

PORT FACILITIES



Indian Minerals Yearbook 2014

(Part- I General Reviews)

53rd Edition

PORT FACILITIES

(ADVANCE RELEASE)

**GOVERNMENT OF INDIA
MINISTRY OF MINES
INDIAN BUREAU OF MINES**

Indira Bhavan, Civil Lines,
NAGPUR – 440 102

PHONE/FAX NO. +91712 – 2565471,2562216

PBX : +91712 - 2562649, 2560544, 2560648

E-MAIL : cme@ibm.gov.in

Website: www.ibm.gov.in

March, 2016

6 Port Facilities

1. GENERAL

1.1 Growth

Ports essentially are the drivers of economy. They function as 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 notified 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 through 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 1.1.2014. 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 (SCL)

The Sethusamudram corporation Ltd was incorporated in the year 2004 to commission the Sethusamudram Ship Channel Project which is being implemented through the Special Purpose Vehicle (SPV). The project 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 ships navigate between east and west coasts of India and to have a continuous and hassle-free sea route passage around the peninsula within India's territorial waters.

The construction of a two berth ship channel i.e., 167 km long, 300 m wide and 12 m deep would reduce the sailing distance between Cape Comorin and Chennai to 402 nautical miles from the present 755 nautical miles, saving 36 hours of sailing time.

Dredging work of the Sethusamudram ship channel was awarded to M/s Dredging Corporation of India Ltd, a Government of India Enterprise on nomination basis and a total quantity of 28.42 million cubic metres of dredging was done in Adam's Bridge Region. Subsequently, based on PIL filed in the Supreme Court, the dredging work in Adam's bridge was stopped on 17.9.2007. At present, the project is kept in abeyance in view of the litigations filed in the Supreme Court of India.

1.3 Private Sector Participation in Major Ports

The Private Sector is envisaged to fund projects under Public-Private-Partnership (PPP) mode through Design-Build-Finance-Operate-Transfer (DBFOT) or Build-Operate-Own-Transfer (BOOT) models. As per the report of Indian Port Association, Thirty four projects have been awarded involving an investment of ₹11,524.42 crore and capacity addition of 220.61 Million Tonnes Per Annum (MTPA) during the year. The details of 34 projects awarded during 2013-14 are as follows:

Table-1: PPP Projects Under Operation in Major Ports

Sl. No.	Projects/ Development	Estimated Cost (in ₹ crore)	Capacity (MTPA)
1.	Container Terminal at Chennai Port Trust	778.03	15.12
2.	Development of II nd Container Terminal at Chennai Port Trust	783.32	9.6
3.	Crude Oil Handling facility at Cochin Port Trust	703.34	13.5

(Contd.)

PORT FACILITIES

Table - 1 (Contd.)

Sl. No.	Projects/Development	Estimated Cost (₹ in crore)	Capacity (MTPA)	Sl. No.	Projects/Development	Estimated Cost (₹ in crore)	Capacity (MTPA)
4.	ICTT at Cochin Vallarpadam	2118	36	22.	Construction of Captive Jetty for handling coal by M/s NPCL at New Mangalore Port Trust	230	5.4
5.	Container Terminal, NSICT JLN Port Trust	750	13.2	23.	Captive Fertilizer Berth to PPL at Paradip Port Trust	20	3.5
6.	BPCL Jetty (Captive) JLN Port Trust	200	5.5	24.	Captive Fertilizer Berth to IFFCO at Paradip Port Trust	26.17	4
7.	Third Container Terminal JLN Port Trust	1078	15.6	25.	Construction of SPM Captive Berth at Paradip Port Trust.	500	10
8.	Marine Liquid Terminal at Ennore	249.5	3	26.	Mechanisation of Cargo Handling Project-1 at Paradip Port	37.32	2
9.	Development of an Iron Ore Terminal on BOT basis at Ennore	351.61	6	27.	Mechanisation of Cargo Handling Project-2 at Paradip Port	25.13	2
10.	Development of Coal Terminal for users other than TNEB on BOT basis at Ennore.	399.13	8	28.	Mechanisation of Central Quay - III Berth at Paradip Port	40	4
11.	Development of 13 th Berth (other than liquid and container cargo berth) at Kandla Port Trust	188	2	29.	Multipurpose Berths-EQ-8 & EQ-9 at Visakhapatnam Port Trust	317	2
12.	Development of 15 th Multipurpose Cargo Berth at Kandla Port Trust	182.21	1.5	30.	Container Terminal, Outer harbour Visakhapatnam Port Trust	86.35	2.88
13.	Oil Jetty awarded to M/s IOCL (Captive) at Kandla Port Trust	20.7	2	31.	Development of 7 th Berth as container terminal at VOC Port Trust, Thoothukudi	135	5
14.	Container Freight Station at Kandla	41.07	3	32.	Container Terminal (Phase I&II) at Kandla Port Trust	446.54	7.2
15.	Oil Jetty related facilities at Vadinar (ESSAR) (Captive) Kandla Port Trust	750	14.5	33.	Mechanisation at HDC berth no 2 at Kolkata Port Trust	75	4.0
16.	Fifth Oil Jetty (IFFCO) (Captive) Kandla Port Trust	22	2	34.	Mechanisation at HDC berth no 8 at Kolkata Port Trust	75	4.0
17.	Multipurpose Berth No. 12 Kolkata Port Trust	35	0.5				
18.	Multipurpose Berth No. 4A Kolkata Port Trust	112	3				
19.	Development of Coal Handling Terminal at Berth No. - 7 at Mormugao Port Trust	406	4.61				
20.	Bulk Cargo Berths No. 5A & 6A at Mormugao Port Trust	245	5				
21.	Bulk Cement Handling facility set up by NMPT for M/s Ambuja Cement Ltd. (captive) at New Mangalore Port Trust	98	1				

(Contd.)

1.4 Inland Water Transport

Inland Water Transport is cost effective, fuel efficient and climate-friendly mode of transport for bulk cargo, over dimensional cargo and hazardous goods. This mode of transport is a potential supplement to the overburdened rail and that of congested roads and efforts are underway to develop this mode of transportation and to operationalise it.

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.

PORT FACILITIES

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

1.4.1 National Waterways

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- 1,620 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 Rivers Godavari and Krishna (Total length- 1,095 km) in the States of Andhra Pradesh, Tamil Nadu and the Union Territory of Puducherry.

National Waterway-5: Designated stretches of East Coast Canal, River Brahmani and Mahanadi Delta (Total length- 623 km) in the States of West Bengal and Odisha.

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

2. MAJOR PORTS

There are twelve major ports in the country, viz, Kolkata-Haldia, Paradip, Visakhapatnam, Chennai, Kamarajar and V.O.Chidambaranar (formerly Tuticorin) on the East Coast and Cochin (in 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 the total 555.52 million tonnes traffic handled at major ports, Kandla Port is the top traffic handler during 2013-14. Except Kamarajar Port which is a Public Sector Undertaking, all the other 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 2013-14 was 800.52 million tonnes as compared to 744.91 million tonnes during 2012-13. The major ports, therefore, continued to maintain a favourable capacity-cargo equation during the year.

The major ports handled a total traffic of 555.52 million tonnes during 2013-14 against 545.79 million tonnes during 2012-13. Traffic handled by major ports during 2012-13 and 2013-14 is given below:

Traffic Handled at Major Ports 2012-13 & 2013-14

(In million tonnes)			
Sl. No.	Ports	2012-13	2013-14
1A.	Kolkata	11.84	12.87
1B.	Haldia	28.08	28.51
2.	Paradip	56.55	68.00
3.	Vizag	59.04	58.50
4.	Kamarajar	17.89	27.34
5.	Chennai	53.40	51.11
6.	V.O. Chidambaranar (formerly Tuticorin)	28.26	28.64
7.	Cochin	19.85	20.89
8.	New Mangalore	37.04	39.37
9.	Mormugao	17.69	11.74
10.	Mumbai	58.04	59.19
11.	JNPT	64.49	62.35
12.	Kandla	93.62	87.01
Total		545.79	555.52

Figures rounded off.

Source: Annual Report 2013-14, Ministry of Shipping, Government of India.

PORT FACILITIES

The selected commodity-wise traffic handled at twelve major ports during 2012-13 and 2013-14 is as below :

Sl. No.	Commodity	(In '000 tonnes)	
		2012-13	2013-14
1.	P.O.L (Crude & Products)	185980	187250
2.	Iron ore	28470	26220
3.	Fertilizer Raw material (Dry)	14740	13720
4.	Coal	86660	104120
5.	Containerised cargo	119820	114670
6.	Others	110120	109520
Total		545790	555500

*Source: Annual Report 2014-15, Ministry of Shipping.
Note: Total may vary due to rounding off.*

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 catering to the Traffic of the entire Eastern India and the 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 2013-14, the break up of traffic handled under Kolkata was 12.875 million tonnes, and at Haldia, it was 28.511 million tonnes.

Handling capacity of the port as on 31.3.2011 was 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 moorings	No. of wharves	Stacking area provided (sq m)
	min.	max.				
Kolkata	5.1	8.5	33	24	4	134722 (Transit Shed) + 10794 Warehouse)

(Contd.)

Port	Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
	min.	max.				
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 2012-13 and 2013-14 was as under:

Commodity	(In '000 tonnes)			
	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Thermal coal	NA	1598	NA	-
Coking coal	-	-	4548	5612
Iron ore	1810	2170	84	-
Iron & Steel	986	357	366	17
Rock phosphate	NA	-	NA	300
Pig iron	3	3	NA	-
Sulphur	-	NA	NA	60
Mica	85	85	-	NA
Metallurgical coke	-	NA	878	NA
Limestone	-	NA	1227	1293
Raw Petroleum coke	-	NA	130	90
Gypsum	-	NA	NA	26
Bauxite	-	NA	-	NA
Dolomite	-	NA	-	16
Ferro - chrome	129	140	-	NA
Non-coking coal	-	-	2247	3266
Manganese ore	-	NA	1249	945
Other ore	-	NA	70	160
Carbon black	NA	NA	NA	NA
Silicon	452	384	NA	27
Cement clinker	-	NA	NA	45

Source: Kolkata Port Trust Administrative Report 2013-14

PORT FACILITIES

Wharfage

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

(In ₹ per tonne)

Sl. No.	Item	Rate
1.	Crude oil Cargo handled through Mechanical system	91.80
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 other than through Mechanical system

1.	Salt, Fly ash	23.33
2.	Iron ore, sand	23.30
3.	Limestone, Bitumen, Pig iron, sponge iron and other ferrous metals, All types of coal/coke/ore/other dry bulk cargo not specified	46.66
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, ic, goods, rock phosphate, sulphur, other fertilizer raw materials, fertilizers, lead conc., asbestos.	68.04
6.	Iron & steel, pipes & tubes	69.98

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 that services the eastern and central part of the country is Paradip port. Its hinterland extends across Odisha, Jharkhand, Chhattisgarh, West Bengal, Madhya Pradesh and Bihar. The Port mainly deals with bulk cargo.

Salient Features of Paradip Port

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

The port handled 68 million tonnes of cargo during 2013-14 and during 2012-13, it was 56.55 million tonnes.

3.3 Visakhapatnam

It is a natural harbour. Visakhapatnam port handled 58.04 million tonnes traffic in 2013-14 as compared to 59.04 million tonnes traffic in 2012-13. The largest size vessel that can be handled in the inner harbour is 12.50 metre draught vessels while the outer harbour is capable of handling vessels upto 2,00,000 dwt having draught up to 18.10 m.

The handling capacity of the port during 2013-14 was 88.92 MT.

Handymass vessels up to 12.5 m draught and Panamax vessels up to 10.90 m draught are handled at inner harbour.

Salient Features of Visakhapatnam Port

	Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
	min.	max.				
Inner harbour	8.00	12.50	18	-	NA	Exclusive of Iron ore: 65306
Outer harbour	14.00	18.10	6	1	NA	297550
Outer harbour	14.00	18.10	6	-	NA	Exclusive of Iron ore: 297550

PORT FACILITIES

Commodities handled by Visakhapatnam port in 2012-13 and 2013-14 were as follows:

Commodity	(In tonnes)			
	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Anthracite Coal	-	-	109745	88998
Bentonite	-	-	32000	15030
LAM coke	-	-	230162	97481
Granite	104893	-	-	-
Limestone	-	-	447362	661227
Manganese ore	84000	73000	1002425	915796
Coking coal	10255	-	6784772	6927618
Ilmenite sand	252526	294571	-	-
Steam coal	-	-	4310900	3404072
Chrome ore	-	-	35765	40236
Bauxite	-	-	600049	624616
Iron ore & Pellets	7538390	8519439	99008	-
SM ore/FM ore	15800	7000	-	-
Thermal Coal	2950818	2743824	-	-
Pet Coke	-	-	650787	945966
Coke fines	-	-	90611	29667
POL & Crude	1757555	1796566	10641320	10359991

Following are the development activities that were undertaken in the port during 2013-14:

1. Development of WQ6 berth for handling dry bulk cargoes.
2. Development of EQ 10 berth for handling liquid cargoes.
3. Development of EQ1A berth on south side of EQ1 berth to facilitate handling of PANAMAX class steam coal and thermal coal vessels.
4. Upgrading of the existing mechanised iron ore at OH facility and new facility creation at WQ1 berth.
5. Dredging to (-) 16.10 m depth in the northern arm of IHTC up to end of EQ10 to cater to 14 m. draught vessels in the inner harbour.
6. Development of West quarry North (WQ 7 &8) berth in inner harbour.
7. Implementation of ERP and development of Port roads and railway system.

8. Replacement of existing East quay berths (EQ 2,3,4,5) to cater to 14 m vessels for handling dry bulk cargoes.

9. Installation of Mechanised fertilizer handling facility at EQ7

10. Installation of two harbour mobile cranes (HMCS) at east quay and west quay berths.

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.

The facilities available at Kamarajar port are detailed below:

1. Berth	2 (Thermal Coal)	one berth
Max. permissible Length	240 metres each	automobile
Max. permissible Draught	13.5 metres	(GCB) one
Capacity of berth CB1	8 MTPA	POL/chemicals
Capacity of berth CB2	4 MTPA	(MLT1)
Capacity of berth GCB	1MTPA	and one
Capacity of berth MLT1	3MTPA	coal (other
Capacity of berth CICT	8MTPA	than
		TNEB)
2. Size of vessels that can be accommodated	65,000/70,000 dwt (For CB1&CB)	
	>70,000 dwt (For GCB)	
	up to 150000 dwt (For MLT1 & CICT)	
3. Breakwater		
South	1,070 metres	
North	3,080 metres	
Type	Rubble mound with accropode armour protection.	
4. Approach Channel		
Length	3,775 metres	
Width	250 metres	
Depth	16 metres BCD	
5. Equipment profile		
i) Conveyors (2 nos - 400 TPH each)		
ii) Unloading equipment (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.	

PORT FACILITIES

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%

The traffic handled during 2012-13 and 2013-14 is furnished below:

(In million tonnes)			
S. No.	Commodity	2012-13	2013-14
	Total	27.34	17.89
1.	Coal	22.49	14.93
2.	POL	2.43	1.22
3.	Other cargo	2.42	1.74
4.	Iron Ore	-	-

Kamarajar port handled 17.89 million tonnes traffic in 2013-14 as compared to 27.34 million tonnes during 2012-13.

3.5 Chennai

The port at Chennai is an artificial harbour situated on the Coromandal coast in south-east India. The Port's handling capacity in 2013-14 was 86.04 million tonnes. The largest size of the vessel that can be received at the port is in the range of 1,65,000 dwt, having a maximum 17.4 m draught and maximum 280 m overall length.

Salient Features of Chennai Port

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq.m)
min.	max.				
8.5	16.5	24	-	-	-

Development Plans

Development of a Mega Terminal includes 2 km long quay and an ultimate alongside depth of 22 m sheltered by a breakwater system of about 4.75 km length. Rated capacity of the Terminal is 4 million TEUs per annum. Barge handling capacity has been developed in Bharathi Dock. It is proposed to develop an integrated Dry port and Inter-modal Logistics Hub for efficient movement

of containers between the port and its hinterland which will also serve to congest city roads that lie in the vicinity of the port.

The total traffic handled by the Chennai port during 2012-13 & 2013-14 was 53.40 million tonnes & 51.11 million tonnes respectively. The traffic in mineral/ore/mineral-based commodities handled by the port (excluding commodities handled in containers) during 2012-13 and 2013-14 is given below:

Commodity	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Barytes	882	532	-	-
Fluorspar	-	NA	NA	-
Dolomite	-	-	NA	1,053
Limestone	-	-	NA	2,682
Iron ore pellets	-	-	-	71

Wharfage

Cargo related wharfage charges levied by Chennai Port Trust in 2013-14 were as follows:

(In ₹ per tonne)	
Item	Rate
i) Asbestos, cement, clinker, lime and limestone products	40.10
ii) Thermal coal	32.70
iii) Coal other than thermal coal, coke of all kinds and charcoal of all kinds	32.70
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 (i) are inclusive of all operations from the time of tipping 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.

PORT FACILITIES

3.6 V.O. Chidambaranar (Formerly Tuticorin)

V.O. Chidambaranar Port is situated in Thoothukudi (formerly Tuticorin) on the eastern coast of Tamil 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 83341 dwt. The port in 2013-14 reported a total handling capacity of 33.34 million tonnes.

Salient Features of V.O. Chidambaranar Port

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min.	max.				
5.85	12.80	13	-	-	3 Warehouse of 14,940 sq m. 2 Transit sheds of 10,800 sq. m open area of 5,53,000sq. m open area for containers of 54,000 sq m

The total traffic handled by the V.O.C port during 2013-14 was 28.26 million tonnes and during 2012-13 it was 28.64 million tonnes.

The traffic in mineral/ore/mineral based commodities handled by the port during 2012-13 and 2013-14 was as under:

Commodity	(In tonnes)			
	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
1. Garnet sand	25970	83742	-	-
2. Ilmenite sand	272650	237083	65292	39605
3. Copper (concentrate)	-	-	1228316	925905
4. Dolomite	-	-	8200	-

Wharfage

Wharfage levied by V.O. Chidambaranar Port during 2013-14 was as follows.

Sl.No.	Commodity	(In ₹ per tonne)
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 2013-14:

1. Dredging in front of North Cargo Berth-II and shallow Water Berth I & II.
2. Development of outer Harbour for handling containers and break bulk cargoes, coal & oil. The number of berths proposed is 8 Nos.
3. Construction of ship building yard and Free Trade warehousing zone.
4. Providing Railway track between Marshalling yard and Hare Island.
5. Development of outsourcing warehousing in zone-B.
6. Establishing Food processing Park.
7. Creation of Special Economic Zone.

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 km from the mouth of the Gulf of Kachchh.

Salient Features of Kandla Port

	Draught (m)		No. of berths	No. of moorings	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 commodities
Liquid cargo	10.00	10.70	6	5	6	-

* Includes 2 cargo berths operated by private operator.

In the port there are maintenance jetty for floating dry docks and maintenance of port craft, three single buoy moorings

PORT FACILITIES

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 km south of Kandla for handling country crafts. Barge handling operations for coal and fertilizer vessels are undertaken. A Bunder basin for handling barges and country crafts is in operation.

The total traffic handled by the Kandla port during 2013-14 was 87.01 million tonnes as against 93.62 million tonnes in 2012-13.

Wharfage

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

Commodity	(In ₹ per tonne)	
	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 the above rates, cargoes 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.

3.8 Mumbai

Mumbai port is a natural deepwater multi-purpose port that handles 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.				
8.84	14.30	28	-	38	Mineral-wise/ Commodity wise information not available

The total traffic handled by the Mumbai port during 2013-14 was 50.25 million tonnes as compared to 49.25 million tonnes in 2012-13. The traffic in mineral/ore/mineral-based commodities handled in 2012-13 to 2013-14 was as under:

Commodity	(In '000 tonnes)			
	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Rock Phosphate	-	-	272	128
Sulphur	-	-	83	23
Coal	-	-	4018	4221
Soapstone	1000	9000	-	-
Silica Sand	-	-	-	11

Wharfage

Wharfage levied by the Mumbai Port in 2013-14 was as below:

Sl. No.	Commodity	(In ₹ per tonne)	
		Foreign Rate	Coastal Rate
1.	Zinc Ingot	131.35	78.80
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 oldest ports on the west coast of India with modern infrastructural facilities and with one of the finest natural harbours in the world.

PORT FACILITIES

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 take place through this port.

The total handling capacity of this port in 2013-14 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 2,75,000 dwt.

Salient Features of Mormugao Port (2013-14)

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min.	max.				
13.10	14.10	5	6	-	1) 80,000 sq m (Berth No.9) for iron ore (attached to Berth No. 9) 2) (Approx. 32,000 sq.m (at berth No. 5 & 6) for coal & coke 3) (Approx. 77,651sq m No. at 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 and floating crane which are operated by private parties. Ore ships are also loaded by ship's 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) up to 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 ship's 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 as undertaken during 2013-14, is detailed as below:

i) 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 is to be laid in R & D yard. Modification in rail yard expansion is aimed so as to cater to Berth Nos. 5, 6, 7, 10 & 11. The total rail length in MPT yard is 13.25 km. plans are a foot to install electronic interlocking for the entire yard. Yard will have 4 weigh bridges for weighing of wagons. The total cost of the project is estimated at ₹48.93 crores.

ii) Installation of Rapid-in-motion wagon loading facility by M/S SWPL (BOT Operator):- Operator M/s SWPL of Berth No. 5&6 has been granted permission for construction of Silo and conveyor system. Cost of the project is ₹ 45.00 crore. Work commenced from 01.04.2013 was completed in June 2014. With this, the capacity of the terminal has been increased from the present 5.00 million tonnes to about 7.50 million tonnes per annum. The capacity of the silo is 4,000 tonnes. The coal will be conveyed /transported from the stockyard to the silo by a overhead pipe conveyor system of 550 m length which rests on 25 trestles/towers at the rate of 2,000 mt/hr. It is estimated that loading of full rake will be completed in just one hour which thus will increase evacuation of cargo at a faster pace.

iii) Development of coal Handling Terminal at port on (DBFOT basis at B. no. 7): The concession agreement was signed on 22.09.2009 with M/s Adani Murmugao port Terminal Pvt. Ltd., Ahmedabad (AMPTPL). The concession was awarded on 15.05.2010. The construction activities commenced from 15.05.2010. Mormugao port has declared the project facilities & services as ready for operation with effect from 6th June, 2014.

The total traffic handled by the Mormugao port during 2013-14 was 11.74 million tonnes as compared to 17.69 million tonnes in 2012-13. The traffic in mineral / ore / mineral-based commodities handled in 2012-13 and 2013-14 was as follows:

Commodity	(In tonnes)			
	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Iron ore	7402255	43523	-	-
Iron ore (pellets)	18866	-	-	-
Bauxite	70397	153400	-	-
Coke	10185	-	416639	347968
Coal	-	-	7373674	7517587

PORT FACILITIES

Wharfage

Wharfage (wharf dues including unloading, stacking, plot rent and loading charges, etc.) rate levied by Mormugao Port Trust in 2013-14 was as below:

Mineral /ore	Rate (₹/tonne)	Remarks
1. Bauxite	42.00	At Berth
2. Coal/coke	25.20 42.00	At Mooring Dolphin At Berth

Iron Ore and pellets handling charges (exported through MOHP at Berth No. 9) in 2013-14 are as under.

Sl. No.	Description of Goods	Import/ Export rate per tonne or part thereof (in ₹)	Remarks
1.	Iron ore	117.94	At MOHP B.No.9
2.	Iron ore pellets		
	(i) During the period June to August each year	126.11	During June to August
	(ii) season beginning from September to May each year During the fair	222.59	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 77.77 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 2013-14 was 37.04 million tonnes as compared to 32.94 million tonnes during 2012-13.

Salient Features of New Mangalore Port

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

The traffic in mineral/ore/mineral-based commodities handled in 2012-13 and 2013-14 was as follows:

(In lakh tonnes)

Commodity	Exports		Imports	
	2012-13	2013-14	2012-13	2013-14
Potash	-	-	2085	3091
Bentonite	-	-	140	168
Limestone	-	-	2722	677

Wharfage

Wharfage (wharf dues including unloading, stacking, plot rent and loading charges, etc.) levied by New Mangalore Port w.e.f. 01.04.2012 was as follows:

(In ₹ 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 in any form	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 traffic handling capacity of the port in 2013-14 was 49.66 million tonnes. The largest size vessel that can be received at this port is 1,15,000 dwt.

Salient Features of Cochin Port

Draught (m)		No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min.	max.				
9.14	14.50	19	-	2	1.25 lakh

PORT FACILITIES

The total traffic handled by the Cochin port during 2013-14 was 20.89 million tonnes. The traffic in mineral/ore/mineral-based commodities handled during 2012-13 and 2013-14 was as under:

(In '000 tonnes)					
Sl.No.	Mineral/ore	Exports		Imports	
		2012-13	2013-14	2012-13	2013-14
1.	Coal	-	-	28	-
2.	Crude	124	68	10063	10160
3.	Bauxite	-	-	5	-
4.	Zinc concentrate	-	-	82	33
5.	Sulphur	-	-	148	148
6.	Rock phosphate	-	-	183	123
7.	Salt	-	37	65	-
8.	Gypsum	-	-	21	-
9.	Ilmenite sand	-	-	18	37
10.	Granite	12	-	-	-
11.	Clay	23	31	-	-

Figures rounded off.

Development of the port undertaken during 2013-14, is as follows :

(1) The port has commissioned automated cement terminals with facilities for lagging and dispatch.

(2) The port is also planning of a mechanised coal handling terminal for which bids are to be issued.

Wharfage

Wharfage levied by the Cochin Port was as follows:

(In ₹ per tonne)			
Sl. No.	Commodity	Foreign Rate	Coastal Rate
1.	Construction and building materials-		
	(a) Sand, stones Granites & marbles	52.00	31.20
	(b) Cement, clinker, clay, chalk	72.80	43.70
2.	(a) Coal/coke	56.00	33.60
	(b) Thermal coal	56.00	56.00

(Contd.)

Sl. No.	Commodity	Foreign Rate	Coastal Rate
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 traffic handling capacity of JN Port Trust as on 2013-14 was 65.88 million tonnes.

The total traffic handled by the port during 2012-13 was 64.49 million tonnes and during 2013-14, it was 62.30 million tonnes.

Salient Features of Jawaharlal Nehru Port

Draught (m)	No. of berths	No. of moorings	No. of wharves	Stacking area provided (sq m)
min.	max.			
10	14	13	-	-

PORT FACILITIES

4. NON-MAJOR PORTS

The available information on traffic handled by non-major ports during 2012-13 and 2013-14 is furnished in Table-2 and that on facilities for handling and transporting minerals from selected non-major ports are furnished in Table-3.

There are 200 notified non-major ports in the country controlled by State Governments and Union Territories. These are in Gujarat (41), Maharashtra (48), Goa (5), Karnataka (11), 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). In 2013-14, only 69 Non-major ports were reported to have handled cargo traffic.

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 development of their ports through private investments.

Gujarat Maritime Board (GMB), a statutory body of Government of Gujarat, responsible for management, control and administration of 41 ports in Gujarat state. These ports under jurisdiction of GMB are grouped into 10 ports.

In Maharashtra the Government of Maharashtra has encouraged development of its 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.

In addition, Andaman Lakshadweep Harbour Works (ALHW) (A subordinate office of Department of Shipping, Government of India), has been entrusted with the responsibility of providing port and harbour facilities in Andaman & Nicobar Islands and Lakshadweep Islands.

**Table-2 : Traffic Handled at Non-major Ports
2012-13 and 2013-14**

	(In '000 tonnes)	
Commodity	2012-13	2013-14
i) POL	168565	169777
ii) Iron ore	21855	18338
iii) Building material	11953	14178
iv) Coal	109264	126321
v) Fertilizers (including Raw Materials)	12548	12010
vi) Others	63738	76346
Total	387923	416970

Source: Update on Indian Port Sector (31.03.2015), Transport Research Wing, Ministry of Road Transport & Highways, Government of India.

PORT FACILITIES

Table – 3 : Facilities for Handling & Transporting and Mineral Commodities Handled at Selected Non-major Ports, 2012-13 and 2013-14

State/ Port	Facilities for Handling & Transporting						Mineral commodity handled (in tonnes)				
	Traffic Handled (‘000t)	Draught max. (m)	No. of wharves	No. of berths (sq m)	Stacking capacity received (‘000 dwt)	Largest vessel	Commodity	Export		Import	
								2012-13	2013-14	2012-13	2013-14
WEST COAST											
GUJARAT											
Bhavnagar	NA	3.5	1	1	225000	-	Coal	-	-	687417	1005306
							Limestone	-	-	383644	59202
Bedi	7750	14	-	8	-	180176	Bauxite	1352733	1599798	-	-
Dahej Harbour and Infrastructure Ltd	21620	13.0	-	1	62500	-	Coal	-	-	362114	340296
							Rock phosphate	-	-	391535	349914
							Copper concentrate	-	-	1273419	1182182
Jafarabad	3430	9	-	1	-	56512	Copper slag	46898	27250	-	-
							Cement clinker	3165516	3232303	-	-
							coal	-	-	24000	118538
Magdalla Surat	19540	12	01	11	30129	152.06	Coal	100604	100457	5156202	4980402
							Iron ore	-	-	7342184	4968137
							Limestone	32000	10011	1510763	124421
							Iron ore fines	22207	98777	55883	148753
Navalakhi	NA	5.0	5	5	205742	183913	Salt	149271	671522	-	-
							Coal	-	-	6271751	4312005
							Cement	-	-	-	-
							Gypsum	-	-	-	-
Okha	NA	8.0	1	2	50000	-	Bauxite	554483	890941	NA	-
							Limestone	-	-	399898	NA
							Coal	-	-	767016	NA
							Clinker	-	-	-	NA
Pipavav	9070	14.5	-	5	-	90000	Silica sand	-	-	-	-
							Minerals	-	-	752341	577386
							Soda Ash	-	-	20501	-
							IOF	-	-	40000	-
							Fertilizer	-	-	787133	712367
							Others	112766	256710	1631307	1279373
Porbandar	NA	8.5	NA	2	-	79141	Coal	-	-	6090000	4590000
							Bauxite	11940000	10390000	-	-
							-	-	-	-	-
							-	-	-	-	-
							-	-	-	-	-
Adani Hazira Port	NA	12.3	1	1	-	-	Gypsum	-	-	-	151423
Alang Bhavnagar	-	-	-	-	-	-	Steam Coal	-	-	696635	1409191
Jodia	-	-	-	-	-	-	Clinker	-	-	5219	-
Salaya	-	-	1	-	-	-	-	-	-	-	-
Adani Dahej	21620	15.4	-	2	158148	90000	Coal	-	-	7156000	7648000
					78014 (others)						
							Rock phosphate	-	-	339000	276000
							Silica sand	-	-	42000	NA

(Contd.)

PORT FACILITIES

Table - 3 (Contd.)

State/ Port	Facilities for Handling & Transporting						Mineral commodity handled (in tonnes)					
	Traffic Handled (‘000t)	Draught max. (m)	No. of wharves	No. of berths (sq m)	Stacking capacity received (‘000 dwt)	Largest vessel	commodity	Export		Import		
								2012-13	2013-14	2012-13	2013-14	
Sikka	125230	-	-	-	-	-	-	-	-	-	-	
Sachana	NA	-	-	-	-	-	-	-	-	-	-	
Veraval Group of Port	NA	10.21	11	-	-	-	Lime powder	30	-	-	-	
Mandvi Port	NA	4.0	1	1	-	-	Bentonite	96	-	-	-	
							Bentonite	-	-	-	-	
							Bauxite	-	-	-	-	
							China clay	-	-	-	-	
							Cement	-	-	-	-	
Jakhau Port	NA	6.0	-	3	78993	-	Coal	-	-	443098	480691	
Mundra	NA	7.30	1	1	-	-	-	-	-	-	-	
KARNATAKA												
Bilikere	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Karwar	380	NA	NA	NA	NA	NA	-	-	-	-	-	
Kundapura	NA	4.50	700	2	1200	2000	-	-	-	-	-	
MAHARASHTRA												
Dahanu	NA	NA	-	NA	-	-	NA	NA	NA	NA	NA	
Dharamtar	10180	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Dighi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Jaigad	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Kelshi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Ratnagiri	670	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Redi	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
Revdanda	1054	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
EAST COAST												
ANDHRA PRADESH												
Kakinada # (Anchorage Port)	2740				NA		NA Feldspar	NA NA	NA NA	NA -	NA -	

(Contd.)

PORT FACILITIES

Table - 3 (Concl.d.)

State/ Port	Facilities for Handling & Transporting						Mineral commodity handled (in tonnes)				
	Traffic Handling (’000t)	Draught max. (m)	No. of wharves	No. of berths	Stacking capacity received (sq m)	Largest vessel (’000 dwt)	commodity	Export		Import	
								2012-13	2013-14	2012-13	2013-14
EAST COAST											
ANDHRA PRADESH (Contd.)											
(Kakinada 3 ships Deep water Port)	13400	NA	NA	NA	NA	NA	Ball clay	NA	-	NA	NA
							Rock	-	-	NA	NA
							Phosphate				
							Bentonite	NA	NA	-	-
							Feldspar chips	-	-	NA	NA
							Iron ore	-	-	-	-
							Limestone	-	-	NA	NA
							Coal	-	-	NA	NA
							C P Coke	-	-	NA	NA
							Alumina	-	-	-	NA
Krishnapat- anam	25200	18	-	9	450000	200	Iron ore	-	-	148360	-
							Gypsum	-	-	-	100932
							Barytes	411855	244315	-	-
							Clinker	-	79100	-	-
Rawa	1540	-	-	-	-	-	-	NA	NA	NA	NA
TAMIL NADU											
Cuddalore	270	@	-	-	80000	@@	-	-	-	-	-

Source: Basic Port statistics of India, 2013-14.

@ not applicable being a roadstead port.

@@ Any size being an anchorage port.

Two ports, namely, 1. Kakinada Anchorage Port under Govt. of Andhra Pradesh and 2. Kakinada Deep water Port under private organisation M/s Kakinada Sea Port Ltd, in East Godavari district, Andhra Pradesh at Kakinada.

5. PRIVATE PORTS

5.1 Major Development Projects International Container Trans-shipment Terminal (ICTT) at Vallarpadam

The International Container Trans-shipment Terminal (ICTT), Vallarpadam is India's first dedicated International Container Trans-shipment Terminal. It was developed by Cochin Port Trust and M/s India Gateway Terminal Pvt. Ltd (IGT), a subsidiary of M/s Dubai Ports World (DPW) through a Public- Private Partnership on Build-Operate - Transfer (BOT) basis. It was dedicated to the nation on 11th February, 2011. This is a

major milestone achieved in the 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.

PORT FACILITIES

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 M/s DPW from 1st January 2015.

A decision in this regard was reportedly taken at a meeting of various stakeholders held in October 2014 convened by the Cochin Port Trust.

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 State of Gujarat. Mundra Port is the gateway for cargo to the Northern hinterland and has increasingly become is the gateway for 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 6,473 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 has the potential to 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 Functional, 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 mechanised efficient port with one of the lowest turnaround time in India

- * In-zone Road & Rail connectivity
- * Well connected with National & State Highways
- * 64 km Private Rail line connects Mundra to National Railway Network at Adipur near Gandhidham, Kachchh
- * 210 km 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 one of India's largest Private Sector Port and Terminal Company by capacity and throughput.

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 Hazira facility has 30 MTPA of dry bulk and break bulb cargo handling capacity while Vadinar has capacity of 58 MTPA for liquid cargo and Paradip has an iron ore berth of 16 MTPA. Essar ports is currently developing a coal berth terminal of 14 MTPA at Paradip and a dry bulk terminal at salaya, on India's west coast, with a capacity of 20MTPA. Essar port is expanding its Hazira terminal capacity by 20MTPA which would augment its overall capacity to 50MTPA.

Essar Ports has an existing aggregate capacity of 104 MTPA. The Company is in process of increasing its aggregate ports capacity to 194 MTPA . In addition,Essar has plans for 32 MTPA iron ore export terminal consisting of three berths at Visakhapatnam in the State of Andhra Pradesh.

PORT FACILITIES

FUTURE OUTLOOK

India's port facilities are in for a major overhaul as development of Ports and augmentation of capacities are significant for economic vibrancy and growth. The projected capacity during the terminal year of 12th Five Year Plan for the major ports would be 1,229.24 MT, which is 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 would be 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 ₹67,295.54 crore. Most of the investment is expected to flow from Private Sector i.e. ₹ 51,036 crore (76%) and the remaining share of 24% is anticipated from internal resources and budgetary support of the Government.