# भारत के पत्तन क्षेत्र का अदयतन

# UPDATE ON INDIAN PORT SECTOR

(30.09.2011)


सत्यमेव जयते

**परिवहन अनुसंधान प्रभाग**

**TRANSPORT RESEARCH WING**

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**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, Road Transport and Highways has been bringing out the biannual publication "*Update on Indian Port Sector*". Till now eighteen issues of the publication have been released. The last issue contained data up to September, 2011.

The current issue of the "*Update on Indian Port Sector*" includes the information on the performance of Major and Non-Major Ports for the period up to end of September, 2011. The list of private sector/captive/joint sector port projects under implementation/consideration at Major Ports and Non-Major Ports have also been included. The cooperation extended by the concerned source authorities is gratefully acknowledged.

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*December, 2011*

# UPDATE ON INDIAN PORT SECTOR

**(UP TO 30.09.2011 )**

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# I. RECENT TRENDS IN CARGO TRAFFIC AND POLICY INITIATIVES

## 1.1 International and Domestic Factors Related to Seaborne Trade

1.1.1 In 2010, the world economy embarked on a recovery path with world output growing at more than 5 per cent over the previous year (Table 1.1). The stimulus measures taken by governments at the onset of the crisis helped jump-start growth. However, the effect of these measures started to fade away as governments initiated a shift towards fiscal consolidation. In 2010, advanced economies recorded positive growth, with their output expanding by more than 3 per cent. Developing economies continued to drive the global recovery with the rebound being led by large emerging economies like China India and Brazil. The overall strong performance of developing countries as a group conceals differences between countries and groupings. The lead taken by developing economies in powering global growth reflects a shake-up in the world's economic order which has taken decades to unfold. UNCTAD data show that the share of developing countries in the global economic output rose from about 17 per cent in 1980 to over 28 per cent in 2010. In 2010, China overtook Japan as the world's second biggest economy (in nominal terms).Goldman Sachs is now predicting that the BRIC countries (Brazil, Russian Federation, India and China) will overtake the G–7 countries in size of their economies by 2018, i.e. much sooner than its original prediction of 2040 made a decade ago.

1.1.2 The world recovery is set to continue, albeit at a slower pace, with world output projected to grow by 4 per cent in 2011. While output growth in all economies is expected to decelerate, the recovery continues to be driven by emerging & developing markets which are expected to grow by more than 6 %. However, these projections are subject to many downside risks which can derail growth. These include renewed stresses in the euro area, sovereign risks, high unemployment in advanced economies, rising food and commodity prices, the risk of a rise in trade protectionism, inflationary pressures in emerging markets, and the end of the stimulus funding impact as all countries, with the exception of the United States, proceed with fiscal consolidation.

1.1.3 Multiple risks are currently clouding the prospects of a sustained recovery and a stable world economy. These risks are magnified by extraordinary shocks and events, including natural disasters and political unrest as well as rising and volatile energy and other commodity prices.
Overcoming the slump in world trade in 2009 which fell by 12 % and in tandem with the recovery in the world economy, the volume of world merchandise trade, bounced back, and is estimated to have grown at more than 14 % in 2010.Robust growth in large emerging economies such as China and India, combined with their deeper economic integration and intensified intraregional trade, have powered the expansion in world merchandise trade. The share of developing countries in global trade increased from about one third to more than 40 per cent between 2008 and 2010.

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

| Table 1: Growth in Cargo handled at Indian Ports and related parameters (in %) | | | | | | |
|---|---|---|---|---|---|---|
| Parameters | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April- September | |
| | | | | | 2010-11 | 2011-12 |
| **Trends in India's Select : Macro Parameters** | | | | | | |
| I. Total Cargo | 11.9 | 2.5 | 14.3 | 4.0 | 7.9 | 4.6 |
| (a) Major Ports | 12.0 | 2.2 | 5.7 | 1.6 | 1.2 | 3.1 |
| (b) Non Major Ports | 11.6 | 3.3 | 35.7 | 8.8 | 22.2 | 7.2 |
| II.GDP overall | 9.3 | 6.8 | 8.0 | 8.5 | 8.6 | 7.3 |
| (a) Agriculture | 5.8 | -0.1 | 0.4 | 6.6 | 3.7 | 3.6 |
| (b) Industry | 9.7 | 4.4 | 8.0 | 7.9 | 8.1 | 4.2 |
| (c) Services | 10.3 | 10.1 | 10.1 | 9.4 | 10.0 | 9.6 |
| III. Foreign Trade | | | | | | |
| (a) Export in $ value | 29.0 | 13.6 | -4.7 | 37.5 | 27.6 | 52.0 |
| (b) Import in $ value | 35.5 | 20.7 | -8.2 | 21.6 | 29.9 | 32.4 |
| **Trends in Select : Global Indicators** | | | | | | |
| IV. World Output | 5.4 | 2.8 | -0.7 | 5.1 | 4.0F | 4.0f |
| (a) Advanced Economies | 2.8 | 0.1 | -3.7 | 3.1 | 1.6F | 1.9f |
| (b) Developing Economies | 8.9 | 6.0 | 2.8 | 7.3 | 6.4F | 6.1f |
| V. World Trade Volume (Goods) | 7.5 | 2.8 | -12.0 | 14.1 | 8.4F | 5.8f |
| VI.Export Volume growth (Goods) | | | | | | |
| (a) Advanced Economies | 6.4 | 1.9 | -14.0 | 14.4 | 7.1F | 5.2f |
| (b) Developing Economies | 9.4 | 4.7 | -8.0 | 13.5 | 9.6F | 7.6f |
| VII. Import Volume (Goods) | | | | | | |
| (a) Advanced Economies | 5.3 | 0.4 | -13.6 | 13.5 | 6.9F | 4.0f |
| (b) Developing Economies | 13.3 | 8.4 | -9.5 | 15.3 | 12.4F | 8.0f |
| VIII. World Seaborne Trade* | 3.8 | 2.1 | -5.0 | 7.0 | NA | NA |
| (a) Goods Loaded | 4.3 | 2.4 | -4.5 | 7.0 | NA | NA |
| (b) Goods Unloaded | 3.3 | 1.8 | -5.5 | 7.0 | NA | NA |

I.Based on data from Major Ports and Non Major Ports
II. Based on gross domestic product (GDP) at Factor Cost (1999-2000 Prices), Central Statistical Organization;
III. Based on Department of Commerce, DGCI&S data; #:April-September
IV,V,VI & VII Based on World Economic Outlook, October ,2011, IMF;
VIII. Based on Review of Maritime Transport, 2011, UNCTAD
Note : MT: Million Tonnes; For item Nos IV, V, VI &VII year 2007-08 refers to calendar year 2007 and so on; pe preliminary estimate; $: Pertains to the year 2010; **: F** refers to forecast for 2011 and f refers to forecast for the year 2012;
* growth in total goods loaded plus unloaded; NA ; Not Available

## Developments affecting Seaborne trade

### Trends and Developments in World Seaborne Trade

1.1.4 Fortunes of maritime trade move in tandem with worldwide macroeconomic conditions. Developments in the world economy and merchandise trade are primary drivers in seaborne trade. Maritime transport activity depends on developments in world trade. An analysis of world seaborne trade (Table:2) based on Review of Maritime Transport (RMT), UNCTAD (2011) shows that world seaborne trade in 2010 bounced back from the contraction of the previous year and grew by an estimated 7 per cent, taking the total of goods loaded to 8.4 billion tons, a level surpassing the pre-crisis level reached in 2008.

| Table 2 : Developments in International Seaborne Trade (Million Tons) | | | | |
|---|---|---|---|---|
| **Year** | **Oil** | **Main Bulk#** | **Other Dry Cargo** | **Total** |
| 2000 | 2163 | 1288 | 2533 | 5984 |
| 2006 | 2698 | 1836 | 3166 | 7700 |
| 2007 | 2747 | 1957 | 3330 | 8034 |
| 2008 | 2742 | 2059 | 3428 | 8229 |
| 2009 | 2642 | 2094 | 3122 | 7858 |
| 2010 | 2752 | 2333 | 3323 | 8408 |
| # iron ore,grain,coal, bauxite/alumina and phosphate Source:Review of Maritime Transport,2011,UNCTAD | | | | |

**General Trends in Seaborne trade**

1.1.5 Container trade and major dry bulks are driving this expansion. In 2010, world seaborne trade continued to be dominated by raw materials, with tanker trade accounting for about one third of the total tonnage and other dry cargo including containerized accounting for about 40 per cent. The remainder (about 28 per cent) is made of the five major dry bulks, namely iron ore, coal, grain, bauxite and alumina and phosphate.

1.1.6 In 2010, dry cargo, including major dry bulks (iron ore,grain,coal, bauxite/alumina and phosphate), minor dry bulks (manufactures, agribulks,metals and minerals), general cargo and containerized trade bounced back and expanded by 8.4 per cent over 2009.Developing countries continued to account for the main loading and unloading areas, with their shares of total goods loaded and unloaded in 2010 amounting to 60 per cent and 56 per cent, respectively. Developed economies' shares of global goods loaded and unloaded were 34 per cent and 43 per cent, respectively.

1.1.7 The contribution of various regions to world seaborne trade volumes underscores the dominance of large emerging developing economies and reflects the concentration of resources and raw materials, which make up the bulk of seaborne trade. Asia is by far the most important loading and unloading area, with a share of 40 per cent of total goods loaded and 55 per cent of goods unloaded. The growth in the proportion of goods unloaded also reflects the emergence of developing countries as a major source of import demand.

**Crude Oil & Petroleum Products**

1.1.8 Demand for crude oil tankers is closely correlated with the global oil demand. In 2010, seaborne shipments of crude oil recovered and returned to pre-crisis levels. Crude oil loaded in 2010 amounted to about 1.8 billion tons, a 4.3 per cent increase over 2009.Global refinery throughputs averaged 74.8 million barrels per day, an increase of 2.4 per cent over

2009.Reflecting developments in the world economy and the influence of weather patterns of 2010, world shipments of petroleum products increased by 3.7 per cent in 2010, taking the total to 967.5 million tons.

**Dry Cargo**

1.1.9 The year 2010 was positive for dry cargo as total volumes bounced back and grew by 8.4 per cent to nearly 5.7 billion tons. Dry bulk cargo (major and minor bulks) amounted to about 3.3 billion tons of this total, up by a firm 11 per cent over 2009. The strong comeback is due in particular to the recovery in world steel production and the associated growth in import demand for iron ore and coking coal.The share of major dry bulks has been expanding over the past four decades, while that of oil trade has been losing its relative weight over the same period. Major dry bulks accounted for 17.4 per cent of total goods loaded in 1970, with their share rising between 25 per cent and 28 per cent between 2008 and 2010.

**Coal Shipments**

1.1.10 Within the major dry bulk commodities, coal accounted for 38.6 per cent of the total loaded in 2010. The share of iron ore stood at 42.3 per cent in 2010. Over the 1984–2010 period, coal and iron ore volumes moved in tandem, both growing at an average annual rate of over 5 per cent. This growing share of dry bulk cargo reflects in particular the fast–growing demand for raw materials such as coal and iron ore used as inputs in steel–making and industrial activity, especially in large developing regions such as China, India, and increasingly in oil–rich Western Asian countries, where important investments are poured into their infrastructure development.

1.1.11 In 2010, the volume of coal shipments (thermal and coking) amounted to 904 million tons, up by 14.4 per cent year on year. Thermal coal exports, where Indonesia holds a present market share of about 44 per cent, increased by 12.4 per cent in 2010 to reach 663 million tons. In 2010, Australia and Indonesia together accounted for 65.2 per cent of the world's total thermal coal shipments.

1.1.12 As coking coal is used in steelmaking, its trade patterns follow closely developments in the world economy as well as those in steel demand and production and the associated iron ore trade. Dominated by Australia, with a market share of 66 per cent, shipments of coking coal also increased even at a much faster rate (20 per cent) than thermal coal taking the total to 241 million tons in 2010.The main destinations of both thermal and coking coal exports are Japan and Europe, which together account for 38.4 per cent of global imports in 2010. In 2009, China became a net importer of coal for the first time and an increasing proportion of China's demand will be met by imports.

**Iron Ore**

1.1.13 Iron ore trade is correlated with growth in world steel production. A recovery in global crude steel production supported growth in global iron ore shipments which expanded by 9.0 per cent in 2010, taking the total to 982 million tons. Major iron ore exporters included Australia, Brazil, Canada, India, and South Africa. In 2010, Australia and Brazil, which together control nearly three quarters of the market, saw their export volume rise by around 11 per cent and 17.0 per cent respectively.

1.1.14 A new trend to observe with respect to iron ore trade is the evolution of purpose-built very large ore carriers (VLOCs). To capitalize on the important iron ore demand from China and to ensure high market share on this trade, Vale, the Brazilian mining giant ordered a giant fleet of 80 VLOCs by 2015. Of these, 36 ships will be of 400,000 deadweight tons (DWT), which is roughly twice as large as existing Capesize ships.

**Dry Cargo:Minor bulks**

1.1.15 In 2010, minor bulks trade also recovered from the 2009 dip and expanded by 11 per cent-taking the total volume of minor bulk shipments to 954 million tons.

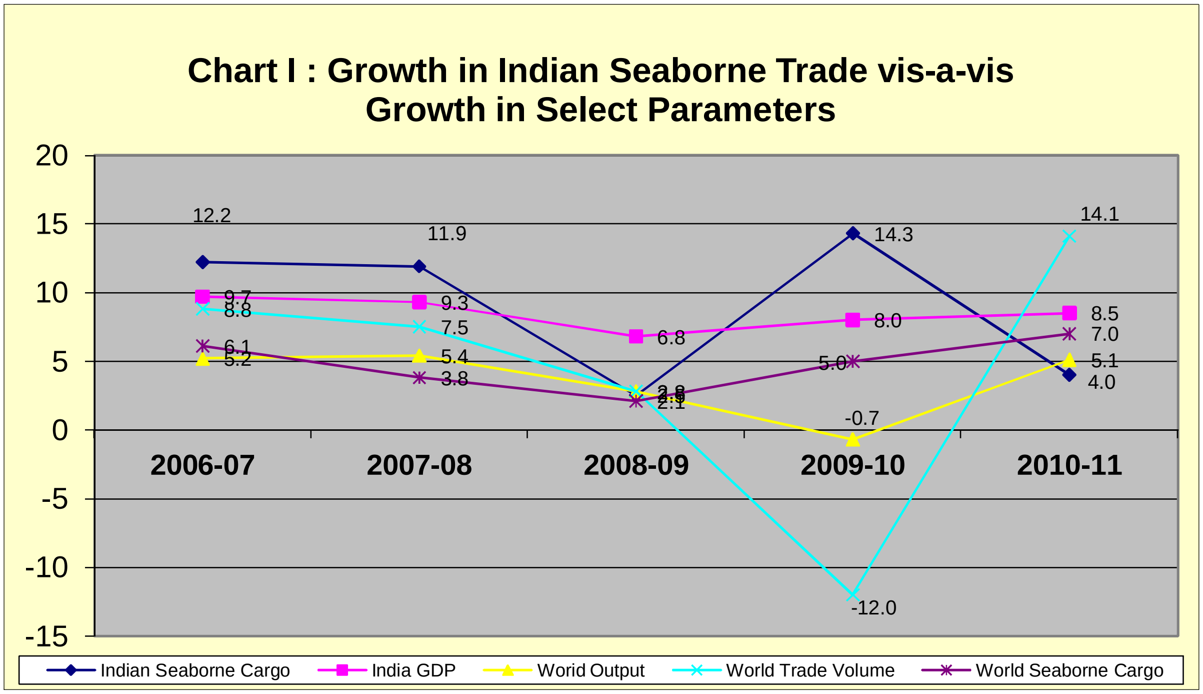
**Containerised Cargo**

1.1.16 The balance of 2.4 billion tons of dry cargoes is made up of containerized (56 per cent) and general cargoes. Driven largely by the increasing international division of labour and productivity gains within the sector, container trade, the fastest-growing cargo segment expanded at an average rate of 8.2 per cent between 1990 and 2010. In 2010, global container trade volumes bounced back at 12.9 per cent over 2009, among the strongest growth rates in the history of containerization.

1.1.17 According to Clarkson Research Services data, container trade volumes reached 140 million 20- foot equivalent unit (TEUs) in 2010, or over 1.3 billion tons. According to Clarkson Research Services, global container trade is projected to grow by 9.7 per cent in 2011 to reach 154 million TEUs.Growth in container trade volumes was propelled by the double–digit rates involving Asia, namely Far East– North America and Asia–Europe . Volumes on these two largest East–West trade lanes are expected to exceed 2008 levels. However, volumes on the transatlantic lane, which experienced a drop of 19 per cent in 2009, are expected to remain below the pre-downturn levels.

## 1.2 Cargo Traffic at Indian Ports

1.2.1 During the first half (April-September) of 2011-12 major and non major ports in India accomplished a total cargo throughput of 446.1 million tonnes reflecting an increase of 4.6% over the same period last year (Table: 3). However, the first half of the current year has seen a marginal improvement in the growth of cargo handled at major ports to 3.1% and from 1.2% in April-September 2010-11. In contrast, non-major port's growth has decelerated to 7.2 in the first half of 2011-12 from 22.2% in the corresponding period of 2010-11. The growth in India's GDP, Port traffic and growth in world output, world export volume and world seaborne trade (loadings and unloading) since 2006-07 is given in Chart




Source: Growth rates for India's GDP and Cargo Traffic are based on statistics released by Central Statistical Organization and data available with Transport Research Wing of M/o Shipping, Road Transport & Highways and pertain to fiscal year. Growth rates in the World Output and World Trade Volume refer to calendar years (2006-07 refers to 2006 and so on) based on ( World Economic Outlook, October 2011, IMF )

**Table 3: Traffic Handled at Indian Ports (Thousand Tonnes)**

| Major/Non-Major Ports | Traffic Handled | | | | Growth over previous year/period | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009-10 | 2010-11 | April-September | | 2009-10 | 2010-11 | April-September | |
| | | | 2010-11 | 2011-12 | | | 2010-11 | 2011-12(P) |
| Major Ports | 561090 (66.01) | 569908 (64.43) | 271296 (63.61) | 279729 (62.70) | 5.7 | 1.6 | 1.2 | 3.1 |
| Non-Major Ports | 288937 (33.99) | 314641 (35.57) | 155227 (36.39) | 166401 (37.30) | 35.5 | 8.9 | 22.2 | 7.2 |
| All Ports | 850027 (100.00) | 884549 (100.00) | 426523 (100.00) | 446130 (100.00) | 14.2 | 4.1 | 7.9 | 4.6 |

Note : Figures within parenthesis indicate percent share in total cargo traffic for Major and Non-Major ports respectively. (P) : Provisional

## 1.3 Cargo Traffic at Major Ports

1.3.1. Cargo through put at India's 12 major mainland ports during the first six months ( April- September ) of 2011-12 grew by modest 3.1%. Growth in cargo through put at major ports shows that Ennore port achieved highest growth of 39.5%, followed by Tuticorin at (13.7%) and Visakhapatnam (10.9%). Other major ports which clocked positive growth in the range 10% to 5% were, Cochin (7.0%), Paradip (5.8%) and New Mangalore (5.7%). In contrast 3 r major ports, one on the East coast, and 2 on the West coast showed contraction in cargo through put and were : Chennai (-8.2%) on the East coast and Mormugao (-7.8%) and Mumbai (-2.6%) on West Coast. Portwise traffic handled during 2009-10, 2010-11 and first half of 2010-11 and 2011-12 is given in Table:4.

**Table 4 : Traffic Handled at Major Ports (Thousand Tonnes)**

| Ports | 2009-10 | 2010-11(P) | April-September | | |
|---|---|---|---|---|---|
| | | | 2010-11 | 2011-12(P) | % Change over CP |
| Kolkata | 46295 | 47432 | 22954 | 23208 | 1.5 |
| Kolkata DS | 13045 | 12540 | 6398 | 6203 | 1.6 |
| Haldia DC | 33378 | 34892 | 16556 | 17005 | 2.7 |
| Paradip | 57011 | 56030 | 26469 | 27996 | 5.8 |
| Vizag | 65501 | 68041 | 32544 | 36097 | 10.9 |
| Ennore | 10703 | 11009 | 4671 | 6527 | 39.5 |
| Chennai | 61057 | 61460 | 31885 | 29269 | -8.2 |
| Tuticorin | 23787 | 25727 | 12183 | 13852 | 13.7 |
| Cochin | 17429 | 17873 | 8976 | 9754 | 7.0 |
| New Mangalore | 35528 | 31550 | 15184 | 16042 | 5.7 |
| Mormugao | 48847 | 50022 | 17793 | 16406 | -7.8 |
| Mumbai | 54541 | 54585 | 27381 | 26662 | -2.6 |
| JNPT | 60763 | 64299 | 30940 | 32348 | 4.5 |
| Kandla | 79500 | 40316 | 40316 | 41568 | 3.1 |
| **All Ports** | **561090** | **569908** | **271296** | **279729** | **3.1** |

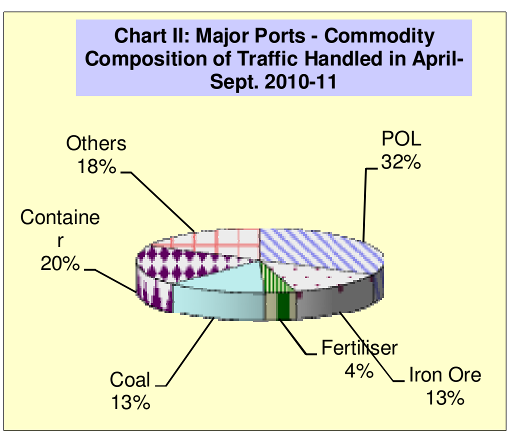
(P): Provisional;
CP: Corresponding period of April-September, 2011-12

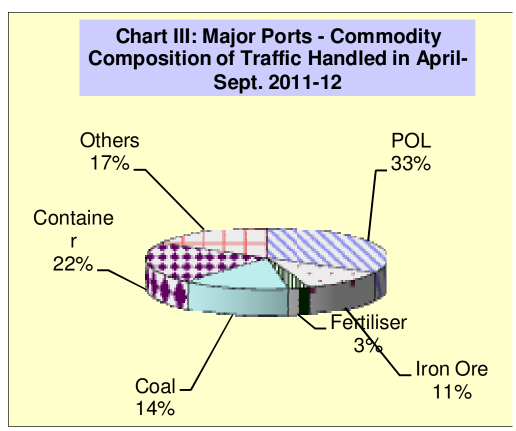
**Commodity wise Cargo Traffic at Major Ports**

1.3.2. In terms of Commodity-wise traffic at 12 major ports, the 3.1% increase in cargo at major ports during the first half of 2011-12 was driven by increase in 3 broad categories of cargo viz. 18.5% thermal coal, 11.4% in Fertilizer Raw material, 8.4% in containers & 7.3% in other cargo. (Table:5). It is noteworthy that during the first six months ( April-September) of the current year, container traffic measured in tonnes increased by 4.6 million tonnes in contrast to a fall in Iron ore (4.4 million tonnes) and Finished Fertiliser (2.9 million tonnes).

| Table 5 : Commodity-wise Traffic Handled at Major Ports (Thousand Tonnes) | | | | | |
|---|---|---|---|---|---|
| Commodity | 2009-10 | 2010-11(P) | April-September | | |
| | | | 2010-11 | 2011-12(P) | % Change over CP |
| POL | 175081 | 180363 | 87099 | 90190 | 3.6 |
| Iron Ore | 100333 | 87306 | 36027 | 31647 | -12.2 |
| Fertiliser | 17717 | 20033 | 10849 | 8303 | -23.5 |
| a. Finished | 10939 | 12412 | 7481 | 4552 | -39.2 |
| B. Raw | 6778 | 7621 | 3368 | 3751 | 11.4 |
| Coal | 71709 | 72755 | 35135 | 39278 | 11.8 |
| a. Thermal Coal | 43375 | 44257 | 20629 | 24443 | 18.5 |
| b. Coking Coal | 28334 | 28498 | 14506 | 14835 | 2.3 |
| Container | 101242 | 114040 | 54739 | 59334 | 8.4 |
| Others | 95008 | 95411 | 47517 | 50977 | 7.3 |
| **Total** | **561090** | **569908** | **271366** | **279729** | **3.1** |
| (P) : Provisional; CP : Corresponding period-April-September 2011-12 | | | | | |

1.3.3 The shares of different commodities in total cargo traffic are depicted in the Charts II and III during the first half of 2010-11 and 2011-12. Energy imports consisting of POL and coal constitute 47% of the total cargo traffic at India's major ports during first half of 2011-12.




POL : Petroleum, Oil & Lubricants

1.3.4 The Port-wise & Commodity-wise traffic handled at major ports during the last few years and the first six months of 2010-11 and 2011-12 are given in **Annexure - II**.

**Container Traffic**

1.3.5 Total Container traffic at major ports has increased both in terms of tonnes and twenty foot equivalent units [TEUs] by 8.4 % and 5.2 % respectively during the first six months (April-September, 2011-12) of the current financial year. Jawahar Lal Nehru Port continues to be the leading container handling port in the country with a share of about 48% in terms of tonnage and more than 55% in terms of TEUs in the total container traffic at major ports (Table:6). Efficiency in container handling operations at some of the select container terminals in India is given in Table:7.

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

| | 2009-10 | | 2010-11(P) | | April-September | | | | % Change over CP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | 2010-11 | | 2011-12 (P) | | April- Sep. 2010-11 | | April- Sep. 2011-12 | |
| PORT | Tn | TEU | Tn | TEU | Tn | TEU | Tn | TEU | Tn | TEU | Tn | TEU |
| **Kolkata** | 6645 | 378 | 6221 | 377 | 3143 | 186 | 3312 | 201 | -4.2 | 0.0 | 5.4 | 8.6 |
| **Haldia** | 2067 | 124 | 2764 | 149 | 1008 | 74 | 1201 | 69 | 9.6 | 34.5 | 19.1 | -6.8 |
| **Paradip** | 44 | 4 | 61 | 3 | 29 | 2 | 39 | 3 | -3.3 | 0.0 | 34.5 | 50.0 |
| **Visakhapatnam** | 1678 | 97 | 2571 | 144 | 1024 | 60 | 1901 | 106 | 30.1 | 33.3 | 85.6 | 76.7 |
| **Chennai** | 23477 | 1216 | 29421 | 1523 | 14622 | 758 | 15329 | 794 | 30.4 | 30.5 | 4.8 | 4.8 |
| **Tuticorin** | 6599 | 440 | 8169 | 467 | 3410 | 227 | 4409 | 240 | 3.6 | 3.7 | 29.3 | 5.7 |
| **Cochin** | 3928 | 290 | 4419 | 318 | 2467 | 172 | 2592 | 184 | 13.3 | 13.9 | 5.1 | 2.9 |
| **New Mangalore** | 475 | 32 | 568 | 40 | 294 | 20 | 333 | 24 | 27.3 | 25.0 | 13.3 | 20.0 |
| **Mormugao** | 192 | 13 | 182 | 18 | 76 | 7 | 104 | 9 | -26.9 | -22.2 | 36.8 | 28.6 |
| **J. L. Nehru** | 53096 | 4092 | 56426 | 4271 | 27159 | 2110 | 28465 | 2150 | 4.9 | 5.9 | 4.8 | 1.9 |
| **Mumbai** | 606 | 58 | 652 | 73 | 323 | 37 | 328 | 31 | 6.3 | 37.0 | 1.5 | -16.2 |
| **Kandla** | 2435 | 147 | 2586 | 160 | 1184 | 46 | 1321 | 81 | 9.7 | 5.8 | 11.6 | 76.01 |
| **All Ports** | **101242** | **6891** | **114040** | **7537** | **54739** | **3699** | **59334** | **3892** | **11.0** | **11.1** | **8.4** | **5.22** |

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

| Table 7: Performance Indicators of Select Container Terminals | | | | | | | |
|---|---|---|---|---|---|---|---|
| Terminal | Year | Moves / Crane Hr. | Moves / Berth Hr. | TEU /Mtr. Quay | TEU / Employee | Dwell Time(Day) | TRT Day |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **Tuticorin** | 2007-08 | 27.0# | 52.0 | 1283 | 2822 | 5.5 | 1.38 |
| | 2008-09 | 25.0 | 48.0 | 1189 | 2880 | 2.7 | 0.71 |
| | 2009-10 | 25.0 | 47.0 | 1187 | 3008 | 2.6 | 0.76 |
| | 2010-11 | 23.0 | 42.0 | 1204 | 3042 | 2.4 | 1.16 |
| **Chennai - CCTPL** | 2007-08 | 21.0 | 42.0 | 1267 | 2670 | 2.6 | 1.08 |
| | 2008-09 | 22.7 | 46.8 | 1289 | 2717 | 1.9 | 1.45 |
| | 2009-10 | 27.0 | 55.0 | 1286 | 2797 | 2.0 | 1.10 |
| | 2010-11 | 26.0 | 51.0 | 1303 | 2744 | 2.7 | 1.30 |
| **Chennai - CITPL** | 2009-10 | 28.4 | 91.1 | 93 | 735 | 3.8 | 1.24 |
| | 2010-11 | 32.0 | 28.0 | 441 | 3426 | 3.5 | 4.50 |
| **JNPT - JNPCT** | 2007-08 | 16.2 | 41.0 | 1756 | 1349 | 2.2$ | 1.90 |
| | 2008-09 | 15.8 | 40.8 | 1450 | 1133 | 2.1$ | 1.69 |
| | 2009-10 | 15.0 | 34.3 | 1142 | 829 | 2.0$ | 1.98 |
| | 2010-11 | | | | | | |
| **JNPT - NSICT** | 2007-08 | 23.0 | 70.4 | 2513 | 2687 | 2.5$ | 1.02 |
| | 2008-09 | 22.9 | 69.2 | 2379 | 2478 | 2.8$ | 0.98 |
| | 2009-10 | 24.1 | 76.9 | 2553 | 3563 | 2.5$ | 1.60 |
| | 2010-11 | | | | | | |
| **JNPT - GTICT** | 2007-08 | 23.7 | 53.9 | 1813 | 2678 | 2.4$ | 1.21 |
| | 2008-09 | 27.3 | 73.9 | 2054 | 2483 | 2.3$ | 1.14 |
| | 2009-10 | 29.9 | 96.9 | 2462 | 3265 | 2.9$ | 1.08 |
| | 2010-11 | | | | | | |
| **Cochin** | 2007-08 | 14.6 | 25.8 | 469 | 539 | 6.5 | 1.14 |
| | 2008-09 | 16.3 | 27.3 | 483 | 536 | 7.3 | 1.37 |
| | 2009-10 | 16.3 | 24.9 | 536 | 579 | 6.4 | 1.45 |
| **Kolkata DS** | 2008-09 | 19.6 | 15.9@ | NA | NA | 7.2$ | 3.86 |
| | 2009-10 | 27.5 | 16.2@ | NA | NA | 5.5$ | 4.55 |
| | 2010-11 | 29.5 | 17.1@ | NA | NA | 6.0$ | 4.45 |
| **Visakhapatnam** | 2010-11 | 22.0 | 30.1 | 324 | 866 | 4.8 | 0.76 |

#: Per effective crane hour; $: Import

*: Average for CFS containers; @: Starting times and finishing times have been considered as vessels sometimes have to wait at berth after completion of work due to non-availability of suitable tide in the river.

Moves /Crane Hour(Hr): Total container vessel moves/sum of gross craned Hours

Moves/Berth Hr: Total container vessel moves/sum of gross vessel working hours

TEU/Mtr. Quay: Total TEUs handled per annum / total quay length in meter

Dwell time: Total No. of container storage days/total no. containers

JNPCT: Jawaharlal Nehru Port Container Terminal NSICT: Nhava Sheva International Container Terminal

GTICT: Gateway Terminals India Container Terminal; TRT:Turn Around Time

CCTPL: Chennai Container Terminal Pvt. Ltd. CITPL: Chennai International Terminal Private Limited.

## 1.4 Cargo Traffic at Non - major Ports

1.4.1 During the first 4 years (2007-11) of the Eleventh Five Year Plan, traffic at non-major ports increased at an annual average growth rate of close to 14.5%. Non-Major Ports handled more than 36% of total maritime freight traffic of the country during the first half of the current fiscal year.

1.4.2 Table 8 presents maritime state-wise share and growth of traffic handled at Non-major ports during last two years and the first six months of the current and previous year

**Table 8 : Traffic Handled by Non-Major Ports by Maritime States/UTs**

| Maritime State/UT | Traffic Handled ('000 Tonnes) | | | | % Change over Previous Year | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009-10 | 2010-11 | April-September | | 2009-10 | 2010-11 | April-September | |
| | | | 2010-11 | 2011-12 | | | 2010-11 | 2011-12 |
| Gujarat | 205583 (71.15) | 230907 (73.39) | 112144 (72.25) | 126859 (76.24) | 34.53 | 12.32 | 18.95 | 13.12 |
| Maharashtra | 12046 (4.17) | 14875 (4.73) | 6518 (4.20) | 8074 (4.85) | 15.65 | 23.48 | 45.95 | 23.87 |
| Andhra Pradesh | 43690 (15.12) | 42610 (13.54) | 25834 (16.64) | 21514 (12.93) | 47.01 | -2.47 | 18.74 | -16.72 |
| Goa | 13897 (4.81) | 14581 (4.63) | 3974 (2.56) | 5233 (3.14) | 16.77 | 4.92 | 49.91 | 31.68 |
| Tamil Nadu | 1174 (0.41) | 1611 (0.51) | 632 (0.41) | 658 (0.40) | 30.73 | 37.22 | 10.68 | 4.11 |
| Karnataka | 8547 (2.96) | 3095 (0.98) | 2718 (1.75) | 293 (0.18) | 72.04 | -63.79 | 40.98 | -89.22 |
| OtherStates/UTs | 4000 (1.38) | 6962 (2.21) | 3407 (2.19) | 3770 (2.27) | 59.49 | 74.05 | 153.12 | 10.65 |
| Total | 288937 (100) | 314641 (100) | 155227 (100) | 166401 (100) | 35.51 | 8.90 | 22.23 | 7.20 |

Note: Figure in parenthesis is the percentage share of traffic handled by the maritime state to the total

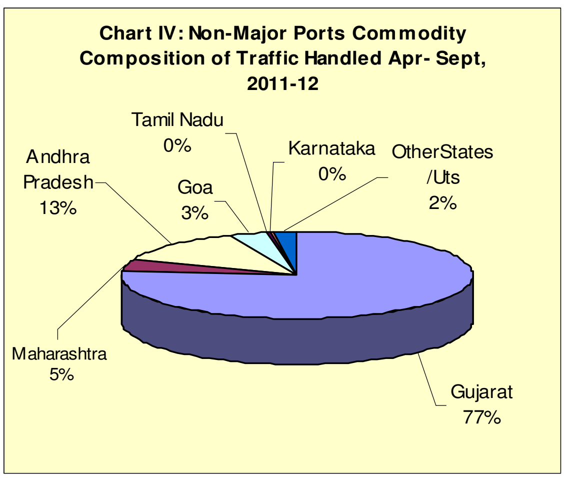
1.4.3 The growth in cargo handled by the non-major which was 22.2% in the first half of 2010-11 moderated to 7.2 % in the first half of 2011-12 (Table:8) . The growth in cargo handled at non-major ports has been facilitated by sustained growth in non-major ports located in Maharashtra and Gujarat aided by substantial increase in the cargo traffic of Coal, Building material and Fertilizer & FRM in particular (Tables 8 & 9). The growing importance of non-major ports in handling cargo traffic has helped alleviate the congestion at major ports. Table 8 provides traffic handled by non-major ports of India's maritime states and Table 9 gives a glimpse of commodity profile of the cargo handled. Table:8 reflects that Gujarat accounted for more than three-fourth of the total traffic handled by the non-major ports followed by Andhra Pradesh (13%), Maharashtra (5%) and Goa (3%) during April –September 2011. Four maritime States, viz, Gujarat, Maharashtra, Goa, and Andhra Pradesh together accounted for close to 97% of the total cargo traffic handled by the non-major ports in the first half of the current year.

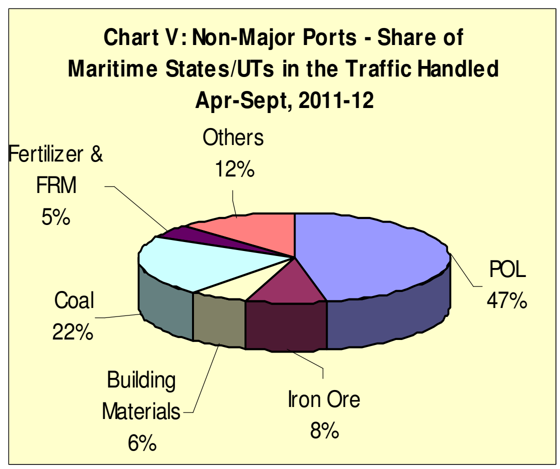
1.4.4 Two commodities, viz. POL, and coal accounted for more than two-third of the total cargo handled at the non major ports (Table :9).

**Table 9 : Commodity-wise Traffic Handled by Non-Major Ports**

| Commodity GROUP | Traffic Handled ('000 Tonnes) | | | | % Change over Previous Period | | | |
|---|---|---|---|---|---|---|---|---|
| | 2009-10 | 2010-11 | April -Sept 2010-11 | April-Sept 2011-12 | 2009-10 | 2010-11 | April-Sept 2010-11 | April-Sept 2011-12 |
| POL | 137720 (47.66) | 153483 (48.78) | 77193 (49.73) | 77793 (46.75) | 40.79 | 11.45 | 31.69 | 0.78 |
| Iron Ore | 48813 (16.89) | 42498 (13.51) | 17603 (11.34) | 13811 (8.30) | 36.11 | -12.94 | -27.19 | -21.54 |
| Building Material | 13142 (4.55) | 14150 (4.50) | 7360 (4.74) | 9865 (5.93) | -0.88 | 7.67 | 50.88 | 34.04 |
| Coal | 41276 (14.29) | 58524 (18.60) | 28994 (18.68) | 35954 (21.61) | 92.37 | 41.79 | 46.10 | 24.00 |
| Fertilizer & FRM | 9501 (3.29) | 10984 (3.49) | 5187 (3.34) | 8458 (5.08) | 7.30 | 15.61 | 31.92 | 63.06 |
| Others | 38485 (13.32) | 35002 (11.12) | 18890 (12.17) | 20520 (12.33) | 6.99 | -9.05 | 21.47 | 8.63 |
| All | 288937 (100) | 314641 (100) | 155227 (100) | 166401 (100) | 35.51 | 8.90 | 22.23 | 7.20 |

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




POL : Petroleum, Oil & Lubricants FRM : Fertiliser Raw Material

1.4.5 The share of Maritime States/UTs in the total traffic and Commodity-wise composition of traffic is revealed in the pie Charts IV and V.

1.4.6 Maritime State-wise & commodity-wise traffic handled at non-major ports during the last few years and the first six months of the current financial year is given in **Annexure - III**.

## 1.5 Impact of Global Macro Developments on Maritime Trade

### 1.5.1 Impact of growth on India's seaborne cargo

1.5.1.1 Maritime Transport activity is driven by developments in the world economy viz. growth in world output & trade as well as in Indian economy (coastal trade). 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 2010-11, the GDP posted a growth of 8.5% compared with an increase of 8.0% in 2009-10. In the first six months of 2011-12, the GDP has seen moderation in growth to 7.3%. However, Cargo traffic at India's 12 major ports ( which accounts for about two-third of India's total seaborne cargo) at 570 million tonnes showed a meagre growth of 1.6% in 2010-11.In first six months of 2011-12, the cargo traffic at major ports has shown an increase of 3.1% only compared to 1.2% in the corresponding period of previous year. The trajectory of growth in cargo handled at India's major ports comes into sharp focus when these growth rates are viewed in terms of quarterly GDP growth trajectories. This reveals that growth in total cargo throughput at Major Ports remained subdued in Q2 and Q3 of 2010-11 and Q2 of 2011-12. The manufacturing sector which is a major factor influencing seaborne cargo traffic had recorded lower GDP growth of 4.2% in first half of 2011-12 compared to 8.1% in first half of 2010-11. The GDP of Industry sector comprising of Mining & Quarrying; manufacturing; electricity , gas and water supply and construction activities recorded quarterly growth of 5.1% in Q1, 3.2% in Q2 compared to 9.1% in Q1 and 7.1% in Q2 of 2010-11. While trends in POL, coal and fertilizers are largely driven by the dynamics of domestic demand supply; those of iron ore, container traffic, "others" in particular are largely shaped by the state of global demand and economic activity and government policies. The impact of pick up in global demand was pronounced in case of container traffic, which reflects trends in trade in manufactures, recorded growth of 7.8% in Q1 and 9.6% in Q2 of 2011-12. Coal recorded sharp increase of 20.0% in Q1 of 2011-12 and modest growth of 5.1% in Q2 of 2011-12. Iron ore cargo traffic posted sharp decline14.3% and 9.0% in Q1 and Q2 of 2011-12 mainly due to ban of iron ore exports by the state of Karnataka. Other commodity groups recorded meager to modest growth.

1.5.1.2 Table 10 gives Quarter wise trend in growth of cargo traffic handled at Major ports, GDP and GDP of Manufacturing sector during 2009-10 and 2010-11.

| **Table 10 : Quarter wise Trend in Growth of Cargo Traffic at Major Ports & GDP** | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Commodities / Year** | **2010-11** | | | | **2011-12** | | |
| | **Q1** | **Q2** | **Q3** | **Q4** | **Q1** | **Q2** | **Half-** |

| | | | | | | | yearly Growth |
|---|---|---|---|---|---|---|---|
| POL | -0.3 | 3.5 | 6.1 | 2.8 | 9.4 | -1.4 | 3.9 |
| Iron Ore | -27.4 | -3.9 | -13.3 | -11.1 | -14.3 | -9.0 | -12.3 |
| Coal | -9.1 | 10.5 | 1.1 | 4.9 | 20.0 | 5.1 | 12.5 |
| Fertilizer | 11.9 | 50.1 | -3.6 | -2.0 | -20.5 | -24.7 | -22.9 |
| Container in tonnes | 16.3 | 6.7 | 15.8 | 12.1 | 7.8 | 9.6 | 8.7 |
| TEUs | 16.6 | 5.9 | 11.7 | 4.2 | 3.2 | 5.4 | 4.3 |
| Other cargo | 3.5 | -4.3 | -7.4 | 10.5 | 7.1 | 4.7 | 5.9 |
| All Cargo | 1.7 | 0.7 | 0.8 | 2.9 | 5.2 | 0.9 | 3.1 |
| GDP overall | 8.8 | 8.4 | 8.3 | 7.8 | 7.7 | 6.9 | 7.3 |
| GDP - Manufacturing | 9.1 | 7.1 | 7.1 | 7.3 | 5.1 | 3.2 | 4.2 |
| GDP: Gross Domestic Product at factor cost at 2004-05 prices. | | | | | | | |

## 1.5.2 Global Ocean Freight Rates

### 1.5.2.1 Dry Bulk Freight Rates

1.5.2.1.1 The dry bulk sector improved in 2010 over the previous year, with freight rates up 12 per cent on the tramp time and 16 per cent on the tramp trip. Dry cargo tramp time charter refers to vessels chartered for a period of time and dry cargo tramp trip charter refers to a charter for a specific voyage. Freight rates for dry bulk vessels were still down by around one third, compared with their 2007 and 2008 levels. Freight rates for dry bulk vessels, which were buoyant during the first half of 2010, declined on average by a quarter for the second half of the year.

1.5.2.1.2 Freight rates for Capesize vessels chartered on the Far East–Europe route were $57,587 per day in January 2010 and declined to $17,358 per day in early 2011. In the opposite direction, from Europe to Asia, freight rates fell from $20,664 per day in

January 2010 to minus $3,371 per day, as shipowners subsidized charterers' repositioning costs.

Chinese imports of iron ore represent around 63 per cent of the iron ore market transported by sea, which makes this market a major employer of Capesize vessels.The time charter earnings of a Capsize vessel in 2010 averaged $40,308 per day, up from $35,283 in 2009. By February 2011, the corresponding figure had fallen to $17,500 per day. During 2008, the average earning for a Capesize vessel was $116,175 per day and at one point, rates surpassed $300,000 per day. At a time of record profits for the biggest mining companies on the back of rising commodity prices, shipowners are experiencing some of the lowest freight rates since 2002.

#### 1.5.2.2 Dry Bulk Time Charter

1.5.2.2.1 Capesize ships of 200,000 dwt aged five years fetched $39,700 per day at the start of 2010, compared with $19,700 per day for the same period in 2009; by the end of the year, the figure stood at $26,000 per day. By February 2011, the rate had fallen further to $18,000 per day. Dry cargo freight rates, which suffered a disastrous collapse in 2008, made a significant recovery by the end of 2009. However, it was short-lived and by June 2010, had petered out. This is reflected in Baltic Dry Index (BDI), which measures freight rates for dry bulk transported on selected maritime routes, started 2010 at 3,140 points and ended the year at 1,773 points. From the end of May 2010 to the middle of July 2010, the BDI lost more than half its value as concern over the recovery of the global economy mounted. A partial rally occurred in August 2010 before the Index continued its downward trajectory. Between May 2010 and May 2011 the BDI declined by around two thirds.

### 1.5.3 Trends in Global top 20 Cargo/Container Ports

1.5.3.1 Growth in cargo and container traffic at world's top major ports/container terminals is a barometer of trends in seaborne trade. The growth in cargo traffic (million tones) at world's top 20 ports increased by more than 13 % in 2010 after suffering a drop of 2.8 % in 2009 in the aftermath of global recession. Similarly, the growth in container traffic ( million TEUs) which reflects growth in manufactured goods increased by 14.6 % on the back of global recovery after experiencing a severe contraction of 10.8 % in 2009. Recent trends in Top 20 World Major Ports (in Million Tonnes) and Container Ports (in million TEUs) are given in Table 12 and Table 13 respectively.

**Table 12 : Top 20 World Major Ports (in Million Tonnes)**

| Port | 2008 | 2009 | 2010 |
|---|---|---|---|
| Shanghai (PRC) | 582.0 | 590.0 | 650.0 |
| Zhoushan/Ningbo* (PRC) | 520.1 | 570.0 | 627.0 |
| Singapore | 515.4 | 472.3 | 502.5 |
| Rotterdam (Netherlands) | 421.1 | 387.0 | 429.9 |
| Tianjin (PRC) | 355.9 | 380.0 | 408.0 |
| Guangzhou (PRC) | 344.3 | 375.0 | 400.0 |
| Dalian(PRC) | 185.2 | 203.7 | 300.8 |
| Hong Kong | 259.4 | 243.0 | 267.8 |
| Busan (South Korea) | 241.7 | 226.2 | 262.1 |
| Qinhuangdao (PRC) | 252.2 | 243.8 | 257.0 |

| | | | |
|---|---|---|---|
| South Louisiana (USA) | 233.7 | 215.6 | 246.2 |
| Houston (USA) | 227.0 | 155.0 | 225.0 |
| Shenzen (PRC) | 211.2 | 194.0 | 221.0 |
| Rizhao (PRC) | 151.0 | 181.3 | 221.0 |
| Los Angles (USA) | 170.0 | 157.5 | 187.8 |
| Nagoya (Japan) | 218.1 | 165.1 | 185.7 |
| Port Hedland (Australia) | 130.7 | 159.4 | 178.6 |
| Antwerp (Belgium) | 189.4 | 157.6 | 178.2 |
| Chiba (Japan) | 170.0 | 150.0 | 165.0 |
| Total of Top 20 Ports | 5378.4 | 5226.5 | 5913.6 |
| Source: Port Statistics, Port of Rotterdam Authority; PRC: Peoples Republic of China;* Combined in 2006 | | | |

| Table 13 : Top 20 World Container Ports (in Million TEUs) | | | |
|---|---|---|---|
| **Port** | **2008** | **2009** | **2010** |
| Shanghai (PRC) | 27.98 | 25.00 | 29.07 |
| Singapore | 29.92 | 25.87 | 28.43 |
| Hong Kong (PRC) | 24.49 | 20.90 | 23.53 |
| Shenzhen (PRC) | 21.40 | 18.25 | 22.51 |
| Busan (Republic Korea) | 13.45 | 11.98 | 14.18 |
| Zhoushan/Ningbo* (PRC) | 11.23 | 10.50 | 13.14 |
| **Guangzhou(PRC)** | **11.00** | **11.19** | **12.55** |
| Qingdao(PRC) | 10.32 | 10.26 | 12.01 |
| Dubai Ports (UAE) | 11.83 | 11.12 | 11.60 |
| Rotterdam (Netherlands) | 10.78 | 9.74 | 11.15 |
| **Tianjin(PRC)** | **8.50** | **8.70** | **10.08** |
| Kaohsiung (Taiwan Province of PRC) | 9.68 | 8.58 | 9.18 |
| Port Klang (Malaysia) | 7.97 | 7.31 | 7.97 |
| Antwerpen (Belgium) | 8.66 | 7.31 | 8.47 |
| Hamburg (Germany) | 9.74 | 7.01 | 7.90 |
| Los Angles (USA) | 7.85 | 6.75 | 7.85 |
| **Tanjung Pelepas (Malaysia)** | **5.60** | **6.00** | **6.53** |
| Long Beach (USA) | 6.49 | 5.07 | 6.26 |
| Xiamen (PRC) | 5.04 | 4.68 | 5.82 |
| Bremen (Germany) | 5.53 | 4.56 | 4.89 |
| Total of Top 20 Ports | 247.46 | 220.78 | 253.12 |
| Source: Port Statistics, Port of Rotterdam Authority; PRC: Peoples Republic of China;* Combined in 2006 | | | |

## 1.6 Policy Initiatives - Central Government

1.6.1 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.

1.6.2 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.

1.6.3 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.

1.6.4 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. The Eleventh Five Year Plan has envisaged an increase in the capacity of major port to 1016.55 million tonnes by the end of 2011-12. At the beginning of the Eleventh Five Year Plan the capacity of the Major Ports was 504.75 million tonnes. Thus the proposed capacity addition during Eleventh Five Year Plan at the Major Ports amounts to 511.80 million tonnes. At the end of March 2011 the cargo handling capacity of Major Ports was 670.13 million tonnes. Commodity-wise capacity of Major Ports at the end of March 2011 is given in Annex 4.

**Maritime Agenda 2010-20**

1.6.5 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 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.

1.6.7 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.

1.6.8 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 – Mumbai (JNPT), Kochi, Chennai and Visakhapatnam.
- Port Policy Measures
    - Corporatisation of Major Ports
    - New Land Policy for Major Ports
    - New Policy on captive berths
    - Establishing a Port Regulator for all ports for setting, monitoring and regulating service levels and technical & performance standards.
    - 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 'Indian Ports Global' for overseas investments by Indian Ports.

**Private Sector Participation**

1.6.9 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. It has been estimated in the Maritime Agenda 2010-20 that investments required in new projects of Major ports will be Rs.109449.41 crore, of which Rs.72878.16 crore have been estimated to come from Private sector participation and the balance Rs.36571.25 would be funded through Internal Resources/EBR and Government Budgetary support etc. The states have also identified projects for development of non-major ports at an estimated cost of Rs 167930.84 crore for creation of additional capacity of 1293.56 million tonnes. Private sector is envisaged to fund most of the projects through PPP or BOT or BOOT basis. It is envisaged that private sector will meet 96.1% of the cost of development amounting to Rs 161332.91 crore. Remaining requirement of Rs. 3678.34 crore is planned to be contributed by State Governments through Internal Resources / Gross budgetary Support/ Internal Extra budgetary Resources.

1.6.10 To encourage private sector participation uniformity, clarity and transparency in the bidding process is of the prime importance. The Department of Shipping has already put in place guidelines for private sector participation. To ensure uniformity in shortlisting 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. In the financial year 2010-11, nine Public Private Partnership (PPP) projects were awarded at an estimated cost of Rs. 3356.65 crore resulting in capacity addition of 51.76 MT in the port sector comprising construction of berths and terminals, mechanization of existing berths etc.

1.6.11 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**

1.6.12 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.

# II. 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 around 7517 Kms with 13 major ports and 176 notified non-major (minor/intermediate) ports along the coast-line and sea-islands. Of the Non-Major Ports, around 60 are handling traffic. Chart-VI gives the geographical location of the Major and prime Non-Major Ports. The Maritime Ports operate within the statutory framework of the Indian Ports Act 1908 which applies to all the ports. However, the Major Ports Act 1963 applies only to Major Ports. Each Major Port is administered by a 'Port Trust' (except for the port of 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)**

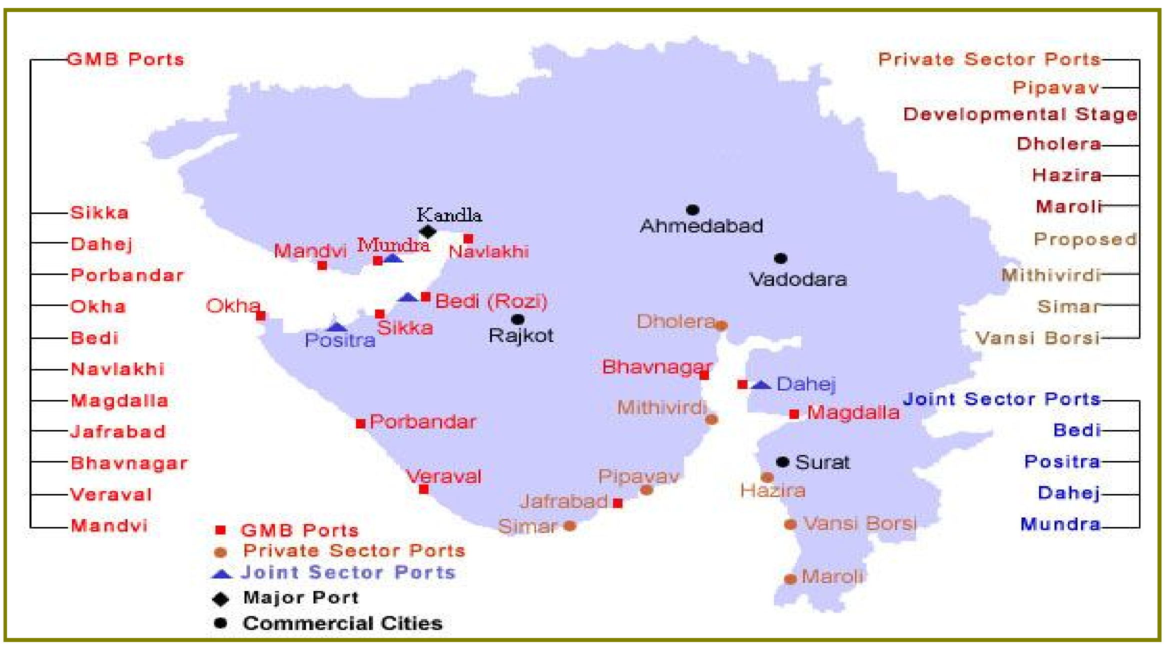
2.3.1 With a view to have an integrated approach for the development of both Major and Non-Major Ports, the **Maritime States Development Council (MSDC)** was constituted in May, 1997 under the Chairmanship of the Honourable Minister of Shipping. The Ministers in-charge of Ports in all Maritime States,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

## 2.4 **PORT POLICY IN MARITIME STATES**

### 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 41 ports located along its coastline, 40 are non major ports while one port, viz. Kandla is a major port. Presently, 20 non-major ports in the State are handling cargo. A snap view of the location of ports in Gujarat is given in Chart –VII.

**Chart – VII: Gujarat: Major and Minor Ports**




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

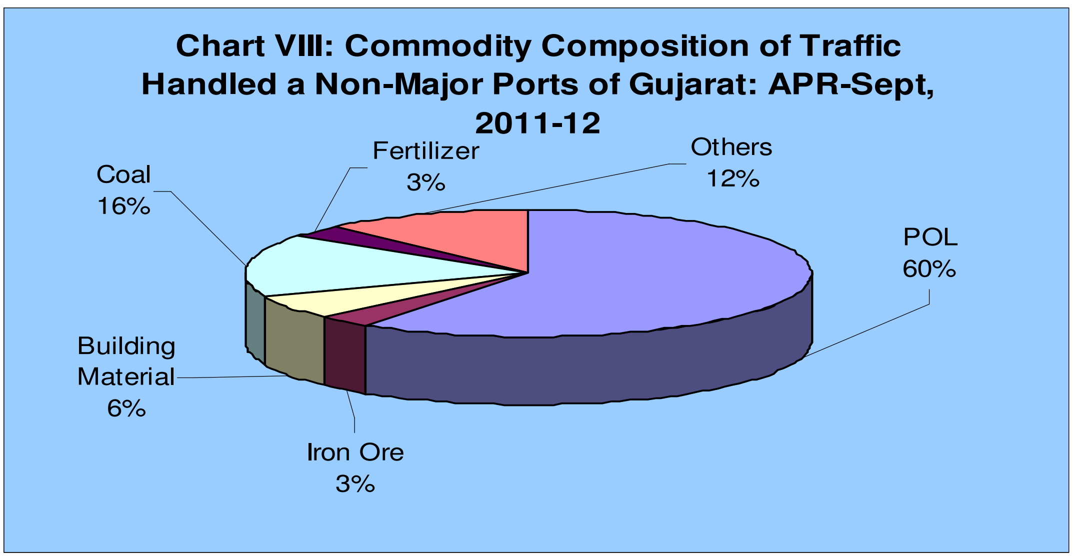
2.4.1.2 The trends in the cargo handled at both major and non-major ports of Gujarat State during the last few years and the first six months of the current year are given in Table: 14. The overall growth in port cargo traffic in case of Gujarat was 18.9% in the first half compared to 7.9% for overall cargo growth for India.

| Table 14 - Gujarat: Trends in Cargo Handled at Major & Non-Major Ports (MT) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Major/Non-Major | **2006-07** | **2007-08** | **2008-09** | **2009-10** | **2010-11** | **April-September** | |
| | | | | | | **2010-11** | **2011-12(P)** |
| Major Ports | 52.98 (15.4) | 64.92 (22.5) | 72.22 (11.2) | 79.5 (10.1) | 81.88 (3.0) | 40.32 (2.5) | 41.57 (3.1) |
| Non-Major Ports | 131.27 (26.8) | 150.52 (14.7) | 152.81 (1.5) | 205.54 (34.5) | 230.91 (12.3) | 112.14 (18.9) | 126.86 (13.1) |
| All Ports | 184.25 (23.3) | 215.44 (16.9) | 225.03 (4.5) | 285.04 (26.7) | 312.79 (9.7) | 152.46 (14.1) | 168.43 (10.5) |

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

2.4.1.3 It is noteworthy that all ports (major and non-major) located along the coast of Gujarat handled about 38% of the total cargo handled by Indian ports in the first half of 2011-12 In particular, non-major ports of Gujarat alone handled more than 76% of total cargo traffic at India's non-major ports.

2.4.1.4 The share of commodity-wise traffic handled by non major ports of Gujarat is shown in the Chart VIII.




POL: Petroleum, Oil and Lubricant FRM: Fertilizer Raw material

2.4.1.5 Amongst the Maritime States of India, Gujarat is one of the States, which has played a proactive role in the development of minor ports on its coastline. It announced an integrated Port Policy in December 1995. The salient features of the Policy are given in the

**Box: 2-Gujarat: Objectives of Integrated Port Policy**

- To increase Gujarat's share in the export and import sectors in national and international trade and commerce in pursuance of the policy of liberalisation and globalization.
- To reduce the burden on existing major ports on the western coast of India.
- To provide port facilities to promote export oriented and port based industries which are estimated to contribute 50% of the total industrial investment in Gujarat.
- To take full advantage of the strategic location of Gujarat coast by (a) encouraging shipbuilding, ship repairing and related manufacturing activities and; (b) providing facilities for coastal shipping and ferrying passengers between Saurashtra and South Gujarat and other destinations.
- To meet Gujarat's potential power requirements by (a) establishing barge mounted power plants and (b) providing exclusive port facilities for importing different kinds of power fuel.
- To attract private investment for the development of minor ports BOOT framework has been envisaged to provide – (i) timeliness of infrastructure creation, (ii) efficiency of operation and operational autonomy to the private sector, (iii) synchronization with hinterland development, (iv) Government's role to be maintained only in appropriate areas, and (v) Government financial liabilities to be kept to a minimum.

Box: 2.

2.4.1.6 Recent trends in cargo handled and capacity creation in non major ports of Gujarat are captured in the Table: 15. It indicates sustained increase in cargo throughput, capacity addition and improvement in capacity utilization. In 2010-11, 40 million tonnes of capacity is estimated to have been added at non-major ports in Gujarat.

**Table : 15 - Gujarat: Non Major Ports - Current Capacity & Utilization (Million Tonnes)**

| Item | 2005-06 | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 |
|---|---|---|---|---|---|---|
| Capacity* | 164.0<br>(11.0) | 182.0<br>(18.77) | 198.0<br>(15.0) | 235.0<br>(38.0) | 243.64<br>(8.64) | 283.64(P)<br>(40.00) |
| Cargo Handled | 103.5 | 131.3 | 150.5 | 152.8 | 205.5 | 230.9 |
| % Utilization | 66.21 | 72.14 | 74.92 | 64.89 | 84.35 | 81.30 |

* Including Lighterage Port Capacity; Figures within parenthesis indicate capacity addition in MT during the yea.r (P) Provisional

2.4.1.7 As per the port policy, Gujarat Maritime Board (GMB) has selected 10 Green Field sites for development of new ports as "All weather Deep Water Direct Berthing Ports". Amongst 10 ports, 6 ports are to be developed through private investment and remaining 4 ports in the joint sector. The list of projects undertaken for capacity augmentation and port wise trend in capacity creation are given in the Table16 & 17 respectively.

**Table 16: Major projects undertaken at Non Major Gujarat Ports**

| No. | Year | Major Projects undertaken | Capacity addition | Cumulative capacity |
|---|---|---|---|---|
| | | Up to 2003 | 138 | 138 |
| 1 | 2003-04 | • Container terminal at Mundra<br>• GMB jetty at Navlakhi<br>• Private jetty at Jakhau | 6<br>1<br>1 | 146 |
| 2 | 2004-05 | • Dahej LNG terminal | 5 | 151 |
| 3 | 2005-06 | • Container and Bulk terminal at Mundra<br>• LNG Terminal at Hazira | 8.5<br>2.5 | 164 |
| 4 | 2006-07 | • Hazira: Extension of captive jetty by Essar<br>• Mundra: T-2 bulk terminal at Mundra<br>• Mundra: Additional 2 berths for container | 8<br>6<br>2 | 182 |
| | 2007-08 | • Establishment of additional one SPMs at Sikka by M/s Reliance.<br>• Expansion of Pipavav port by Gujarat Pipvav port Ltd.<br>• Private jetty at Navlakhi | 10<br>5<br>1 | 198 |
| 5 | 2008-09 | • Establishment of additional 2 SPM<br>• SPM at Sikka by BORL | 25<br>12 | 235 |
| 6. | 2009-10 | • Establishment of SPMs at Bhogat by Cairn Energy<br>• Deepwater jetty by Essar at Magdalla port | 10<br>15 | 243.64 |
| 7. | 2010-11 | | | 283.64 |
| Source : Gujarat Maritime Board | | | | |

| Table 17 : Portwise Capacity | | | | | | |
|---|---|---|---|---|---|---|
| **Ports** | **2005-06** | **2006-07** | **2007-08** | **2008-09** | **2009-10** | **2010-11** |
| Mundra (GAPL) | 28.20 | 36.20 | 36.20 | 36.20 | 36.20 | 41.20 |
| Mundra (GAB) | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 | 0.24 |
| Okha | 3.96 | 3.96 | 3.96 | 3.96 | 3.96 | 3.96 |
| Bedi | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 | 5.69 |
| Pipavav (GPPL) | 9.41 | 9.41 | 14.41 | 14.41 | 14.41 | 23.41 |
| Magdalla | 17.05 | 27.05 | 27.05 | 27.05 | 27.05 | 43.05 |
| Navalakhi | 3.82 | 3.82 | 4.82 | 4.82 | 4.82 | 4.82 |
| Sikka | 57.57 | 57.57 | 67.57 | 95.93 | 104.57 | 104.57 |
| Porbander | 5.26 | 5.26 | 5.26 | 5.26 | 5.26 | 5.26 |
| Veraval | 2.17 | 2.17 | 2.17 | 2.17 | 2.17 | 2.17 |
| Muldwarka | 7.72 | 7.72 | 7.72 | 7.72 | 7.72 | 7.72 |
| Jafrabad | 4.53 | 4.53 | 4.53 | 4.53 | 4.53 | 4.53 |
| Dahej | 13.19 | 13.19 | 13.19 | 13.19 | 13.19 | 16.19 |
| Bhavnagar | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 | 1.18 |
| Jakhau | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 | 3.25 |
| Mandvi | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 | 0.32 |
| Gogha | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 | 0.08 |
| Bhooj | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total** | **164.00** | **182.00** | **198.00** | **235.00** | **243.64** | **267.64*** |
| Source: Gujarat Maritime Board<br>*- Revised capacity of ports in Gujarat at the end of March 2011 was 283.64. | | | | | | |

### 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 13 handle cargo. The capacity of non- major ports in Maharashtra is estimated at 38.25 million tonnes (as on 31.3.2011). Maharashtra Maritime Board (MMB) is the nodal agency for regulation and development of the State's maritime activities. MMB has taken many policy initiatives for development of port sector which are given in the Box:3.

**Box:3-Maharashtra: Policy Initiatives for Port Development**:

- Development on BOOST basis
- Developer's selection on MOU basis or by tender if many investors interested.
- Concession period of 50 years
- Concessional Wharfage
- Government land on lease, if available, at market valuation
- Equity participation by Government/MMB up to a maximum of 11 %
- Road linkage to nearest State Highway to be part funded by the State
- Rail connectivity by Developer
- Freedom to fix tariff

**Policy Guidelines for Captive Terminals**

- Land and site for jetty will be leased out for a period of 30 years
- Development on Build, Operate & transfer (BOT) basis
- No berthing dues from vessels calling at captive jetty
- Wharfage charges as per the prescribed rates notified by the State Government.
- At the end of 30 years, the jetty, superstructure & facilities on jetty will revert back to MMB.

2.4.2.2 Rewas-Aware and Dighi are both located in Raigad District, are in the process of development since March, 2002. The developer of Dighi Port has issued work order for construction of first berth in November 2007. The Rewas-Aware Port Project has secured Environmental Clearance from M/o Environment & Forests in May 2007 and pre-construction activities as well as validation of some earlier data are in progress. Further, 3 more ports viz. Redi, Vijaydurg and Jaigad are likely to come up shortly. Letters of Intent have been issued to the concerned developers. It is expected these ports will be ready for cargo handling in next 3-4 years. The proposed capacity in Million tones per annum of these ports is given below:

| **Port** | **Initial Phase (Million Tones )** | **Ultimate Phase** |
|---|---|---|
| Rewas-Aware | 47.00 | 127.00 |
| Dighi | 5.45 | 18.15 |
| Jaigad (Dhamankhol Bay) | 5.00 | 18.00 |
| Jaigad | 1.12 | 2.90 |
| Vijaydurg | 7.50 | 75.00 |
| Redi | 5.10 | 33.0 |

2.4.2.3 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: 18.

| Table 18 - Maharashtra: Cargo Handled at Major & Non-Major Ports (MT) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Major/Non-Major | **2006-07** | **2007-08** | **2008-09** | **2009-10** | **2010-11** | **April-September** | |
| | | | | | | **2010-11** | **2011-12 (P)** |
| Major Ports | 97.18 (18.5) | 112.88 (16.2) | 109.18 (-3.3) | 115.30 (5.6) | 118.88 (3.1) | 58.32 (3.8) | 59.01 (1.2) |
| Non-Major Ports | 11.58 (-3.8) | 11.36 (-1.9) | 10.42 (-8.4) | 12.51 (20.1) | 14.88 (18.9) | 6.52 (45.9) | 8.07 (23.8) |
| All Ports | 108.76 (16.7) | 124.24 (14.2) | 119.59 (-3.7) | 127.81 (6.9) | 133.76 (4.7) | 64.84 (6.9) | 67.08 (3.5) |

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

## 2.4.3 **GOA**

2.6.3.1 Goa with a coastline of about 118 kms is criss-crossed by 7 rivers. Apart from the major port at Mormugoa, 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.

2.4.3.2 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:19.

| Table 19: Goa : Trends in Cargo Handled at Major & Non-Major Ports (MT) | | | | | | | |
|---|---|---|---|---|---|---|---|
| Major/Non-Major | **2006-07** | **2007-08** | **2008-09** | **2009-10** | **2010-11** | **April-September** | |
| | | | | | | **2010-11** | **2011-12(P)** |
| Major Ports | 34.24 (8.0) | 35.13 (2.6) | 41.68 (18.6) | 48.85 (17.2) | 50.02 (2.4) | 17.80 (6.8) | 16.41 (-7.8) |
| Non-Major Ports | 14.31 (21.7) | 12.83 (-10.3) | 11.90 (-7.2) | 13.90 (16.8) | 14.58 (4.9) | 3.97 (49.8) | 5.23 (31.7) |
| All Ports | 48.55 (11.7) | 47.96 (-1.2) | 53.58 (11.7) | 62.75 (17.1) | 64.60 (3.0) | 21.77 (12.7) | 21.64 ( -0.6) |

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

(P) Provisional.

### 2.4.4 **KARNATAKA**

2.4.4.1 Karnataka has a coastline of about 280 kms. At present, there is one major sea port, the New Mangalore Port at Mangalore and 10 non-major ports in Karnataka. The ports of Karwar, Belekary and Mangalore are three main cargo handling non-major ports in the state.

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 first six months of the current and previous year are given in Table: 20.

**Table 20 - Karnataka: Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Major Ports | 32.04 (-7.0) | 36.02 (12.4) | 36.69 (1.9) | 35.53 (-3.2) | 31.55 (-11.2) | 15.18 (-14.4) | 16.04 (5.7) |
| Non-Major Ports | 6.56 (59.2) | 8.9 (35.7) | 4.97 (-44.2) | 8.55 (72.0) | 3.10 (-63.8) | 2.72 (40.9) | 0.29 (-89.3) |
| All Ports | 38.6 (0.1) | 44.92 (16.4) | 41.66 (-7.3) | 44.08 (5.8) | 34.65 (-21.4) | 17.9 (-9.0) | 16.33 (-8.8) |

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

(P) Provisional.

### 2.4.5 **KERALA**

2.4.5.1 Kerala has a coastline of 570 kms, with one major port at Cochin and 13 other non-major ports. The Vallarpadam Container Terminal Project in Cochin has been commissioned on a BOT basis under 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 first six months are given in Table: 21. In Kerala of the 4 non major ports 3 viz, Azhikkal, Beypore (handled more than 90 % of the total non major cargo traffic in the State), and Vizhinjam are handling cargo for the last few years.

**Table 21 - Kerala : Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Major Ports | 15.26 (9.9) | 15.81 (3.6) | 15.5 (-2.0) | 17.43 (12.5) | 17.87 (2.5) | 8.98 (16.8) | 9.75 (8.6) |
| Non-Major Ports | 0.17 (21.4) | 0.10 (-41.2) | 0.13 (30.0) | 0.12 (-14.3) | 0.12 (0.0) | 0.05 (25.0) | 0.05 (0.0) |
| All Ports | 15.43 (10.0) | 15.91 (3.1) | 15.63 (-1.8) | 17.55 (12.2) | 17.99 (2.5) | 9.03 (16.8) | 9.80 (8.5) |

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

### 2.4.6 **TAMIL NADU**

2.4.6.1 Tamil Nadu has a coastline of about 906 km, with 3 major ports at Chennai, Ennore and Tuticorin and 15 non-major ports. Out of 15 non-major ports only five 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. 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: 22.

**Table 22 - Tamil Nadu: Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Major Ports | 82.12 (11.6) | 90.19 (9.8) | 91 (0.9) | 95.55 (5.0) | 98.20 (2.8) | 48.74 (2.5) | 49.65 (1.9) |
| Non-Major Ports | 0.81 (14.1) | 0.89 (9.9) | 0.90 (1.1) | 1.17 (30.0) | 1.61 (37.6) | 0.63 (10.5) | 0.66 (4.8) |
| All Ports | 82.93 (11.7) | 91.08 (9.8) | 91.9 (0.9) | 96.72 (5.2) | 99.81 (3.2) | 49.37 (2.6) | 50.31 (1.9) |

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

### 2.4.7 ANDHRA PRADESH

2.4.7.1 The State is bestowed with a coastline of about 974 kms. There is one major port viz Visakhapatnam and 12 non-major ports in Andhra Pradesh.

2.4.7.2 The State had prepared a perspective developmental plan, in its *VISION 2020 Document* for development of its ports with a view to enhance cargo handling capacity at its Non-Major Ports to around 20.7 million tonnes by 2020. As large investments are required for capacity creation, the State Government policy intends to encourage the participation of private sector in port development. The status of privatized ports and private investment in Andhra Pradesh Ports is as follows:

**Status of Privatized Ports**

(i) Kakinada Deep Water Port was privatized in March 1999 to M/S ISPL on OMST terms for 20 years.

(ii) Krishnapatnam Port was privatized in Jan 1997 on BOOT terms to M/S Krishnapatnam Port Company Ltd.(NATCO) for 30 years. Revised agreement was signed on 17-9-2004. Navayuga Engineering Company has taken 74% equity stake in KPCL and NATCO 26%.

(iii) Gangavaram Port was privatized in August,2003 for development of Deep Water Port on BOOT terms initially for 30 years. The port has started handling cargo.

**Proposed Private Investment**

The proposed investments in approved port projects are (i) Gangavaram Port (Rs.2750crore); (ii) Krishnapatnam Port (Rs.2000 crore); and (iii)Kakinada Deep Water Port Expansion (Rs.900 crore).The projects under pipeline are (i) Machilipatnam Port (Rs.1860 crore); and (ii) Nizampatnam Port (Rs.15414crore).

2.4.7.3 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: 23.

**Table 23 - Andhra Pradesh: Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | **2006-07** | **2007-08** | **2008-09** | **2009-10** | **2010-11** | **April-September** | |
|---|---|---|---|---|---|---|---|
| | | | | | | **2010-11** | **2011-12(P)** |
| Major Ports | 56.39 (1.1) | 64.6 (14.6) | 63.91 (-1.1) | 65.5 (2.5) | 68.04 (3.9) | 32.54 (-1.6) | 36.1 (10.9) |
| Non-Major Ports | 18.61 (5.3) | 19.29 (3.7) | 29.72 (54.1) | 43.69 (47.0) | 42.61 (-2.5) | 25.78 (15.8) | 21.51 (-16.7) |
| All Ports | 75 (2.1) | 83.89 (11.9) | 93.63 (11.6) | 109.12 (16.6) | 110.65 1.3 | 58.32 (6.1) | 57.61 (-1.3) |

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

2.4.8 **ORISSA**

2.4.8.1 Orissa has a Coast line of 480 K.Ms. 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 has identified 14 potential sites for development of Minor Ports. To facilitate developers for development of Minor Ports, Government of Orissa has 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. Fourteen Potential Port locations identified in the State are as follows:-

| **Name of the Port Locations** | **District** |
|---|---|
| (1) | (2) |
| Gopalpur | Ganjam |
| BahudaMuhan (Sonepure) | Ganjam |
| Palur | Ganjam |
| Baliharichandi | Puri |
| Astaranga | Puri |
| Jatadhar Muhan | Jagatsingpur |
| Barunei Muhan | Kendrapara |
| Dhamra | Bhadrak |
| Chudamani | Bhadrak |
| Inchuri | Balasore |
| Chandipur | Balasore |
| Bahabalpur | Balasore |
| Subarnarekha Mouth (Kirtania) | Balasore |
| Bichitrapur (Talashari) | Balasore |

**Dhamra Port**

2.4.8.3 Government of Orissa had signed a Memorandum of Understanding with International Sea Ports Limited on 31.03.1997 for development of Dhamara Port. Concession Agreement was signed between Government of Orissa and International Sea-Ports Limited on 02.04.1998. The Special Purpose Company i.e. Dhamara Port Company Limited (Tisco and L&T 50%:50% basis) is developing the port. The Company shall share with the Government ITS gross income in accordance with formula given in below:

| Period commencing from Share as in-operation date | Percentage of Income to company payable to Government by the Company |
|---|---|
| $1^{st}$ to $5^{th}$ year | 5% |
| $6^{th}$ to $10^{th}$ year | 8% |
| $11^{th}$ to $15^{th}$ year | 10% |
| $16^{th}$ year to end of lease period | 12% |

**Gopalpur Port**

2.4.8.4 Gopalpur Port was operating as a seasonal lighterage port from 1986-87 by Government. This port was closed during 2003-04. The Concession Agreement between Government of Orissa and Gopalpur Ports Limited was signed on $14^{th}$ September, 2006 on BOOST basis. The Company will share with the Government, "Gross Revenue of Company" on the basis of sharing percentages mentioned below:-

| Period commencing from take over date i.e. 30.10.2006 | Percentage of "gross revenue of company" to be paid to the Government as share by the Company |
|---|---|
| $1^{st}$ year | NIL |
| $2^{nd}$ to $4^{th}$ year | 1.5% |
| $5^{th}$ to $9^{th}$ year | 5% |
| $10^{th}$ year to end of Concession period | 7.5% |

2.4.8.5 The Port was handed over to Gopalpur Ports Limited on $30^{th}$ October, 2006 for construction. The environment clearance from MOEF, Government of India has been obtained for the Phasse-II of the Port on $30^{th}$ March, 2011.

**Subarnarekha Mouth (Kirtania)**

2.4.8.6 For development of Port on Subarnarekha Mouth (Kirtania) in Balsore district, Government has entered into an MOU with Creative Port Development Private Limited, Chennai on $18^{th}$ December, 2006. Government of Orissa has signed the Concession Agreement with the developer on $11^{th}$ January, 2008. Environment scoping application submitted and clearance of terms of reference (TOR) obtained from MOEF, Government of India. Detailed land survey for port area (961 acre) has been made and alienation work of these lands is in progress.

**Astaranga Port**

2.4.8.7 Government of Orissa has signed an MoU with Navayuga Engineering Company Limited, Hyderabad on the 22nd December, 2008 for development of a Port at Astarang in Puri district. The estimated cost of the Project is Rs.3500.00 Crore. The projected capacity of the Port will be 25 MTPA in Phase-I. Number of berths will be eight. The Government has signed the Concession Agreement with the company on 22nd November, 2010. Land acquisition work in progress.

**Chudamani Port**

2.4.8.8 Government of Orissa has signed a MoU with Aditya Birla Group represented by ESSEL Mining and Industries on 22.10.2009 for development of a Captive Port at Chudamani in Bhadrak district. The draft Concession Agreement is under process.

**Jatadhar Port**

2.4.8.9 Government of Orissa have approved for establishment of a captive minor port at Jatadhar Muhan in Jagatsingpur district by POSCO India Ltd. on 14th June, 2006. POSCO has conducted preliminary study and prepared Master Plan for Harbour facilities and site preparation for POSCO's Integrated Steel Plant. Numerical Model Analysis, Littoral Drift Study have also been conducted by POSCO through the consultancy services of International standard. Environment Clearance has been obtained from MoEF. The proposed port, POSCO India Ltd. Will handle its own cargo i.e. iron ore, coal etc. The draft Concession Agreement is under process.

2.4.8.10 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: 24.

**Table 24 - Orissa : Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Major Ports | 38.52 (16.3) | 42.44 (10.2) | 46.41 (9.4) | 57.01 (22.8) | 56.03 (-1.7) | 26.47 (-1.0) | 27.10 (2.4) |
| Non-Major Ports | - | 0.30 (0.0) | 0.30 (0.0) | 0.42 (40.0) | 0.42 (0.0) | 0.03 (200.0) | 0.03 (0.0) |
| All Ports | 38.52 (16.3) | 42.74 (11.0) | 46.71 (9.3) | 57.43 (23.0) | 56.45 (-1.7) | 26.81 (-0.3) | 27.13 (1.2) |

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

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 non-major port namely Kulpi is being developed for which consultants have been shortlisted. Presently there is no cargo traffic at non major ports.

2.4.9.2 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: 25.

**Table 25 - West Bengal :Trends in Cargo Handled at Major & Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Major Ports | 55.05 (3.6) | 57.33 (4.1) | 54.22 (-5.4) | 46.43 (-14.4) | 47.43 (2.2) | 22.96 (-1.2) | 23.21 (1.1) |
| Non-Major Ports | - | - | - | - | - | - | |
| All Ports | 55.05 (3.6) | 57.33 (4.1) | 54.22 (-5.4) | 46.43 (-14.4) | 47.43 (2.2) | 22.96 (-1.2) | 23.21 (1.1) |

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

(P) Provisional.

2.4.10 **ANDAMAN & NICOBAR ISLANDS**

2.4.10.1 Port Blair was declared as a major port with effect from June 1, 2010. With the issuance of notification, Port Blair becomes India's 13$^{th}$ Major Port. The Port Blair will have territorial jurisdiction over all 23 ports located in Andaman and Nicobar islands. The trends in cargo handled at ports of the Union Territory during the last few years and first six months of the current and previous year are given in Table: 26.

**Table 26 - Union Territory: Trends in Cargo Handled at Major Port (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11(P) | 2011-12(P) |
| Andaman & Nicobar Islands | 1.56 | 2.16 | 2.01 | 1.65 | 1.68 | 0.83 | 0.58 |

2.4.11 **OTHER NON-MAJOR PORTS**

2.4.11.1 The other non-major ports are spread across the Union Territories ( UTs) of Daman & Diu, Puducherry, and Lakshadweep. These ports in the UTs are administered through their respective Departments. 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 these ports of the State during the last few years and first six months of the current and previous year are given in Table: 27.

2.4.11.2 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.

**Table 27 - Union Territories: Trends in Cargo Handled at Non-Major Ports (MT)**

| Major/Non-Major | 2006-07 | 2007-08 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| Lakshadweep | 0.03 | 0.03 | 0.03 | 0.03 | 0.03 | 0.01* | 0.01* |
| Puducherry | 0.03 | 0.01 | 0.05 | 1.32 | 4.71 | 2.48 | 3.10 |

(P) Provisional * Estimated

# III. EFFICIENCY INDICATORS OF MAJOR PORTS

3.1 Major ports have improved their efficiency of operations as reflected in select physical performance indicators over the last several years. Some key indicators of physical performance for select years and for current half year in comparison with corresponding period of previous year are elaborated in this section.

### 3.2 Average Turn Round Time (TRT)

3.2 1 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, Average TRT for all major port has shown an increase to 4.4 days in 2009-10 and 4.64 in 2010-11. During April-September 2011, the TRT at 4.8 was slightly higher compared 4.5 days in the corresponding period of the last year with a range between 1.96 days at Ennore port to 7.65 days at Paradip. Amongst the major ports improvement in TRT during April-September 2011-12 as compared to April-September 2010-11 is discernible in case of Hadia D.C., Paradip, Ennore, Chennai, Cochin, Mormugao and J.L.Nehru. Port-wise TRT for select years are given in Table:28. The path of turn round time at major ports for select years since 1990-91 to 2010-11 and April-September 2011-12 is presented in the Chart IX.

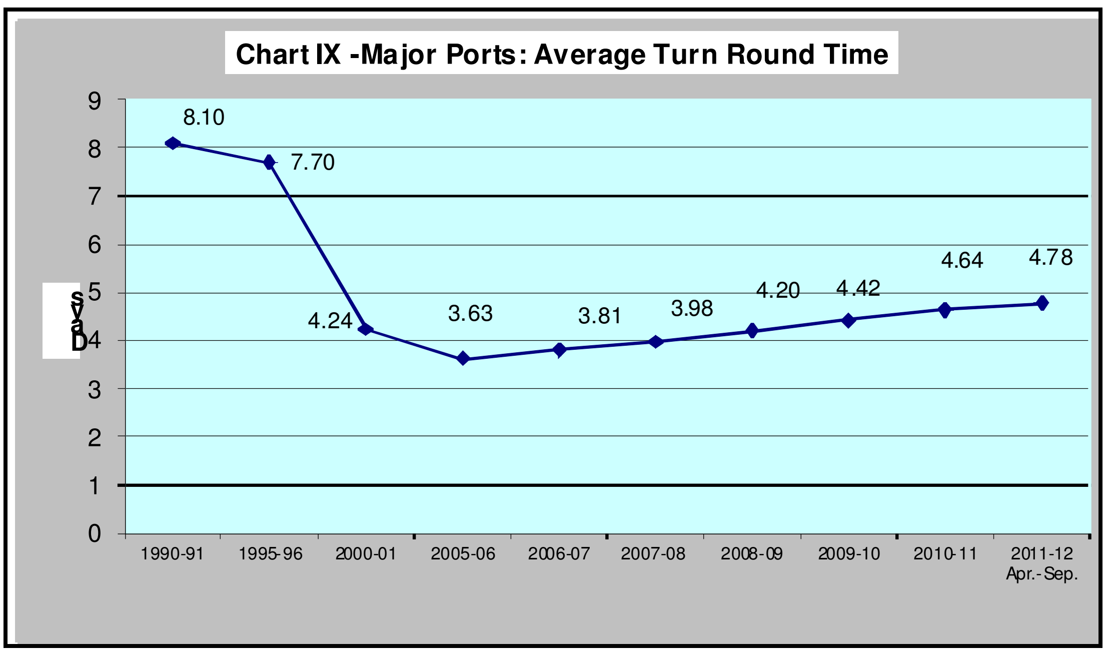



**Table 28: Average Turn Round Time (days)**

| Port | 1990-91 | 2000-01 | 2008-09 | 2009-10 | 2010-11(P) | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Kolkata D.S | 11.9 | 5.5 | 5.10 | 5.47 | 5.35 | 4.93 | 5.16 |
| Haldia D.C | 6.47 | 3.97 | 4.21 | 5.01 | 4.53 | 4.38 | 4.21 |
| Paradip | 8.4 | 4.16 | 4.78 | 9.04 | 7.73 | 8.18 | 7.65 |
| Vishakhapatnam | 7.07 | 3.71 | 3.93 | 4.78 | 5.84 | 5.76 | 6.00 |
| Ennore | - | - | 2.35 | 2.35 | 2.78 | 3.51 | 1.96 |
| Chennai | 7.2 | 5.83 | 4.15 | 4.05 | 4.35 | 4.53 | 3.89 |
| Tuticorin | 4.70 | 4.1 | 3.64 | 3.97 | 4.11 | 4.11 | 5.15 |
| Cochin | 4 | 3.11 | 2.14 | 2.08 | 2.20 | 2.19 | 1.98 |
| New Mangalore | 4.96 | 2.89 | 3.00 | 3.06 | 2.70 | 2.82 | 2.86 |
| Mormugoa * | 6.4 | 4.25 | 5.95 | 5.63 | 6.46 | 5.91 | 5.27 |
| J.L.Nehru | - | 2.21 | 1.90 | 2.02 | 2.67 | 2.72 | 2.69 |
| Mumbai | 10.80 | 5.2 | 4.95 | 4.61 | 4.52 | 4.26 | 4.91 |
| Kandla | 10 | 4.72 | 7.26 | 5.03 | 5.90 | 5.04 | 7.12 |
| All Ports | 8.10 | 4.24 | 4.20 | 4.42 | 4.64 | 4.47 | 4.78 |

(P) Provisional
* Relate to dry bulk cargo for MOHP(Mech.) and Berth No. 10 &11 (Mech.)
Source: Major Ports/ Indian Ports Association (IPA)

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

3.3.1 The average overall pre berthing detention time (PBDT) for all major ports has declined from 2.2 days in 1990-91 to 0.96 days in 2004-05**.** Thereafter, average PBDT for all major ports has shown an increase to 1.63 in 2009-10 and 2.16 in 2010-11. However, average PBDT on port account has seen a sharper decline from 2.10 days in 1990-91 to 0.2 day in 2004-05. In 2010-11, average PBDT on Port account increased to 0.5 days. During the first six months of 2011-12, average PBDT on port account has increased to 0.52 days compared to 0.4 days during April-September 2010-11. Average PBDT was maximum (1.93 days) at Kandla during the first half of current year. Improvement in average PBDT on port a/c during April-September 2011 as compared to same period of 2010 is evident in case of Kolkata DS, Haldia Dock Complex, Paradip, Mormugao, and J.L.Nehru. Port-wise PBD for select years is indicated in Table 29. 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, 2004-05 and onwards is shown in Chart X.

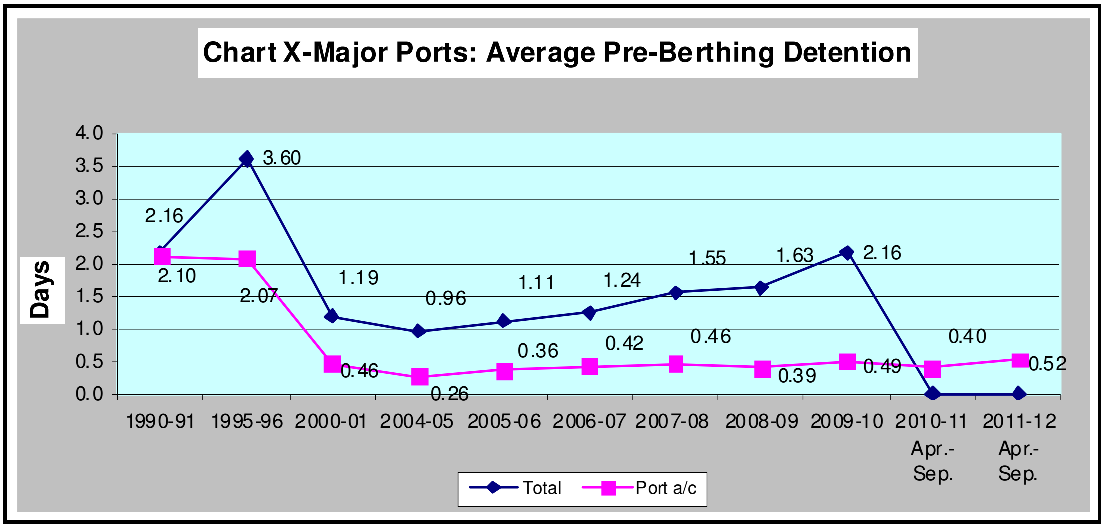


Chart X-Major Ports: Average Pre-Berthing Detention

**Table 29 : Average Pre-Berthing Detention(Days)**

| Port | 1990-91 | 2000-01 | 2008-09 | 2009-10 | 2010-11 | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11* | 2011-12* |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Kolkata D.S | 0.9 | 0.61 | 0.66 | 0.85 | 0.14 | 0.14 | 0.05 |
| Haldia D.C | 1.66 | 0.91 | 3.38 | 4.50 | 1.15 | 0.93 | 0.74 |
| Paradip | 1.59 | 1.41 | 2.32 | 6.30 | 0.10 | 0.06 | 0.05 |
| Vishakhapatnam | 1.83 | 0.75 | 1.28 | 1.90 | 0.10 | 0.11 | 0.11 |
| Ennore | | | 0.27 | 0.37 | 0.00 | 0.00 | 0.00 |
| Chennai | 2.1 | 2.45 | 1.39 | 1.35 | 0.04 | 0.04 | 0.04 |
| Tuticorin | 0.9 | 1.4 | 1.09 | 1.36 | 0.39 | 0.42 | 0.82 |
| Cochin | 0.83 | 0.74 | 0.70 | 0.85 | 0.19 | 0.25 | 0.27 |
| New Mangalore | 0.79 | 0.77 | 0.65 | 0.81 | 0.03 | 0.02 | 0.05 |
| Mormugoa** | 2.51 | 1.32 | 1.77 | 3.46 | 0.59 | 0.76 | 0.29 |
| J.L.Nehru | | 0.67 | 0.95 | 0.98 | 0.57 | 0.54 | 0.45 |
| Mumbai | 3.4 | 1.26 | 1.41 | 1.06 | 0.32 | 0.23 | 0.31 |
| Kandla | 4.4 | 1.51 | 2.62 | 2.60 | 1.51 | 0.95 | 1.93 |
| All Ports | 2.16 | 1.19 | 1.63 | 2.17 | 0.50 | 0.40 | 0.52 |

(P): Provisional. * Relates to Port Account only; Source: Major Ports/ Indian Ports Association(IPA)
** Relate to dry bulk cargo for MOHP(Mech.) and Berth No. 10 &11 (Conv.)

### 3.4 Average Output Per Ship Berth-day

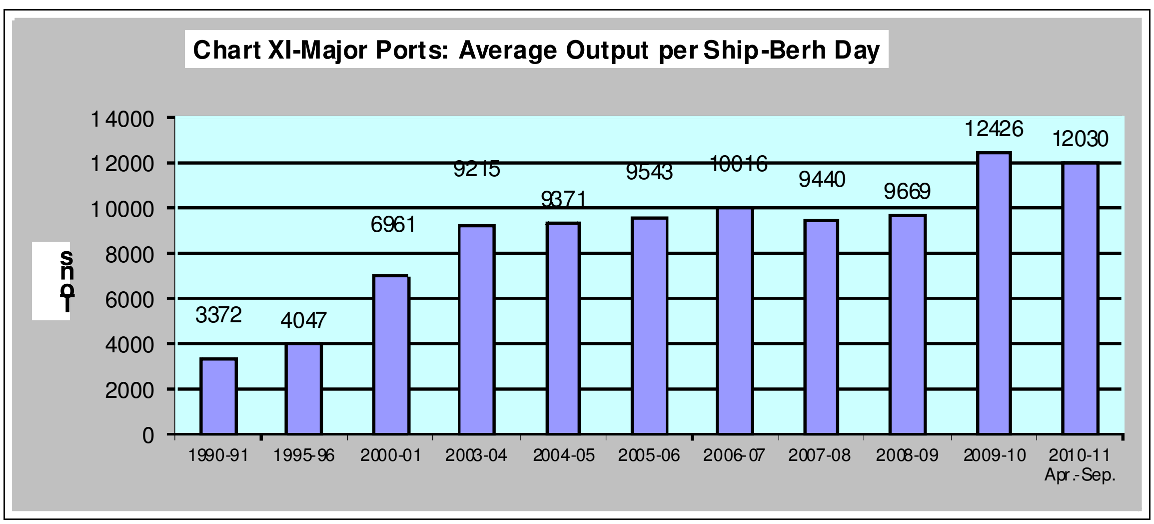
3.4.1 During the last 20 years this indicator has seen a tremendous improvement. Average Output per Ship-berth day has shown close to four fold increase from 3,372 tonnes in 1990-91 to 12429 tonnes in 2010-11 for major ports. However, average output per ship berth day is marked by substantial variation across major ports ranging from a high 26936 tonnes in case of Ennore to a low of 2679 tonne at Kolkata Dock System during April-September, 2011. This variation reflects the type of cargo being handled, level of mechanization and labour practices. Amongst the major ports improvement in average output per Ship-berth day during April-September 2011-12 as compared to April-September 2010-11 is discernible in all major ports except Kolkata D.S. , Chennai, Mormugao and Mumbai. Port-wise average output per Ship-berth day for selected years and latest period are given in Table: 30.

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

| Port | 1990-91 | 2000-01 | 2008-09 | 2009-10 | 2010-11(P) | April-September | |
|---|---|---|---|---|---|---|---|
| | | | | | | 2010-11 | 2011-12(P) |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| Kolkata D.S | 560 | 2305 | 3027 | 1917 | 2641 | 2848 | 2679 |
| Haldia D.C | 5659 | 6384 | 7732 | 6243 | 6486 | 6348 | 6608 |
| Paradip | 4082 | 8503 | 12635 | 13853 | 14243 | 13381 | 15443 |
| Visakhapatnam | 5325 | 9799 | 11171 | 10484 | 10336 | 10162 | 10964 |
| Ennore | - | - | 28424 | 21665 | 17684 | 13073 | 26936 |
| Chennai | 3912 | 6977 | 10778 | 11428 | 11271 | 11861 | 11008 |
| Tuticorin | 2130 | 3983 | 5817 | 6934 | 6511 | 6218 | 6334 |
| Cochin | 3714 | 6138 | 10599 | 11089 | 11752 | 11910 | 14900 |
| New Mangalore | 4412 | 12192 | 13645 | 13896 | 14205 | 12869 | 13855 |
| Mormugao* | 10429 | 12438 | 6290 | 5002 | 17314 | 14461 | 14324 |
| J.L.Nehru | - | 6383 | 20344 | 21563 | 24849 | 24009 | 25183 |
| Mumbai | 2310 | 4213 | 5717 | 6122 | 7374 | 7380 | 7374 |
| Kandla | 4417 | 8230 | 13107 | 13549 | 13842 | 13486 | 13670 |
| All Ports | 3372 | 6961 | 9669 | 9215 | 12429 | 12030 | 12814 |

(P): Provisional. *Relate to dry bulk cargo for MOHP(Mech.) and Berth No. 10 &11 (Conv.)
Source: Major Ports /Indian Ports Association (IPA).

3.4.2. The average out-put per ship-berth-day for selected years since 1990-91 is presented in the Chart XI.




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

4.1 Brief details of the approved Private Sector/Captive/Joint Sector Port Projects and a list of these projects under consideration as on 30.09.2010 are brought out in Appendix-I, Appendix-II in respect of Major Ports and in Appendix-III, Appendix-IV for Non-major Ports.

**Appendix – I**

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

| Sl. No | Project Name | Port Name | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Construction of Container Terminal on BOT basis | Ennore | 18.0 MTPA | 14070 | Process of achieving financial closure. Expected to be completed in 2013-14 |
| 2. | Construction of two New Off-shore Container berths & Development of Container Terminal berth on BOT basis in Mumbai Harbour. | Mumbai Port | 0.80 MTEUs | 14610 | Agreement signed on 3.12.2007 with M/s. ICTPL. BOT operator has taken over BPX yard and commenced work on 15.6.2008. EPC contract awarded by BOT operator on 2.12.08.<br>Jetty Construction work is in progress. Pilling in approach trestle is in progress. All 259 piles completed. Pilling commenced for berth pockets. 549 piles out of 833 completed. Precast members 3685 units out of 6045 units completed.<br>Dredging contract for MbPT component awarded to M/s. Jaisu Shipping Co. Pvt. Ltd. on 1.4.09. Filling of Victoria basin commenced from 04.09.09 and is in progress. Filling of Princess Dok commenced from 16/06/2010.<br>Anticipated date of completion is December 2012. |
| 3. | Construction of 13th to 16th Cargo berth on BOT basis. | Kandla Port | 8.0 MMTPA | 7555 | **13th Berth**- Work in Progress.<br>**14th Berth**- RFQ a fresh is invited through global NIT from 19.9.2011 with bid date due on 18.11.2011.<br>**15th Berth** - LoA issued on 7.12.10 to M/s IMC Ltd. and executed agreement with KPT on 18.2.11. Date of award has been declared on 27.9.11.<br>**16th Berth** - LoA issued on 7.12.10 to M.s PSL Ltd and executed agreement with KPT on 18.2.11. Conditions precedents are being fulfilled by PSL. |
| 4 | Development of dry-bulk terminal Off Tekra near | Kandla Port | 14.1 | 10600 | The bids will be opened after receipt of the security clearance of consortium member for one of |

| | | | | | |
|---|---|---|---|---|---|
| | Tuna outside Kandla Creek at Kandla Port on BOT basis | | | | bidders. Concession agreement will be signed with successful bidder by Feb 2012. Environment/CRZ clearance received. However, formal orders in this regard, yet to be received. |
| 5 | Setting up of SPM and allied facilities off Veera in Gulf of Kutch. | Kandla Port | 12.0 | 6285 | Revised PPPAC memo alongwith bidding documents sent to Ministry on 26/4/11. Env. Clearance is being obtained. Concession agreement will be signed with successful bidder by April 2012 |
| 6 | Construction of barge jetty at IFFCO | Kandla Port | 2 | 277 | Award of concession given to M/s IKBLL on 11/8/11. |
| 7 | Barge handling facilities at Bunder Basin on BOT basis | Kandla Port | 3 | 1096 | RFQ reinvited Concession agreement will be signed with successful bidder by April 2012 |
| 8 | Development of oil jetty to handle liquid cargo & ship bunkering terminal at old Kandla on PPPmode | Kandla Port | 3 | 2765 | EOI evaluation completed. Feasibility report, RFQ and TAMP proposal under approval. RFQ to be invited shortly. |
| 9 | Development of Berth No. 7 as second coal handling terminal on DBFOT basis. | Mormugao | 4.61 | 406.00 | The date of award of concession was fixed on 15.5.2010. Physical progress of overall project is21.62% and financial progress is 27.76%. |
| 10 | Development & Operation of International Container Transshipment Terminal (ICTT) at Vallarpadam (BOT basis by M/s India Gateway Terminal Pvt. Ltd. a subsidiary of M/s. Dubai Ports International) | Cochin | Capacity addition of 12.5 MT to 40 MT in phases | 21180 | Phase I of the ICTT Project commissioned on 11th February 2011 |
| 11 | Setting up of LNG Regasification Terminal at Puthuvypeen by M/s Petronet LNG Ltd. on captive basis. | Cochin | Initial 2.5 MT Final 5 MT | 415.00 | The project was immedly scheduled for commissioning in the first quarter of 2012 but now PLL has informed that they are taking up the additional facilities required to regasify 5 MMTPA also at this stage and the augmented facility is now scheduled for commissioning by the end of 2012. |
| 12 | Construction of Coal Jetty by M/s. Udupi Power | New Mangalore | 3.0 MTPA | 2300 | Work is in progress. Piling work of jetty and Diaphram wall are completed. Structural / erection |

| | | | | | |
|---|---|---|---|---|---|
| | Corporation Ltd. (UPCL) Erstwhile NPCL. On BOT (Captive user) basis. | | | | work is under progress. About 80% of work completed. Anticipated date of completion is October, 2011. |
| 13 | Setting up of Mechanised Iron Ore handling facilities at berth No. 14 by M/s. SICAL Logistics Limited on BOT basis. | New Mangalore | 3 MTPA (Capacity of Jetty) | 2960 | Bids were opened on 15.09.2009 and the Letter of Award has been issued on 23rd September, 2009. Concession agreement has been signed on 19.10.2009 and work started in November 2009. Work delayed due to ban on measurement of Iron Ore by Govt. of Karnataka. |
| 14 | Construction of North Cargo Berth – I (Captive use) | Tuticorin | 7.0 MTPA | 375 | Berth construction commenced on 15.1.2010. |
| 15 | Development of Mega Container Terminal | Chennai | … | 36860 | Ministry accorded approval on 22.10.2010 for the project. Bids (RFP) opened on 30.9.2011. One offer received and same is under evaluation |
| 16 | Construction of WQ 6 berth in Inner Harbour for Multi cargo berth on - DBFOT basis. | Visakhapatnam | 2.1 | 1145 | Concession was awarded on 7.10.2011. Concessionaire commenced work. Expected date of completion is June 2013. |
| 17 | Construction of EQ-10 berth in Inner Harbour for handling Liquid Cargoes & Chemicals on DBFOT Basis. | Visakhapatnam | 1.85 | 554 | Concession was awarded on 10.10.2011 Work commenced. Expected date of completion is April, 2013. |
| 18 | Mechanized Coal Handling Facilities at General-cum-bulk Cargo Berth in Outer Harbour (DBFOT basis). | Visakhapatnam | 5.38 | 4441 | Construction work is in progress Expected date of completion is October, 2012. |

BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT:Design, Build, Finance, Operate and Transfer
Note: Information from Kolkata D.S., Haldia D.C. and Tuticorin ports has not been received. Latest available information in respect of these ports has been included.
Source: Major Ports.

**Appendix – II**

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

| Sl. No. | Project | Port Name | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Development of Deep Draught Iron Ore berth on BOT basis. | Paradip | 10.0 MTPA | 5914 | Concession agreement has been signed on 1.7.09. |
| 2. | Development of Deep Draught Coal Berth on BOT basis | Paradip | 10.0 MTPA | 4790 | Concession agreement has been signed on 10.11.09. |
| 3. | Development of Multi-Purpose berths to handle clean cargo including container on BOT basis. | Paradip | 5.0 MTPA | 3873 | Financial bids are scheduled to be received on 14.05.2010. |
| 4 | Construction of LNG Terminal (Joint Venture) | Ennore | 2.5 MTPA | 2700 | "In Principle" approval for the proposal for development of LNG berth through Joint Venture with IOCL/CPCL, granted by the Ministry on 18.7.2005.<br>Proposal/implementation schedule is awaited from IOC.<br>IOCL is now preparing DPR. |
| 5 | Fourth Container Terminal (DBFOT Basis). | Jawaharlal Nehru | 2.8 MTEUs | 41000 Phase -1 | RFP's of four shortlisted bidders along with M/s MPSEZ (total five nos) were opened on 28.06.2011. The consortium of PSA, Mumabi Investments Pvt Ltd. and ABG Ports Pvt Ltd stands H-1. The Board has approved the proposal and the Port has issued LoA vide its letter dt.26.09.2011. Likely date of signing of Concession Agreement – Nov. 2011. Likely date of completion of the Phase-I – Sept.2014. |
| 6 | Development of standalone container handling facility with a quay length of 330 m. to the north of JNPT. | Jawaharlal Nehru | 10.0 MTPA | 6000 | PPPAC discussed this project in its meeting held on 11.11.09 and the committee agreed for the proposed development. As per court order<br>The port has received approval from the Central Government. Vide its letter dated 16.2.2010. Security clearance has been received for the Project through MOS in Feb 2011. The Port has issued RFP alongwith |

| | | | | | |
|---|---|---|---|---|---|
| | | | | | DCA. M/s DP World Pvt. Ltd. has filed an SLP in Apex Court which has directed that no final award is to be made without leave of the Court. The bid due date is 30.11.2011. |
| 7 | Development of berth nos.10/11 Indira Dock and 12 Indira Dock as conventional cargo terminal on BOT basis for 20 years. | Mumbai | … | 300 | The Board has approved the proposal on 30.06.2009.<br>RFP due for submission on 3.3.2010 has been extended several times as approval of Standing Finance Committee and security clearance may take sometime. RFP opened on 24.2.2011. No offers received. The matter to be considered by the Board. |
| 8 | New Cruise Terminal near Gateway of India. | Mumbai | … | 18600 | Consultant, M/s. Zepec Marine Consultant and Services submitted DPR for location at Oyster Rock. However, Navy has objected for the location of the Cruise Terminal on security ground. Matter refered to Shipping Ministry for taking up the matter with MoD. Alternative locations are being examined. Consultant is being asked to critically examine feasibility of locations at Nariman Point. As per the instructions of the Ministry the Consultant has examined the matter of improving existing Cruise Terminal at BPX and submitted its report. The report is being examined. |
| 9 | Barge handling facilities at Khori Creek | Kandla | 4 | 1000 | Under planning stage |
| 10 | Construction of T shape Jetty at at Tekra (Phase-II) | Kandla | 14 | 15000 | The scheme will spill over in 13th five year plan. Under planning stage. |
| 11 | Setting up of barge jetty at Tuna on captive use basis | Kandla | 1.5 | 220 | 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. |
| 12 | Construction of barge jetty at Tuna on BOT basis | Kandla | 6.0 | 2553 | Feasibility Report, RFQ and TAMP proposal under approval. |
| 13 | Strengthening of oil jetty 1 & 2 to handle 13/14 m. draught vessels | Kandla | 1.57 | 154 | Detailed estimate under preparation. |
| 14 | Development of Port based multi product SEZ | Kandla | - | 10950 | In-principle approval from MoS for formation of SPV is awaited.<br>Concurrence of GoG is still awaited. KPT has appointed NIO, Mumbai for carrying out EIA studies. |
| 15 | Development of | New | … | 2697 | RFQ documents issued from 20th |

| | | | | | |
|---|---|---|---|---|---|
| | Container Terminal on BOT basis. | Mangalore | | | July, 2009 to 5th September,2009. Pre-application Conference held on 18th August, 2009. 5 bidders have submitted their RFQ application on 30.09.2009. The PPPAC Memo submitted on 14.9.2009. Proposal for security clearance in revised format sent on 2.12.2009. TAMP consultative hearing held on 6.1.2010 and approved the project. RFP document issued on 2.2.2010. Two pre bid meetings held on 24.2.2010 and 14.5.2010. Bids were due for receipt on 30.6.2010. No bids were received. The project is under review. Port has requested for relaxation of conditions of upfront tariff fixation order to attract bidders for the project. |
| 16 | Installatino of Mechanical unloading facilities for fertilizers at EQ-7 berth in inner harbour | Visakhapatnam | 3.56 | 2176 | RFP issued on 31.12.2010. Awaiting security clearance. Price bids will be opened on receipt of security clearance. |
| 17. | Development of EQ-1 berth by replacing the existsing EQ1 berth and part of EQ2 berth in inner harbour for handling steam coal. | Visakhapatnam | 6.4 | 3232 | Concession agreement was signed on 1.8.2011. EAC has recommended for issue of amendment. Environmental clearance to be received. |
| 18. | Development of EQ-1A berth on South side of EQ-1 berth in inner harbour for handling thermal coal & steam coal | Visakhapatnam | 7.36 | 3134 | LOA issued on 19.3.2011 EAC has recommended for issue of amendment. Environmental clearance to be received. Concession agreement will be signed shortly. |
| 19. | Installation of mechanized iron ore handling facilities at WQ-1 berth in inner harbour on DBFOT basis | Visakhapatnam | 8.98 | 2752 | Upfront tariff approved on 3.12.2011. Security clearance received on 7.2.2011. Proposal sent to Ministry on 15.2.2011. PPPAC meeting to be fixed by Ministry. |
| 20. | Development of WQ-7 berth including mechanized facilities in inner harbour for handling import other dry bulk cargo | Visakhapatnam | 5.11 | 2009 | RFQ opened on 28.4.2011. Upfront tarrif approved on 29.6.2011. Proposal for security clearance sent on 27.6.2011. SFC memo. DCA, RFP, TEFR sent to Ministry on 20.7.2011. |
| 21. | Development of WQ-8 berth including | Visakhapatnam | | | EOI issued on 30.8.2011. |

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| | mechanized facilities in inner harbour for handling export other dry/break and import general cargo. | | | | |
| 22. | Development of SBM facility for crude oil (HPCL) | Visakhapat nam | 8.0 | 9000 | MoU entered with M/s HPCL on 31.3.2008 on allotment of land. The facility commissioned on 9.2.2011. |
| 23. | Development of Iron Ore export terminal at the waterfront west of existing breakwater. | Mormugao | 7.2 | 7210 | Cabinet Committee on Infrastructure clearance awaited. |
| 24. | Development of mechanized coal import terminal at berth No.11 | Murmugao | 400 | 4250 | PPPAC memo. sent to MoS. TAMP notified upfront tariffs. 13 parties short listed subject to security clearance. |
| 25. | Setting up of an International Bunkering Term-inal. | Cochin | 5.0 | 950 | RFQ were invited on 21.7.2009 and five firms have been pre-qualified. The proposal for up-front Tariff Setting was submitted to TAMP on 24.11.2009 and TAMP conducted the joint hearing on 23.2.2010. EIA studies report is under finalization. SFC has decided to recommend the project for clearance/approval. RFP document issued on 22.02.2011. Due date of submission is 31.10.2011. |
| 26. | Setting up of an International Cruise Terminal at Cochin Port (Joint Venture through BOT) | Cochin | … | 3750 | Consultants furnished the final Feasibility Report and Business plan on 31/03/2008. M/s. Feedback Ventures Pvt. Ltd. Haryana was appointed as Transaction Adviser on 02/06/2008 and they have commenced the assignment on 09/06/2008. Application seeking Prior Environmental Clearance for the project has been submitted to the MoE&F on 3.1.09. Proposal seeking 'In Principal' approval of PPPPAC enclosing the PPPAC documents duly prepared by the Transaction Adviser has been submitted to the Ministry on 27.2.09.The proposal for 'In-principle' approval was discussed in the meeting taken by the Secretary (Shipping) on 29.7.2009.<br>Accordingly EOI was invited and a meeting convened on 10.11.2009 for the Project Briefing and interactions with the interested parties.<br>Based on subsequent deliberations with the Ministry, the proposal has been revised for project implementation by utilizing the existing Q5 & Q6 berths of Ernakulam Wharf and leasing out the adjacent area of 3.68 ha. To the developer for |

| | | | | | |
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| | | | | | a period of 30 years, with option for extension for a further period of 30 yers. Ministry's 'In-Principle' approval has been sought for this proposal vide CoPT's letter dated 08.12.2010. Detailed Project Report for the project prepared in-house, has also been submitted to the Ministry on 8.12.2010. Port Trust Board's approval for the revised proposal conveyed to the Ministry vide CoPT's letter dated 22.02.2011.<br>A Committee under the Chairmanship of the Secretary(S), on 3rd May 2011, decided to take up the project in its entirety on a land lease model. |
| 27. | Development of Ro Ro cum multi purpose berth and multi level car park in Bharathi Dock | Chennai | | 1000 | DPR is finalized appointment of TA under process. |
| 28. | Conversion of berth No. 8 as container terminal on BOT basis. | Tuticorin | 7.2 MTPA | 3122 | Awaiting Ministry's approval on restriction of Monopoly policy decision. Likely commission period is December 2011. |
| 29. | Construction of One Number of Shallow Draught Berth on DBFOT Basis. | Tuticorin | 2.0 MTPA | 654 | RFQ will be opened on 10.6.2010. Likely commission period is September 2012. |
| 30. | Development of North Cargo Berth – II on DBFOT basis. | Tuticorin | 7.0 MTPA | 3322 | On receipt of Ministry's approval for security clearance RFP will be issued to the short listed bidders. Likely commission period is July, 2012. |
| 31. | Upgradation of Mechanical Handling Equipments in berth No, 1 to 6 and berth No. 9 on BOO basis. | Tuticorin | 11.9 MTPA | 801 | RFQ will be opened on 18.5.2010. Likely commission period is August, 2011. |
| 32. | Construction of a riverine jetty north of 3rd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 3.75 MTPA | 995 | RFQ has been issued in February 2010 for execution of the scheme. |
| 33. | Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 1.5 MTPA | 471 | Feasibility Study being undertaken, following which RFQ document would be issued. |
| 34. | Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 1.5 MTPA | 471 | Feasibility Study being undertaken, following which RFQ document would be issued. |

| | | | | | |
|---|---|---|---|---|---|
| 35. | Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 1.5 MTPA | 471 | Feasibility Study being undertaken, following which RFQ document would be issued. |
| 36. | Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 1.5 MTPA | 471 | Feasibility Study being undertaken, following which RFQ document would be issued. |

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|---|---|---|---|---|---|
| 37. | Construction of a riverine jetty south of 2nd Oil Jetty through DBFOT Basis. | Haldia Dock Complex under KoPT | 1.5 MTPA | 471 | Feasibility Study being undertaken, following which RFQ document would be issued. |

BOT: Build Operate and Transfer; BOO: Build Own Operate; DBFOT:Design, Build, Finance, Operate and Transfer
Note: Information from Kolkata D.S., Haldia D.C., Paradip and Tuticorin ports have not been received. Latest available information in respect of these ports has been included.
Source: Major Ports.

**Appendix – III**

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

| Sl. No | Project Name | State/ Ports Maritime Board | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1. | Development of Coal terminal at for UMPP at Mundra port. | Mundra, (Gujarat) | 15 | 20000 | Three berths of 1120 mt is completed. The company has planned to complete the terminal in the year 2011-12. |
| 2. | Navy jetty at porbandar | Porbandar, (Gujarat) | 1 | 500 | Construction is in progress. |
| 3. | Establishment of SBM at Bhogat by cairn energy. | Bhogat, (Gujarat) | 7 | 10000 | Construction work is in final stage of completion. |
| 4. | Second SBM at Mundra and Crude oil terminal | Mundra, (Gujarat) | 9 | 9000 | The SBM is installed. |
| 5 | Solid Cargo Terminal at Dahej-Phase 2 | Dahej, (Gujarat) | 8 | 6000 | Construction completed. |
| 6 | Coal jetty at Salaya by Essar | Salaya, (Gujarat) | 5 | 10000 | Construction is in progress. |
| 7 | Dahej port development on BOOT basis linked port | Dahej, (Gujarat) | 14 | 12000 | Construction is in progress. |
| 8 | Bulk General cargo terminal at Hazira. | Hazira, (Gujarat) | 15 | 10000 | Construction is in progress. |
| 9 | Expansion of LNG handling facilities at Dahej. | Dahej, (Gujarat) | 3 | 4500 | Environment Clearance is received. Work is in progress. |
| 10 | Cement jetty by ABG Cement at Akrimoti. | Akrimoti, (Gujarat) | 4 | 610 | Construction is in progress. |
| 11. | Cement jetty by JP Associates at Kharo Creek | Kharo Creek, (Gujarat) | 3 | 1400 | Construction is in progress |
| 12. | Development of an all weather and Multipurpose Port at Dighi, Dist. Raigad | Rajpuri, ( Dighi ) Maharashtra | 30 | 35000 | Two berths having a total length of 650 Mtrs ready and likely to be commissioned in the Ist quarter of year 2012. |
| 13. | Development of an all weather and Multipurpose port at Rewas-Aware, Dist. Raigad | Thal, Rewas-Aware Maharashtra | 50 | 52000 | Environmental clearance received. Technical studies/ investigations completed. Pre- construction activities in progress. |
| 14 | Development of an all weather and Multipurpose port at Dhamankhol-Jaigad port Dist. Ratnagiri | Jaigad, (Dhamankhol Bay) Maharashtra | 50 | 29000 | Two berths of 550 mtrs. In length commissioned. Detailed Project Report (Phase-II) comprising of additional 5 berths under scrutiny. |

| | | | | | |
|---|---|---|---|---|---|
| 15. | Development of an all weather and Multipurpose port at Lavgan- Jaigad Port Dist Ratnagiri ( Cargo facility + Ship Repair system) | Jaigad, ( Lavgan- Bay) Maharashtra | 1.2 + Ship repair | 7000 | Capital dredging and Construction of berth is in progress. The port is expected to commission by 1st quarter of year 2012. |
| 16. | Development of an all weather and Multipurpose port at Redi Port, Dist Sindhudurg | Redi, Maharashtra | 5.16 | 44000 | Master plan of the project approved. Public hearing conducted. Proposal for Environmental clearance under consideration. Land acquisition in progress. |
| 17. | Development of an all weather and Multipurpose port at Vijaydurg Port Dist. Sindhudurg | Vijaydurg, Maharashtra | 7.5 | 10000 | Detailed Project Report under scrutiny. Terms of Reference (ToR) being obtained from MoEF. MoEF has issued moratorium till 31.12.2011 banning infrastructure projects in Sindhudurg & Ratnagiri districts. Matter taken up with MoEF for lifting of moratorium. |
| 18 | Establishing a captive port at Kattupalli in Thiruvallur district by M/s L & T Shipbuilding Ltd. | Kattupalli, Tamil Nadu | Ship building | 33750 | Construction works are under progress. Port is expected to commence operation during Jan 2012. |
| 19 | Establishing a captive port at Thiruchopuram in Cuddalore district by M/s. Nagarjuna oil corporation Ltd. | Thiruchopuram Tamil Nadu | 9.3 | 3840 | Construction work has commenced. |
| 20 | 6th berth berth at Kakinada Deep Water Port | Kakinada Andhra Pardesh | 2.5 | 600 | Under progress |
| 21 | Machilipatnam port | Machilipatnam Andhra Pardesh | 31MTPA | 50740 | Construction is scheduled to commence in June, 2011(yet to commence) |
| 22 | Modern Dry Dock for ship Repair yard at Malala in Diu district | Malala, Diu | | 250 | The concerned party has asked for Arbitrator and hence such project is not started and delayed. |
| 23 | Expansion development and Operation of Gopalpur port. | Gopalpur, Orissa | 10 MT PA | 11500 | MOEF clearance received on 30.03.2011. Construction activities are in progress. All Weather Direct Berthing port id scheduled for operation from Nov 2013. |
| 24 | Development of Port at Astaranga Puri. | Astaranga Puri Orissa | 60 MT PA | 85000 Including Connectivit y | Concession Agreement concluded, Land allotment, DPR preparation is in progress. |
| 25 | Development of Karaikal Port through private investment on BOT | Karaikal, Puducherry | Phase – 1 4.0<br><br>Phase - II | 4170 | Phase 1 of commercial operations commenced in June 2009 and is currently functional Phase II related |

| | | | | | |
|---|---|---|---|---|---|
| | basis | | 2.6 | | works in progress. |
| 26 | Development of Pondicherry port through private investment on BOT basis | Puducherry | Phase – 1 16.2<br><br>Phase - II 10.8 | 27850<br><br>N.A | Developer has applied for Environmental clearance. Work to commence upon obtaining the same. |
| 27 | Captive port owned by M/s Chemplast Sanmar, Chennai | Captive Marine Terminal Facility, Karaikal | 0.08 | 300 | Commercial operations commenced in September 2007 and are functioning. |
| 28 | Development of Ponnani Port under PPP | Ponnani Kerala | - | 7630 | Work awarded to M/s Malabar Pvt Ltd. And the concession agreement signed on 29/09/2011 |

Source: Maritime States/Maritime Boards

**Appendix – IV**

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

| Sl. No | Project | State/ Ports Maritime Board | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | Expansion of UTCL jetty at Kovaya | Pipavav (Gujarat) | 5 | 2500 | Environment clearance awaiting. |
| 2. | Private terminals at Bhogat by USEL. | Bhogat (Gujarat) | 10 | 20000 | Environment clearance to be obtained. Land acquisition initiated. |
| 3. | Private jetty at Rozi port- Ruchi Infrastructure, Arcadia shipping etc. | Bedi (Gujarat) | 2 | 150 | Environment clearance received and Construction is to be start soon ( Pvt -2) |
| 4. | Ro Ro jetty at Dahej | Dahej (Gujarat) | 1 | 1000 | Tenders for construction of terminal is under finalization. |
| 5. | Port terminal facilities at Bagasara | Bagasara (Gujarat) | 1 | 500 | EIA initiated. Tenders for PQ are under progress. |
| 6. | Expansion of Cement terminals at Jakhau by sanghi | Jakhau (Gujarat) | 8 | 4500 | Environment clearance in process. Land Acquisition is in progress. |
| 7. | Greenfield port development at Chhara | Chhara (Gujarat) | 8 | 12000 | DPR Approved. Environment clearance in advance stage. |
| 8. | LNG terminal at Pipavav by SWAN. | Pipavav (Gujarat) | 5 | 15000 | DPR Submitted.Commercial terms with GPPL are under discussion. |
| 9. | LNG terminal at Mundra port. | Mundra (Gujarat) | 5 | 30000 | Environment clearance received. Technical Studies have been imitated. |
| 10. | Development of Kachhigadh by L&T | Kachhigadh (Gujarat) | 5 | 20000 | Land identified. DPR under way. |
| 11. | Multipurpose Terminal Navlakhi-DMCC. | Navlakhi (Gujarat) | 4 | 3000 | DPR approved. Applied for extension of validity of Environment Clearance. |
| 12. | SPM at Magdalla by ONGC. | Magdalla (Gujarat) | 5 | 4000 | Basic Engineering is in progress. Environment clearance is in process. |
| 13. | New Cement jetty in Kutch | Kharo and kori Creek(Gujarat) | 4 | 3500 | Common port facilities for various cement industries is planned and DPR to be prepared. |

| Sl. No | Project | State/ Ports Maritime Board | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | | | | | |
| 14. | SPM at Magdalla by RIL | Magdalla Gujarat) | 4 | 3000 | Environment clearance is in process Basic engineering completed. Detailed Engineering is in progress. |
| 15. | Cement jetty by ABG Cement at Mora village, Surat. | Magdalla (Gujarat) | 3 | 1000 | Under Government approval . |
| 16. | Multipurpose jetty by Reliance Industries Ltd. | Sikka (Gujarat) | 15 | 20000 | Environment clearance obtained. Detailed engineering underway. |
| 17. | Expansion of Coal jetty & phase 2 dredging at pipavav | Pipavav (Gujarat) | 5 | 6500 | Development envisaged in the DPR submitted for expansion of the port, However detailed implementation plan and DPR for Phase 2 is to be submitted to GMB based on requirements of thermal power plants companies. |
| 18. | Development of South basin initial two container berths at Mundra | Mundra (Gujarat) | 15 | 50000 | Environment clearance obtained. This work shall be taken up as a pert of south port development for which GMB approved DPR on January 2009. Work is in progress. |
| 19. | Greenfield port at Mahuva | Mahuva (Gujarat) | 3 | 4250 | DPR under progress |
| 20. | Greenfield port at Nargol | Nargol (Gujarat) | 10 | 17500 | Bids received and under scrutiny. |
| 21 | Greenfield port at Vansiborsi | Vansiborsi (Gujarat) | 8 | 17730 | Consultant is engaged for fresh PFR for Vansiborsi. |
| 22 | Greenfield port in lieu of Khambhat port | Khambhat (Gujarat) | 3 | 1200 | Location shifting is in process at GOG level. |
| 23 | Greenfield port in lieu of Dholera | Dholera (Gujarat) | 10 | 10000 | Location shifting is in process at GOG level. |
| 24 | Construction of jetty of length 169.5 mts. At panaji. | Panaji, Goa | 14.5 M.T. For the year 2010-11 at Panaji Port | 84.5 | Project approved by Govt of Goa administrative and financially. Funds shall be placed shortly for commencement of works. |
| 25 | Captive port facility by | Udangudi | 6 | 90830 | Port has been notified. Detailed |

| Sl. No | Project | State/ Ports Maritime Board | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | M/s. Udangudi Power Corporation Ltd. | Thoothukudi Tamil Nadu | | | Project Report under preparation. |
| 26 | Captive port facility by M/s. NSL Power Ltd. | Vanagiri Nagapattinam Tamil Nadu | 5.5 | 70040 | Port has been notified. Detailed Project Report submitted. |
| 27 | Captive port facility by M/s. Indian Gas Ltd. | Manappad Thoothukudi Tamil Nadu | 6.5 | 18000 | Port has been notified. Quarrying or rock stones required for breakwater construction is in progress. |
| 28 | Captive port facility by M/s. NTPC Ltd. | Marakkanam Villupuram Tamil Nadu | 13 | 100000 | In principal approval accorded. Reports are awaited. |
| 29 | Captive port facility by M/s.Goodearth shipbuilding Ltd. | Silambimang alam in Taluk Cuddalore Tamil Nadu | Shipbuildin g | 140000 | Port has been notified Fencing works are under progress. Financial closure yet to be achieved. |
| 30 | Captive port facility by M/s. Sindya power Generting Co. Private Ltd. | SirkazhiTaluk Nagapattinam Tamil Nadu | 3 | 50000 | In principle approved accorded. Financial closure yet to be achieved. |
| 31 | Captiv ship repair facility by M/s. Marg Swarnabhoomi Port Private Ltd. | Mugaiyur Kancheepura m Tamil Nadu | Ship repair facility | 6000 | Port has been notified. Coastal land has been allotted. |
| 32 | Captive port facility by M/s. PEL Power Ltd. | Kaveri Nagapattinam Tamil Nadu | 4 | 50000 | Port has been notified. Studied are being conducted. |
| 33 | Captive port facility by M/s. Coastal Tamil Nadu Power Ltd. | Cheyyur Kancheepura m Tamil Nadu | 13 | 160000 | Detailed Project Report submitted and the port limits are yet to be assessed. |
| 34 | Captive port facility by M/s. Cuddalore Powergen Corporation Ltd. | Cuddalore Tamil Nadu | 4 | 50000 | Acquiring pf private lands under progress. |
| 35 | Captive port facility by M/s.IL & FS Ltd. | Parangipettai Tamil Nadu | 13 | 12600 | Port has been notified. Consent from TNPCB received. |
| 36 | Captive port facility by M/s. Empee Power and Infrastructure Private Ltd. | Neithavasal Nagapattinam Tamil Nadu | 4 | 50000 | In principle approved accorded. Financial closure yet to be achieved |
| 37 | Captive port facility by M/s. Tridem port and Power and Infrastructure Private Ltd. | Thirukkuvalai Nagapattinam Tamil Nadu | 6.5 | 6000 | Port has been notified. Clearance from Ministry of Environment and Forests awaited. |
| 38 | Captive port facility by M/s. Chettinad Power Corporation Ltd. | Tharangamba di Taluk Nagapattinam Tamil Nadu | 3.5 | 75000 | In principle approved. Declaration of Port limits under consideration of Government. |
| 39 | 2nd stage Development of Modern Sea Ports at Karwar | Karwar Karnataka | 5 | 8000 | REQ-over, RFP is pending with Government. |
| 40 | Development of Modern Sea Port at | Tadri Karnataka | 34.25 | 30000 | IDD Nominated KSIIDC as nodal agency Preparation of DPR is |

| Sl. No | Project | State/ Ports Maritime Board | Capacity (Million Tonnes) | Project Cost (Rs. Million) | Project Status |
|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 |
| | Tadri in Karnataka coast line. | | | | under progress. |
| 41 | New Haldipur Port | Haldipur Karnataka | 18 | 19000 | DPR under progress by MEL Bangalore. |
| 42 | Development of Honnavar anchorage port | Honnavar Karnataka | 2 | 1670 | Design layouts etc., prepared by M/s L&T Ramboll, Chennai have been sent to M/s CWPRS. Pune for opinion. |
| 43 | Development of Manki port near Honnavar | Manki Karnataka | 1 | 460 | Manki port is yet to be notified as a port |
| 44 | 7th Berth at Kakinada Deep Water Port | Kakinada Andhra Pradesh | 2.5 | 600 | Yet to commence. |
| 45 | Additional Rly lines into 5th berth at Kakinada Deep Water Port | Kakinada Andhra Pradesh | - | 80 | Feasibility report completed. |
| 46 | Development of Kollam port. | Kollam, Kerala | | 400 | Awaiting approval of DFR and RFP from Govt. |
| 47 | Development of alappuzha Marina & cargo | Alappuzha Kerala | | 3851 | Expression of interest is being invited. |
| 48 | Development of Beypore Port, | Beypore, Kerala | | 1635 | Awaiting Govt decision. |
| 49 | Development of Azhikal port. | Azhikal, Kerala | | 4630 | Awaiting Govt decision |
| 50 | Chudamani | Captive Orissa | 10 | - | MoU signed on 22nd October 2009. |

Annex-I

## Outlay And Expenditure - Port Sector (Central)

(Rs. In crore)

| Port | Annual Plan (2006-2007) | | Annual Plan (2007-2008) | | Annual Plan (2008-2009) | | Annual Plan (2009-2010) | | Annual Plan (2010-11) | | Annual Plan (2011-12) | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | App. Outlay | Actual Exp. | App. Outlay | Actual Exp. | App. Outlay | Actual Exp. | App. Outlay | Actual Exp. | App. Outlay | Actual Exp. | App. Outlay | Actual Exp.* |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| Kolkata (a) | 50.04 | 71.99 | 37.37 | 63.05 | 44.97 | 53.64 | 58.00 | 48.85 | 50.88 | 49.76 | 64.95 | 15.67 |
| Mumbai | 59.86 | 14.55 | 50.36 | 26.10 | 150.00 | 23.50 | 192.00 | 146.09 | 179.58 | 116.76 | 285.00 | 75.36 |
| JNPT | 106.14 | 40.71 | 188.18 | 70.28 | 175.17 | 48.77 | 324.00 | 177.94 | 89.61 | 38.24 | 195.00 | 71.18 |
| Chennai | 35.00 | 26.07 | 47.81 | 44.41 | 72.95 | 48.98 | 34.00 | 58.37 | 243.00 | 184.46 | 97.00 | 2.34 |
| Cochin | 73.84 | 72.89 | 158.52 | 139.07 | 255.65 | 246.33 | 191.97 | 190.93 | 259.35 | 160.86 | 121.11 | 13.27 |
| Visakhapatnam | 27.33 | 43.80 | 83.00 | 36.61 | 39.97 | 31.44 | 65.01 | 75.74 | 151.00 | 121.19 | 320.00 | 33.50 |
| Kandla | 94.66 | 80.19 | 89.49 | 38.25 | 140.87 | 58.07 | 115.00 | 62.64 | 45.66 | 52.70 | 100.00 | 14.17 |
| Mormugao | 28.06 | 20.77 | 10.10 | 11.18 | 22.07 | 17.52 | 71.00 | 31.01 | 66.29 | 71.52 | 166.03 | 32.31 |
| Paradip | 83.40 | 23.15 | 100.00 | 42.05 | 288.00 | 101.47 | 276.51 | 128.19 | 166.21 | 81.26 | 160.00 | 20.89 |
| New Mangalore | 18.00 | 18.02 | 36.00 | 25.81 | 30.00 | 30.11 | 34.00 | 32.48 | 31.00 | 24.56 | 36.00 | 7.11 |
| Tuticorin | 52.31 | 29.11 | 79.46 | 63.16 | 96.87 | 65.12 | 220.50 | 39.03 | 90.94 | 172.08 | 195.00 | 313.61 |
| Ennore Port Ltd. | 70.00 | 9.57 | 61.00 | 34.53 | 70.00 | 102.43 | 95.01 | 50.52 | 95.00 | 70.12 | 110.00 | 37.07 |
| Sethusamudram Ship Canal Project | 304.00 | 334.66 | 664.22 | 119.47 | 1581.07 | 152.24 | 161.10 | 20.98 | 10.00 | 6.02 | 12.10 | 0.98 |
| WEB Based EDI Port Community System | 7.83 | 1.66 | 7.50 | 0.04 | 6.00 | 1.00 | 3.00 | 3.33 | 4.88 | 4.46 | 2.37 | 0.00 |
| Others (b) | 333.78 | 213.64 | 477.26 | 170.67 | 598.38 | 88.50 | 564.90 | 161.68 | 362.86 | 223.31 | 620.76 | 117.60 |
| Survey Vessels | 20.00 | 0.00 | 19.00 | 0.00 | 79.00 | 5.00 | 10.00 | 0.00 | 15.00 | 15.00 | 15.00 | 0.00 |
| Total | 1364.25 | 1000.81 | 2109.27 | 884.68 | 3650.97 | 1143.10 | 2416.00 | 1227.78 | 1861.26 | 1392.30 | 2499.32 | 201.45 |

(a) Includes Haldia and RR Schemes.

(b) Includes DCI, ALHW, R&D Studies, Post Tusnami Works, Minor Ports Studies etc.

* Expenditure upto Sept.,2011

App.Outlay: Approved Outlay

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

Annex-II

# Commodity-wise Traffic Handled at Major Ports

(000 Tonnes)

| Port | Period | POL & its Products | Iron Ore | Thermal Coal | Coking Coal | Ferti.& FRM (Dry) | Food grain | Container | | Others | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | Tonnes | TEUs | | |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| **Kolkata** | 2009-10 | 724 | 253 | 0 | 8 | 33 | 0 | 6645 | 378 | 5382 | 13045 |
| | 2010-11P | 878 | 827 | 0 | 97 | 62 | | 6221 | 377 | 4455 | 12540 |
| **April-Sept.** | 2010-11 | 592 | 366 | 0 | 77 | 0 | 170 | 3143 | 186 | 2050 | 6398 |
| | 2011-12P | 342 | 291 | 0 | 4 | 14 | 0 | 3310 | 201 | 2242 | 6203 |
| **Haldia** | 2009-10 | 9305 | 7678 | 1489 | 6059 | 295 | 10 | 2067 | 124 | 6475 | 33378 |
| | 2010-11P | 10784 | 5877 | 2173 | 6008 | 453 | 0 | 2764 | 149 | 6833 | 34892 |
| **April-Sept.** | 2010-11 | 5659 | 2149 | 840 | 3301 | 204 | 0 | 1008 | 74 | 3395 | 16556 |
| | 2011-12P | 4249 | 2928 | 1186 | 2836 | 182 | 0 | 1201 | 69 | 4423 | 17005 |
| **Paradip** | 2009-10 | 11648 | 16158 | 14818 | 5003 | 3567 | 0 | 44 | 4 | 5773 | 57011 |
| | 2010-11P | 12846 | 13850 | 13280 | 6195 | 4410 | 0 | 61 | 3 | 5388 | 56030 |
| **April-Sept.** | 2010-11 | 5483 | 6267 | 7273 | 3036 | 2053 | 0 | 29 | 2 | 2328 | 26469 |
| | 2011-12P | 7312 | 4962 | 7980 | 2936 | 2131 | 0 | 39 | 3 | 2636 | 27996 |
| **Visakha-** | 2009-10 | 18290 | 18944 | 3771 | 7951 | 3684 | 272 | 1678 | 97 | 10911 | 65501 |
| **patnam** | 2010-11P | 19267 | 19116 | 3538 | 7344 | 4079 | 0 | 2571 | 144 | 12126 | 68041 |
| **April-Sept.** | 2010-11 | 9042 | 8860 | 1432 | 4388 | 2501 | 80 | 1024 | 60 | 5217 | 32544 |
| | 2011-12P | 10048 | 9717 | 1597 | 3717 | 1923 | 0 | 1901 | 106 | 7193 | 36096 |
| **Chennai** | 2009-10 | 13321 | 8027 | 1269 | 1790 | 611 | 0 | 23477 | 1216 | 12562 | 61057 |
| | 2010-11P | 13882 | 2176 | 1925 | 578 | 776 | 0 | 29421 | 1523 | 12702 | 61460 |
| **April-Sept.** | 2010-11 | 6864 | 2071 | 757 | 364 | 386 | 0 | 14622 | 758 | 6821 | 31885 |
| | 2011-12P | 6419 | 51 | 861 | 351 | 126 | 0 | 15329 | 794 | 6132 | 29269 |
| **Ennore** | 2009-10 | 395 | 936 | 9279 | 0 | 0 | 0 | 0 | 0 | 93 | 10703 |
| | 2010-11P | 589 | 401 | 9368 | 103 | 0 | 0 | 0 | 0 | 548 | 11009 |
| **April-Sept.** | 2010-11 | 282 | 348 | 3998 | 0 | 0 | 0 | 0 | 0 | 43 | 4671 |
| | 2011-12P | 305 | 0 | 5483 | 111 | 0 | 0 | 0 | 0 | 628 | 6527 |
| **Tuticorin** | 2009-10 | 514 | 41 | 5603 | 0 | 2081 | 150 | 6599 | 440 | 8799 | 23787 |
| | 2010-11P | 737 | 64 | 5349 | 0 | 1901 | 0 | 8169 | 467 | 9507 | 25727 |
| **April-Sept.** | 2010-11 | 264 | 29 | 2570 | 0 | 1112 | 53 | 3410 | 227 | 4745 | 12183 |
| | 2011-12P | 430 | 14 | 2977 | 0 | 811 | 0 | 4410 | 240 | 5210 | 13852 |
| **Cochin** | 2009-10 | 11957 | 0 | 148 | 0 | 346 | 0 | 3928 | 290 | 1050 | 17429 |
| | 2010-11P | 12101 | 0 | 40 | 0 | 429 | 0 | 4419 | 318 | 884 | 17873 |
| **April-Sept.** | 2010-11 | 6064 | 0 | 40 | 0 | 113 | 0 | 2320 | 172 | 439 | 8976 |
| | 2011-12P | 6541 | 0 | 16 | 0 | 167 | 0 | 2592 | 177 | 442 | 9758 |
| **New** | 2009-10 | 21339 | 7062 | 0 | 2810 | 833 | 161 | 475 | 32 | 2848 | 35528 |
| **Mangalore** | 2010-11P | 21551 | 3744 | 0 | 2830 | 788 | 0 | 568 | 40 | 2069 | 31550 |
| **April-Sept.** | 2010-11 | 9874 | 2124 | 0 | 1328 | 498 | 0 | 294 | 20 | 1066 | 15184 |
| | 2011-12P | 11361 | 1353 | 0 | 1714 | 178 | 0 | 333 | 24 | 1103 | 16042 |
| **Mormugao** | 2009-10 | 964 | 40574 | 957 | 3784 | 125 | 0 | 192 | 13 | 2251 | 48847 |
| | 2010-11P | 938 | 40625 | 1633 | 4933 | 242 | 0 | 182 | 18 | 1469 | 50022 |
| **April-Sept.** | 2010-11 | 451 | 13627 | 499 | 2160 | 132 | 0 | 76 | 7 | 848 | 17793 |
| | 2011-12P | 379 | 11888 | 122 | 3108 | 17 | 0 | 104 | 9 | 788 | 16406 |
| **J. L. Nehru** | 2009-10 | 4916 | 0 | 0 | 0 | 0 | 0 | 53096 | 4092 | 2751 | 60763 |
| | 2010-11P | 5135 | 0 | 0 | 0 | 9 | 0 | 56426 | 4271 | 2729 | 64299 |
| **April-Sept.** | 2010-11 | 2349 | 0 | 0 | 0 | 0 | 0 | 27159 | 2110 | 1432 | 30940 |
| | 2011-12P | 2802 | 0 | 0 | | 0 | 0 | 28465 | 2151 | 1081 | 32348 |
| **Mumbai** | 2009-10 | 34496 | 0 | 3745 | 0 | 442 | 17 | 606 | 58 | 15235 | 54541 |
| | 2010-11P | 33228 | 0 | 3869 | 0 | 494 | 0 | 652 | 73 | 16342 | 54585 |
| **April-Sept.** | 2010-11 | 16508 | 0 | 1403 | 0 | 226 | 41 | 322 | 37 | 8881 | 27381 |
| | 2011-12P | 16460 | 0 | 1899 | 0 | 146 | 0 | 328 | 31 | 7829 | 26662 |
| **Kandla** | 2009-10 | 47212 | 660 | 2296 | 929 | 5700 | 632 | 2435 | 147 | 19636 | 79500 |
| | 2010-11P | 48427 | 626 | 3082 | 410 | 6390 | 0 | 2586 | 160 | 20359 | 81880 |
| **April-Sept.** | 2010-11 | 23853 | 186 | 1430 | 240 | 3625 | 303 | 1184 | 73 | 9495 | 40316 |
| | 2011-12P | 24047 | 388 | 2572 | 59 | 2669 | 0 | 1321 | 81 | 10512 | 41568 |
| **All Ports** | 2009-10 | 175081 | 100333 | 43375 | 28334 | 17717 | 1242 | 101242 | 6891 | 93766 | 561090 |
| | 2010-11P | 180363 | 87306 | 44257 | 28498 | 20033 | 0 | 114040 | 7543 | 95411 | 569908 |
| **April-Sept.** | 2010-11 | 87285 | 36027 | 20242 | 14894 | 10850 | 647 | 54591 | 3726 | 46760 | 271296 |
| | 2011-12P | 90695 | 31592 | 24693 | 14836 | 8364 | 0 | 59333 | 3886 | 50219 | 279732 |

Source: Major Ports and Indian Ports Association.

P : Provisional

Annex - III

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

(000 Tons)

| Maritime Status / UTs | | Period | POL | Iron Ore | Building Material | Coal | Fertiliser & FRM | Others | Total |
|---|---|---|---|---|---|---|---|---|---|
| Gujarat | | 2009-10 | 132817 | 6845 | 9321 | 21636 | 5021 | 29943 | 205583 |
| | | 2010-11 | 148808 | 11327 | 11102 | 29653 | 4635 | 25382 | 230907 |
| | April - Sept | 2010-11 | 74763 | 3628 | 5771 | 13332 | 2338 | 12312 | 112144 |
| | | 2011-12 | 75960 | 3481 | 8138 | 19885 | 4404 | 14991 | 126859 |
| Maharashtra | | 2009-10 | 0 | 5055 | 2199 | 2880 | 221 | 1691 | 12046 |
| | | 2010-11 | 0 | 5195 | 2277 | 4997 | 0 | 2406 | 14875 |
| | April - Sept | 2010-11 | 0 | 2705 | 998 | 1769 | 0 | 1046 | 6518 |
| | | 2011-12 | 0 | 2788 | 1121 | 2417 | 0 | 1748 | 8074 |
| Andhra pradesh | | 2009-10 | 3666 | 15263 | 708 | 15243 | 4174 | 4636 | 43690 |
| | | 2010-11 | 2921 | 8952 | 450 | 19758 | 5788 | 4741 | 42610 |
| | April - Sept | 2010-11 | 1758 | 6805 | 208 | 11609 | 2668 | 2786 | 25834 |
| | | 2011-12 | 1036 | 2309 | 400 | 11291 | 3469 | 3009 | 21514 |
| Goa | | 2009-10 | 0 | 13679 | 0 | 218 | 0 | 0 | 13897 |
| | | 2010-11 | 0 | 14581 | 0 | 0 | 0 | 0 | 14581 |
| | April - Sept | 2010-11 | 0 | 3974 | 0 | 0 | 0 | 0 | 3974 |
| | | 2011-12 | 0 | 5233 | 0 | 0 | 0 | 0 | 5233 |
| Tamil Nadu | | 2009-10 | 1035 | 0 | 0 | 0 | 45 | 94 | 1174 |
| | | 2010-11 | 1503 | 0 | 0 | 0 | 58 | 50 | 1611 |
| | April - Sept | 2010-11 | 485 | 0 | 3 | 0 | 24 | 120 | 632 |
| | | 2011-12 | 473 | 0 | 0 | 0 | 28 | 157 | 658 |
| Karnataka | | 2009-10 | 36 | 7841 | 29 | 0 | 0 | 641 | 8547 |
| | | 2010-11 | 54 | 2322 | 40 | 0 | 0 | 679 | 3095 |
| | April - Sept | 2010-11 | 86 | 491 | 3 | 0 | 0 | 2138 | 2718 |
| | | 2011-12 | 234 | 0 | 0 | 0 | 0 | 59 | 293 |
| Others states / | | 2009-10 | 166 | 130 | 885 | 1299 | 40 | 1480 | 4000 |
| Uts # | | 2010-11 | 197 | 121 | 281 | 4116 | 503 | 1744 | 6962 |
| | April - Sept | 2010-11 | 101 | 0 | 377 | 2284 | 157 | 488 | 3407 |
| | | 2011-12 | 90 | 0 | 206 | 2361 | 557 | 556 | 3770 |
| All Major Ports | | 2009-10 | 137720 | 48813 | 13142 | 41276 | 9501 | 38485 | 288937 |
| | | 2010-11 | 153483 | 42498 | 14150 | 58524 | 10984 | 35002 | 314641 |
| | April - Sept | 2010-11 | 77193 | 17603 | 7360 | 28994 | 5187 | 18890 | 155227 |
| | | 2011-12 | 77793 | 13811 | 9865 | 35954 | 8458 | 20520 | 166401 |

Source : State Maritime Directorate/ Boards

Note : All figures of 2010-11 are provisional.

\# : Consists of Pondicherry,Orissa, Kerala, Andaman & Nicobar Islands and Lakshadweep Islands.
No traffic was handled at ports of Daman & Diu.

**Annex-4**

# COMMODITY WISE CAPACITY OF MAJOR PORT CAPACITIES AS ON 31.3.2011

**(Taking into account the Reassessment of Port capacities)**

**(IN MILLION TONNES)**

| Sl no. | Commodity | Kolkata | Haldia | Paradip | Vizag | Chennai | Ennore | Tuticorin | Cochin | New Mangalore | Mormugao | Mumbai | Kandla | J.N.P.T | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1. | P.O.L | 4.11+ 4.0 (7)+A | 17.00 (3+2BJ ) | 21.00(1)+ SBM | 17.65 (4) | 11.80 (2) | 3.00 (1) | 2.30 (1) | 18.70 (3)+ SBM | 23.37 (4) | 1.50 (1) | 32.00 (5) | 62.83 +0.8 (8+3SB M+A) | 5.50 (2) | 220.76+4.80 (42+5SBM+ 2BJ+A) |
| 2. | IRON ORE | | 8.00 (2) | 4.50 (1) | 12.50 (1) | 8.00 (1) | 6.00(1) | | | 7.50 (1) | 33.00 (1)+Trans | | | | 79.50 (8+Trans) |
| 3. | Coal (Thermal) | | 7.00 (2) | 20.00 (2) | | | 21.00 (3) | 6.25 (2) | | | | | | | 54.25 (9) |
| 4. | Fertilizer | | | 7.50 (2) | 1.00 (1) | | | | 0.80 (1) | | | | | | 9.30 (4) |
| 5. | Gen. Break Bulk Cargo | 6.51+0. 51 (22)+A | 14.70 (8) | 23.50 (9) | 31.28 (15) | 17.92 (14) | 1.00 (1) | 13.49 (10) | 8.98 (12) | 14.70 (8) | 7.40 (4) | 11.53 (25)+6 (A) | 16.88 (11) | 0.90 (1) | 168.79+ 6.50(140)+A |
| 6. | Containers | 5.73 (4) | 4.00 (2) | | 2.50 (1) | 42.00 (7) | | 5.00 (1) | 12.50 (3) | | | 1.00 (1) | 7.20 (2) | 57.60 @ (9) | 137.53 (30) |
| | In lakhs TEUs | 4.58 | 3.33 | | 2.08 | 35.00 | | 4.17 | 10.00 | | | 0.83 | 6.00 | 45.50 | 114.19 |
| Total | | 16.35+ 4.51 (33)+A | 50.70 (17)+2 BJ | 76.50(15) +SBM | 64.93 (22) | 79.72 (24) | 31.00 (6) | 27.04 (14) | 40.98 (19)+SB M | 45.57 (13) | 41.90 (6+Trans) | 44.53+ 6.0 (31)+A | 86.91+0. 8(21+3S BM)+A | 64.00 (12) | 670.13+11.3 1(233)+5SB M+Trans+2 BJ)+A |

Figure in the parenthesis indicate the number of berths. BJ Barge jetties, T-Transhippers, A- Anchorages, SBM- Single Buoy Mooring
@ Capacity of JNP container terminal (3 berths), NSICT (2 berths) GTIL (3 berths) and shallow water berth (1 no) has been taken as 15.0 MT, 15.00 MT, 26.40 MT and 1.20 MT respectively. Capacity of one shallow water berth at JNPT is 0.90 MT for dry bulk cargo.
Capacity of Chennai Container Terminal I (4 berths) and II (3 berths) has been taken as 24MT and 18MT respectively.
Capacity of Iron Ore berth has been taken as 6.0MT at Ennore Port. After full fledged commissioning, balance capacity of 6.0MT will be added.
RGCT berths at Wellington Island of Cochin Port have been shown as general cargo berths. Capacity of 3 Container berths of Vallarpadnam has been taken as 1.0 Million TEU (12.5MT).

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