handled by the maritime state to the total traffic handled by all the maritime states;
P- Provisional
Source: Basic Port Statistics of India(BPS), State Maritime Board / Directorate of Port (Andhra Pradesh, Gujarat, Goa, Tamil Nadu, Karnataka, Orissa, Puducherry and Andaman & Nicobar) and PDMP (Maharashtra and Kerala)
Note: *Includes 119 (000) tonnes cargo handled at Lakshadweep during 2013-14 & 2014-15.

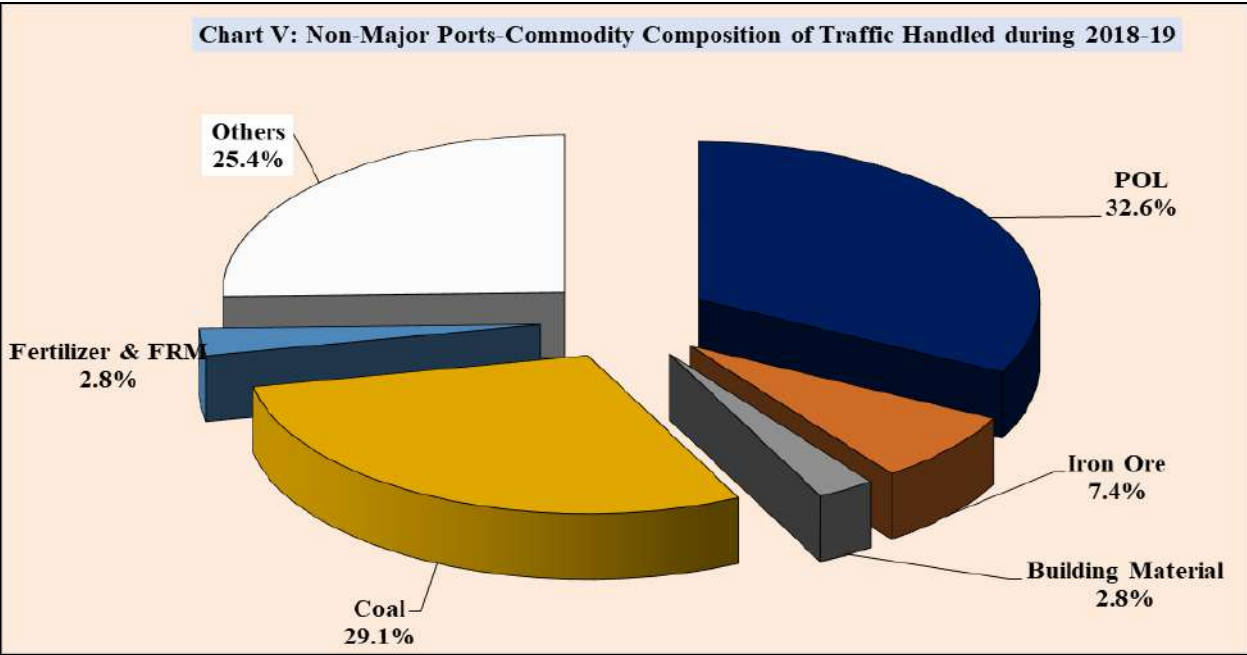
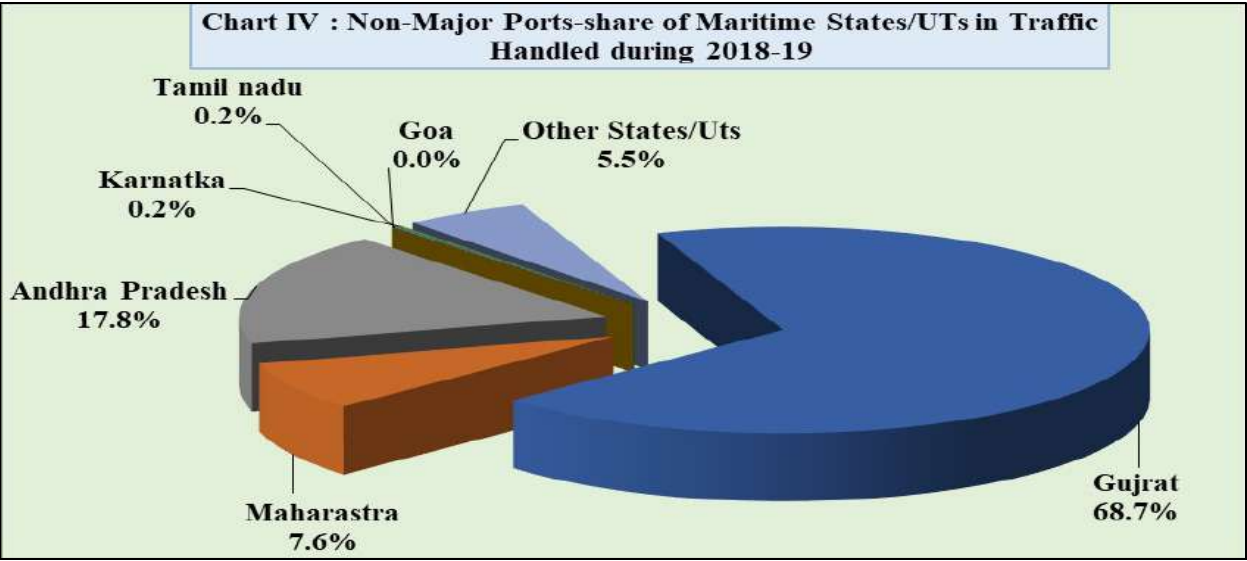
1.5.3 The growth in cargo handled by the non-major ports during 2018-19 was 9.9% compared to 9.0% recorded in the previous year. **Table 8** gives a glimpse of commodity profile of the cargo handled. The above table reflects that Gujarat accounted for (68.7%) of the traffic handled by the non-major ports followed by Andhra Pradesh (17.8%) and Maharashtra (7.6%). Three maritime States, viz, Gujarat, Andhra Pradesh and Maharashtra together accounted for 94.1% of the total cargo traffic handled by the non-major ports in 2018-19.

1.5.4 Two commodities, viz. POL and Coal accounted for 61.7 % of the total cargo handled at the non-major ports during 2018-19 (**Table 8**).

Table 8: Commodity-wise Traffic Handled by Non-Major Ports								
(000'Tonnes)								
Commodity	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)	% Change over previous year	
							2017-18	2018-19 (P)
POL*	169777	167278	180641	186070	193422	189570	4.0	-2.0
	(40.7)	(35.5)	(38.8)	(38.3)	(36.6)	(32.6)		
Iron Ore**	18338	26794	17383	34454	36595	42867	6.2	17.1
	(4.4)	(5.7)	(3.7)	(7.1)	(6.9)	(7.4)		
Building Material\$	14178	14224	14173	15170	15588	15986	2.8	2.6
	(3.4)	(3.0)	(3.0)	(3.1)	(2.9)	(2.8)		
Coal@	126321	156737	141874	133755	146684	169075	9.7	15.3
	(30.3)	(33.3)	(30.5)	(27.6)	(27.7)	(29.1)		
Fertilizer & FRM&	12010	13952	16946	14237	11714	16087	-17.7	37.3
	(2.9)	(3.0)	(3.6)	(2.9)	(2.2)	(2.8)		
Others	76346	91903	94854	101527	125085	147640	23.2	18.0
	(18.3)	(19.5)	(20.4)	(20.9)	(23.6)	(25.4)		
All	416970	470888	465871	485213	529088	581225	9.0	9.9
	(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
* includes POL crude, POL products, LPG/LNG, Naphtha and Fuel oil.
@ includes Thermal Coal, Coking coal, other coal and Pet coal.
\$ includes Building Material and Cement/Clinker
** includes iron ore fines and Pellets
& includes Fertilisers, FRM-Liquid, FRM-Dry and Rock Phosphate
Source: BPS, Non Major Ports/State Maritime Boards and Port Data Management Port (PDMP)

1.5.5 The share of Maritime States/UTs in the total traffic and Commodity-wise composition of traffic during 2018-19 is depicted in the pie **Charts IV and V** respectively.



1.5.6 Maritime State-wise & commodity-wise traffic handled at non-major ports during the last few years is given in **Annex 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 2017-18, Indian economy grew at GVA growth rate of 6.9%. However, in 2018-19, the growth declined to 6.6%. The Agriculture, Forestry and Fishing sector has shown a growth rate of 2.9% in 2018-19 as against the growth rate of 5.0% in the previous year. However the growth of Indian industry sector is 6.9% in 2018-19 as compared to 6.0% in 2017-18.

1.6.1.2 Cargo traffic handled by India's 12 major ports (which accounts for 54.60% of India's total seaborne cargo) during 2018-19 was 699.10 million tonnes as compared to 679.47 million tonnes recorded in the corresponding period of 2017-18 showing a growth of 2.9%. 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 6.9% in 2018-19 as compared to 6.0% in corresponding period of 2017-18. GVA of Industry sector recorded growth of 6.7%, 7.0% and 4.2% in last three quarters of 2018-19.

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 year 2017-18 posted negative growth of 2.7%, while in the year 2018-19, it increased to 0.4%. The growth of Coal traffic was 4.7% in the year 2017-18 and further increased to 8.0% during 2018-19. The growth of POL Product in the 2018-19 was 3.6% as compared to 6.9% in the 2017-18. The container traffic increased in the year 2018-19 to 8.8% as compared to 7.3% posted in the previous year

The quarterly growth of cargo handled by major ports in 2018-19 was 4.1%, 6.7%, 1.4% and 0.6% respectively.

1.6.1.4 **Table 9** gives Quarter wise trend in growth of cargo traffic handled at Major ports, GVA overall and GVA of Industry sector during Q1,Q2,Q3,Q4 and annual growth of 2017-18 and 2018-19.

Table -9 - Quarter-wise trend in growth of Cargo Traffic at Major Ports and GVA										
Commodities/ Year	2017-18					2018-19				
	Q1	Q2	Q3	Q4	Annual Growth	Q1	Q2	Q3	Q4	Annual Growth
POL*	8.9	5.5	6.3	7.8	6.9	0.7	5.8	-2.0	5.8	3.6
Iron Ore #	33.4	11.6	-23.8	-11.1	-2.7	-12.8	-9.1	10.0	-15.8	0.4
Coal @	-9.8	-9.9	13.9	28.4	4.7	23.7	25.9	11.8	-4.1	8.0
Fertilizer **	6.8	-10.4	0.8	49.1	7.0	9.9	-14.4	1.5	6.5	1.2
Container										
In tonnes	5.6	7.6	9.4	6.8	7.3	9.8	9.4	8.6	8.6	8.8
In TEUs	6.5	7.3	7.7	10.9	8.1	6.4	9.1	9.5	7.3	8.1
Other cargo	8.8	-2.0	-2.2	-1.5	0.1	-6.5	-1.8	-10.3	-4.5	-5.9
All Cargo	5.0	1.5	4.4	8.5	4.8	4.1	6.7	1.4	0.6	2.9
GVA overall	5.9	6.6	7.3	7.9	6.9	7.7	6.9	6.3	5.7	6.6
GVA - Industry	0.8	6.9	8.0	8.1	5.9	9.8	6.7	7.0	4.2	6.9

GVA: Gross Value Addition at factor cost at 2011-12 prices.
 * includes POL Product and POL crude, # includes iron ore fines and pellets
 @ includes Thermal coal and Coking Coal, ** includes Fertilizer and FRM-dry
 Source: Port Data Management Portal

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, 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).

Even though the supply of global container ship capacity continued in 2017, freight rates made a remarkable recovery from the low 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 Shanghai– 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.

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

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	% change (2017/ 16)	2018 first half year
Dirty Tanker Index	1510	581	896	782	719	642	777	821	726	787	8	667
Clean Tanker Index	1155	485	732	720	641	605	607	638	487	606	24.0	577

Source : Review of Maritime Transport -2018

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.

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.

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.

1.6.3 Trends in Global Top 20 Cargo/Container Ports

1.6.3.1 In 2017, global port activity and cargo handling of containerized and bulk cargo expanded rapidly, following two years of weak performance. This expansion was in line with positive trends in the world economy and seaborne trade. Global cargo traffic boasted an increase in volume of about 5.0% during the year 2017. However, world container terminals boasted an increase in volume of about 5.8% during the same year 2017. 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	8.4
2	Singapore	Singapore	30.9	33.7	9.1
3	Shenzhen	China	24	25.2	5.0
4	Ningbo-Zhoushan	China	21.6	24.6	13.9
5	Busan	Republic of Korea	19.9	21.4	7.5
6	Hong Kong	Hong Kong SAR	19.8	20.8	5.1
7	Guangzhou (Nansha)	China	18.9	20.4	7.9
8	Qingdao	China	18	18.3	1.7
9	Dubai	United Arab Emirates	14.8	15.4	4.1
10	Tianjin	China	14.5	15.2	4.8
11	Rotterdam	Netherlands	12.4	13.6	9.7
12	Port Klang	Malaysia	13.2	12.1	-8.3
13	Antwerp	Belgium	10	10.5	5.0
14	Xiamen	China	9.6	10.4	8.3
15	Kaohsiung	Taiwan Province of China	10.5	10.2	-2.9
16	Dalian	China	9.6	9.7	1.0
17	Hamburg	Germany	8.9	9.6	7.9
18	Los Angeles	United States	8.9	9.3	4.5
19	Tanjung Pelepas	Malaysia	8.3	8.3	0.0
20	Laem Chabang	Thailand	7.2	7.8	8.3
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, 2019; the cargo handling capacity of Major Ports was 1514.09 Million Tonnes. Commodity-wise capacity of Major Ports at the end of March 2014 to 2019 is given in **Annex V**.

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 43 PPP projects are operational and 13 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 incentivize 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.**

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 by 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 filed ports

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

e) Sagarmala Project

1.7.14 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.

a) 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.

b) 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.

a) 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, 93 have already been implemented. The implementation of these initiatives will further improve the efficiency and performance of the Ports of rakes), maintenance (Equipment uptime and breakdowns), Gate-In and Gate-out operations, safety, customs and penetration of IT.

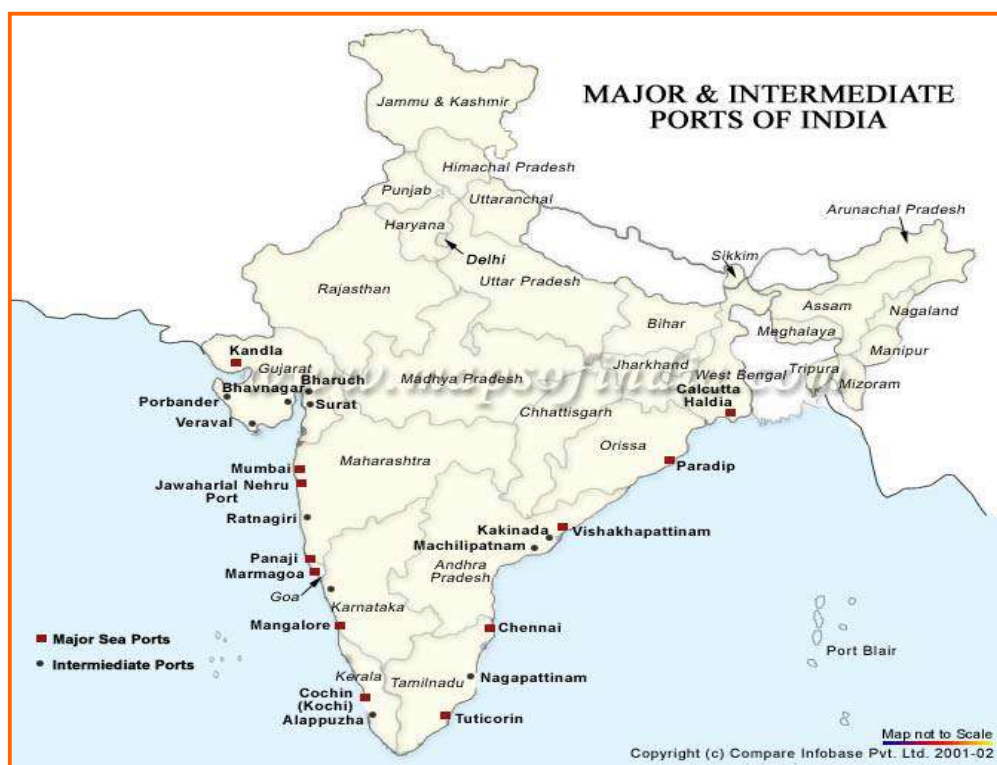
c) Coastal Transportation of Vehicles by Ro-Ro Vessels

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), Orissa (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 2018-19, only 65 Non-major Ports were reported to have handled cargo traffic. **Chart-VI** gives the geographical location of the Major and prime Non-Major Ports. The Maritime Ports operate within the statutory framework of the Indian Ports Act 1908 which applies to all the ports. However, the Major Ports Act 1963 applies only to Major Ports. Each Major Port is administered by a 'Port Trust' except for the port of Kamarajar (Ennore) which is a corporatized entity.

Chart - VI



Source: <http://www.mapsofindia.com>

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

2.3 Maritime States Development Council (MSDC)

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

2.4 Maritime States – Non-Major Ports

2.4.1 Non-major ports in India collectively handled 581.23 million tonnes of traffic with a share of 45.4% in total cargo handled during 2018-19 as compared to 529.09 million tonnes of cargo handled in 2017-18 recording growth of 9.0%.

2.4.2 GUJARAT

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

Chart – VII: Gujarat: Major and Minor Ports



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

2.4.2.2 The trends in the cargo handled at both major and non-major ports of the State during the last few years are given in Table 13.

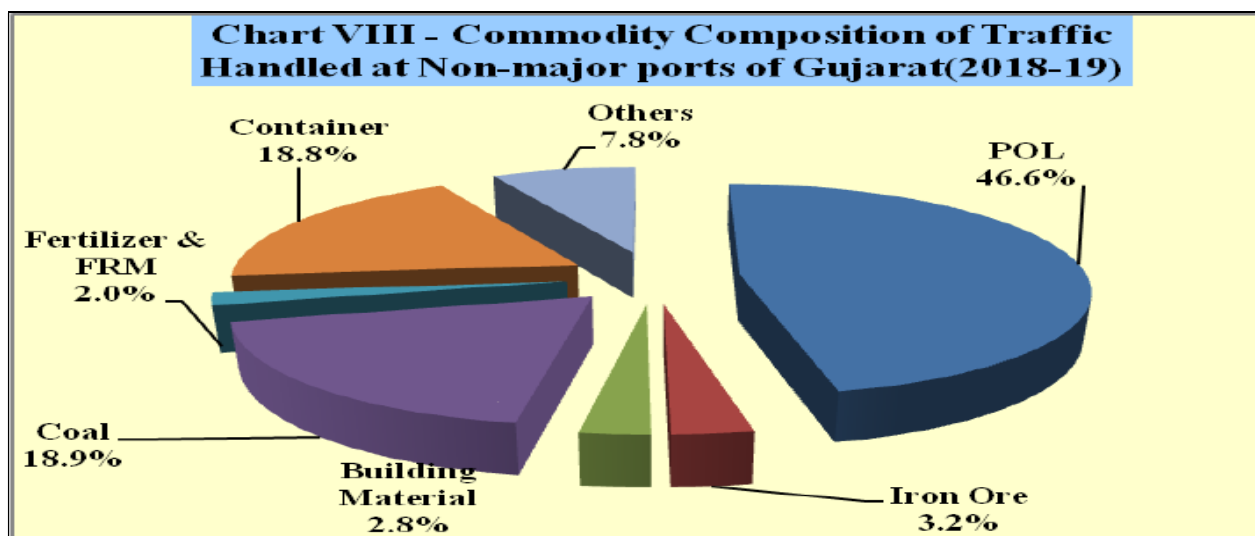
Table 13 - Gujarat: Trends in Cargo Handled at Major & Non-Major Ports (Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Major Ports	87.01	92.50	99.46	105.44	110.10	115.40
	(-7.1)	(6.3)	(7.5)	(6.0)	(4.4)	(4.8)
Non-Major Ports	309.95	336.10	339.78	345.74	370.77	399.20
	(7.7)	(8.4)	(1.1)	(1.8)	(1.8)	(7.2)
All Ports	396.96	428.59	439.24	451.18	480.87	514.60
	(4.1)	(8.0)	(2.5)	(2.7)	(2.7)	(7.0)

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 40.2% of the total cargo handled by Indian ports in 2018-19. The total cargo traffic handled at the major and non-major ports of Gujarat during 2018-19 was of the order of 514.60

million tonnes as against 480.87 million tonnes in the same periods of 2017-18, reflecting an increase of 7.0%. In particular, non-major ports of Gujarat alone handled more than two third of total cargo traffic at India’s non-major ports during 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 is shown in **Chart VIII**.



2.4.2.5 Recent trends in cargo handled and capacity creation in non-major ports of Gujarat are captured in the **Table 14**. It indicates sustained increase in cargo throughout and capacity addition. During the year 2018-19; 19 million tonnes of capacity was added taking the total cargo handling capacity in the non- major port sector in Gujarat to 542 million tonnes. 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 2013-14 onwards the capacity of Non-major ports increased every year.

Item	(Million Tonnes)					
	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Capacity*	387	422	466	501	523	542
	(5.7)	(9.0)	(10.4)	(7.5)	(4.4)	(3.6)
Cargo Handled	309.95	336.09	339.78	345.74	370.77	399.20
% Utilization	80.1	79.6	72.9	69.0	70.9	73.7

* 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 and Jawahar Lal Nehru and 48 non-major ports. Out of 48 non-major ports only 13 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 2018-19 was 175.72 million tonnes compared to 166.81 million tonnes handled during 2017-18 with the growth of 5.3%. However the share of the cargo handled at the two major Ports of Maharashtra State in the total cargo was 74.7% while share of non-major ports was only 25.3%.

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						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Major Ports	121.52	125.46	125.15	125.28	128.91	131.29
	-(0.8)	(3.2)	-(0.3)	(0.1)	(2.9)	(1.9)
Non-Major Ports	24.66	27.30	28.85	34.89	37.91	44.42
	(1.9)	(10.7)	(5.7)	(21.0)	(8.6)	(17.2)
All Ports	146.18	152.76	154.00	160.18	166.81	175.72
	-(0.4)	(4.5)	(0.8)	(4.0)	(4.1)	(5.3)

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 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						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Major Ports	11.74	14.71	20.78	33.18	26.90	17.68
	-(33.8)	(25.3)	(41.2)	(59.7)	-(18.9)	-(34.3)
Non-Major Ports	0.28	0.76	0.43	0.12	0.07	0.02
	-(91.6)	(167.6)	-(43.4)	-(72.8)	-(38.5)	-(79.2)
All Ports	12.02	15.47	21.21	33.30	26.97	17.70
	-(43.1)	(28.7)	(37.1)	(57.0)	-(19.0)	-(34.4)
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, 5 ports handle cargo in the state which is: Mangalore, Malpe, Hangarkatta, Kundarpura and Karwar port. During 2018-19, non- major ports in the State handled 1.04 million tonnes of cargo traffic as compared to 0.68 million tonnes in 2017-18 reflecting increase of 53.6%. The total cargo handled in Karnataka state was 43.55 million tonnes in 2018-19 compared to 42.74 million tonnes in 2017-18 with a growth of 1.9%.

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	2018-19(P)
Major Ports	39.37	36.57	35.58	39.94	42.06	42.51
	(6.3)	-(7.1)	-(2.7)	(12.2)	(5.3)	(1.1)
Non-Major Ports	0.51	0.65	0.84	0.71	0.68	1.04
	-(16.6)	(27.9)	(28.3)	-(15.2)	-(3.9)	(53.6)
All Ports	39.87	37.22	36.42	40.64	42.74	43.55
	(5.9)	-(6.7)	-(2.1)	(11.6)	(5.2)	(1.9)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.						

2.4.6 KERALA

2.4.6.1 Kerala has a coastline of 570 kms, with one major port at Cochin and 17 other non-major ports. The Vallarpadam Container Terminal Project in Cochin has been promoted on BOT basis through public private participation. In Kerala, 4 non-major ports are handling cargo are Kovalam /Vizhinjam, Kollam / Neendakara, Beypore and Azhikkal.

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	2018-19(P)
Major Ports	20.89	21.60	22.10	25.01	29.14	32.02
	(5.3)	(3.4)	(2.3)	(13.2)	(16.5)	(9.9)
Non-Major Ports	0.09	0.16	0.14	0.14	0.14	0.20
	-(6.3)	(76.7)	-(9.4)	-(2.8)	-(1.4)	(45.9)
All Ports	20.98	21.75	22.24	25.15	29.28	32.22
	(5.2)	(3.7)	(2.2)	(13.1)	(16.4)	(10.0)
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 2018-19, the non-major ports in Tamil Nadu collectively handled 0.96 million tonnes of cargo traffic as compared to 1.10 million tonnes in 2017-18. The trend in the cargo handled at both major and non-major ports of the State during the last few years and current year is given in **Table 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	2018-19(P)
Major Ports	107.08	115.21	119.11	118.70	118.91	121.85
	(7.6)	(7.6)	(3.4)	-(0.3)	(0.2)	(2.5)
Non-Major Ports	0.87	0.83	0.86	1.15	1.10	0.96
	-(6.9)	-(4.7)	(3.8)	(34.6)	-(4.3)	-(12.7)
All Ports	107.95	116.03	119.97	119.85	120.01	122.81
	(7.4)	(7.5)	(3.4)	-(0.1)	(0.1)	(2.3)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.						

2.4.8 ANDHRA PRADESH

2.4.8.1 Andhra Pradesh has one major port at Visakhapatnam besides 12 non-major port locations: Bhavanapadu, Meghavaram, Bheemunipatnam, Gangavaram, Kakinada SEZ, Kakinada Deep Water, Rawa, Narsapur, Machilipatnam, Nizamapatnam, Vodarevu, 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 168.6 million tonnes of cargo during of 2018-19 compared with 149.8 million tonnes in 2017-18 thus registering increase of 12.6% in traffic handled by major and non-major ports of Andhra Pradesh. Non-major ports in Andhra Pradesh have shown a growth of 19.8% in 2018-19.

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	2018-19(P)
Major Ports	58.50	58.00	57.04	61.02	63.54	65.30
	-(0.9)	-(0.9)	-(1.7)	(7.0)	(4.1)	(2.8)
Non-Major Ports	58.69	83.42	72.73	69.60	86.29	103.33
	(13.3)	(42.1)	-(12.8)	-(4.3)	(24.0)	(19.8)
All Ports	117.2	141.4	129.8	130.6	149.8	168.6
	(5.7)	(20.7)	-(8.2)	(0.7)	(14.7)	(12.6)

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 Odisha identified 14 potential sites for development of Minor Ports. To facilitate developers for development of Minor Ports, Government of Odisha framed the Port Policy during the year 2004.

2.4.9.2 The advantages for development of sea ports in Orissa includes availability of a vast hinterland generating cargo, comprising of other developing Eastern and Central Indian States, mineral rich hinterland which offers long term potential for cargo which need seaport facility in Orissa. Paradip port is the only major port in the State under the control of Government of India which is packed to accommodate increasing traffic. 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 22.19 million tonnes of cargo during 2018-19 compared to 22.60 million tonnes in the corresponding period of 2017-18 registering a decrease of 1.8% in traffic. However, the total cargo handled during 2018-19 was 131.46 million tonnes compared to 124.62 million tonnes in the corresponding period of 2017-18 registering an increase of 5.5% in traffic. The cargo handled at Major port has registered a growth of 7.1% during 2018-19 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	2018-19(P)
Major Ports	68.00	71.01	76.40	88.96	102.03	109.28
	(20.3)	(4.4)	(7.6)	(16.4)	(14.7)	(7.1)
Non-Major Ports	14.37	15.45	14.95	22.47	22.60	22.19
	(29.8)	(7.5)	-(3.3)	(50.3)	(0.5)	-(1.8)
All Ports	82.37	86.46	91.35	111.43	124.62	131.46
	(21.8)	(5.0)	(5.6)	(22.0)	(11.8)	(5.5)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.						

2.4.10 WEST BENGAL

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

Table 22 - West Bengal :Trends in Cargo Handled at Major & Non-Major Ports						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Major Ports	41.39	46.29	50.29	50.95	57.89	63.76
	(3.7)	(11.8)	(8.6)	(1.3)	(13.6)	(10.1)
Non-Major Ports	0	0	0	0	0	0
All Ports	41.39	46.29	50.29	50.95	57.89	63.76
	(3.7)	(11.9)	(8.6)	(1.3)	(13.6)	(10.1)
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 both major and non-major ports of the Andaman & Nicobar Islands during the last few years and current year are given in **Table 23**.

Table 23 - Union Territory: Trends in Cargo Handled at A & N Islands Port						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Andaman & Nicobar Islands	1.15	1.16	1.32	1.28	1.42	1.49
	(7.4)	(0.6)	(14.4)	-(3.6)	(11.1)	(5.4)
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 Karaikal. The commercial operations started in April 2009.

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

Table 24 - Union Territories: Trends in Cargo Handled at Non-Major Ports						
(Million Tonnes)						
Major/Non-Major	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
Lakshadweep	0.12	0.12	-	-	-	-
Puducherry	6.28	4.96	5.97	9.11	8.12	8.37
	(-9.1)	(-21.1)	(20.5)	(52.5)	(-10.9)	(3.1)

3: PERFORMANCE INDICATORS

3.1 Capacity Utilization for Major and Non-Major Ports

3.1.1 Over the years, cargo handling capacity of major ports has steadily increased to cater to the growing volume of internal and external trade. The capacity of the ports which was 172.59 million tonnes at the end of 1993-94 increased to a level of 1514.09 million tonnes at the end of 2018-19. The capacity of Non-Major Ports has been increased by 54.12 million tonnes to 910.32 million tonnes in 2018-19 as compared to 856.2 Million tonnes in 2017-18. The port-wise capacity and traffic of Major and Non-Major Ports for 2018-19 is brought out in **Table 25 & 26** respectively.

S. No.	Name of Ports	Capacity	Traffic (P)	Capacity Utilization (%)
1	Kolkata Ports of Trust*	82.57	63.76	77.2
2	Paradip Port Trust	239.00	109.28	45.7
3	Visakhapatnam Port Trust	131.09	65.30	49.8
4	Kamarajar Ports Limited	91.00	34.50	37.9
5	Chennai Port Trust	134.00	53.01	39.6
6	V.O.Chidambaranar Port Trust	111.46	34.34	30.8
7	Cochin Port Trust	78.60	32.02	40.7
8	New Mangalore Port Trust	98.00	42.51	43.4
9	Mormugao Port Trust	63.40	17.68	27.9
10	Mumbai Port Trust	79.00	70.71	89.5
11	Jawaharlal Nehru Port Trust	138.87	60.59	43.6
12	Deendayal Port Trust	267.10	115.40	43.2
	Total	1514.09	699.10	46.2

*Haldia Dock Complex included.

Source: Development Wing of M/o Shipping for Capacity and Major Ports for Traffic

P:-Provisional

3.1.2 The table shows that 46.2% capacity has been utilized at major Ports during 2018-19. The highest capacity utilization i.e. 89.5% is achieved at Mumbai port followed by Kolkata Port Trust including Haldia Dock Complex (77.2%), Visakhapatnam Port Trust (49.8%) and Paradip Port Trust (45.7%). The least capacity utilization was at Mormugao Port Trust (27.9%) followed by VOC Port Trust (30.8%) during 2018-19.

3.1.3 The table 26 below shows that around 63.8% capacity has been utilized at Non-major Ports during 2018-19. The highest capacity utilization i.e. 74.0% is achieved at Goa State followed by Gujarat Maritime Board (GMB) (73.7%), Directorate of Ports, Andhra Pradesh (58.1%), Port Management Board, A&N Islands (49.8%), Puducherry (49.5%), Directorate of Ports, Odisha (46.7%), Tamil Nadu Maritime Board (TNMB) (44.8%) and Maharashtra Maritime Board (MMB) (43.4%). The least capacity utilization was at Directorate of Ports, Karnataka (5.9%) followed by Directorate of Ports, Kerala (36.6%) during 2018-19.

Table 26-Non-Major Port-wise Capacity Utilisation during 2018-19				
(Million Tonnes)				
S. No.	Name of State Maritime Board	Capacity	Traffic (P)	Capacity Utilisation (%)
1	Gujarat	542.00	399.20	73.7
2	Maharashtra	102.40	44.42	43.4
3	Tamil Nadu	2.15	0.96	44.8
4	Goa	0.02	0.01	74.0
5	Kerala	0.55	0.20	36.6
6	Karnataka	17.80	1.04	5.9
7	Andhra Pradesh	178.00	103.33	58.1
8	Odisha	47.50	22.19	46.7
9	Puducherry	16.90	8.37	49.5
10	Andaman & Nicobar Islands	3.00	1.49	49.8
	Total	910.32	581.22	63.8

Source: State Maritime Board/ Directorate of Ports
P:- Provisional

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

3.2.1 Achievement during 2018-19 against the projected targets of 2018-19 is given in **Table-27**. It shows that the total cargo handled at major port was 699.10 million tonnes against the target of 704 Million tonnes, achieving 99.3% of the target. Some of the ports such as Mumbai Port, Haldia Dock Complex, Deendayal Port Trust and Cochin Port have achieved more than their target 117.8%, 105.1%, 103% and 100.1% respectively.

Table 27: Annual Cargo Traffic Targets and Achievement during 2018-19				
(In Million Tonnes)				
S. No.	Name of Ports	Targets 2018-19*	Achieved 2018-19	% age Achievement
1	Kolkata Ports of Trust	19.0	18.6	97.6
2	Haldia Dock Complex	43.0	45.2	105.1
3	Paradip Port Trust	110.0	109.3	99.3
4	Vishakhapatnam Port Trust	66.0	65.3	98.9
5	Kamarajar Ports Limited	36.0	34.5	95.8
6	Chennai Port Trust	53.0	53.0	100.0
7	V.O.Chidambaranar Port Trust	38.0	34.3	90.4
8	Cochin Port Trust	32.0	32.0	100.1
9	New Mangalore Port Trust	44.0	42.5	96.6
10	Mormugao Port Trust	20.0	17.7	88.4
11	Mumbai Port Trust	60.0	70.7	117.8
12	Jawaharlal Nehru Port Trust	71.0	60.6	85.3
13	Deendayal Port Trust	112.0	115.4	103.0
	Total	704.0	699.1	99.3

Source: *IPA and cargo traffic from all Major Ports

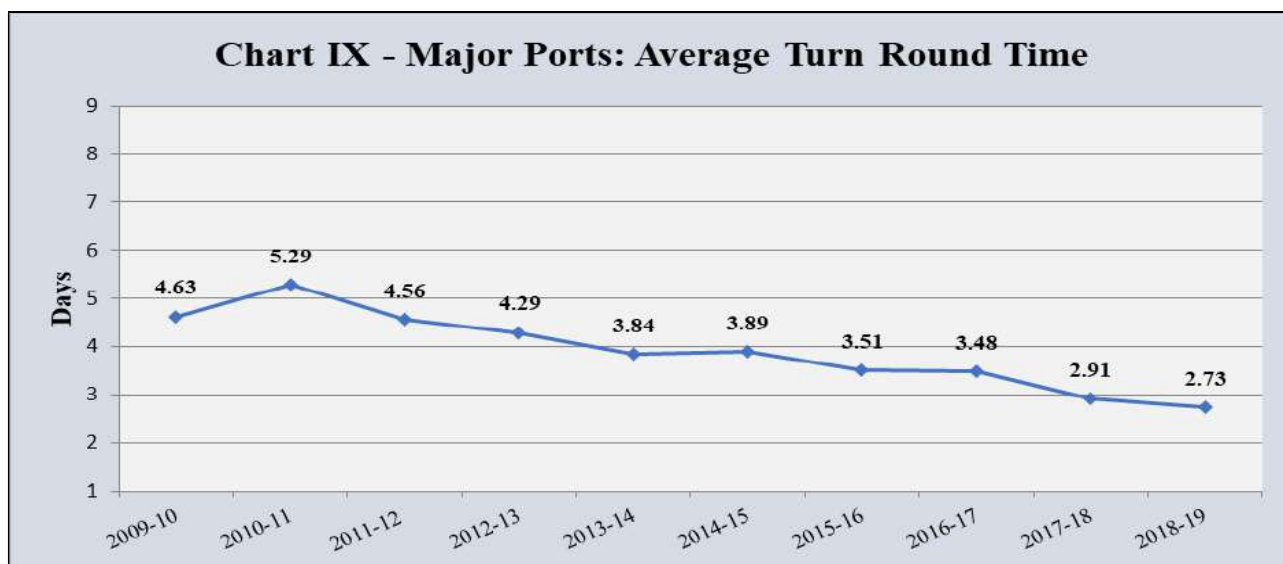
3.3 Port Efficiency

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 3.84 days in 2013-14 and further increased to 3.89 days in 2014-15. The average TRT improved in 2017-18 to 2.91 days and further improved to 2.73 days during 2018-19. However, the TRT varied in the range between 1.76 days at V.O. Chindambaranar Port to 4.68 days at Deendayal Port during 2018-19. Amongst the 12 major ports, improvement in TRT during 2018-19 compared to corresponding period of 2017-18 is reflected in all Major Ports except Deendayal Port

Mormugao Port and Cochin Port. Port-wise TRT for select years are given in **Table 28**. Average Turn Round Time at major ports for select years since 2009-10 to 2018-19 is presented in the **Chart IX** below.



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

Table 28: Average Turn Round Time (days)

Port	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
1	2	3	4	5	6	7
Kolkata D.S	4.51	4.97	4.78	4.43	3.77	3.35
Haldia D.C	3.77	3.36	3.27	5.47	3.75	3.03
Paradip	4.62	7.01	4.50	4.99	3.31	2.51
Vishakhapatnam	4.73	5.67	3.84	3.75	2.58	2.51
Kamarajar (Ennore)	4.24	4.32	6.87	2.68	2.19	1.96
Chennai	2.46	2.54	2.53	2.51	2.21	1.98
Chidambaranar (Tuticorin)	3.92	3.37	3.53	4.00	2.40	1.76
Cochin	1.76	1.69	2.18	1.99	1.87	1.94
New Mangalore	3.18	2.46	2.63	2.35	2.04	1.93
Mormugao	4.50	3.97	3.37	3.43	3.15	3.48
J.L.Nehru	2.26	2.24	2.31	1.96	2.23	2.13
Mumbai	4.25	4.09	3.29	2.48	2.76	2.69
Deendayal	5.66	4.90	4.28	4.51	4.25	4.68
All Ports	3.84	3.89	3.51	3.48	2.91	2.73
Source: Major Ports, P: Provisional,						

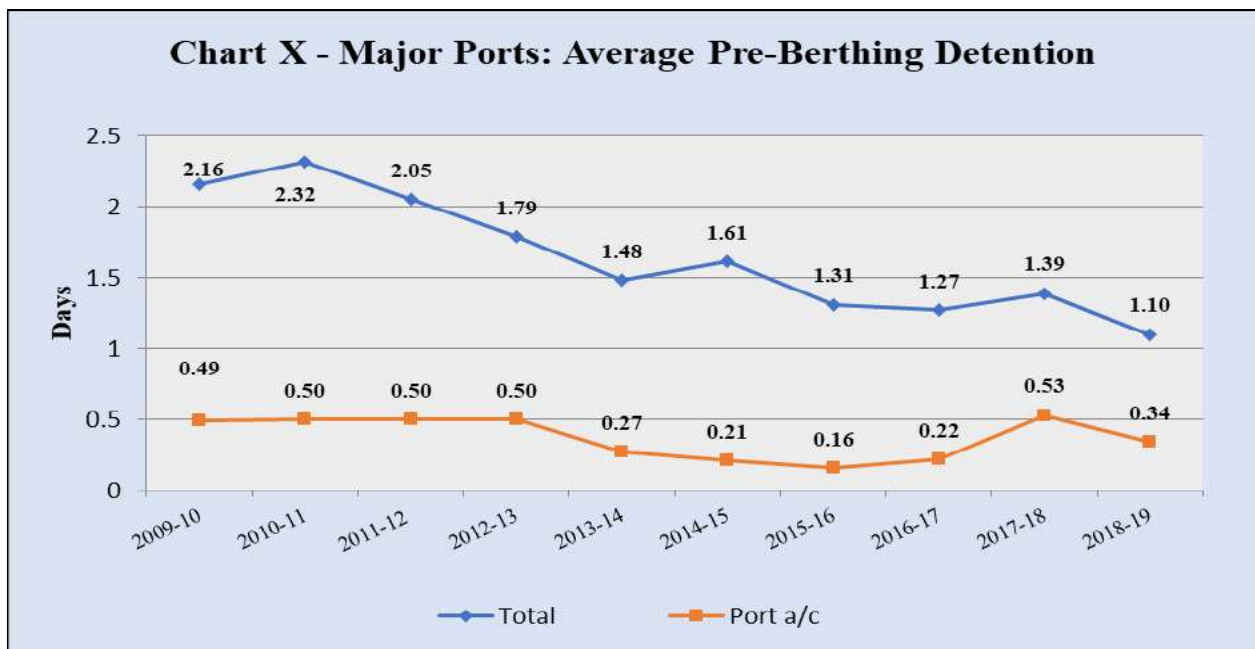
Average Pre Berthing Detention Time (PBDT)

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. The average overall pre berthing detention time (PBDT) was 1.61 days during 2014-15 and decreased to 1.27 days in 2016-17. The average PBDT was further increased to 1.39 days in 2017-18 and improved to 1.10 days in 2018-19. Port-wise PBD for select years is indicated in **Table 29**.

Table 29 : Average Pre-Berthing Detention(Days)

Port	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
1	2	3	4	5	6	7
Kolkata D.S	0.56	0.71	0.50	0.57	0.62	0.46
Haldia D.C	2.21	1.43	0.66	2.49	3.15	2.72
Paradip	1.94	4.11	2.05	2.47	0.87	0.30
Vishakhapatnam	1.84	2.59	1.47	1.22	2.37	1.29
Kamarajar	2.38	2.51	4.73	0.96	0.57	0.27
Chennai	0.41	0.41	0.44	0.38	0.86	0.15
Chidambaranar	1.19	1.07	1.33	1.80	1.13	0.68
Cochin	0.97	0.81	0.66	0.48	0.43	0.53
New Mangalore	0.81	0.60	0.76	0.00	1.16	1.10
Mormugao	1.47	1.61	1.38	1.67	1.31	1.24
J.L.Nehru	1.08	0.80	1.17	0.77	0.92	0.82
Mumbai	1.18	1.69	1.27	0.46	0.96	1.07
Deendayal	2.72	2.52	1.98	2.02	1.90	2.02
All Ports	1.48	1.61	1.31	1.27	1.39	1.10
Source: Major Ports, P: Provisional						

3.3.4 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 0.27 and 0.21 days in 2013-14 and 2014-15 respectively. In 2015-16 the Average PBDT on port account decreased to 0.16 days and further increased to 0.22 days and 0.53 days in 2016-17 and 2017-18 respectively. PBDT on port account improved to 0.34 days in 2018-19. The trajectory of weighted average of pre berthing detention time at Major ports- total and on port account since 2009-10 to 2018-19 is shown in **Chart X** below.



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

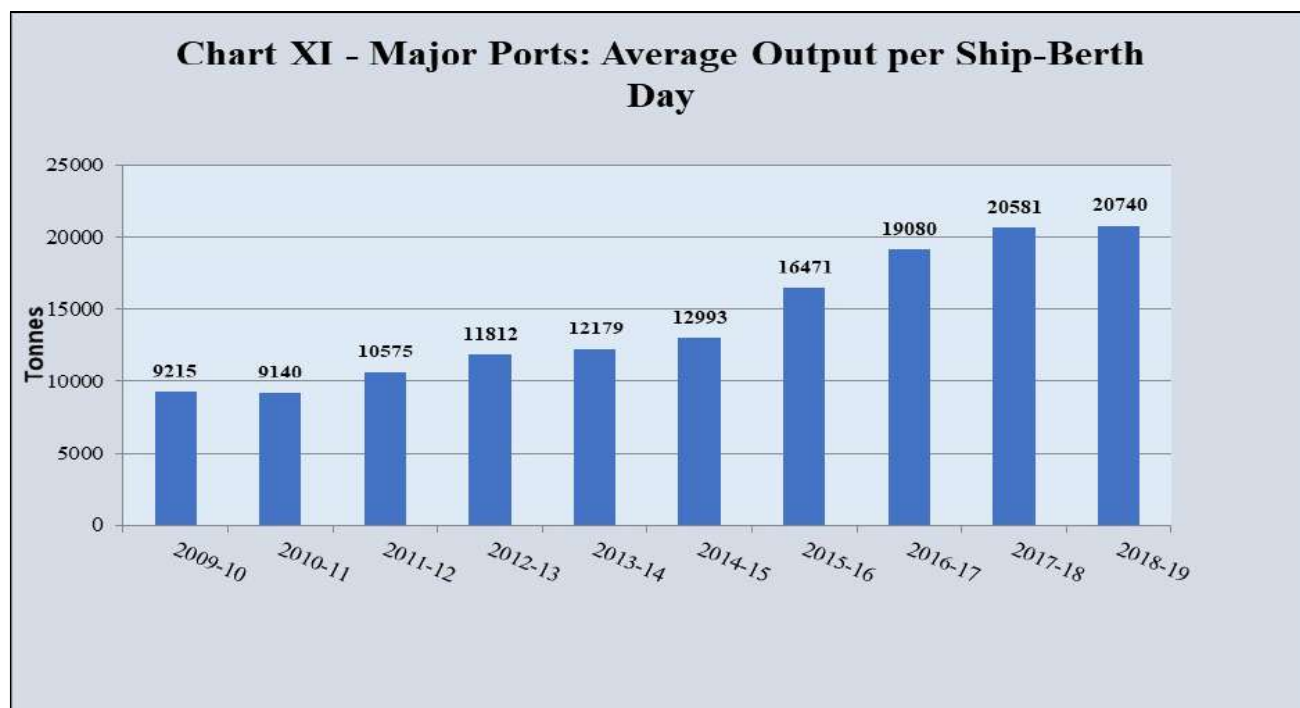
Average Output Per Ship Berth-day

3.3.5 During the last 25 years this indicator has seen a tremendous improvement. Average Output per Ship-berth day has increased around six times from 3,372 tonnes in 1990-91 to 20740 tonnes in 2018-19 at Major Ports. However, average output per ship-berth day during 2018-19 is marked by substantial variation across major ports ranging from a high 31740 tonnes in case of Paradip Port to a low of 7765 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 2018-19 over the corresponding period of the previous year is visible in all the ports. Average Output per Ship-berth day during 2018-19 is 20740 tonnes compared to 20581 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 30**. The Graph of weighted average Output per Ship Berth-day (Tonnes) at Major ports since 2009-10 to 2018-19 is shown in **Chart XI** below.

Table 30: Average Output per Ship Berth-day (Tonnes)

Port	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19(P)
1	2	3	4	5	6	7
Kolkata D.S	2963	3084	3201	6080	6962	7765
Haldia D.C	6130	6802	9126	12537	13832	15083
Paradip	18179	17736	26965	30245	33440	31740
Vishakhapatnam	10925	10640	17179	16823	17592	18281
Kamarajar	22357	22613	31106	26235	28456	27918
Chennai	14268	14464	18976	19220	19113	21003
Chidambaranar	9633	10468	13619	13612	15557	15557
Cochin	15881	16906	20962	23539	28143	30150
New Mangalore	16314	19856	16165	17094	16378	19640
Mormugao	10018	12272	21542	30414	24948	18685
J.L.Nehru	23014	21310	23792	23897	22526	25847
Mumbai	7057	11055	18020	20915	22996	25941
Deendayal	15729	15159	16538	18235	22903	21281
All Ports	12179	12993	16471	19080	20581	20740

Source: Major Ports,
P: Provisional



4. PRIVATE SECTOR/CAPTIVE/JOINT SECTOR PORT PROJECTS

Brief details of the ongoing Private Sector/Captive/Joint Sector Port Projects and a list of these projects under consideration as on 31.03.2019 are brought out in Appendix-I & Appendix-II in respect of Major Ports and in Appendix-III & Appendix-IV for Non – Major Ports.

APPENDICES

- I. Ongoing Private Sector/Captive/ Joint Venture Port Projects at Major Ports
- II. Under Formulation Private Sector/Captive/ Joint Venture Port Projects at Major Ports
- III. Ongoing Private Sector/Captive/ Joint Venture Port Projects at Non-Major Ports
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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 Oct' 17.
2.	Development of Multi Cargo Terminal on DBFOT basis	Kamarajar Port Ltd	2.00	151.00	Terminal operation commenced from Aug' 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	271.56	* Berth construction completed. * Top loading facilities erected is in progress.
5.	Development of LNG Terminal KPL	Kamarajar Port Ltd	3.00	5151.00	Operation commenced from 26.02.2019.
6.	Provide Handling Equipment at Berth No. 16 (Old Berth No. 12) for Handling Bulk Cargo & Containers under PPP Mode.	New Mangalore Port Trust	6.73 MTPA	469.46	The concession agreement has been signed on 18.03.2016 with M/s Chettinad Mangalore coal Terminal ltd. Construction works are under progress and expect to be completed by 31.05.2019.
7.	Development of Bulk Coal Terminal on Captive Basis	New Mangalore Port Trust	5.4	376.52	Commercial Operation commenced from 22.06.2012.
8.	Development of Barge handling facility at Bharathi Dock under PPP model	Chennai	1.35 MTPA	27.29	Project awarded to CBTPL (construction of IMC Ltd.) on 30.01.2013, but due to non-fulfillment of conditions precedent, termination order issued in Feb-2016. Consequently, the PPP operator initiated arbitration proceedings. The Arbitral award was issued by the tribunal on 30.03.2018.

					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 the work is in progress.
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. Concessionaire M/s. SVCPTL invoked arbitration on post termination and the Arbitration process is under progress.
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	16.20	580.89	1). The Completion certificate for Phase-I, of the subject project was issued on 29.09.2018 by Independent Engineer (M/s. Mecon Ltd). 2). VPT Board in the meeting held on 21.02.2019 has received to accept the opinion of the Expert on the issue of phase-II development and to discharge the concessionaire from the obligation contained at Appendix-4 at Project requirements at Para (B) & (D) duly returning the additional bank guarantee of Rs. 25 crores. 3). Since, Phase-II is discharge from the obligation of the concessionaire, the obligation of the concessionaire, the revised capacity is 16.20 MTPA and the estimated project cost is Upfront fee- 185.87 crs. Phase-I 395.02 Crs. Total: 580.89 Crs. Instead of 845.41 Crores.
12.	Extension of existing Container terminal in outer harbor.	Visakhapatnam	0.54 MTEUs	633.11	Concessionaire was awarded on 02.03.2019.
13.	Multipurpose Clean Cargo Berth on BOT basis. (PPP Operation : PICTPL)	Paradip Port trust	5	430.78	Completion certificate has issued to M/s. PICTCL on 03.04.2019 and terminal is now operational.
14.	New Iron Ore Berth on BOT basis.	Paradip Port trust	10	740.19	Work is progress. Scheduled date of completion April 2019. Actual completion by Sept 2019.
15.	Mechanization of EQ-1,2 &3 (3Berths) for handling export Coal Cargo (PPP Operator : JSW)	Paradip Port trust	30	1437.76	Work is progress 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	7915.00	The work of Ist phase having investment about Rs. 4719 cr. Commissioned December, 2017.The work of Phase-II development will commenced from December, 2019 and will be commissioned in December, 2022
18.	Redevelopment of Berths 8,9 and Barge Berths at the Port of Mormugao, Goa on DBFOT basis	Mormugao	19.22 MTPA	1145.36	Letter of Award is issued to M/s Sterlite Port Ltd., Tuticorin n 29.03.2016. Concession Agreement signed on 2.09.2016 with M/s Goa Sea Port Pvt. Ltd (GSPPL), SPV of M/s Sterlite Port limitedPublic hearing conducted from 29 th April2017 to 5 th May 2017.Application for the Environment clearance has been made to MoEF&CC along with CRZ recommendation of GCZMA on 25.03.2019. Environmental Clearance is awaited.
19.	Construction and operation of general cargo berth no. 5 & 6 at Mormugao Port, Goa on BOOT basis	Mormugao	19.6 MTPA	250	Operational since 19.06.2004
20.	Development of a Coal Import Terminal at Berth No. 7 at Mormugao Port on DBFOT basis	Mormugao	13.7 MTPA	406	Operation since 06.06.2014
21.	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. A meeting with M/S TCTPL and lenders held on 15.11.2018 as a part of remedial process of the concession agreement. Since the director of M/S TCTPL had not attended the meeting another meeting along with his presence will be convened shortly. Meeting was held on 18.12.2018. Port informed M/S remodify concessionaire Event of Default at the earliest. Meeting with lenders held on 12.02.2019 wherein port requested the lenders for replacement of the concessionaire

					for commencement of commercial operation by a new operator as per clause 15.4 of concession agreement
22.	Construction dedicated berth for handling coastal cargo at V.O.C. Port Trust	VOCPT	1	38.91	Completed on 19.12.2017
23.	Design, Construction and maintenance of Truck parking terminal at the Port Land opposite to Fisheries college in V.O. Chidambaram port. (Sagarmala Project)	VOCPT	-	23.69	Completed on 06.12.2017
23.	Up gradation of CJ-I and CJ-II (berth construction)	VOCPT	18.00	97.76	90% work has been completed in CJ-I. CJ-II will started after operation of CJ I
24.	Construction of shallow draught berth for handling construction material on PPP mode	VOCPT	2.00	65.37	<p>Port gave time up to 27.07.2018 to take over the project site assets and fulfill conditions precedent as per CA.</p> <p>. The concessionaire requested the Port to grant additional time to fulfill the conditions precedent.</p> <p>. Port granted extension of time up to 15.09.2018 still the conditions precedent has not been fulfilled.</p> <p>Since the firm failed to fulfill the condition precedent. The matter placed before the action will be taken as per Board directions. The concessionaire has not fulfilled the condition precedent even at the expiry of extended period. Further as approval by the competent authority additional time of 10 days has been given to VJR on fulfilled the condition precedent till date.</p> <p>In response to Port's letter, Concessionaire has furnished their additional document regarding conditions precedence on 02.11.2018. On scrutiny of the documents, Finance/Legal sections have recommended that the concessionaire has not fulfilled the conditions precedent Clause 3.1 (a) iv, v, vi, vii & ix. In this regard, as per C.A. Article – 3 of clause 3.6 in the event that, the condition precedents are not complied with within the time (including the extended time, if any) in terms of C.A article 3.2 to 3.5 this Agreement shall be liable to be terminated. Port legal wing opined to obtain legal opinion from ASG, Delhi before terminating of CA.</p>

25.	Construction North cargo Berth-III under EPC mode.	VOCPT	10.22	36.52	Work completed on 31.07.2018
26.	Dredging in front of Coastal Berth	VOCPT	-	96.34	Work completed on 05.04.2018.
27.	Widening of the Existing Korampallam surplus course bridge and ROB	VOCPT	-	41.55	LOI issued on 10.04.2018 45% of work has been completed and remaining work is in progress.
28.	Development of fourth container terminal	JNPT	60	7915.00	The work of 1 st phase having investment of about Rs. 4719 Cr was commissioned Dec-2017. The work of Phase-II developed will commence from Dec.2019 & will be commissioned in Dec-2022.
29.	Setting up of a liquid cargo handling jetty along with associated facilities at Shalukkali, Haldia Dock – 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"> • Fulfilment of condition precedent may get delayed as some more time are required for obtaining of EC from MoEF&CC because of CRZ issues. • Construction work will commence after fulfilment of condition precedent.
30.	Integrated ship-to-shore services including back-up operations at 3,4,5,7 & 8 NSD of KDS	Kolkata Dock System of Kolkata Port Trust	Incremental capacity -1.7 MTPA	Estimate of Proposed tender is Rs. 99.69 crore per year. Cost of BoT operator Rs 19000 crore	Project Commissioned on 23.12.2014.
<p>BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer. Note: - The status of all Projects has been updated on 31st March, 2019.</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 – 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 (2X Rs. 655Cr.)	Paradip Port	30 MT	2725	RFQ applications were invited and bids received on 12/10/2018, the same are under evaluation. PPPAC memo submitted for MOS for appraisal on 19.01.2019. Comments for ministry of Finance, NITI AAYOG and MOS has been received on 02.04.2019 and the compliance are under preparation.
3.	Construction of Outer Harbour	Paradip Port	144 MT	8767	DPR has been submitted by the consultant HUWE Engineering project (P) Ltd. It has been recommended that, PPP may expend its inner harbor capacity to the maximum before going for the proposed Outer harbor facilities in the 2nd phase as the project would not be presently viable being dependent on a single commodity viz. Coal. Subsequently, this has been approved by Ministry and PPP has initiated proposal for inner harbor expansion including development of Western Dock.
4.	Barge handling facilities at Khori Creek	Kandla	4	100	Under planning stage.
5.	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.
6.	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.
7.	Construction of barge jetty at Tuna on BOT basis	Kandla	5.49	255.3	Feasibility Report, RFQ and TAMP proposal under approval.
8.	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.

9.	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.
10.	Capital dredging of the dock basin in front of Coal Jetty-I, Coal Jetty –II, Berth 3 & 4, Berth -7, Berth-8, Berth- 9, NCB –I,NCB-II, and NCB –III 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.	VOCPT	51.95 MTPA	3090.28	<p>Revised PIB Memo submitted on: 17.04.2018 Issued of LOA for Dredging June, 2018 Completion for work Jan, 2021 (28 months) Subsequently, revised PIB memo was submitted to Ministry on 09.05.2018.</p> <p>The EAC meeting for the project was held on 10.08.2018. The EAC committee directed VOCPT to resubmit the EC & CRZ application after compliance of the observations made by Regional Office, MoEF&CC.</p> <p>The final revised PIB Memo incorporating the queries of Ministries/ Departments was submitted to MoS on 11.02.2018 for further process. The proposal of PIB Memo for “Deepening of the dock basin and the channel to (-) 16.50m and (-) 17.20m” was reviewed by the Secretary, Shipping on 10.10.2018 and it has been decided to review the proposal by IIT(M), Chennai and to submit the fresh DPR considering the present study reports of Bore hole data and bathymetry survey including Seismic refraction survey. IIT(M), Chennai is on the job.</p> <p>As per the meeting, Port engaged Back Hoe (BH) Dredger for a period of 43 days and Trailer suction Hopper dredger for a period of 19 days through M/s. DCI as a measure of maintenance dredging to remove the loose materials, spillages and patches in the Inner Harbour and channel land and the work is completed on 17.12.2018.</p> <p>Period of Deployment of BH: 19.10.2018 to 30.11.2018 943 days) Period of Deployment of TSHD: 29.11.2018 to 17.12.2018 9 19 days).</p> <p>After removal of the loose materials at berth face , Port Declared the draught of 11.70m from existing 10.90m on 30.11.2018 at berth 7, declare the dredger the draught of 14.20 m from existing 14.00 m at berth 8 on 31.12.2018</p> <p>M/s. IITM Chennai had been engaged for preparation of revised DPR for maintenance and Capital Dredging. After submission of DPR, port will submit the Dredging proposal for approval.</p>
11.	Development of Outer Harbour 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. Further, Navy informed vide Ir dt: 20.02.2019 that Feasibility of development of Naval Jetty as per the Conceptual Project report submitted by IIT-M is being examined by Navy and the decision will be conveyed subsequently.
12.	Development of Rajiv Gandhi Dry Port and Multi Modal Logistic Hub for Chennai Port in SIPCOT industrial park at Mappedu, Sriperrumbudur; under PPP modeHuhhhhhhjh	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 were also fruitful as SIPCOT imposed sub-lease charges. NHAI & MoRTH have appointed consultant M/s. Howe for preparing Feasibility report to develop Multi Modal Logistic Park at 80 acres of lands owned by ChPT at Mappedu. The consultant has submitted inception report. Further a meeting was held on 01.03.2019 wherein a presentation was made by the consultant. MOS through SDVL appointed consultant M/s. Crisil Risk & Infrastructure Solutions Ltd., Gurgaon for preparation of Feasibility Report and the consultant had submitted draft Feasibility report on 01.20.2019 and as presentation on DFR on 14.02.2019.
13.	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. Recently ICG has informed that MoD(fin) has cleared the timeline. As requested by ICG further extension upto 31.05.2019 has been granted. Meanwhile IPA has appointed Consultant M/s. Royal Haskoning to explore the opportunity for development of ship repair facilities for DBFOT on PPP (Feasibility Report) in 3 ports viz., ChPT, JNPT and VoCPT. The consultant has submitted inception report and Marked assessment report on 05.03.2019
14.	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 mode to subject to favorable recommendations from the empowered committee constituted by Hon'ble Supreme Court. The port is taking measures to comply with the recommendations of the Empowered Committee. After requirements on the EC report satisfied, TNPCB will be approached for resumption of Pollution free coal handling at this port. Meanwhile, EoI was called for developing a Bulk Cargo Terminal at BD-II as a captive facility and firms submitted the proposal. On

					evaluation of proposals, it is decided to develop the facility for handling of captive cargo viz., coal, dolomite, limestone all three firms were requested to submit feasibility Report (FR) for the same by 04.03.2019. Based on the request of the firms, the last date to submit FR has been extended upto 06.05.2019
15.	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. The Port is taking measures to comply with the recommendations of the Empowered Committee constituted by Hon'ble Supreme Court. After requirements in the EC report are satisfied, TNPCB will approach for resumption of Pollution free coal handling at this port.
16.	Development of Captive Jetty by IOCL.	Kamarajar Port Limited	3 MTPA	48.00	* Concession Agreement signed on 09.06.2016. * Compliance of condition precedent by concessionaire is in progress. * Environmental Clearance for Commencement of work was obtained on 30.10.2018.
17.	Development of Marin Liquid Terminal-II on DBFOT Basis.	Kamarajar Port Limited	3 MTPA	39.3	* Environmental Clearance for Commencement of work was obtained on 30.10.2018. *Litigation with the existing BOT operator of MLT-1(ETTPL),KPL is unable to allot the water front for MLT-2 and sign the concession Agreement with BPCL-HPCL consortium.
18.	Providing Handling equipment at Berth No. 14 for handling container under PPP Mode.	New Mangalore Port Trust	3.59 Lakh TEU's	280.71	RFQ opened on 16.08.2018. Six firms submitted their Bids. Five firms were qualified. Tariff Proposal approved by TAMP vide order No. TAMP/69/2018-NMPT dated 18.01.2019 Proposal submitted to SFC on 24.01.2019. RFQ issued on 22.02.2019 Security clearance received from Ministry on 10.03.2019
19.	Mechanization of Berth No. 3 of HDC, On DBFOT basis.	Haldia Dock Complex, Kolkata Port Trust	3.5 MTPA	3320	Project mode changed from EPC to PPP during DIP meeting held in Ministry on 14.12.18. <ul style="list-style-type: none"> • Traffic proposal approved by TAMP and awaiting notification. • SFC proposal sent to MoS on 17.04.2019. • RFQ invitation by June, 2019
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 10 to 19 is updated on 31 st March 2019.					

Appendix – III

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

Sl. No	Project Name	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	HPCL-Mittal Pipeline Ltd.	Modhava Coast of Dist Kutch	6 MMPTA	2781.37	Proposal submitted to GoG for In-Principal
2.	HPCL- Rajasthan Refinery Ltd.	Modhava Coast of Dist Kutch	9 MMPT	1400	Permission given by GMB for initial survey and investigation
3.	Adani Cement Ltd.	Kori Creek Dist Kutch	1.8 MMPTA	845.4	In-principal approval as granted recently by GMB.
4.	Shree Cement Ltd.	Modhava near Mundra Port Dist Kh	6 MMPTA	242	Proposal submitted to GoG for In-principal approval.
5.	Ahir Salt and Allied Product Pvt. Ltd.	Mithirohar, near Kandla Port Trust. Dist Kutch.	0.7 MMPTA	192.06	In-principal Approval was granted on 17 February 2019.
6.	Bhadreshwar	Bhadreshwar, Near Port Mundra Dist Kutch	2 MMPTA		Permission given be GMB for initial survey and investigation.
7.	Development of Multipurpose Private Jetty at Navlakhi Port by DMCC Oil Terminal (Navlakhi) Ltd.	Navlakhi	4.0 MMTPA	330	MOEF, Govt. of India has issued EC/CRZ clearance. Draft license agreement is under approval.
8.	Development of the existing port facilities (Private Jetty) at Victor port by OM Sai Navigations Pvt. Ltd.	Victor (Pipavav)	0.5 MMTPA	29	Environment/CRZ clearance is awaited.
9.	Multipurpose jetty terminal at village change (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.
10.	Expansion of existing captive jetty facilities at village Vave(Dharamtar	35.0	280	Construction of berth and related facilities, in progress. Out of proposed 1750 Mtrs. Of quay length, about 1000

	Tal. Pen,Dist. Raigad) in Dharamtar creek by M/s JSW Dharamtar Port Pvt Ltd				mtrs. Is ready. While, the capacity of 2017-18 is 15 MTPA, the projected capacity of 35 MTPA will be achieved by FY2022.
11.	Expansion of JSW Jaigad Port in Ratnagiri district by JSW Jaigarh Port Ltd.	Jaigad	80.0	2800	Two berths in Phase-1 and two berths in Phase-11(Total 04 berths) are operational. Construction of three berths in phase-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.
12.	Establishing a captive port at Parangipettai by M/s IL &FS Limited	Parangipettai Tamil Nadu	13 MTPA	1349	Port has been notified. Construction of Port Structure Commenced.
13.	Captive Port facility M/s. Udangudi Power Corporation Limited.	Udangudi in Thoothukudi	6 MTPA	1254.61	Port has been notified. Construction of Port Structure Commenced.
14.	Kakinada Deep Water Port, in East Godavari District, Andhra Pradesh	Kakinada Deep Water Port, (Andhra Pradesh)	25	1320	Under Operation
15.	Development of Gangavaram Port in Visakhapatnam District Andhra Pradesh	Gangavaram Port	64	2970	Under Operation
16.	Development of Krishnapatnam Port in SPS Nellore District Andhra Pradesh Stat	Krishnapatnam Port Andhra Pradesh	82	7200	Under Operation
17.	Phase-II Development of Krishnapatnam	Krishnapatnam Port	44.3 MTPA of Non-Container cargo+3.3M TEUpa of container cargo.	10800	75% work completed.
18.	AnarkAluminium Ltd	Nakkapalli	5 M.T	479	Not Operational
19.	---	Bhavanapadu	** 645 M.T	2362	--- ** Vide communication available in records with Government of A.P.
20.	---	Calingapatnam	** 645 M.T	2362	Not Operational

21.	KSEZ	KSEZ	37.93 M.T	Unknown	Not Operational
22.	Development of Karaikal Port through private investment on BOT basis	Karaikal, Puducherry	Phase – 2A 21.5 Phase 2AE 6.5	1600 500	Phase -2A and 2AE Works are in progress.
23.	Development of Pondicherry Port as a Feeder Port to Chennai Port in association with Chennai Port Trust	Pondicherry	0.40	NIL	Cargo handling operations on regular basis to commence soon after dredging works under “Sagarmala” are completed.
24.	Captive Port owned by M/s Chemplast Sanmar, Chennai	Captive Marine Terminal Facility, Karaikal.	NIL	NIL	Commercial operations commenced in September 2007 and are functioning.
25.	The Dhamra Port Company Limited	Odisha	45 MMT	6915.17	2 nd Phase expansion in progress.
26.	Expansion, Development and Operation of Gopalpur Port	Gopalpur Port Ltd (Odisha)	20	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 “Phalen” 3. Port Re-commissioned its commercial Traffic 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.
27.	Construction of Oil Spill vessel	Panaji Port	N.A.	4.18	Under construction
28.	Construction of Terminal Building	Panaji Port	N.A.	28.06	Construction work is in Progress.
29.	E.I.A. Study of Sal	Panaji Port	N.A.	1.08	Work Under Process, 50% Payment already made.
30.	E.I.A. Study of Talpona	Panaji Port	N.A.	0.85	Work Under Process, 75% Payment already made.
31.	E.I.A. Study of Galgibag	Panaji Port	N.A.	0.7	Work Under Process, 50% Payment already made.
32.	Repairs of Marine Slipway	Panaji Port	N.A.	0.30	Work in progress.
33.	Divar Ferry Ramp	Panaji Port	N.A.	0.24	90% work Completed.
Source: Maritime States/Maritime Boards.					
Note: The project status of Project name at S. No. 1 to 8 and 12 to 33 is updated on 31 st March 2019.					

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

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	HPCL- Rajasthan Refinery Ltd.	Modhava Coast of Dist Kutch	9 MMPTA	43129	
2.	Adani Cement Ltd.	Koir creek Dist Kutch.	1.8 MMTPA	845.4	
3.	Shree Cement Limited	Modhava near Mundra Por Dist Kutch	6 MMTPA	242	
4.	Ahir Salt and Allied Product Pvt. Ltd	Mithirohar, near Kandla Port Trust Dist Kutch	0.7 MMTPA	192.06	0
5.	Bhadareshwar Vidute Pvt. Ltd.	Bhadreshwar, near Mundra Dist Kutch	2MMPTA		
6.	Construction of captive jetty at village Nandgaon (Tal. Satpati, Dist. Palghar) by JSW Infrastructure Ltd.	SatpatiNawapur Maharashtra	8.0	3048	All project related studies completed. Project has received EC on 9.12.2016. Project could not move ahead due to a legal matter pending in the court.
7.	Construction of captive jetty at village Korlai (Tal. Murud-Janjira, Dist. Raigad) in Revdanda creek by M/s indo Energy International Ltd.	Revdanda Maharashtra	11.75	437	All project related studies completed. Proposal for EC under consideration of MCZMA for onward submission to MoEE.
8.	Construction of captive jetty at village Vaghveera (Tal. Alibag Dist. Raigad) in Dharamtar creek by M/s Gajanana Industries Ltd.	Dharamtar Maharashtra	1.0	28	Letter of Intent (Lol) issued to Project Proponent (PP) on 07.06.2017. PP to prepare DPR and obtain EC with 24 months from data of Lol.

9.	Construction of captive jetty at village Nate (Tal. Rajapur, Dist. Ratnagiri) by M/sI-Log Ports Ltd.	Jaitapur	5.0	135	All project related studies are completed. Proposal for EC under consideration of MCZMA
10.	Construction of multi purpose jetty at village Aronda- Kiranpani (Tal. Sawantwadi, Dist. Sindhudurg) by M/S White Orchid Estate Pvt. Ltd.	Kiranpan	0.5	28	Consideration of jetty facilities completed. However, port operations are kept in abeyance due to legal matters pending in the court/ NGT.
11.	Development of port at Redi (Tal. Vengurla, Dist. Sawantwadi) by Redi port Ltd.	Redi	5.16	716	As per the directions of the State Government vide letter dtd. 3.1.2018, two jetties have been handed over back to M/s Redi Port Ltd.(RPL). The Port operator is required to obtain Environment clearance for new port construction. Redi port will have a capacity of 5.16 MTPA in Phase-I (2014-17) which will ultimately reach up to 33.38 MTPA in Phase-V (2032-46)
12.	Development of port at Vijaydurg (Tal. Devgad, Dist. Sawantwadi) by Vijaydurg port Pvt. Ltd.	Vijaydurg	12.94	1059	The project proponent has obtained Terms of Reference (ToR) from MoEF vide letter did. 28.04.2015. The PP is required to revise DPR as per the recommendations in ToR and conduct EIA/ EMP studies for submission of proposal for EC. Currently, the Zero Date for the project has been extended up to 30.04.2019. It is estimated that if the construction of the port starts in FY-18, the Phase-I will be completed by FY-22 to achieve Port capacity of 12.94 MTPA. During the meeting held on 25.7.2017 under chairmanship of Hon. Chief Minister, GoM and in the presence of Hon. Union Minister of Shipping, it has been decided to develop Vijaydurg Port jointly by MbPT, MMB and Goa Port Trust. Goa Port Trust has appointed M/s Tata Consulting Engr. As consultant to prepare Techno-Economic Feasibility Study Report.
13.	Construction of 9 Jetties under Sagarmala Project	Panaji Port	N.A.	73.04	Preparation of Detailed Project Report (DPR) under progress.
14.	Construction of 4 floating Jetties in Mandovi and Chapora River	Panaji Port	N.A.	12.0	Tender has been floated and work awarded to Marine tec India Pvt. Ltd. Through MPT.

15.	Consultancy financial and trasaction advisory services for development of Maritime aschool on PPP Model.	Panaji Port	N.A.	0.24	Work in progress.
16.	Construction of 3 Ferry Boats	Panaji Port	N.A.	2.2	File Submitted for Expenditure sanction.
17.	Construction of Sarmanas & Betim Ramp and Beautification of Panaji Ferry Ramp.	Panaji Port	N.A.	1.5	Expenditure sanction obtained from Finance Department.
18.	Captive port facility by M/s. Coastal Tamil Nadu Power Ltd.	Panaiyur Kancheepuram (Tamil Nadu)	13 MMTPA	1832	Port has been notified. Statutory clearances pending.
19.	Captive port by M/s Chettinad Power corporation Ltd.	Tharangambadi Taluk in Nagapattinam District	3.5 MMPTA	1000	Port has been notified. Statutory clearances pending.
20.	Development of Machilipatnam Deep Water Port in Krishna District, Andhra Pradesh	Machilipatnm Port (Andhra Pradesh)	45	6778	Land acquisition is in progress. Project yet to be grounded.
21.	Development of Bhavanapadu Port in Srikakulam District, Andhra Pradesh State.	Bhavanapadu Port,	30.57	3390	M/s. Adani 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., Ahmadabad during March 2018.
22.	Development of Commercial Port at Kona Village of East Godavari District of Andhra Pradesh State.	Kakinada SEZ Port	16	2123	CA entered with Development Kakinada Gateway port Ltd., on 21.11.2018. Financial closure is in progress
23.	2 nd stage Development of Karwar Port	Karnataka Ports & IWT Department	20	199.4	Inviting tender is deferred
24.	Development of Modern Sea Port at Tadri	Karnataka Infrastructure Development	34.40	380	IDD has prepared DPR and EIA studies report.

		Department			
25.	Development of port and setting up Free trade & warehousing Zone at Belekeri	M/o Shipping Govt of India	10	172	Government of Karnataka has prepared RFP & Draft Concessional Agreement for development port & setting up of free trade & warehousing Zone at Belekeri Port. Government of India is also prepared Techno Economical Feasibility Report (TEFR) for development of Belekeri Port as a satellite Port to NMPT at Keni near Belekeri. State Government has conveyed its willingness along with NOC to GOI.
26.	Development of captive jetty at Pavinkurva, Kumta	Karnataka Port & Inland Water Transport Department	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. M/s JSW has prepared final DPR and submitted to same.
27.	Development of Bulk Liquid Berth for handling L.N.G.	Karaikal Port Puducherry	5.0	2.61	Obtained Environmental Clearance from MoEF & CC: Government of Puducherry has issued "NOC" for LNG facility.

Source: Maritime States/Maritime Boards.

Note: The project status of Project name at S. No. from 1 to 5 and 13 to 27 updated on 31st March 2019.

Commodity-wise Traffic Handled at Major Ports											Annex-I
											(000 Tonnes)
Port	Period	POL Crude & POL Products *	Iron Ore @	Thermal Coal	Coking Coal	Ferti. & FRM (Dry) #	Food grain**	Container	TEUs	Others	Total
Kolkata	2015-16	664	12	1660	297	201	14	9263	578	4671	16782
	2016-17	905	0	0	20	86	2030	9887	636	3882	16810
	2017-18	781	0	7	172	307	236	9760	640	6127	17390
	2018-19(P)	780	7	9	985	175	8	9934	652	6653	18551
Haldia	2015-16	5067	869	1552	5722	638	0	1376	85	18283	33507
	2016-17	4766	1160	1818	5523	467	0	2467	136	17940	34141
	2017-18	5651	1576	2181	7319	702	0	2672	156	20400	40501
	2018-19(P)	5277	467	2531	8633	600	0	3140	178	24564	45212
Paradip	2015-16	20567	2889	31250	8221	4361	0	132	5	8977	76397
	2016-17	27695	10250	25845	10162	4064	0	42	2	10900	88958
	2017-18(P)	33776	12189	29047	12861	4449	0	113	7	9593	102028
	2018-19(P)	38117	12206	32478	12377	4579	0	194	13	9324	109275
Visakhapatnam	2015-16	14873	6088	3393	5108	2795	86	5145	243	19547	57035
	2016-17	13051	11620	3471	4289	2664	559	6428	367	18938	61020
	2017-18	13057	10872	2948	5764	2873	76	6835	389	21112	63537
	2018-19(P)	14860	10897	1851	5805	3109	0	7958	450	20821	65301
Chennai	2015-16	11891	0	0	0	260	0	30207	1565	7700	50058
	2016-17	12216	0	0	0	268	571	28850	1495	8309	50214
	2017-18(P)	13497	0	0	0	230	274	29905	1549	7975	51881
	2018-19(P)	13298	0	0	0	251	57	31263	1620	8143	53012
Kamarajar	2015-16	2443	0	25537	75	0	0	1	0	4150	32206
	2016-17	2648	0	23017	79	0	0	1	0	4275	30020
	2017-18	3021	0	22973	199	0	0	52	3	4201	30446
	2018-19(P)	3233	0	23964	1077	42	0	1101	57	5080	34497
Chidambaranar	2015-16	475	86	11491	3305	1511	378	12388	612	7215	36849
	2016-17	439	0	10824	3426	1641	1906	12991	642	7236	38463
	2017-18	466	0	9795	0	1401	1161	14191	698	9569	36583
	2018-19(P)	459	215	8314	4924	785	0	14955	739	4690	34341
Cochin	2015-16	13773	0	88	0	252	95	5785	419	2102	22095
	2016-17	15740	0	44	0	252	174	6840	491	1957	25007
	2017-18	18664	0	44	0	223	0	7694	556	2518	29143
	2018-19(P)	21340	0	43	0	218	0	8116	594	2305	32022
New Mangalore	2015-16	21966	454	3319	3051	811	27	1105	76	4849	35582
	2016-17	23032	2947	3533	3387	488	248	1411	95	4890	39936
	2017-18	22509	4903	2492	4205	693	51	1744	115	5462	42059
	2018-19(P)	23636	4625	2198	329	525	0	1920	132	9277	42510
Mormugao	2015-16	559	3965	3727	7808	223	0	345	26	4149	20776
	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
	2018-19(P)	600	4181	1680	6066	268	0	467	37	4421	17683
J. L. Nehru	2015-16	3419	0	0	0	0	0	56791	4491	3817	64027
	2016-17	3829	0	0	0	0	0	54530	4500	3793	62152
	2017-18	4013	0	0	0	0	0	57866	4833	4124	66004
	2018-19(P)	3999	0	0	0	0	0	62114	5133	4593	70706
Mumbai	2015-16	35669	0	3451	0	439	961	574	43	20025	61119
	2016-17	35761	0	4204	0	283	430	639	43	21812	63129
	2017-18	36745	0	2418	0	288	0	630	42	22821	62902
	2018-19(P)	36435	7266	4695	1710	430	0	329	27	9723	60588
Deendayal (Kandla)	2015-16	54994	952	14784	217	4532	812	56	3	23111	99458
	2016-17	59516	735	15059	496	3645	586	175	5	25230	105442
	2017-18	60452	1371	13241	546	3704	598	1839	117	28349	110099
	2018-19(P)	58930	1479	16359	818	4245	730	3954	243	28887	115402
All Ports	2015-16	186360	15315	100252	33804	16023	2373	123168	8146	128596	605891
	2016-17	200225	41765	90329	35848	14057	6504	124663	8442	135082	648473
	2017-18	213261	41170	87145	39580	15052	2396	133726	9137	147140	679470
	2018-19(P)	220964	41343	94121	42724	15227	795	145445	9875	138481	699100

* Includes POL crude and POL Products only @ includes iron ore fine and pellets only # includes Fertilizer finished and FRM-Dry only ** excludes pulses

P : Provisional

Source: Basic Port Statistics (BPS) and Major Ports.

Annex-II

Commodity Composition of Traffic Handled at Non- Major Ports.

(000 Tonnes)

Maritime Status / UTs	Period	POL *	Iron Ore **	Building Material \$	Coal @	Fertiliser & FRM ^	Container	Others	Total
1	2	3	4	5	6	7	8	9	10
Gujarat	2015-16	174875	7511	9075	65903	10331	47930	24153	339778
	2016-17	180315	9379	9730	62421	8704	53124	22066	345739
	2017-18	188465	11584	10509	65962	5475	66312	22462	370769
	2018-19(P)	185998	12762	11024	75410	7792	74985	31226	399197
Maharashtra	2015-16	3225	7611	2243	12173	151	0	3446	28849
	2016-17	2161	15049	2506	11137	243	0	3798	34894
	2017-18	2528	13378	2125	15481	870	0	3524	37906
	2018-19(P)	1196	16956	2252	18091	502	0	5424	44421
Andhra Pradesh	2015-16	1428	1620	1978	46203	5956	1807	13741	72733
	2016-17	2712	2983	1656	39521	4870	4246	13615	69603
	2017-18	1449	5949	1731	45262	5106	7793	18995	86285
	2018-19(P)	1398	8130	1694	56312	6900	8835	20065	103333
Goa	2015-16	0	260	0	170	0	0	0	430
	2016-17	0	117	0	0	0	0	0	117
	2017-18	0	72	0	0	0	0	0	72
	2018-19(P)	0	0	0	0	0	0	15	15
Tamil Nadu	2015-16	546	0	4	0	30	0	276	856
	2016-17	302	0	0	0	36	0	814	1152
	2017-18	424	0	4	0	32	0	643	1103
	2018-19(P)	574	0	56	0	48	0	285	963
Karnataka	2015-16	82	0	81	0	57	0	615	835
	2016-17	111	0	86	0	40	0	470	707
	2017-18	182	0	44	0	36	0	419	681
	2018-19(P)	164	0	44	0	49	0	787	1044
Puducherry	2015-16	267	69	312	4658	421	0	247	5974
	2016-17	272	499	756	6967	63	0	555	9112
	2017-18	156	696	822	6094	62	1	290	8121
	2018-19(P)	18	440	527	6338	285	0	761	8369
Odisha	2015-16	0	312	0	12767	0	0	1870	14949
	2016-17	0	6427	50	13709	281	0	2006	22473
	2017-18	0	4916	29	13860	134	0	3656	22595
	2018-19(P)	0	4579	59	12924	510	0	4113	22186
Kerala	2015-16	19	0	1	0	0	0	124	144
	2016-17	19	0	0	0	0	0	121	140
	2017-18	22	0	0	0	0	0	116	138
	2018-19(P)	19	0	0	0	0	25	157	201
Andaman & Nicobar	2015-16	199	0	479	0	0	374	271	1323
	2016-17	178	0	386	0	0	442	270	1276
	2017-18	196	0	324	25	0	485	388	1418
	2018-19(P)	203	0	329	0	0	619	343	1495
All Non Major Ports	2015-16	180641	17383	14173	141874	16946	50111	44743	465870
	2016-17	186070	34454	15170	133755	14237	57812	43715	485213
	2017-18	193422	36595	15588	146684	11715	74591	50493	529088
	2018-19(P)	189570	42867	15986	169075	16087	84465	63176	581225

(P) Provisional

No traffic was handled at Daman & Diu and Lakshadweep.

* includes POL crude, POL products, LPG/LNG, Naphtha and Fuel oil.

** includes iron ore fines and Pellets

\$ includes Building Material and Cement/Clinker

@ includes Thermal Coal, Coking coal, other coal and Pet coal

^ includes Fertilisers, FRM-Liquid, FRM_Dry and Rock Phosphate

Source: BPS, Non Major Ports/State Maritime Boards and Port Data Management Port (PDMP)

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														
As on 31.3.19														
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														
As on 31.3.19														
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														
As on 31.3.19														
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														
As on 31.3.19														
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														
As on 31.3.19														
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														
As on 31.3.19														
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
As on 31.3.19	31.57	51.00	239.00	131.09	91.00	134.00	111.46	78.60	98.00	63.40	79.00	267.10	138.87	1514.09

(*) 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), GTIPL (3berths) and shallow water berth (1 no) has been taken as 21.57 MT, 17.40 MT, 31.80 MT

* 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

Source : Development Wing - Department of Shipping.