

**भारत के पत्तन क्षेत्र का अद्यतन**  
**UPDATE ON INDIAN PORT SECTOR**  
**(30.09.2016)**



**परिवहन अनुसंधान प्रभाग**  
**TRANSPORT RESEARCH WING**  
**पोत परिवहन मंत्रालय**  
**MINISTRY OF SHIPPING**  
**भारत सरकार**  
**GOVERNMENT OF INDIA**  
**नई दिल्ली**  
**NEW DELHI**

राजीव कुमार  
RAJIVE KUMAR

Tel. : 23714938  
Fax : 23716656



सचिव  
पोत परिवहन मंत्रालय  
भारत सरकार  
SECRETARY  
MINISTRY OF SHIPPING  
GOVERNMENT OF INDIA

## PREFACE

As per the decision of the Maritime State Development Council, the Transport Research Wing in the Ministry of Shipping has been bringing out the biannual publication "**Update on Indian Port Sector**". Present issue (**upto September, 2016**) is twenty-eighth in the series of the publication "**Update on Indian Port Sector**". The last issue contained data up to March, 2016.

The current issue of the "**Update on Indian Port Sector**" includes the **information on the performance of Major and Non-Major Ports for the period up to end of September, 2016**. 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.

December, 2016

(Rajive Kumar)

# UPDATE ON INDIAN PORT SECTOR

(UP TO 30.09.2016)

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**Officers associated with this publication**

**Mr. M. M. Hasija  
Adviser (Statistics)**

**Mr. Santosh Kumar Gupta  
Deputy Director**

## **1. RECENT TRENDS IN CARGO TRAFFIC AND POLICY INITIATIVES**

### **1.1 INDIA AND WORLD ECONOMY**

1.1.1 The growth in World gross domestic product (GDP) expanded by 2.5%, the same rate as in 2014. Diverging individual country performances unfolded against the background of lower oil and commodity price levels, weak global demand and a slowdown in China. China's transition from an investment and export led-growth model has had an impact on global manufacturing activity, aggregate demand, investment and commodity prices. An additional factor dampening global growth was the reduced positive effect of lower oil prices, partly offset by the negative impact on investment in the oil sector and the import demand of oil-exporting countries.

1.1.2 Developing country growth decelerated from 4.4 per cent in 2014 to 3.9 per cent in 2015 (Review of Maritime Transport, 2016, UNCTAD). China's economy has slowed over the past few years, although it is still growing at a relatively high rate; GDP growth decelerated from 7.2 per cent in 2014 to 6.9 per cent in 2015. China is said to be growing at two speeds, with its manufacturing sector facing overcapacity and limited growth, while its consumer-driven services sector is growing at a rapid pace (The Economist Intelligence Unit, 2016). India is now growing faster than China, as its GDP growth, supported by factors such as infrastructure investment, accelerated to 7.2 per cent in 2015. Apart from developments in China and continuing weak demand conditions, other trends have also affected many developing countries, namely, the recession in Brazil, the low commodity and energy price environment, and geopolitical tensions and domestic conflicts in a number of countries.

1.1.3 Global growth is projected to slow to 3.1 percent in 2016-17 before recovering to 3.4 percent in 2017-18 (International Monetary Fund, October, 2016). The global growth is estimated at 2.9 percent in the first half of 2016-17, slightly weaker than in the second half of 2015-16 and lower than projected in the April 2016 WEO (World Economic Output). Global industrial production remained subdued, but has shown signs of a pickup in recent months, and trade volumes retreated in the quarter through June after several months of sustained recovery from the trough of early 2015. The recent weak momentum is mostly a product of softer activity in advanced economies.

The 2016 forecast reflects weaker-than-expected U.S. activity in the first half of the year as well as materialization of an important downside risk with the Brexit vote. Although financial market reaction to the result of the U.K. referendum has been contained, the increase in economic, political, and institutional uncertainty and the likely reduction in trade and financial flows between the United Kingdom and the rest of the European Union over the medium term are expected to have negative macroeconomic consequences, especially in the United Kingdom. As a result, the 2016 growth forecast for advanced economies has been marked down to 1.6 percent.

1.1.4 Given the size and global economic integration of the largest emerging markets—Brazil, the Russian Federation, India, China, and South Africa (BRICS)—the simultaneous slowdown underway in all but one of them could have significant spillovers to the rest of the world. Specifically, one percentage point decline in growth in BRICS is associated with a reduction in growth over the following two years by 0.8 percentage points in other emerging markets, 1.5 percentage points in frontier markets, and 0.4 percentage points in the global economy.

1.1.5 Growth in emerging market and developing economies is expected to strengthen slightly in 2016-17 to 4.2 percent after five consecutive years of decline, accounting for over three-quarters of projected world growth this year. However, the outlook for these economies is uneven and generally weaker than in the past. While external financing conditions have eased with expectations of lower interest rates in advanced economies, other factors are weighing on activity. These include a slowdown in China, whose spillovers are magnified by its lower reliance on import- and resource-intensive investment; commodity exporters' continued adjustment to lower revenues; spillovers from persistently weak demand in advanced economies; and domestic strife, political discord, and geopolitical tensions in several countries. While growth in emerging Asia and especially India continues to be resilient, the largest economies in sub-Saharan Africa (Nigeria, South Africa, Angola) are experiencing sharp slowdowns or recessions as lower commodity prices interact with difficult domestic political and economic conditions. Brazil and Russia continue to face challenging macroeconomic conditions, but their outlook has strengthened somewhat relative to last April.

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

<b>Table 1: Growth in Cargo handled at Indian Ports and related parameters (in %)</b>									
<b>Parameters</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16</b>	<b>April-September</b>	
								<b>2015-16</b>	<b>2016-17</b>
<b>Trends in India's Select : Macro Parameters</b>									
<b>I. Total Cargo</b>	14.2	4.2	3.2	2.2	4.1	8.2	1.9	1.9	5.1
(a) Major Ports	5.7	1.6	-1.7	-2.6	1.8	4.7	4.3	4.1	5.2
(b) Non Major Ports	35.5	9.1	12.2	9.7	7.5	12.9	-1.0	-1.0	4.9
<b>II. GVA overall</b>	n.a	n.a	n.a	n.a	6.6	7.1	7.2	7.2	7.2
(a) Agriculture	n.a	n.a	n.a	n.a	3.7	-0.2	1.2	2.3	2.5
(b) Industry	n.a	n.a	n.a	n.a	4.5	5.9	7.4	6.5	5.6
(c) Services	n.a	n.a	n.a	n.a	9.1	10.3	8.9	8.9	9.2
<b>III. Foreign Trade</b>									
(a) Export in \$ value	-3.5	40.5	21.8	-1.8	4.7	-1.2	-15.9	-17.65	-1.74
(b) Import in \$ value	-5.0	28.2	32.3	0.3	-8.3	-0.6	-15.3	-14.16	-13.77
<b>Trends in Select : Global Indicators</b>									
<b>IV. World Output</b>	0.0	5.4	4.2	3.5	3.3	3.4	3.2	3.1F	3.4f
(a) Advanced Economies	-3.4	3.1	1.7	1.2	1.2	1.9	2.1	1.6F	1.8f
(b) Developing Economies	3	7.4	6.3	5.3	4.9	4.6	4.0	4.2F	4.6f
<b>V. World Economic Growth</b>	-2.2	4.1	2.8	2.2	2.2	2.5	2.5	2.3F	-
(a) Advanced Economies	-3.8	2.6	1.4	1.1	1.1	1.7	2.0	1.6F	-
(b) Developing Economies	2.4	7.9	6.0	4.7	4.6	4.4	3.9	3.8F	-
(c) Transition Economies	-6.6	4.5	4.7	3.3	2.0	0.9	-2.8	0.0F	-
<b>VI. World Trade Volume (Goods)</b>	-11.6	14.3	6.9	2.5	3.1	3.3	2.4	2.3F	3.8f
<b>VII. Export Volume growth (Goods)</b>									
(a) Advanced Economies	-13.1	14.7	6.0	1.9	2.6	3.3	3.6	1.8F	3.5f
(b) Developing Economies	-8.7	14.8	8.1	4.2	4.3	2.9	1.3	2.9F	3.6f
<b>VIII. Import Volume (Goods)</b>									
(a) Advanced Economies	-12.8	13.1	5.3	0.3	1.8	3.4	4.2	2.4F	3.9f
(b) Developing Economies	-9.6	15.3	10.5	5.4	4.8	3.6	-0.6	2.3F	4.1f
<b>IX. World Seaborne Trade*</b>	-5.0	7.4	4.3	4.6	3.4	3.5	2.0	NA	NA
(a) Goods Loaded	-4.5	7.0	4.5	4.7	3.4	3.4	2.1	NA	NA
(b) Goods Unloaded	-5.5	7.8	4.2	4.4	3.4	3.5	2.0	NA	NA
<b>Source:</b>									
I. Based on data from Major Ports and Non Major Ports									
II. Figures - 2014-15 onwards based on Press Release of Gross Value Added (GVA) at Factor Cost (at Current Prices), Central Statistical Office, dated 30.11.2016. Comparable figures for the back series are not available.									
III. Based on Department of Commerce, DGCI&S and RBI Bulletin									
IV, VI, VII & VIII Based on World Economic Outlook, October, 2016, IMF;									
V & IX. Based on Review of Maritime Transport, 2016 ( November), UNCTAD									
<b>Note :</b> MT: Million Tonnes; For item Nos IV, VI, VII & VIII year 2009-10 refers to calendar year 2009 and so on; <b>F</b> refers to forecast for 2016 and <b>f</b> refers to forecast for the year 2017;									
* growth in total goods loaded plus unloaded; NA ; Not Available (P) Provisional									

1.1.7 Compared to most other major developing countries, India is well positioned to withstand near-term headwinds and volatility in global financial markets due to reduced external vulnerabilities, a strengthening domestic business cycle, and a supportive policy environment. The Economic Survey, 2016 has projected a wide band of 7 - 7.75 per cent growth in 2016-17, boosted by normal monsoon projection. It had, however, cautioned that with the global slowdown likely to persist, chances of India's growth rate in 2016-17 increasing significantly beyond 2015-16 levels were not very high.

### **Selected Emerging Trends Affecting Seaborne Trade**

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

1.1.9 In 2015, the World Seaborne Trade volumes are estimated to have accounted for over 80 per cent of total world merchandise trade. In 2015 – for the first time in UNCTAD records, the World Seaborne Trade volumes were estimated to have exceeded 10 billion tonnes. However, shipments expanded by 2.1 per cent, a pace notably slower than the historical average and below rates recorded over the last decade, when volumes were lifted by strong import demand from China. Individual performances varied by country and across market segments, with tanker trade performing relatively better than any other sector.



<b>Year</b>	<b>Oil</b>	<b>Main Bulk#</b>	<b>Other Dry Cargo</b>	<b>Total</b>
2000	2163	1295	2526	5984
2006	2698	1814	3188	7700
2007	2747	1953	3334	8034
2008	2742	2065	3422	8229
2009	2642	2085	3131	7858
2010	2772	2335	3302	8409
2011	2794	2486	3505	8784
2012	2841	2742	3614	9197
2013	2829	2923	3762	9514
2014	2825	2985	4033	9843
2015	2947	2951	4150	10047

# iron ore, grain, coal, bauxite/alumina and phosphate rock  
Source: Review of Maritime Transport,2016,UNCTAD

1.1.10 In 2015, dry cargo shipments accounted for 70.7 per cent of total seaborne trade volumes, while the remaining share was made up of tanker trade, including crude oil, petroleum products and gas (**tables 2**). Also in 2015, volumes increased by 1.6 per cent, down from 4.1 per cent in 2014. Growth in world seaborne trade by tonne–miles – providing a more accurate measure of demand for ship-carrying capacity, as it takes into account distances travelled – also decelerated; world seaborne trade totaled an estimated 53.6 billion ton–miles, up from an estimated 52.7 billion tonne–miles in 2014.

1.1.11 Developing countries continued to contribute larger shares to the total volumes of international seaborne trade. Their contribution with regard to global goods loaded is estimated at 60 per cent, and their import demand as measured by the volume of goods unloaded increased, reaching 62 per cent. Developing countries remained key world importers and exporters in 2015 and have consolidated their position as suppliers of raw materials, while also strengthening their position as large sources of consumer demand and main players in globalized manufacturing processes.

1.1.12 While, a slowdown in China is bad news for shipping, other countries have the potential to drive further growth. South–South trade is gaining momentum, and planned initiatives

such as the One Belt, One Road Initiative and the Partnership for Quality Infrastructure, as well as the expanded Panama Canal and Suez Canal, all have the potential to affect seaborne trade, reshape world shipping networks and generate business opportunities. In parallel, trends such as the fourth industrial revolution, big data and electronic commerce are unfolding, and entail both challenges and opportunities for countries and maritime transport.

## **Crude Oil and Petroleum products**

### **Crude Oil**

1.1.13 In 2015, oil remained the leading fuel, accounting for one third of global energy consumption. Global oil consumption was supported by demand among members of the Organization for Economic Cooperation and Development, in particular the United States and the European Union, and also partly sustained by China and India, where oil consumption expanded by 6.3 per cent and 8.1 per cent, respectively (British Petroleum, 2016). Global oil production expanded at a faster pace, resulting in continued downward pressure on oil prices. Underpinned by these developments, global crude oil trade reversed the 2014 trend and expanded by 3.8 per cent in 2015, with total volumes reaching an estimated 1.77 billion tonnes.

Global seaborne oil trade expanded faster than underlying oil demand, suggesting that end-user oil demand was not the only factor at play. Ample oil supply, low oil price levels, additions to refinery capacity, improved refinery margins and stock-building activity all contributed to the rise in crude oil volumes, which in turn led to infrastructure bottlenecks, delays and greater demand for oil storage. Lower oil prices and improved refinery margins supported imports into Europe, as well as shipments within the region and from both Western Africa and Western Asia. Crude oil imports into China accounted for about half the growth, as volumes increased by an estimated 9.3 percent (Clarksons Research, 2016). Together, growing refinery throughput in China, the need to fill the country's strategic petroleum reserve and liberalization of the market, allowing a number of independent refineries to either import crude oil or refine imported volumes, boosted China's oil demand and crude oil imports. India – the third largest importer of crude oil after the United States and China – increased its imports, while increasingly diversifying sources of supply, including Latin America and Western Africa (Tusiani, 2016).

## **Refined Petroleum products**

1.1.14 Trade in petroleum products and gas increased by 5.1 per cent in 2015, reaching a total volume of 1.17 billion tonnes. However, estimates, for example by Clarksons Research, indicate that trade increased in petroleum products by 6.2 per cent, to above 1 billion tonnes, and in gas by 3.5 per cent, to 328 million tonnes. Import demand in Asia, as well as strong demand in Australia resulting from the closure of some refineries in 2014 and 2015, helped support trade. Import growth was also fuelled by strong import demand in India, driven largely by the removal of diesel subsidies in late 2014. Imports in Europe also increased on the back of lower oil price levels, which supported growth in refinery throughputs and intra- European trade. In parallel, and in addition to end-user demand, lower oil price levels triggered greater trading activity and generated arbitrage opportunities, further supporting trade in petroleum products. With regard to cargo types, strong demand for gas and transportation fuels, as well as storage activity with regard to diesel, supported demand for petroleum products. With regard to supply, increased refinery throughput resulting from the availability of domestic crude oil boosted export volumes from the United States, while growing refinery capacity in Western Asia, in particular in Saudi Arabia, supported export volumes from the region.

## **Natural Gas and liquefied gases**

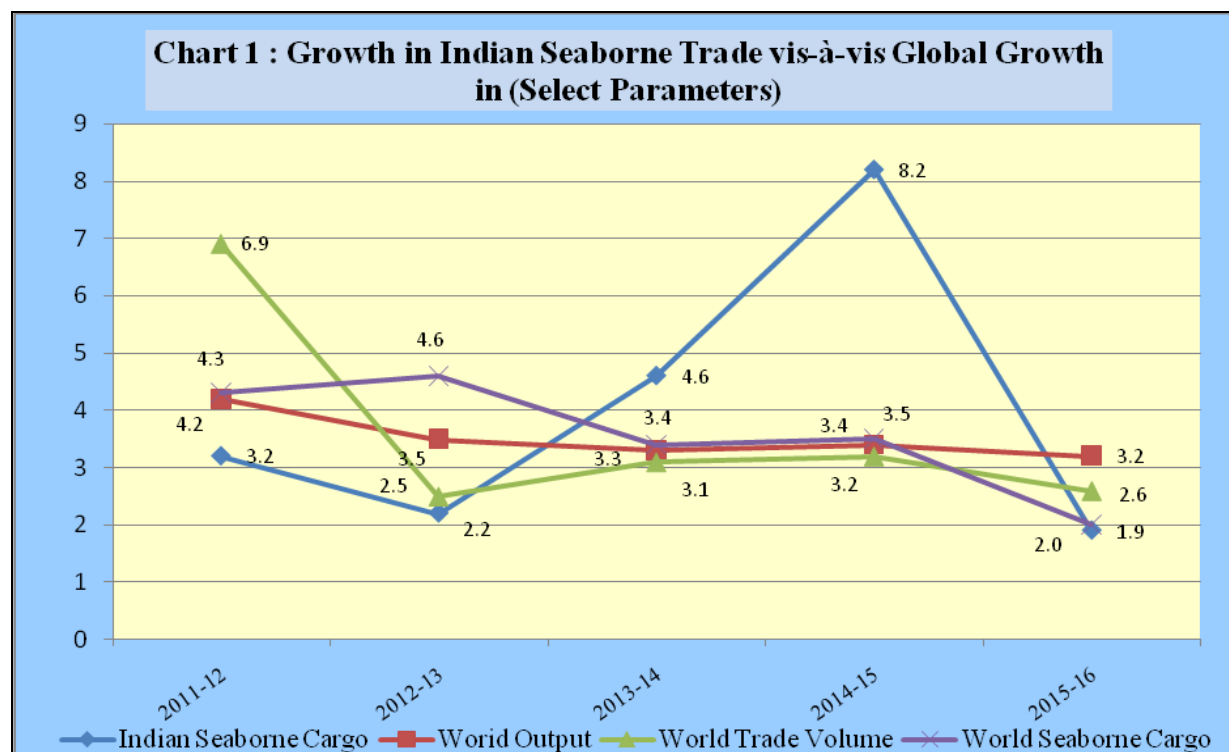
1.1.15 Global natural gas trade carried by sea in liquefied form, which accounted for nearly one third of world natural gas trade in 2015, expanded by 1.6 per cent, down from 2.5 per cent in 2014. Total volumes reached 338.3 billion cubic metres (British Petroleum, 2016). Export growth was driven by growing shipments from Australia, Indonesia, Malaysia, Papua New Guinea and Qatar, among others. Rising import demand in Europe and Western Asia helped partly offset volume declines in some key liquid natural gas importing countries such as Japan. The largest importer, Japan reduced its imports, possibly owing to a mild winter, reduced coal prices and the restart of two nuclear reactors in 2015 (World Nuclear Association, 2016).

The Republic of Korea, the second largest importer, also reduced its imports by 15 per cent (British Petroleum, 2016). Imports into China fell by 3.3 per cent due to the economic slowdown, a mild winter and expansion of the country's domestic gas production. In addition, although starting from a low base, liquefied natural gas imports to the United States increased by over 50 per cent, while exports increased eightfold (British Petroleum, 2016). In 2015, the high cost of onshore import facilities resulted in the use of alternative and new solutions, including the use of re-gasification

equipment on board ships, liquid natural gas re-gasification carriers as mobile import terminals and floating storage and re-gasification units (Clarksons Research, 2016). In July 2015, 19 countries were reported to be exporting liquid natural gas, and 16 countries are reported to have started importing liquid natural gas over the past 10 years (Clarksons Research, 2015). Trade in liquefied petroleum gas, which competes with naphtha for use as a feedstock in the petrochemical sector, is estimated to have expanded by 8.3 per cent in 2015, owing to continued export growth in the United States and rising demand in the petrochemical and household sectors in Asia, notably in China and India.

## 1.2 India: Seaborne Cargo Traffic

The growth in India’s Port traffic and growth in World output, export volume and seaborne trade (loadings and unloading) since 2008-09 is given in **Chart I**.



### 1.3 Cargo Traffic at Indian Ports

1.3.1 During first six months (April-September) of 2016-17, Major and Non-major Ports in India have accomplished a total cargo throughput of 549.74 million tonnes reflecting an increase of 5.1% over the corresponding period of the previous year 2015-16 (Table 3). The growth in cargo handled at Major and Non-major ports in first six months (April-September) of 2016-17, were 5.2% and 4.9% respectively. The share of Major Port in the total traffic handled at Indian Port increased from 57.3% in first six months (April-September), 2015-16 to 57.4% in the same six months of 2016-17. Trend in traffic handled at Major and Non-major Ports is given below in **Table 3**.

<b>Table 3- Traffic Handled at Indian Ports</b>								
<b>(Million Tonnes)</b>								
<b>Major/Non-Major</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16 (P)</b>	<b>April-September</b>	
							<b>2015-16 (P)</b>	<b>2016-17 (P)</b>
<b>Major Ports</b>	570.09 (1.6)	560.19 (-1.7)	545.83 (-2.6)	555.49 (1.8)	581.34 (4.7)	606.37 (4.3)	299.96	315.42 (5.2)
<b>Non-Major Ports*</b>	315.36 (9.1)	353.74 (12.2)	387.92 (9.7)	416.97 (7.5)	470.89 (12.9)	466.10 (-1.0)	223.33	234.32 (4.9)
<b>All Ports</b>	<b>885.45</b> <b>(4.2)</b>	<b>913.93</b> <b>(3.2)</b>	<b>933.75</b> <b>(2.2)</b>	<b>972.46</b> <b>(4.1)</b>	<b>1052.23</b> <b>(8.2)</b>	<b>1072.47</b> <b>(1.9)</b>	<b>523.29</b>	<b>549.74</b> <b>(5.1)</b>

Note: Figures in brackets indicate growth over previous year.

### 1.4 Cargo Traffic at Major Ports

1.4.1 The volume of seaborne cargo traffic handled by ports is mainly shaped by the levels and changes in both the global and domestic activity. Cargo traffic at India's 12 major ports during first six months (April-September) of 2016-17 was 315.42 million tonnes achieving growth of 5.2% over the previous year.

1.4.2 During first six months (April-September) of 2016-17, Mormugao recorded highest growth in traffic 61.1% followed by Paradip Port (18.3%), Visakhapatnam (10.9%), Kandla (7.1%), Cochin (5.2%), Chidambaranar (3.5%), NMPT (3.4%) and Chennai (0.3%). Major ports which recorded **negative growth** in traffic during first six months (April-September) of 2016-17 were:

Kolkata Dock System (9.4%), Kamarajar (6.8%), Haldia Dock Complex (5.6%), JNPT (4.5%) and Mumbai (1.0%).

1.4.3 Amongst the Major Ports, Kandla Port handled the maximum Cargo of 53.96 million tonnes with a share of 17.1% in total cargo handled at major ports followed by Paradip (13.5%), JNPT (9.8%), Mumbai (9.8%), Vishakhapatnam (9.7%), Chennai (8.2%), Chidambaranar (6.1%), NMPT (5.5%), Haldia Dock Complex (5.1%), Kamarajar (4.7%), Mormugao (4.1%), Cochin (3.8%) and Kolkata Dock System (KDS) (2.4%) during first six months (April-September) of 2016-17.(Table 4).

<b>Table 4 : Traffic Handled at Major Ports</b>								
<b>(Thousand Tonnes)</b>								
<b>Ports</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16(P)</b>	<b>April-September (P)</b>		
						<b>2015-16(P)</b>	<b>2016-17(P)</b>	<b>% change 2016-17/2015-16</b>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Kolkata	43248	39928	41386	46293	50195	25686	23934	-6.8
Kolkata DS	12233	11844	12875	15283	16688	8487	7692	-9.4
Haldia DC	31015	28084	28511	31010	33507	17199	16242	-5.6
Paradip	54254	56552	68003	71011	76386	36068	42668	18.3
Vizag	67420	59038	58504	58004	57033	27637	30662	10.9
Kamarajar	14956	17885	27337	30251	32206	15979	14891	-6.8
Chennai	55707	53404	51105	52541	50058	25814	25892	0.3
Chidambaranar	28105	28260	28642	32414	36849	18668	19320	3.5
Cochin	20090	19845	20886	21595	22099	11331	11924	5.2
New Mangalore	32941	37036	39365	36566	35582	16927	17499	3.4
Mormugao	39049	17738	11739	14711	20776	8113	13070	61.1
Mumbai	56186	58038	59184	61660	61110	31120	30813	-1.0
JNPT	65730	64488	62333	63801	64027	32230	30781	-4.5
Kandla	82501	93619	87005	92497	100051	50383	53963	7.1
<b>All Ports</b>	<b>560187</b>	<b>545831</b>	<b>555489</b>	<b>581344</b>	<b>606372</b>	<b>299956</b>	<b>315417</b>	<b>5.2</b>
Source: IPA, (P): Provisional								

### **Commodity-wise growth of cargo traffic at Major Ports**

1.4.4 At a broad commodity level, during first six months (April-September) of 2016-17, Iron ore posted growth rate of 138% followed by food grains (64.9%). The other commodities such

as POL, Coking Coal, Container and Other Cargo posted growth of 6.1, 7.9%, 0.7%, and 2.8% respectively. Cargo traffic in Fertilizer and FRM was affected during the first six months of 2016-17 and dropped by 10.8%.

1.4.5 In terms of composition of cargo traffic handled during first six months (April-September) of 2016-17 at major ports, the largest commodity group (with share in percent in total cargo handled) was POL (32.8%), Coal (20.0%), Others cargo (20.0%), Container traffic (19.6%), Iron ore (4.5%) and Fertilizer & FRM (2.7%) in **Table 5**.

<b>Table 5 : Commodity wise Traffic Handled at Major Ports</b>								
<b>Commodities</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16(P)</b>	<b>(Thousand Tonnes)</b>		<b>% change 2016-17/ 2015-16</b>
						<b>April-September (P)</b>		
						<b>2015-16(P)</b>	<b>2016-17(P)</b>	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
POL	173851	180725	181055	181020	195872	97535	103508	6.1
Iron Ore	60719	27289	24616	18002	15354	5991	<b>14260</b>	138.0
<b>Fertilizer</b>	<b>20404</b>	<b>14797</b>	<b>13784</b>	<b>16291</b>	<b>15898</b>	<b>9671</b>	<b>8630</b>	-10.8
1. Finished	12218	7469	6149	7926	8419	5167	4186	-19.0
2. Raw (DRY)	8186	7328	7635	8365	7479	4504	4444	-1.3
<b>Coal</b>	<b>78776</b>	<b>86804</b>	<b>104271</b>	<b>119474</b>	<b>126075</b>	<b>63245</b>	<b>62931</b>	-0.5
1. Thermal Coal	51128	58772	71651	87119	98725	47898	46375	-3.2
2. Coking Coal	27648	28032	32620	32355	27350	15347	16556	7.9
Food Grain	3279	6597	4796	3089	2403	687	1133	64.9
Container (Tonnes)	120276	119866	114672	119441	123118	61449	61883	0.7
Others	102882	109753	112295	124027	127652	61378	63072	2.8
<b>Total</b>	<b>560187</b>	<b>545831</b>	<b>555489</b>	<b>581344</b>	<b>606372</b>	<b>299956</b>	<b>315417</b>	<b>5.2</b>
Source: IPA, (P): Provisional								

1.4.6 The Port-wise and Commodity-wise shares in total cargo traffic during first six months (April-September) of 2016-17 are depicted in the **Charts II and III** respectively.

Chart-II Major Ports-Portwise share in Traffic Handled during First Six months (April-September), 2016 in India

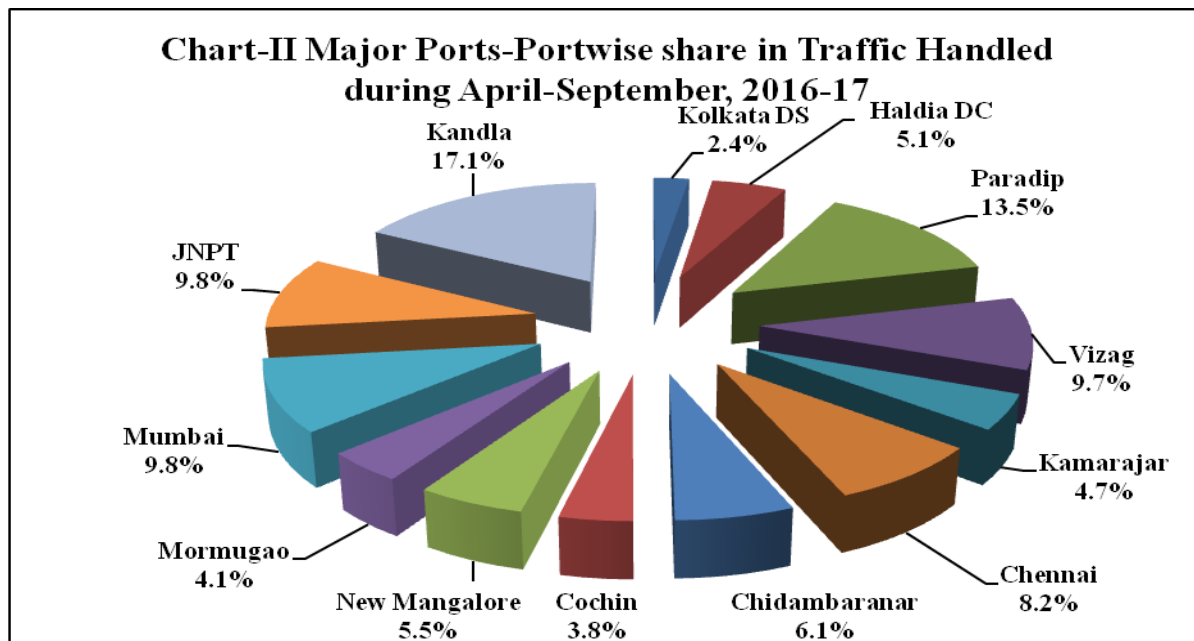
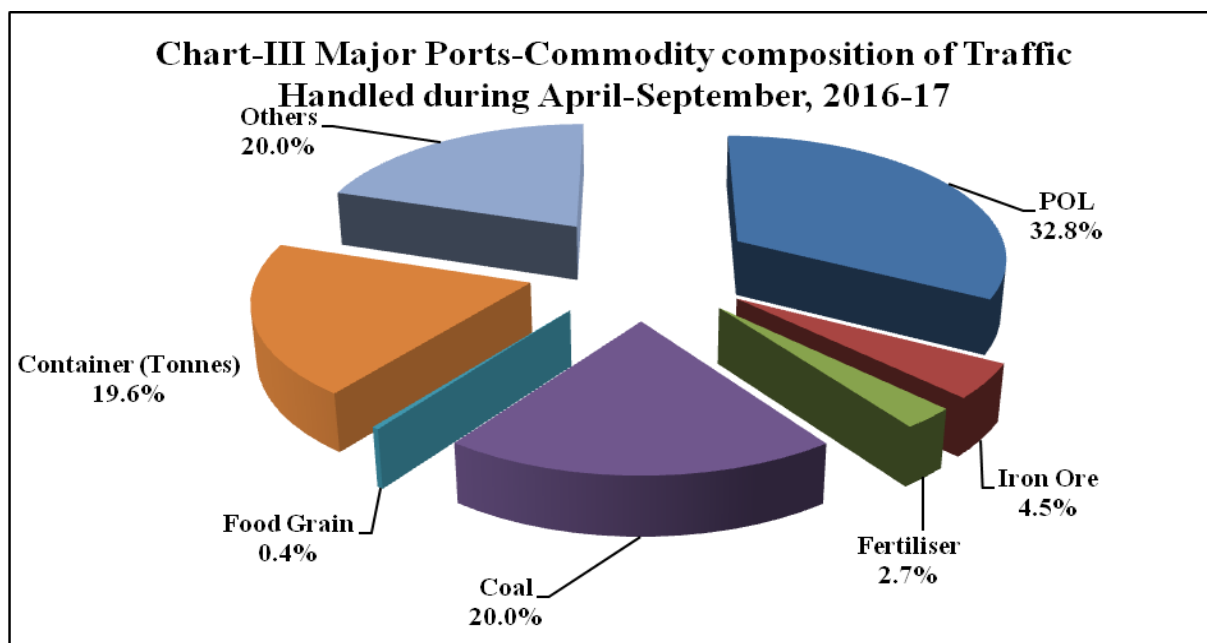


Chart-III Major Ports-Commodity composition of Traffic Handled during First Six months (April-September), 2016 in India



1.4.7 The Port-wise & commodity-wise traffic handled at major ports from 2012-13 onwards are given in **Annex –II**.



## Container Traffic

1.4.8 Growth in container traffic (in million tonnes) which reflects largely trade in manufactures and components, at 0.7% during first six months of 2016-17 is lower compared to 3.1% achieved in the corresponding periods of the year 2015-16. In terms of Twenty Foot Equivalent Units (TEUs), containers handled by Major Ports during first six months of 2016-17 recorded 3.3% growth as compared to 3.0% in the same period of the 2015-16. Amongst the major ports, the ports at Paradip, Chennai and JNPT witnessed fall in container traffic. JNPT is continues to be the leading container handling port in the country with a share of 43.9% in terms of tonnage and 53.5% in terms of TEUs in the total container traffic at major ports during first six months (April-September), 2016-17 (**Table 6**). Chennai port which handled 23.3% of container cargo is the second largest container handling port followed by Tutucorin (10.6%).

PORT	2013-14		2014-15		2015-16(P)		April-September				% change 2016-17/ 2015-16	
							2015-16		2016-17		April-September	
	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Kolkatta DS	7063	449	8110	528	9263	578	4548	282	5073	331	11.5	17.4
Haldia DC	2230	113	1958	102	1374	85	652	43	718	49	10.1	14.0
Paradip	99	9	67	4	121	5	66	3	28	1	-57.6	-66.7
Vizag	4916	262	4372	248	5145	293	2299	134	3275	188	42.5	40.3
Chennai	28330	1468	29945	1552	30207	1565	15517	804	14444	748	-6.9	-7.0
Ennore	0	0	0	0	1	0	1	0	1	0	0.0	0.0
Tuticorin	10129	508	11034	560	12388	612	6122	310	6586	325	7.6	4.8
Cochin	4785	343	5246	366	5785	420	2778	201	3370	242	21.3	20.4
New Mangalore	747	50	920	63	1105	76	565	39	646	44	14.3	12.8
Mormugao	236	19	312	25	345	26	147	12	187	14	27.2	16.7
JNPT	55235	4162	56933	4467	56791	4492	28497	2245	27187	2262	-4.6	0.8
Mumbai	449	41	544	45	537	43	243	21	287	23	18.1	9.5
Kandla	453	29	0	0	56	3	14	1	81	4	478.6	300.0
<b>All Ports</b>	<b>114672</b>	<b>7453</b>	<b>119441</b>	<b>7960</b>	<b>123118</b>	<b>8198</b>	<b>61449</b>	<b>4095</b>	<b>61883</b>	<b>4231</b>	<b>0.7</b>	<b>3.3</b>

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

## 1.5 Cargo Traffic at Non-Major Ports

1.5.1 Non-major ports handled 42.6% of total maritime freight traffic of the country during first six months (April-September) of 2016-17.

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

Maritime State/UT	2012-13	2013-14	2014-15	2015-16 (P)	April-September			
					2015-16 (P)	2016-17 (P)	% Change over previous year	
							2015-16 (P)	2016-17 (P)
<b>Gujarat</b>	287817	309945	336095	339779	166408	168635	0.9	1.3
	(74.2)	(74.3)	(71.4)	(72.9)	(74.5)	(72.0)		
<b>Maharashtra</b>	24198	24664	27295	28849	12271	15552	-3.8	26.7
	(6.2)	(5.9)	(5.8)	(6.2)	(5.5)	(6.6)		
<b>Andhra Pradesh</b>	51811	58692	83418	72718	33309	32947	-6.0	-1.1
	(13.4)	(14.1)	(17.7)	(15.6)	(14.9)	(14.1)		
<b>Goa</b>	3389	284	760	430	0	484	-	-
	(0.9)	(0.1)	(0.2)	(0.1)	(0.0)	(0.2)		
<b>Tamil Nadu</b>	933	866	825	856	413	483	-13.4	16.9
	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)	(0.2)		
<b>Karnataka</b>	610	509	651	835	339	315	21.9	-7.1
	(0.2)	(0.1)	(0.1)	(0.2)	(0.2)	(0.1)		
<b>Other States/UTs</b>	19165	22010	21844	22634	10594	15901	-6.4	50.1
	(4.9)	(5.3)	(4.6)	(4.9)	(4.7)	(6.8)		
<b>All M. States/UTs</b>	387923	416970	470888	466101	223334	234317	-1.0	4.9
	(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

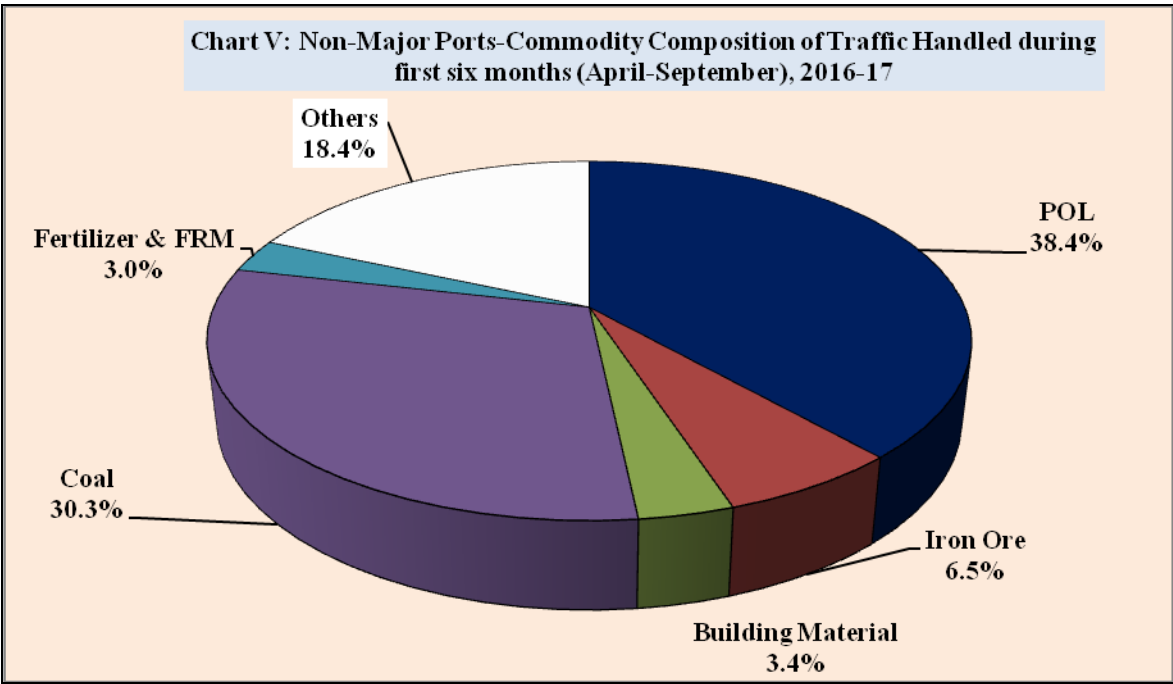
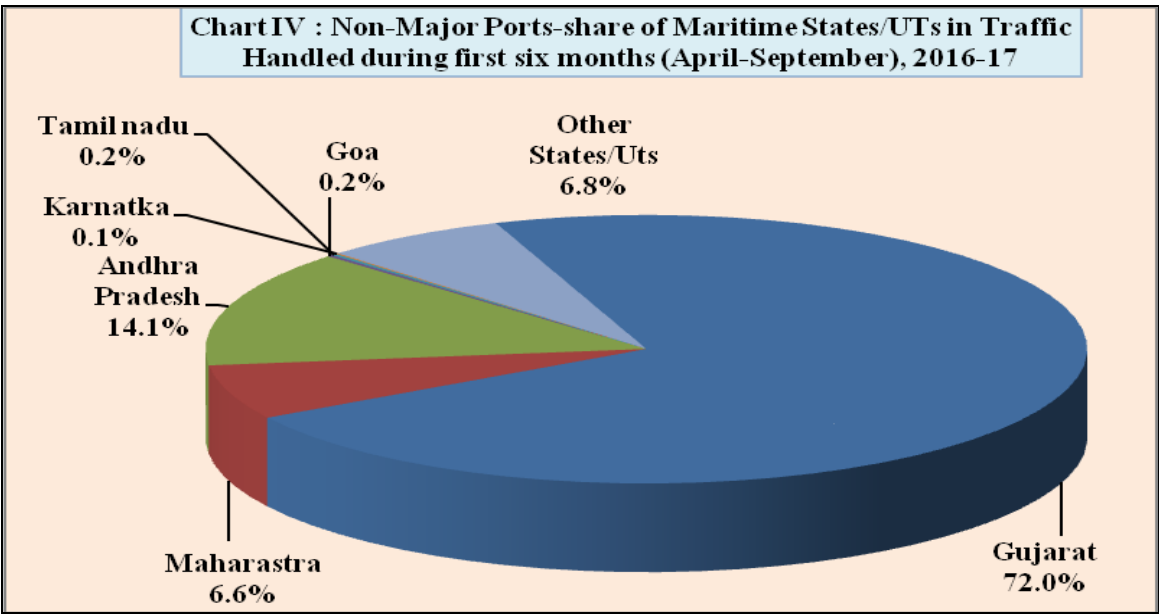
1.5.3 The growth in cargo handled by the non-major ports during first six months (April-September) of 2016-17 was 4.9% compared to -1.0% recorded in the corresponding period of previous year. **Table 7** provides traffic handled by non-major ports in terms of maritime states (geographic location) and **Table 8** gives a glimpse of commodity profile of the cargo handled. The above table reflects that Gujarat accounted for (72.0%) of the traffic handled by the non-major ports followed by Andhra Pradesh (14.1%) and Maharashtra (6.6%). Three maritime States, viz, Gujarat,

Andhra Pradesh and Maharashtra together accounted for 92.7% of the total cargo traffic handled by the non-major ports in first six months (April-September) of 2016-17.

1.5.4 Two commodities, viz. POL and Coal accounted for more than two-third of the total cargo handled at the non-major ports during April-September, 2016-17 (**Table 8**).

<b>Table 8: Commodity-wise Traffic Handled by Non-Major Ports</b>								
<b>(Thousand Tonnes)</b>								
<b>Commodity</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16(P)</b>	<b>April-September</b>			
					<b>2015-16 (P)</b>	<b>2016-17 (P)</b>	<b>% Change over previous year</b>	
							<b>2015-16 (P)</b>	<b>2016-17 (P)</b>
<b>POL</b>	168565 (43.5)	169777 (40.7)	167278 (35.5)	180950 (38.8)	87718 (39.3)	90040 (38.4)	6.2	2.6
<b>Iron Ore</b>	21855 (5.6)	18338 (4.4)	26794 (5.7)	16353 (3.5)	8226 (3.7)	15285 (6.5)	-28.1	85.8
<b>Building Material</b>	11953 (3.1)	14178 (3.4)	14224 (3.0)	13760 (3.0)	7569 (3.4)	7993 (3.4)	-11.3	5.6
<b>Coal</b>	109264 (28.2)	126321 (30.3)	156737 (33.3)	144229 (30.9)	71444 (32.0)	70965 (30.3)	-7.5	0.7
<b>Fertilizer &amp; FRM</b>	12548 (3.2)	12010 (2.9)	13952 (3.0)	14389 (3.1)	8515 (3.8)	6973 (3.0)	51.1	18.1
<b>Others</b>	63738 (16.4)	76346 (18.3)	91903 (19.5)	96420 (20.7)	39862 (17.8)	43061 (18.4)	-2.1	8.0
<b>All</b>	387923 (100.0)	416970 (100.0)	470888 (100.0)	466101 (100.0)	223334 (100.0)	234317 (100.0)	-1.0	4.9
Note: Figure in parenthesis is the percentage share of major commodity groups in the total traffic handled by the Non major ports								

1.5.5 The share of Maritime States/UTs in the total traffic and Commodity-wise composition of traffic during first six months (April-September) of 2016-17 is depicted in the pie **Charts IV and V** respectively.



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

## **1.6 Impact of Global Macro Developments on Maritime Trade**

### **1.6.1 Impact of growth on India's seaborne cargo**

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

1.6.1.2 Cargo traffic handled by India's 12 major ports (which accounts for 57.4% of India's total seaborne cargo) during April-September, 2016-17 was 315.42 million tonnes compared to 299.96 million tonnes recorded corresponding period of 2015-16 showing a growth of 5.2%. The trajectory of growth in cargo handled at India's major ports comes into sharp focus when these growth rates are viewed in terms of quarterly growth trajectories. The Industry sector which is a major factor influencing seaborne container cargo traffic posted a GVA growth of 5.6% in first six months (April-September), 2016-17 as compared to 6.5% in corresponding period of 2015-16. GVA of Industry sector recorded growth of 6.7% and 6.3% in the first two quarters of 2015-16 while, growth in first two quarters of 2016-17 was 6.0% and 5.2% respectively. Trends in POL, coal and fertilizers are largely driven by the dynamics of domestic demand supply and those of container traffic and "other cargo" in particular is largely shaped by the state of global demand and economic activity in India. Iron ore traffic has been impacted by the judicial intervention. The growth in Iron Ore traffic, in the first six months of 2015-16 posted negative growth of 21.0%, while in the year 2016-17 (April-September) posted a growth of 142.4% respectively with re-starting of iron ore mining in Goa. The growth of Cargo handled by major ports in first two quarters of 2016-17 was 6.2% and 4.2% respectively was higher of 4.5% and 3.8% achieved in corresponding period of 2015-16.

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

<b>Table -9 - Quarter-wise trend in growth of Cargo Traffic at Major Ports and GVA</b>						
<b>Commodities/ Year</b>	<b>2015-16</b>			<b>2016-17</b>		
	<b>Q1</b>	<b>Q2</b>	<b>Half Yearly Growth</b>	<b>Q1</b>	<b>Q2</b>	<b>Half Yearly Growth</b>
<b>POL</b>	17.9	17.1	17.5	2.1	9.6	5.8
<b>Iron Ore</b>	-29.0	-10.5	-21.0	159.3	124.7	142.4
<b>Coal</b>	43.9	29.7	36.8	0.5	-6.8	-3.0
<b>Fertilizer</b>	1.0	21.5	12.0	-9.4	-14.8	-12.5
<b>Container</b>						
<b>In tonnes</b>	1.2	1.4	1.3	3.0	-1.5	0.7
<b>In TEUs</b>	2.3	1.3	1.8	6.4	6.3	6.3
<b>Other cargo</b>	-43.2	-38.6	-40.9	8.5	1.1	4.6
<b>All Cargo</b>	<b>4.5</b>	<b>3.8</b>	<b>4.2</b>	<b>6.2</b>	<b>4.1</b>	<b>5.2</b>
<b>GVA overall</b>	<b>7.2</b>	<b>7.3</b>	<b>7.2</b>	<b>7.3</b>	<b>7.1</b>	<b>7.2</b>
<b>GVA -Industry</b>	<b>6.7</b>	<b>6.3</b>	<b>6.5</b>	<b>6.0</b>	<b>5.2</b>	<b>5.6</b>

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

## **1.6.2 Recent Developments in Global Ocean Freight Rates**

In 2016, the freight rates market remained very volatile in its various segments. The continuous delivery of newly built large vessels and hesitant demand in the global shipping market put pressure on rates.

### **1. Container freight rates**

Container freight rates declined steadily, reaching record low prices as the market continued to struggle with weakening demand and the presence of ever-larger container vessels that had entered the market in 2015. The global container shipping demand slackened in 2015. The segment recorded its slowest growth rate since 2010 – 2 per cent, compared with 5 per cent in 2014. At the same time, sluggish demand was challenged by an accelerated massive global expansion in container supply capacity, estimated at 8 per cent in 2015 – its highest level since 2010. This represented a slight increase over 2014, when container supply capacity stood at 7 per cent.

The limited growth in container demand in 2015 can be attributed to several factors, including weak European demand, which had an impact on peak leg trade between Asia and Europe, and low commodity prices, in particular of iron ore and crude oil. This affected the economies, and in particular the imports, of commodity-dependent developing countries, mainly in Africa and Latin America. Another contributing factor was slower economic activity in China, which also had an impact on intra-Asian trade growth

Problems affecting the container freight market in 2015 can be traced to diverging and persistent global supply-and-demand trends and growing imbalances. This situation is expected to continue throughout 2016 and 2017, when carriers with capacities of up to 21,100 TEUs will be in service. Despite weakening demand and low freight rates, carriers continued to invest in larger vessels in 2015. The global container ship fleet is projected to grow by 4.6 per cent in 2016 and another 5.6 per cent in 2017 (AlixPartners, 2016). Such a pace would continue to outstrip global container demand and exacerbate market fundamentals and in turn challenge container ship market conditions and freight rates in the short term, especially on the mainlanes (Clarksons Research, 2016).

## **2. Tanker freight rates**

The tanker market, which encompasses the transportation of crude oil, refined petroleum products and chemicals, witnessed one of its best years since the market crisis in 2008. The crude oil tanker and oil product tanker markets enjoyed strong freight rates throughout 2015, prompted by the drop in oil prices that had begun in mid-2014 and had been sustained by relatively low supply-side growth in 2015.

The progression of the Baltic Exchange tanker indices was relatively moderate. The average Dirty Tanker Index increased by 5.6 per cent to 821 points in 2015, compared with 777 points in 2014. The average Clean Tanker Index reached 638 points in 2015, compared with 607 in 2014, a 5 per cent increase over the 2014 average. Conditions in the crude oil market were favorable in 2015, enabled by a surge in seaborne crude oil trade, which grew by 3.8 per cent. Such growth was supported by a sharp increase in floating and stocking activities, low oil prices and low crude tanker fleet capacity, which increased less than 1 per cent in 2015 (Clarksons Research, 2016).

Tanker markets and freight rates are expected to remain the same as in 2016. However, the significant building of oil stocks in 2015 slow-down growth in tanker demand. At the same time, while demand for tankers is expected to increase at a slow pace in the short term, the entry into

market of new tanker deliveries (crude tankers and products) towards the end of 2016 may perturb the tanker market and put downward pressure on freight rates. Overall, 2015 was the best year for oil tankers since the market crash in 2008.

<b>Table 10 - Baltic Exchange Rate Index</b>										
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>Percentage change (2015/2014)</b>	<b>2016 (First Half)</b>
Dirty Tanker Index	1510	581	896	782	719	642	777	821	5.6	790
Clean Tanker Index	1155	485	732	720	641	605	607	638	5.0	539

Source : Review of Maritime Transport -2016

### **3. Dry bulk freight rates**

In 2015, the dry bulk market witnessed one of its worst years since 2008. Dry bulk freight rates plunged to a record low as weakening demand and strong supply created a high imbalance in market fundamentals. The dry cargo market was mainly affected by a substantial slowdown in seaborne dry bulk trade, with volumes contracting by 0.2 per cent as a result of limited growth in the iron ore trade and declining coal volumes. China, the largest player on the market, saw demand for dry bulk fall in 2015, the first time since the Great Recession.

On the other hand, excess supply-side tonnage remained high, although bulk carriers continued to cancel and push back new-building deliveries, while ship scrapping activity surged to high levels. The dry bulk carriers accounted for 73 per cent of gross tonnage demolished in 2015. The increase in cancellation and scrapping activities helped to limit overall fleet growth to its slowest pace in 15 years (Clarksons Research, 2016) but it was not enough to bridge the gap between supply and demand and bring the sector back into balance. Idling of vessels was another measure taken to limit supply but on a smaller scale (about 5 million dwt lay idle) (Danish Ship Finance, 2016).

Given these challenging market conditions, the Baltic Exchange Dry Index reached several low levels. As shown in figure 3.3, the Index dropped to 519 points in December 2015, its lowest average in the year, plunging by 43 per cent from its average in December 2014. The fall continued in early 2016, and the Index posted an average of 319 points in February, 2016.



### 1.6.3 Trends in Global Top 20 Cargo/Container Ports

**1.6.3.1** Growth in cargo and container traffic at world's top major ports/container terminals is a barometer of trends in seaborne trade. The growth in cargo traffic (million tonnes) at world's top 20 ports was at 0.9% in 2015 as compared to 6.3% in 2014. The growth in container traffic (million TEUs) was 0.5 % in 2015 as compared to 5.6% in 2014.

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.

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

<b>Table 12 - Top 20 World Container Ports</b>					
<b>(in Million TEUs)</b>					
<b>S. No.</b>	<b>Port</b>	<b>Country</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>
1	Shanghai	China	33.6	35.3	36.5
2	Singapore	Singapore	32.6	33.9	30.9
3	Shenzhen	China	23.3	24.0	24.2
4	Ningbo & Zhoushan	China	17.4	19.5	20.6
5	Hong Kong	China	22.4	22.2	20.1
6	Busan	Republic of Korea	17.7	18.7	19.5
7	Guangzhou	China	15.3	16.6	17.6
8	Qingdao	China	15.5	16.6	17.4
9	Dubai Ports	United Arab Emirates	13.6	15.2	15.6
10	Tianjin	China	13.0	14.1	14.1
11	Rotterdam	Netherlands	11.6	12.3	12.2
12	Port Klang	Malaysia	10.4	10.9	11.9
13	Kaohsiung	Taiwan	9.9	10.6	10.3
14	Antwerpen	Belgium	8.6	9.0	9.7
15	Dalian	China	10.0	10.1	9.5
16	Xiamen	China	8.0	8.6	9.2
17	Tanjung Pelepas	Malaysia	7.6	8.5	9.1
18	Hamburg	Germany	9.3	9.7	8.8
19	Los Angeles	United State of America	7.9	8.3	8.2
20	Long Beach	United State of America	6.6	6.8	7.2
<b>Total of Top 20 Ports</b>			<b>294.3</b>	<b>310.9</b>	<b>312.5</b>
Source: Port Statistics, Port of Rotterdam Authority; PRC: Peoples Republic of China; 1) Including river trade					

## **1.7 Policy Initiatives - Central Government**

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

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

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

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

1.7.4 Measures for increasing the capacity of Major Ports which are under the control of Central Government are taken as part of an ongoing process, keeping in view the demands of maritime trade through implementation of development plans for the ports, improvement in productivity, etc. At the end of March 2016 the cargo handling capacity of Major Ports was 965.36 Million Tonnes. Commodity-wise capacity of Major Ports at the end of March 2009 to 2016 is given in Annex IV.

### **Private Sector Participation**

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

1.7.6 To encourage private sector participation uniformity, clarity and transparency in the bidding process is of the prime importance. The Ministry of Shipping has already put in place guidelines for private sector participation. To ensure uniformity in short listing and bidding Model RFQ and RFP documents have been finalized. A Model Concession Agreement has also been finalized which attempts to bring in uniformity to the agreements to be signed by the Major Ports as Concessioning Authority with the various private operators as concessionaire. During the year 2015-16, 10 Public Private Partnership (PPP) projects were awarded at an estimated investment of Rs. 7669.90 crore for capacity addition of 73.25 Million Tonnes in the major ports comprising construction of berths and terminals, mechanization of existing berths etc. In the first six months of

2016-17, sixteen Projects with an estimated investment of Rs. 910.23 Crores for capacity expansion of 16.86 Million Tonnes have been awarded by Major Ports.

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

### **Areas of private investment**

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

- (a) Leasing out existing assets of the Port.
- (b) Construction/creation of additional assets, such as:
  - ❖ Construction and operation of container terminals.
  - ❖ Construction and operation of bulk, break bulk, multipurpose and specialized cargo berths.
  - ❖ Warehousing, container freight stations, storage facilities and tank farms.
  - ❖ Carnage/handling equipment.
  - ❖ Setting up of captive power plants.
  - ❖ Dry docking and ship repair facilities.
- (c) Leasing of equipment for port handling and leasing of floating crafts from the private sector.
- (d) Pilotage.
- (e) Captive facilities for port based industries.

### **National Transport Development Policy Committee (NTDPC)**

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

ports and to incentivise and integrate water based transport for it to play an increasing role in the national transport network. Key recommendations of the Committee are:

**a) Strategic view on port investment**

**(i) Mega ports**

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

An expert group needs to be expeditiously set up to study and identify potential locations for development of these mega ports.

**(ii) Drafts**

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

**b) Strategic Institutional shift – Landlord model of port governance**

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

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

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

#### **c) Role of TAMP**

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**

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 within the next 12 months. Green Channel clearance has already become operational in 8 Major Ports. Presently because of lack of exclusive berth, storage area and gates for coastal cargo in the ports, there is

considerable delay in clearance of these cargoes. The Ministry of Shipping has given a policy directive to all the major ports to have exclusive berths with associated storage space and separate gates for coastal cargo. A new scheme for setting up of coastal berths at Major Ports has been approved. The Cabinet has also given approval to create a special purchase vehicle (SPV) to focus on providing different evacuation system in Major Ports and their connectivity.

A New Central Sector Scheme has been formulated to provide financial support by way of grant to:

**(1) Major Ports/ Non-Major Ports for**

**(i) Construction/ up-gradation of**

**(a) Exclusive coastal berths for coastal cargo**

**(b) berths/Jetties for passenger ferries**

**(c) Construction of platforms/ jetties for hovercrafts/ seaplanes in port waters and**

**(2) State Governments concerned for construction of berths/jetties in National Waterways.**

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 related to construction/ upgradation of coastal berths for coastal cargo and passengers and a maximum of Rs. 10 crore for construction of platforms for hovercrafts and jetties for seaplanes. The balance cost will have to be borne by respective ports/ concerned State Govt. from their internal/own resources.

**e) Sagarmala Project**

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

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

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

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

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

**h) Stevedoring Policy**

The Ministry of Shipping has formulated a new Stevedoring and Shore handling policy for Major Ports. The policy has been prepared in consultation with Major Ports and other Stake-holders. The policy shall come into effect in all the Major Ports except Haldia Dock



Complex (HDC) not later than 01.04.2016. The policy envisages an open and transparent auction system based on the TAMP notified tariff to give licenses for stevedoring and shore handling on revenue sharing basis for a period of three years. It is expected that the policy will bring in competition amongst the service providers and enable qualitative and cost effective services to the Trade.

**i) Benchmarking Study of Major Ports (Project UNNATI)**

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.

The benchmarking study focused on identifying how efficiently capacity is utilized and underlying operational performance metrics across commodities. The low berth productivity and crane productivity across container terminals at Major Ports along with potential to drive 15-20% higher volumes of coal across ports, just by replicating 'best demonstrated performance' consistently was studied. Potential to double volumes of POL by replicating BDP and reducing non working time and high costs of labour and maintenance dredging across ports was also analyzed.

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.

A total number of 116 new initiatives for 12 Major Ports has been identified which would increase the volume of traffic significantly and also avoidance of capital expenditure. The roadmap for improvement has been suggested along with the timelines, approach and methodology for

implementation. All the 116 recommendations are to be implemented by December 2019. Out of these, 69 have already been implemented. The implementation of these initiatives will further improve the efficiency and performance of the Ports.

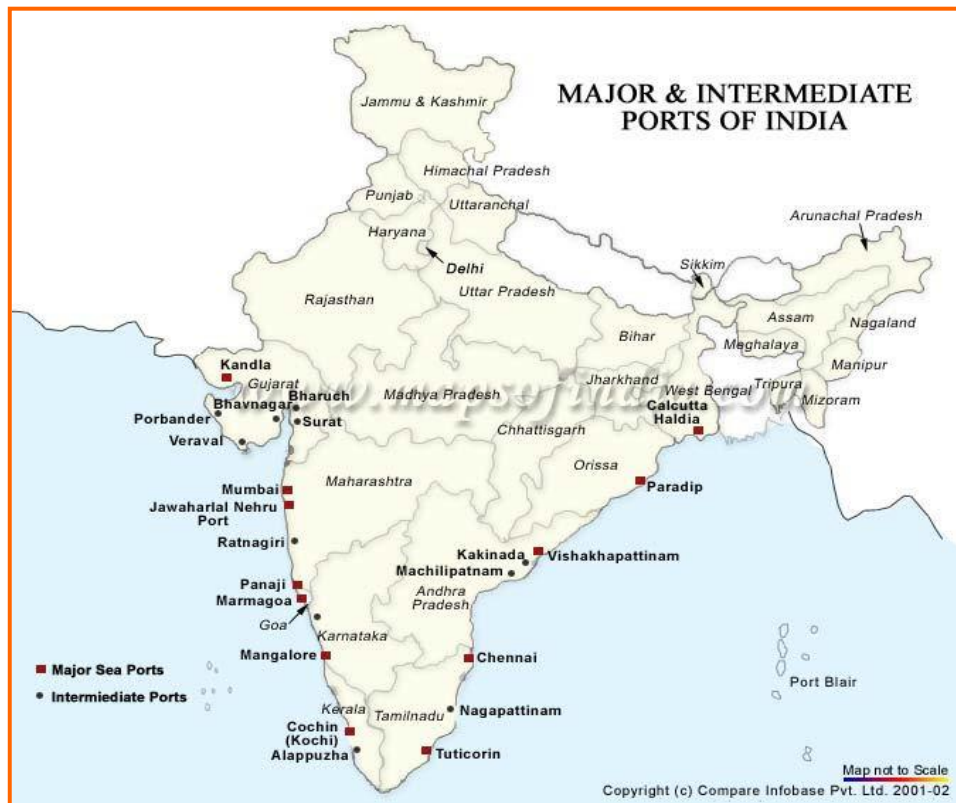
**j) Coastal Transportation of Vehicles by Ro-Ro Vessels**

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. 20<sup>th</sup> 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 2014-15, only 69 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 corporatised 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**

Non-major ports in India collectively handled 234.32 million tonnes of traffic during first six months of 2016-17 as compared to 223.33 million tonnes of cargo handled in the same six months of 2015-16 recording growth of 4.9%.

#### **2.4.1 GUJARAT**

2.4.1.1 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](http://www.gmbports.org/port_pog.htm)

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

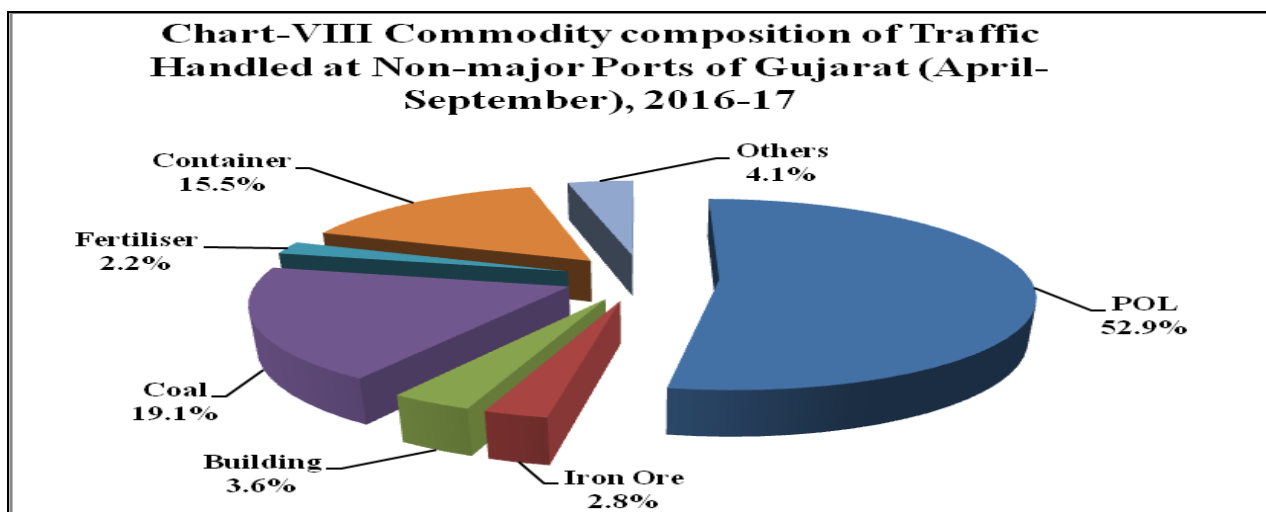
<b>Table 13 - Gujarat: Trends in Cargo Handled at Major &amp; Non-Major Ports</b>								
<b>(Million Tonnes)</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16(P)	2016-17(P)*
Major Ports	81.88 (03.0)	82.50 (00.8)	93.62 (13.5)	87.01 -(07.1)	92.50 (06.3)	100.05 (08.2)	50.38	53.96 (07.1)
Non-Major Ports	230.91 (12.3)	259.05 (12.2)	287.82 (11.1)	309.94 (07.7)	336.10 (08.4)	339.78 (01.1)	166.41	168.64 (01.3)
All Ports	312.79 (09.7)	341.55 (09.2)	381.437 (11.7)	396.95 (04.1)	428.59 (08.0)	439.83 (02.6)	216.79	222.60 (02.7)

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

2.4.1.3 It is noteworthy that all ports (major and non-major) located along the coast of Gujarat handled 40.1% of the total cargo handled by Indian ports in the first six months (April-September) of 2016-17. The total cargo traffic handled at the major and non-major ports of Gujarat during first six months (April-September) of 2016-17 was of the order of 220.6 million tonnes as

against 216.79 million tonnes in the same periods of 2015-16, reflecting an increase of 2.7%. In particular, non-major ports of Gujarat alone handled close to three-fourth of total cargo traffic at India's non-major ports during first six months (April-September) of 2016-17.

2.4.1.4 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**.



2.4.1.5 Recent trends in cargo handled and capacity creation in non-major ports of Gujarat are captured in the **Table 14**. It indicates sustained increase in cargo throughput and capacity addition. During the year 2015-16, 44 million tonnes of capacity was added taking the total cargo handling capacity in the non- major port sector in the Gujarat to 466 million tonnes. Gujarat Maritime Board (GMB) is the nodal agency for regulation and development of the State's maritime activities.

<b>Table 14 - Gujarat: Non Major Ports - Capacity &amp; Utilization</b>						
<b>Item</b>	<b>Million Tonnes</b>					
	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>2013-14</b>	<b>2014-15</b>	<b>2015-16(P)</b>
Capacity*	267	323	366	387	422	466
	(09.4)	(21.0)	(13.3)	(05.7)	(09.0)	(10.4)
Cargo Handled	230.91	259.04	287.82	309.95	336.09	339.78
% Utilization	86.5	80.2	78.6	80.1	79.6	72.9
* Including Lighter age Port Capacity; Figures within parenthesis indicate capacity addition in % age during the year						

2.4.1.6 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.

## 2.4.2 MAHARASHTRA

2.4.2.1 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 14 ports handle cargo. Maharashtra Maritime Board (MMB) is the nodal agency for regulation and development of the State’s maritime activities. 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**.

<b>Table 15 - Maharashtra: Cargo Handled at Major &amp; Non-Major Ports</b> (Million Tonnes)								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	118.90 (03.1)	121.92 (02.5)	122.53 (00.5)	121.52 -(00.8)	125.46 (03.2)	125.14 -(00.3)	63.35	61.59 -(02.8)
Non-Major Ports	14.88 (23.5)	19.95 (34.1)	24.20 (21.3)	24.66 (01.9)	27.30 (10.7)	28.85 (05.7)	12.27	15.52 (26.5)
All Ports	133.78 (05.0)	141.87 (06.0)	146.73 (03.4)	146.18 -(00.4)	152.76 (04.5)	153.99 (00.8)	75.62	77.11 (02.0)
Figures in bracket represent percentage change over the previous year/period. P- Provisional								

## 2.4.3 GOA

2.4.3.1 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.

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**.

<b>Table 16: Goa : Trends in Cargo Handled at Major &amp; Non-Major Ports</b> (Million Tonnes)								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	50.06 (02.5)	39.05 -(22.0)	17.74 -(54.6)	11.74 -(33.8)	14.71 (25.3)	20.78 (41.2)	8.1	13.1 (61.7)
Non-Major Ports	14.58 (04.9)	14.47 -(00.8)	3.39 -(76.6)	0.28 -(91.6)	0.76 (167.6)	0.43 -(43.4)	0.0	0.484 (00.0)
All Ports	64.64 (03.0)	53.52 -(17.2)	21.13 -(60.5)	12.024 -(43.1)	15.47 (28.7)	21.21 (37.1)	8.10	13.58 (67.7)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.								

## 2.4.4 KARNATAKA

2.4.4.1 Karnataka has a coastline of about 280 kms. At present, there is one major sea port, the New Mangalore Port and 9 non-major ports in Karnataka. Out of 9 non-major ports, 4 ports handle cargo in the state. During 2015-16, non-major ports in the State handled 0.84 million tonnes of cargo traffic as compared to 0.65 million tonnes in 2014-15 reflecting an increase of 28.3%. However, during first six months (April-September) of 2016-17, non-major ports in the State handled 0.32 million tonnes of cargo traffic as compared to 0.34 million tonnes in same period of 2015-16 reflecting decline of 5.9%.

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 17**.

<b>Table 17 - Karnataka: Trends in Cargo Handled at Major &amp; Non-Major Ports</b> (Million Tonnes)								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	31.55 -(11.2)	32.94 (04.4)	37.04 (12.4)	39.36 (06.3)	36.57 -(07.1)	35.58 -(02.7)	16.93	17.5 (03.4)
Non-Major Ports	3.10 -(63.7)	0.59 -(81.0)	0.61 (03.4)	0.51 -(16.6)	0.65 (27.9)	0.84 (28.3)	0.34	0.32 -(05.9)
All Ports	34.65 -(21.4)	33.53 -(03.2)	37.65 (12.3)	39.87 (05.9)	37.22 -(06.7)	36.42 -(02.1)	17.27	17.82 (03.2)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.								



## 2.4.5 KERALA

2.4.5.1 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.

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 18**.

<b>Table 18 - Kerala : Trends in Cargo Handled at Major &amp; Non-Major Ports</b> (Million Tonnes)								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	17.87 (02.5)	20.09 (12.4)	19.84 -(01.2)	20.89 (05.3)	21.60 (03.4)	22.10 (02.3)	11.33	11.92 (05.2)
Non-Major Ports	0.12 (00.0)	0.10 -(16.7)	0.10 -(04.0)	0.09 -(06.3)	0.16 (76.7)	0.14 -(11.3)	0.05	0.04 -(20.0)
All Ports	17.99 (02.5)	20.19 (12.2)	19.94 -(01.3)	20.98 (05.2)	21.75 (03.7)	22.24 (02.2)	11.38	11.96 (05.1)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.								

## 2.4.6 TAMIL NADU

2.4.6.1 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. 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.

2.4.6.2 During first six months (April-September), 2016-17, the non-major ports in Tamil Nadu collectively handled 0.48 million tonnes of cargo traffic as compared to 0.41 million tonnes in the

same period of 2015-16. 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**.

<b>Table 19 - Tamil Nadu: Trends in Cargo Handled at Major &amp; Non-Major Ports</b> (Million Tonnes)								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16(P)	2016-17(P)
Major Ports	98.2 (02.8)	98.77 (00.6)	99.55 (00.8)	107.08 (07.6)	115.21 (07.6)	119.11 (03.4)	60.46	60.1 -(00.6)
Non-Major Ports	1.61 (37.6)	1.21 -(24.8)	0.93 -(23.1)	0.87 -(06.9)	0.83 -(04.7)	0.86 (03.8)	0.41	0.48 (17.1)
All Ports	99.81 (03.2)	99.98 (00.2)	100.48 (00.5)	107.95 (07.4)	116.03 (07.5)	119.97 (03.4)	60.87	60.58 -(00.5)

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

## 2.4.7 ANDHRA PRADESH

2.4.7.1 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. In addition, the department of ports is taking up limited operations at the Kakinada anchorage port.

2.4.7.6 Ports in Andhra Pradesh collectively handled 63.6 million tonnes of cargo during first six months (April-September) of 2016-17 compared with 61.0 million tonnes in the same six months of 2015-16 thus registering increase of 4.4% in traffic handled by major and non-major ports of Andhra Pradesh. Non-major ports in Andhra Pradesh posted negative growth of 1.1% in the first six months (April-September) of 2016-17. 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**.

<b>Table 20 - Andhra Pradesh: Trends in Cargo Handled at Major &amp; Non-Major Ports (Million Tonnes)</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	68.04 (03.9)	67.42 -(00.9)	59.04 -(12.4)	58.50 -(00.9)	58.00 -(00.8)	57.03 -(01.7)	27.64	30.66 (10.9)
Non-Major Ports	43.27 -(01.0)	45.63 (05.5)	51.81 (13.5)	58.69 (13.3)	83.42 (42.1)	72.72 -(12.8)	33.31	32.95 -(01.1)
All Ports	111.31 (01.9)	113.05 (01.6)	110.85 -(01.9)	117.2 (05.7)	141.4 (20.7)	129.8 -(08.3)	61.0	63.6 (04.4)
Figures in bracket represent percentage change over the previous year/period. (P) Provisional.								

## 2.4.8 ORISSA

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

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

2.4.8.3 Non-major ports in Orissa collectively handled 10.56 million tonnes of cargo during first six months (April-September) of 2016-17 compared to 7.01 million tonnes in the corresponding period of 2015-16 registering an increase of 50.6% in traffic. 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**.

<b>Table 21 - Orissa : Trends in Cargo Handled at Major &amp; Non-Major Ports</b>								
<b>(Million Tonnes)</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)*
Major Ports	56.03 -(01.7)	54.25 -(03.2)	56.55 (04.2)	68.00 (20.2)	71.01 (04.4)	76.39 (07.6)	36.01	42.67 (18.5)
Non-Major Ports	0.4 -(04.8)	5.08 (1170.0)	11.07 (117.9)	14.37 (29.8)	15.45 (07.5)	14.71 -(04.8)	7.01	10.56 (50.6)
All Ports	56.43 -(01.7)	59.33 (05.1)	67.62 (14.0)	82.371 (21.8)	86.46 (05.0)	91.09 (05.4)	43.02	53.23 (23.7)

Figures in bracket represent percentage change over the previous year/period.  
(P) Provisional. \*: Dhamra Port has started operations in May 2011.

## 2.4.9 WEST BENGAL

2.4.9.1 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**.

<b>Table 22 - West Bengal :Trends in Cargo Handled at Major &amp; Non-Major Ports</b>								
<b>(Million Tonnes)</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16 (P)	2016-17 (P)
Major Ports	47.55 (02.4)	43.25 -(09.0)	39.93 -(07.7)	41.39 (03.7)	46.29 (11.8)	50.20 (08.4)	25.69	23.93 -(06.8)
Non-Major Ports	0	0	0	0	0	0	0	0
All Ports	47.55 (02.41)	43.25 -(09.04)	39.93 -(07.68)	41.39 (03.66)	46.29 (11.85)	50.20 (08.43)	25.69	23.93 -6.82

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

## 2.4.10 OTHER NON-MAJOR PORTS

The other non-major ports are spread across the Union Territories (UTs) of Daman & Diu, Puducherry, Lakshadweep and Andaman & Nicobar Islands. These ports in the UTs are

administered through their respective Departments. Andaman & Nicobar Islands administration has constituted a 'Port Management Board' for the development of ports in the Islands. The two non-major ports of Daman & Diu are not handling any cargo traffic for the last few years.

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**.

<b>Table 23 - Union Territory: Trends in Cargo Handled at A &amp; N Islands Port</b>								
<b>(Million Tonnes)</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16(P)	2016-17(P)
Andaman & Nicobar Islands	1.68 -(18.8)	1.21 -(28.0)	1.07 -(11.6)	1.15 (07.5)	1.16 (00.5)	1.69 (46.5)	0.59	0.65 (10.2)
Figures in bracket represent percentage change over the previous year/period. P- Provisional								

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

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

<b>Table 24 - Union Territories: Trends in Cargo Handled at Non-Major Ports</b>								
<b>(Million Tonnes )</b>								
Major/Non-Major	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April-September	
							2015-16(P)	2016-17(P)
Lakshadweep	0.03	0.03	0.03	0.12	0.12	0.12	0.06	0.06
Puducherry	4.71	6.42	6.91	6.28	4.96	5.97	2.88	4.59

### 3: PERFORMANCE INDICATORS

#### 3.1 Capacity Utilization

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 965.36 tonnes at the end of 2015-16. The port-wise capacity and traffic for 2015-16 is brought out in **Table 25**.

<b>Table 25-Major Port-wise Capacity Utilization during 2015-16</b>				
<b>(Million Tonnes)</b>				
<b>S. No.</b>	<b>Name of Ports</b>	<b>Capacity</b>	<b>Traffic</b>	<b>Capacity Utilization (%)</b>
1	Kolkata Ports of Trust	21.1	16.7	79.1
2	Haldia Dock Complex	65.89	33.5	50.9
3	Paradip Port Trust	126.94	76.4	60.2
4	Visakhapatnam Port Trust	107.75	57.0	52.9
5	Kamarajar Ports Limited	45.0	32.2	71.6
6	Chennai Port Trust	93.44	50.1	53.6
7	VOC-Chidambaranar Port Trust	59.26	36.8	62.2
8	Cochin Port Trust	49.66	22.1	44.5
9	New Mangalore Port Trust	77.77	35.6	45.8
10	Mormugao Port Trust	48.79	20.8	42.6
11	Mumbai Port Trust	49.33	61.1	123.9
12	Jawaharlal Nehru Port Trust	89.37	64.0	71.6
13	Kandla Port Trust	131.06	100.1	76.3
	<b>Total</b>	<b>965.36</b>	<b>606.4</b>	<b>62.8</b>

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

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

<b>Table 26: Annual Cargo Traffic Targets during 2016-17 and achievement upto September, 2016</b>				
<b>(In Million Tonnes)</b>				
S. No.	Name of Ports	Targets 2016-17	Traffic upto April-September, 2016	% age Achievement
1	Kolkata Ports of Trust	16.3	7.7	47.2
2	Haldia Dock Complex	37.5	16.2	43.2
3	Paradip Port Trust	83.1	42.7	51.4
4	Visakhapatnam Port Trust	60.0	30.7	51.2
5	Kamarajar Ports Limited	36.0	14.9	41.4
6	Chennai Port Trust	55.6	25.9	46.6
7	VOC-Chidambaranar Port Trust	39.5	19.3	48.9
8	Cochin Port Trust	25.0	11.9	47.6
9	New Mangalore Port Trust	37.3	17.5	46.9
10	Mormugao Port Trust	19.4	13.1	67.5
11	Mumbai Port Trust	62.0	30.8	49.7
12	Jawaharlal Nehru Port Trust	67.5	30.8	45.6
13	Kandla Port Trust	105.0	54.0	51.4
	<b>Total</b>	<b>644.2</b>	<b>315.5</b>	<b>49.0</b>

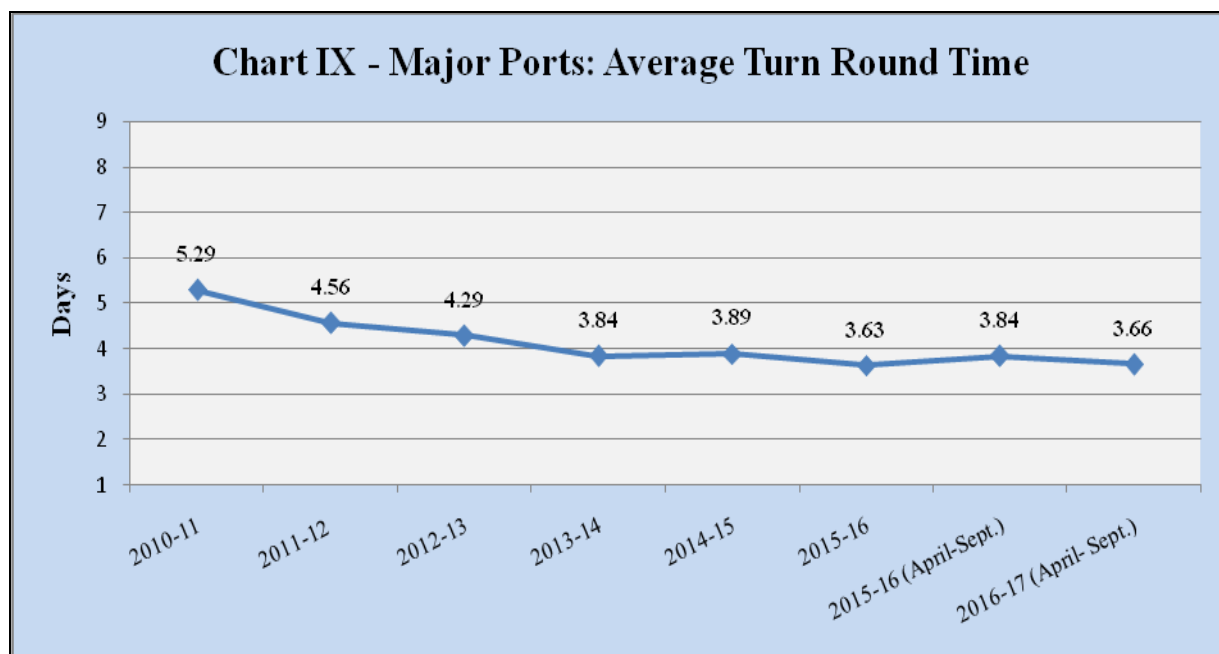
### 3.3 Port Efficiency

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 5.29 days in 2010-11. In 2011-12, the average TRT declined to 4.56 days and further to 3.84 days in 2013-14. However, TRT increased to 3.89 during 2014-15. The TRT declined to 3.66 during first six months of 2016-17. The TRT varied in the range between 2.18 days at Cochin Port to 6.53 at Kamarajar port during 2015-16. However, the TRT varied in the range between 1.89 days at Cochin Port to 5.81 at Mormugao Port during April-September, 2016. Amongst the 12 major ports, improvement in TRT during April-September, 2016 compared to corresponding period of 2015-16 is reflected in

all Major Ports except Kolkata, Haldia, Chennai and Mormugao. Port-wise TRT for select years are given in **Table 27**. Average Turn Round Time at major ports for select years since 2010-11 to 2016-17 (upto September, 2016) is presented in the **Chart IX** below.



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

**Table 27: Average Turn Round Time (days)**

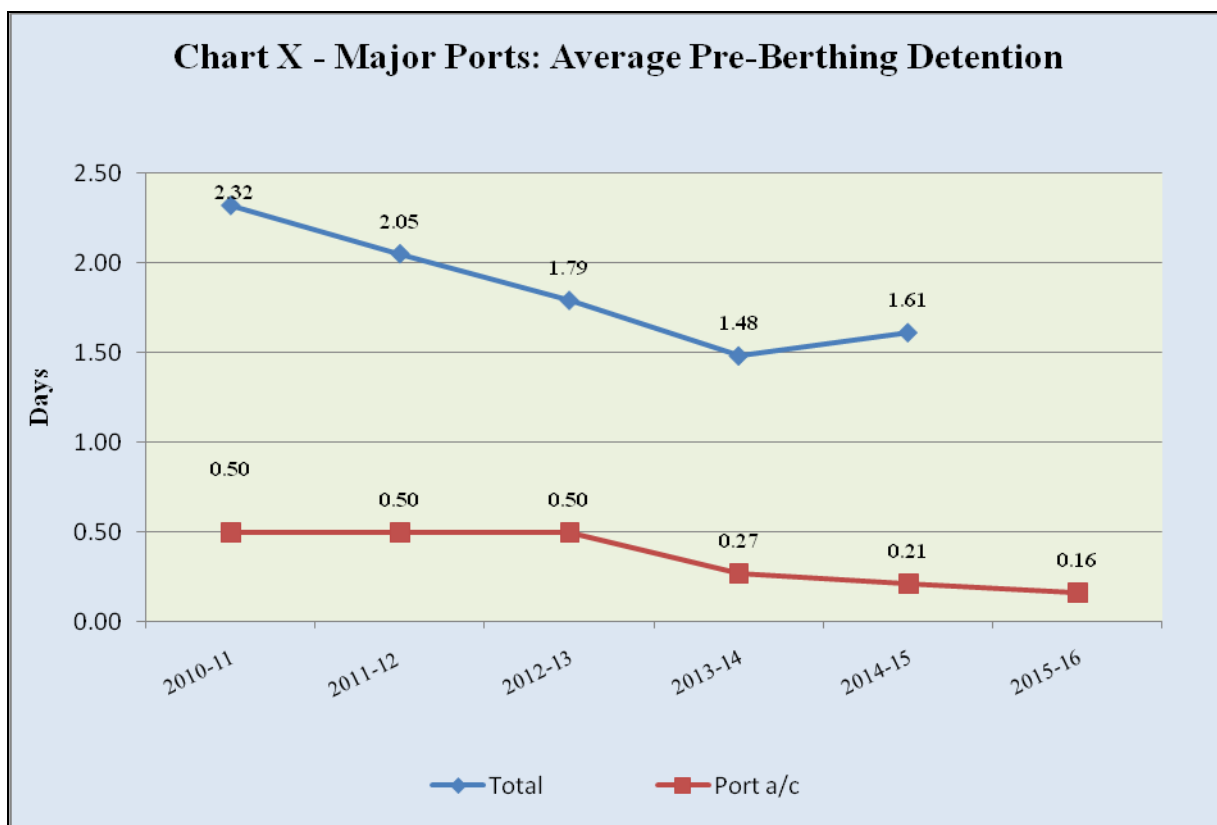
Port	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April- September	
							2015-16 (P)	2016-17 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	6.21	5.45	4.72	4.51	4.97	3.98	3.89	4.62
Haldia D.C	4.45	3.62	3.95	3.77	3.36	3.27	3.09	4.97
Paradip	7.73	6.33	4.39	4.62	7.01	4.50	5.32	5.24
Vishakhapatnam	5.84	5.68	5.39	4.73	5.67	3.84	4.38	3.77
Ennore (Kamarajar)	2.78	2.17	2.95	4.24	4.32	6.53	6.43	3.31
Chennai	4.36	3.91	3.24	2.46	2.54	2.53	2.57	2.69
Tuticorin (Chidambaranar)	4.00	4.94	4.31	3.92	3.37	3.73	4.04	3.76
Cochin	2.20	1.82	1.58	1.76	1.69	2.18	2.28	1.89
New Mangalore	2.70	2.95	3.29	3.18	2.46	2.63	2.80	2.35
Mormugao	10.43	7.68	5.06	4.50	3.97	3.65	3.70	5.81
J.L.Nehru	2.64	1.94	2.48	2.26	2.24	2.44	2.85	2.01
Mumbai	4.96	5.22	5.58	4.25	4.09	4.58	4.21	3.38
Kandla	5.90	6.42	6.33	5.66	4.90	4.66	5.06	4.72
<b>All Ports</b>	<b>5.29</b>	<b>4.56</b>	<b>4.29</b>	<b>3.84</b>	<b>3.89</b>	<b>3.63</b>	<b>3.84</b>	<b>3.66</b>

Source: Major Ports / Indian Ports Association (IPA)



### Average Pre Berthing Detention Time (PBDT)

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



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

**Table 28 : Average Pre-Berthing Detention(Days)**

Port	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)*	April-September*	
							2015-16 (P)	2016-17 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	1.23	0.77	0.61	0.56	0.71	0.01	0.01	0.01
Haldia D.C	3.73	2.54	2.29	2.21	1.43	0.15	0.19	0.75
Paradip	5.04	3.69	1.65	1.94	4.11	0.20	0.05	0.86
Vishakhapatnam	2.81	2.84	2.50	1.84	2.59	0.04	0.06	0.02
Ennore (Kamarajar)	0.65	0.76	1.33	2.38	2.51	0.00	0.00	0.00
Chennai	1.61	1.16	0.80	0.41	0.41	0.03	0.04	0.03
Tuticorin (Chidambaranar)	1.29	1.91	1.31	1.19	1.07	0.27	0.38	0.60
Cochin	1.03	1.05	1.09	0.97	0.84	0.06	0.10	0.00
New Mangalore	0.59	0.79	1.04	0.81	0.60	0.04	0.05	0.16
Mormugao	4.07	2.94	1.62	1.47	1.61	0.18	0.22	0.59
J.L.Nehru	1.51	1.13	1.31	1.08	0.80	0.37	0.51	0.30
Mumbai	1.23	1.37	1.62	1.18	1.69	0.31	0.40	0.07
Kandla	3.32	3.74	3.58	2.72	2.52	0.15	0.23	0.10
<b>All Ports</b>	<b>2.32</b>	<b>2.05</b>	<b>1.79</b>	<b>1.48</b>	<b>1.61</b>	<b>0.16</b>	<b>0.20</b>	<b>0.27</b>

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

### Average Output Per Ship Berth-day

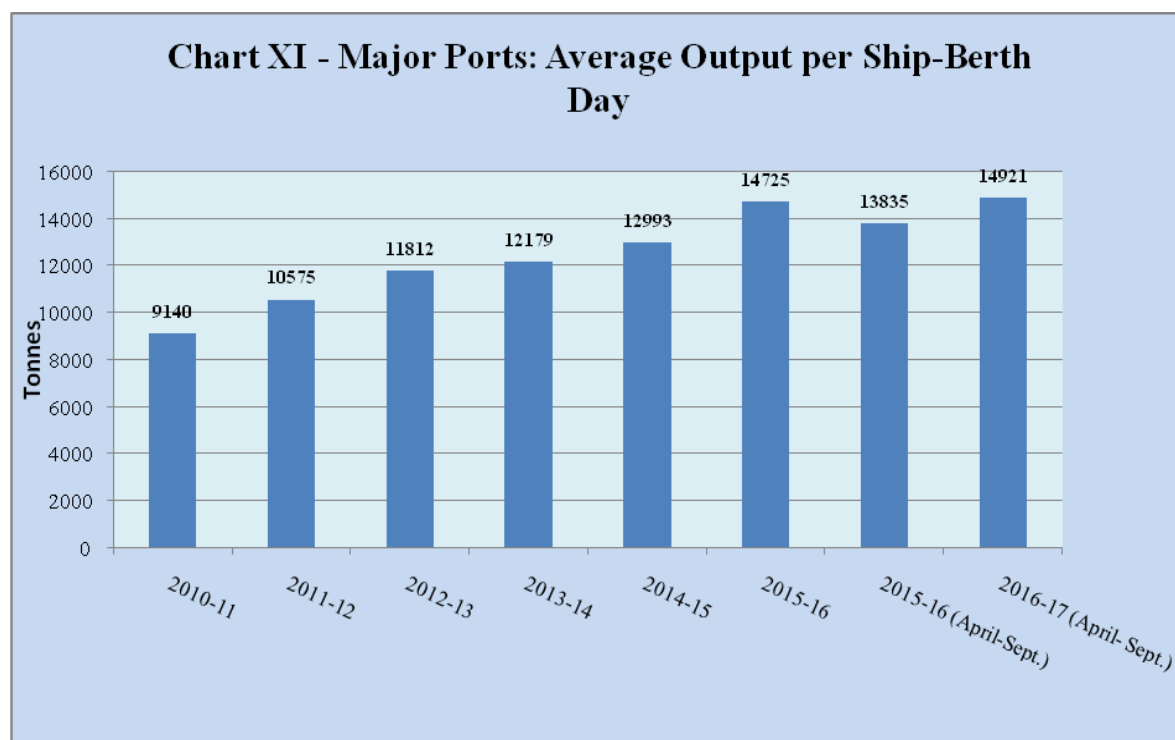
3.3.4 During the last 25 years this indicator has seen a tremendous improvement. Average Output per Ship-berth day has increased more than four times from 3,372 tonnes in 1990-91 to 14725 tonnes in 2015-16 for major ports and further increased to 14921 in 2016-17 (upto Septmeber, 2016). However, average output per ship berth day during April-September, 2016 is marked by substantial variation across major ports ranging from a high 22214 tonnes in case of Paradip port to a low of 4174 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 2016-17 over the corresponding period of the previous year is visible in all the ports except Kamarajar, Chennai, Mormugao and Mumbai. Average Output per Ship-berth day during 2016-17 (upto September, 2016) is 14921 tonnes compared to 13835 tonnes over the corresponding period of the previous year. Port-wise average output per Ship-berth day for select years and latest period are given in **Table 29**.

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

Port	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)	April- September	
							2015-16 (P)	2016-17 (P)
1	2	3	4	5	6	7	8	9
Kolkata D.S	2253	2503	2762	2963	3084	4182	4129	4174
Haldia D.C	6563	6728	6078	6130	6802	7790	6919	7739
Paradip	14243	15995	16625	18179	17736	21139	18740	22214
Visakhapatnam	10334	10704	10641	10925	10640	12802	11733	12889
Ennore (Kamarajar)	17669	27505	27741	22357	22613	31080	23235	22124
Chennai	10984	10352	12046	14268	14464	15742	16636	15739
Tuticorin (Chidambaranar)	7035	6733	7452	9633	10468	10239	10035	10653
Cochin	11752	15784	15878	15881	16906	15661	14811	16394
New Mangalore	14211	13957	15921	16314	19856	16165	16256	16465
Mormugao	4409	10530	11484	10018	12272	13885	12577	12042
J.L.Nehru	20393	19227	23319	23014	21310	21287	20550	22803
Mumbai	6042	6476	8709	7057	11055	7922	8260	8065
Kandla	14137	14272	15728	15729	15159	16655	16087	17789
<b>All Ports</b>	<b>9140</b>	<b>10575</b>	<b>11812</b>	<b>12179</b>	<b>12993</b>	<b>14725</b>	<b>13835</b>	<b>14921</b>

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

3.3.5 The average out-put per ship-berth-day for selected years since 2010-11 to 2016-17 (upto April-September, 2016) is presented in the **Chart XI** below.



#### **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 30.9.2016 are brought out in Appendix-I & Appendix-II in respect of Major Ports and in Appendix-III & Appendix-IV for Non – Major Ports.

#### **APPENDICES**

- I. On going Private Sector/Captive/ Joint Venture Port Projects at Major Ports
- II. Under Formulation Private Sector/Captive/ Joint Venture Port Projects at Major Ports
- III. On going Private Sector/Captive/ Joint Venture Port Projects at Non-Major Ports
- IV. Under Formulation Private Sector/Captive/ Joint Venture Port Projects at Non- Major Ports

## Appendix – I

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

Sl. No	Project Name	Port Name	Capacity (Million Tonnes)	Project Cost (Rs. Crores)	Project Status
1	2	3	4	5	6
1.	Development of Container Terminal on DBFOT basis	Kamarajar Port Ltd	16.8MT	1270	-Concession Agreement signed with the Concessionaire Adani Ennore Container Terminal Pvt. Ltd. on 15.3.14 -Award of Concession for Phase-I Development (400 m quay length) was granted to the Concessionaire on 20.10.14. -The Concessionaire has commenced the Phase-I Terminal Construction work.
2.	Development of Multi Cargo Terminal on DBFOT basis	Kamarajar Port Ltd	2.00	151	Concession Agreement signed with the Concessionaire M/s Chettinad International Bulk Terminal Pvt. Ltd. on 28.3.14 -Award of Concession was granted to the Concessionaire on 24.04.15. -The work has commenced.
3.	Construction of Coal Berth No.3	Kamarajar Port Ltd	9.00	198.95	LOA was issued to M/s ITD Cementations Ltd and Date of commencement reckoned from 21.2.15 Pre Project activities are in progress.
4.	Development of LNG Terminal	Kamarajar Port Ltd	5.00	5151	Concession agreement signed with SPV company M/s Indian Oil LNG Pvt. Ltd. on 31.07.2015. Project site handed over on 18.8.15

5.	Construction of Coal Berth-4	Kamarajar Port Ltd	9.00	325	KPL has issued LOA to M/s Afcons Infrastructure Ltd, Mumbai for construction of berth. The work has been commenced.
6.	Construction of two New Off-shore Container berths & Development of Container Terminal berth on BOT basis in Mumbai Harbour.	Mumbai Port	9.60MTP A (1.00 Mn TEUs)	1461	<p><b>BOT Component-</b> Entire Approach jetty is ready. Berth structure completed. Total investment till date is Rs. 627.25 crores. M/s. ICPTL has proposed to procure container handling equipment from 2 Chinese vendors. Details of vendors have been forwarded to ministry on 31.7.14 for security clearance. Development of container yard in Princess Dock is in progress.</p> <p><b>MbPT component-</b> Fresh tenders for balance work of dredging and filling dock enclosure have been invited.</p> <p>i) The Board in its meeting held on 25.4.14 has accepted the bid of M/s International Seaport Dredging Ltd., for award of work subject to Govt. sanction to RCE.</p> <p>ii) Work order for balance filling work and dock closure placed on 4.4.14. Work of Princess Dock filling completed. Victoria Dock filling work is in progress. RCD work is in progress.</p> <p>iii) Trial operation of berth facilities has been successfully done on 26.11.14. The Board on 16.1.15 has approved alternate use of OCT project for handling automobiles with revenue sharing on trial basis for a period of 3 months.</p>
7.	Multi-User Liquid Terminal (MULT) at Puthuvypeen SEZ (International Bunkering Terminal at Cochin)	Cochin Port	4.42 MTPA	240	<p>Govt's in principle approval for assigning the MULT projects to IOCL on nomination basis given on 11.3.13. The project was assigned to IOCL subject to certain conditions.</p> <p>The concession Agreement signed with IOCL on 04/04/2014. Application to KSPCB for</p>

					<p>conducting public consultation and application to KCAMA for CRZ clearance for MULT project wer submitted on 11.6.14. A fresh on line application to MoEF for obtaining Environmental Clearance uploaded on 16.4.15 after changing the project sector from Industrial to Infrastructure and Misc. Projects + CRZ. DC, SEZ conveyed the approval of the Ministry of Commerce &amp; Industry on 12.8.14 to M/s IOCL for undertaking additional activities in consultation with development of MULT in Puthuvypeen SEZ. M/s IOCL have entrusted CoPT with execution of construction of jetty and its associated facilities through EPC contractor.</p> <p>M/s L&amp;T Ramboll Consultin Engineers Ltd. Chennai was entrusted with preparation of FEED Document and Bid document for the Development of MULT. On tendering two bids on due date. Price bid of the one prequalified bidder opened and IOCL's concurrence for awarding the contract is awaited. For Capital Dredging for Mult Basin, letter of intent has been issued to M/s DCI on 17.08.2015.</p>
8.	Setting up of Mechanized Iron Ore handling facilities at berth No. 14 by M/s. SICAL Logistics Limited on BOT basis.	New Mangalore Port Trust	6.62 MTPA (Capacity of Jetty)	296.03	The concession was awarded to M/s SICAL on 03.06.2010. The Concessionaire has not commenced the work due to ban on export & movement of iron ore imposed b Karnataka Govt. The Concessionaire has requested to excuse for performance under Force Majeure clause. M/s. SICAL was given one more opportunity to commence the work before 8.4.2014 and give milestone accordingly, failing which necessary action may be taken to terminate the contract as

					per the provisions of Concession Agreement. As resolved by the Port Trust Board a letter to M/s. SICAL is issued on 08.10.2013. & reminder letter sent on 09.01.2013 reply is awaited. Programme is not yet submitted by M/s. SICAL. M/s. SICAL has filed writ petition against the board of Trustees NMP under article 226 & 227 of constitution of India. Hon'ble High Court has given interim order date 20 February 2014 in the said W.P. disposal of writ petition:- 1. Stay any further action that may be taken in relation to termination of the concession agreement between the Board of Trustees of the NMPT & M/s. SICAL. 2. Stay of the enforcement of any of the terms of the invoking / encashing the Bank Guarantee issued on behalf of M/s. SICAL in terms of the Concession Agreement and from receiving any money under bank guarantee. Port is in process of vacating the stay. Hearing of the case has been completed.
9.	Development of Barge handling facility at Bharathi Dock	Chennai	1.35 MTPA	27.29	Concession agreement signed with Chennai Bunkering Terminal Pvt. Ltd., on 30.3.2013. The expert was appointed to resolve the issue regarding phased development. The report of the expert has been received and placed in Board Meeting.
10.	Development of EQ-1A berth on south side of EQ-1 berth in Inner Harbour for handling Thermal coal and Steam coal	Visakhapatnam	7.36	313.39	Physical progress is 78 % Expected completion by December, 2016.
11.	Installation of mechanized Fertilizer handling facilities at EQ-7 at Inner Harbor.	Visakhapatnam	5.21	217.58	Concession agreement signed on 18.05.2012. Letter of award given on 18.04.2013. Concessionaire has to submit 5 yrs. License fee as



					refundable security deposit. Termination notice issued on 05.04.2014. The concessionaire has filled Writ petition in High Court, Hyderabad.
12.	Up-gradation of the existing facility (OHC) and creating new facility (WQ-1) for iron ore handling.	Visakhapatnam	23	845.41	LOA issued on 31.05.2013 to M/s Vadinar Oil Terminal Ltd. Concessionaire was awarded on 14.05.2015. Phase I construction started from 14.05.2015.
13.	Extension of existing Container terminal in outer harbor.	Visakhapatnam	0.54 MTEUs	633.11	Concession agreement signed on 17.12.2014. Expected date of completion 30.11.2018.
14.	Development of Deep Drought Coal Berth on BOT basis	Paradip Port	10.00	655.56	The concession agreement signed with ESSAR Paradip Terminal Ltd. is terminated on 02.09.2016. Fresh RFQ has been invited on 19.10.2016.
15.	Development of Multi-Purpose berths to handle clean cargo including container on BOT basis at Paradip Port.	Paradip Port	5.0 MTPA	430.78	Award of concession has been issued to Paradip International Cargo Terminal Pvt. Ltd. (PICTPL) on 04.04.2016. Work is in progress.
16.	Mechanization of EQ 1 to EQ 3 berths at Paradip Port on BOT basis.	Paradip Port	30	1437.76	Letter of Award has been issued in favour of Consortium of JSW infrastructure Ltd and South West Port Ltd. On 29.02.2016 with a revenue share of 31.70 percentage to Paradip Port Trust. However, the H2 bidder Kakinada Sea Ports Ltd. Filed a writ in Honorable High Court of Odisha challenging the award in favour of JSW. Honorable High court of Odisha has quashed the LoA. The matter is now subjudice in the Supreme Court.
17.	Development of Deep Draught Iron Ore Berth on BOT basis at Paradip Pot.	Paradip Port	10	740.19	Award of concession has been issued to JSW Paradip Terminal Pvt. Ltd. on 12.04.2016. Presently, detailed Engineering is under progress.
18.	Conversion of berth No. 8 as container terminal	Tuticorin	7.2 MTPA	312.23	LOA issued to M/s Dhakshin Bharath Gate way Terminals Pvt. Ltd. 7.8.12 with a gross revenue share of 55.19%. Concession Agreement signed

					on 4.9.12. Work is in progress. Two number of reach stackers arrived and firm has taken action to purchase shore crane. M/s STUP Consultant, Chennai is appointed as Independent Engineer for the project. Partial operation has started on 11.5.2014.
19.	Construction of One Number of Shallow Draught Berth on DBFOT Basis.	Tuticorin	2.67 MTPA	84.08	LOA issued to M/s Transstroy – OJSC consortium on 31.12.12 with a Gross revenue share of 22%. Concession Agreement signed on 17.4.13. Revalidation of Environmental Clearance received from MOEF vide letter dated 31.03.2014. The concessionaire has not fulfilled the condition precedent and termination of concession agreement was issued on 31.08.15. Re-tender was called on 25.11.15 and under process.
20.	Development of North Cargo Berth – II on DBFOT basis.	Tuticorin	7.0 MTPA	332.16	The Concession agreement signed with concessionaire M/s Tuticorin Coal Terminal Pvt. Ltd. Mumbai on 11.9.2010. About 90% of work completed at site physically. Tender process completed to carry out dredging work in front of the Berth by the Port and environment clearance from MOEF received. Security clearance issued at Port level on 30.06.14 for import of equipment from China.
21.	Development of North Cargo berth – III	Tuticorin	9.15	420	V.O.CPT accorded approval to issue LOA in favour of the H1 Bidder M/s. Transstroy OJSC Consortium at a Gross Revenue Share of 30%. The concession Agreement signed on 07.02.2014. Capacity Addition of 9.15 MTPA. Concessionaire requested the Port to grant 3 months time to fulfill the condition precedents and time has been granted by Port upto 31.3.2016 to fulfill the condition precedent.

22.	Development of North Cargo berth – IV	Tuticorin	9.15	355.0	LOA was issued to M/s Transstroy OJSC Consortium on 30.01.2013 at Gross Revenue share of 30% concession Agreement signed on 17.04.2013. On the request of Concessionaire the port has granted the time upto 31.12.2016 to fulfill the condition precedent.
23.	Development of Fourth Container Terminal at JNP on DBFOT basis	JNPT	60 MTPA	7915	The work is in progress. The first phase schedule date of commencing is 22.12.2017 and second phase will commission by December, 2022.
24.	Development of standalone handling facility with a quay length of 330 m to the North at JNPT	JNPT	10 MTPA	600	The Concessionaires are completed the wharf construction work. RMQCs are installed, JNP Board has allowed for partial commissioning of the Operation.
25.	Redevelopment of Berths 8,9 and Barge Berth at the Port of Mormugao, Goa	Mormugao	19.22 MTPA	114.5	Concession Agreement signed with M/s Goa Sea Port Pvt. Ltd. (SPV of Sterlite Port Ltd.) on 22.09.2016
<p>BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer.  Note: The project status of Project name at S. No. 10, 13, 14, 15, 16, 17, 23 &amp; 25 is updated on 30<sup>th</sup> September, 2016.</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.	Barge handling facilities at Khori Creek	Kandla	4	100	Under planning stage.
2.	Construction of T shape Jetty at Tekra (Phase-II)	Kandla	14	1500	The scheme will spill over in 13 <sup>th</sup> five year plan. Under planning stage.
3.	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.
4.	Construction of barge jetty at Tuna on BOT basis	Kandla	5.49	255.3	Feasibility Report, RFQ and TAMP proposal under approval.
5.	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.
6.	Construction of 1 No. shallow water berth for handling construction materials	Tuticorin	2.00 MTPA	65.37	Court case filed by M/s Indian Port Terminal, Tuticorin. The matter is at Hon'ble Madras High Court, Chennai. Next date of hearing is yet to be announced.
7.	Development of Outer Harbour at Chennai Port (previously called Development of Mega Container Terminal). Under PPP mode on BOT basis.	Chennai Port Trust	(32 MTPA)	5100	The mega container terminal project restructured as Outer Harbor terminal due to low revenue share quoted by bidders for Megha Container Terminal. Due to poor investors response to the bid invitation on account of high captive cost, alternative modes of financing the project are under examination.
8.	Development of Rajiv Gandhi Dry Port and Multi Modal Logistic Hub at Mappedu near Sriperrumbudur; under PPP mode	Chennai Port Trust	18.45 MTPA	415	Due to global economic recession and road connecting problems, bid invitation received poor response. Alternative use of the land being discussed with prospective bidder for better investors' response.

9.	Development of Dry Dock /Ship Repair facility at Timber pond/Boat basin in Chennai Port on Private Sector Participation (Land Lease Model) for a lease period of 30years	Chennai Port Trust		315	Draft MOU has been prepared by ChPT and forwarded by Indian Coast Guard to Ministry of Defence for scrutiny during March, 2015. Response awaited.
10.	Development of Bharthi Dock - 2(BD-II) as co- terminal in Chennai Port Trust	Chennai Port Trust	5MTPA	180	Empowered committee (EC) Supreme Court likely to give its recommendations by 30.06.2016
11.	Development of JD (East) berths as Multi-cargo Terminal	Chennai Port Trust	5	369	The Supreme court adjourned the case for final hearing to November, 2015 on the receipt on the report on the dust free handling of Coal. If Supreme Court allows coal handling JD (E) will develop as Coal Terminal.
12.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
13.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
14.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
15.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
16.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Haldia Dock Complex under KoPT	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.

BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer.

## Appendix – III

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

Sl. No	Project Name	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	Development of Mundra Port	Mundra (Gujarat)	160	12305	<p>Construction of 4 berths alongwith backup facilities has been completed.</p> <p><b>Phase-I of the Project completed &amp; Operational</b></p> <p>1.810 m Multipurpose jetty            2.1843 m container terminal &amp; T-2            3. 1 SBM and other back up facilities</p> <p><b>Phase-2:</b></p> <p>1. 1510 m Coal Terminal, Wandh-Operational            2. 810 m Container Terminal Operational            3. Second SBM Operational            4. Multipurpose 3 Operational            5. Out of two proposed LNG Berths under Phase-II, Proposal for granting in principle approval to be developed in JV with GSPC LNG Ltd., has been submitted to GOG. The same is yet to be received. Meanwhile construction permission to GLL has been issued.            6. In-Principle approval has been granted to M/s ACMTPL for development of Container Terminal 4. Construction is in progress.</p>
2.	Captive jetty by Cairn Energy India Pvt. Ltd. Bhogat Dist. Jamnagar	Bhogat (Gujarat)	7	1285	Construction completed, landing place declared. Agreement to be signed after GOG approval.
3.	Captive Jetty by Essar Salaya Bulk Terminal Limited.	Salaya (Gujarat)	7	600	The Construction of Jetty is completed. Approach bund is under construction.

4.	Captive Jetty by ABG Cement Ltd	Hazira Mora (Gujarat)	2	100	Construction permission granted. Extension in construction period is granted by the Board in its meeting held on 28.09.2015.
5.	Captive Jetty by M/s. Essar Bulk Terminal Ltd. -1100m (3 <sup>rd</sup> Expansion)	Hazira (Gujarat)	25	2621	Construction permission granted by the Board in its meeting held on 03.09.2015.
6.	Captive Jetty by M/s Godrej – Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej (Gujarat)	1	5.9	Construction permission granted by the Board in its meeting held on September 2015.
7.	Captive Jetty by M/s ISGEC – Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej (Gujarat)	1	55	Construction permission granted by the Board in its meeting held on September 2015.
8.	Demolition of old existing jetty and reconstruction of new Capt. Of Ports jetty at Old Goa.	Panaji-Port Goa	*	20.36	95% work of construction is completed.  * The jetty will cater to low craft passenger vessel and other small crafts. No cargo will be discharged/ loaded at this jetty.
9..	Establishing a captive port at Parangipettai by M/s IL &FS Limited	Parangipetta i Tamil Nadu	13 MMTPA	1349	Construction yet to commence.
10.	7 <sup>th</sup> Berth	Kakinada Deep Water Port, Andhra Pradesh	2.5	90	The Project is under progress.
11	Phase-2-Development of Krishnapatnam Port	Krishnapatnam Andhra Pradesh	44.30(Bulk & Gen Cargo) 3.30 MTEU (Container)	6600	Under construction

12.	East Coast Energy Pvt. Ltd.,	Meghavaram, Andhra Pradesh	Captive Port	2370	To be operational by the 1 <sup>st</sup> quarter of 2017
13.	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.
14.	Development of Pondicherry Port through private investment on BOT basis	Pondicherry	Phase – I 16.2  Phase - II 10.8	2785   N.A	The Arbitration ended on 18.07.2016 with the pronouncement of a “NIL” award against a claim of Rs. 1511 crores sought by the erstwhile private developer from the Government of Puducherry. However, on 17.10.2016 the private developer has filed a petition in the Puducherry Court for setting aside the Arbitral Award.
15.	Construction of Captive Jetty at Manki in Honnavar Taluk of U.K District by M/s. Shree Renuka Energy Ltd., Belgaum	Manki Karnataka	2.0(3.5 in Future)	50	M/s Renuka Sugars Limited (RSL), Belagavi has been permitted to construct 2MTPA capacity Captive Jetty at Manki Port for which 75000 Sqm of port land has been sanctioned. RSL has not commenced developmental works.
16.	Anchorage operations at Honnavar Port by M/s Honnavar Port Pvt Ltd., Hyderabad	Honnavar, Karnataka	4.99	511.0	M/s Honnavar Port Private Limited (HPPL) has signed agreement with State Government for development of Honnavar Port. Total 137560 Sqm area of port land has already sanctioned and accorded approval for construction of jetty, breakwaters and dredging. Preliminary works are in progress.

Source: Maritime States/Maritime Boards.

Note: Note: The project status of Project name at S. No. 8, 9, 10, 13, 14, 15 & 16 is updated on 30<sup>th</sup> September, 2016.



## Appendix – IV

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

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
1.	GCPTL Proposed 2nd liquid jetty & allied infrastructure.	Dahej (Gujarat)	2.5-3.5 (estimated)	2500 (estimated)	Techno- Commercial Feasibility study is under progress.
2.	Sterling Port Limited	Dahej (Gujarat)	41 ( Phase -I)	2501.8	Under Construction.
3.	Development of Chhara Port	Chhara (Gujarat)	8	1200	CA signed on 29.1.2015 Environment Clearance received. Financial closure is under process.
4.	Development of Modhawa port.	Modhawa (Gujarat)	Developer Under selection at GoG Level		
5.	Development of Greenfield port by M/s. IL & FS	Khambhat (Gujarat)	Kept on hold due to Kalpsar Project.		
6.	Development of Greenfield port by Ms. JK Cement Group	Dholera (Gujarat)	Kept on hold due to Kalpsar Project.		
7.	Development of Nargol Port	Valsad (Gujarat)	20	4300 (Estimated)	DPR has been submitted which is under scrutiny. Environment Clearance is to be obtained by the Company.
8.	LNG Terminal by Swan Energy Ltd.	Jafrabad, Pipavav, Gujarat	5	4000	DPR approved. Environment Clearance received. Financial Closure & Concession Agreement is under discussion.
9.	Captive jetty expansion by M/s. Sanghi CEMENT Ltd.	Jakhau, Gujarat	2	150	Environmental clearance awaited
10.	Captive jetty by M/s Archan Chemical Budh Bunder	Jakhau, Gujarat	2	135	In principle approval has been granted by GoG. Studies & investigations for DPR are under progress.
11.	Multi-purpose jetty at Sikka by Reliance Industries Ltd.	Sikka, (Gujarat)	15	1000	Studies are under progress.
12.	Captive jetty by M/s Universal	( Bhogat )	5	12.6	Environmental clearance awaited.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
	Success Enterprise Ltd	Gujarat)			
13.	M/s Sealand Port Pvt. Ltd ( a group company of IL&FS ) Coal Jetty & Multipurpose Jetty	Nana Layja, Kutch, Gujarat	17	1000	In principle approval is granted by GoG (December 2014)l
14.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Multipurpose Jetty under Gujarat SEZ Act.	Nana Layja, Kutch, Gujarat	3	256	In principle approval is granted by GoG (September 2015)
15.	Captive jetty by M/s Reliance Ports Terminal Ltd. – 6 th oil tanker berth at Sikka –A2	Sikka, Gujarat	7	180	In principle approval is granted by Board of GMB ( June 2015)
16.	SPM no. 2 at Hazira by Reliance Industry Ltd.	Hazira,Gujarat	4	100	Studies are under progress.
17.	Redi Port Ltd	Redi Port Maharashtra	33.38 MTPA & 1.74 m/EU	3634	Awaiting Environmental Clearance from MOEF
18.	Vijaydurg Ports Pvt Ltd	Vijaydurg Port, Maharashtra	78	4000	TORs received from MOEF
19.	Rewas Port Ltd	Redi Port Maharashtra	Phase I - 66m.ton	Phase I 7000	Permission for Right of Way yet not received from MbPT
			Phase I! - 185 m.ton		
			Phase I I I – over 400 m.ton		
20.	Construction of Terminal building	Panji Port	*	28.33	Project is in initial stage. *This is integral part of Capt. of ports jettiey at Panji
21.	Captive port facility by M/s. Udangudi Power Corporation Ltd.	Udangudi Thoothukudi	6	9083	Port has been notified. Statutory clearances. Financial closure pending

<b>Sl. No</b>	<b>Project</b>	<b>State/ Ports Maritime Board</b>	<b>Capacity (Million Tonnes)</b>	<b>Project Cost (Rs. In Crore)</b>	<b>Project Status</b>
1	2	3	4	5	6
		Tamil Nadu			
22.	Captive port facility by M/s. Coastal Tamil Nadu Power Ltd.	Cheyyur Kancheepuram Tamil Nadu	13	1832	Notification of Port limits under process
23.	Captive port by M/s. Chettinad Power Corporation Ltd.	Tharangambadi Taluk Nagapattinam Tamil Nadu	3.5	1000	Port has been notified. Development under process.
24.	Captive port permitted to handled other commercial cargo by M/s. Nagarjuna Oil Corporation Ltd.	Thiruchopuram in Cuddalore Tamil Nadu	9.3	384 (Captive facility only )	Port has been notified. Development has temporarily been stopped due to financial issues.
25.	Development of Machilipatnam Port Ltd.	Machilipatnam Port Andhra Pradesh	45- Phase-1 Stage-1 250-Master Plan	6778	Land acquisition is in progress.
26.	Nakkapalli Port	Nakkapalli Andhra Pradesh	Captive Port 4.00 MMT	479	Investigation studies are in progress.
27.	2nd stage Development of Karwar Port	Karwar Karnataka	20	1994.0	Bidding process yet to be commenced for selecting developer.
28.	Development of Modern Sea Port at Tadri.	Tadri Karnataka	34.40	3800	The Government of Karnataka has taken decision to develop a Green field deep drafts modern port at Tadri. Karnataka infrastructure Development department nominated KSIIDC as nodal agency and preparation of DPR is in progress.
29.	Development of Honnavar Port	Honnavar Karnataka	2	20	M/s. Honnavar Port Ltd., has submitted DPR for the approval of the Government.

Sl. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
30.	Captive Port at Manki Port	Manki Karnataka	1	4.6	M/s. Renuka Sugar is in the process of preparing DPR for construction of captive jetty.
31.	Development of Port and setting up trade warehousing Zone at Belekeri.	Belekeri Karnataka	10	1500	State government initiated development of 10MTPA capacity port & setting up of free trade ware housing zone at Belekeri at cost of Rs. 1500 Crores and prepared pre-feasibility report, RFP & Q and draft concessional agreement for inviting public tender for identifying developer. Ministry of Shipping, GOI, also shown interest for development of Belekeri Port.
32.	Development of captive jetty at Pavinkurva, Kunta	Pavinkurve Port(Newly declared port)	7.6	160	The proposal is under consideration.
33.	Development of Bulk Liquid Berth for handling L.N.G.	Karaikal Port Puducherry	5.0	1948	Applied for Environmental Clearance.

Source: Maritime States/Maritime Boards.

Note: Note: The project status of Project name at S. No. 17-23, 25-28, & 31 is updated on 30<sup>th</sup> September, 2016.

## Outlay And Expenditure - Port Sector (Central)

(Rs. In crore)

Port	Annual Plan (2010-11)		Annual Plan (2011-12)		Annual Plan (2012-13)		Annual Plan (2013-14)		Annual Plan (2014-15)		Annual Plan (2015-16)		Annual Plan (2016-17)	
	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual	App. Outlay	Actual	App. Outlay	Actual Exp. Upto Sept, 2016
1	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Kolkata (a)	50.88	49.76	63.73	21.29	28.45	17.34	38.03	5.86	43.75	23.04	46.00	7.73	51.09	16.08
Mumbai	179.58	116.76	176.57	142.05	279.79	149.30	427.60	24.87	50.00	76.53	230.79	31.51	300.62	67.78
JNPT	89.61	38.24	153.69	140.52	341.18	240.21	1559.10	137.58	647.54	294.82	235.85	83.9&&	300.00	110.74
Chennai	243.00	184.46	136.00	4.44	145.00	81.75	107.00	9.20	41.99	4.11	39.00	33.30	50.00	50.64
Cochin	259.35	160.86	115.08	92.21	93.45	78.47	123.05	3.40	42.84	17.20	3.00	6.81	33.31	27.46
Visakhapatnam	151.00	121.19	190.00	113.45	102.71	57.92	182.34	26.07	306.88	274.69	414.01	23.53	231.61	112.46
Kandla	45.66	52.70	92.27	52.82	166.89	138.44	145.45	28.30	100.00	324.47	308.92	5.26	132.97	30.58
Mormugao	66.29	71.52	108.93	69.17	71.36	46.95	110.00	24.75	82.87	61.17	13.76	3.68	244.81	29.55
Paradip	166.21	81.26	70.00	74.80	127.31	73.73	96.91	55.65	132.60	85.10	22.50	68.14	35.00	49.94
New Mangalore	31.00	24.56	36.00	38.45	36.00	45.50	75.00	8.04	50.00	67.94	64.35	17.83	71.05	57.08
Tuticorin	90.94	172.08	291.97	369.65	201.42	42.63	547.82	3.19	600.85	34.09	422.33	90.17	160.63	21.55
Ennore Port Ltd.	95.00	70.12	60.00	61.92	73.50	80.03	600.00	28.38	220.00	62.50	200.00	99.81	250.00	327.19
Sethusamudram Ship Canal Project	10.00	6.02	10.01	8.51	4.00	2.12*	6.00	1.42*	0.50	2.94*	477.5	0.69*	0.00	0.00
WEB Based EDI Port Community System	4.88	4.46	2.38	2.01	2.00	2.00	1.00	##	0.50	0.00	3.85	0.00	3.00	0.00
Others (b)	362.86	223.31	673.09	518.08	901.87	579.43	635.00	318.98	464.80	38.01	704.38	48.57	535.23	46.25
Survey Vessels	15.00	15.00	15.00	15.00	0.00	0.00##	0.00	0.00##	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total</b>	<b>1861.26</b>	<b>1392.30</b>	<b>2194.72</b>	<b>1724.37</b>	<b>2574.93</b>	<b>1633.70</b>	<b>4654.30</b>	<b>674.27</b>	<b>2785.12</b>	<b>1366.62</b>	<b>3186.24</b>	<b>520.93</b>	<b>2399.32</b>	<b>947.30</b>

(a) Includes Haldia and RR Works.

(b) Includes DCI, ALHW, R&amp;D Studies, Sagar Mala, Dev. of Non-Major Ports, IT for M/o Shipping, Coastal shipping Berths, Pollution cess, River Regulatory measures etc.

\* The amount is received as equity from Govt. of India and other stakeholders.

&amp;&amp; -Rs.66.63 advance paid earlier now Transferred to revenue

App.Outlay: App

##- Not Available

Source : Annual Plan - Port Sector ( Deptt. of Shipping)/IPA

## Commodity-wise Traffic Handled at Major Ports

(000 Tonnes)

Port	Period	POL & its Products	Iron Ore	Thermal Coal	Coking Coal	Ferti.& FRM (Dry)	Food grain	Container	TEUs	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12
Kolkata	2014-15	626	133	1410	270	147	5	8110	528	4582	15283
	2015-16(P)	589	0	0	201	76	9	9263	578	6550	16688
April-September	2015-16(P)	314	0	0	167	29	9	4548	282	3420	8487
	2016-17(P)	304	0	0	0	20	2	5073	331	2293	7692
Haldia	2014-15	3618	2338	1238	6005	797	0	1958	102	15056	31010
	2015-16(P)	7086	869	1552	5720	638	0	1374	85	16268	33507
April-September	2015-16(P)	3651	858	803	3372	532	0	652	43	7331	17199
	2016-17(P)	3200	190	730	2996	261	0	718	49	8147	16242
Paradip	2014-15	17976	3499	30063	7645	4429	0	67	4	7332	71011
	2015-16(P)	20567	2889	31461	8221	4361	0	121	5	8766	76386
April-September	2015-16(P)	9516	1728	14583	4086	2032	0	66	3	4057	36068
	2016-17(P)	12636	4000	13912	5072	2143	0	28	1	4877	42668
Visakhapatnam	2014-15	13129	8365	2779	6074	2558	75	4372	248	20652	58004
	2015-16(P)	16945	6086	3403	5108	2795	127	5145	293	17424	57033
April-September	2015-16(P)	8494	2349	1539	2722	1841	49	2299	134	8344	27637
	2016-17(P)	7984	5368	1758	2201	1933	46	3275	188	8097	30662
Chennai	2014-15	12659	146	0	0	542	37	29945	1552	9212	52541
	2015-16(P)	11892	0	0	0	260	0	30207	1565	7699	50058
April-September	2015-16(P)	6272	0	0	0	188	0	15517	804	3837	25814
	2016-17(P)	6469	0	0	0	113	26	14444	748	4840	25892
Kamarajar	2014-15	1894	0	24222	0	0	0	0	0	4135	30251
	2015-16(P)	3883	0	25537	75	0	0	1	0	2710	32206
April-September	2015-16(P)	1983	0	12619	0	0	0	1	0	1376	15979
	2016-17(P)	2034	0	11433	79	0	0	1	0	1344	14891
Chidambaranar	2014-15	366	46	8652	0	1491	59	11034	560	10766	32414
	2015-16(P)	693	86	11491	0	1511	371	12388	612	10309	36849
April-September	2015-16(P)	356	86	5776	0	909	0	6122	310	5419	18668
	2016-17(P)	364	0	5510	0	1104	448	6586	325	5308	19320
Cochin	2014-15	14016	0	0	98	446	0	5246	366	1789	21595
	2015-16(P)	13775	0	0	0	252	95	5785	420	2192	22099
April-September	2015-16(P)	7477	0	44	0	278	68	2778	201	686	11331
	2016-17(P)	7609	0	44	0	304	33	3370	242	564	11924
New Mangalore	2014-15	21409	1557	2726	5452	704	7	920	63	3791	36566
	2015-16(P)	23931	507	3319	0	811	27	1105	76	5882	35582
April-September	2015-16(P)	11560	174	1508	1392	454	27	565	39	1247	16927
	2016-17(P)	11533	384	1549	1844	232	27	646	44	1284	17499
Mormugao	2014-15	571	758	2000	6569	227	0	312	25	4274	14711
	2015-16(P)	559	3965	3727	7808	223	0	345	26	4149	20776
April-September	2015-16(P)	239	260	1316	3565	130	0	147	12	2456	8113
	2016-17(P)	300	4119	1390	4194	68	0	187	14	2812	13070
J. L. Nehru	2014-15	3330	0	0	0	0	0	56933	4467	3538	63801
	2015-16(P)	4094	0	0	0	0	0	56791	4492	3142	64027
April-September	2015-16(P)	2215	0	0	0	0	0	28497	2245	1518	32230
	2016-17(P)	2049	0	0	0	0	0	27187	2262	1545	30781
Mumbai	2014-15	35837	0	4304	0	448	683	544	45	19844	61660
	2015-16(P)	36273	0	3451	0	439	961	537	43	19449	61110
April-September	2015-16(P)	18157	0	2171	0	166	108	243	21	10275	31120
	2016-17(P)	18530	0	1361	0	115	246	287	23	10274	30813
Kandla	2014-15	55589	1160	9725	242	4502	2223	0	0	19056	92497
	2015-16(P)	55585	952	14784	217	4532	813	56	3	23112	100051
April-September	2015-16(P)	27301	536	7539	43	3112	426	14	1	11412	50383
	2016-17(P)	30496	199	8688	170	2337	305	81	4	11687	53963
All Ports	2014-15	181020	18002	87119	32355	16291	3089	119441	7960	124027	581344
	2015-16(P)	195872	15354	98725	27350	15898	2403	123118	8198	127652	606372
April-September	2015-16(P)	97535	5991	47898	15347	9671	687	61449	4095	61378	299956
	2016-17(P)	103508	14260	46375	16556	8630	1133	61883	4231	63072	315417

P : Provisional

Source: BPS and Major Ports and Indian Ports Association.

## Commodity-wise Traffic Handled at Non-Major Ports

(000 Tonnes)

State/UTs Maritime	Period	POL	Iron Ore	Building Material	Coal	Fertiliser & FRM	Container	Others	Total
1	2	3	4	5	6	7	8	9	10
Gujarat	2014-15	163631	5632	8925	79987	7529	43677	26714	336095
	2015-16 (P)	178203	6449	9370	67062	8285	47930	22480	339779
April-September	2015-16 (P)	87051	2605	5759	35066	4846	23408	7673	166408
	2016-17 (P)	89187	4671	5997	32152	3656	26114	6858	168635
Maharashtra	2014-15	1248	8824	2120	10924	171	0	4008	27295
	2015-16 (P)	0	7657	2026	12370	0	0	6797	28849
April-September	2015-16 (P)	0	4247	929	5020	0	0	2075	12271
	2016-17 (P)	0	6535	874	5812	0	0	2331	15552
Andhra pradesh	2014-15	1403	10526	2492	48662	5362	1382	13591	83418
	2015-16 (P)	1428	1620	1102	47202	5585	1807	13973	72718
April-September	2015-16 (P)	75	955	558	22949	3392	761	4618	33309
	2016-17 (P)	136	799	443	22004	3205	1450	4911	32947
Goa	2014-15	0	347	1	412	0	0	0	760
	2015-16 (P)	0	260	0	170	0	0	0	430
April-September	2015-16 (P)	0	0	0	0	0	0	0	0
	2016-17 (P)	0	260	0	224	0	0	0	484
Tamil Nadu	2014-15	419	0	1	0	292	0	113	825
	2015-16 (P)	549	0	229	0	30	0	48	856
April-September	2015-16 (P)	285	0	4	0	23	0	101	413
	2016-17 (P)	286	0	8	0	26	0	163	483
Karnataka	2014-15	40	0	85	0	47	0	479	651
	2015-16 (P)	235	0	80	0	66	0	454	835
April-September	2015-16 (P)	85	0	22	0	20	0	212	339
	2016-17 (P)	130	0	15	0	20	0	150	315
Other states/UTs	2014-15	537	1465	600	16752	551	430	1509	21844
	2015-16 (P)	536	367	953	17425	423	372	2558	22634
April-September	2015-16 (P)	222	419	297	8409	234	18	995	10594
	2016-17 (P)	301	3020	656	10773	66	22	1063	15901
	2014-15	167278	26794	14224	156737	13952	45489	46414	470888
	2015-16 (P)	180950	16353	13760	144229	14389	50109	46310	466101
April-September	2015-16 (P)	87718	8226	7569	71444	8515	24187	15674	223334
	2016-17 (P)	90040	15285	7993	70965	6973	27586	15476	234317

Source: State/UTs Maritime Board

## Commodity-Wise Capacity Available at Major Ports

(In Million Tonnes)

Commodities	KDS	HDC	PPT	VPT	EPL	ChPT	V.O.C.	CoPT	NMPT	MoPT	MbPT	KPT	JNPT	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
<b>POL</b>														
As on 31.3.12	4.50	17.00	21.00	17.65	3.00	15.27	2.30	19.01	23.37	1.50	32.00	66.60	5.50	228.70
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
<b>Iron Ore</b>														
As on 31.3.12	-	8.00	4.50	12.50	6.00	8.00	-	-	7.50	33.00	-	-	-	79.50
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
<b>Coal</b>														
As on 31.3.12	-	7.00	20.00	-	21.00	-	12.55	-	5.40	-	-	-	-	65.95
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
<b>Fertiliser</b>														
As on 31.3.12	-	-	7.50	1.00	-	-	-	0.80	-	-	-	-	-	9.30
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
<b>Break-Bulk Cargo</b>														
As on 31.3.12	6.74	14.75	27.30	32.50	1.00	17.92	13.49	9.55	14.70	7.40	11.53	17.42	0.90	175.20
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
<b>Container</b>														
As on 31.3.12	5.90	4.00	-	2.68	-	42.00	5.00	12.50	-	-	1.00	7.20	57.60@	137.53
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
<b>TOTAL</b>														
As on 31.3.12	17.14	50.75	80.30	66.33	31.00	83.19	33.34	41.86	50.97	41.90	44.53	91.22	64.00	696.53
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

Figure in the parenthesis indicate the number of berths. BJ Barge jetties, T-Transhippers, 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 and 1.20 MT respectively. Capacity of one shallow water berth at JNPT is 0.90 MT for dry bulk cargo.

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

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

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

Source : Development Wing - Department of Shipping.