

Appendix-02 Tables – Statistical

Indicators / Archives	Title	Table No.
• Kandla and Mumbai Ports ranks No. 1 & 2 respectively.	Traffic handled – 1997-98 to 2000-01 by Major & Minor Ports.	09.
• 70% of the Foreign Trade by value passes through the Ports	Indian's Foreign Trade	10
• Total investment required in the Port Sector development during next 20 years is US\$ 21.86 Billion. (Appx. : Rs.11,000 cr.)	Assessment of Investment requirements to fund port development 2001-02 to 2021-22.	11.
• By 2021-22, total traffic projected to be handled at Major ports would be 546 88 MT (45% share) and at Minor Ports 675.45 MT (55% share) from the cargo level in 2001-02 of 304.12 MT (77% share) for Major ports and of 89.65 (23% share) for Minor Ports.	Assessment of Traffic Projections at Indian Ports 2001-02 to 2021-22.	12.
• Liquid and dry bulk cargo to increase from 167.46 MT & 165.81 MT respectively in 2001-02 to 493.81 MT & 425.12 MT respectively in 2021-22.	Commodity (clustered)-wise traffic projections at Indian Ports between 2001-02 to 2021-22.	13.
• Total cumulative investment allocation upto Ninth Five Year Plan is Rs.13492 82 Crores.	Investment allocation made for development of Ports – First Five Year Plan to Ninth Five year Plan.	14.
• Involves investment of Rs.78.76 Billion and capacity addition of 92.45 MT.	Status of Private Sector participation – 2000-01.	15.
• Total market is US\$ 45 to 60 Billion	Estimated available market in Port Sector	16
• Calcutta, Paradip and Vizag ranked 1, 2 & 3 respectively in % utilization of capacity.	Capacity utilization at various Major ports, March, 2000.	17
• Kandla Port ranked high for non-working time by % at Port whereas Calcutta Port ranked high for % non-working time at berth	% of non-working time to total stay at berth / port – liquid bulk handling – 1999-2000.	18

• Average parcel size rate was highest at Visakhapatnam in the DWT cluster of 40000 to 80000 DWT. Tuticorin remained lowest in average parcel size as well as DWT cluster	DWT cluster of vessels – liquid bulk handled during 1999-2000 at Major ports	19
• Kandla ranked first and Tuticorin ranked the lowest.	Ranking of Major ports handling liquid bulk by no. of vessels handled.	20
• Kandla ranked the highest and Tuticorin remained lowest.	Ranking by cargo traffic (POL, crude plus other liquid chemicals) handled at Major ports – 1999-2000.	21.
• Kandla ranks no. 1 followed by Visakhapatnam.	Berth capacities to handle POL and liquid products at Major ports as on 31.03.2000	22.
• Maritime States	Maritime States and Ports of India (other than captive and intermediate ports).	23.
• Gujarat Ports ranked no. 1 followed by Maharashtra Ports.	Cargo handled by Minor and Intermediate Ports – 2001-02.	24.

Table No. 9

TRAFFIC HANDLED AT INDIAN PORTS

(1997-98 TO 2000-01)

Year	Major Ports		Minor Ports	
	Quantity (in million Tonnes)	Growth Rate (%)	Quantity (in million Tonnes)	Growth Rate (%)
1997-98	251.66	10.74	35.42	36.81
1998-99	251.72	0.02	38.06	7.45
2000-2001	280.96	3.32	88.00	41.14

Source : Indian Ports Association, New Delhi, India (2001)

Table No. 10

INDIA'S FOREIGN TRADE

(Figures in Billion US\$)

Year	Value of exports	Value of imports	Balance of trade
1991-92	17.9	19.4	-1.5
1992-93	18.4	21.9	-3.5
1993-94	22.2	23.3	-1.1
1994-95	26.3	28.7	-2.4
1995-96	31.8	36.7	-4.9
1996-97	33.5	39.1	-5.6
1997-98	35.0	41.5	-6.5
1998-99	33.2	42.4	-9.2
1999-2000	36.8	49.7	-12.9
2000-01(P)	44.1	49.8	-5.7

70% of the countries's foreign trade by value passes through the ports

(P) Provisional

Source : Ministry of Commerce & Industry (2001).

Table No.11

AN ASSESSMENT OF
INVESTMENT REQUIREMENTS TO FINANCE PORT DEVELOPMENT

(Rs in billion)

Indian Ports	2001-02	2006-07	2011-12	2016-17	2021-22
A - Major Ports		-			
Kolkata & Haldia	2 0	2.00	4.00	8 40	2 40
Paradip	-	3.60	-	-	-
Visakhapatnam	4 5	4 50	-	6 90	-
Chennai	-	5.00	4.50	2 00	6 00
Tuticorin	-	0.80	4.50	-	-
Cochin	-	13.60	1.60	4.50	-
New Mangalore	-	1 10	6.10	3 60	-
Mormugao	-	-	0 80	-	2.00
Mumbai	-	3 60	-	-	-
Jawaharlal Nehru	-	12.10	19.60	23.00	-
Kandla	6.05	3 60	2.00	1 10	-
Ennore	-	19.20	1.10	1.10	-
Total (A)	12.55	69.10	44.20	50.60	10 40
B - Minor Ports	8 7	143.45	112 10	169.40	159.25
C - Harbour Costs	34.0	137.00	19 00	36.00	-
Total Cost	55 25	349.55	175.30	256.00	169.65
Total (A+B+C)	(US\$ 1.20 billion)	(US\$ 7 60 billion)	(US\$ 3.81 billion)	(US\$ 5 56 billion)	(US\$ 3.69 billion)

TOTAL INVESTMENT REQUIRED IN THE PORT SECTOR DURING THE NEXT 20 YEARS IS
US\$21 86 BILLION (Source Perspective Plan for Indian Port Sector - Vision 2020)

Table No. 12

AN ASSESSMENT OF
TRAFFIC PROJECTIONS AT INDIAN PORTS

(in million tonnes)

Indian Ports	2001-02	2006-07	2011-12	2016-17	2021-22
A - Major Ports					
Kolkata & Haldia	29.55	39.29	46 44	55.45	58.37
Paradip	23 12	38.21	40.07	40.9	41.63
visakhapatnam	36 73	42.89	46.48	50 66	54.72
Chennai	26 77	29.98	28.88	33.38	43.5
Tuticorin	10.85	13 13	16.88	23 01	24.06
Cochin	13.63	22.56	25.37	29.12	32 22
New Mangalore	23 6	25.51	35.28	38 67	40.31
Mormugao	28 11	29.96	30.86	31.9	33 18
Mumbai	30	35.05	40.18	47.47	53 51
Jawaharlal Nehru	17.69	20 16	36.04	56.58	57 09
Kandla	48.41	61 96	66 16	68 01	68 98
Ennore	15.66	25.55	36 53	38 69	39.31
Total (A)	304.12	384.25	449.17	513 84	546 88
% share of traffic	77%	62%	57%	51%	45%
B - Minor Ports	89 65	231.28	343.44	497 85	675.45
% share of traffic	23%	38%	43%	49%	55%
Total (A+B)	393.77	615.53	792.61	1011.69	1222 33

Source : Perspective Plan for Indian Port Sector - Vision 2020

Table No.13

AN ASSESSMENT OF
COMMODITY-WISE TRAFFIC PROJECTIONS AT INDIAN PORTS

(in million tonnes)					
Commodities	2001-02	2006-07	2011-12	2016-17	2021-22
Liquid Bulk	167.46	262.86	312.33	417.03	493.81
Dry Bulk	165.81	262.03	340.88	384.06	425.12
Containers	33.3	54.4	90.6	147.4	212.39
Break Bulk	27.2	36.24	48.8	63.2	91.01
Total	393.77	615.53	792.61	1011.69	1222.33

Source : Perspective Plan for Indian Port Sector - Vision 2020

Table No.14

ALLOCATION OF RESOURCES
INVESTMENT MADE FOR DEVELOPMENT OF PORTS

Plan Periods		Investment (Rs.in million)
First Five Year Plan	1951-1956	263.2
Second Five Year Plan	1956-1961	460.0
Third Five Year Plan	1961-1966	930.0
Annual Plan	1966-1967	240.0
Annual Plan	1967-1968	250.0
Annual Plan	1968-1969	400.0
Fourth Five Year Plan	1969-1974	2890.0
Fifth Five Year Plan	1974-1978	4140.0
Annual Plan	1978-1979	530.0
Annual Plan	1979-1980	480.0
Sixth Five Year Plan	1980-1985	5440.0
Seventh Five Year Plan	1985-1990	12690.0
Annual Plan	1990-1991	1949.5
Annual Plan	1991-1992	2275.5
Eighth Five Year Plan	1992-1997	29840.0
Ninth Five Year Plan	1997-2002	72150.0
		134928.2
		(In US billion \$ 2.93)

Source : Transport Research Wing, Ministry of Surface Transport, Government of India

Table No 15

CURRENT STATUS OF PRIVATE SECTOR PARTICIPATION IN PORT SECTOR

Status of BOT	No. of Schemes	Investments involved		Capacity addition
		Billion Rupees	Billion US\$	Million Tonnes
Schemes already approved / completed / under implementation	16	44.26	0.96	58.05
Schemes under consideration / bidding done	5	30.00	0.65	29.40
Sub Total	21	74.26	1.61	87.45
Schemes for which bids likely to be invited	3	4.50	0.10	5.00
TOTAL	24	78.76	1.71	92.45

Source : Indian Ports Association, New Delhi, India (2001).

Table No.16

THE PORT BUSINESS ENVIRONMENT

ESTIMATED AVAILABLE MARKET IN PORT SECTOR

		(US\$ in Billion)
Projects		Estimated annual revenues
1	Terminal Operations	30 to 40
2	Tug assist services	4 to 5
3	Maintenance Dredging	4 to 5
4	Information Technology	2 to 3
5	Environment and ship safety services	1 to 2
6	Other port services	4 to 5
Total available market		45 to 60

Source : Port Reform Toolkit, the World Bank - 2001 page 10

Table No. 17

CAPACITY : MARCH,2000

(In Million Tons)

PORT	CAPACITY	TRAFFIC	% UTILISATION
CALCUTTA	3.40	*5.60	164.71
HALDIA	17.00	10.80	63.53
PARADIP	1.50	2.20	146.67
VISAKHAPATNAM	10.80	*15.30	141.67
CHENNAI	8.50	10.10	118.82
TUTICORIN	2.30	0.50	21.74
COCHIN	10.50	9.90	94.29
NEW MANGALORE	11.00	8.30	75.45
MORMUGAO	1.50	1.10	73.33
MUMBAI	21.00	16.80	80.00
J.N.P.T.	-	1.40	-
KANDLA	31.00	*34.60	111.61
TOTAL	118.50	116.60	98.40

*INCLUDES TRANSHIPMENT ALSO.

Source : A Profile of Major Ports of India - 1999-2000.

Table No. 18

PORT PERFORMANCE INDICATORS - LIQUID BULK
 % OF NON-WORKING TIME TO TOTAL STAY AT BERTH / PORT
 (1999-2000)

(in percent)

PORT		% at Berth	% at Port
1	Calcutta	43.15	19.46
2	Haldia	39.56	12.15
3	Paradip	N.A.	N.A.
4	Vishakhapatnam	38.05	22.18
5	Chennai	30.00	11.00
6	Tuticorin	2.06	2.99
7	Cochin	28.29	14.87
8	New Mangalore	22.00	58.00
9	Mormugao	28.08	21.40
10	Mumbai	32.41	61.56
11	JNPT	6.21	6.21
12	Kandla	30.00	77.00

(Source Indian Ports Association, a profile of Major Ports of India - 1999-2000)

Table No. 19

DWT cluster of vessels for liquid bulk during 1999-2000 at major ports of India

PORT	Total (Nos)	Average parcel size (Tonnes)	DWT Cluster (Nos)				
			<10000	20000<30000	40000<80000	80000<100000	100000>
Calcutta	392	13619	251	82	23	4	32
Haldia	648	17674	108	120	338	82	-
Paradip	290	10367	106	121	62	1	-
Vishakhapatnam	644	24850	47	247	277	40	33
Chennai	518	21296	179	131	148	32	28
Tuticorin	143	6984	45	84	14	-	-
Cochin	398	23653	49	143	156	47	3
New Mangalore	415	23039	47	223	90	33	22
Mormugao	158	8363	20	109	29	-	-
Mumbai	971	21735	323	334	224	45	45
Kandla	1100	9358	198	502	255	13	132
JNPT	232	28483	75	92	65	-	-
TOTAL	5909		1448	2188	1681	297	295

DWT = Dead Weight Tonnage of vessel carrying cargo

(Source Indian Ports Association A profile of Major Ports of India 1999-2000)

Table No 20

**Vessel Traffic - Liquid Bulk
(1999-2000)**

Sr. No.	Ports	Nos.of Vessels	% of Traffic to Total Traffic	Ranking
1	Calcutta	392	6.63	8
2	Haldia	648	10.97	3
3	Paradip	290	4.91	9
4	Vishakhapatnam	644	10.9	4
5	Chennai	518	8.77	5
6	Tuticorin	143	2.42	12
7	Cochin	398	6.74	7
8	New Mangalore	415	7.02	6
9	Mormugao	158	2.67	11
10	Mumbai	971	16.43	2
11	JNPT	232	3.93	10
12	Kandla	1100	18.61	1
TOTAL		5909	100%	

(Source Indian Ports Association, A profile of Major Ports of India - 1999-2000)

Table No. 21

Cargo Traffic of POL, CRUDE + other Liquid Bulk Chemicals
handled during 1999-2000

(in '000 Tons)

Sr No.	Ports	Cargo (in '000 Tons)	% Share in Total Traffic	Ranking
1	Calcutta	6199	4.79	8
2	Haldia	11678	9.03	4
3	Paradip	3018	2.33	9
4	Vishakhapatnam	15946	12.33	3
5	Chennai	11613	8.98	5
6	Tuticorin	986	0.77	12
7	Cochin	10217	7.9	6
8	New Mangalore	9589	7.41	7
9	Mormugao	1334	1.03	11
10	Mumbai	18582	14.37	2
11	JNPT	2171	1.68	10
12	Kandla	38002	29.38	1
TOTAL		129335	100%	

(Source Major ports of India - A Profile 1999-2000 of Indian Port Association)

Table No. 22

Berths available to handle POL & other liquid products at Major Ports
as on 31.03.2000

Sr No	Ports	No. of Berths	Aggregate Capacities (in Million Tons)	(99-2000 % of occupancy)*
1	33	7	3.40	40.22
2	Haldia	3 + (2 Barge Jettys)	17.00	71.22
3	Paradip	1	1.50	68
4	Vishakhapatnam	3	10.80	75.25
5	Chennai	2	8.50	59.8
6	Tuticorin	1	2.30	38
7	Cochin	3	10.50	63.27 00%
8	New Mangalore	2 + (1 Virtual Jetty)	11.00	52
9	Mormugao	1	1.50	67
10	Mumbai	5	21.00	51
11	JNPT	2	-	-
12	Kandla	4 + (2SBM) + (1 Virtual Jetty)	31.00	90.17
TOTAL		34 + 2SBM + 2 Barge Jetty + 2 Virtual Jettys	118.50	

(Source Development Wing, Ministry of Surface Transport and Major Ports of India - A profile - 1999-2000 by Indian Port Association).

Table No 23

MARITIME STATES AND PORTS OF INDIA

SR NO.	STATE		MINOR PORT
1	Gujarat	1. Kandla	1. Mundra 2. Jakhau 3. Mandavi 4. Salaya 5. Okha 6. Bedi Bunder 7. Sikka 8. Pindhara 9. Porbander 10. Veraval 11. Jafrabad 12. Pipavav 13. Bhavnagar 14. Dahej 15. Magdalla / Hazira
2	Maharashtra	1. Mumbai 2. JNPT	1. Ratnagiri 2. Redi
3	Goa	1. Mormugao	
4	Karnataka	1. New Mangalore	1. Karwar 2. Honawar 3. Malpe 4. Mangalore
5	Kerala	1. Cochin	1. Calicut 2. Alleppey 3. Neendakara 4. Quilon 5. Colachel
6	Tamilnadu	1. Tuticorin 2. Chennai 3. Ennore (Corporatised)	1. Nagapattinam 2. Cuddalore 3. Pondicherry
7	Andhra Pradesh	1. Visakhapatnam	1. Kakinada 2. Machilipatnam
8	Orissa	1. Paradip 2. Haldia	1. Gopalpur 2. Dhamra
9	W Bengal	1. Calcutta	
TOTAL		13	33

Note Captive and Intermediate Ports are excluded

(Source Indian Port Association, Major Ports of India - A Profile 1999-2000)

Table No. 24

Minor & Intermediate Ports

Cargo handled in 2001-02

(in MMT)

Sr.No	States	No of ports	Total Cargo Handled (2001-02)
1	Gujarat	48	82.55
2	Maharashtra	48	4.98
3	Goa	7	2.97
4	Karnataka	9	0.70
5	Kerala	16	0.13
6	Tamilnadu	14	0.54
7	Andhra Pradesh	12	5.10
8	Orissa	2	0.02
9	West Bengal	1	-
10	Others	28	0.91
TOTAL		185	97.9

(Source Indian Port Association & Ports of India, Economic Times)