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PORT FACILITIES

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GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES

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6 Port Facilities

1. GENERAL

1.1 Growth

Port provides an interface between ocean transport and land-based transport. India has a long coastline of about 7,517 km spread across the western and eastern shelves of the mainland and also along the islands. It is a strategic geographical asset for country's trade. There are twelve major ports in India out of which six are located on the east coast and six on the west coast. In addition, there are about 200 minor ports in the country. Shipping plays an important role in the economic development of the country, especially in India's International trade. The Indian shipping industry also plays an important role in the energy security of the country, as energy resources, such as coal, crude oil and natural gas are mainly transported or received by ships. Approximately, 95% of the country's trade by volume and 68% in terms of value, is being transported by sea route. Though India has one of the largest merchant shipping fleets among the developing countries, it is ranked 17th in the world in terms of dead weight tonnage (dwt) as on 1.1.2013. The Ministry of shipping encompasses within its fold major ports and inland water transport, among others. All major ports in the country are at present, having both rail and road connectivity.

1.2 Sethusamudram Corporation Ltd

The Sethusamudram ship channel project, which is being implemented through the Special Purpose Vehicle (SPV) namely, Sethusamundram Corporation Ltd envisages dredging of a ship channel in the shallow portion of sea to connect the Gulf of Mannar and Bay of Bengal through Palk bay to enable the ships moving between east and west coasts of India and to have a continuous and hassle-free navigable sea route around the peninsula within India's territorial waters.

Dredging work of the Sethusamundram ship channel was awarded to M/s Dredging Corporation of India Ltd, a Government of India enterprise on nomination basis. The project was inaugurated by the Hon'ble Prime Minister of India on 2.7.2005. Subsequently, based on PILs filed in the Supreme Court, the dredging work in Adam's bridge was stopped on 17.9.2007. At present, the project work is in abeyance in view of the litigation in the Supreme Court of India.

1.3 Private Sector Participation in Major Ports

The private sector is envisaged to fund most of the projects through Public Private Partnership (PPP) in Design, Operate, Finance and Transfer (DBFOT basis) or Build, Operate, Own and Transfer (BOOT basis), etc. Thirty projects have been awarded involving an investment of ₹ 20709.93 crores and capacity addition of 217.57 Million Tonnes Per Annum (MTPA) during 2013-14. Out of these 30 projects, 13 are PPP projects augmenting the capacity by 137.65 MTPA and costing ₹13,208.83 crores. Among the others 14 are non PPP and three are captive projects costing ₹7501.00 crores with capacity augmentation of 79.92 MTPA. The details 30 projects awarded during 2013-14 are as follows:

Table-1: Private Sector Participation

Sl. No.	Projects/ Development	Estimated Cost (₹ in crore)	Capacity (MTPA)
1.	Installation of Mechanical Iron Ore handling facilities at WQ-1 in the northern arm of inner harbour of VPT for handling Dry bulk cargo and Modernisation of Ore Handling complex at VPT.	940.00	23.70
2.	Development of Oil Jetty to handle liquid cargo ship bunkering Terminal at Old Kandla	233.25	3.39
3.	Supplying 6 Nos. of Rubber Tyred Gantry Cranes (RTYGCs) at JNPT	72.00	6.5
4.	Hiring of 6 Mobile Harbour Cranes for mechanization of 7 & 8 Dry Cargo Berths at Kandla Port.	400.00	9.00
5.	Commissioning of 6 floating cranes on license basis at Outer Tuna Bay (OT).	400.00	6.00

Contd.

Sl. No.	Projects/Development	Estimated Cost (₹ in crore)	Capacity (MTPA)
6.	Upgradation of the existing Non-TNEB Coal Terminal developed by M/s Chettinad International Coal Terminal Pvt.Ltd at Kamarajar Port.	100	2
7.	Development of Haldia Dock II (North) of Kolkata Port.	821.40	11.70
8.	Setting up of facilities for Cement Bagging Plant Cochin Port by M/s Zuari Cement Ltd. at Cochin Port.	47.00	0.3
9.	Construction of new multi-purpose berth No.18 for handling general cargo and containers at NMPT.	93.64	5.00
10.	Acquisition of 2 Mobile Harbour Cranes as replacement of 3 Nos. of 10 Tonnes Wharf Cranes at NMPT.	47.87	1.00
11.	Development of NCB-III for handling thermal coal & rock phosphate at V.O.Chidambaranar Port.	420.00	7.28
12.	Berth No.4 project for handling Bulk/Break Bulk Cargo at Mormugao Port.	35.00	0.2
13.	Development of WQ 7 for handling import Dry bulk cargo and Development of WQ 8 for handling break bulk cargo and export bulk cargo.	221.14	4.78
14.	Development of facilities for Handling Thermal Coal for SPIC Electric Power Corpn. Pvt. Ltd (SEPC) at V.O.C. Port.	214.50	2.50
15.	Acquisition of 3 Nos. of New Super Post Panamax size RMQC for MCB to SDB & allied electrical works at JNPT.	98.80	2.64
16.	Enhancement of handling facilities in CB1, CB2 and GCBs through upgradation and addition of Railway Infra-structure at Paradip Port.	61.94	3.00
17.	Bare Jetty-II for M/s Tata Steel at Haldia Dock Complex, Kolkata.	39.86	1.00
18.	Container Terminal expansion (extension of existing container terminal) at VIZAG.	633.11	4.79
19.	Construction of coal berth no.3 for TNEB at Kamarajar Port.	270.00	9.00
20.	Railway Siding Project for BOT operators for handling Coal and Iron Ore at Kamarajar Port.	51.00	4.00
21.	Licensing of Operation of floating cranes in the Port anchorage for Lighterage operations at V.O.C. Port.	70.71	2.49
22.	Development of LNG Terminal by IOCL at Kamarajar Port.	4512.00	5.00
23.	Mooring Dolphin Project at Liquid Jetty at JNPT.	8.71	1.00
24.	VPT: Strengthening and wide-ning of berths in Inner Harbour.	42.00	1.00
25.	VPT: Single Point Mooring - Captive facility developed by H.P.C.L.	650.00	8.00
26.	Kamarajar: Development of Container Terminal at Kamarajar Port.	1270.00	16.80
27.	Supply, Operation and Maintenance of equipment for container handling operations in Kolkata Dock System.	490.00	13.5
28.	Kamarajar:Development of Multi-Cargo Berth at Kamarajar.	151.00	2.00
29.	Development of Container Terminals of 2000 Mtrs Length at JNPT (4th Container Terminal).	7915.00	60.00
30.	VPT: Development of Container Freight Station.	400.00	-

1.4 Inland Water Transport

Inland water transport mode is cost effective, fuel efficient and climate-friendly mode of transport for bulk cargo and over dimensional cargo. It has been a neglected sector. Efforts are being made to develop this mode of transportation.

Waterways declared as National Waterways by the Act of Parliament come under the purview of Central Government, while other waterways remain under the respective State Government's domain.

Inland Waterways Authority of India (IWAI) came into existence on 27.10.1986 for development and regulation of inland waterways for shipping & navigation. The Authority primarily undertake projects for development and maintenance of Inland Water Transport (IWT) infrastructure on National waterways through grant received from Ministry of shipping.

1.4.1 Inland Water ways

The Government of India has so far declared six waterways as National Waterways. These are:

National Waterway-1: Allahabad-Haldia stretch of the Ganga-Bhagirathi-Hooghly river system (Total length- 1620 km) in the states of Uttar Pradesh, Bihar, Jharkhand and West Bengal.

National Waterway-2: Dhubri-Sadiya stretch of Brahmaputra River (Total length- 891 km) in the state of Assam.

National Waterway-3: Kottapuram-Kollam stretch of West Coast Canal along with Udyogmandal and Champakara Canals (Total length- 205 km) in the state of Kerala.

National Waterway-4: Kakinada-Puducherry stretch of the canal along with designated stretches of Godavari and Krishna Rivers (Total length- 1078 km) in the states of Andhra Pradesh and Tamil Nadu and the Union Territory of Puducherry.

National Waterway-5: Designated stretches of East Coast Canal, Brahmani River and Mahanadi Delta (Total length- 588 km) in the states of West Bengal and Odisha.

National Waterway-6: Lakhipur to Bhanga at River Barak in Assam (Total length - 121 km) which is established recently in 2013.

2. MAJOR PORTS

There were twelve major ports in the country; viz, Kolkata-Haldia, Paradip, Visakhapatnam, Chennai, Kamarajar and V.O.Chidambaranar (Tuticorin) on the East Coast and Cochin (Kochi), New Mangalore, Mormugao, Jawaharlal Nehru, Mumbai and Kandla on the West Coast. Of these, Paradip, Visakhapatnam, Chennai, New Mangalore and Mormugao ports were the five leading iron ore handling ports having mechanical ore handling system. Out of total 545.79 million tonnes traffic handled at major ports, Kandla Port is the top traffic handler during 2012-13. Except Kamarajar Port being Public Sector Undertaking, all the major ports are administered by Port Trusts which are autonomous bodies.

2.1 Tariff Authority for Major Ports

The Authority was constituted by the Government of India in 1997 to provide for an independent body to regulate all tariffs (vessel related and cargo related) as also the rates for lease of properties in major Port Trusts and private operators located therein and conditions governing application of rates. The jurisdiction of the Authority is restricted to major port trusts and private terminals operating therein.

2.2 Cargo Handling Capacity and Cargo Handled

The capacity of major ports during 2012-13 was 744.91 million tonnes as compared to 689.83 million tonnes during 2011-12. The major ports, therefore, continued to maintain a favourable capacity-cargo equation during the year.

The major ports handled a total traffic of 545.79 million tonnes during 2012-13 against 560.15 million tonnes during 2011-12. Traffic handled by major ports during 2011-12 and 2012-13 is given below:

Traffic Handled at Major Ports
2011-12 to 2012-13

(In million tonnes)

Sl. No.	Ports	2011-12	2012-13
1A.	Kolkata	12.23	11.84
1B.	Haldia	31.01	28.08
2.	Paradip	54.25	56.55
3.	Vizag	67.42	59.04
4.	Kamarajar	14.96	17.89
5.	Chennai	55.71	53.40
6.	V.O.Chidambaranar (Tuticorin)	28.11	28.26
7.	Cochin	20.09	19.85
8.	New Mangalore	32.94	37.04
9.	Mormugao	39.00	17.69
10.	Mumbai	56.19	58.04
11.	JNPT	65.73	64.49
12.	Kandla	82.50	93.62
	Total	**560.15**	**545.79**

Figures rounded off.
Source:*Annual Report 2013-14, Ministry of Shipping, Government of India.*

The selected commodity-wise traffic handled at twelve major ports during 2011-12 and 2012-13 is as below :

(In '000 tonnes)

Sl. No.	Commodity	2011-12	2012-13
1.	P.O.L	179104	186169
2.	Iron ore	60401	27081
3.	Fertilizer	20386	14784
4.	a) Thermal coal	50827	58845
	b) Coking coal	27958	28292
Total		**338676**	**315171**

Source:*Indian Ports Association.*

3. PORT-WISE REVIEW OF MAJOR PORTS

EAST COAST

3.1 Kolkata - Haldia

Kolkata Port is the oldest (established in 1870) and the only riverine major port in India. The port was catering to the entire Eastern India and two landlocked neighbouring countries, Nepal and Bhutan. Kolkata Port Trust (KPT) has twin dock system, viz, Kolkata Dock System (KDS) on Eastern bank of river Hoogly and Haldia Dock Complex (HDC) started in 1971 on the Western bank of the river Hoogly.

During 2012-13, the break up of traffic handled under Kolkata was 11.84 million tonnes, and at Haldia was 28.08 million tonnes.

Handling capacity of the port as on 31.3.2011 was Kolkata: 20.86 million tonnes at Kolkata and , 50.70 million tonnes at Haldia.

Salient Features of Kolkata - Haldia Port

Port	Draught (m)		No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (sq m)
	min	max				
Kolkata	5.1	8.5	33	24	4	134722 (Transit Shed) + 10794 Warehouse)
Haldia	6.1	8.1	17*	–	–	25040 (Transit shed) 892840 (open area)

** Including three riverine oil jetties and 3 riverine & Haldia Anchorage for LASH vessels barge jetties.*

Both Kolkata Dock System and Haldia Dock Complex of Kolkata Port have been awarded ISO-9001:2000 certification. The port is also ISPS compliant. For promotion of Inland Water Traffic and River Tourism, New Inland Water Transport Terminal (IWT) and renovation of port-owned riverside jetties are underway.

The traffic in mineral/ore/mineral-based commodities handled at Kolkata Port in 2011-12 and 2012-13 was as under:

(In '000 tonnes)

Commodity	Export		Import	
	2011-12	2012-13	2011-12	2012-13
Thermal coal	2346	NA	-	NA
Coking coal	-	NA	4947	4548
Iron ore	4446	1810	-	84
Iron & Steel	785	986	216	366
Rock phosphate	-	NA	339	NA
Pig iron	4	3	-	NA
Sulphur	-	NA	60	NA
Mica	104	85	-	NA
Metallurgical coke	-	NA	211	878
Limestone	-	NA	625	1227
Raw Petroleum coke	-	NA	90	130
Gypsum	-	NA	17	NA
Bauxite	-	NA	-	NA
Dolomite	-	NA	14	-
Ferro-chrome	108	129	-	NA
Non-coking coal	-	-	3266	2247
Manganese ore	-	NA	1129	1249
Other ore	-	NA	17	70
Carbon black	42	NA	9	NA
Silicon/ Silicon Manganese	-	452	1	NA
Cement clinker	-	NA	-	NA
Manganese slag	-	-	-	71

Contd.

Wharfage

Wharfage on foreign Cargo landed/shipped at Kolkata Port Trust w.e.f. 17.3.2011.

(₹ per tonne)

Sl. No.	Item	Rate
1.	Crude oil	76.50
	Cargo handled through Mechanical system	
2.	Export Iron ore	38.88
3.	Export Thermal Coal	43.74
4.	All other types of coal not specified, Fertilizer, Fertilizer raw materials, soda ash, and all other dry bulks	87.48
	Cargo handled through other than Mechanical system	
1.	Salt, Fly ash	19.44
2.	Iron ore, sand	19.44
3.	Limestone, Bitumen, Pig iron, sponge iron and other ferrous metals, All types of coal/coke/ore/other dry bulk cargo not specified	38.88
4.	Cement, Clinkers, Gypsum, Slag	48.60
5.	Magnesite, granite, all types of Scraps, fire bricks and other refractory materials, mica block/flake/splittings/waste/scrap/ powder mica, non-ferrous metals of all kinds except ingot of zinc/aluminium/copper, lead, c.i. goods, rock phosphate, sulphur, other fertilizer raw materials, fertilizers, lead conc., asbestos.	68.04
6.	Iron & steel, pipes & tubes	58.32

Wharfage on coastal cargo landed/shipped at/ from Kolkata Port Trust

1.	Crude oil, Thermal coal, Iron ore and Iron ore pellets	Same as Foreign cargo.
2.	All other cargo	60% of the rate for foreign cargo as specified for foreign cargo.

3.2 Paradip

The only major sea port in Odisha is Paradip serving eastern and central part of the country. It's hinterland extends across Odisha, Jharkhand, Chattisgarh, West Bengal, Madhya Pradesh and Bihar.

Salient Features of Paradip Port

Draught (m) min	Draught (m) max	No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (sq m)
11.0	14.5	14	1	–	–

The port handled 56.55 million tonnes of cargo during 2012-13 and during 2011-12, it was 54.25 million tonnes.

3.3 Visakhapatnam

It is a natural harbour. Visakhapatnam port handled 59.04 million tonnes traffic in 2012-13 as compared to 66.42 million tonnes traffic in 2011-12. The largest size vessel that can be handled in the inner harbour is 11 m draught and in the outer harbour 150,000 dwt in normal condition and 160,000 dwt with extra efforts. This is the only port having three international accreditations; viz, ISO 14001; 2004 (EMS)/OHSAS/8001 and ISO 9001; 2000 (QMS).

The handling capacity of port during 2012-13 was 67.33 MT.

Handymass vessels upto 11 meters draught and Panamax vessels upto 10.90 meters draught are handled at inner harbour.

Salient Features of Visakhapatnam Port

	Draught (m) min	Draught (m) max	No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (sq m)
Inner harbour	8.00	11.00	18	–	NA	Exclusive of Iron ore: 369018
Outer harbour	14.00	17.00	6	1	NA	369018

Commodities handled by Visakhapatnam port in 2011-12 and 2012-13 were as follows:

(In tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
Anthracite Coal	20036	-	307949	109745
Bentonite	-	-	60518	32000
LAM coke	-	-	211525	230162
Granite	190564	104893	-	-
Limestone	-	-	288723	447362
Manganese ore	121300	84000	675035	1002425
Coking coal	93735	10255	6780382	6834973
POL (crude)	-	-	10874374	10641320
Ilmenite sand	316476	252526	-	-
Steam coal	-	-	4042403	4260699
Chrome ore	-	-	24157	35765
Bauxite	-	-	791395	600049
Iron ore	10322161	7538390	-	99008
SM ore/FM ore	-	15800	-	-
Thermal Coal	3189039	2950818	-	-
Pet Coke	-	-	717932	650787
Corex coal	-	-	14414	-
Furnace Coke	-	-	29971	-
Coke finer	-	-	-	90611
Nickel ore	-	-	40900	-
Crude oil & POL Transshift	-	-	4323728	1526902

Following development plans of port were undertaken during 2012-13:

1. Mechanical Coal handling facilities.
2. Development of EQ1 berth by replacing existing EQ1 and part of EQ2 berth to facilitate handling Panamax class steam coal vessels.
3. Installation of Mechanised fertilizer handling facility at EQ7.

3.4 Kamarajar (formerly Ennore)

Kamarajar port is situated on the Coromandal coast about 24 km north of Chennai port along the coastal line in Tamil Nadu. This port has been endowed with large chunks of land.

The facilities available at Kamarajar port are given below:

1. Berth	2 (Thermal Coal)	one berth automobile (GCB) one POL/chemicals (MLT1) and one coal (other than TNEB)
Max. permissible Length	240 metres each	
Max. permissible Draught	13.5 metres	
Capacity of berth CB1	8 MTPA	
Capacity of berth CB2	4 MTPA	
2. Size of vessels that can be accommodated	65000/70,000 dwt	
3. Breakwater		
South	1070 metres	
North	3080 metres	
Type	Rubble mound with accropode armour protection.	
4. Approach Channel		
Length	3775 metres	
Width	250 metres	
Depth	16 metres BCD	
5. Equipment profile		
i) Conveyors (2 nos - 400 TPH each)		
ii) Unloading equipments (2 nos-200 TPH each)		
iii) Mobile Hopper (1 No.)		
iv) Temporary hoppers (6 Nos.)		
6. Connectivity	1) Excellent road connectivity to NH4, NH5, NH45 2) linked to Chennai-Kolkata BG main line. 3) Connectivity to Chennai airport.	

Wharfage

Cargo related charges w.e.f. 21.8.2010 are as below:

S.No.	Nomenclature	Unit	Rate
1.	Coal and Coke	1 tonne	₹ 130.00
2.	Other goods	1 tonne	₹ 60.00
3.	Other goods	Ad valorem	₹ 0.5%

Traffic handled during 2011-12 and 2012-13 is given below:

(In million tonnes)

S.No.	Mineral	2011-12	2012-13
Total		**14.96**	**17.89**
1.	Coal	13.11	14.93
2.	POL	0.60	1.22
3.	Other cargo	1.79	1.74
4.	Iron Ore	-	-

The Kamrajar port handled 17.89 million tonnes traffic in 2012-13 compared to 14.96 million tonnes during 2011-12.

3.5 Chennai

The port at Chennai is an artificial harbour situated on the Coromandal coast in south-east India. The handling capacity of the port in 2012-13 was 83.19 million tonnes. The largest size of the vessel that can be received at the port is in the range of 1,75,000 dwt, having a maximum 17.4 m draft and maximum 280 m overall length.

Salient Features of Chennai Port

Draught (m)		No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (Sq.m.)
min	max				
8.5	17.4	24	–	–	46100

Development Plans

Barge handling facility at Bharathi Dock envisages 1.35 MTPA capacity addition of the port. The environment clearance process and the construction work was expected to commence during the second quarter of 2014. Development of Rajiv Gandhi Dry Port and Multi-Modal Logistics Hub is proposed to avoid congestion on city roads in the vicinity of the port.

The total traffic handled by the Chennai port during 2012-13 was 53.40 million tonnes. The traffic in mineral/ore/ mineral-based commodities handled by this port (excluding commodities handled in containers) during 2011-12 and 2012-13 is given below:

(In tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
Barytes	NA	882	NA	-
Fluorspar	NA	-	NA	7
Dolomite	NA	-	NA	1,040
Limestone	NA	-	NA	2,602
Iron ore pellets	-	-	-	52

Wharfage

Cargo related wharfage charges levied by Chennai Port Trust in 2012-13 were as follows:

(In ₹ per tonne)

	Item	Rate
i)	Asbestos, cement, clinker, lime and limestone products	17.16
ii)	Thermal coal	23.00
iii)	Coal other than thermal coal, coke of all kinds and charcoal of all kinds	13.80
iv)	Ores and minerals of all kinds including sized kerbstone/cobblestone for export	16.50
v)	Ores and minerals of all kinds in bulk for import.	28.60
	Mechanical handling	
i)	Iron ore handled mechanically or through handling system at Bharathi Dock	85.00
ii)	Charges for cleaning the ore handling system for receiving the shipment of iron ore fines/calibrated iron ore	2.00

Note: *The rates specified at item 2(i) are inclusive of all operations from the time of tippling the iron ore from the wagon by the wagon tippler to putting it into the holds of the vessel, cleaning the system, cleaning the spillages, dust and trimming operations of the ship, if any, required and wagon damages; but exclusive of all the railway operations connected with the movement of iron ore for which charges are leviable as per the Scale of Rates.*

3.6 V.O.Chidambaranar (Formerly, Tuticorin)

V.O. Chidambaranar Port is situated in Tuticorin on the eastern coast in Tanmil Nadu. It has two operating wings viz, Zone A, comprising new major port, and Zone B, representing old anchorage port. The largest size of vessel that can be received at the port is 75,328 dwt. Zone B can handle lighterage vessels. The total handling capacity of the port in 2012-13 was 33.34 million tonnes.

Salient Features of V.O.Chidambaranar Port

Draught (m)		No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (Sq m.)
min	max				
5.85	12.80	15	–	–	3 nos. warehouse 15500 sq m, 2 Nos. Transit sheds 10800, open area 5,53,000, open area container 30,000 sq m

The total traffic handled by the V.O.C port during 2012-13 was 28.26 million tonnes and during 2011-12 was 28.11 million tonnes.

The traffic in mineral/ore/mineral based commodities handled during 2011-12 and 2012-13 was as under:

(In tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
1. Garnet sand	18406	25970	6419	-
2. Ilmenite sand	241500	272650	54811	65292
3. Copper (concentrate)	-	-	1106467	1228316
4. Other ore (Dolomite)	33458	-	-	8200

Wharfage :

Wharfage levided by V.O. Chidambaranar Port during 2012-13 were as follows.

(In ₹ per tonne)

Sl.No.	Commodity	2012-13
1.	Garnet Sand	19.00
2.	Ilmenite sand	19.00
3.	Copper concentrate	55.00
4.	River sand	18.00
5.	Iron ore	19.00

The following development works were undertaken during 2012-13:

1. Development of Berth No.8 as container Terminal on BOT basis (2nd container terminal).

2. Construction of shallow water bearth for handling cement.

3. Development of North Congo berth IV.

4. Upgradation of Mechanical handling infrastructure at berth VI & IX.

5. Improvement and modification of port entrance at Green gate in VOCPT.

WEST COAST

3.7 Kandla

This port is a protected natural harbour situated on the western coast of Gujarat in the Kandla Creek and is 90 kms from the mouth of the Gulf of Kachch.

Salient Features of Kandla Port

	Draught (m)		No. of berths	No. of moor-ings	No. of wharves	Stacking area provided (sq.m.)
	min	max				
Dry cargo	9.10	12.00	2*	–	12	There is no special stacking area for mineral commo-dities
Liquid cargo	10.00	10.70	6	5	6	–

** Included 2 cargo berths operated by private operator.*

In additon, there was maintenance jetty for floating dry docks and maintenance of port craft, three single buoy moorings to handle very large crude carriers for import of

crude oil, two Essar product jetties to handle POL carriers for export at Vadinar and a minor port Tuna, 24 kms south of Kandla for handling country crafts. Barges handling operations for coal and fertilizer vessels have commenced from July, 2009. A Bunder basin for handling through barges and country crafts also operates.

The total traffic handled by the Kandla port during 2012-13 was 93.62 million tonnes as against 82.50 million tonnes in 2011-12.

Wharfage

Wharfage levied by Kandla Port Trust as on 31.3.2011 were as follows:

(In ₹ per tonne)

Commodity	Coastal Rate	Foreign Rate
Liquid cargo		
i) Crude oil	12.00	12.00
ii) LPG (per cu m)	60.00	100.00
iii) POL products (bulk)	26.20	26.25
Fertilizer and raw material including sulphur	14.40	24.00
Cement & clinker	10.80	18.00
Ores and minerals (in all forms)	8.10	13.50
Granite and marbles	10.80	18.00
Metal (ferrous/non-ferrous) (including pipes, plates, pig iron, coil, sheet)	18.00	30.00
Metal scrap	21.60	36.00
Construction materials and sand	8.10	13.50
Coal and coke	10.80	18.00
Salt	1.80	3.00
Dry chemicals including soda ash	10.80	18.00

Note: *In addition to above rates, cargos other than bulk; i.e., break-bulk and non-containerised shall be charged @ ₹ 18.00 per tonne for foreign and ₹ 10.80 per tonne for coastal cargo supply of port labour.*

3.8 Mumbai

Mumbai port is a natural deep water multi-purpose port handling all types of cargo-liquid bulk, dry bulk, break bulk and container. Salient features of Mumbai port are as follows:

Salient Features of Mumbai Port

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min	max				
8	10.5	27	–	Berths have wharves of different lengths minerals	No special facility for handling

The total traffic handled by the Mumbai port during 2012-13 was 58.04 million tonnes as compared to 56.19 million tonnes in 2011-12. The traffic in mineral/ore/mineral-based commodities handled in 2011-12 to 2012-13 was as under:

(In '000 tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
Rock Phosphate	-	-	163	272
Iron and Steel	721	741	3505	2941
Coal	-	-	4321	4018

Wharfage

Wharfage levied by the Mumbai Port in 2011-12 were as below:

(In ₹ per tonne)

Sl. No.	Commodity	Foreign	Coastal
1.	Zinc Ingot	101.05	60.65
2.	Asbestos, Construction Material, sand, cement and clinker , Granite and Marble, Metal (ferrous, non ferrous) in the form of ingots , unmanufactured and metal scrap	34.50	20.70
3.	Coal and firewood	48.00	48.00
4.	Ores, ore pellets & minerals	34.50	34.50

3.9 Mormugao

Mormugao port is one of the country's old ports on the west coast of India with modern infrastructural facilities and one of the finest natural harbours in the world.

The entire output of iron ore from Goa and considerable quantity of iron ore from Bellary-Hospet is exported through this port. Maximum exports of iron ore takes place through this port.

The total handling capacity of this port in 2012-13 was 27.50 million tonnes for iron ore & other ores and 5.00 million tonnes for coal/coke. The largest vessel that can be received at Berth No. 9 of this port is about 275,000 dwt.

Salient Features of Mormugao Port (2012-13)

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min	max				
10.50	14.10	5	6	-	1) 8000 sq m (berth No.9) for iron ore (attached to Berth No. 9) 2) (Approx. 30000 sq.m (to berth 5 & 6) for coal & coke 3) (Approx. 70,000 sq m to berth 10 & 11 for coke and coal

The demand for Mooring Dolphins, particularly during monsoon period is heavy and also for export of iron ore through this facility.

Ore ships are also loaded in mid-stream by transhippers, floating crane and by ships gears. At West of Break Water (WOB), there is no draught restriction to load ore vessels. At times, large size vessels requiring higher draughts are initially loaded at MOHP (Berth No.9) upto permissible limit and then at outer anchorage (WOB) by transhippers. Six Mooring dolphins capable of accommodating Panamax size vessels are also available for handling ore, coke and coal and other cargo using ships own gear. Ore loaded at these facilities is brought by barges from hinter land through inland waterways. Import cargo at this position is unloaded in barges.

Development of the port was undertaken during 2012-13, as per following details:

i) Harbour mobile crane: HMC was commissioned on 12.07.2013 for handling cargo through hook, grab and spreader through which port will be able to handle cargo at higher rate.

ii) Development of Coal terminal at berth No.7: The coal terminal at 4.61 million tonnes capacity at berth No.7 is expected to be ready by June 2019.

iii) Augmentation of Railway Network: Mormugao Port has undertaken the work of augmenting the existing rail network considering the increased rail traffic in the port. The salient feature of the project is that a total of 7 rail lines will be laid in R & D yard. Modification in rail yard expansion will cater to Berths No. 5, 6, 7, 10 & 11. Total rail length in MPT yard is 13.25 kms. It is also splanned to install electronic interlocking for the entire yard. Yard will have 4 weigh bridges for weighment of wagons. The total cost of the project is estimated ₹ 48.93 Crores. The work is currently in progress and likely to be completed by May' 2014.

iv) Replacement of 3 Nos. stakers from 3000 TPH to 4000 TPH : 3 Nos. of stackers and receiving yard conveyors are replaced from 3000 TPH to 4000 TPH.

v) Replacement of receiving yard conveyors from 3000 TPH to 4000 TPH : Providing mechanised handling facilities for handling of coal at Berth No.11 at Mormugao Port on DBFOT basis.

vi) Installation of Rapid-in-motion wagon loading facility by M/s SWPL.

vii) Providing mechanised handling facilities for handling of coal at berth No.11 on DBFOT basis-PPP project.

The total traffic handled by the Mormugao port during 2012-13 was 17.69 million tonnes compared to 39.00 million tonnes in 2011-12. The traffic in mineral/ore/mineral-based commodities handled in 2011-12 and 2012-13 was as follows:

(In tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
Iron ore	28839204	7402255	161358	-
Iron ore (pellets)	369115	18866	-	-
Bauxite	-	70397	-	-
Coke	20659	10185	355484	416639
Coal	-	-	6831979	7373674

Wharfage

Wharfage (wharf dues including unloading, stacking, plot rent and loading charges, etc.) rate levied by Mormugao Port Trust in 2012-13 was as below:

	Mineral /ore	Rate (₹/tonne)	Remarks
1.	Bauxite	30.00	At Berth
2.	Coal/coke	18.00 30.00	At Mooring Dolphin At Berth

Iron Ore and pellets handling charges (exported through MOHP at Berth No. 9) in 2012-13 are as under.

Sl. No.	Description Goods	Import/ Export rate per tonne or part thereof (in ₹)	Remarks
1.	Iron ore	84.24	At MOHP B.No.9
2.	Iron ore pellets		
	(i) During the period June to August each year	90.08	During June to August
	(ii) During the fair season beginning from September to May each year	158.99	During Sept. to May

3.10 New Mangalore

The port has a modern all weather artificial lagoon situated at Panambur, Mangalore in Karnataka on the west coast of India.

The present total capacity of the port is 76.77 million tonnes. The largest vessel that can be received at this port is 90,000 tonnes.

The traffic handled by New Mangalore Port Trust during 2012-13 was 37.04 million tonnes as compared to 32.94 million tonnes during 2011-12.

Salient Features of New Mangalore Port

Draught (m) min	Draught (m) max	No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
7.0	14.0	15	–	1	58391 open area

The traffic in mineral/ore/mineral-based commodities handled in 2011-12 and 2012-13 are as follows:

(In tonnes)

Commodity	Exports		Imports	
	2011-12	2012-13	2011-12	2012-13
Bentonite powder	-	NA	32000	NA
Coal	-	NA	4022000	NA
Granite	95000	NA	-	-
Crude oil	-	NA	13081000	NA
Iron ore/fines/ pellets	1866000	NA	1170000	NA
Limestone	-	-	1666	2722
Gypsum	-	-	188000	NA

Wharfage

Wharfage (wharf dues including unloading, stacking, plot rent and loading charges, etc.) levied by New Mangalore Port w.e.f. 21.2.12 was as follows:

(₹ per tonne)

Commodity	Foreign Rate	Coastal Rate
Chrome ore	22.20	13.32
Iron ore (other than KIOCL)	25.90	25.90
Crude oil	51.80	51.80
Thermal Coal	18.50	18.50
Coal (other than thermal coal) & coke	18.50	11.10
Limestone	25.90	15.54
Manganese ore	22.20	13.32
Granite stones	33.30	19.98
Bentonite & Ball clay sand/ clay of any class	14.80	8.88
Gypsum/clinker	22.20	13.32
Any other ore in bulk	25.90	15.54
Perlite ore	22.20	13.32

3.11 Cochin

The handling capacity of this port in 2012-13 was 49.66 million tonnes. The largest size vessel that can be received at this port is 1,50,000 dwt.

Salient Features of Cochin Port

Draught (m)		No. of berths	No. of moorings	No. of wharf's	Stacking area provided (sq m)
min	max				
9.14	14.50	18	1	2	-

The total traffic handled by the Cochin port during 2012-13 was 19.85 million tonnes. The traffic in mineral/ore/mineral-based commodities handled during 2011-12 and 2012-13 was as under:

(In '000 tonnes)

Sl.No.	Mineral/ore	Export		Import	
		2011-12	2012-13	2011-12	2012-13
1.	Coal	-	-	34	28
2.	Crude	227	124	9800	10063
3.	Zinc concentrate	-	-	49	82
4.	Sulphur	-	-	171	148
5.	Rock phosphate	-	-	145	183
6.	Salt	-	-	137	65
7.	Gypsum	-	-	-	21
8.	Ilmenite sand	-	-	-	18
9.	Zircon sand (containerised)	1	1	-	-

Figures rounded off.

Development of the port was undertaken during 2012-13, as per following details :

(i) LNG Regasification Terminal: Petronet LNG Ltd has set up an LNG Terminal and Re-gasification plant in Puthuvygeen at Cochin Port.

(ii) Multi-User Liquid Terminal: The port has developed an International Cruise passenger facilitation centre named "Samudrika".

(iii) International cruise Terminal: The port is also developing an International ship repair facility.

Wharfage

Wharfage levied by the Cochin Port were as follows:

(In ₹ per tonne)

Sl. No.	Commodity	Foreign	Coastal
1.	Construction and building materials-		
	(a) Sand, stones	52.00	31.20
	Granites & marbles	67.00	40.20
	(b) Cement, clinker, clay, chalk	72.80	43.70
2.	(a) Coal/coke	56.00	33.60
	(b Thermal coal	56.00	56.00
3.	Fertilizer and fertilizer raw material at Q 10 Berth		
	(a) Sulphur	62.00	37.20
	(b) Rock phosphate	57.00	34.20
	(c) Finished fertilizers	57.00	34.20
4.	Metals and metal products	112.00	67.20
5.	Metal scrap	90.00	54.00
6.	Liquid Cargo, acids-		
	(a) Phosphoric acid	109.20	65.50
	(b) Liquid ammonia	119.00	71.40
	(c) POL products at Port Berth	65.00	65.00
7.	Minerals & ores	72.80	43.70
8.	Salt	14.00	8.40

3.12 Jawaharlal Nehru Port Trust (JNPT), Nhava-Sheva, Navi Mumbai

JNPT does not have any facility to handle ore/mineral separately. JNPT has become a world class international container handling port. The largest size of the vessel that can be received at the port is 1,00,000 dwt. The handling capacity of JN Port as on 31.3.2013 was 65.88 million tonnes.

The total traffic handled by the port during 2011-12 was 65.73 million tonnes and during 2012-13, it was 64.49 million tonnes. JNPT has not handled any mineral/ore cargo during 2011-12 & 2012-13.

Salient Features of Jawaharlal Nehru Port

Draught (m)		No. of berths	No. of moorings	No. of wharf's	Stacking area provided (sq m)
min	max				
–	12.5	12	8 Tugs 10 Launches	5	-

4. NON-MAJOR PORTS

The available information on traffic handled by non-major ports during 2011-12 to 2012-13 is furnished in Table-2 and that on facilities for handling and transporting minerals from selected non-major ports is given in Table-3.

There are 200 non-major ports in the country controlled by State Governments and Union Territories. These are in Gujarat (42), Maharashtra (48), Goa (5), Karnataka (10), Kerala (17), Tamil Nadu (15), Andhra Pradesh (12), Odisha (13), West Bengal (1), Daman & Diu (2), Lakshadweep (10), Puducherry (2) and Andaman & Nicobar Islands (23).

Minor Port Survey Organisation (MPSO), a subordinate office of Ministry of Shipping, Government of India, located at Mumbai, carries out the task of Hydrographic Survey in minor and major ports and inland waterways. The Governments of Gujarat, Maharashtra and Andhra Pradesh have taken several initiatives for developments of their ports through private investments.

Gujarat Maritime Board (GMB) is the statutory body of State Government of Gujarat. It is responsible for management, control and administration of 44 ports in Gujarat state. These ports under jurisdiction of GMB are grouped into 10 ports.

The Government of Maharashtra has encouraged development of port sector and adopted an investor-friendly port policy. To meet the requirements of India's growing economy and to address the need of its industry, Maharashtra Maritime Board (MMB) has entered into six concession agreements for development of minor ports namely, Rewas-Awaare Port, Dighi Port, Jaigad Port (Lavgan), Vijaydurg Port, Redi Port, etc.

Besides, Andaman Lakshdweep Harbour Works (ALHW) is a subordinate office of Department of Shipping, Government of India. It has the responsibility for providing port and harbour facilities in Andaman & Nicobar Islands and Lakshdweep Islands.

Table-2: Traffic Handled at Non-major Ports

2011-12 and 2012-13

(In '000 tonnes)

Commodity	2011-12	2012-13
i. POL	156322	168565
ii. Iron ore	30616	21855
iii. Building material	12866	11953
iv. Coal	79040	109264
v. Fertilizers (including Raw Materials)	15742	12548
vi. Others	59159	63738
Total	**353745**	**387923**

***Source**: Update on Indian Port Sector (30.9.2014), Transport Research Wing, Ministry of Road Transport & Highways, Government of India.*

Table – 3 : Facilities for Handling & Transporting and Mineral Commodities Handled at Selected Non-major Ports, 2011-12 and 2012-13

State/ Port	Facilities for Handling & Transporting						Mineral Commody Handled (in tonnes)				
	Handling capacity ('000t)	Draught max. (m)	No. of wharves	No. of berths	Stacking (sq m)	Largest capacity received ('000 dwt)	Commodity vessel	Export		Import	
								2011-12	2012-13	2011-12	2012-13
WEST COAST											
GUJARAT											
Bhavnagar	1000 to 1100	12.5	2	1	249039	-	Coal	-	-	529903	687417
							Limestone	-	-	378087	383644
							Salt	-	55141	-	-
Bedi,	1353	14	-	8	-	151148	Bauxite	-	1352733	-	-
Dahej Harbour and Infrastructure Ltd	2900	13.0	-	1	62500	-	Coal	-	-	340098	362114
							Rock phosphate	-	-	352052	391535
							Copper concentrate	-	-	1215036	1273419
Jafarabad	40	9	-	1	-	39626	Cement clinker	3702767	3165516	415273	240090
Magdalla Surat	3050	12	01	11	30129	152.06	Coal	52153	100604	4406595	5165202
							Iron ore	-	-	6644912	7342184
							Limestone	-	32000	1217893	1510763
							Iron ore fines	98777	22207	95387	55883
Navalakhi	6500	5.0	5	5	205742	181434	Salt	182792	149271	-	-
							Coal	-	-	5491114	6271751
							Cement	-	-	68584	-
Okha	1744	8.0	1	2	50000	1861927	Bauxite	69028	554483	-	-
							Limestone	-	-	601889	399897
							Coal	-	-	898934	767016
							Clinker	26286	-	-	-
Pipavav	4000	14.5	-	5	-	90000	Silica sand	-	-	21300	-
							Minerals	-	-	924428	577386
Porbandar	6560	8.5	NA	2	-	79141	Coal	160000	-	3910000	6090000
							Bauxite	690000	11940000	-	-
Adani Hazira	2000	13.0	-	2	-	-	-	-	-	-	-
Port	350	12.3	1	1	-	147000	-	-	-	-	-
Alang Bhavnagar	-	-	-	-	-	-	-	-	-	-	-
Jodia	-	-	-	-	-	-	-	-	-	-	-
Salaya	-	-	-	-	-	-	-	-	-	-	-
Adani Dahej	7557	14	-	2	65209	16667	Steam Coal	-	-	1711358	7143227
							Coking Coal	-	-	41658	13238
							Rock phosphate	-	-	262520	339632
							Silica sand	-	-	98205	42900
Sikka	-	-	-	-	-	-	-	-	-	-	-
Sachana	-	-	-	-	-	-	-	-	-	-	-
Veraval Port	25.12	3.5	-	2	30000	-	-	-	-	-	-

(Contd.)

Table - 3 (Contd.)

State/ Port	Facilities for Handling & Transporting						Mineral Commodity Handled (in tonnes)				
	Handling capacity ('000t)	Draught max. (m)	No. of wharves	No. of berths	Stacking capacity (sq m)	Largest vessel received ('000 dwt)	Commodity	Export		Import	
								2011-12	2012-13	2011-12	2012-13
Mandvi Port	-	4.0	1	1	-	-	Bentonite	261750	-	-	-
							Bauxite	135964	-	-	-
							China clay	31500	-	-	-
							Cement	4300	-	-	-
Jakhau Port	-	6.0	-	3	-	-	Coal	-	-	534159	443098
AP & SEZ Ltd	81823	17.3	-	20	135435	319869	Clay	2000	-	6150	-
							Bauxite	553921	-	-	-
							Gypsum	-	2135	83645	57462
							Iron ore	49000	43267	-	-
							Salt	6870	55000	-	-
							Bentonite	33730	4014	-	-
							Cement	19800	-	-	-
							Rock Phosphate	-	-	-	17000
							Limestone	-	-	-	50746
Mundra	-	7.30	1	1	-	-	-	-	-	-	-
KARNATAKA											
Bilikere	60.9	No restriction	2	60000 (Iron ore) 20000 (Mn ore)	-	-	NA	NA	NA	NA	NA
Karwar	-	3.5	1	2	50 (acre)	60	-	-	-	-	-
Kundapura	300	2.83	-	-	70000	-	-	-	-	-	-
MAHARASHTRA											
Dahanu	445	6.0	-	1	-	-	NA	NA	NA	NA	NA
Dharamtar	5088	5	-	2	-	-	NA	NA	NA	NA	NA
Dighi	2	10	-	1	-	-	NA	NA	NA	NA	NA
Jaigad	371	5.5	-	-	-	-	NA	NA	NA	NA	NA
Kelshi	305	3.0	1	1	-	0.8	NA	NA	NA	NA	NA
Ratnagiri	365	5	-	1	-	-	NA	NA	NA	NA	NA
Redi	529	4.0	-	2	-	-	NA	NA	NA	NA	NA
Revdanda	1029	8.0	-	-	-	-	NA	NA	NA	NA	NA

(Contd.)

Table - 3 (Concld.)

State/ Port	Facilities for Handling & Transporting						Mineral Commodity Handled (in tonnes)				
	Handling capacity ('000t)	Draught max (m)	No. of wharves	No. of berths	Stacking capacity (sq m)	Largest vessel received ('000 dwt)	Commodity	Export		Import	
								2011-12	2012-13	2011-12	2012-13
EAST COAST											
ANDHRA PRADESH											
Kakinada # (Anchorage Port)	819502	Open road-sted-port, no separate stacking yard for minerals					NA	NA	NA	NA	NA
							Feldspar	87010	87850	-	-
(Kakinada deep water port)	3 ships 22000	13	-	4	NA	NA	Ball clay	37475	-	37475	43934
							Rock Phosphate	-	-	163306	172688
							Bentonite	235800	208930	-	-
							Feldspar chips	-	-	46150	52586
							Iron ore	-	-	-	-
							Limestone	-	-	5393	7000
							Coal	-	-	2443580	4701094
							C P Coke	-	-	63825	112859
							Alumina	-	-	-	187587
-	-										
Krishnapat-anam	50000	18	-	9	NA	200	Iron ore	90271	-	NA	148360
							Gypsum	NA	-	204648	NA
							Barytes	382408	411855	-	-
Rawa	2500	-	-	-	-	-	-	NA	NA	NA	NA
TAMIL NADU											
Cuddalore	2000 t/day	@	-	-	80000	@@	-	-	-	-	-

@ not applicable being a roadstead port.
@@ Any size being an anchorage port.
 # Two ports namely 1. Kakinada Anchorage Port working under Govt. of Andhra Pradesh and 2. Kakinada deep water port working under private organisation M/s Kakinada Sea Port Ltd, in East Godavari district, Andhra Pradesh are working at Kakinada.

5. PRIVATE PORTS

5.1 Major Development Projects

International Container Transhipment Terminal (ICTT) at Vallarpadam

The International Container Transhipment Terminal (ICTT), Vallarpadam is India's first dedicated International Container Transhipment Terminal. It was developed by Cochin Port Trust and M/s India Gateway Terminal Pvt. Ltd (IGT), a subsidiary of M/s Dubai Port World (DPW) through a Public Private Partnership on Build, Operate and Transfer (BOT) basis. It was dedicated to the nation on 11th February, 2011. This is a major milestone achieved in maritime sector in the development of the country's logistics infrastructure. The ICTT has been developed with facilities for handling mother container ships of 8000 - plus TEUs capacities and is a state-of-the-art terminal with modern cargo handling equipment and related super-structures to have an annual throughput of 3 million TEUs. The BOT operator has completed the construction of phase-1 of the Terminal with an investment of approximately ₹ 1,600 crore. The first phase has a quay length of 600 m, with a handling capacity of one million TEUs. This will be increased to 1,800 m in the final phase.

Container handling charges at nearby Vallarpadam terminal are likely to go down with stakeholders deciding that all terminal related charges will be billed directly to the exporter or importer by the DP World from January 1 next year.

A decision in this regard was taken at a meeting of various stakeholders, convened by the Cochin Port Trust yesterday according to a port release.

5.2 Adani Ports and Special Economic Zone Limited (APSEZ),

Mundra Special Economic Zone (Mundra SEZ is located on the western coast of India in the Gulf of Kachchh, within the vibrant state of Gujarat. Mundra Port is the gateway for cargo to the Northern hinterland and Mundra SEZ is the gateway for the Indian exports.

Mundra SEZ is India's largest notified, operational multi-product SEZ with state-of-the art infrastructure and is planned to be spread over 15,000 Ha. Currently notified multi-product SEZs are spread over an area of 6473 Ha. The zone also has in addition a Free Trade and Warehousing Zone (FTWZ) spread over 168 Ha. Leveraging the advantage of the robust port infrastructure, Mundra SEZ offers the best investment opportunity for diversified industries.

Mundra SEZ can offer developed industrial clusters for small/medium projects as well as facilitate the mega projects with the desired land parcel, along with an excellent logistic connectivity, power reliability and other utilities.

Infrastructure being the key to the SEZ development, emphasis has been to develop/ augment core infrastructure facilities to attract investments.

Special features of Mundra SEZ are:

• India's Largest, Port based, Notified and Functuional, Multi-product SEZ

• An integrated self sustained zone with modern infrastructure and facilities

- Mundra SEZ's multi-modal connectivity offers competitive logistic advantage with:

* In-zone Multi-purpose Port with Container Terminals

* Fully mechanized efficient port with one of the lowest turnaround time in India

* In-zone Road & Rail connectivity:

* Well connected with National & State Highways

* 64 Kms Private Rail line connects Mundra to National Railway Network at Adipur near Gandhidham, Kutch

* 210 kms rail network within the Zone

* In-zone private Airstrip.

* Proposed International Air Cargo Hub

* Integrated Infrastructure and Utilities.

* Well developed commercial & social infrastructure for Living, Learning, Healthcare & Recreations.

5.3 Essar Ports

Essar Ports Ltd is India’s one of largest private sector port and terminal company by capacity and throughput. It develops, owns and operates ports and terminals.

The company through its subsidiaries develops and operates ports and terminals for handling liquid, dry bulk and general cargo with an existing aggregate cargo handling capacity of 104 MTPA across the facilities located at Vadinar and Hazira in the state of Gujarat on west coast of India and Paradip in the state of Odisha on east coast of India. The facilities of Vadinar, Hazira and Paradip are used primarily for receipt of raw material such as crude oil, iron ore pellets, limestone, dolomite, coal and finished goods such as petroleum products and steel products.

The company is in the process of expanding its existing aggregate ports capacity to 158 million tpy. Besides, a new port at Salaya in Gujarat and two terminals at Paradip in the state of Odisha on the east coast of India is being developed.

The company’s sites at Vadinar, Hazira and Salaya are strategically located on the western coast of India in the state of Gujarat to cater the growing demand from the land-locked northern, north-western and central regions of India and are well connected to the state highways and will

have connectivity to the railway network in future. It's sites at Paradip are located on the eastern coast of the state of Odisha to serve mineral and metal-rich eastern India and are well positioned to serve cargo for the steel and power industries.

Essar port has an existing aggregate capacity of 104 MTPA. The company is in process of increasing its aggregate ports capacity to 194 MTPA with expansion of the Hazira facility from 30 MTPA at present to 50 MTPA, a new 20 MTPA dry bulk terminal at Salaya in Gujarat, an 18 MMTPA coal import terminal at Paradip in Odisha and a 32 MTPA iron ore export terminal consisting of three berths at Visakhapatnam in the State of Andhra Pradesh.

FUTURE OUTLOOK

As per the 12th Five Year Plan period (2012-17), the projected capacity during the terminal year of 12th Five Year Plan for the major ports would be 1229.24 MT, nearly 1.76 times of the existing capacity. The expected demand by the end of 12th Five Year Plan in terms of cargo handling at major port as per 12th Five Year Plan is 943.06 MT with an estimated annual growth of 10.98%. The total plan outlay projected to augment the capacity by 532.71 MT is ₹ 67295.54 crores. Most of investment is expected to flow from private sector i.e. ₹ 51,036 crores (76%) and the remaining share of 24% is anticipated from internal resources and budgetary support of the Government.