# भारत के पत्तन क्षेत्र का अदयतन UPDATE ON INDIAN PORT SECTOR (31.03.2016)





परिवहन अनुसंधान प्रभाग TRANSPORT RESEARCH WING सडक परिवहन तथा राजमार्ग मंत्रालय MINISTRY OF ROAD TRANSPORT & HIGHWAYS भारत सरकार GOVERNMENT OF INDIA नई दिल्ली NEW DELHI

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### 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 March, 2016) is twenty-seventh in the series of the publication "Update on Indian Port Sector". The last issue contained data up to September, 2015.

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 March, 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.

(Rajive Kumar)

JULY, 2016

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## UPDATE ON INDIAN PORT SECTOR

(UP TO 31.03.2016)

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

#### 1.1 INDIA AND WORLD ECONOMY

1.1.1 Indiac Gross Domestic Product (GDP) grew by 7.6 per cent in 2015-16 compared to 7.2% in 2014-15, powered by a rebound in farm output, and an improvement in electricity generation and mining production in the fourth quarter of the fiscal. The growth numbers for the last fiscal which reinforces Indiac position as the world fastest . growing large economy, came on the back of a strong 7.9 per cent growth in the last quarter of the fiscal at a time when China has reported a 6.7 per cent GDP growth in the March quarter . its slowest growth in about seven years.

1.1.2 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 Indiacs growth rate in 2016-17 increasing significantly beyond 2015-16 levels were not very high.

1.1.3 Global growth fell short of expectations in 2015, decelerating to 2.4 percent from 2.6 percent in 2014. The disappointing performance mainly reflected a continued growth deceleration in emerging and developing economies amid post . crisis lows in commodity prices, weaker capital flows and subdued global trade. Global growth is projected to edge up in the coming years, but at a slower pace than envisioned in June 2015, reaching 2.9 percent in 2016 and 3.1 percent in 2017-18 (World Bank Report on Global Economic Prospects . Spillovers amid Weak Growth). This pickup is predicated on continued gains in major high. income countries a gradual tightening of financing conditions, a stabilization of commodity prices, and a gradual rebalancing in China. The forecast is subject to downside risks, including a disorderly slowdown in major emerging market economies, financial market turmoil arising from sudden shifts in borrowing costs amid deteriorating fundamentals, lingering vulnerabilities in some countries, and heightened geopolitical tensions. 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.

1.1.4 In developing countries, growth in 2015 is estimated at a post-crisis low of 4.3 percent, down from 4.9 percent in 2014 In a development unprecedented since the 1980s, most of the largest emerging economies in each region have been slowing simultaneously for three consecutive years. The economic rebalancing in China is continuing and accompanied by slowing growth. Brazil and Russia have been going through severe adjustments in the face of external and domestic challenges. On an average, activity in emerging and developing commodity exporter countries stagnated in 2015, as they continued to be hard hit by declining commodity prices. As a result, the contribution to global growth from these economies has declined substantially. Notable exceptions in an otherwise gloomy outlook for developing countries include South Asia (reflecting reduced macroeconomic vulnerabilities and domestic policy reforms in India), as well as some commodity-importing countries in East Asia.

1.1.5 According to World Bank Report on Global Economic Prospects, global growth is expected to pick up, albeit at an appreciably slower pace than previously projected, reaching 2.9 percent in 2016 and 3.1 percent in 2017-18. Global inflation is expected to increase moderately in 2016 as commodity prices level off, but will remain low by historical standards. A modest upturn in global activity in 2016 and beyond is predicated on a continued recovery in major high-income countries, a gradual slowdown and rebalancing in China, a stabilization of commodity prices, and an increase in global interest rates that is gradual and stays well contained.

1.1.6 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. Although the pace of reforms has slowed somewhat, growth is expected to strengthen to 7.9 percent in 2016-17 from 7.6 percent in 2015-16. Progress on infrastructure improvements and government efforts to boost investment are expected to offset the impact of any tightening of borrowing conditions resulting from tighter U.S. monetary policy. Such investment will also lift potential growth over the medium term.

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

Parameters	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
	Trends in Ind	ia's Select	: Macro Par	ameters			
I. Total Cargo	14.2	4.2	3.2	2.2	4.1	8.2	1.9
(a) Major Ports	5.7	1.6	-1.7	-2.6	1.8	4.7	4.3
(b) Non Major Ports	35.5	9.1	12.2	9.7	7.5	13.0	-1.0
II.GVA overall	n.a	n.a	n.a	n.a	6.6	7.1	7.2
(a) Agriculture	n.a	n.a	n.a	n.a	3.7	-0.2	1.2
(b) Industry	n.a	n.a	n.a	n.a	4.5	5.9	7.4
(c) Services	n.a	n.a	n.a	n.a	9.1	10.3	8.9
III. Foreign Trade							
(a) Export in \$ value	-3.5	40.5	21.8	-1.8	4.7	-1.2	-15.9
(b) Import in \$ value	-5.0	28.2	32.3	0.3	-8.3	-0.6	-15.3

 Table 1: Trend in Cargo handled at Indian Ports and related parameters (in %) (Contd.)

	Trends in	Select : Gl	obal Indica	ators			
IV. World Output	-0.1	5.4	4.2	3.5	3.3	3.4	3.1
(a) Advanced Economies	-3.4	3.1	1.7	1.2	1.2	1.8	1.9
(b) Developing Economies	3.0	7.4	6.3	5.3	4.9	4.6	4.0
V. World Economic Growth	-2.2	4.1	2.8	2.2	2.4	2.5	NA
(a) Advanced Economies	-3.8	2.6	1.4	1.1	1.3	1.6	NA
(b) Developing Economies	2.4	7.9	6.0	4.7	4.8	4.5	NA
(c) Transition Economies	-6.6	4.5	4.7	3.3	2	0.9	NA
VI. World Trade Volume (Goods)	-11.6	14.3	6.9	2.5	3.1	3.2	2.4
VII. Export Volume growth (Goods)							
(a) Advanced Economies	-13.1	14.7	6.0	1.9	2.6	3.3	2.9
(b) Developing Economies	-8.7	14.8	8.1	4.2	4.3	3.1	1.5
VIII. Import Volume (Goods)							
(a) Advanced Economies	-12.8	13.1	5.3	0.3	1.8	3.4	3.8
(b) Developing Economies	-9.6	15.3	10.5	5.4	4.8	3.0	0.4
IX. World Seaborne Trade*	-5.0	7.4	4.3	4.6	3.4	3.3	NA
(a) Goods Loaded	-4.5	7.0	4.5	4.7	3.4	3.4	NA
(b) Goods Unloaded	-5.5	7.8	4.2	4.4	3.4	3.2	NA

I. Based on data from Major Ports and Non Major Ports

II. Figures - 2013-14 onwards based on Press Release of Gross Value Added (GVA) at Factor Cost (2011-12 Prices), Central Statistical Office, dated 31.05.2016. 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, April ,2016, IMF;

V & IX. Based on Review of Maritime Transport, 2015(November), UNCTAD

Note : MT: Million Tonnes; For item Nos IV, VI, VII & VIII year 2009-10 refers to calendar year 2009 and so on;

\* growth in total goods loaded plus unloaded; NA; Not Available (P) Provisional

#### Selected Emerging Trends Affecting Seaborne Trade

1.1.8 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¢ capital investment as well as operational efficiency, and provides the backdrop for successful long-term maritime trade strategy.

1.1.9 The volume of world seaborne shipments (loaded) expanded by 3.4 per cent in 2014, that is, at the same rate as in 2013. Additions to volumes exceeded 300 million tonnes, taking the total to 9.84 billion, or around four fifths of total world merchandise trade. Dry cargo was estimated to have accounted for over two thirds of the total, while the share of tanker trade, including crude oil, petroleum products and gas was estimated to have slightly declined from nearly 30.0 per cent in 2013 to 28.7 per cent in 2014.

Year	Oil	Main Bulk#	Other Dry Cargo	Total
2000	2163	1295	2526	5984
2006	2698	1814	3188	7700
2007	2747	1953	3334	8034
2008	2742	2065	3422	8229
2009	2642	2085	3131	7858
2010	2772	2335	3302	8409
2011	2794	2486	3505	8784
2012	2841	2742	3614	9197
2013	2829	2923	3762	9514
2014	2826	3112	3903	9842

1.1.10 With most of the developing world in a slowdown, a prolonged weakness in commodity prices over the next decade is being forecasted.. Prices for coal, iron ore, and crude oil are all likely to remain depressed for the next few years. For most shippers, the 5-10 years of slow growth ahead translates into depressed rates for shipping, particularly dry bulk shipping.

1.1.11 One exception to this trend is tanker shipping, which is expected to stay strong in the short term. During the first half of 2015, the sector saw an increase in freight rates as

the low price of crude oil encouraged emerging economies to burn oil instead of coal. Positive revenue growth is anticipated for the remainder of the year as long as oil prices remain low. Although lower prices will spur more oil consumption in the short term, it is expected that overall global oil demand growth will average just 0.6% per year through to 2040. This is because the link between economic growth and oil demand will weaken as the world adopts alternatives to hydrocarbon fuels and enhances vehicle fuel efficiency.

1.1.12 The recent deceleration of Chinacs economic growth is affecting many domestic industries, with implications for the global maritime economy. The construction industry is sinking deeper into recession. At the same time, slow and unstable global economic growth means that China will not be able to export its way to recovery.

1.1.13 Even with the recent news of mine closures in China in response to the availability of superior, low-cost imports there is little chance of a return to 5-8% yearly growth in Chinacs demand for foreign iron ore. Instead demand for seaborne imports will simply stabilize, allowing for the possibility of modest to slight growth.

1.1.14 To date, government-controlled steel makers in China have been able to find buyers abroad as prices fall rather than scaling down production. However, anti-dumping rules are expected to push the industry to cut back production. This is causing a disconnect in the shipping industry between the expectations of owners and charterers for three-to-five year spot rates. New-building prices suggest that freight rates will drop further. While the larger Asian shipyards appear stable, smaller shipyards may be vulnerable, particularly those that specialize in the dry bulk and offshore vessel markets.

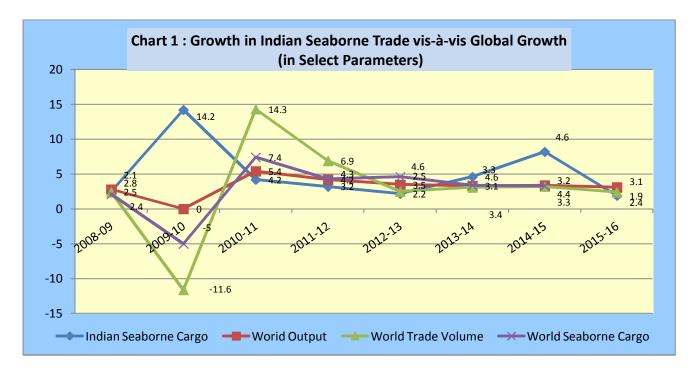
1.1.15 Adding to difficulties for shipping is the decline in seaborne imports of thermal coal to China, due in part to the substitution of land-born coal sourced domestically as well as from neighbouring Mongolia. The growth of nuclear and alternative energy sources has also reduced demand for ship borne imported coal from Australia and elsewhere overseas.

1.1.16 The one bright spot for Chinese shipping is the container trade, which is expected to grow. Volume on the routes to the Western United States is expected to rise 8% in 2016 and on the European routes by 6%.

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#### 1.2 India: Seaborne Cargo Traffic

The growth in Indiac 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 2015-16, Major and Non-major Ports in India have accomplished a total cargo throughput of 1072.47 million tonnes reflecting an increase of 1.9% over 2014-15.(Table 3). The growth in cargo handled at Major and Non-major ports in 2015-16 were 4.3% and -1.0% respectively compared to 4.7% and 12.9% achieved in 2014-15.

The share of Major Port in the total traffic handled at Indian Port increased from 55% in 2014-15 to 57% in 2015-16.Trend in traffic handled at Major and Non-major Ports is given below in **Table 3.** 

		Table 3- T	raffic Hand	dled at Indi	ian Ports								
	(Million Tonnes												
Major/Non-Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16					
Major Ports	530.81	561.10	570.08	560.19	545.84	555.49	581.34	606.37					
		(5.7)	(1.6)	-(1.7)	-(2.6)	(1.8)	(4.7)	(4.3)					
Non-Major Ports	213.24	288.90	315.29	353.74	387.93	416.96	470.89	466.10					
		(35.5)	(9.1)	(12.2)	(9.7)	(7.5)	(12.9)	-(1.0)					
All Ports	744.05	850.00	885.37	913.93	933.77	972.45	1052.23	1072.47					
		(14.2)	(4.2)	(3.2)	(2.2)	(4.1)	(8.2)	(1.9)					

Note: Figures in brackets indicate growth over previous year.

#### 1.4 Cargo Traffic at Major Ports

1.4.1 The volume of seaborne cargo traffic handled by ports is mainly shaped by the levels and changes in both the global and domestic activity. Cargo traffic at Indiac 12 major ports during 2015-16 was at 606.37 million tonnes achieving growth of 4.3% over the previous year.

1.4.2 During 2015-16, Mormugao recorded highest growth in traffic 41.2% followed by Chidambaranar (13.7%), Kolkata Dock System (9.2%), Kandla (8.2%), Haldia Dock Complex (8.1%), Paradip (7.6%), Kamarajar (6.5%), Cochin (2.3%) and JNPT (0.4%). Major ports which recorded negative growth in traffic during 2015-16 were: Chennai Port (4.7%), NMPT (2.7%), Visakhapatnam (1.7%) and Mumbai (0.9%).

1.4.3 Amongst the Major Ports, Kandla Port handled the maximum Cargo of 100.01 million tonnes with a share of 16.5% in total cargo handled at major ports followed by Paradip (12.6%), JNPT (10.6%), Mumbai (10.1%), Vishakhapatnam (9.4%), Chennai (8.3%), Chidambaranar (6.1%), NMPT (5.9%), Haldia Dock Complex (5.5%), Kamarajar (5.3%), Cochin (3.6%), Mormugao (3.4%) and Kolkata Dock System (KDS) (2.8%) during 2015-16.**(Table 4)**.

	10			andled at		0113	(Thousan	d Tonnes)
Ports	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)	change 2015-16 / 2014-15
1	2	3	4	5	6	7	8	9
Kolkata	46423	47545	43248	39928	41386	46293	50195	8.4
Kolkata DS	13045	12540	12233	11844	12875	15283	16688	9.2
Haldia DC	33378	35005	31015	28084	28511	31010	33507	8.1
Paradip	57011	56038	54254	56552	68003	71011	76386	7.6
Vizag	65501	68041	67420	59038	58504	58004	57033	-1.7
Kamarajar	10703	11009	14956	17885	27337	30251	32206	6.5
Chennai	61057	61460	55707	53404	51105	52541	50058	-4.7
Chidambaranar	23787	25727	28105	28260	28642	32414	36849	13.7
Cochin	17429	17873	20090	19845	20886	21595	22099	2.3
New Mangalore	35528	31550	32941	37036	39365	36566	35582	-2.7
Mormugao	48847	50060	39049	17738	11739	14711	20776	41.2
Mumbai	54541	54586	56186	58038	59184	61660	61110	-0.9
JNPT	60763	64317	65730	64488	62333	63801	64027	0.4
Kandla	79500	81880	82501	93619	87005	92497	100051	8.2
All Ports	561090	570086	560187	545831	555489	581344	606372	4.3

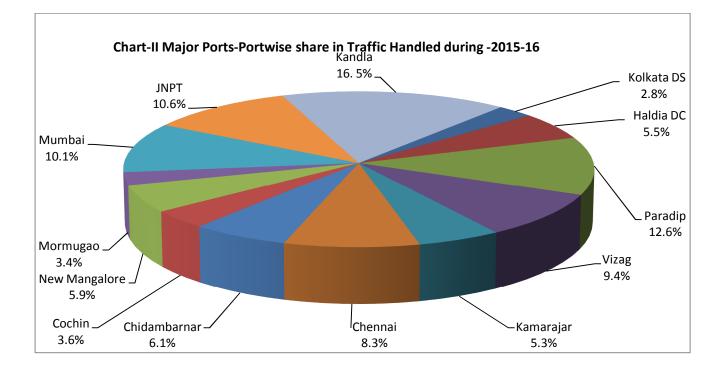
#### Commodity-wise growth of cargo traffic at Major Ports

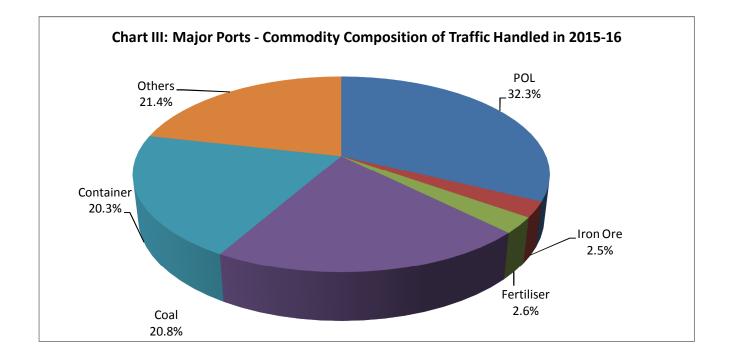
1.4.4 At a broad commodity level, during 2015-16, POL, Coal, Container and Other Cargo posted growth of 8.2, 5.5%, 3.1%, and 2.9% respectively. Cargo traffic in Food grains, Iron ore and Fertilizer and FRM was affected during 2015-16 and dropped by 22.2%, 14.7% and 2.4% respectively. The decline in Iron ore traffic is mainly attributed to restrictions in mining of iron ore.

1.4.5 In terms of composition of cargo traffic handled at major ports, the largest commodity group (with share in percent in total cargo handled) was POL (32.3%), Other cargo (21.1%), Coal (20.8%), , Container traffic (20.3%), Fertilizer & FRM (2.6%) and Iron ore (2.5%). **(Table 5)**.

	Table 5:	Commod	itv wise T	raffic Ha	ndled at N	lajor Ports		
						-	Thousand	Tonnes)
Commodities	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)	% change 2015-16/ 2014-15
1	2	3	4	5	6	7	8	9
POL	174861	179882	173851	180725	181055	181020	195872	8.2
Iron Ore	100892	87686	60719	27289	24616	18002	15354	-14.7
Fertiliser	17731	20798	20404	14797	13784	16291	15898	-2.4
1. Finished	10941	12367	12218	7469	6149	7926	8419	6.2
2. Raw (DRY)	6790	8431	8186	7328	7635	8365	7479	-10.6
Coal	71786	75146	78776	86804	104271	119474	126075	5.5
1. Thermal Coal	43440	46145	51128	58772	71651	87119	98725	13.3
2. Coking Coal	28346	29001	27648	28032	32620	32355	27350	-15.5
Food Grain	1196	1915	3279	6597	4796	3089	2403	-22.2
Container (Tonnes)	101244	114158	120276	119866	114672	119441	123118	3.1
Others	93380	90501	102882	109753	112295	124027	127652	2.9
Total	561090	570086	560187	545831	555489	581344	606372	4.3
(P): Provisional								

1.4.6 The Port-wise and Commodity-wise shares in total cargo traffic during 2015-16 are depicted in the **Charts II and III** respectively.





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

#### **Container Traffic**

1.4.7 Growth in container traffic (in million tonnes) which reflects largely trade in manufactures and components, at 3.1% during 2015-16 is lower compared to 4.2% achieved in 2014-15. In terms of Twenty Foot Equivalent Units (TEUs), containers handled by Major Ports in 2015-16 recorded 3.0% growth as compared to 6.8% in 2014-15. Amongst the major ports, the ports at Haldia DC, JNPT and Mumbai witnessed fall in container traffic. JNPT is continues to be the leading container handling port in the country with a share of 46.1% in terms of tonnage and 54.8% in terms of TEUs in the total container traffic at major ports during 2015-16.(**Table 6**). Chennai port which handled 24.5% of container cargo is the second largest container handling port.

PORT	2012-13		2013	-14	2014	-15	2015-1	16(P)	% chang 16/ 20	
	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU	Tn	TEU
1	2	3	4	5	6	7	8	9	10	11
Kolkatta DS	6960	463	7063	449	8110	528	9263	578	14.2	9.5
Haldia DC	2869	137	2230	113	1958	102	1374	85	-29.8	-16.7
Paradip	171	13	99	9	67	4	121	5	80.6	25.0
Vizag	4554	247	4916	262	4372	248	5145	293	17.7	18.1
Chennai	29708	1539	28330	1468	29945	1552	30207	1565	0.9	0.8
Ennore	0	0	0	0	0	0	1	0	0	0
Tuticorin	9372	476	10129	508	11034	560	12388	612	12.3	9.3
Cochin	4607	335	4785	343	5246	366	5785	420	10.3	14.8
New Mangalore	692	48	747	50	920	63	1105	76	20.1	20.6
Mormugao	258	20	236	19	312	25	345	26	10.6	4.0
JNPT	57911	4259	55235	4162	56933	4467	56791	4492	-0.2	0.6
Mumbai	829	58	449	41	544	45	537	43	-1.3	-4.4
Kandla	1935	118	453	29	0	0	56	3	0.0	0.0
All Ports	119866	7714	114672	7453	119441	7960	123118	8198	3.1	3.0

#### 1.5 Cargo Traffic at Non-Major Ports

1.5.1 Non. major ports handled 43% of total maritime freight traffic of the country during 2015-16.

1.5.2 **Table 7** presents maritime state-wise share and growth of traffic handled at Non-major ports from 2009-10 onwards.

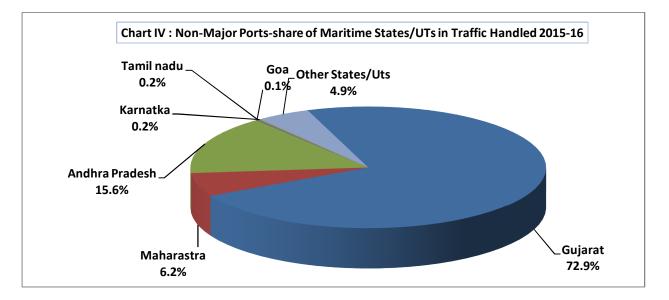
Maritime State/UT								(000 <b>q</b> onnes
	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)	% change 2015- 16/2014-15
Gujarat	205583	230907	259050	287817	309945	336095	339779	1.1
Gujarat	(71.2)	(73.2)	(73.2)	(74.2)	(74.3)	(71.4)	(72.9)	
Maharashtra	12046	14875	19947	24198	24664	27295	28849	5.7
ivialiai astiti a	(4.2)	(4.7)	(5.6)	(6.2)	(5.9)	(5.8)	(6.2)	
Andhra Pradesh	43690	43267	45633	51811	58692	83418	72718	-12.8
	(15.1)	(13.7)	(12.9)	(13.4)	(14.1)	(17.7)	(15.6)	
Goa	13897	14581	14470	3389	284	760	430	-43.4
	(4.8)	(4.6)	(4.1)	(0.9)	(0.1)	(0.2)	(0.1)	
Tamil Nadu	1174	1611	1210	933	866	825	856	3.8
	(0.4)	(0.5)	(0.3)	(0.2)	(0.2)	(0.2)	(0.2)	
Karnataka	8547	3095	592	610	509	651	835	28.3
	(3.0)	(1.0)	(0.2)	(0.2)	(0.1)	(0.1)	(0.2)	
OtherStates/UTs	4000	7022	12843	19165	22010	21844	22634	3.6
	(1.4)	(2.2)	(3.6)	(4.9)	(5.3)	(4.6)	(4.9)	
All M.States/UTs	288937	315358	353745	387923	416970	470888	466101	-1.0
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	

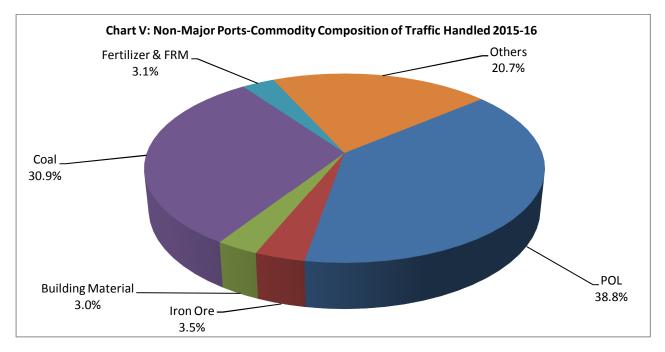
1.5.3 The growth in cargo handled by the non-major ports during 2015-16 was -1.0% compared to 12.9% recorded in 2014-15. After achieving high growth in cargo traffic for several years, non-major ports have recorded negative growth in 2015-16. **Table 7** provides traffic handled by non-major ports in 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 (72.9%) of the traffic handled by the non-major ports followed by Andhra Pradesh (15.6%) and Maharashtra (6.2%). Three maritime States, viz, Gujarat, Andhra Pradesh and Maharashtra together accounted for 95% of the total cargo traffic handled by the non-major ports in 2015-16.

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 2015-16. (**Table 8**).

	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)	000q onnes % change 2014-15/
							·•(· )	2013-14
POL	137720	145378	156322	168565	169777	167278	180950	8.:
	(47.7)	(46.1)	(44.2)	(43.5)	(40.7)	(35.5)	(38.8)	
Iron Ore	48813	38266	30616	21855	18338	26794	16353	-39.
	(16.9)	(12.1)	(8.7)	(5.6)	(4.4)	(5.7)	(3.5)	
Building Material	13142	12327	12866	11953	14178	14224	13760	-3.
	(4.5)	(3.9)	(3.6)	(3.1)	(3.4)	(3.0)	(3.0)	
Coal	41276	58462	79040	109264	126321	156737	144229.0	-8.
	(14.3)	(18.5)	(22.3)	(28.2)	(30.3)	(33.3)	(30.9)	
Fertilizer & FRM	9501	12725	15742	12548	12010	13952	14389	3.
	(3.3)	(4.0)	(4.5)	(3.2)	(2.9)	(3.0)	(3.1)	
Others	38485	48200	59159	63738	76346	91903	96419	4.
	(13.3)	(15.3)	(16.7)	(16.4)	(18.3)	(19.5)	(20.7)	
All	288937	315358	353745	387923	416970	470888	466101	-1.
	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	(100.0)	

1.5.5 The share of Maritime States/UTs in the total traffic and Commodity-wise composition of traffic during 2015-16 is depicted in the pie **Charts IV and V**.





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 Indiacs 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 2015-16, the GVA growth increased to 7.6% from 7.2% during 2014-15. Cargo traffic handled by Indiags 12 major ports (which accounts for 57% of Indiags total seaborne cargo) during 2015-16 was 606.37 million tonnes compared to 581.34 million tonnes recorded during 2014-15 showing a growth of 4.3%. The trajectory of growth in cargo handled at Indiags 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 7.4% in 2015-16 as compared to 5.9% in 2014-15. GVA of Industry sector recorded quarterly growth ranging from 3.8% to 8.0% during 2014-15 and 6.3% to 8.6% 2015-16. While trends in POL, coal and fertilizers are largely driven by the dynamics of domestic demand supply, those of container traffic and % ther cargo+in particular are 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 Q1 of 2014-15 at 4.4% posted negative growth of 42.2%, 41.4% and 23.0% in Q2 to Q4 of 2014-15 and continued to record negative growths of 62.3%, 31.9%, 8.7% and 4.2% in Q1 to Q4 of 2015-16 respectively. Negative growth in Iron Ore cargo traffic was 28.1% during 2015-16 compared to 27.2% in 2014-15. The overall growth of Cargo handled by major ports declined from 4.7% in 2014-15, to 4.3% in 2015-16.

1.6.1.2 **Table 9** gives Quarter wise trend in growth of cargo traffic handled at Major ports, GVA overall and GVA of Industry sector during 2014-15 and 2015-16.

Commodities/										
Year		2014	-15		Annual		2015	5-16		Annual
	Q1	Q2	Q3	Q4	2014-15	Q1	Q2	Q3	Q4	2015-16
POL	0.0	-1.1	4.0	15.3	4.3	4.5	2.9	0.0	7.9	3.9
Iron Ore	4.4	-42.2	-41.4	-23.0	-27.2	-62.3	-31.9	-8.7	-4.2	-28.1
Coal	0.2	11.3	19.4	22.3	13.0	15.8	13.7	-0.1	13.0	10.3
Fertilizer	21.5	9.9	16.4	24.8	17.5	0.8	21.6	-5.8	-23.6	-1.1
Container										
In tonnes	4.3	5.4	6.8	0.3	4.2	1.2	1.4	1.4	8.4	3.1
In TEUs	4.1	9.6	11.2	2.6	6.8	2.4	1.1	1.3	7.3	3.0
Other cargo	14.7	12.7	8.8	-15.9	3.5	8.6	0.8	7.0	7.1	5.9
All Cargo	4.4	3.5	6.9	4.0	4.7	4.3	3.8	1.4	7.7	4.3
GVA overall	7.4	8.1	6.7	6.2	7.1	7.2	7.3	6.9	7.4	7.2
GVA -Industry	8.0	5.9	3.8	5.7	5.9	6.7	6.3	8.6	7.9	7.4

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

In 2014, 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 remained volatile throughout 2014 although with different trends in individual trade lanes. Market fundamentals did not change significantly despite the expansion in global demand for container shipping. This was mainly due to the constant supply pressures that the market rates continued to face with the introduction of very large units in mainlane trades and the cascading effect on non-main lane trades. The growth in global demand for container shipping reached 6 per cent in 2014 (compared to 5 per cent in 2013), outpacing that of supply, which remained at 5 per cent. Global container demand was boosted mainly by strong trade growth on the peak leg main lanes of the Far East. Europe and the trans-Pacific, where North Europe imports and United States imports from Asia performed particularly well in 2014. Mainlane freight rates recorded a general improvement in 2014 compared to 2013 levels.

For 2015, the Baltic Dry Index, which was at 591 in April, 2015 reached 900 in September, 2015. The order book schedule also indicates that further ultra-large container ships will be delivered to the main lanes in 2015. 2016 and the extent to which cascading impact it will have will largely determine freight rates on both the mainlane and non-mainlane trades. Moreover, some new challenges could emerge in the future, as global trade is expected to be increasingly concentrated around regional manufacturing hubs, thereby potentially decreasing future travel distances. The charter market environment may improve with significant scrapping levels of small and medium-sized vessels and the relatively small order book of container ship capacity in the smaller size ranges.

#### 2. Tanker freight rates

The tanker market, which encompasses the transportation of crude oil, refined petroleum products and chemicals, witnessed an equally volatile freight rate environment in 2014 and early 2015. As a whole, the Baltic index for crude oil (Baltic Dirty Tanker Index) progressed by 21 per cent in 2014, reaching 777 points, whereas the Baltic Clean Tanker Index remained almost at the same level as in 2013, with 607 points, compared to 605 in 2013. In 2014, freight rates for both crude and product carriers increased in general for all vessel segments. Demand outperformed supply for the first time since 2010, leading to higher freight rates. The crude tanker market turned out to be better than expected in 2014,

particularly towards the second half of the year, when a drop in crude oil prices increased demand for such tankers. In addition, the slow expansion in oil fleet supply (which only increased by 4.5 per cent), slow steaming and the change in trading pattern (fewer imports to the United Sates and increasing demand from the Far East economies), which resulted in

longer distances (Barry Rogliano Salles, 2015), triggered a surge in 2014 spot rates in most segments.

The collapse in oil prices by almost 60 per cent over the second half of 2014 resulted in positive impacts on the tanker market. Demand for crude oil tankers was also boosted as a consequence of the increase in oil stockpiling, especially by Asian countries (namely China), increases in refinery runs and increases in floating storage as the contango situation developed. As such, the tight availability of tonnage and increase in activity pushed up very large crude carrier spot freight rates on key freight routes, namely Asian routes, towards the end of 2014.

The tanker market is likely to remain positive with Average Dirty Tanker Index reaching a level of 853 and Clean Tanker Index at 678 during first half of 2015. Moreover, a change in the pattern of trade and demand, namely involving the decline in refining capacity in Europe and an increase in Asia and the Middle East, may result in increasing freight rate volatility.

		Та	ble 10 -	Baltic I	Exchan	ge Rate	Index		
	2008	2009	2010	2011	2012	2013	2014	%age chang e (2014/ 2013)	2015 (First Half)
Dirty Tanker Index	1 510	581	896	782	719	642	777	21	853
Clean Tanker Index	1155	485	732	720	641	605	607	0.033	678

Source : Review of Maritime Transport -2015

#### 3. Dry bulk freight rates

Despite a strong start and high expectations for a positive impetus carried over from 2013, the dry bulk market freight rates faced another challenging year influenced by the surplus capacity that still exists and the uncertainties in demand projections in 2014. Bulk carrier earnings fell 5 per cent from 2013 to reach an average of \$9,881/day. The low level of earnings exerted financial pressure on owners and led to several companies filing for bankruptcy. As an overall indicator of the continued depression in dry bulk earnings, the Baltic

Exchange Dry Index slid to a low level of 796 points in July 2014, to end at 910 points in December 2014

The freight rates for all dry-bulk segments have been low throughout 2015, the July/August spike for Capesize ships being the short-lived exception. Averages for the first eight months of 2015 range from USD 5,605 per day for a Handysize to USD 8,163 per day for a Capesize. The poorest freight market on record is due to a combination of demand weakness and capacity abundance. Unfortunately, there are no easy ways to escape this. As China is going through a period of transition that does not favour the dry-bulk shipping industry, the prime driver is out of the picture. Capacity has been abundant for years, so it the change to the demand side, the variable that the industry cannot impact, which is at the epicentre in 2015. The dry bulk market rates will continue to be dominated by growing supply and uncertainties concerning the demand for dry bulk commodities from China. Factors that could influence demand in the future include innovation in technologies that seek to improve fuel efficiency and substitute for coal, and the increased number of countries that are setting policies and regulations aimed at reducing carbon emissions.

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

**1.6.3.1** Growth in cargo and container traffic at worldos top major ports/container terminals is a barometer of trends in seaborne trade. The growth in cargo traffic (million tonnes) at worldos 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.

S.No.	Port	2013	2014	<b>2015</b> 889.0 717.4
1	Ningbo & Zhoushan (PRC)	809.8	873.0	
2	Shanghai (PRC)	776.0	755.3	
3	Singapore	560.8	581.3	574.9
4	Tianjin (PRC)	500.6	540.0	541.0
5	Taicang Port Area1)	454.0	480.0	540.0
6	Guangzhou (PRC)	454.7	500.4	519.9
7	Qingdao(PRC)	450.0	480.0	500.0
8	Tangshan	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(PRC)	408.4	420.0	415.0 361.0 338.5
12	Rizhao (PRC)	309.2	353.0	
13	Yingkou	330.0	330.7	
14	Busan 2)	292.4	312.0	323.7
15	South Louisiana(USA)	241.5	264.7	265.6
16	Hong Kong 1)	276.1	297.7	256.6
17	Qinhuangdao(PRC)	272.6	274.0	253.1
18	Port Klang (Malaysia) 2)	200.2	217.2	219.8 217.1
19	Shenzen (PRC)	234.0	223.2	
20	Xiamen(China)	191.0	205.0	210.0
	Total of Top 20 Ports	7974.0	8474.8	8551.9

2         Singapore         32.6         33.9         30.           3         Shenzhen (PRC)         23.3         24.0         24.           4         Ningbo & Zhoushan (PRC)         17.4         19.5         20.           5         Hong Kong (PRC)1)         22.4         22.2         20.           6         Busan (Republic Korea)         17.7         18.7         19.           7         Guangzhou(PRC)         15.3         16.6         17.           8         Qingdao(PRC)         15.5         16.6         17.           9         Dubai Ports (UAE)         13.6         15.2         15.           10         Tianjin(PRC)         13.0         14.1         14.           11         Rotterdam (Netherlands)         11.6         12.3         12.           12         Port Klang (Malaysia)         10.4         10.9         11.           13         Kaohsiung (Taiwan Province of PRC)         9.9         10.6         10.           14         Antwerpen (Belgium)         8.6         9.0         9.           15         Dalian(PRC)         10.0         10.1         9.           16         Xiamen (PRC)         8.0         8.6	S.No.	Port	2013	2014	2015				
3         Shenzhen (PRC)         23.3         24.0         24.           4         Ningbo & Zhoushan (PRC)         17.4         19.5         20.           5         Hong Kong (PRC)1)         22.4         22.2         20.           6         Busan (Republic Korea)         17.7         18.7         19.           7         Guangzhou(PRC)         15.3         16.6         17.           8         Qingdao(PRC)         15.5         16.6         17.           9         Dubai Ports (UAE)         13.6         15.2         15.           10         Tianjin(PRC)         13.0         14.1         14.           11         Rotterdam (Netherlands)         11.6         12.3         12.           12         Port Klang (Malaysia)         10.4         10.9         11.           13         Kaohsiung (Taiwan Province of PRC)         9.9         10.6         10.           14         Antwerpen (Belgium)         8.6         9.0         9.           15         Dalian(PRC)         8.0         8.6         9.           14         Antwerpen (Belgium)         9.3         9.7         8.           15         Dalian (PRC)         8.0         8.6	1	Shanghai (PRC)	33.6	35.3	36.5				
4       Ningbo & Zhoushan (PRC)       17.4       19.5       20.         5       Hong Kong (PRC)1)       22.4       22.2       20.         6       Busan (Republic Korea)       17.7       18.7       19.         7       Guangzhou(PRC)       15.3       16.6       17.         8       Qingdao(PRC)       15.5       16.6       17.         9       Dubai Ports (UAE)       13.6       15.2       15.         10       Tianjin(PRC)       13.0       14.1       14.         11       Rotterdam (Netherlands)       11.6       12.3       12.         12       Port Klang (Malaysia)       10.4       10.9       11.         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.         14       Antwerpen (Belgium)       8.6       9.0       9.         15       Dalian(PRC)       8.0       8.6       9.         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.         18       Hamburg (Germany)       9.3       9.7       8.         20       Log Beach       6.6       6	2								
5         Hong Kong (PRC)1)         22.4         22.2         20.           6         Busan (Republic Korea)         17.7         18.7         19.           7         Guangzhou(PRC)         15.3         16.6         17.           8         Qingdao(PRC)         15.5         16.6         17.           9         Dubai Ports (UAE)         13.6         15.2         15.           10         Tianjin(PRC)         13.0         14.1         14.           11         Rotterdam (Netherlands)         11.6         12.3         12.           12         Port Klang (Malaysia)         10.4         10.9         11.           13         Kaohsiung (Taiwan Province of PRC)         9.9         10.6         10.           14         Antwerpen (Belgium)         8.6         9.0         9.           15         Dalian(PRC)         10.0         10.1         9.           16         Xiamen(PRC)         8.0         8.6         9.           17         Tanjung Pelepas (Malaysia)         7.6         8.5         9.           18         Hamburg (Germany)         9.3         9.7         8.           20         Long Beach         6.6         6.8	3	Shenzhen (PRC)	23.3	24.0	24.2				
6         Busan (Republic Korea)         17.7         18.7         19.           7         Guangzhou(PRC)         15.3         16.6         17.           8         Qingdao(PRC)         15.5         16.6         17.           9         Dubai Ports (UAE)         13.6         15.2         15.           10         Tianjin(PRC)         13.0         14.1         14.           11         Rotterdam (Netherlands)         11.6         12.3         12.           12         Port Klang (Malaysia)         10.4         10.9         11.           13         Kaohsiung (Taiwan Province of PRC)         9.9         10.6         10.           14         Antwerpen (Belgium)         8.6         9.0         9.           15         Dalian(PRC)         10.0         10.1         9.           16         Xiamen(PRC)         8.0         8.6         9.           17         Tanjung Pelepas (Malaysia)         7.6         8.5         9.           18         Hamburg (Germany)         9.3         9.7         8.           20         Long Beach         6.6         6.8         7.           310.9         312.         7.         310.9 <td< td=""><td>4</td><td>Ningbo &amp; Zhoushan (PRC)</td><td>17.4</td><td>19.5</td><td>20.6</td></td<>	4	Ningbo & Zhoushan (PRC)	17.4	19.5	20.6				
7       Guangzhou(PRC)       15.3       16.6       17.         8       Qingdao(PRC)       15.5       16.6       17.         9       Dubai Ports (UAE)       13.6       15.2       15.1         10       Tianjin(PRC)       13.0       14.1       14.         11       Rotterdam (Netherlands)       11.6       12.3       12.3         12       Port Klang (Malaysia)       10.4       10.9       11.         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.         14       Antwerpen (Belgium)       8.6       9.0       9.         15       Dalian(PRC)       10.0       10.1       9.         16       Xiamen(PRC)       8.0       8.6       9.         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.         18       Hamburg (Germany)       9.3       9.7       8.3         20       Long Beach       6.6       6.8       7.         Total of Top 20 Ports       294.3       310.9       312.	5	Hong Kong (PRC)1)	22.4	22.2	20.1				
8         Qingdao(PRC)         15.5         16.6         17.           9         Dubai Ports (UAE)         13.6         15.2         15.7           10         Tianjin(PRC)         13.0         14.1         14.1           11         Rotterdam (Netherlands)         11.6         12.3         12.1           12         Port Klang (Malaysia)         10.4         10.9         11.1           13         Kaohsiung (Taiwan Province of PRC)         9.9         10.6         10.1           14         Antwerpen (Belgium)         8.6         9.0         9.1           15         Dalian(PRC)         10.0         10.1         9.1           16         Xiamen(PRC)         8.0         8.6         9.0           17         Tanjung Pelepas (Malaysia)         7.6         8.5         9.1           18         Hamburg (Germany)         9.3         9.7         8.3           20         Long Beach         6.6         6.8         7.1           Total of Top 20 Ports         294.3         310.9         312.	6	Busan (Republic Korea)	17.7	18.7	19.5				
9       Dubai Ports (UAE)       13.6       15.2       15.1         10       Tianjin(PRC)       13.0       14.1       14.1         11       Rotterdam (Netherlands)       11.6       12.3       12.1         12       Port Klang (Malaysia)       10.4       10.9       11.1         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.1         14       Antwerpen (Belgium)       8.6       9.0       9.1         15       Dalian(PRC)       10.0       10.1       9.1         16       Xiamen(PRC)       8.0       8.6       9.0         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.1         18       Hamburg (Germany)       9.3       9.7       8.1         19       Los Angeles (USA)       7.9       8.3       8.1         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	7	Guangzhou(PRC)	15.3	16.6	17.6				
10       Tianjin(PRC)       13.0       14.1       14.         11       Rotterdam (Netherlands)       11.6       12.3       12.1         12       Port Klang (Malaysia)       10.4       10.9       11.1         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.1         14       Antwerpen (Belgium)       8.6       9.0       9.1         15       Dalian(PRC)       10.0       10.1       9.1         16       Xiamen(PRC)       8.0       8.6       9.0         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.1         18       Hamburg (Germany)       9.3       9.7       8.1         19       Los Angeles (USA)       7.9       8.3       8.1         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	8	Qingdao(PRC)	15.5	16.6	17.4				
11       Rotterdam (Netherlands)       11.6       12.3       12.1         12       Port Klang (Malaysia)       10.4       10.9       11.1         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.1         14       Antwerpen (Belgium)       8.6       9.0       9.0         15       Dalian(PRC)       10.0       10.1       9.1         16       Xiamen(PRC)       8.0       8.6       9.0         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.0         18       Hamburg (Germany)       9.3       9.7       8.1         19       Los Angeles (USA)       7.9       8.3       8.1         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	9	Dubai Ports (UAE)	13.6	15.2	15.6				
12       Port Klang (Malaysia)       10.4       10.9       11.4         13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.1         14       Antwerpen (Belgium)       8.6       9.0       9.1         15       Dalian(PRC)       10.0       10.1       9.1         16       Xiamen(PRC)       8.0       8.6       9.1         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.1         18       Hamburg (Germany)       9.3       9.7       8.1         19       Los Angeles (USA)       7.9       8.3       8.1         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	10	Tianjin(PRC)	13.0	14.1	14.1				
13       Kaohsiung (Taiwan Province of PRC)       9.9       10.6       10.         14       Antwerpen (Belgium)       8.6       9.0       9.         15       Dalian(PRC)       10.0       10.1       9.         16       Xiamen(PRC)       8.0       8.6       9.         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.         18       Hamburg (Germany)       9.3       9.7       8.3         19       Los Angeles (USA)       7.9       8.3       8.         20       Long Beach       6.6       6.8       7.         Total of Top 20 Ports       294.3       310.9       312.	11	Rotterdam (Netherlands)	11.6	12.3	12.2				
14       Antwerpen (Belgium)       8.6       9.0       9.0         15       Dalian(PRC)       10.0       10.1       9.0         16       Xiamen(PRC)       8.0       8.6       9.0         17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.0         18       Hamburg (Germany)       9.3       9.7       8.3         19       Los Angeles (USA)       7.9       8.3       8.0         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	12	Port Klang (Malaysia)	10.4	10.9	11.9				
15         Dalian(PRC)         10.0         10.1         9.1           16         Xiamen(PRC)         8.0         8.6         9.1           17         Tanjung Pelepas (Malaysia)         7.6         8.5         9.           18         Hamburg (Germany)         9.3         9.7         8.3           19         Los Angeles (USA)         7.9         8.3         8.1           20         Long Beach         6.6         6.8         7.1           Total of Top 20 Ports         294.3         310.9         312.	13	Kaohsiung (Taiwan Province of PRC)	9.9	10.6	10.3				
16         Xiamen(PRC)         8.0         8.6         9.1           17         Tanjung Pelepas (Malaysia)         7.6         8.5         9.           18         Hamburg (Germany)         9.3         9.7         8.1           19         Los Angeles (USA)         7.9         8.3         8.1           20         Long Beach         6.6         6.8         7.1           Total of Top 20 Ports         294.3         310.9         312.	14	Antwerpen (Belgium)	8.6	9.0	9.7				
17       Tanjung Pelepas (Malaysia)       7.6       8.5       9.         18       Hamburg (Germany)       9.3       9.7       8.3         19       Los Angeles (USA)       7.9       8.3       8.3         20       Long Beach       6.6       6.8       7.1         Total of Top 20 Ports       294.3       310.9       312.	15	Dalian(PRC)	10.0	10.1	9.5				
18         Hamburg (Germany)         9.3         9.7         8.3           19         Los Angeles (USA)         7.9         8.3         8.3           20         Long Beach         6.6         6.8         7.3           Total of Top 20 Ports         294.3         310.9         312.3	16	Xiamen(PRC)	8.0	8.6	9.2				
19         Los Angeles (USA)         7.9         8.3         8.3           20         Long Beach         6.6         6.8         7.3           Total of Top 20 Ports         294.3         310.9         312.3	17	Tanjung Pelepas (Malaysia)	7.6	8.5	9.1				
20         Long Beach         6.6         6.8         7.1           Total of Top 20 Ports         294.3         310.9         312.1	18	Hamburg (Germany)	9.3	9.7	8.8				
Total of Top 20 Ports         294.3         310.9         312.	19	Los Angeles (USA)	7.9	8.3	8.2				
	20	Long Beach	6.6	6.8	7.2				
	Total of Top 20 Ports Source: Port Statistics, Port of Rotterdam Authority; PRC: Peoples		294.3	310.9	312.5				

#### 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 finalised 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 2015 the cargo handling capacity of Major Ports was 871.52 Million Tonnes. Commodity-wise capacity of Major Ports at the end of March 2009 to 2015 is given in Annex IV.

#### Maritime Agenda 2010-20

1.7.5 In the Maritime Agenda a target of 3130 MT Port capacity has been set for the year 2020. More than 50% of this capacity is to be created in the Non-Major Ports. The Non-Major Ports are expected to play a major role and by the year 2020, the traffic handled by Non-Major Ports is expected to increase to 1280 Million Tonnes (MT). The objective is not only creating more capacity but to bring out ports at par with the best international Ports in terms of performance. This will reduce the transaction cost considerably for our trade, thus making them globally competitive. The total proposed investment in Major and Non-Major Ports by 2020 is expected to be around Rs.2,96,000 crore. Most of this investment has to

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come from the private sector. Public Funds will be mainly deployed for common user infrastructure facilities like deepening of port channels, rail and road connectivity from ports to hinterland etc. Foreign Direct Investment up to 100% under automatic route is permitted for construction and maintenance of Ports.

The Ministry of Shipping is continuously engaged in designing and implementing various projects for development of port sector. To increase the pace of growth and to improve the efficiency of the delivery system, the Ministry of Shipping has come out with a Maritime Agenda 2010-20 for the next ten years. The Agenda is an effort to identify the areas for attention during 2010-11 to 2019-20.

1.7.6 The agenda for the Ports are:-

- Develop Two New Major Ports one each on east and west coasts.
- Full mechanization of cargo handling and movement
- Major Ports to have draft of not less than 14 metres and hub ports 17 metres.
- Identification and implementation of projects for rail, road and inland waterway connectivity to ports.
- Development of two hub ports on each of the West and the East coasts
- Port Policy Measure
  - New Land Policy for Major Ports
  - New Policy on captive berths
  - New Policy on dredging
  - Shifting of transshipment of Indian containers from foreign ports to Indian ports.
  - Policy on co-operation and competition amongst Indian Ports
  - Establishing ±ndian Ports Globalqfor overseas investments by Indian Ports.
  - Development of two non-major ports, one at Dugarajapatnam in Andhra Pradesh and other in Sagar, West Bengal.

#### Private Sector Participation

1.7.7 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.

1.7.8 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 MT in the major ports comprising construction of berths and terminals, mechanization of existing berths etc.

1.7.9 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

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

(a) Leasing out existing assets of the Port.

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

- construction and operation of container terminals.
- construction and operation of bulk, break bulk, multipurpose and specialized cargo berths.
- warehousing, container freight stations, storage facilities and tank farms.
- cranage/handling equipment.

- setting up of captive power plants.
- dry docking and ship repair facilities.
- (c) Leasing of equipment for port handling and leasing of floating crafts from the private sector.
- (d) Pilotage.
- (e) Captive facilities for port based industries.

National Transport Development Policy Committee (NTDPC)

1.7.11 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 is 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. The Ministry of Shipping has proposed a bill for amendment in the Major Port Trust Act, 1963 seeking abolition of TAMP for which a proposal has been initiated for consideration and approval of the Cabinet. Deregulation of Tariff Determination would lead to enhanced competition, performance improvement and business orientation in this Sector and would also encourage investors.

#### 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 Indiac 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 Govts 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 itsqown 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

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

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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 104 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 104 recommendations are to be implemented by December 2019. Out of these, 32 have already been implemented. The implementation of these initiatives will furthers improve the efficiency and performance of the Ports.

**Project E- Port:** On the suggested reforms of World Banko Report titled Sease of Doing Business+, Ministry of Shipping has already taken the following significant steps to reduce congestion and faster evacuation of cargo at JNPT.

- (i) Manual Form 13 & 11 have been eliminated w.e.f. 23/02/2015 and a software for web based e-Forms 13 has been developed, wherein the Customs authorization/endorsement is obtained online while accepting the containers. Other Major Ports are also directed to follow the above action.
- (ii) Gate Automation System has been put in place at GTI terminal at JNPT, resulting in significant reduction of transaction time at the port gate for containers.
- (iii) To ease the traffic, a Centralized Parking Plaza and pay & parking facilities are developed at JNPT for parking of Tractor-Trailer (TTs). Roads leading to JNPT and also those connecting the port to various CFSs around it are being widened for smooth traffic movement.
- (iv) Inter-terminal transfer of Tractor-Trailers from JNPCT to GTI, JNPCT to NSICT and vice-versa has been started.
- (v) Almost all the Shipping Lines (29/33) have implemented e-Delivery orders.
- (vi) This Ministry is in process of procurement/installation of container scanners in some terminals of 7 Major Ports namely JNPT, KoPT, VoCPT (Tuticorin), PPT,

KPL (Ennore), NMPT and VPT as decided in the Revenue Secretary meeting held on 24.10.2015 at JNPT and CoS meeting held on 23.12.2015.

Incorporating all the above, the Shipping ministry has chalked out an action plan Project e-Port with various activities such as establishment of single window clearance system, gate automation, integration of ICES-PCS-CFS-Terminal, Direct Port Delivery, Edelivery Orders, E-Payment, Installation of Container Scanners, implementation of RFID etc.

#### 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), Lakshdweep (10), Tamilnadu (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 **P**ort Trustqexcept for the port of Kamarajar (Ennore) which is a corporatised entity.

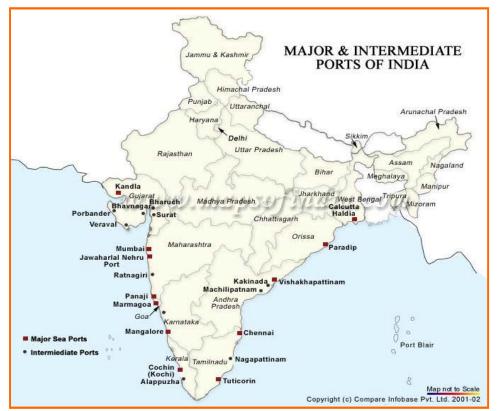


Chart - VI

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 Honople Minister of Shipping. The Ministers incharge of Ports in all Maritime States, Union Territories of Puducherry, Andamanop & 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 466.10 million tonnes of traffic during 2015-16 as compared to 470.9 million tonnes of cargo handled in 2014-15.

#### 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 traffic only of small volume. A snap view of the location of ports in Gujarat is given in **Chart –VII** 



Source : :http://www.gmbports.org/port\_pog.htm

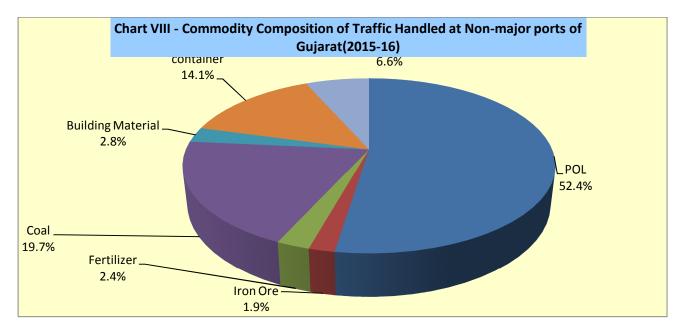
2.4.1.2 The trends in the cargo handled at both major and non-major ports of the State during the last few years and first six months of the current and previous year are given in **Table 13**.

Table 13 - Gujarat: Trends in Cargo Handled at Major & Non-Major Ports (MillionTonnes)								
Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	72.22	79.50 (10.1)	81.88 (03.0)	82.50 (00.8)	93.62 (13.5)	87.01 -(07.1)	92.50 (06.3)	100.05 (08.2)
Non-Major Ports	152.8	205.58	230.91	259.05	287.82	309.94 (07.7)	336.10	339.78
All Ports	225.03	285.08 (26.7)	312.79 (09.7)	341.55 (09.2)	381.44 (11.7)	396.95 (04.1)	428.59 (08.0)	439.83 (02.6)
Figures in bra (P) Provisiona		sents perce	ntage chan	ge over the p	revious year/	period.	•	• • •

2.4.1.3 It is noteworthy that all ports (major and non-major) located along the coast of Gujarat handled 41% of the total cargo handled by Indian ports in 2015-16. The total cargo traffic handled at the major and non-major ports of Gujarat during 2015-16 was of the order of 439.83 million tonnes as against 428.59 million tonnes in 2014-15, reflecting an increase of

2.6%. In particular, non-major ports of Gujarat alone handled close to three-fourth of total cargo traffic at Indiacs non-major ports during 2015-16.

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 Stateq maritime activities.

	Table 14	- Gujarat: N	lon Major F	Ports - Capaci	ty & Utilizatio	n (Million 1	۲onnes)	
ltem	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16(P)
Capacity*	235	244	267	323	366	387	422	466
		(03.8)	(09.4)	(21.0)	(13.3)	(05.7)	(09.0)	(10.4)
Cargo Handled	152.81	205.58	230.91	259.04	287.82	309.95	336.09	339.78
% Utilization	65.0	84.3	86.5	80.2	78.6	80.1	79.6	72.9
* Including Light	terage Port Ca	pacity;						

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 % II weather Deep Water Direct Berthing Ports+. Amongst 11 ports, 6 ports are to be developed through private investment and remaining 4 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 handle cargo. Maharashtra Maritime Board (MMB) is the nodal agency for regulation and development of the States maritime activities.

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 15**.

Tonnes)									
Major/Non-Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)	
Major Ports	109.18	115.30	118.90	121.92	122.53	121.52	125.46	125.14	
		(05.6)	(03.1)	(02.5)	(00.5)	-(00.8)	(03.2)	-(00.3)	
Non-Major Ports	10.42	12.05	14.88	19.95	24.20	24.66	27.30	28.85	
		(15.6)	(23.5)	(34.1)	(21.3)	(01.9)	(10.7)	(05.7)	
All Ports	119.6	127.35	133.78	141.87	146.73	146.18	152.76	153.99	
		(06.5)	(05.0)	(06.0)	(03.4)	-(00.4)	(04.5)	(00.8)	

### 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 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 16**.

Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	41.68	48.85	50.06	39.05	17.74	11.74	14.71	20.78
		(17.2)	(02.5)	-(22.0)	-(54.6)	-(33.8)	(25.3)	(41.2)
Non-Major	11.90	13.90	14.58	14.47	3.39	0.28	0.76	0.43
Ports		(16.8)	(04.9)	-(00.8)	-(76.6)	-(91.6)	(167.6)	-(43.4)
All Ports	53.58	62.75	64.64	53.52	21.13	12.024	15.47	21.21
		(17.1)	(03.0)	-(17.2)	-(60.5)	-(43.1)	(28.7)	(37.1)

### 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, 4 ports are cargo handling non-major ports 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%.

2.4.4.2 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 17**.

Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	36.69	35.53	31.55	32.94	37.04	39.36	36.57	35.58
		-(03.2)	-(11.2)	(04.4)	(12.4)	(06.3)	-(07.1)	-(02.7)
Non-Major	4.97	8.55	3.10	0.59	0.61	0.51	0.65	0.84
Ports		(72.0)	-(63.7)	-(81.0)	(03.4)	-(16.6)	(27.9)	(28.3)
All Ports	41.66	44.08	34.65	33.53	37.65	39.87	37.22	36.42
		(05.8)	-(21.4)	-(03.2)	(12.3)	(05.9)	-(06.7)	-(02.1)

### 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.

2.4.5.2 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 18**. In Kerala, 4 non-major ports are handling cargo.

Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	15.5	17.43	17.87	20.09	19.84	20.89	21.60	22.10
		(12.5)	(02.5)	(12.4)	-(01.2)	(05.3)	(03.4)	(02.3)
Non-Major	0.13	0.12	0.12	0.10	0.10	0.09	0.16	0.14
Ports		-(07.7)	(00.0)	-(16.7)	-(04.0)	-(06.3)	(76.7)	-(11.3)
All Ports	15.63	17.55	17.99	20.19	19.94	20.98	21.75	22.24
		(12.3)	(02.5)	(12.2)	-(01.3)	(05.2)	(03.7)	(02.2)

#### 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 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 2015-16 the non-major ports in Tamil Nadu collectively handled 0.86 million tonnes of cargo traffic as compared to 0.83 million tonnes in 2014-15. 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 19**.

Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	91	95.55 (05.0)	98.2 (02.8)	98.77 (00.6)	99.55 (00.8)	107.08 (07.6)	115.21 (07.6)	119.11 (03.4)
Non-Major Ports	0.90	1.17 (30.0)	1.61 (37.6)	1.21 -(24.8)	0.93 -(23.1)	0.87 -(06.9)	0.83 -(04.7)	0.86 (03.8)
All Ports	91.9	96.72 (05.2)	99.81 (03.2)	99.98 (00.2)	100.48 (00.5)	107.95 (07.4)	116.03 (07.5)	119.97 (03.4)

#### 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, Mutyalammapalem 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 129.8 million tonnes of cargo during 2015-16 compared with 141.4 million tonnes in 2014-15 thus registering decline of

8.3% in traffic handled by major and non-major ports of Andhra Pradesh. Non-major ports in Andhra Pradesh posted negative growth of 12.8% in 2015-16. 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-20**.

Table 20	- Andhra	a Pradesh		in Cargo H lion Tonne		t Major &	Non-Majo	r Ports
Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Major Ports	63.91	65.5 (02.5)	68.04 (03.9)	67.42 -(00.9)	59.04 -(12.4)	58.50 -(00.9)	58.00 -(00.8)	57.03 -(01.7)
Non-Major Ports	29.72	43.69	43.27	45.63 (05.5)	51.81 (13.5)	58.69 (13.3)	83.42	72.72
All Ports	93.63	109.19 (16.6)	, 111.31 (01.9)	113.05 (01.6)	110.85 -(01.9)	117.2 (05.7)	141.4 (20.7)	129.8 -(08.3)

#### 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 14.71 million tonnes of cargo during 2015-16 compared with 15.45 million tonnes in 2014-15 thus registering a decline of 4.8% 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**.

Tab	Table 21 - Orissa : Trends in Cargo Handled at Major & Non-Major Ports         (Million Tonnes)										
Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)			
Major Ports	46.41	57.01 (22.8)	56.03 -(01.7)	54.25 -(03.2)	56.55 (04.2)	68.00 (20.2)	71.01 (04.4)	76.39 (07.6)			
Non-Major Ports	0.3	0.42 (40.0)	0.4 -(04.8)	5.08 (1170.0)	11.07 (117.9)	14.37 (29.8)	15.45 (07.5)	14.71 -(04.8)			
All Ports	46.71	57.43 (23.0)	56.43 -(01.7)	59.33 (05.1)	67.62 (14.0)	82.371 (21.8)	86.46 (05.0)	91.09 (05.4)			

Figures in bracket represents 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 and Haldia 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**.

22 - Wes	st Bengal		-		Major & N	lon-Major	Ports
2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
54.22	46.43 -(14.4)	47.55 (02.4)	43.25 -(09.0)	39.93 -(07.7)	41.39 (03.7)	46.29 (11.8)	50.20 (08.4)
0	0	0	0	0	0	0	0
54.22	46.43 -(14.37)	47.55 (02.41)	43.25 -(09.04)	39.93 -(07.68)	41.39 (03.66)	46.29 (11.85)	50.20 (08.43)
	<b>2008-09</b> 54.22 0	2008-09     2009-10       54.22     46.43       -(14.4)       0     0	2008-09         2009-10         2010-11           54.22         46.43         47.55           -(14.4)         (02.4)           0         0         0           54.22         46.43         47.55	(Million Tonne           2008-09         2009-10         2010-11         2011-12           54.22         46.43         47.55         43.25           -(14.4)         (02.4)         -(09.0)           0         0         0         0           54.22         46.43         47.55         43.25           -(14.4)         (02.4)         -(09.0)           54.22         46.43         47.55         43.25	(Million Tonnes)           2008-09         2009-10         2010-11         2011-12         2012-13           54.22         46.43         47.55         43.25         39.93           -(14.4)         (02.4)         -(09.0)         -(07.7)           0         0         0         0         0           54.22         46.43         47.55         43.25         39.93           -(14.4)         (02.4)         -(09.0)         -(07.7)           0         0         0         0           54.22         46.43         47.55         43.25         39.93	(Million Tonnes)           2008-09         2009-10         2010-11         2011-12         2012-13         2013-14           54.22         46.43         47.55         43.25         39.93         41.39           -(14.4)         (02.4)         -(09.0)         -(07.7)         (03.7)           0         0         0         0         0         0           54.22         46.43         47.55         43.25         39.93         41.39           -(14.4)         (02.4)         -(09.0)         -(07.7)         (03.7)           0         0         0         0         0         0           54.22         46.43         47.55         43.25         39.93         41.39	2008-092009-102010-112011-122012-132013-142014-1554.2246.4347.5543.2539.9341.3946.29-(14.4)(02.4)-(09.0)-(07.7)(03.7)(11.8)000000054.2246.4347.5543.2539.9341.3946.29000000054.2246.4347.5543.2539.9341.3946.29

#### 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 **P**ort Management Boardqfor 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 State during the last few years and current year are given in **Table 23**.

Tab	le 23 - Un	ion Territ		ds in Cargo		at A & N	Islands P	ort
			( <b>M</b> i	illion Tonne	es)			
Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)
Andaman &	2.01	2.07	1.68	1.21	1.07	1.15	1.16	1.69
Nicobar Islands		(03.0)	-(18.8)	-(28.0)	-(11.6)	(07.5)	(00.5)	(46.5)

The cargo handling capacity at Puducherry is estimated 200,000 tonnes of cargo per annum. 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 development work at Kariakal port has begun and 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**.

Table 2	Table 24 - Union Territories: Trends in Cargo Handled at Non-Major Ports         (Million Tonnes)										
Major/Non- Major	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015- 16(P)			
Lakshadweep	0.03	0.03	0.03	0.03	0.03	0.12	0.12	0.12			
Puducherry	0.05	1.32	4.71	6.42	6.91	6.28	4.96	5.97			

## **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**.

	Table 25-Major Port-wise Cap	pacity Utilisation durin	g 2015-16	6
				(MillionTonnes)
S.No.	Name of Ports	Capacity	Traffic	Capacity Utilisation (%)
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
	Total	965.36	606.4	62.8

#### 3.2 Port Efficiency

3.2.1 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)

3.2.2 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 3.63 during 2015-16. The TRT varied in the range between 2.18 days at Cochin Port to 6.53 at Kamarajar port during 2015-16. Amongst the 12 major ports, improvement in TRT during 2015-16 in comparison to 2014-15 has been achieved by all Major Ports except Kamarajar, Chidambaranar, Cochin, New Managalore, JNPT and Mumbai. Port-wise TRT for select years are given in **Table 26**. The Average Turn Round Time achieved by major ports for select years since 1990-91 to 2015-16 is presented in the **Chart IX** below.

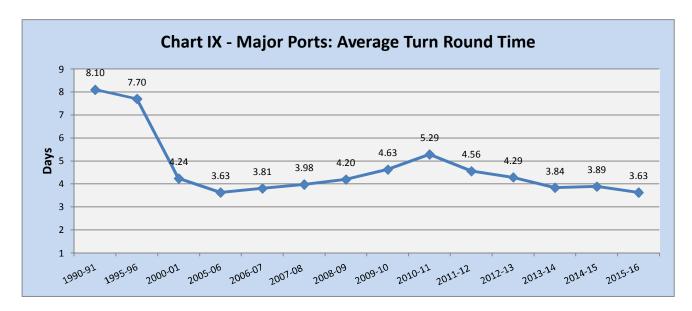
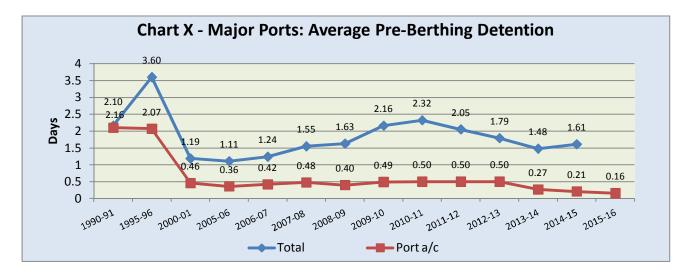


	Table 26: Average Turn Round Time (days)											
Port	1990- 91	2000- 01	2008- 09	2009- 10	2010- 11	2011- 12	2012- 13	2013- 14	2014- 15	2015- 16(P)		
1	2	3	4	5	6	7	8	9	10	11		
Kolkata D.S	11.90	5.50	5.10	6.80	6.21	5.45	4.72	4.51	4.97	3.98		
Haldia D.C	6.47	3.97	4.21	5.01	4.45	3.62	3.95	3.77	3.36	3.27		
Paradip	8.40	4.16	4.78	9.04	7.73	6.33	4.39	4.62	7.01	4.50		
Vishakhapatnam	7.07	3.71	3.93	4.78	5.84	5.68	5.39	4.73	5.67	3.84		
Kamarajar			2.35	2.11	2.78	2.17	2.95	4.24	4.32	6.53		
Chennai	7.20	5.83	4.15	4.04	4.36	3.91	3.24	2.46	2.54	2.53		
Chidambaranar	4.70	4.10	3.64	3.90	4.00	4.94	4.31	3.92	3.37	3.73		
Cochin	4.00	3.11	2.14	2.08	2.20	1.82	1.58	1.76	1.69	2.18		
New Mangalore	4.96	2.89	3.00	3.06	2.70	2.95	3.29	3.18	2.46	2.63		
Mormugao	6.40	4.25	5.95	8.91	10.43	7.68	5.06	4.50	3.97	3.65		
J.L.Nehru		2.21	1.90	2.01	2.64	1.94	2.48	2.26	2.24	2.44		
Mumbai	10.80	5.20	4.95	4.61	4.96	5.22	5.58	4.25	4.09	4.58		
Kandla	10.00	4.72	7.26	5.03	5.90	6.42	6.33	5.66	4.90	4.66		
All Ports	8.10	4.24	4.20	4.63	5.29	4.56	4.29	3.84	3.89	3.63		
Source: Major P	orts / Indi	an Ports /	Associatio	on (IPA)								

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

#### Average Pre Berthing Detention Time (PBDT)

3.2.3 The average overall pre berthing detention time for all major ports declined from 2.2 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. Port-wise PBD for select years is indicated in **Table 27**. The trajectory of weighted average of pre berthing detention time at Major ports- total and on port account -during 1990-91, 1995-96, 2000-01, 2005-06 onwards is shown in **Chart X** below.



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

Port	1990-	2000-	2008-	2009-	2010-	2011-	2012-	2013-	2014-	2015-
	91	01	09	10	11	12	13	14	15	16(P)*
1	2	3	4	5	6	7	8	9	10	11
Kolkata D.S	0.90	0.61	0.66	1.31	1.23	0.77	0.61	0.56	0.71	0.01
Haldia D.C	1.66	0.91	3.38	4.39	3.73	2.54	2.29	2.21	1.43	0.15
Paradip	1.59	1.41	2.32	6.30	5.04	3.69	1.65	1.94	4.11	0.20
Vishakhapatnam	1.83	0.75	1.28	1.90	2.81	2.84	2.50	1.84	2.59	0.04
Kamarajar			0.27	0.37	0.65	0.76	1.33	2.38	2.51	0.00
Chennai	2.10	2.45	1.39	1.35	1.61	1.16	0.80	0.41	0.41	0.03
Chidambaranar	0.90	1.40	1.09	1.36	1.29	1.91	1.31	1.19	1.07	0.27
Cochin	0.83	0.74	0.70	0.85	1.03	1.05	1.09	0.97	0.84	0.06
New Mangalore	0.79	0.77	0.65	0.81	0.59	0.79	1.04	0.81	0.60	0.04
Mormugao	2.51	1.32	1.77	3.46	4.07	2.94	1.62	1.47	1.61	0.18
J.L.Nehru		0.67	0.95	0.98	1.51	1.13	1.31	1.08	0.80	0.37
Mumbai	3.40	1.26	1.41	1.06	1.23	1.37	1.62	1.18	1.69	0.31
Kandla	4.40	1.51	2.62	2.60	3.32	3.74	3.58	2.72	2.52	0.15
All Ports	2.16	1.19	1.63	2.16	2.32	2.05	1.79	1.48	1.61	0.16
Source: Major Po	rts/ Indian	Ports Ass	ociation (II	PA) - * - R	elates to F	Ports A/c c	only.			

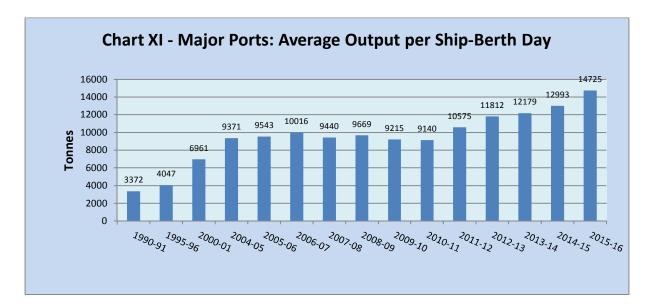
Table 27: Average Pre-Berthing Detention(Days)

#### Average Output Per Ship Berth-day

3.2.4 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. However, average output per ship berth day is marked by substantial variation across major ports ranging from a high 31080 tonnes in case of Kamarajar port to a low of 4182 tonnes at Kolkata Dock System during 2015-16. 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 2015-16 over the corresponding period of the previous year is visible in all the ports except Chidambaranar, New Mangalore, JNPT and Mumbai. Average Output per Ship-berth day during 2015-16 is 14213 tonnes compared to 114725 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 28**.

	•	Table 28	Average	Output p	per Ship E	Berth-day	(Tonnes)			
Port	1990- 91	2000- 01	2008- 09	2009- 10	2010- 11	2011- 12	2012- 13	2013- 14	2014- 15	2015- 16(P)
1	2	3	4	5	6	7	8	9	10	11
Kolkata D.S	560	2305	3027	1917	2253	2503	2762	2963	3084	4182
Haldia D.C	5659	6384	7732	6243	6563	6728	6078	6130	6802	7790
Paradip	4082	8503	12635	13853	14243	15995	16625	18179	17736	21139
Visakhapatnam	5325	9799	11171	10484	10334	10704	10641	10925	10640	12802
Kamarajar			28424	21665	17669	27505	27741	22357	22613	31080
Chennai	3912	6977	10778	11428	10984	10352	12046	14268	14464	15742
Chidambaranar	2130	3983	5817	6934	7035	6733	7452	9633	10468	10239
Cochin	3714	6138	10599	11089	11752	15784	15878	15881	16906	15661
New Mangalore	4412	12192	13645	13896	14211	13957	15921	16314	19856	16165
Mormugao	10429	12438	6290	5002	4409	10530	11484	10018	12272	13885
J.L.Nehru		6383	20344	21563	20393	19227	23319	23014	21310	21287
Mumbai	2310	4213	5717	6122	6042	6476	8709	7057	11055	7922
Kandla	4417	8230	13107	13549	14137	14272	15728	15729	15159	16655
All Ports	3372	6961	9669	9215	9140	10575	11812	12179	12993	14725
Source: Major Po	rts /Indian I	Ports Asso	ciation (IPA	A).						

2.5 The average out-put per ship-berth-day for selected years since 1990-91 to 2015-16 is presented in the **Chart XI** below.



Output per Ship- Berth day . Total tonnage handled distributed over total number of berth days

#### 4. PRIVATE SECTOR/CAPTIVE/JOINT SECTOR PORT PROJECTS

Brief details of the ongoing Private Sector/Captive/Joint Sector Port Projects and a list of these projects under consideration as on 31.3.2016 are brought out in Appendix-I & Appendix-II in respect of Major Ports and in Appendix-III & Appendix-IV for Non . Major Ports.

## **APPENDICES**

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

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

SI. 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.
	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
	Construction of Coal Berth-4	Kamarajar Port Ltd	9.00	325	KPL has issued LOA to M/s Afcons Insfrastructure Ltd, Mumbai for construction of berth. The work has been commenced
4	Construction of two New Off- shore Container berths & Development of Container Terminal berth on BOT basis in Mumbai Harbour.	Mumbai Port	9.60MTPA (1.00 Mn TEUs)	1461	<ul> <li>BOT Component- Entire Approach jetty is ready. Berth structure completed. Total investment till date is Rs. 627.25 crores. M/s. ICPTL has proposed to procure container handling equipment from 2 Chinese vendors. Details of vendors have been forwarded to ministry on 31.7.14 for security clearance. Development of contaianer yeard in Pricess Dock is in progress.</li> <li>MbPT component- Fresh tenders for balance work of dredging and filing dock enclosure have been invited.</li> <li>i) The Board in its meeting held on 25.4.14 has accepted the bid of M/s International Seaport Dredging Ltd., for award of work subject to Govt. sanction to RCE, which is yet to be received.</li> <li>ii) Work order for balance filling work and dock closure placed on 4.4.14. Work of Princes Dock filling completed. Victoria Dock filling work is in progress. RCD work is in progress.</li> </ul>

					<ul> <li>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.</li> </ul>
5	Multi-User Liquid Terminal (MULT) at Puthuvypeen SEZ (International Bunkering Terminal at Cochin)	Cochin Port	4.42 MMTPA	240	Gols 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. The concession Agreement signed with IOCL on 04/04/2014. Application to KSPCB for 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 & 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. M/s L&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 IOCLcs 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.
6	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. Hontple 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 and

					judgment may be pronounced on the next date.
7	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.
8.	Development of EQ-1A berth on south side of EQ-1 berth in Inner Harbour for handling Thermal coal and Steam coal at IH.	Visakhapatnam	7.36	313.39	Physical progress is 77 % Expected completion by June, 2016. Concession Agreement signed on 03.02.2014 with M/s. SEQ Vizag Coal Terminal Pvt. Ltd.,
9.	Installation of mechanized Fertilizer handling facilities at EQ-7 at IH.	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.
10.	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.
11.	Extension of existing Container terminal in outer harbor.	Visakhapatnam	0.54 MTEUs	633.11	LOA issued to M/s VCTPL on 31.12.2013. Concession agreement is to be signed.
12.	Development of Deep Drought Coal Berth on BOT basis	Paradip Port	10.00	479.01	In pursuance to the Board resolution No.226/2015-16., Termination Notice has been issued to ESSAR on 3.3.2016 in view of their failure to fulfill the C Conditions Precedent including financial closure by 31.01.2016
13.	Conversion of berth No. 8 as container terminal on.	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.
14.	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.
15	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.
16	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.				
17.	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.				
18.	Development of Fourth Container Terminal at JNP on DBFOT basis	JNPT	60 MTPA	7915	The Concession is awarded to Bharat Mumbai Container Terminals Pvt. Ltd. On 22.12.14. Concessionaire has awarded the work of dredging and reclamation. The reclamation work commenced in March, 15.				
19.	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.				
BOT	BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer.								

Appendix – II

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

SI.	Project	Port Name	Capacity	Project	Project Status
No			(Million Tonnes)	Cost (Rs. In crores)	
1	2	3	4	5 <sup>´</sup>	6
1.	Development of Multi-Purpose berths to handle clean cargo including container on BOT basis at Paradip Port.	Paradip Port	5.0 MTPA	430.78	Concession Agreement has been signed with the SPV Rearadip International Cargo Terminal (Pvt.) Ltd (PICTPL) on 7.3.15 with revenue share of 11.044%. PICTPL has sought time till 12.12.2015 for fulfillment of condition precedents.
2.	Mechanization of EQ 1 to EQ 3 berths at Paradip Port on BOT basis.	Paradip Port	30	1437.76	Fresh RFQ has been floated on 14.08.2015 with due date of RFQ as 28.09.2015.
3.	Development of Deep Draught Iron Ore Berth on BOT basis at Paradip Pot.	Paradip Port	10	740.19	Letter of Award has been issued in favour of H1 bidder i.e. consortium of JSW Infrastructure Ltd. & South West Port Ltd. on 5.2.15 at 21 % revenue share to the Port. The Project is in the stage of fulfillment of condition precedent including financial closure.
4.	Dredging & Infrastructure development for handling bigger ships at 18 to 22 ID Harbour Wall Berths.	Mumbai	8.00 MT	613	Due to poor response to the project as suggested by M/s RITES, it is proposed to scrap the project.
5.	Barge handling facilities at Khori Creek	Kandla*	4	100	Under planning stage.
6.	Construction of T shape Jetty at Tekra (Phase-II)	Kandla*	14	1500	The scheme will spill over in 13 <sup>th</sup> five year plan. Under planning stage.
7.	Setting up of barge jetty at Tuna on captive use basis	Kandla*	1.5	22	EOI invited. Only M/s Shree Renuka Sugars has submitted application till due date. Committee recommended the proposal submitted by M/s Shree Ranuka Sugars and also recommended to put up to the Board for approval.
8.	Construction of barge jetty at Tuna on BOT basis	Kandla*	5.49	255.3	Feasibility Report, RFQ and TAMP proposal under approval.
9.	Strengthening of oil jetty 1 at KPT	Kandla	0.78	14.29	LOA issued to M/s Indiana build infrastructure pvt. Ltd., Mumbai on 18.03.14. work order issued on 20.5.2014. Work has been completed.
10.	Development of Port based multi product SEZ	Kandla*	-	1095	In-principle approval from MoS for formation of SPV is awaited. Concurrence of GoG is still awaited. KPT has appointed NIO, Mumbai for carrying out EIA studies.
11.	Development of General Cargo	Cochin Port	4.23 MTPA of	198.2	The project was to develop a 300 metre berth length of Q8-Q9 berths as a

	Terminal at Q8-Q9 berths (Modernization of Coal Handling at Cochin Port)		Coal		dedicated Coal only terminal, with 14.42 ha of backup area and involving investment of around Rs. 198 crores. Tenders were invited thrice for the project, no response was received. During the review meeting on 24.2.15, it was decided to rejig the project by providing 14.5 m draft and decking the 300 m stretch of the berth and also revising the cost estimates of the existing components and apply for VGF to Govt. of India to improve the IRR. The assignment for providing consultancy services for preparation of a Feasibility Report for Development of a Coal Terminal at Cochin Port is awarded to M/s Alia Consulting Solutions Pvt. Ltd., Mumbai on 31.3.15. The final feasibility study report as submitted by consultant on 21.05.2015. Study shows that scope of terminal is not bright. Hence it is decided to shelve the project.
12.	Construction of 1 No. shallow water berth for handling construction materials		2.00 MTPA	65.37	Court case filed by M/s Indian Port Terminal, Tuticorin. The matter is at Honople Madras High Court, Chennai. Next date of hearing is yet to be announced.
13.	Development of Outer Harbour at Chennai Port (previously called Development of Mega Container Terminal). Under PPP mode on BOT basis.	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 capitive cost, alternative modes of financing the project are under examination.
14.	Development of Rajiv Gandhi Dry Port and Multi Modal Logistic Hub at Mappedu near Sriperrumbudur; under PPP mode	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 prospective.
15.	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			315	Draft MOU has been prepared by ChoPT and forwarded by Indian Coast Guard to Ministry of Defence for scrutiny during March, 2015. Response awaited.
16.	Development of Bharthi Dock - 2(BD-II) as co- terminal in Chennai Port Trust		5MTPA	180	Empowered committee (EC) Supreme Court likely to give its recommendations by 30.06.2016
17.	Development of JD (East) berths as Multi-cargo Terminal	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.
18	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.	Complex under KoPT*	1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
19.	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.

20.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.		1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
21.	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.
22.	Construction of a riverine jetty south of 2 <sup>nd</sup> Oil Jetty through DBFOT Basis.		1.5 MTPA	471	Feasibility Study being undertaken, following which RFQ document would be issued.
23.	Redevelopment of Berths 8,9 and Barge Berth at the Port of Mormugao, Goa		19.22 MTPA	114.5	Letter of Award is issued to M/s Sterlite Port Ltd., Tuticorin on 29.03.2016

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BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT: Design, Build, Finance, Operate and Transfer. \*- As on 30<sup>th</sup> September,2015

Appendix – III

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

SI. No	Project Name	State/ Ports Maritime Board	Capacity (Million	Project Cost (Rs.	Project Status
			Tonnes)	In Crore)	
1	2	3	4	5	6
1.	Development of Mundra Port	Mundra (Gujarat)*	160	12305	<ul> <li>Construction of 4 berths alongwith backup facilities has been completed.</li> <li>Phase-I of the Project completed &amp; Operational</li> <li>1.810 m Multipurpose jetty</li> <li>2.1843 m container terminal &amp; T-2</li> <li>3. 1 SBM and other back up facilities</li> <li>Phase-2:</li> <li>1. 1510 m Coal Terminal, Wandh-Operational</li> <li>2. 810 m Container Terminal Operational</li> <li>3. Second SBM Operational</li> <li>4. Multipurpose 3 Operational</li> <li>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.</li> <li>6. In-Principle approval has been granted to M/s ACMTPL for development of Container Terminal 4. Construction is in progress.</li> </ul>
2.	Hazira Port Pvt. Ltd (HPPL)	Hazira (Gujarat)*	2.50 ( MMTPA)	1180	Phase 1 A (LNG Terminal) completed and operational.
3.	Development of Solid Cargo Port Terminal	Dahej (Gujarat)*	15	84	Two solid cargo berths with cranes completed 1) Backup area constructed 2) Conveyor system for berths no. 1 completed as per DPR.

4.	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.
5.	Captive Jetty by JP Associates Limited Jakhau Port	Jakhau Port*	3	140	Made operational, But JAL jetty is taken over by Ultra Tech Cement and jetty became non-operational since June 2013. Recently, GMB has granted the change of company.
6.	Captive Jetty by Essar Salaya Bulk Terminal Limited.	Salaya (Gujarat)*	7	600	The Construction of Jetty is completed. Approach bund is under construction.
7.	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.
8.	Captive Jetty by M/s. Essar Bulk Terminal Ltd1100m (3 <sup>rd</sup> Expansion)	Hazira (Gujarat)*	25	2621	Construction permission granted by the Board in its meeting held on 03.09.2015.
9	Captive Jetty by M/s Ultra Tech Cement Ltd- Expansion of Captive jetty at Kovaya	Kovaya Pipavav (Gujarat)*	5	200	Construction of the jetty is completed and will be operational after getting customs clearance.
10.	Captive Jetty by M/s Godrej . Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej*	1	5.9	Construction permission granted by the Board in its meeting held on September 2015.
11	Captive Jetty by M/s ISGEC . Ro Ro jetty for handling of ODC cargo at Dahej SEZ	Dahej*	1	55	Construction permission granted by the Board in its meeting held on September 2015.
12.	Demolition of old existing jetty and reconstruction of new Capt. Of Ports jetty at Old Goa.	Panaji-Port Goa	*.	20.36	<ul> <li>85% work of construction is completed.</li> <li>* The jetty will cater to low craft passenger vessel and other small crafts. No cargo will be discharged/ loaded at this jetty.</li> </ul>
13.	Establishing a captive port at Parangipettai by M/s IL &FS Limited	Parangipettai Tamil Nadu	13 MMTPA	1349	Construction yet to be commenced.
14.	7 <sup>th</sup> Berth	Kakinada Deep Water Port,	2.5	90	The Project is under progress.

15.	Phase-2-Development of Krishnapatnam Port	Krishnapatnam Andhra Pradesh	44.30(Bulk & Gen Cargo) 3.30 MTEU (Container)	6600	Under construction
16.	East Coast Energy Pvt. Ltd.,	Meghavaram	Captive Port	2370	To be operational by the 1 <sup>st</sup> quarter of 2017
17.	Dhamra Chandbali Port Project	Dhamra Port,Orissa	25 MMT	3639	2 Berths Completed
18.	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.
19.	Development of Pondicherry Port through private investment on BOT basis	Pondicherry	Phase . 1 16.2 Phase - II 10.8	2785 N.A	Developer has gone for Arbitration and the same is in progress.
20.	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)	46	DPR Under Preparation GoK has leased 75000 Sq.M land on 30 years lease Period Statutory Clearances are yet to be obtained Manki Port limits declared.
21.	Anchorage operations at Honnavar Port by M/s Honnavar Port Pvt Ltd., Hyderabad	Honnavar, Karnataka	4.99	511.3	Gok has leased 137560 Sq.m of Port land on lease for 10/30 years Period. Some Statutory Clearances are yet to be obtained Port limits declared.

Source: Maritime States/Maritime Boards. \* As on 30<sup>th</sup> September,2015

Appendix – IV

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

SI. 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.	Petronet LNG Ltd. 2nd jetty	Dahej (Gujarat)*	2.5	612	Construction completed & operational.
4.	Development of Chhara Port	Chhara (Gujarat)*	8	1200	CA signed on 29.1.2015 Environment Clearance received. Financial closure is under process.
5.	Development of Modhawa port.	Modhawa (Gujarat)*	Developer Ur	nder selection at	GoG Level
6.	Development of Greenfield port by M/s. IL & FS	Khambhat (Gujarat)*	Kept on hold	due to Kalpsar F	Project.
7.	Development of Greenfield port by Ms. JK Cement Group	Dholera (Gujarat)*	Kept on hold	due to Kalpsar	Project.
8.	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.
9	LNG Terminal by Swan Energy Ltd.	Jafrabad, Pipavav, Gujarat*	5	4000	DPR approved. Environment Clearance received. Financial Closure & Concession Agreement is under discussion.
10	Captive jetty expansion by M/s.	Jakhau,	2	150	Environmental clearance awaited

SI. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	
1	2	3	4	5	6
	Sanghi CEMENT Ltd.	Gujarat*			
11	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.
12.	Multi-purpose jetty at Sikka by Reliance Industries Ltd.	Sikka, (Gujarat)*	15	1000	Studies are under progress.
13.	Captive jetty by M/s Universal Success Enterprise Ltd	( Bhogat ) Gujarat)*	5	12.6	Environmental clearance awaited.
14.	M/s Sealand Port Pvt. Ltd ( a group company of IL&FS ) Coal Jetty & Multypourpose Jetty	Kutch, Gujarat*	17	1000	In principle approval is granted by GoG (December 2014)I
15.	M/s Sealand Port Pvt. Ltd (a group company of IL&FS) Multypourpose Jetty under Gujarat SEZ Act.	Nana Layja, Kutch, Gujarat*	3	256	In principle approval is granted by GoG (September 2015)
16	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)
17.	SPM no. 2 at Hazira by Reliance Industry Ltd.	Hazira,Gujarat*	4	100	Studies are under progress.
18	Redi Port Ltd	Redi Port Maharashtra*	33.38 MTPA & 1.74 m/EU	3634	Awaiting Environmental Clearance from MOEF
19	Vijaydurg Ports Pvt Ltd	Vijaydurg Port, Maharashtra*	78	4000	TORs received from MOEF
20	Rewas Port Ltd	Redi Port Maharashtra*	Phase1 - 66m.ton	Phase1 7000	
			Phase1! - 185 m.ton		Permission for Right of Way yet not received from MbPT

SI. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status					
1	2	3	4	5	6					
			Phase111 . over 400 m.ton							
21.	Construction of Terminal building	Panji Port	*	28.33	Project is in initial stage. *This is integral part of Capt. of ports jettey at Panji					
22	Captive port facility by M/s. Udangudi Power Corporation Ltd.	Udangudi Thoothukudi Tamil Nadu	6	9083	Port has been notified. Statutory clearances. Financial closure pending					
23.	Captive port facility by M/s. Coastal Tamil Nadu Power Ltd.	Cheyyur Kancheepuram Tamil Nadu	13	16000	Notification of Port limits under process					
24.	Captive port by M/s. Chettinad Power Corporation Ltd.	Tharangambadi Taluk Nagapattinam Tamil Nadu	3.5	7500	Port has been notified. Development under process.					
25.	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.					
26.	Development of Machilipatnam Port Ltd.	Machilipatnam Port Andhra Pradesh	45- Phase- 1 Stage-1 250-Master Plan	6778	Construction Work is scheduled to commence upon handling over of land for Port Development by GoAP.					
27.	Nakkapalli Port	Nakkapalli Andhra Pradesh	Captive Port 4.00 MMT	479	Investigation studies are in progress.					
28.	2nd stage Development of Karwar Port	Karnataka	520	165.9	Issue of bid documents is under progress.					
29.	Development of Modern Sea	Tadri	34.40	300	IDD Nominated KSIIDC as nodal agency.					

SI. No	Project	State/ Ports Maritime Board	Capacity (Million Tonnes)	Project Cost (Rs. In Crore)	Project Status
1	2	3	4	5	6
	Port at Tadri.	Karnataka			Preparation of DPR is under progress.
30.	Development of Honnavar Port	Honnavar Karnataka	2	20	M/s. Honnavar Port Ltd., has submitted DPR for the approval of the Government.
31.	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.
32.	Development of Port and setting up trade warehousing Zone at Belekeri.	Belekeri Karnataka	24	150	i-deck already prepared RFP, pre-feasibility report and Draft Concessional agreement.
33.	Development of captive jetty at Pavinkurva, Kunta	Pavinkurve Port(Newly declared port)	7.6	160	The proposal is under consideration.
34.	Development of Bulk Liquid Berth for handling L.N.G.	Karaikal Port Pudducherry	5.0	1948	Applied for Environmental Clearance.

Source: Maritime States/Maritime Boards. \* As on 30<sup>th</sup> September, 2015

Annex-I

#### Autley And Evnenditure - Port Sector (Centrel)

					Outla	y And Ex	penditur	e - Port S	ector (C	entral)							(Rs. In c	rore)
	Annual F (2007-200		Annual F (2008-200		Annual F (2009-201		Annual F (2010-11)	-	Annual (2011-12)	-	Annual P (2012-13)	lan	Annual Pl (2013-14)	an	Annual P (2014-15)		Annual P (2015-16)	an
Port	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual Exp.	App. Outlay	Actual	App. Outlay	Actual
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Kolkata (a)	37.37	63.05	44.97	53.64	58.00	48.85	50.88	49.76	63.73	21.29	28.45	17.34	38.03	5.86	43.75	23.04	46.00	7.73
Mumbai	50.36	26.10	150.00	23.50	192.00	146.09	179.58	116.76	176.57	142.05	279.79	149.30	427.60	24.87	50.00	76.53	230.79	31.51
JNPT	188.18	70.28	175.17	48.77	324.00	177.94	89.61	38.24	153.69	140.52	341.18	240.21	1559.10	137.58	647.54	294.82	235.85	83.9&&
Chennai	47.81	44.41	72.95	48.98	34.00	58.37	243.00	184.46	136.00	4.44	145.00	81.75	107.00	9.20	41.99	4.11	39.00	33.30
Cochin	158.52	139.07	255.65	246.33	191.97	190.93	259.35	160.86	115.08	92.21	93.45	78.47	123.05	3.40	42.84	17.20	3.00	6.81
Visakhapatnam	83.00	36.61	39.97	31.44	65.01	75.74	151.00	121.19	190.00	113.45	102.71	57.92	182.34	26.07	306.88	274.69	414.01	23.53
Kandla	89.49	38.25	140.87	58.07	115.00	62.64	45.66	52.70	92.27	52.82	166.89	138.44	145.45	28.30	100.00	324.47	308.92	5.26
Mormugao	10.10	11.18	22.07	17.52	71.00	31.01	66.29	71.52	108.93	69.17	71.36	46.95	110.00	24.75	82.87	61.17	13.76	3.68
Paradip	100.00	42.05	288.00	101.47	276.51	128.19	166.21	81.26	70.00	74.80	127.31	73.73	96.91	55.65	132.60	85.10	22.50	68.14
New Mangalore	36.00	25.81	30.00	30.11	34.00	32.48	31.00	24.56	36.00	38.45	36.00	45.50	75.00	8.04	50.00	67.94	64.35	17.83
Tuticorin	79.46	63.16	96.87	65.12	220.50	39.03	90.94	172.08	291.97	369.65	201.42	42.63	547.82	3.19	600.85	34.09	422.33	90.17
Ennore Port Ltd.	61.00	34.53	70.00	102.43	95.01	50.52	95.00	70.12	60.00	61.92	73.50	80.03	600.00	28.38	220.00	62.50	200.00	99.81
Sethusamudram Ship Canal Project	664.22	119.47	1581.07	152.24	161.10	20.98	10.00	6.02	10.01	8.51	4.00	2.12*	6.00	1.42*	0.50	2.94*	477.5	0.69*
WEB Based EDI Port Community System	7.50	0.04	6.00	1.00	3.00	3.33	4.88	4.46	2.38	2.01	2.00	2.00	1.00	##	0.50	0.00	3.85	0.00
Others (b)	477.26	170.67	598.38	88.50	564.90	161.68	362.86	223.31	673.09	518.08	901.87	579.43	635.00	318.98	464.80	38.01	704.38	48.57
Survey Vessels	19.00	0.00	79.00	5.00	10.00	0.00	15.00	15.00	15.00	15.00	0.00	0.00##	0.00	0.00##	0.00	0.00	0.00	0.00
Total	2109.27	884.68	3650.97	1143.10	2416.00	1227.78	1861.26	1392.30	2194.72	1724.37	2574.93	1633.70	4654.30	674.27	2785.12	1366.62	3186.24	520.93

(a) Includes Haldia and RR Schemes.

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

\* The amount is received as equity from Govt. of India and other stakeholders. & Rs.66.63 advance paid earlier now Transferred to revenue

App.Outlay: Approved Outlay
 ##- Not Available
 Source : Annual Plan - Port Sector ( Deptt. of Shipping)/IPA

	1	· · · · · · · · · · · · · · · · · · ·			1						0 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	1
Kolkata	2012-13	708	158	0	9	94	107	6960	463	3808	1184
	2013-14	717	179	211	262	39	27	7063	449	4377	1287
	2014-15	626	133	1410	270	147	5	8110	528	4582	1528
	2015-16(P)	589	0			76		9263	578	6550	1668
Haldia	2012-13	4796	1715	1976	4503	386	0	2869	137	11839	2808
	2013-14	4572	2170		5350	559			113	12032	2851
	2014-15	3618	2338			797			102	15056	3101
	2014-10 2015-16(P)	7086	869		5720	638			85	16268	3350
Paradip	2012-13	16467	1833	21403	4702	4146	0	171	13	7830	5655
landap	2012-18	17602	5593		6872	4054			9	9040	6800
	2013-14	17976	3499		7645	4429			4	7332	7101
	2014-15 2015-16(P)	20567	2889		8221	4361	-	-	5	8766	7638
<u>, ,, ,</u>	0010.10	40504	40500	0054	0705	0500	4404	4554	0.47	4.4050	5000
Visakhapatnam	2012-13	13501	12569		6795	2588		4554	247	14959	5903
	2013-14	12960	13032			2614		4916	262	14493	5850
	2014-15	13129	8365			2558		4372	248	20652	5800
	2015-16(P)	16945	6086	3403	5108	2795	127	5145	293	17424	5703
Chennai	2012-13	13376	52					29708	1539	9533	5340
	2013-14	12877	0	-				28330	1468	9177	5110
	2014-15	12659	146	0	0	542	37	29945	1552	9212	5254
	2015-16(P)	11892	0	0	0	260	0	30207	1565	7699	5005
Kamarajar	2012-13	521	0	14240	685	0	0	0	0	2439	1788
tamarajar	2013-14	1275	0		0	0			0	3580	2733
	2014-15	1894	0		0	0	-	-	0	4135	3025
	2014-10 2015-16(P)	3883	0		75	0		-	0	2710	3220
04:4	2010 12	E 47	0	0000	0	4050	100	0070	470	10405	0000
Chidambaranar	2012-13	547 299	0					9372	476	10465	2826
	2013-14		-		0			10129	508	10343	2864
	2014-15 2015-16(P)	366 693	46 86		0	1491 1511		11034 12388	<u>560</u> 612	10766 10309	3241 3684
Cochin	2012-13	14027	0						335	830	1984
	2013-14	14289	0		-	307			343	1505	2088
	2014-15 2015-16(P)	14016 13775	0			446 252		5246 5785	366 420	1789 2192	2159 2209
New Mangalore	2012-13 2013-14	22538 22944	2616 3012		4358 5420	536 504			48 50	3539 3692	3703 3936
	2013-14	21409	1557			704		920	63	3791	3656
	2014-15 2015-16(P)	23931	507			811		1105	76	5882	3558
Mormuraa	2012 12	000	7404	700	0000			050		470.4	4770
Mormugao	2012-13	823	7421	768		78			20	1724	1773
	2013-14	527	44	-		179		236	19	3191	1173
	2014-15 2015-16(P)	571 559	758 3965		6569 7808	227 223			25 26	4274 4149	1471 2077
J. L. Nehru	2012-13	4126	0		0	0			4259	2451	6448
	2013-14	4107	0						4162	2991	6233
	2014-15 2015-16(P)	3330 4094	0						4467 4492	3538 3142	6380 6402
Mumbai	2012-13	34751	0		0	512		829	58	16966	5803
	2013-14	35980	0		0			449	41	17529	5918
	2014-15	35837	0					544	45	19844	6166
	2015-16(P)	36273	0	3451	0	439	961	537	43	19449	6111
Kandla	2012-13	54544	925		374	4624		1935	118	23370	9361
	2013-14	52906	586			3633		453	29	20345	8700
	2014-15	55589	1160	9725	242	4502	2223	0	0	19056	9249
	2015-16(P)	55585	952			4532	813	56	3	23112	10005
All Ports	2012-13	180725	27289	58772	28032	14797	6597	119866	7714	109753	54583
	2012-10	181055	24616		32620	13784		114672	7453	112295	55548
	2013-14	181033	18002			16291			7433	124027	58134
	2014-15 2015-16(P)	195872	15354			15898			8198		60637

#### Annex-III

#### Commodity Composition of Traffic Handled at Non- Major Ports.

Maritime	Period	POL	Iron Ore	Building	Coal	Fertiliser		(000 Tor Others	Total
Status / UTs				Material		& FRM	Container		
1	2	3	4	5	6	7	8	9	10
Gujarat	2012-13	165137	7636	8408	54337	6418	24618	21263	287817
	2013-14	165578	5169	10002	65759	5950	37043	20444	309945
	2014-15	163631	5632	8925	79987	7529	43677	26714	336095
	2015-16	178203	6449	9370	67062	8285		22480	339779
Status / UTs 1 Gujarat Maharashtra Andhra pradesh Goa Tamil Nadu Karnataka Others states /	2012-13	397	7818	2042	10396	84	0	3461	24198
	2013-14	1123	7615	1998	9715	140	0	4073	24664
	2014-15	1248	8824	2120	10924	171	0	4008	27295
	2015-16	0	7657	2026	12370	0	0	6797	28849
Andhra pradesh	2012-13	1762	977	1111	30854	5135	0	11972	51811
	2013-14	1707	1475	1550	35957	5455	0	12548	58692
	2014-15	1403	10526	2492	48662	5362	1382	13591	83418
	2015-16	1428	1620	1102	47202	5585	1807 0	13973	72718
Goa	2012-13	0	3276	0	113	0		0	3389
000	2013-14	0	0210		284	0	-	-	284
	2014-15	0	347		412	0			760
	2015-16	0	260		170	0		0	430
Tamil Nadu	2012-13	631	0	6	0	252	0	44	933
	2013-14	788	0	27	0	41	0	10	866
	2014-15	419	0	1	0	292	0	113	825
	2015-16	549	0	229	0	30	0	48	856
Karnataka	2012-13	38	0	0	5	52	0	21263 20444 26714 22480 3461 4073 4008 6797 11972 12548 13591 13973 0 0 0 0 0 0 0 0 0 0 0 0 0	610
	2013-14	38	0	0	6	75	0	390	509
	2014-15	40	0	85	0	47	0	479	651
	2015-16	235	0	80	0	66	0	454	835
Others states /	2012-13	600	2148	386	13559	607	291	1574	19165
Uts #	2013-14	543	4079	601	14600	349	309	1529	22010
	2014-15	537	1465	600	16752	551	430	1509	21844
	2015-16	536	367	953	17425	423	372	2558	22634
All Non Major	2012-13	168565	21855	11953	109264	12548	24909	38829	387923
PORTS	2013-14	169777	18338	14178	126321	12010	37352	38994	416970
	2014-15	167278	26794	14224	156737	13952	45489	46414	470888
	2015-16	180950.4	16353	13760	144229	14389	50109	46310	466101
# : Includes I	Pondicherry,	Orissa, Kera	l ala, Andama	an & Nicobai	· Islands an	L d Lakshadv	veep Islands		
	was handle						-		

Annexure-IV

Commodity-Wise Capacity Available at Major Ports

				Com	modity-Wise C	apacity Availat	ole at Major Port	S				(	(In Million Tonnes)			
Commodities	KDS	HDC	PPT	VPT	EPL	ChPT	V.O.C.	CoPT	NMPT	MoPT	MbPT	KPT	JNPT	Total		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
POL																
As on 31.3.10	3.96	17.00	21.00	17.65	3.00	11.80	2.30	18.70	22.00	1.50	32.00	62.83	5.50	219.24		
As on 31.3.11	4.11	17.00	21.00	17.65	3.00	11.80	2.30	18.70	23.37	1.50	32.00	62.83	5.50	220.76		
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	17.67	4.00	3.15	24.01	49.17	1.50	34.50	70.82	6.50	314.81		
Iron Ore																
As on 31.3.10		6.00	4.50	12.50		8.00			7.50	28.30				66.80		
As on 31.3.11		8.00	4.50	12.50	6 ^	8.00			7.50	33.00				79.50		
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	8.00	6.00			7.50	27.50				73.89		
Coal																
As on 31.3.10		7.00	20.00		13.00		6.25							46.25		
As on 31.3.11		7.00	20.00		21.00		6.25							54.25		
As on 31.3.12		7.00	20.00		21.00		12.55		5.40					65.95		
As on 31.3.12		7.00	20.00		21.00		12.55		5.40					65.95		
			20.00													
As on 31.3.14		7.00 7.00			21.00		12.55		5.40	4.61				65.95 74.56		
As on 31.3.15		7.00 9.00	21.00		24.00	.32.00	12.55		5.40	8.94				100.52		
As on 31.3.16		9.00	21.00			.32.00	24.18		5.40	8.94				100.52		
Fertiliser																
As on 31.3.10			7.50	1.00				0.60						9.10		
As on 31.3.11			7.50	1.00				0.80						9.30		
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		
Break-Bulk Cargo																
As on 31.3.10	6.44	12.70	23.50	29.38		17.92	10.17	6.76	14.70	7.25	9.80	14.97	0.90	154.49		
As on 31.3.11	6.51	14.70	23.50	31.28	1.00	17.92	13.49	8.98	14.70	7.40	11.53	16.88	0.90	168.79		
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	22.92	3.00	24.70	12.35	15.70	10.85	14.83	51.04	0.90	290.16		
Container																
As on 31.3.10	5.50	4.00		1.74		33.60	5.00	4.31			1.90	7.20	57.60@	120.85		
As on 31.3.11	5.73	4.00		2.50		42.00#	5.00	12.5 **			1.00*	7.20	57.60@	137.53		
As on 31.3.12	5.90	4.00		2.68		42.00#	5.00	12.50			1.00	7.20	57.60@	137.88		
As on 31.3.12	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						42.00	5.00	12.50			1.00		59.48 @	140.21		
	5.90	4.00		2.68								7.20				
As on 31.3.15	9.86	4.00		2.68	44.95	42.45	5.00	12.50			1.00	7.20	71.97	156.66		
As on 31.3.16	9.86	4.00	400.01	6.20	44.85	45.00	7.23	12.50	77 77	40 70	40.00	7.20	81.97	173.81		
TOTAL	21.10	65.89	126.94	107.75	93.44	45.00	59.26	49.66	77.77	48.79	49.33	131.06	89.37	965.36		
As on 31.3.09	15.76	46.70	76.50	62.27	16.00	71.32	23.72	30.37	44.20	37.05	43.70	77.24	64.00	574.77		
As on 31.3.10	15.90	50.70	76.50	64.93	31.00	71.32	27.04	40.98	45.57	41.90	43.70	85.00	64.00	616.73		
As on 31.3.11	16.35	50.75	80.30	66.33	31.00	79.72	33.34	40.98	50.97	41.90	44.53	86.91	64.00	670.13		
As on 31.3.12	17.14	46.75	102.30	67.33	31.00	85.59	33.34	44.66	76.77	36.40	44.53	93.22	64.00	744.91		
As on 31.3.13	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	93.44	45.00	59.26	49.66	77.77	48.79	49.33	131.06	89.37	965.36		
is on 31.3.16				T-Transhippers				-0.00	11.11	40.73	70.00	101.00	03.31	303.30		

 As on 31.3.16
 21.10
 65.89
 126.94
 107.75
 93.44
 45.00
 59.26

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

1 - OSTT (12MT) has been decommissioned at vizag port temporaily , but its capacity has been retained

2- partial capacity of 2.30 MT has been consider at offshore container terminal of mumbai port.

2- partial capacity of 2.03 MT has been consider at onsider to the no.8 container terminal of Voc port.
4- Break up of poL capacity at kandal port OJ-1-6: 16.11, E
6.11, Essar berth 12.2

6 .11 , Essar berth 12.26 MT, loc SBM( 2nd ) 22.50 MT Essar SBM 19.95 MT thus totaling 70.82 MT.

5- increment addition of HDC include : Trasloading 66.4 MT, Equipment at 2&8:7 MT, Edible oil pipeline 5&6:0.5 MT, Fly a

Source : Development Wing - Department of Shipping.