社会開発協力部報告書

No. 7

FINAL REPORT

THE STUDY ON THE DEVELOPMENT PROJECT OF DHAKA AND NARAYANGANJ PORTS IN THE PEOPLE'S REPUBLIC OF BANGLADESH

VOLUME 2 APPENDICES

SEPTEMBER 1987

JAPAN INTERNATIONAL COOPERATION AGENCY

FINAL REPORT

THE STUDY ON THE DEVELOPMENT PROJECT OF DHAKA AND NARAYANGANJ PORTS IN THE PEOPLE'S REPUBLIC OF BANGLADESH

VOLUME 2 APPENDICES

SEPTEMBER 1987

CONTENTS

1. TRAFFIC SURVEY
1-1 Objectives and basic policy of the port traffic survey.....1- 1
1-1-1 Objectives of the port traffic survey.....1- 1
1-1-2 Basic policy of the port traffic.....1- 1
1-2 Methodology of the port traffic survey.....1- 4
1-2-1 Classification of jetty types.....1- 4
1-2-2 Cargo O-D and movement survey.....1- 4
1-2-3 Passenger movement survey at passnger terminals.....1- 6
1-2-4 River traffic volume survey from river bank....1- 6
1-3 Outline of the result of the port traffic survey...1- 7
1-3-1 Cargo O-D and movement survey.....1- 7
1-3-2 Passenger movement survey.....1-33
1-3-3 River traffic survey.....1-33
1-4 Inter-district cargo movement by IWT.....1-38

2. OUTLINE OF DHAKA - NARAYANGANJ METROPOLITAN AREA
2-1 Enumerated and adjusted population.....2- 1

3. NATURAL CONDITIONS OF DHAKA AND NARAYANGANJ PORTS
3-1 Soil investgation.....3- 1
3-2 Weather conditions.....3- 6
3-3 River features.....3- 9
3-3-1 Fluctuation of the water level in Dhaka port and Naryanganj port.....3- 9
3-3-2 River surface fluctuation of the three major rivers, the Jamuna, the Ganges, and the Meghna.3-16
3-3-3 Influence of the flood waves of the major rivers on the port water level 3-20
3-3-4 River cross sections in both ports.....3-23
3-3-5 Stability of river beds in both port area.....3-27
3-3-6 River current in Dhaka and Narayanganj ports...3-38
3-3-7 Maintenance dredging in the entrance channel...3-43

3-4 Earthquakes.....3-49
3-4-1 Earthquakes in Bangladesh.....3-49
3-4-2 Outline of the code for earthquake resistant design.....3-51

4. DEMAND FORECAST
4-1 Macroeconomic forecast.....4- 1
4-2 Traffic forecast.....4-12
4-3 Land demand for urban activities.....4-20

5. ENGINEERING ASPECTS OF PORT FACILITIES
5-1 Engineering aspects.....5- 1
5-1-1 Current speed.....5- 1
5-1-2 Wave conditions.....5- 1
5-1-3 Measurement for Truck-Cranes and Forklifts.....5- 1

6. MASTER PLAN
6-1 Land use concept around the port area.....6- 1
6-1-1 Rough estimation of road traffic demand in the port related zone.....6- 1

7. ECONOMIC ANALYSIS
7-1 Coaster transportation cost.....7- 1
7-1-1 Vessel operating performance.....7- 1
7-1-2 Transport cost.....7- 2
7-2 Truck transportation cost.....7- 6
7-2-1 Truck operating performance.....7- 6
7-2-2 Transport cost.....7- 6
7-3 Train transportation cost.....7- 9
7-3-1 Transport cost.....7- 9
7-4 Cargo handling cost.....7-10
7-4-1 Conventional cargo handling.....7-10
7-4-2 Improved cargo handling.....7-10
7-5 Value of handling cargo.....7-13
7-6 Costs of land.....7-14

8. A COMPARISON OF FEEDER TRANSPORTATION COSTS
8-1 Transportation cost.....8- 1

APPENDIX 1

TRAFFIC SURVEY

1-1 Objectives and basic policy of the port traffic survey

1-1-1 Objectives of the port traffic survey

The objectives of the port traffic survey are to clarify the distribution of functions between Dhaka and Narayanganj ports, and to clarify the hinterland of both ports.

1-1-2 Basic policy of the port traffic survey

IWTA conducted a dry cargo movement survey at the port of Dhaka for one month from November 5th to December 4th, 1984 as shown in Table 1.1.1. The survey areas are shown in Fig. 1.1.1

However, no previous port traffic survey data is available regarding the port of Narayanganj.

Since IWTA's 1984 survey provides good data for port planning, the present port traffic survey is carried out in accordance with the following basic policy as summarized in Table 1.1.1.

(1) Regarding Dhaka port

To conduct a supplemental port traffic survey at public jetties.

(2) Regarding Narayanganj port

To conduct a complete port traffic survey for both public and private jetties.

(3) Regarding both ports

To conduct a passenger head counting survey at the passenger terminals.

To conduct a river traffic volume survey at typical points.

Table 1.1.1 Comparison of Port Traffic Surveys in 1984 and 1986

	30 day Survey in 1984 1)		30 day Survey in 1986 2)	
	Survey points	Survey items	Survey points	Survey items
1. Cargo O-D Survey			Mainly Public Jetties	Cargo O-D, Transport Mode, Vessel Type and Capacity
2. Cargo Movement	All Cargo Handling Points between Swari Ghat and Fatullah	Number of Vessels Quantity of Cargo	Public Jetties and Private Jetties	Vessel Type and Capacity, Quantity of Cargo
3. Passenger Movement	Indirect Survey by Number of Tickets sold	Number of Passengers	Passenger Terminals (Direct Survey by Head Count)	Number of Passengers, Vessel Type
4. River Traffic Survey			Mouth of Port and Bridge Crossing Point	Hourly variation of River Traffic by Vessel Type (0800H-1800H)

Note: 1) IWTA Survey 2) JICA Study Team Survey :31 commodities surveyed.

1-2 Methodology of the port traffic survey

1-2-1 Classification of jetty types

Jetties are generally classified into two types in Bangladesh, namely public and private use jetties.

(1) Public jetties

Public jetties are defined as those constructed, maintained and repaired by IWTA and semi-government public corporations. The port traffic survey concentrates on the IWTA jetties because of the large variety of cargoes handled.

Although the seasonal river water level variation is very large, 5 to 6 meters in a year, there are many fixed type public jetties. These public jetties are difficult to use in the dry season except for vessels with cranes (normally called coasters in Bangladesh).

(2) Private jetties

There are two types of private jetties, jetties with structures and jetties without structures, that is natural river bank landing areas.

Private jetties are defined as all those constructed, maintained and repaired by the private sector.

1-2-2 Cargo O-D and movement survey

(1) Survey at Public Jetties

1) Origin and Destination (O-D) survey of dry cargo movement

(i) Survey points

The duration of the survey is one month from February 18th to March 19th, 1986.

The following points are selected to clarify the functions and the hinterlands of the ports.

(a) IWTA's public jetties
(b) Public corporations' jetties which seem important
(c) Natural river jetties with high public use mainly by country boats

(ii) Survey items

The following are the survey items for the O-D survey of dry cargo movement.

(a) Origin and Destination by district
(b) Transport mode (origin to jetty and jetty to destination)
(c) Capacity of vessels, carried volume by commodity, vessel type
(d) Vessel's waiting days for berthing

2) Cargo handling days survey for incoming cargo

Apart from the O-D survey of dry cargo for one month, a sample survey is conducted to grasp the duration of cargo handling for coasters, cargo launches and flat barges.

(2) Survey at private jetties

A cargo movement survey is conducted for one month.

The following items are included in the cargo movement survey.

- Capacity of vessel, carried volume by commodity, vessel type

(3) Survey at passenger terminals

Passengers sometimes carry cargo at the passenger terminal. After only one week it was determined that the cargo volume carried is insignificant, and so the survey was suspended.

1-2-3 Passenger movement survey at passenger terminals

The following are the survey items at the passenger terminals of Dhaka and Narayanganj.

- Type of passenger vessel (deck type and hull type)

- Capacity of passenger vessel

- Number of passengers

- Origin and Destination of passenger vessel by district

1-2-4 River traffic volume survey from river bank

Vessel traffic volume was observed for twenty days at two points at Dhaka port and at one point at Narayanganj port to grasp the situation of incoming and outgoing vessels.

1-3 Outline of the result of the port traffic survey

Fig. 1.3.1, Fig. 1.3.2 and Table 1.3.1 show the selected survey points in accordance with the basic policy.

1-3-1 Cargo O-D and movement survey

(1) Number of incoming and outgoing vessels

Table 1.3.2 shows the number of vessels surveyed for one month from February 18th to March 19th, 1986. Empty vessels are excluded in the survey.

Country boats account for 23 percent of all vessels at Dhaka port. Few country boats berth at public jetties at Dhaka. On the other hand, at Narayanganj port, approximately 90 percent of the vessels are country boats.

(2) Carried volume by commodity by jetty type

Table 1.3.3(1) - (5) show the carried volume by commodity by jetty type.

Incoming cargo accounts for almost all the cargo handled at Dhaka port; outgoing cargo comprises merely two percent of the total cargo.

Only four commodities, namely cement, newsprint, wheat and iron and steel comprise 95 percent of the cargo handled at the IWTA jetties of Dhaka port. Public corporation jetties handle cement, fertilizer and sugar. No outgoing cargo is observed at the public corporation jetties.

Meanwhile, outgoing cargo accounts for about 20 percent of the total cargo at Narayanganj port.

At the IWTA public jetties of Narayanganj port, 95 percent of the incoming cargo is fertilizer, wheat and raw jute. Jute and wheat are the major incoming cargo. Wheat, raw jute and jute goods are the main outgoing cargoes at the public corporation jetties.

Salt, raw jute, wheat, rice and sand comprise 94 percent of the incoming cargo at the private jetties of Narayanganj port. 89 percent of the outgoing cargo is raw jute, salt and wheat. (Refer to Table 1.3.4 (5) excluding Nitaiganj Ferry Ghat shown in Table 1.3.4 (4).)

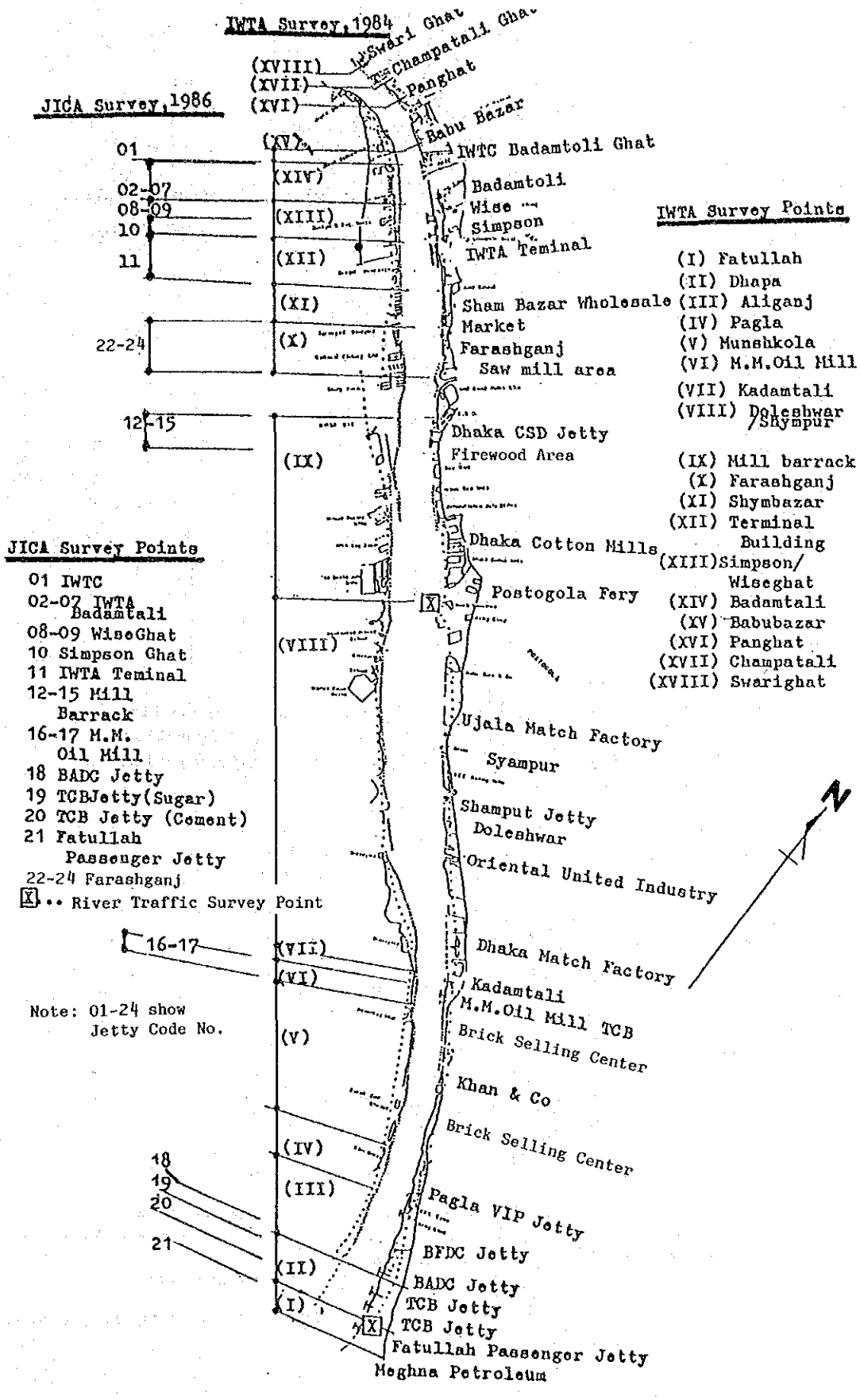

Fig. 1.3.1 Port Traffic Survey Points at the Port of Dhaka

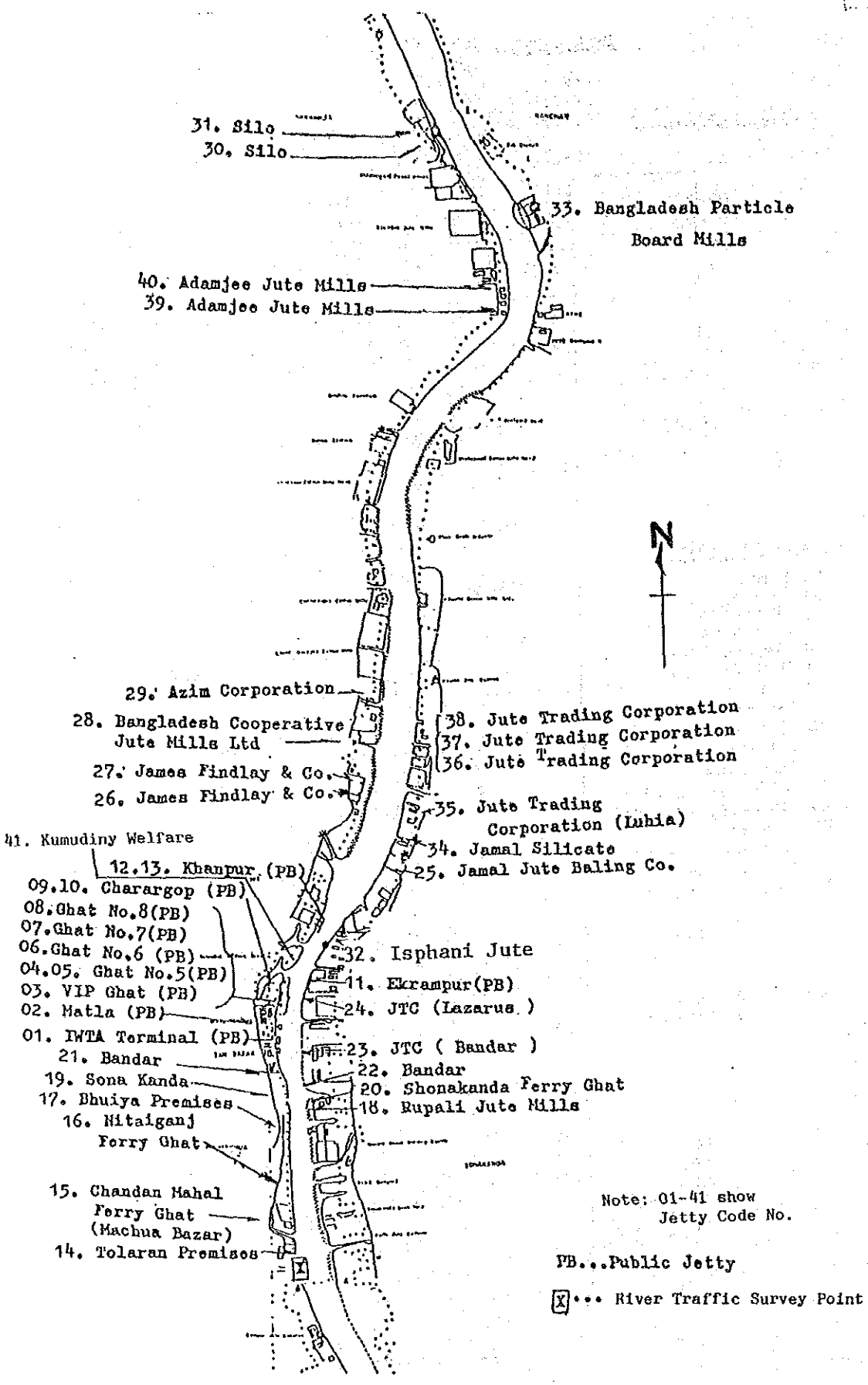

Fig. 1.3.2 Port Traffic Survey Points at the Port of Narayanganj

Table 1.3.1 Number of Jetties for Port Traffic Surveys

	Survey Period (days)	Dhaka Port					Narayanganj Port					Grand Total
		Public Jetties			Private Jetties	Total	Public Jetties			Private Jetties	Total	
		IWTA	Semi-Gov.	Sub-Total			IWTA	Semi-Gov.	Sub-Total			
Cargo O-D Survey	30	16[1)]	3[3)]	19	0	19	12[5)]	6[7)]	18	1[8)]	19	38
	7	2[2)]	0	2	0	2	1[6)]	0	1	0	1	3
	Sub-Total	18	3	21	0	21	13	6	19	1	20	41
Cargo Movement Survey	30	16[1)]	3[3)]	19	0	19	12[5)]	6[7)]	18	20[9)]	38	57
	9	2[2)]	0	2	3[4)]	5	1[6)]	0	1	1[10)]	2	7
	Sub-Total	18	3	21	3	24	13	6	19	21	40	64
Passenger Movement Survey	21	1[11)]	0	0	0	1	1[12)]	0	0	0	1	2
	Sub-Total	1	0	0	0	1	1	0	1	0	1	2
Grand Total		37	6	42	3	46	14	12	39	22	61	107

Note: 1) denotes Jetty Type 1 with Jetty Code No. 01 10, 12 17 at Dhaka Port (IWTA Public Jetties)

2) denotes Jetty Type 2 with Jetty Code No.11 (Dhaka Passenger Terminal) and No.21 (Fatullash Passenger Jetty)

3) denotes Jetty Type 3 with Jetty Code No.18, 19, 20 at Dhaka Port (Semi-government Public corporation Jetties)

4) denotes Jetty Type 4 with Jetty Code No.22, 23, 24 at Dhaka Port (Normally called Farashganj Area)

5) denotes Jetty Type 5 with Jetty Code No. 02 13 at Narayanganj Port (IWTA Public Jetties)

6) denotes Jetty Type 6 with Jetty Code No.01, Narayanganj Passenger Terminal

7) denotes Jetty Type 6 with jetty Code No.23, 24, 30, 31, 39, 40 at Narayanganj Port (Semi-government Public corporation Jetties)

8) denotes jetty Type 8 with Jetty Code No.16 at Narayanganj Port (Normally Called Nitaiganj Ferry ghat)

9) denotes Jetty Type 9 with Jetty Code No.14, 15, 17 22, 25 19, 32 38 at Narayanganj Port (Private Jettie)

10) denotes Jetty Type 10 with Jetty Code No.41 at Narayanganj Port (Normally called Kamudiny, private jetty)

11) Jetty Code No.11, Dhaka Passenger Terminal

12) Jetty Code No.01, Narayanganj Passenger Terminal

* Refer to Fig.3.1 and Fig.3.2 regarding Jetty Code No.

Table 1.3.2 Number of Vessesl Surveyed at Dhaka and Narayanganj Ports

	Jetty		Coaster		Cargo Launch		Passenger Launch		Flat Barge		Mechanized Country Boat		Manual Country Boat		Others		Total	
			In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out	In	Out
DHAKA	01	IWTC Badamtali	2	0	5	0	25	27	3	0	0	0	0	0	0	0	35	27
	02 ~ 07	Badamtali	20	0	29	3	0	0	10	0	1	2	6	0	0	0	66	5
	08 ~ 10	Wise/Simpson Ghat	0	0	10	0	15	5	1	0	0	0	0	0	0	0	26	5
	12 ~ 15	Mill Barrack	3	0	2	0	0	0	0	0	0	0	2	25	0	0	7	25
	16,17	M.M. Oil Mill	7	0	23	0	0	0	19	0	0	0	0	0	0	0	49	0
		Sub-total	32	0	69	3	40	32	33	0	1	5	10	62	0	0	185	102
	18 ~ 20	Dhapa	16	0	27	0	0	0	7	0	0	0	0	0	0	0	50	0
		Total	48	0	96	3	40	32	40	0	1	5	10	62	0	0	235	102
NARAYANGANJ	02 ~ 08	Ghat No. 5-8	8	2	96	4	0	2	26	0	26	3	41	59	2	2	191	72
	09, 10	Charargop	0	0	1	1	0	0	0	2	1	3	27	183	0	0	29	189
	11	Ekrampur	4	0	0	0	0	0	0	0	0	0	54	172	0	0	58	172
	12, 13	Khampur	0	0	22	0	0	0	12	0	0	1	9	2	0	0	43	3
		Sub-total	12	2	111	5	0	2	38	2	27	7	131	416	2	2	321	436
	23, 24	J.T.C. (Bandar)	0	0	3	5	0	0	1	16	2	0	92	0	0	0	98	21
	30, 31	Silo	26	0	1	1	0	0	0	0	0	0	0	192	0	0	27	193
	39, 40	Adamjee Jute Mills	2	0	34	37	0	0	7	2	1	0	305	4	0	0	349	43
		Sub-total	28	0	38	43	0	0	8	18	3	0	397	196	0	0	474	257
	14, 15	Tolaram	1	0	3	5	0	0	7	10	8	0	1,145	339	0	0	1,164	354
	17,19,21	Bhuiya	10	1	25	24	0	0	7	0	62	24	210	337	3	1	317	387
	18,20,22	Rupali	0	0	1	3	0	0	0	2	2	0	243	29	0	0	246	34
	25,32,34	Jamal	0	0	2	4	0	0	0	2	12	5	208	118	0	0	222	129
	28, 29	B.C. Jute	0	1	0	1	0	0	0	1	0	0	62	29	2	1	64	33
	35 ~ 38	J.T.C. (Luhia)	0	0	5	10	0	0	0	2	1	0	56	51	0	0	62	53
		Sub-total	11	2	36	47	0	0	14	7	85	29	1,924	908	5	2	2,075	990
	16	Nitaiganj	1	0	7	5	0	0	1	1	2	9	571	888	0	0	582	903
		Total	52	4	192	100	0	2	61	28	117	45	3,023	2,403	7	4	3,452	2,586

Note, In: Incoming Vessels Out: Outgoing Vessels
Vessels at Jetty Types 1, 3, 5, 7, 8, 9 are included

Table 1.3.3 (1) Cargo Handling Volume by Commodity by Jetty (Jetty Type 1 and 3)

1 Direction : 1 Incoming
2 Type of Jetty : 1
3 Location of Jetty: 1 Dhaka
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	IWTC Badamtali	Badamtali 2 ∿ 7	Wise/Simpson Ghat 9, 10	Mill Barrack 12, 13, 14	M.M.Oil Mill 16, 17	Total
3 Cement	500.00	22,496.00	750.00	0	17,542.00	41,288.00
5 Fish	4.72	0	4.37	0	0	9.09
6 Rice	4.46	3.35	18.22	300.00	0	326.03
7 Iron & Steel	17.73	890.00	2.56	10.50	0	920.79
8 Milk	0	400.00	0	0	0	400.00
9 Newsprint	1,688.51	0	1,225.44	0	0	2,913.95
15 Stones	0	55.00	13.00	0	0	68.00
16 Sugar	0	0	0	675.00	9	675.00
17 Vegetables	0	0	2.63	0	0	2.63
18 Wheat	0	0	0	2,475.00	0	2,475.00
19 Firewood	0.53	0	0	0	0	0.53
20 Timber	2.07	0	0	0	0	2.07
21 Coal	8.77	0	0	0	0	8.77
23 Cotton Yarn	5.61	250.00	0	0	0	255.61
24 Jute goods	2.13	0	111.06	6.00	0	119.19
26 Machinery	1.69	0	0	0	0	1.69
27 Oil(edible)	2.62	0	0	0	0	2.62
28 Paper & Board	13.11	0	229.00	0	0	260.11
31 Sundries	112.87	111.91	44.15	0	0	268.93
Total	2,382.82	24,206.26	2,400.43	3,466.50	17,542.00	49,998.01

1 Direction : 2 Outgoing
2 Type of Jetty : 1
3 Location of Jetty: 1 Dhaka
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	IWTC Badamtali	Badamtali 2 ∿ 7	Wise/Simpson Ghat 9, 10	Mill Barrack 12, 13, 14	M.M.Oil Mill 16, 17	Total
3 Cement	0	192.25	0	3.00	0	195.25
6 Rice	0.22	0	0	54.11	0	54.33
7 Iron & Steel	19.37	0	3.91	15.50	0	38.78
8 Milk	2.26	0	0	0	0	2.26
9 Newsprint	0.25	0	2.23	0	0	2.48
16 Sugar	0	0	0	41.05	0	41.05
18 Wheat	0	0	0	424.88	0	424.88
20 Timber	4.96	0	0	0.02	0	4.98
22 Bitumen	1.85	0	0	0	0	1.85
23 Cotton Yarn	24.52	0	0	0	0	24.52
26 Machinery	20.50	0	4.10	0	0	24.60
27 Oil (edible)	5.88	0	0	0	0	5.88
28 Paper & Board	2.75	0	2.24	0	0	4.99
31 Sundries	74.13	24.30	14.11	0	0	112.54
Total	156.69	216.55	26.59	538.56	0	938.39

1 Direction : 1 Incoming
2 Type of Jetty : 3
3 Location of Jetty: 1 Dhaka
4 Survey Period : from 18/2 to 19/3

Commodity Type	Jetty No. 18, 19, 20
3 Cement	7,570.00
4 Fertilizers	6,971.00
16 Sugar	5,605.00
Total	20,146.00

Note: Jetty No. 18, 19, 20:
No outgoing cargo handled.

Table 1.3.3 (2) Cargo Handling Volume by Commodity by Jetty (Jetty Type 5)

1 Direction : 1 Incoming
2 Type of Jetty : 5
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Ghat No.5～8 02 ～ 08	Charargop 09, 10	Ekrampur 11	Khampur 12 13	Total
1 Raw Jute	433.91	1,025.13	0	153.90	1,612.94
2 Bricks	0	15.91	0	0	15.91
4 Fertilizer	34,210.65	0	0	7,065.00	41,275.65
5 Fish	627.12	0	0	0	627.12
6 Rice	160.48	13.06	254.65	44.78	472.97
10 Potatoes	20.33	0	0	0	20.33
13 Sand	0	131.92	0	25.48	157.40
16 Sugar	376.12	0	125.00	0	501.12
17 Vegetables	18.04	9.33	0	0	27.37
18 Wheat	298.56	0	3,602.86	0	3,901.42
19 Firewood	0	26.12	0	5.00	31.12
20 Timber	0	0	0	4.00	4.00
24 Jute goods	78.74	0	0	0	78.74
27 Oil (edible)	0.75	0	0	0	0.75
29 POL	31.72	0	0	0	31.72
31 Sundries	41.39	1.87	0	0	43.26
Total	36,297.81	1,223.34	3,982.51	7,298.16	48,801.82

1 Direction : 2 Outgoing
2 Type of Jetty : 5
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Ghat No.5～8 02 ～ 08	Charargop 09, 10	Ekrampur 11	Khampur 12 13	Total
1 Raw jute	41.43	8,175.56	29.85	135.78	8,382.62
2 Bricks	0	22.73	0	0	22.73
4 Fertilizer	774.57	0	0	0	774.57
6 Rice	118.30	18.66	135.74	0	272.70
7 Iron & Steel	25.76	0	0	0	25.76
14 Shingles	5.00	0	0	0	5.00
16 Sugar	0	0	139.33	0	139.33
17 Vegetables	1.31	0	0	0	1.31
18 Wheat	0	42.93	1,395.75	0	1,438.68
23 Cotton Yarn	96.60	0	0	0	96.60
29 POL	190.00	0	0	0	190.00
31 Sundries	142.75	0	0	0	142.75
Total	1,395.72	8,259.88	1,700.67	135.78	11,492.05

Table 1.3.3 (3) Cargo Handling Volume by Commodity by Jetty
(Jetty Type 7)

1 Direction : 1 Incoming
2 Type of Jetty : 7
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	J.T.C. (Bandar) 23,24	Silo 30,31	Adamjee Jute Mills 39,40	Total
1 Raw Jute	3,093.50	0	32,928.74	36,022.24
5 Fish	0	0	45.00	45.00
18 Wheat	0	26,239.50	1,551.00	27,790.50
29 POL	0.37	0	0	0.37
Total	3,093.87	26,239.50	34,524.74	63.858.11

1 Direction : 2 Outgoing
2 Type of Jetty : 7
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	J.T.C. (Bandar) 23,24	Silo 30,31	Adamjee Jute Mills 39,40	Total
1 Raw Jute	5,772.71	0	0	5,772.71
18 Wheat	0	9,793.23	52.25	9,845.48
24 Jute Goods	0	0	20,306.07	20,306.07
Total	5,772.71	9,793.23	20,358.32	35,924.26

Table 1.3.3 (4) Cargo Handling Volume by Commodity by Jetty
(Jetty Type 8)

1 Direction : Incoming & Outgoing
2 Type of Jetty : 8
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Incoming 16	Outgoing 16
1 Raw Jute	198.17	2,844.66
2 Bricks	-	3.11
3 Cement	-	155.75
4 Fertilizer	-	9.14
6 Rice	1,551.16	154.55
7 Iron & Steel	28.29	63.53
8 Milk	-	3.32
9 Newsprint	4.85	41.47
10 Potatoes	2.24	-
12 Salt	999.35	942.71
13 Sand	35.44	-
16 Sugar	88.01	356.74
18 Wheat	2,180.25	1,361.89
19 Firewood	42.34	1.67
20 Timber	149.77	-
23 Cotton Yarn	-	3.28
24 Jute Goods	130.20	186.20
26 Machinery	-	13.50
27 Oil (Edible)	30.59	251.17
28 Paper & Board	3.10	0.22
29 POL	19.02	283.49
31 Sundries	386.49	701.03
Total	5,849.27	7,377.42

Table 1.3.3 (5) Cargo Handling Volume by Commodity by Jetty (Jetty Type 9)

1 Direction : 1 Incoming
2 Type of Jetty : 9
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Tolaram 14,15	Bhuiya 17,19,21	Rupali 18,20,22	Jamal 25,32,34	B.C.Jute 28,29	J.T.C. (Luhia) 35 38	Total
1 Raw Jute	8,065.96	201.60	2,166.08	3,208.90	1,061.93	2,289.61	16,994.08
2 Bricks	9.38	22.73	19.32	0	0	0	51.43
3 Cement	1.67	355.50	0.61	0	0	0	357.78
4 Fertilizer	22.39	0	0	0	0	0	22.39
5 Fish	5.72	3.36	0	0	0	0	9.08
6 Rice	1,243.62	356.34	157.39	0	0	0	1,757.35
8 Milk	0	15.68	0	0	0	0	15.68
10 Potatoes	309.04	152.46	0	0	0	0	461.50
12 Salt	2,842.38	14,443.95	3.73	0	0	0	17,290.06
13 Sand	81.14	156.63	61.36	1,436.76	0	0	1,735.89
15 Stones	0	40.00	0	0	0	0	40.00
16 Sugar	23.06	2.80	1.87	0	0	0	27.73
17 Vegetables	37.76	14.37	0	0	0	0	52.13
18 Wheat	1,258.96	787.61	0	0	0	0	2,046.57
19 Firewood	64.33	45.16	49.64	0	0	0	159.13
20 Timber	30.71	152.00	90.50	0	0	0	273.21
23 Cotton Yarn	102.00	254.07	0	0	0	0	356.07
24 Jute Goods	19.38	0	0	0	0	0	19.38
27 Oil (Edible)	2.61	0.75	0	0	0	0	3.36
28 Paper & Board	0	6.53	0	0	0	0	6.53
29 POL	27.97	328.05	0	0	0	0	356.02
30 Sulphur	0	164.95	0	0	0	0	164.95
31 Sundries	83.99	196.84	17.10	3.73	0	0	301.66
Total	14,232.07	17,701.38	2,567.60	4,649.39	1,061.93	2,289.61	42,501.98

1 Direction : 2 Outgoing
2 Type of Jetty : 9
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Tolaram 14,15	Bhuiya 17,19,21	Rupali 18,20,22	Jamal 25,32,34	B.C.Jute 28,29	J.T.C. (Luhia) 35 38	Total
1 Raw Jute	6,331.45	74.64	1,482.75	3,926.37	1,212.36	4,625.41	17,652.98
3 Cement	12.00	106.11	0	0	0	0	118.11
4 Fertilizer	0	3.50	0	0	0	0	3.50
6 Rice	77.25	61.03	9.96	0	0	0	148.24
7 Iron & Steel	0	18.62	0	0	0	0	18.62
8 Milk	0	4.82	0	0	0	0	4.82
10 Potatoes	2.41	19.98	3.73	4.87	0	0	30.99
11 Ice	0	5.60	0	0	0	0	5.60
12 Salt	323.28	1,987.63	0	0	0	0	2,310.91
13 Sand	0	0	0	7.66	0	0	7.66
16 Sugar	10.73	58.83	0	0	0	0	69.56
18 Wheat	209.66	934.63	0.82	42.92	0	0	1,188.03
19 Firewood	3.73	50.05	0	0	0	0	53.78
20 Timber	14.95	13.94	0	0	0	0	28.89
21 Coal	0	3.74	0	0	0	0	3.74
23 Cotton Yarn	0	441.62	0	0	0	0	441.62
24 Jute Goods	17.72	3.06	1.72	0	0	0	22.50
26 Machinery	0	0.37	0	0	0	0	0.37
27 Oil (Edible)	8.01	357.66	0	0	0	0	365.67
28 Paper & Board	0	0.11	0	0	0	0	0.11
29 POL	4.10	303.73	0	0	0	0	307.83
30 Sulphur	0	11.83	0	0	0	0	11.83
31 Sundries	207.33	657.48	25.18	170.92	0	0	1,060.91
Total	7,222.62	5,118.98	1,524.16	4,152.74	1,212.36	4,625.41	23,856.27

(3) Carried volume by vessel type by commodity by jetty type

Table 1.3.4 indicates the carried volume by vessel type by commodity by jetty type.

At the IWTA public jetties at the port of Dhaka, the total cargo volume carried by country boats is small, while at the port of Narayanganj, country boats play an important role.

(4) Origin and destination of major commodities

Fig. 1.3.3 (1) - (5) show the O-D of the major commodities handled at Dhaka port, and Fig. 1.3.4 (1) - (4) show the O-D of the major commodities at Narayanganj port.

Dhaka port functions as a relay station for transshipment of cement, sugar and fertilizer to the hinterland, north Bengal and Mymensingh, and as a receiving station for wheat and newsprint for the Dhaka Area. Meanwhile, Narayanganj port functions as a relay station for transshipment of wheat and fertilizer, and as a collection point for shipment of raw jute and jute goods, which are the principal export commodities of Bangladesh.

Table 1.3.4 (1) Cargo Handling Volume by Commodity by Vessel Type (Jetty Type 1 and 3)

1 Direction : 1 Incoming
2 Type of Jetty : 1
3 Location of Jetty: 1 Dhaka
4 Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country	Manual Country	Total
3 Cement	16,417.00	16,121.00	.00	8,535.00	.00	215.00	41,288.00
5 Fish	.00	.00	9.09	.00	.00	.00	9.09
6 Rice	.00	300.00	22.68	.00	.00	3.35	326.03
7 Iron & Steel	890.00	.00	20.29	.00	.00	10.50	920.79
8 Milk	400.00	.00	.00	.00	.00	.00	400.00
9 Newsprint	345.00	1,767.65	163.33	637.97	.00	.00	2,913.95
15 Stones	.00	68.00	.00	.00	.00	.00	68.00
16 Sugar	.00	675.00	.00	.00	.00	.00	675.00
17 Vegetables	.00	.00	2.63	.00	.00	.00	2.63
18 Wheat	2,475.00	.00	.00	.00	.00	.00	2,475.00
19 Firewood	.00	.00	.53	.00	.00	.00	.53
20 Timber	.00	.00	2.07	.00	.00	.00	2.07
21 Coal	.00	.00	8.77	.00	.00	.00	8.77
23 Cotton Yarn	250.00	.00	5.61	.00	.00	.00	255.61
24 Jute goods	.00	.00	2.13	111.06	.00	6.00	119.19
26 Machinery	.00	.00	1.69	.00	.00	.00	1.69
27 Oil (edible)	.00	.00	2.62	.00	.00	.00	2.62
28 Paper & Board	.00	299.00	31.11	.00	.00	.00	260.11
31 Sundries	.00	1.00	156.02	.00	82.00	29.91	268.93
Total	20,777.00	19,161.65	428.57	9,284.03	82.00	264.76	49,998.01
No. of Vessels	32	69	40	33	1	10	185

1 Direction : 1 Incoming
2 Type of Jetty : 3
3 Location of Jetty: 1 Dhaka
4 Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country	Manual Country	Total
3 Cement	2,675.00	4,425.00	.00	470.00	.00	.00	7,570.00
4 Fertilizer	2,156.00	3,590.00	.00	1,225.00	.00	.00	6,971.00
16 Sugar	5,605.00	.00	.00	.00	.00	.00	5,605.00
Total	10,436.00	8,015.00	.00	1,695.00	.00	.00	20,146.00
No. of Vessels	16	27	0	7	0	0	50

Table 1.3.4 (2) Cargo Handling Volume by Commodity by Vessel Type (Jetty Type 5)

1 Direction : 1 Incoming
2 Type of Jetty : 5
3 Location of Jetty: 2 Narayanganj
Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	.00	500.00	.00	.00	59.04	1,053.90	.00	1,612.94
2 Bricks	.00	.00	.00	.00	.00	15.91	.00	15.91
4 Fertilizer	2,326.00	26,790.00	.00	12,139.65	.00	20.00	.00	41,275.65
5 Fish	.00	137.82	.00	.00	479.97	9.33	.00	627.12
6 Rice	.00	9.33	.00	.00	.00	463.64	.00	472.97
10 Potatoes	.00	.00	.00	.00	.00	20.33	.00	20.33
13 Sand	.00	.00	.00	.00	.00	157.40	.00	157.40
16 Sugar	125.00	350.00	.00	.00	.00	26.12	.00	501.12
17 Vegetables	.00	.00	.00	.00	.93	26.44	.00	27.37
18 Wheat	1,886.65	298.56	.00	.00	.00	1,716.21	.00	3,901.42
19 Firewood	.00	.00	.00	.00	.00	31.12	.00	31.12
20 Timber	.00	.00	.00	.00	.00	4.00	.00	4.00
24 Jute goods	.00	.00	.00	.00	.00	78.74	.00	78.74
27 Oil (edible)	.00	.00	.00	.00	.75	.00	.00	.75
29 POL	.00	.00	.00	.00	.00	31.72	.00	31.72
31 Sundries	.00	.00	.00	.00	.00	20.87	22.39	43.26
Total	4,337.65	28,085.71	.00	12,139.65	540.69	3,675.73	22.39	48,801.82
No. of Vessels	12	111	0	38	27	131	2	321

1 Direction : 2 Outgoing
2 Type of Jetty : 5
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	.00	37.80	.00	126.72	234.00	7,984.10	.00	8,382.62
2 Bricks	.00	.00	.00	.00	.00	22.73	.00	22.73
4 Fertilizer	297.03	18.66	.00	.00	24.26	434.62	.00	774.57
6 Rice	.00	.00	.00	.00	3.73	268.97	.00	272.70
7 Iron & Steel	.00	.00	.00	.00	.00	25.04	.72	25.76
14 Shingles	.00	.00	.00	.00	.00	5.00	.00	5.00
16 Sugar	.00	.00	.00	.00	.00	139.33	.00	139.33
17 Vegetables	.00	.00	.00	.00	.00	1.31	.00	1.31
18 Wheat	.00	.00	.00	.00	.00	1,438.68	.00	1,438.68
23 Cotton Yarn	.00	.00	23.19	.00	.00	40.47	32.94	96.60
29 POL	.00	190.00	.00	.00	.00	.00	.00	190.00
31 Sundries	.00	110.00	13.06	.00	.00	16.20	3.49	142.75
Total	297.03	356.46	36.25	126.72	261.99	10,376.45	37.15	11,492.05
No. of Vessels	2	5	2	2	7	416	2	436

Table 1.3.4 (3) Cargo Handling Volume by Commodity by Vessel Type (Jetty Type 7)

1 Direction : 1 Incoming
2 Type of Jetty : 7
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
	VESSEL TYPE							
1 Raw Jute	333.00	9,037.90	.00	5,354.53	84.66	21,212.15	.00	36,022.24
5 Fish	.00	.00	.00	.00	.00	45.00	.00	45.00
18 Wheat	27,534.50	256.00	.00	.00	.00	.00	.00	27,790.50
29 POL	.00	.00	.00	.00	.00	.37	.00	.37
Total	27,867.50	9,293.90	.00	5,354.53	84.66	21,257.52	.00	63,858.11
No. of Vessels	28	38	0	8	3	397	0	474

1 Direction : 2 Outgoing
2 Type of Jetty : 7
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country	Manual Country Boat	Others	Total
	VESSEL TYPE							
1 Raw Jute	.00	1,363.46	.00	4,409.25	.00	.00	.00	5,772.71
18 Wheat	.00	400.00	.00	.00	.00	9,445.48	.00	9,845.48
24 Jute goods	.00	17,916.07	.00	1,700.00	.00	690.00	.00	20,306.07
Total	.00	19,679.53	.00	6,109.25	.00	10,135.48	.00	35,924.26
No. of Vessels	0	43	0	18	0	196	0	257

Table 1.3.4 (4) Cargo Handling Volume by Commodity by Vessel Type (Jetty Type 8)

1 Direction : Incoming
2 Type of Jetty : 8
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	.00	.00	.00	.00	.00	198.17	.00	198.17
6 Rice	.00	7.17	.00	.00	6.72	1,537.27	.00	1,551.16
7 Iron & Steel	.00	.00	.00	.00	.00	28.29	.00	28.29
9 Newsprint	.00	.00	.00	.00	.00	4.85	.00	4.85
10 Potatoes	.00	.00	.00	.00	.00	2.24	.00	2.24
12 Salt	528.00	242.58	.00	.00	.00	228.77	.00	999.35
13 Sand	.00	.00	.00	.00	.00	35.44	.00	35.44
16 Sugar	.00	.00	.00	.00	.00	88.01	.00	88.01
18 Wheat	.00	133.60	.00	.00	.00	2,046.65	.00	2,180.25
19 Firewood	.00	.00	.00	.00	.00	42.34	.00	42.34
20 Timber	.00	11.00	.00	5.60	34.00	99.17	.00	149.77
24 Jute goods	.00	26.12	.00	.00	.00	104.08	.00	130.20
27 Oil (edible)	.00	.00	.00	.00	.00	30.59	.00	30.59
28 Paper & Board	.00	.00	.00	.00	.00	3.10	.00	3.10
29 POL	.00	.00	.00	.00	.00	19.02	.00	19.02
31 Sundries	.00	.00	.00	.00	.00	386.49	.00	386.49
Total	528.00	420.47	.00	5.60	40.72	4,854.48	.00	5,849.27
No. of Vessels	1	7	0	1	2	571	0	582

1 Direction : 2 Outgoing
2 Type of Jetty : 8
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

(Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	.00	.00	.00	.00	.00	2,844.66	.00	2,844.66
2 Bricks	.00	.00	.00	.00	.00	3.11	.00	3.11
3 Cement	.00	.00	.00	.00	.00	155.75	.00	155.75
4 Fertilizer	.00	.00	.00	.00	6.34	2.80	.00	9.14
6 Rice	.00	.00	.00	.00	.00	154.55	.00	154.55
7 Iron & Steel	.00	.00	.00	.00	.00	63.53	.00	63.53
8 Milk	.00	.00	.00	.00	.00	3.32	.00	3.32
9 Newsprint	.00	.00	.00	.00	.00	41.47	.00	41.47
12 Salt	.00	77.85	.00	.74	37.68	826.44	.00	942.71
16 Sugar	.00	11.00	.00	.00	3.18	342.56	.00	356.74
18 Wheat	.00	278.88	.00	.37	14.36	1,068.28	.00	1,361.89
19 Firewood	.00	.00	.00	.00	.00	1.67	.00	1.67
23 Cotton Yarn	.00	.00	.00	.00	1.00	2.28	.00	3.28
24 Jute goods	.00	.00	.00	.00	.00	186.20	.00	186.20
26 Machinery	.00	.00	.00	.00	.00	13.50	.00	13.50
27 Oil (edible)	.00	1.00	.00	.18	2.61	247.38	.00	251.17
28 Paper & Board	.00	.00	.00	.00	.00	.22	.00	.22
29 POL	.00	.00	.00	.00	.00	283.49	.00	283.49
31 Sundries	.00	32.68	.00	.44	2.23	665.68	.00	701.03
Total	.00	401.41	.00	1.73	67.40	6,906.88	.00	7,377.42
No. of Vessels	0	5	0	1	9	888	0	903

Table 1.3.4 (5) Cargo Handling Volume by Commodity by Vessel Type
(Jetty Type 9)

1 Direction : 1 Incoming
2 Type of Jetty : 9
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	.00	668.73	.00	464.54	341.35	15,507.34	12.12	16,994.08
2 Bricks	.00	.00	.00	.00	.00	51.43	.00	51.43
3 Cement	.00	350.00	.00	.00	.00	7.78	.00	357.78
4 Fertilizer	.00	.00	.00	.00	.00	22.39	.00	22.39
5 Fish	.00	.00	.00	.00	6.70	2.38	.00	9.08
6 Rice	.00	.00	.00	.00	7.27	1,750.08	.00	1,757.35
8 Milk	.00	.00	.00	.00	.00	15.68	.00	15.68
10 Potatoes	.00	2.99	.00	.00	11.20	447.31	.00	461.50
12 Salt	6,239.93	5,364.70	.00	1,635.00	2,759.38	572.64	718.41	17,290.06
13 Sand	.00	.00	.00	.00	256.25	1,479.64	.00	1,735.89
15 Stones	.00	40.00	.00	.00	.00	.00	.00	40.00
16 Sugar	.00	.00	.00	.00	.00	27.73	.00	27.73
17 Vegetables	.00	.00	.00	.00	10.25	41.88	.00	52.13
18 Wheat	.00	450.00	.00	.00	.00	1,596.57	.00	2,046.57
19 Firewood	.00	.00	.00	.00	76.51	82.62	.00	159.13
20 Timber	.00	40.00	.00	.00	.00	193.21	40.00	273.21
23 Cotton Yarn	.00	48.26	.00	102.00	3.24	202.57	.00	356.07
24 Jute goods	.00	.00	.00	.00	.00	19.38	.00	19.38
27 Oil (edible)	.00	.00	.00	.00	.00	3.36	.00	3.36
28 Paper & Board	.00	.00	.00	.00	.00	6.53	.00	6.53
29 POL	.00	.00	.00	.00	16.79	339.23	.00	356.02
30 Sulphur	.00	164.95	.00	.00	.00	.00	.00	164.95
31 Sundries	.00	80.00	.00	.00	54.85	164.94	1.87	301.66
Total	6,239.93	7,209.63	.00	2,201.54	3,543.79	22,534.69	772.40	42,501.98
No. of Vessels	11	36	0	14	85	1924	5	2075

1 Direction : 2 Outgoing
2 Type of Jetty : 9
3 Location of Jetty: 2 Narayanganj
4 Survey Period : from 18/2 to 19/3

VESSEL TYPE (Unit: M-ton)

Commodity	Coaster	Cargo Launch	Passenger Launch	Flat Barge	Mechan. Country Boat	Manual Country Boat	Others	Total
1 Raw Jute	153.36	4,014.46	.00	4,197.07	161.64	9,119.25	7.20	17,652.98
3 Cement	.00	.00	.00	.00	.03	118.08	.00	118.11
4 Fertilizer	.00	.00	.00	.00	.00	3.50	.00	3.50
6 Rice	.00	.00	.00	.00	1.45	146.79	.00	148.24
7 Iron & Steel	.00	.00	.00	.00	7.46	11.16	.00	18.62
8 Milk	.00	.00	.00	.00	1.86	2.96	.00	4.82
10 Potatoes	.00	.00	.00	.00	.00	30.99	.00	30.99
11 Ice	5.60	.00	.00	.00	.00	.00	.00	5.60
12 Salt	.00	1,193.94	.00	.00	64.56	1,052.41	.00	2,310.91
13 Sand	.00	.00	.00	.00	.00	7.66	.00	7.66
16 Sugar	.00	.00	.00	.00	7.46	62.10	.00	69.56
18 Wheat	.00	429.70	.00	.00	37.32	721.01	.00	1,188.03
19 Firewood	.00	.00	.00	.00	9.33	44.45	.00	53.78
20 Timber	.00	.00	.00	.00	6.00	22.89	.00	28.89
21 Coal	.00	.00	.00	.00	.00	3.74	.00	3.74
23 Cotton Yarn	.00	202.20	.00	.00	40.46	198.96	.00	441.62
24 Jute goods	.00	.00	.00	.00	.00	22.50	.00	22.50
26 Machinery	.00	.00	.00	.00	.00	.37	.00	.37
27 Oil (edible)	.00	81.66	.00	.00	15.85	268.16	.00	365.67
28 Paper & Board	.00	.00	.00	.00	.00	.11	.00	.11
29 POL	.00	52.73	.00	.00	18.66	236.44	.00	307.83
30 Sulphur	.00	3.27	.00	.00	.56	8.00	.00	11.83
31 Sundries	.00	44.00	.00	.00	45.17	969.88	1.86	1,060.91
Total	158.96	6,021.96	.00	4,197.07	417.81	13,051.41	9.06	23,856.26
No. of Vessels	2	47	0	17	29	893	2	990

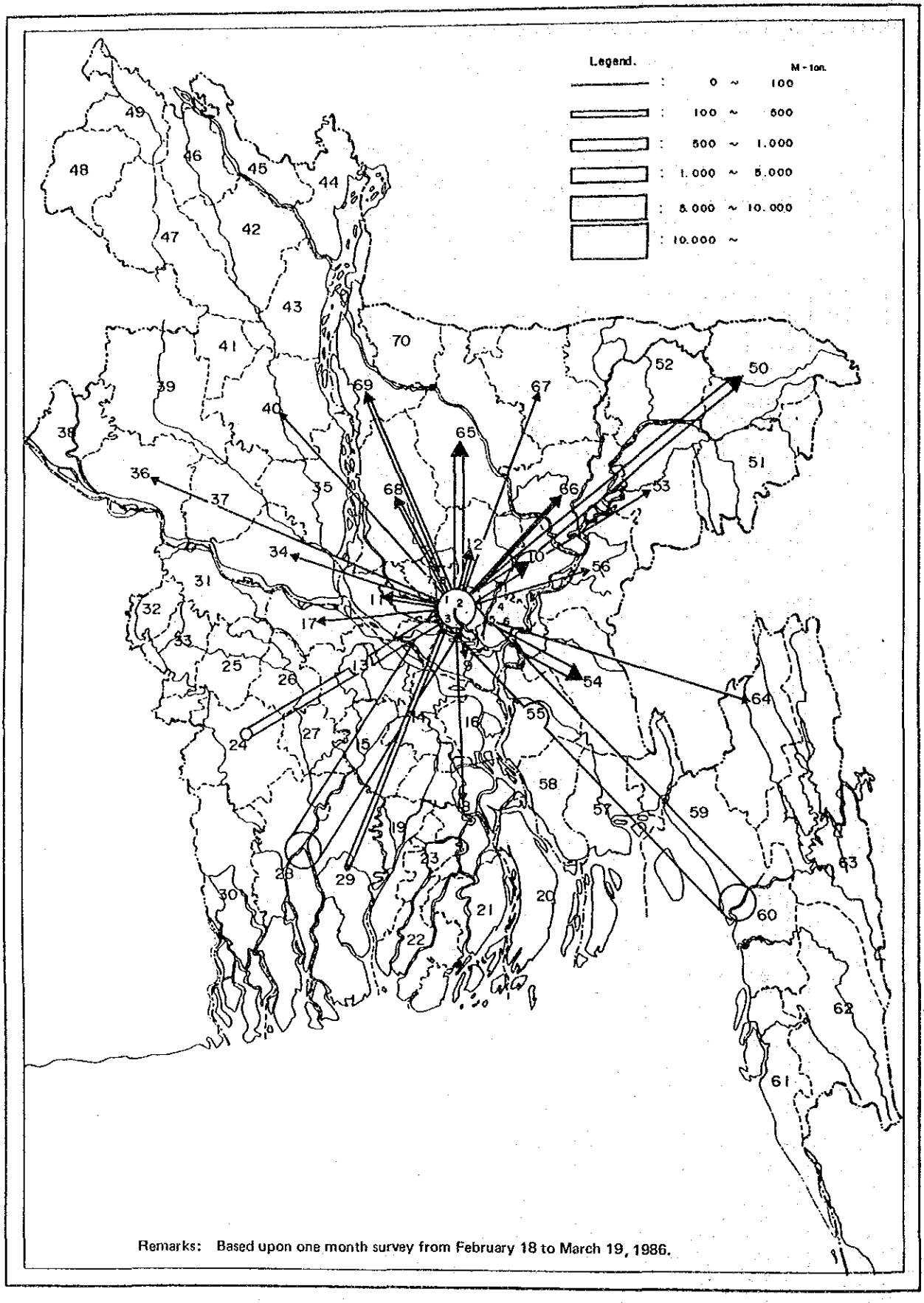

Fig. 1.3.3 (1) O-D of Cement Via Dhaka Port

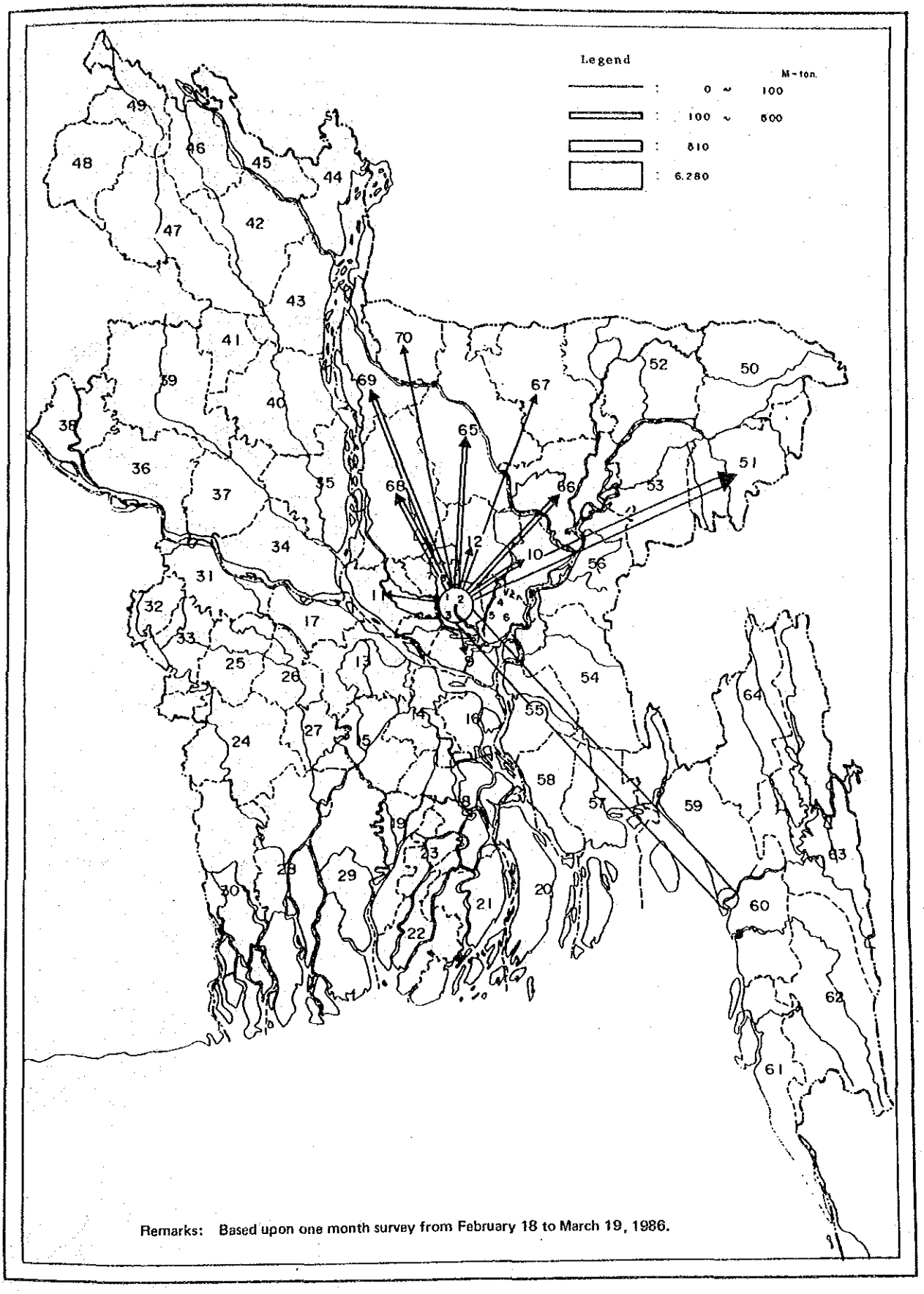

Fig. 1.3.3 (2) O-D of Sugar Via Dhaka Port

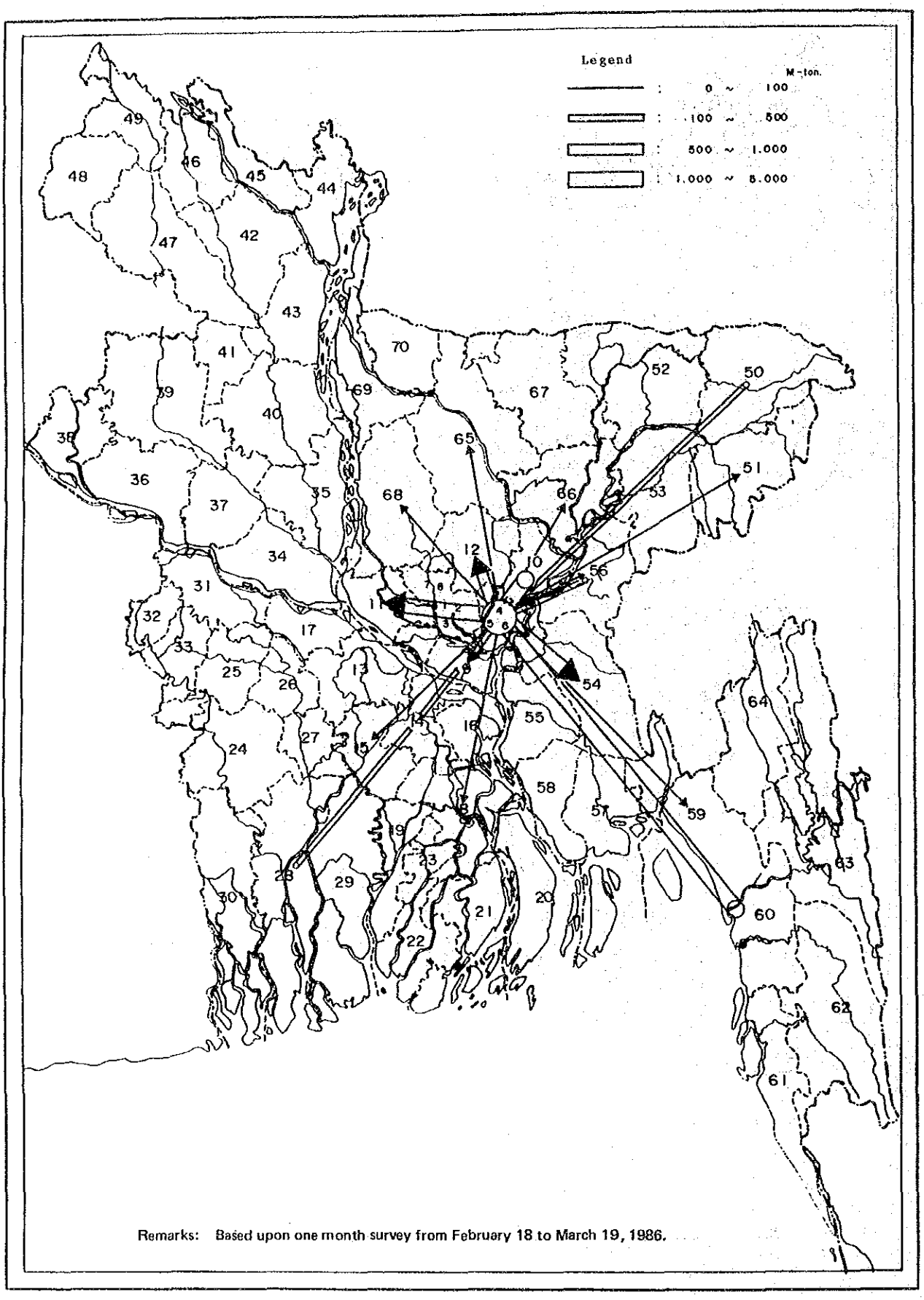

Fig. 1.3.3 (3) O-D of Fertilizer Via Dhaka Port

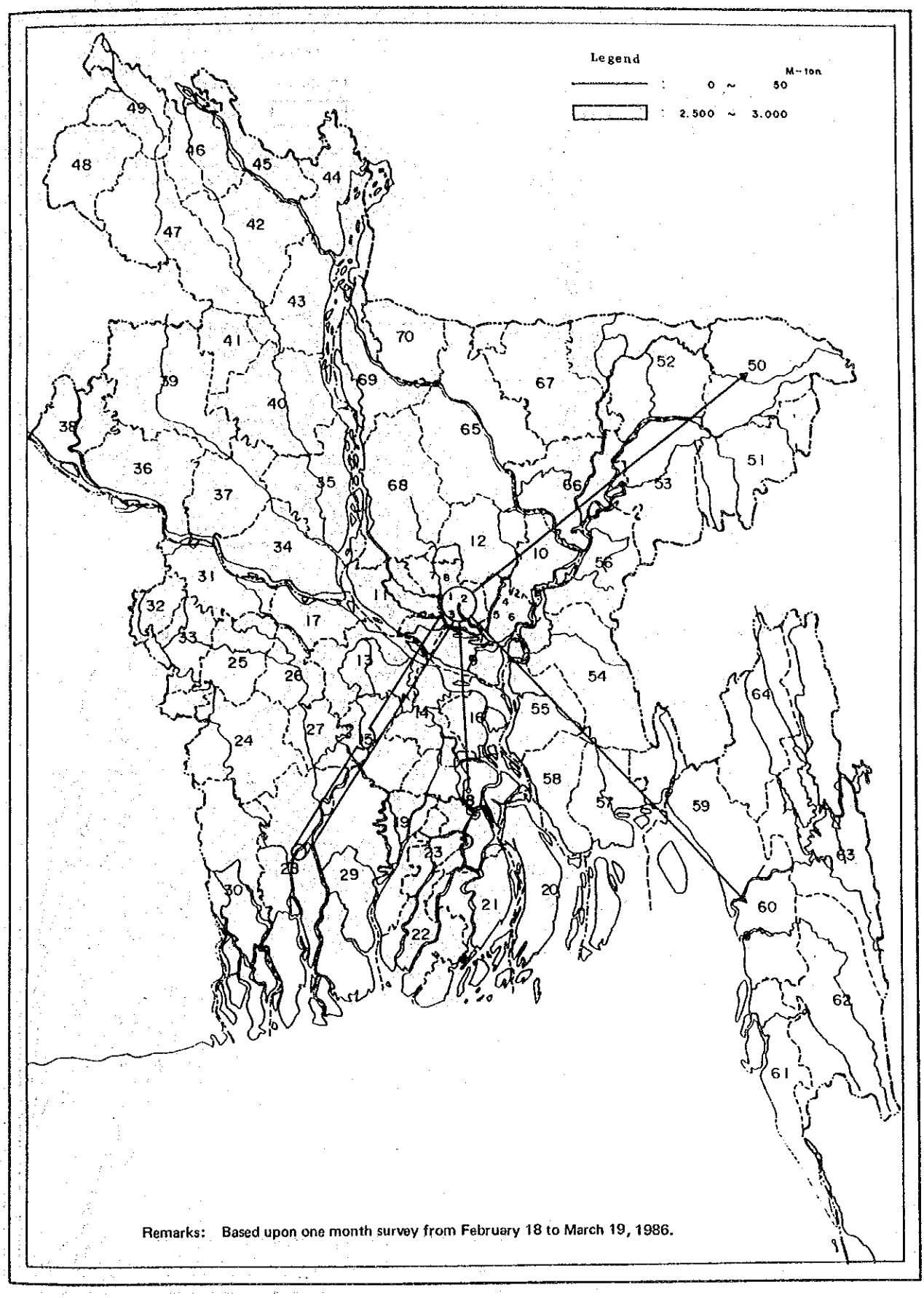

Fig. 1.3.3 (4) O-D of Newsprint Via Dhaka Port

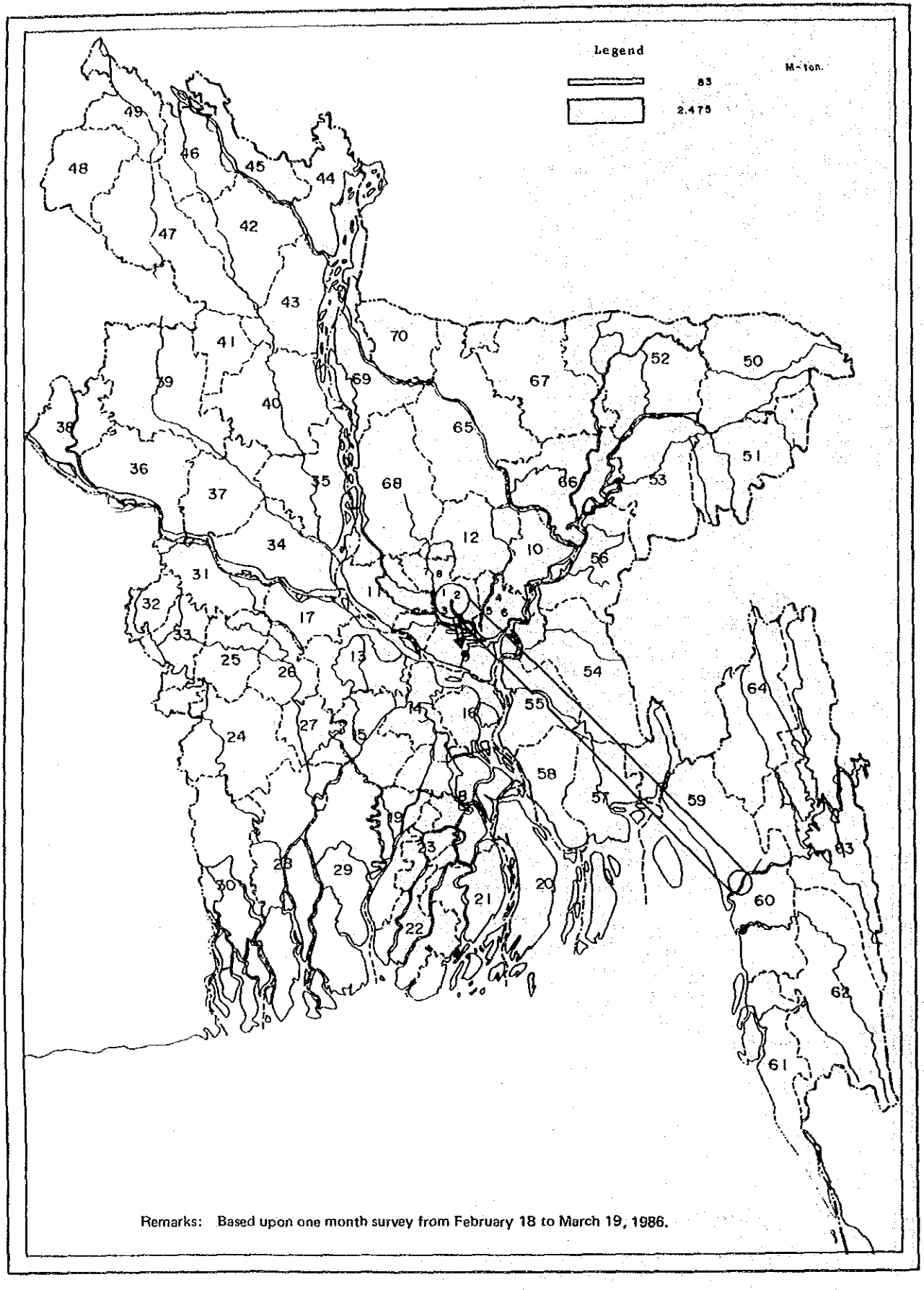

Fig. 1.3.3 (5) O-D of Wheat Via Dhaka Port

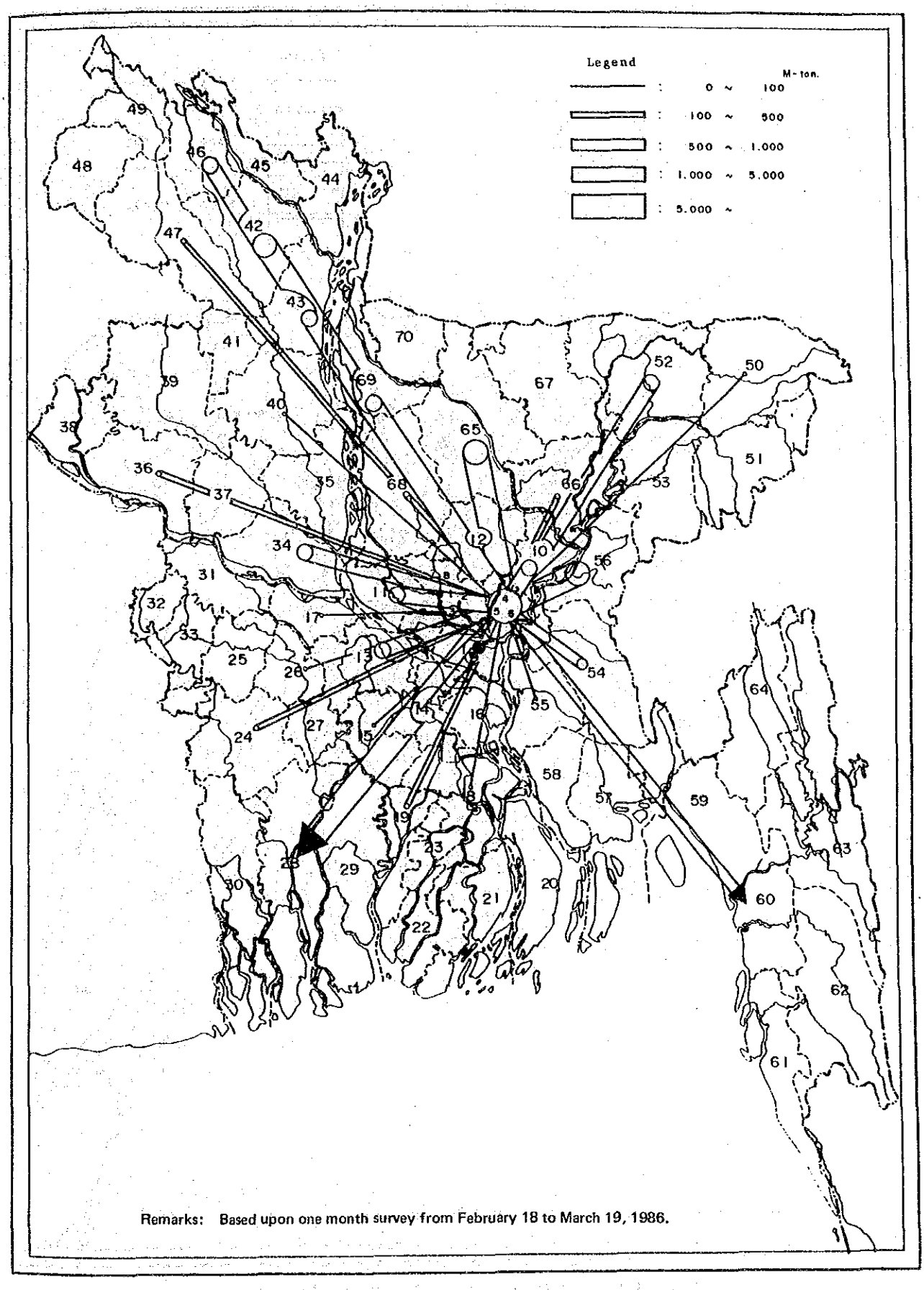

Fig. 1.3.4 (1) O-D of Raw Jute Via Narayanganj Port

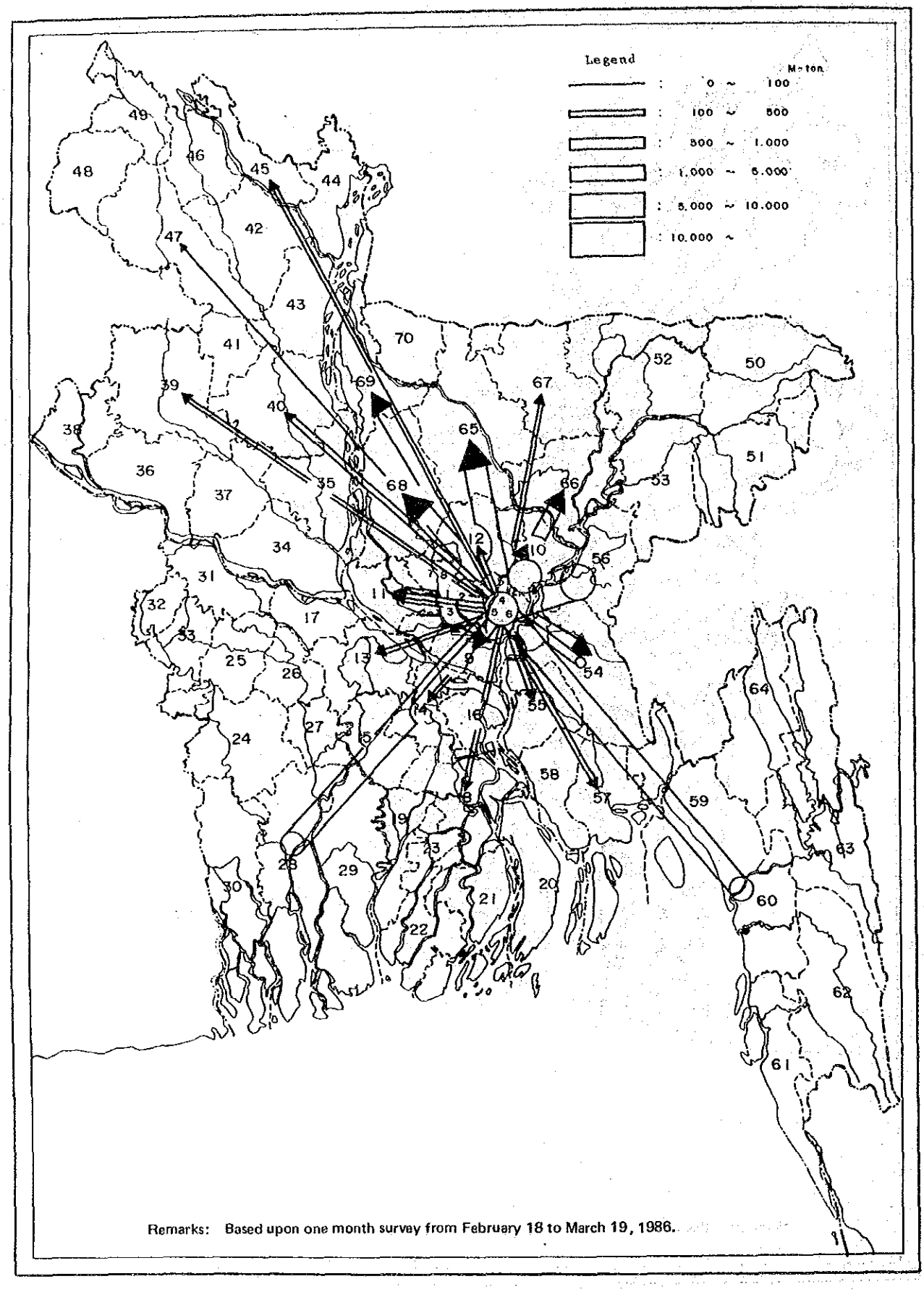

Fig. 1.3.4 (2) O-D of Fertilizer Via Narayanganj Port

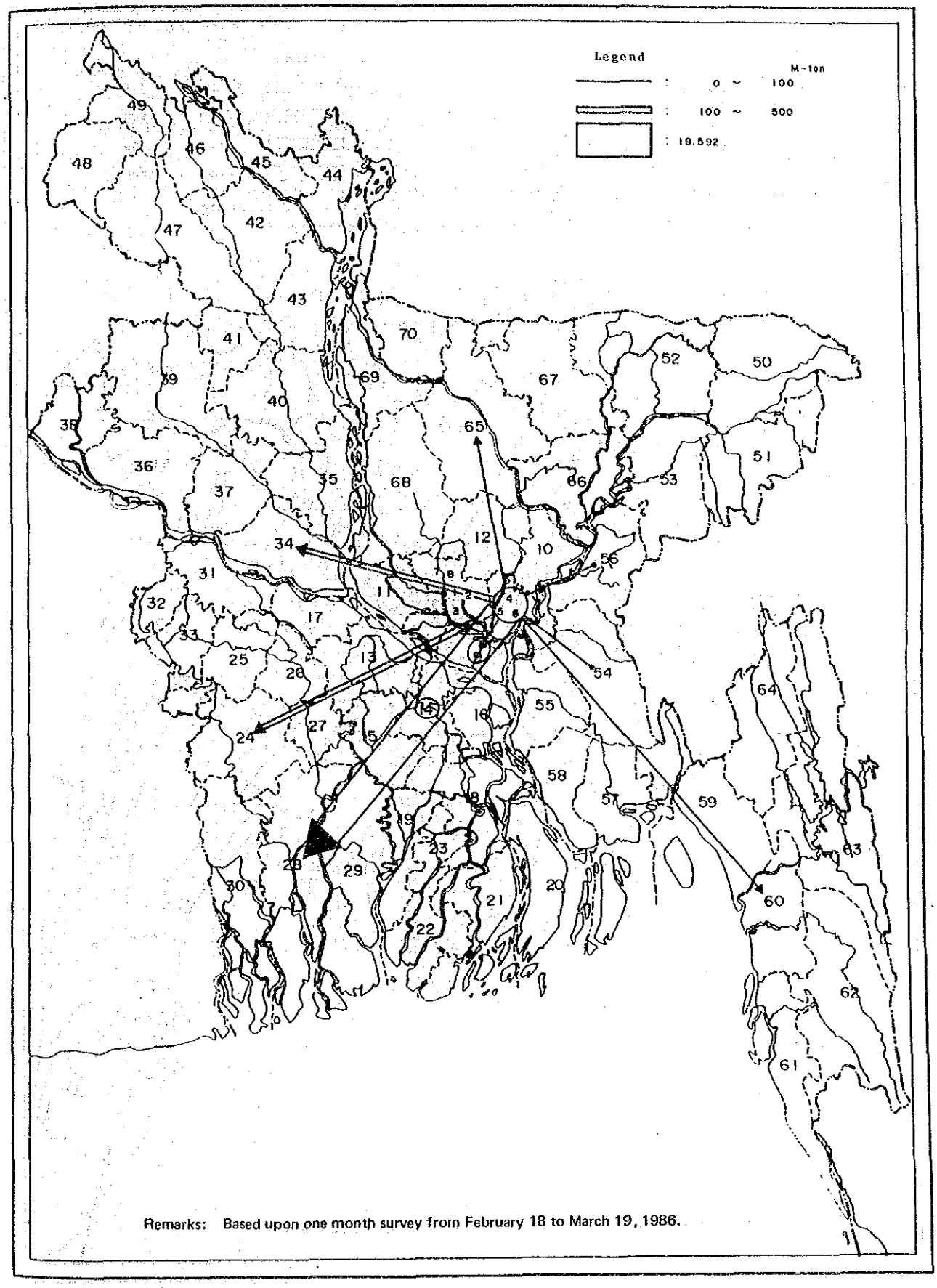

Fig. 1.3.4 (3) O-D of Jute Goods Via Narayanganj Port

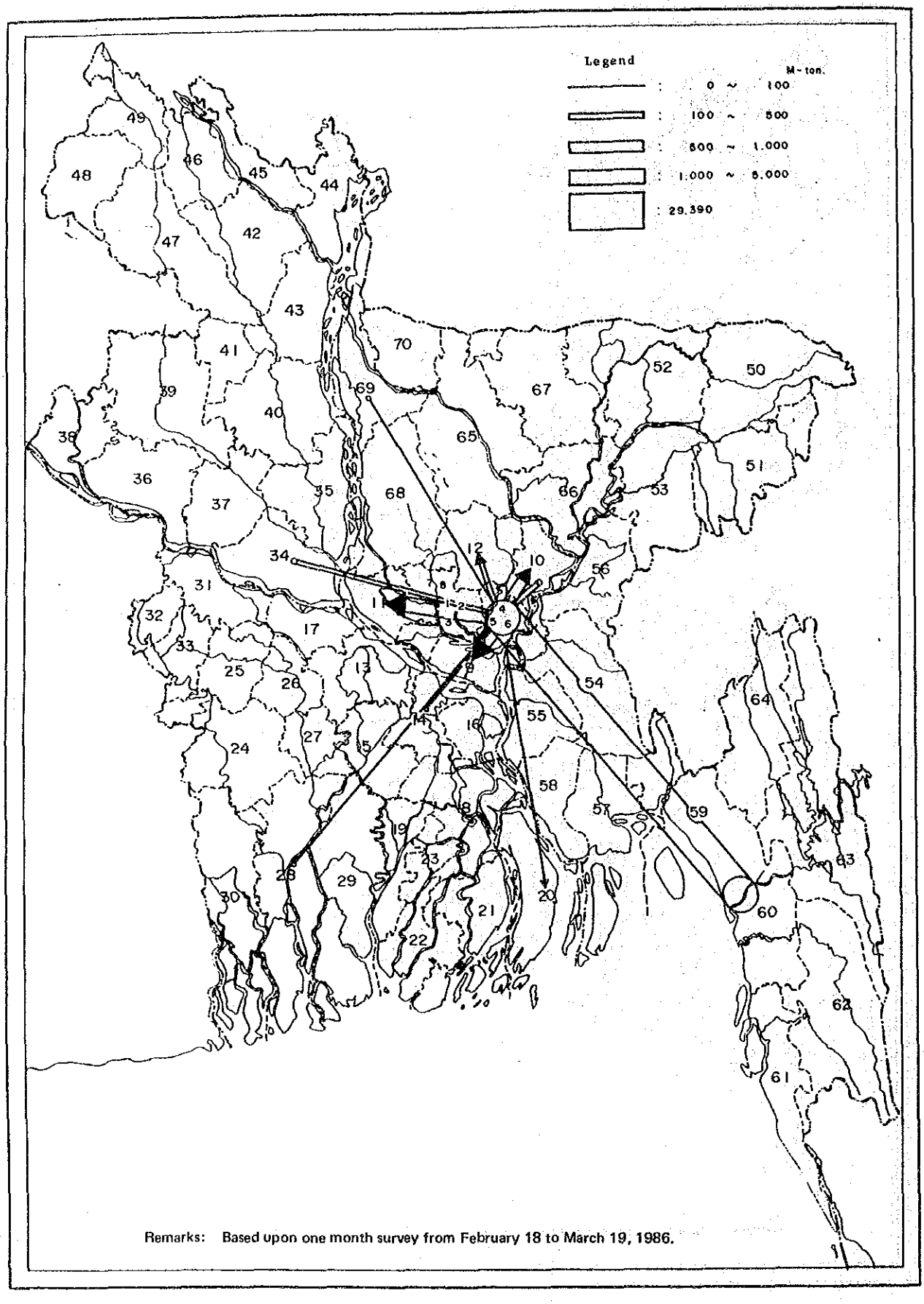

Fig. 1.3.4 (4) O-D of Wheat Via Narayanganj Port

1-3-2 Passenger Movement Survey

Table 1.3.5 shows the number of passengers surveyed at the passenger terminals of Dhaka and Narayanganj ports.

The duration of the survey is 16 days excluding 5 days (March 8th, 16th, 17th, 18th, 19th) due to a strike.

The number of passengers at Dhaka port is twice the number at Narayanganj port. There were approximately 500,000 passengers at Dhaka port.

1-3-3 River Traffic Survey

Table 1.3.6 (1) - (3) shows the result of the port vessel traffic volume survey. It is observed that country boats comprise the largest number of vessels at all observation points.

The low volume of passenger launch traffic on March 8th, 16th, 17th, 18th and 19th is due to the strike on these days.

Table 1.3.5 No. of Passenger Vessels & No. of Passengers by O-D

1 Name of Terminal : 1 Dhaka
2 Survey Period : 16 days from 27/2 to 19/3 (excluding March 8,16,17,18,19)

District	VESSEL TYPE						Total	Passengers
	Single Deck		One and a half Deck		Double Deck			
	Steel	Wooden	Steel	Wooden	Steel	Wooden		
1 Dhaka-1	25	194	79	184	4	0	486	63,805
9 Munshiganj	7	263	21	201	1	1	494	68,950
13 Faridpur	16	44	121	90	89	15	375	79,438
14 Madaripur	9	13	64	36	9	1	132	26,369
16 Shariatpur	1	3	25	11	45	15	100	23,511
18 Barisal	0	1	21	13	155	3	193	68,773
20 Bhola	1	0	9	2	72	2	86	29,715
21 Patuakhali	0	0	1	2	79	1	83	34,170
22 Barguna	0	1	0	1	31	0	33	13,295
28 Khulna	1	1	0	0	19	0	21	10,155
29 Bagerhat	0	0	1	0	24	2	27	9,722
54 Comilla	0	0	0	1	0	0	1	104
55 Chandpur	6	1	47	21	166	3	244	65,334
Total	66	521	389	562	694	43	2,275	493,341

Note: Dhaka-1 shows Savar, Nawabganj and Dohar of Dhaka District.

1 Name of Terminal: 2 Narayanganj
2 Survey Period : 16 days from 27/2 to 19/3 (excluding March 8,16,17,18,19)

District	VESSEL TYPE						Total	Passengers
	Single Deck		One and a half Deck		Double Deck			
	Steel	Wooden	Steel	Wooden	Steel	Wooden		
1 Dhaka-1	0	0	0	3	0	0	3	327
3 Dhaka-3	0	0	0	13	0	0	13	1,642
9 Munshiganj	3	19	12	885	1	0	920	99,691
13 Faridpur	0	0	3	1	20	0	24	8,632
16 shariatpur	0	0	22	21	5	0	48	10,134
54 Comilla	0	1	8	348	0	0	357	55,067
55 Chandpur	0	1	20	281	4	0	306	56,151
Total	3	21	65	1,552	30	0	1,671	231,644

Note: Dhaka-1 shows Savar, Nawabganj and Dohar of Dhaka District.
Dhaka-3 shows the remaining area except Savar, Nawabganj, Dohar and Keraniganj of Dhaka District.

Table 1.3.6 (1) River Traffic Survey

(Daily Downstream movement of Vessels by Vessel Type at Dhaka Port)

DATE	COASTER		CARGO LAUNCH		FLAT BARGE		PASSENGER LAUNCH		MECHANIZED COUNTRY BOAT		MANUAL COUNTRY BOAT (1)		MANUAL COUNTRY BOAT (2)+	
	P	F	P	F	P	F	P	F	P	F	P	F	P	F
28.2	1	2	26	28	1	-	59	66	35	44	41	12	214	489
1.3	2	-	15	14	1	3	55	46	33	24	49	20	228	850
2.3	2	3	18	15	-	-	40	43	37	30	40	17	198	379
3.3	-	-	24	14	1	1	48	48	24	31	41	19	261	344
4.3	-	1	12	5	1	1	43	41	22	38	47	18	215	383
5.3	-	1	16	10	-	1	47	43	22	26	27	26	204	349
6.3	-	2	14	21	1	-	51	52	34	14	31	33	259	432
7.3	-	1	19	23	2	6	57	46	26	27	32	47	195	358
8.3	1	1	8	8	2	1	14	15	13	17	20	31	145	217
9.3	-	2	26	19	1	2	53	41	30	51	36	49	361	477
10.3	-	2	30	15	1	1	42	43	25	27	48	39	269	386
11.3	-	5	24	15	4	-	36	38	31	32	39	52	246	403
12.3	4	3	23	20	1	3	39	50	23	38	41	53	230	433
13.3	-	2	14	18	1	2	48	39	30	23	39	26	254	483
14.3	-	-	15	14	-	-	40	43	19	22	31	59	264	233
15.3	2	2	13	6	2	-	40	43	25	30	48	29	366	319
16.3	-	2	7	12	1	4	23	1	19	61	36	44	295	397
17.3	4	2	17	8	-	1	16	-	30	41	52	27	308	421
18.3	1	3	10	10	1	-	2	1	27	64	40	47	287	416
19.3	-	2	16	11	3	3	-	3	25	56	35	54	230	264
TOTAL	17	36	347	286	24	29	753	702	530	696	773	702	5,029	8,133

Note: OBSERVATION POINTS: F - FATULLAH
P - POSTAGOLA

(1) shows one man rowboat
(2) + shows two or more man rowboat

Table 1.3.6 (2) River Traffic Survey

(Daily Upstream Movement of Vessels by Vessel Type at Dhaka Port)

DATE	COASTER		CARGO LAUNCH		FLAT BARGE		PASSENGER LAUNCH		MECHANIZED COUNTRY BOAT		MANUAL COUNTRY BOAT (1)		MANUAL COUNTRY BOAT (2)+	
	P	F	P	F	P	F	P	F	P	F	P	F	P	F
28.2	2	1	24	23	1	-	52	52	33	39	31	11	303	446
1.3	-	3	19	20	2	3	55	59	43	38	31	7	230	50
2.3	-	-	22	19	2	-	57	53	32	30	39	17	262	464
3.3	-	1	17	21	-	-	58	58	22	33	38	23	206	521
4.3	-	-	21	14	-	2	57	61	25	34	44	23	228	465
5.3	1	1	16	16	-	2	61	60	29	29	44	44	235	575
6.3	-	-	14	14	-	3	58	62	31	33	29	28	186	507
7.3	1	1	22	23	-	-	56	58	31	38	38	35	318	529
8.3	-	-	11	20	1	-	31	32	20	18	16	35	137	148
9.3	-	4	19	17	1	4	55	54	28	49	32	43	294	470
10.3	-	3	24	19	1	1	64	64	22	38	33	42	276	297
11.3	-	4	20	15	-	2	54	16	32	38	40	57	308	473
12.3	-	4	20	18	-	2	60	62	31	33	43	63	319	535
13.3	-	4	17	18	-	5	61	59	29	29	38	45	321	495
14.3	1	2	16	19	1	1	56	56	27	38	33	56	347	391
15.3	-	1	21	20	2	1	62	55	31	36	53	39	264	492
16.3	-	1	11	7	1	-	29	15	35	54	47	52	319	351
17.3	1	1	14	10	-	1	20	6	34	44	39	33	405	535
18.3	3	6	14	19	1	4	4	6	27	62	43	50	460	477
19.3	1	1	18	12	-	-	2	7	23	62	45	82	473	441
TOTAL	11	38	360	344	13	31	952	895	585	775	756	785	4,891	8,662

Note: OBSERVATION POINTS: F - FATULLAH
P - POSTAGOLA

(1) shows one man rowboat
(2) + shows two or more man rowboat

Table 1.3.6 (3) River Traffic Survey

(Daily Vessel Movement by Vessel Type at Narayanganj Port)

DATE	COASTER		CARGO LAUNCH		FLAT BARGE		PASSENGER LAUNCH		MECHANIZED COUNTRY BOAT		MANUAL COUNTRY BOAT (1)		MANUAL COUNTRY BOAT (2)+	
28.2	U	D	U	D	U	D	U	D	U	D	U	D	U	D
28.2	6	7	13	7	1	-	82	50	22	19	31	34	166	130
1.3	2	1	16	7	8	1	55	46	17	18	37	18	221	138
2.3	7	2	20	8	2	1	62	44	20	19	42	25	224	136
3.3	2	2	16	13	6	-	56	46	13	6	33	26	208	122
4.3	-	2	17	13	2	4	50	50	18	15	33	29	200	132
5.3	2	3	9	18	1	10	56	52	17	11	23	27	201	146
6.3	1	4	12	5	2	2	56	48	21	21	46	64	185	163
7.3	3	3	17	11	9	10	56	47	10	13	27	17	154	100
8.3	2	1	8	2	3	-	19	22	8	7	11	19	91	101
9.3	3	3	11	5	5	1	61	50	27	24	41	25	155	117
10.3	2	1	19	9	6	2	55	49	15	18	69	38	166	152
11.3	4	2	15	5	2	5	53	45	13	10	38	33	146	157
12.3	3	5	10	15	3	8	49	35	16	10	59	40	171	128
13.3	1	3	17	8	3	1	50	48	17	17	60	77	253	197
14.3	5	1	17	7	3	1	52	47	14	13	36	26	154	111
15.3	3	2	13	5	3	-	51	52	14	16	57	19	219	124
16.3	2	4	16	4	9	1	29	25	37	39	21	34	192	136
17.3	3	6	9	4	-	-	20	13	38	35	27	40	200	137
18.3	2	2	17	14	7	4	2	3	38	36	35	39	220	149
19.3	2	2	18	6	11	1	-	-	46	43	40	36	220	133
TOTAL	55	56	290	166	86	52	914	772	421	390	776	666	3,606	2.709

Note: OBSERVATION POINTS: U - Upstream
D - Downstream

(1) shows one man rowboat
(2) + shows two or more man rowboat

1-4 Inter-district cargo movement by IWT

The inter-district cargo movements by IWT based on the Annual Ports and Traffic Report 1982/83, BIWTA, are summarized in the following tables.

Table 1.4.1 IWT Freight Flow 1982-1983

Commodity : All Commodities

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	58510	54322	2336	0	1289750	0	0	1450	0	51794
Chitt.HT	12573	0	0	0	0	0	0	0	0	0	0
Comilla	346	0	0	481	2534	8025	2497	0	1408	0	7586
Noakhali	590	0	913	0	0	0	0	0	0	0	613
Sylhet	0	0	35453	0	0	101406	304	0	0	0	7523
Dhaka	37259	0	22062	0	3821	0	6283	0	6164	0	8378
Faridpur	0	0	0	0	0	729	0	0	0	0	227
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	182
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	608	0	4286	496	90	10597	927	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	5904	0	2780	257	1158	65525	26661	0	100	0	66695
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	970	58	420	3504	395	0	0	0	1094
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	165	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	913	0	0	3006	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	903	0	0	0	0	0
Total	57445	58510	121699	3628	8023	1483440	37067	0	9122	0	144092

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	537	410110	0	4456	0	123	0	0	0	1873390	34933
Chitt.HT	0	0	0	0	0	0	0	0	0	12573	0
Comilla	0	16678	0	2044	0	0	9624	0	0	51223	7989
Noakhali	0	0	0	57	0	0	0	0	0	2173	0
Sylhet	481	16075	0	597	0	0	14612	0	0	176451	11037
Dhaka	0	255612	0	6389	0	0	89652	0	0	435620	71103
Faridpur	0	891	0	0	0	0	0	0	0	1847	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	182	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	4688	0	5982	0	0	0	0	0	27674	11689
Jessore	0	43128	0	0	0	0	0	0	0	43128	0
Khulna	2207	0	568	31418	0	0	400	0	0	203673	809490
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	1321	0	0	0	0	0	0	0	7762	639
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	165	0
Pabna	0	350	0	0	0	0	0	0	0	4269	200
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	903	0
Total	3225	748853	568	50943	0	123	114288	0	0	2841030	947080

Source : Annual Ports & Traffic Report . BIWTA
Unit : ton

Table 1.4.2 IWT Freight Flow 1982-1983

Commodity : Bamboo

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	10888	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	10888	0	0	0	0	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	10888	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	1363
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	10888	1363

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.3 IWT Freight Flow 1982-1983

Commodity : Bitumin

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	1558	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	500	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2058	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	950	0	0	0	0	0	0	0	2508	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	500	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	950	0	0	0	0	0	0	0	3008	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.4 : IWT Freight Flow 1982-1983

Commodity : Bricks

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	655	0	165	0	1193	0	0	0	0	0	328
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	655	0	165	0	1193	0	0	0	0	0	328

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	720
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	2341	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	2341	720

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.5 IWT Freight Flow 1982-1983

Commodity : Cement

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	2659	0	0	296309	0	0	1450	0	6555
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	2645
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	648	0	0	19480	0	0	0	0	0
Dhaka	1861	0	0	0	0	0	0	0	0	0	105
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	142	0	0	27002	0	0	100	0	5279
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	1861	0	3449	0	0	342791	0	0	1550	0	14584

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	18373	0	3142	0	0	0	0	0	328488	1550
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	2645	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	76	0	0	0	0	10169	0	0	30373	0
Dhaka	0	500	0	100	0	0	867	0	0	3433	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	60	0	0	0	0	0	60	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	477	0	0	0	0	0	33000	82685
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	18949	0	3779	0	0	11036	0	0	397999	84235

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.6 IWT Freight Flow 1982-1983

Commodity : Coal

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	8916	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	376	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	9292	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	8916	2000
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	376	17717
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	9292	19717

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.7 IWT Freight Flow 1982-1983

Commodity : Cotton Yarn

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	1767	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	250	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1767	250	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	748	0	0	0	0	0	0	0	2515	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	868	0	0	868	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	250	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	748	0	0	0	0	868	0	0	3633	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.8 IWT Freight Flow 1982-1983

Commodity : Fertilizer

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	548	1946	0	43361	0	0	0	0	224
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	5719	1268	0	1305	0	2233
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	6050	0	220	0	6283	0	6075	0	4433
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	880	0	0	1047	0	0	0	0	3366
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	7478	1946	220	50127	7551	0	7380	0	10256

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	18325	0	1314	0	0	0	0	0	65718	10625
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	4119	0	327	0	0	6752	0	0	21723	7989
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	79291	0	3282	0	0	4537	0	0	110171	62246
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	240	0	0	0	0	0	5533	49872
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	101735	0	5163	0	0	11289	0	0	203145	130732

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.9 IWT Freight Flow 1982-1983

Commodity : Fire Wood

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	450	4373	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	229	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	450	4602	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	4823	114
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	229	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	5052	114

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.10 IWT Freight Flow 1982-1983

Commodity : Fish

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	346	0	0	22	0	0	0	0	449
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	590	0	524	0	0	0	0	0	0	0	431
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	80
Faridpur	0	0	0	0	0	0	0	0	0	0	31
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	318	0	1600	0	0	568	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	18	0	0	0	0	0	0	0	25
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	970	0	0	381	0	0	0	0	826
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	908	0	3458	0	0	971	0	0	0	0	1842

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	21	0	0	0	123	0	0	0	961	202
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	57	0	0	0	0	0	1602	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	176	0	0	0	0	0	0	0	256	0
Faridpur	0	0	0	0	0	0	0	0	0	31	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	155	0	0	0	0	0	2641	2769
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	6	0	0	0	0	0	49	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	620	0	0	0	0	0	0	0	2797	34
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	817	0	218	0	123	0	0	0	8337	3005

Source : Annual Ports & Traffic Report . BIWTA
Unit : ton

Table 1.4.11 IWT Freight Flow 1982-1983

Commodity : Foodgrains

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	355	0	0	316025	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	54	0	0	0	2094	965	1229	0	103	0	985
Noakhali	0	0	389	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	254
Dhaka	180	0	0	0	49	0	0	0	89	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	182
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	1645	0	0	9209	887	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	8359	25946	0	0	0	55562
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	2894	380	0	0	0	157
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	234	0	2389	0	2143	337452	28442	0	192	0	57140

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	2337	0	0	0	0	0	0	0	318717	6673
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	384	0	445	0	0	0	0	0	6259	0
Noakhali	0	0	0	0	0	0	0	0	0	389	0
Sylhet	0	534	0	0	0	0	0	0	0	788	0
Dhaka	0	0	0	1724	0	0	152	0	0	2194	125
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	182	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	1778	0	5452	0	0	0	0	0	18971	6241
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	2207	0	568	29824	0	0	0	0	0	122466	381125
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	680	0	0	0	0	0	0	0	4111	575
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	2207	5713	568	37445	0	0	152	0	0	474077	394739

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.12 IWT Freight Flow 1982-1983

Commodity : Dewa & Sundari wood

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	569	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	569	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	569	41943
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	569	41943

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.13 IWT Freight Flow 1982-1983

Commodity : Gur & Molasses

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	490	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	490	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	490	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	490	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.14 IWT Freight Flow 1982-1983

Commodity : Ice

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	390	0	0	0	0	0	0	221
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	292	0	0	481	0	0	0	0	0	0	1528
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	19	0	0	0	0	0	0	0	0	0	582
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	290	0	0	496	0	101	40	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	26	0	171	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	58	0	0	15	0	0	0	111
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	165	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	766	0	0	1451	0	272	55	0	0	0	2442

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	611	232
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	13	0	992	0	0	0	0	0	3306	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	383	0	0	0	0	0	984	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	20	0	158	0	0	0	0	0	1105	2561
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	259	0	0	0	0	0	456	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	21	0	0	0	0	0	0	0	205	30
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	165	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	54	0	1792	0	0	0	0	0	6832	2823

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.15 IWT Freight Flow 1982-1983

Commodity : Iron & Steel

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	43381	0	0	0	0	850
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	300	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	69	1300	0	0	0	0	1094
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	300	0	0	0	69	44681	0	0	0	0	1944

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	3550	0	0	0	0	0	0	0	47781	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	100	0	0	0	0	0	0	0	100	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	300	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	2463	1142
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	3650	0	0	0	0	0	0	0	50644	1142

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.16 IWT Freight Flow 1982-1983

Commodity : Jute

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	266	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	7359	0	1079	0	150	0	0	0	0	0	332
Faridpur	0	0	0	0	0	435	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	3464	0	308	0	0	125	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	363	0	0	2355	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	903	0	0	0	0	0
Total	10823	0	1750	0	150	4084	0	0	0	0	332

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	305	0	0	0	0	0	0	0	305	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	8960	0	0	0	0	0	0	0	9226	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	110024	0	0	0	0	0	0	0	118944	1405
Faridpur	0	211	0	0	0	0	0	0	0	646	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	400	0	0	0	0	0	0	0	400	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	3897	90935
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	350	0	0	0	0	0	0	0	3068	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	903	0
Total	0	120250	0	0	0	0	0	0	0	137389	92340

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.17 IWT Freight Flow 1982-1983

Commodity : Jute goods

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	25136	0	0	0	163	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	2111	0	55	0	0	250	0	0	0	0	1
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	350	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	27247	0	55	0	163	600	0	0	0	0	1

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	2628	0	0	0	0	0	0	0	2628	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	62343	0	0	0	0	250	0	0	87892	0
Faridpur	0	680	0	0	0	0	0	0	0	680	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	2490	0	0	0	0	0	0	0	2490	0
Jessore	0	1328	0	0	0	0	0	0	0	1328	0
Khulna	0	0	0	0	0	0	0	0	0	2417	124763
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	350	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	69469	0	0	0	0	250	0	0	97785	124763

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.18 IWT Freight Flow 1982-1983

Commodity : Lime stone

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	1269	0	0	2242	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	1269	0	0	2242	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	432	0	0	0	0	0	0	0	3943	11037
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	432	0	0	0	0	0	0	0	3943	11037

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.19 IWT Freight Flow 1982-1983

Commodity : Machinery

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	1650	0	0	0	0	500
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	533	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	533	0	0	1650	0	0	0	0	500

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	300	0	0	0	0	0	0	0	2450	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	533	3535
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	300	0	0	0	0	0	0	0	2983	3535

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Tabel 1.4.20 IWT Freight Flow 1982-1983

Commodity : Oil (edible)

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	2261	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	2261	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	2261	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	30	0	0	0	0	0	30	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	102	0	0	0	0	0	102	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	132	0	0	0	0	0	2393	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.21 IWT Freight Flow 1982-1983

Commodity : Paper & Board

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	10962	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	80	0	0	0	0	10890	0	0	0	0	49
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	11042	0	0	0	0	10890	0	0	0	0	49

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	10962	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	11019	4761
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	21981	4761

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.22 IWT Freight Flow 1982-1983

Commodity : P O L

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	43787	19918	0	0	469612	0	0	0	0	41989
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	14006	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	43787	33924	0	0	469612	0	0	0	0	41989

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	353778	0	0	0	0	0	0	0	929084	12881
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	80525	0	0	94531	7162
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	353778	0	0	0	0	80525	0	0	1023620	20043

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.23 IWT Freight Flow 1982-1983

Commodity : Pulp

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	801	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	801	0	0	0	0	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	801	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	914	0	0	914	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	527
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	914	0	0	1715	527

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.24 IWT Freight Flow 1982-1983

Commodity : Rayon & Dilphane

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	1611	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	1611	0	0	0	0	0	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	1611	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	1611	0

Source : Annual Ports & Traffic Report . BIWTA
Unit : ton

Table 1.4.25 IWT Freight Flow 1982-1983

Commodity : Salt

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	1902	30309	0	0	20673	0	0	0	0	900
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	140	0	0	0	0	0	195
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	48	0	0	0	0	0	102
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	700	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	1902	30309	0	188	21373	0	0	0	0	1197

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	5841	0	0	0	0	0	0	0	59625	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	474	0	30	0	0	2872	0	0	3711	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	608	0	0	0	0	878	0	0	1636	165
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	360	0	0	0	0	0	1060	1380
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	6923	0	390	0	0	3750	0	0	66032	1545

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.26 IWT Freight Flow 1982-1983

Commodity : Sand

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	187	0	0	2587	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	165	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	1952	0	0	10514	304	0	0	0	4174
Dhaka	1749	0	0	0	0	0	0	0	0	0	1050
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	1749	0	2139	0	0	13266	304	0	0	0	5224

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	350	0	0	0	0	0	0	0	0	3124	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	165	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	481	4959	0	597	0	0	0	0	0	22981	0
Dhaka	0	0	0	870	0	0	0	0	0	3669	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	831	4959	0	1467	0	0	0	0	0	29939	0

Source : Annual Ports & Traffic Report . BIWTA
Unit : ton

Table 1.4.27 IWT Freight Flow 1982-1983

Commodity : Stones/Shingles

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	23333	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	31584	0	0	68896	0	0	0	0	3095
Dhaka	0	0	0	0	0	0	0	0	0	0	411
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	31584	0	0	92229	0	0	0	0	3506

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	187	0	0	0	0	0	0	0	0	23520	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	10074	0	0	0	0	2924	0	0	116573	0
Dhaka	0	520	0	0	0	0	200	0	0	1131	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	187	10594	0	0	0	0	3124	0	0	141224	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.28 IWT Freight Flow 1982-1983

Commodity : Sugar

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	1291	165	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1291	165	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	350	0	0	0	0	0	0	0	350	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	150	0	0	0	0	0	1606	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	350	0	150	0	0	0	0	0	1956	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.29 IWT Freight Flow 1982-1983

Commodity : Sulphur

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	1022	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	1022	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	455	0	0	0	0	0	0	0	1477	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	455	0	0	0	0	0	0	0	1477	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.30 IWT Freight Flow 1982-1983

Commodity : Sundries

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	1132	0	0	0	55675	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	300	420	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	182
Sylhet	0	0	0	0	0	274	0	0	0	0	0
Dhaka	0	0	762	0	1998	0	0	0	0	0	955
Faridpur	0	0	0	0	0	294	0	0	0	0	196
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	1041	0	90	719	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	249	0	388	231	639	8062	300	0	0	0	1319
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	420	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	550	0	0	301	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	249	1132	2741	231	3447	65745	300	0	0	0	2652

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	5127	0	0	0	0	0	0	0	61934	50
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	220	0	0	0	0	0	940	0
Noakhali	0	0	0	0	0	0	0	0	0	182	0
Sylhet	0	0	0	0	0	0	605	0	0	879	0
Dhaka	0	1800	0	30	0	0	1375	0	0	6920	0
Faridpur	0	0	0	0	0	0	0	0	0	490	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	157	0	0	0	0	0	2007	118
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	11188	7628
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	420	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	851	200
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	6927	0	407	0	0	1980	0	0	85811	7996

Source : Annual Ports & Traffic Report . BIWTA
Unit : ton

Table 1.4.31 IWT Freight Flow 1982-1983

Commodity : Sweet Water

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	0	0	0

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	0	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	41800	0	0	0	0	0	0	0	41800	0
Khulna	0	0	0	0	0	0	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	41800	0	0	0	0	0	0	0	41800	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

Table 1.4.32 IWT Freight Flow 1982-1983

Commodity : Timber

	Chittagong	Chitt.HT	Comilla	Noakhali	Sylhet	Dhaka	Faridpur	Jamalpur	Mymensingh	Tangail	Barisal
Chittagong	0	0	0	0	0	1595	0	0	0	0	106
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	456	0	0	510	0	0	0	0	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	456	0	0	2105	0	0	0	0	106

	Jessore	Khulna	Kushtia	Patuakhali	Bogra	Dinajpur	Pabna	Rajshai	Rangpur	Total	(Intra)
Chittagong	0	0	0	0	0	0	0	0	0	1701	0
Chitt.HT	0	0	0	0	0	0	0	0	0	0	0
Comilla	0	0	0	0	0	0	0	0	0	0	0
Noakhali	0	0	0	0	0	0	0	0	0	0	0
Sylhet	0	0	0	0	0	0	0	0	0	0	0
Dhaka	0	0	0	0	0	0	0	0	0	0	0
Faridpur	0	0	0	0	0	0	0	0	0	0	0
Jamalpur	0	0	0	0	0	0	0	0	0	0	0
Mymensingh	0	0	0	0	0	0	0	0	0	0	0
Tangail	0	0	0	0	0	0	0	0	0	0	0
Barisal	0	0	0	0	0	0	0	0	0	0	0
Jessore	0	0	0	0	0	0	0	0	0	0	0
Khulna	0	0	0	0	0	0	400	0	0	1366	0
Kushtia	0	0	0	0	0	0	0	0	0	0	0
Patuakhali	0	0	0	0	0	0	0	0	0	0	0
Bogra	0	0	0	0	0	0	0	0	0	0	0
Dinajpur	0	0	0	0	0	0	0	0	0	0	0
Pabna	0	0	0	0	0	0	0	0	0	0	0
Rajshai	0	0	0	0	0	0	0	0	0	0	0
Rangpur	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	400	0	0	3067	0

Source : Annual Ports & Traffic Report , BIWTA
Unit : ton

APPENDIX 2

OUTLINE OF DHAKA - NARAYANGANJ METROPOLITAN AREA

Enumerated and Adjusted Population, 1981

	1981 Enumerated Population										1981 Adjusted Population				
	Total Population	Pop. 10 years and over	Resident Work Force						Crude Activity Rate (%)	Refined Activity Rate (%)	Total Population	Resident Work Force			
			Total	Cultivation	Other Agriculture	Manufacturing	Business	Others				Total	Agriculture	Manufacturing	Others
DNMA	4,073,880	2,963,639	1,384,917	93,920	6,370	217,888	292,517	774,222	34.0	46.7	4,206,000	1,432,000	104,000	225,000	1,103,000
Port Related Zone	987,559	690,713	319,317	22,704	1,741	98,780	61,201	134,891	32.3	46.2	1,019,000	331,000	25,000	102,000	204,000
DND Triangle	238,170	170,171	88,127	4,792	349	46,493	10,527	25,966	37.0	51.8	245,000	91,000	5,000	48,000	38,000
Demra (P)	111,383	78,546	38,579	2,090	117	16,790	5,290	14,292	34.6	49.1	114,000				
Fatullah(P)	32,789	22,513	10,441	948	168	3,130	1,612	4,583	31.8	46.4	34,000				
Siddhirganj	93,998	69,112	39,107	1,754	64	26,573	3,625	7.991	41.6	56.6	97,000				
Keraniganj	202,011	141,380	68,325	2,669	440	11,493	17,482	36,241	33.8	48.3	209,000	71,000	3,000	12,000	56,000
SMA area	165,800	116,607	56,267	423	335	10,181	16,008	29,320	33.9	48.3	172,000				
Konda	36,211	24,773	12,058	2,246	105	1,312	1,474	6,921	33.3	43.5	37,000				
Narayanganj	296,253	211,856	92,174	6,367	478	14,974	21,819	48,536	31.1	43.5	306,000	95,000	7,000	15,000	73,000
Mu. area	174,302	129,651	58,702	405	202	10,370	15,896	31,829	33.7	45.3	180,000				
Other N'ganj	21,931	14,228	5,478	1,933	35	162	997	2,351	25.0	38.5	23,000				
Fatullah(U)	52,689	36,618	15,558	794	151	2,757	2,854	9,002	29.5	42.5	54,000				
Fatullah(R)	47,331	31,359	12,436	3,235	90	1,685	2,072	5,354	26.3	39.7	49,000				
Bandar	251,125	167,306	70,691	8,876	474	25,820	11,373	24,148	28.1	42.3	259,000	74,000	10,000	27,000	37,000
Mu.area	72,213	50,781	23,039	307	119	7,449	4,205	10,959	31.9	45.4	74,000				
Other Bandar	125,626	81,589	32,270	5,963	226	11,592	4,825	9,664	25.7	39.6	130,000				
Kachpur	18,443	11,698	4,864	920	85	2,637	365	857	26.4	41.6	19,000				
Tarabo	34,843	23,238	10,518	1,686	44	4,142	1,978	2,668	30.2	45.3	36,000				
Central Zone	1,944,590	1,470,176	709,285	7,970	1,328	68,602	175,539	455,846	36.5	48.2	2,008,000	733,000	10,000	71,000	652,000
Old Dhaka	796,659	597,228	291,830	1,500	615	33,177	83,244	173,294	36.6	48.9	823,000				
New Dhaka	1,147,931	872,948	417,455	6,470	713	35,425	92,295	282,552	36.4	47.8	1,185,000				
North Zone	1,141,731	802,750	356,315	63,246	3,301	50,506	55,777	183,485	31.2	44.4	1,179,000	368,000	69,000	52,000	247,000
North Dhaka	708,661	502,334	217,818	16,749	1,127	18,586	39,355	142,001	30.7	43.4	731,000	224,000	18,000	19,000	187,000
Tongi-Joydebpur	241,104	169,128	79,673	18,436	579	28,807	9,762	22,089	33.0	47.1	250,000	83,000	20,000	30,000	33,000
Savar	191,966	131,288	58,824	28,061	1,595	3,113	6,660	19,395	30.6	44.8	198,600	61,000	31,000	3,000	27,000

APPENDIX 3

NATURAL CONDITIONS OF DHAKA AND NARAYANGANJ PORTS

(related to CHAPTER 4)

3-1 Soil Investigation

The results of soil tests at each location are shown in Tables 4.1.1 - 4.1.4.

Most of the sites have a compacted sand deposit below the 20 m to 22 m PWD level. These sandy deposits have only a little silt and a low water content.

Table 4.1.1 Results of Soil Tests

Location A

Item / Soil Stratum	Depth (PWD)	N-Value Blows per 30cm	Specific Gravity (GS)	Grain Size Distribution			Water Content (%)	Atterberg Limit			Density		Unconfined Compression	
				Sand (%)	Silt (%)	Clay (%)		W_L (%)	Wp (%)	Ip	Wet γ_{tw} (g/cm^3)	Dry γ_{td} (g/cm^3)	qu (kgf/cm^2)	Sensitivity
Filled Soil	above +2.00	Mini 1 Max 1 $\tilde{N}$ = 1	-	-	-	-	-	-	-	-	-	-	-	-
Silty Layer	+2.00 -10.00	Mini 2 Max 17 $\tilde{N}$ = 6	2.651 ~ 2.663	8	60	32	37.9	43.7	26.3	19.0	1.77	1.24	0.859	2.166
Clayey Layer	+2.00 ~ -8.00 -8.00 ~ -18.00	Mini 2 Max 31 $\tilde{N}$ = 11	2.653 ~ 2.662	10	45	45	33.8	55.8	29.3	26.6	2.01	1.59	4.072	1.21
Silty Clay	-8.00 ~ -10.00 -12.00 ~ -18.00	Mini 3 Max 22 $\tilde{N}$ = 9	2.652 ~ 2.664	2	50	48	36.7	49.9	29.7	28.0	-	-	-	-
Silty Layer	-12.00 ~ -18.00 -18.00 ~ -21.00	Mini 6 Max 36 $\tilde{N}$ = 23	2.656 ~ 2.668	30	50	20	22.15	31.9	23.1	13.5	-	-	-	-
Sandy Layer	-18.00 ~ -21.00 below	Mini 15 Max 123 $\tilde{N}$ = 54	2.662 ~ 2.667	73	27	0	21.6	-	-	-	-	-	-	-

Table 4.1.2 Results of Soil Tests

Location B

Item / Soil Stratum	Depth (PWD)	N-Value Blows per 30cm	Specific Gravity (GS)	Grain Size Distribution			Water Content (%)	Atterberg Limit			Density		qu
				Sand (%)	Silt (%)	Clay (%)		W_L (%)	Wp (%)	Ip	Wet γ_{tw} (g/cm^3)	Dry γ_{td} (g/cm^3)	
Sandy Silt	above -5.00 ∿ -9.00	Mini 1 Max 14 $\tilde{N}$ = 7	2.657 ∿ 2.669	23	76	1	35.05	37.9	22.7	15.2	1.84	1.367	0.74
Sandy Layer	-9.00 ∿ -18.00	Mini 3 Max 22 $\tilde{N}$ = 10	2.661 ∿ 2.675	57	42	0	30.86	-	-	-	-	-	-
Silty Layer	-18.00 ∿ 20.00	Mini 4 Max 25 $\tilde{N}$ = 10	2.659 ∿ 2.669	28	69	3	38.22	43.6	24.5	19.10	-	-	-
Sandy Layer	-20.00 below	Mini 6 Max 114 $\tilde{N}$ = 48	2.659 ∿ 2.671	84	16	0	28.4	-	-	-	-	-	-

Table 4.1.3 Results of Soil Tests

Location E

Item / Soil Stratum	Depth (PWD)	N-Value Blows per 30cm	Specific Gravity (GS)	Grain Size Distribution			Water Content (%)	Atterberg Limit			Density		Unconfined Compression	
				Sand (%)	Silt (%)	Clay (%)		W_L (%)	Wp (%)	Ip	Wet γ_{tw} (g/cm^3)	Dry γ_{tw} (g/cm^3)	qu (kgf/cm^2)	Sensitivity
Silty Layer	above ±0.00 ∿ -10.00	Mini 1 Max 6 Ñ = 3.5	2.653 ∿ 2.665	40	50	10	31	38.4	22.2	16.2	1.81	1.36	0.58	1.54
Sandy Layer	-10.00 ∿-25.00	Mini 7 Max 22 Ñ = 12	2.660 ∿ 2.668	80	20	0	25.6	-	-	-	-	-	-	-
Silty Layer	-25.00 ∿-28.00	Mini 14 Max 30 Ñ = 22	2.663 ∿ 2.665	24	70	6	31.4	53.2	29.0	24.2	-	-	-	-
Sandy Silt	-28.00 ∿-37.00	Mini 19 Max 36 Ñ = 24	2.66 ∿ 2.663	58	42	0	27.7	43.2	23.8	19.4	2.0	1.6	2.04	1.6
Silty Clay	-37.00 ∿-47.00	Mini 19 Max 28 Ñ = 35	2.657 ∿ 2.663	5	45	50	26.4	55.4	30.3	25.1	-	-	-	-
Sandy Layer	-47.00 below	Mini 35 Max 49 Ñ = 43	2.660 ∿ 2.664	77	23	0	20.5	-	-	-	-	-	-	-

Table 4.1.4 Results of Soil Tests

Location G

Item / Soil Stratum	Depth (PWD)	N-Nalue Blows per 30cm	Specific Gravity (GS)	Grain Size Distribution			Water Content (%)
				Sand (%)	Silt (%)	Cu	
Sandy Silt	+3.60 ∿ -7.00	Mini 2 Max 14 Ñ = 7	2.660 ∿ 2.665	70	30	4.24	31.88
Sandy Layer	-7.00 ∿ -23.00	Mini 7 Max 27 Ñ = 17	2.660 ∿ 2.671	88	12	3.24	28.20
Sandy Silt	-23.00 ∿-26.00	Mini 37 Max 40 Ñ = 38	2.665	70	30	7.77	23.20
Sandy Layer	-26.00 below	Mini 22 Max 56 Ñ = 38	2.660 ∿ 2.671	87	13	4.65	22.20

3-2 Weather Conditions

Table 4.2.1 shows the wind direction and velocity at Dhaka based on a total of 8,732 ten minute observations (the wind speeds are average valves during each ten minute period).

The prevailing winds are from the SE and S, and these account for approximately 30% of the total observations. There are almost no winds exceeding 15m/sec, and winds of 5m/sec or less comprise approximately 99% of the total observation. In general, the wind conditions are extremely calm.

An examination of the wind conditions by season shows that the dry season is the calmest period of the year with calm conditions prevailing approximately 78% of the time. The season with the strongest winds is the hot season when calm conditions occur only about 28% of the time. All the observed winds over 10m/sec blow during this season. During the hot and rainy seasons the SE and S winds blow as the monsoon. Such winds account for about 48% of the total observations during the hot season, about 40% during the rainy season and about 5% during the dry season.

Table 4.2.1 Wind Direction and Wind Velocity at Dhaka

ALL SEASONS

(Jan. ∿ Dec.)

WIND DIRECTION / WIND VELOCITY	N	NE	E	SE	S	SW	W	NW	TOTAL
CALM	-		-	-	-	-	-	-	4,561 (52.2)
m/sec 0.3 ∿ 4.9	176 (2.0)	85 (1.0)	401 (4.6)	1041 (11.9)	1552 (17.8)	434 (5.0)	198 (2.3)	180 (2.0)	4,066 (46.6)
5.0 ∿ 9.9	4 (0.05)	4 (0.05)	13 (0.1)	42 (0.5)	28 (0.3)	4 (0.05)	2 (0.02)	2 (0.02)	100 (1.1)
10.0 ∿ 14.9		2 (0.02)	1 (0.01)	1 (0.01)					4 (0.05)
15.0 ∿ 19.9						1 (0.01)			1 (0.01)
20.0 ∿ 24.9									-
TOTAL	180 (2.1)	91 (1.1)	415 (4.7)	1084 (12.4)	1580 (18.1)	439 (5.0)	200 (2.3)	182 (2.1)	8,732 (100%)

DRY SEASON

(Nov., Dec., Jan., Feb.)

WIND DIRECTION / WIND VELOCITY	N	NE	E	SE	S	SW	W	NW	TOTAL
CALM	-	-	-	-	-	-	-	-	2,236 (77.5)
m/sec 0.3 ∿ 4.9	58 (2.0)	45 (1.6)	80 (2.8)	32 (1.1)	93 (3.2)	81 (2.8)	111 (3.8)	133 (4.6)	633 (21.9)
5.0 ∿ 9.9	1 (0.03)			1 (0.03)	14 (0.5)		1 (0.03)		17 (0.6)
10.0 ∿ 14.9									-
15.0 ∿ 19.9									-
20.0 ∿ 24.9									-
TOTAL	59 (2.1)	45 (1.6)	80 (2.8)	33 (1.2)	107 (3.7)	81 (2.8)	112 (3.9)	133 (4.6)	2,886 (100%)

Source: Meteorology Department

HOT SEASON

(Mar., Apl., May)

WIND DIRECTION / WIND VELOCITY	N	NE	E	SE	S	SW	W	NW	TOTAL
CALM	-	-	-	-	-	-	-	-	607 (27.6)
m/sec 0.3 ∿ 4.9	34 (1.5)	21 (1.0)	161 (7.4)	319 (14.5)	718 (32.6)	205 (9.3)	60 (2.8)	33 (1.5)	1,551 (70.4)
5.0 ∿ 9.9	3 (0.1)	2 (0.1)	5 (0.2)	14 (0.6)	10 (0.5)	3 (0.1)	1 (0.05)	2 (0.1)	40 (1.8)
10.0 ∿ 14.9		2 (0.1)	1 (0.03)	1 (0.05)					4 (0.2)
15.0 ∿ 19.9						1 (0.05)			1 (0.05)
20.0 ∿24.9									
TOTAL	37 (1.7)	25 (1.1)	167 (7.5)	334 (15.2)	728 (33.0)	209 (9.5)	61 (2.8)	35 (1.6)	2,203 (100%)

RAINY SEASON

(Jun., Jul., Aug., Sep., Oct.)

WIND DIRECTION / WIND VELOCITY	N	NE	E	SE	S	SW	W	NW	TOTAL
CALM	-	-	-	-	-	-	-	-	1,718 (47.2)
m/sec 0.3 ∿ 4.9	84 (2.3)	19 (0.5)	160 (4.4)	690 (19.0)	741 (20.3)	148 (4.1)	27 (0.7)	14 (0.4)	1,882 (51.7)
5.0 ∿ 9.9		2 (0.05)	8 (0.2)	27 (0.7)	4 (0.1)	1 (0.03)			43 (1.2)
10.0 ∿ 14.9									
15.0 ∿ 19.9									
20.0 ∿ 24.9									
TOTAL	84 (2.3)	21 (0.6)	168 (4.6)	717 (19.7)	745 (20.5)	149 (4.1)	27 (0.7)	14 (0.4)	3,643 (100%)

Source: Meteorology Department

3-3 River Features

3-3-1 Fluctuation of the water level in Dhaka Port and Narayanganj Port

The water levels of the Buriganga river and the Lakhya river vary periodically. The periodical movement of both river surfaces from April of 1980 to March of 1985 is shown in Fig. 4.3.1. The annual fluctuation is classified into the dry season from December to April, the pre-flood season in May and June, the flood season from July to September, and the post-flood season in October and November.

The daily periodic change of the water level is dominant when the water level is lower than +3.5 m PWD. The daily water level fluctuations at both ports in 1981 are shown in Tables 4.3.1 and 4.3.2. The water levels indicate another periodic fluctuation over a two week period which is a result of the tidal changes in the Bay of Bengal. The daily difference between the high and low water levels in both ports during the dry season is 0.9 m in maximum, and the average is 0.6 m to 0.7 m in Dhaka port and 0.3 m to 0.5 m in Narayanganj port.

The elevation and the occurrence date of the annual highest water levels observed at Dhaka port since 1951 are shown in Table 4.3.3. The highest water level recorded is +7.09 m PWD, and the mean of the annual highest water levels over the 30 year observation period is +6.0 m PWD.

There are only 12 complete or nearly complete annual observation records from the 27 years from 1958 to 1984 which include almost all of the daily HWL and LWL levels at Dhaka port. In order to determine the occurrence probability of various water levels at the port, the annual number of occurrence days of different HWL and LWL

at the port are classified according to the water level at 0.5 m intervals in Table 4.3.4.

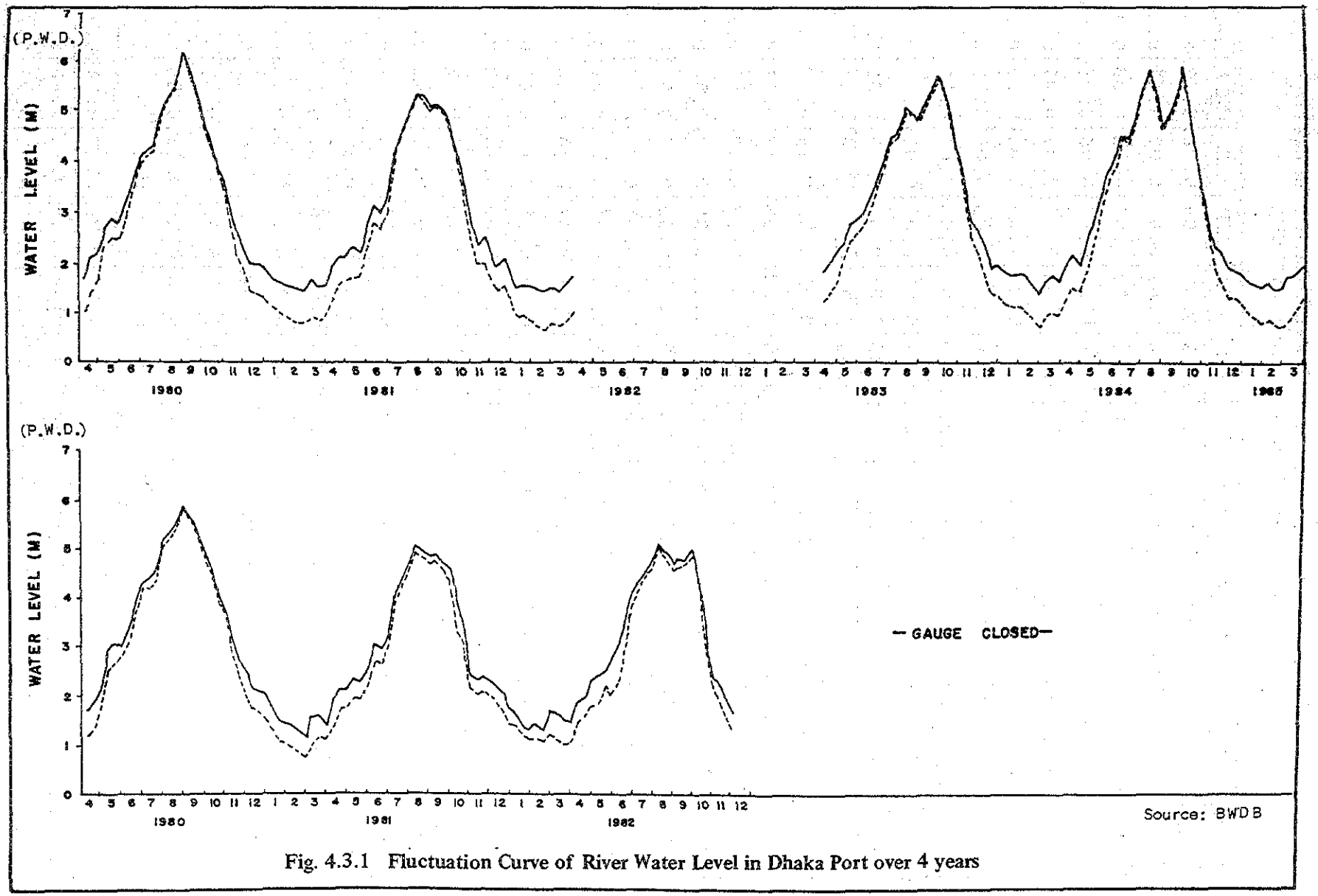

Fig. 4.3.1 Fluctuation Curve of River Water Level in Dhaka Port over 4 years

Table 4.3.1 Daily Difference of Water Level Between HWL & LWL in Dhaka Port in 1981

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC.
1	0.54	0.61	0.55	0.63	0.61	0.35	0.31	0.05	0.04	0.06	0.43	0.60
2	0.55	0.64	0.67	0.67	0.69	0.36	0.29	0.07	0.07	0.07	0.41	0.47
3	0.61	0.65	0.71	0.73	0.69	0.40	0.20	0.07	0.04	0.08	0.38	0.47
4	0.65	0.70	0.73	0.71	0.72	0.40	0.16	0.03	0.03	0.06	0.34	0.50
5	0.55	0.79	0.77	0.81	0.70	0.35	0.12	0.03	0.03	0.07	0.31	0.39
6	0.64	0.86	0.84	0.84	0.64	0.30	0.13	0.03	0.03	0.05	0.25	0.29
7	0.64	0.86	0.92	0.75	0.55	0.23	0.09	0.05	0.03	0.05	0.28	0.34
8	0.64	0.80	0.63	0.70	0.57	0.20	0.09	0.05	0.03	0.05	0.34	0.48
9	0.55	0.74	0.89	0.66	0.50	0.22	0.07	0.03	0.03	0.05	0.41	0.55
10	0.56	0.65	0.78	0.57	0.43	0.24	0.03	0.05	0.03	0.06	0.49	0.64
11	0.56	0.68	0.71	0.54	0.38	0.25	0.04	0.05	0.03	0.09	0.55	0.72
12	0.52	0.58	0.58	0.58	0.44	0.25	0.04	0.05	0.05	0.14	0.58	0.70
13	0.60	0.55	0.54	0.60	0.54	0.31	0.05	0.03	0.06	0.17	0.61	0.60
14	0.55	0.66	0.53	0.54	0.52	0.28	0.06	0.05	0.03	0.22	0.58	0.66
15	0.57	0.64	0.67	0.57	0.48	0.28	0.06	0.03	0.05	0.23	0.50	0.53
16	0.61	0.68	0.70	0.51	0.49	0.28	0.06	0.05	0.05	0.25	0.54	0.58
17	0.64	0.73	0.71	0.61	0.29	0.38	0.03	0.05	0.05	0.21	0.52	0.57
18	0.64	0.73	0.75	0.55	0.49	0.34	0.05	0.07	0.05	0.24	0.44	0.46
19	0.70	0.79	0.76	0.61	0.49	0.34	0.03	0.03	0.06	0.20	0.40	0.35
20	0.75	0.74	0.75	0.60	0.46	0.35	0.05	0.03	0.05	0.17	0.40	0.34
21	0.79	0.77	0.78	0.63	0.41	0.34	0.06	0.03	0.05	0.15	0.43	0.49
22	0.80	0.75	0.78	0.55	0.40	0.25	0.03	0.06	0.05	0.14	0.46	0.52
23	0.84	0.70	0.73	0.52	0.37	0.23	0.05	0.05	0.05	0.19	0.48	0.51
24	0.78	0.66	0.67	0.52	0.32	0.23	0.03	0.05	0.05	0.25	0.51	0.55
25	0.67	0.61	0.62	0.42	0.34	0.25	0.03	0.02	0.02	0.30	0.51	0.59
26	0.62	0.59	0.66	0.37	0.34	0.26	0.05	0.03	0.06	0.34	0.54	0.57
27	0.56	0.54	0.61	0.34	0.31	0.26	0.06	0.02	0.08	0.38	0.58	0.57
28	0.47	0.42	0.53	0.35	0.35	0.28	0.03	0.03	0.08	0.40	0.57	0.51
29	0.42	-	0.45	0.44	0.46	0.29	0.02	0.05	0.08	0.43	0.55	0.54
30	0.54	-	0.50	0.55	0.42	0.21	0.06	0.05	0.06	0.43	0.54	0.55
31	0.58	-	0.62	-	0.38	-	0.06	0.05	-	0.42	-	0.53
MAX	0.84	0.86	0.92	0.84	0.72	0.40	0.31	0.07	0.08	0.43	0.61	0.72
MEAN	0.62	0.68	0.68	0.58	0.47	0.29	0.08	0.04	0.05	0.19	0.46	0.52
MIN	0.42	0.42	0.45	0.34	0.29	0.20	0.02	0.02	0.02	0.05	0.25	0.29

Table 4.3.2 Daily Difference of Water Level Between HWL & LWL in Narayanganj Port in 1981

DATE	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	0.37	0.42	0.39	0.46	0.40	0.35	0.19	0.10	0.09	0.25	0.30	0.25
2	0.46	0.54	0.43	0.40	0.49	0.28	0.23	0.16	0.08	0.30	0.20	0.25
3	0.41	0.49	0.46	0.55	0.52	0.40	0.30	0.16	0.10	0.62	0.25	0.28
4	0.41	0.49	0.46	0.61	0.58	0.51	0.28	0.13	0.13	0.35	0.23	0.25
5	0.50	0.43	0.46	0.61	0.55	0.40	0.25	0.10	0.14	0.55	0.25	0.20
6	0.58	0.40	0.49	0.55	0.55	0.26	0.13	0.09	0.15	0.82	0.20	0.25
7	0.55	0.49	0.52	0.64	0.44	0.15	0.10	0.07	0.20	0.74	0.30	0.25
8	0.48	0.43	0.57	0.69	0.29	0.24	0.18	0.07	0.20	0.71	0.25	0.35
9	0.50	0.43	0.87	0.69	0.33	0.30	0.09	0.06	0.23	0.68	0.35	0.45
10	0.54	0.34	0.85	0.40	0.35	0.41	0.07	0.07	0.26	0.58	0.35	0.28
11	0.40	0.34	0.58	0.43	0.28	0.47	0.06	0.08	0.26	0.44	0.40	0.30
12	0.52	0.52	0.49	0.36	0.25	0.41	0.10	0.06	0.18	0.21	0.30	0.35
13	0.46	0.52	0.48	0.36	0.22	0.41	0.10	0.06	0.15	0.20	0.30	0.40
14	0.93	0.51	0.43	0.46	0.40	0.38	0.08	0.05	0.10	0.28	0.25	0.50
15	0.46	0.51	0.25	0.52	0.22	0.15	0.06	0.07	0.10	0.25	0.25	0.45
16	0.37	0.45	0.28	0.37	0.27	0.27	0.10	0.07	0.07	0.32	0.30	0.50
17	0.40	0.45	0.31	0.27	0.17	0.25	0.12	0.09	0.07	0.37	0.25	0.45
18	0.46	0.48	0.43	0.29	0.55	0.28	0.10	0.15	0.10	0.30	0.20	0.40
19	0.43	0.49	0.47	0.30	0.55	0.20	0.10	0.23	0.13	0.32	0.15	0.32
20	0.46	0.44	0.40	0.67	0.55	0.25	0.10	0.18	0.04	0.27	0.30	0.33
21	0.54	0.36	0.46	0.48	0.55	0.35	0.05	0.20	0.07	0.33	0.25	0.35
22	0.37	0.45	0.46	0.57	0.40	0.23	0.08	0.17	0.10	0.45	0.40	0.20
23	0.64	0.48	0.40	0.43	0.55	0.22	0.18	0.16	0.18	0.31	0.40	0.35
24	0.62	0.45	0.31	0.34	0.17	0.23	0.15	0.19	0.26	0.27	0.35	0.25
25	0.49	0.30	0.31	0.34	0.32	0.22	0.16	0.20	0.40	0.34	0.30	0.15
26	0.43	0.33	0.22	0.34	0.27	0.18	0.10	0.17	0.33	0.17	0.20	0.20
27	0.31	0.33	0.23	0.46	0.23	0.10	0.16	0.13	0.30	0.14	0.20	0.40
28	0.34	0.37	0.22	0.31	0.33	0.05	0.17	0.18	0.30	0.11	0.25	0.40
29	0.23	-	0.21	0.43	0.35	0.05	0.07	0.10	0.24	0.16	0.30	0.40
30	0.18	-	0.24	0.43	0.38	0.12	0.08	0.10	0.22	0.14	0.30	0.40
31	0.37	-	0.43	-	0.42	-	0.07	0.08	-	0.12	-	0.35
MAX	0.64	0.54	0.87	0.69	0.58	0.51	0.95	0.23	0.40	0.82	0.40	0.50
MEAN	0.44	0.44	0.42	0.46	0.39	0.27	0.15	0.12	0.17	0.36	0.28	0.34
MIN	0.18	0.30	0.21	0.30	0.17	0.05	0.05	0.05	0.07	0.11	0.15	0.15

Table 4.3.3 Annual Maximum and Minimum Water Level at Dhaka Port

Year	Annual Maximum Water Level		Annual Minimum Water Level	
	Date	WL (PWD)	Date	WL (PWD)
1951	31.7	5.944	-	-
1952	10.9	5.486	-	-
1953	5.8	5.700	-	-
1954	2.9	7.056	-	-
1955	18.8	7.087	-	-
1956	3.7	5.685	-	-
1957	17.8	5.364	-	-
1958	2.9	6.447	1.2	0.34
1959	23.8	5.776	-	-
1960	25.9	6.096	7.4	0.49
1961	2.9	5.517	11.2	0.49
1962	-NA-	-	-	-
1963	-NA-	-	-	-
1964	-NA-	-	-	-
1965	-NA-	-	-	-
1966	-NA-	-	-	-
1967	-NA-	-	-	-
1968	2.8	6.340	-	-
1969	31.8	5.928	14.2	0.77
1970	6.8	6.507	16.2	0.61
1971	30.8	6.233	6.3	0.70
1972	8.8	5.300	11.2	0.61
1973	18.8	5.883	15.3	0.58
1974	11.8	6.614	17.2	0.66
1975	9.8	5.425	8.3	0.75
1976	29.8	5.166	25.2	0.69
1977	2.9	5.640	30.1	0.56
1978	22.8	5.258	-	-
1979	8.8	5.288	-	-
1980	27.8	6.431	-	-
1981	9.8	5.455	16.3	0.69
1982	-	-	5.2	0.480
1983	24.9	5.765	-	-
1984	26.9	6.040	26.2	0.425
1985	-	-	16.2	0.650
	Mean 5.905 m		Mean 0.59 m	
	R.M.F.L. 7.087 m (18.8, 1955)		0.34 m (1.2, 1958)	

Station : Dhaka (Mill Barrack)

Source : BWDB

Table 4.3.4 Daily HWL and LWL at Dhaka Port

HWL

Height / Year	0 ~ 0.5	0.5 ~ 1.0	1.0 ~ 1.5	1.5 ~ 2.0	2.0 ~ 2.5	2.5 ~ 3.0	3.0 ~ 3.5	3.5 ~ 4.0	4.0 ~ 4.5	4.5 ~ 5.0	5.0 ~ 5.5	5.5 ~ 6.0	6.0 ~ 6.5	6.5 ~ 7.0	7.0 over	Total	
1958		8	74	54	41	25	36	21	41	19	15	17	14			365	
60			80	76	48	15	23	19	16	11	60	14	4			366	
69			33	104	59	25	19	16	11	16	34	45	3			365	
70		1	38	68	58	26	23	25	18	32	32	18	24	2		365	
71			29	98	60	23	6	15	27	19	42	21	21			361	(4 Days Lacking)
72			30	100	62	24	39	13	50	34	14					366	
73			55	51	46	36	42	9	17	50	42	17				365	
74			26	74	46	42	40	9	14	13	29	38	14	10		365	
75			26	92	44	49	27	28	23	57	19					365	
76			27	90	83	28	19	26	16	58	19					366	
81			32	95	59	46	25	14	10	38	46					365	
84			15	105	54	27	11	26	26	39	35	26	2			366	
Total		9 (0.2)	465 (10.6)	1007 (23.0)	670 (15.3)	366 (8.4)	310 (7.1)	221 (5.0)	269 (6.1)	386 (8.8)	387 (8.8)	196 (4.5)	82 (1.9)	12 (0.3)		4,380 (100.0)	

LWL

Height / Year	0 ~ 0.5	0.5 ~ 1.0	1.0 ~ 1.5	1.5 ~ 2.0	2.0 ~ 2.5	2.5 ~ 3.0	3.0 ~ 3.5	3.5 ~ 4.0	4.0 ~ 4.5	4.5 ~ 5.0	5.0 ~ 5.5	5.5 ~ 6.0	6.0 ~ 6.5	6.5 ~ 7.0	7.0 over	Total	
1958	8	75	52	23	27	36	20	30	33	15	16	17	13			365	
60	1	64	67	62	18	12	25	14	15	11	59	15	3			366	
69		32	92	66	21	13	8	24	23	12	39	35				365	
70		43	61	49	23	24	22	20	20	31	33	14	25			365	
71		40	96	43	14	18	8	15	25	20	41	22	19			361	(4 Days Lacking)
72		47	92	49	16	38	15	12	55	28	14					366	
73		86	20	44	26	41	15	8	19	48	43	15				365	
74		28	85	42	18	37	30	9	14	12	29	39	16	6		365	
75		43	78	38	43	21	21	24	22	56	19					365	
76		41	84	62	36	17	9	24	22	56	15					366	
81		68	66	54	31	29	11	14	13	42	37					365	
84	2	16	95	64	10	20	9	22	28	38	35	26	1			366	
Total	11 (0.2)	583 (13.3)	888 (20.3)	596 (13.6)	283 (6.5)	306 (7.0)	193 (4.4)	216 (4.9)	289 (6.6)	369 (8.4)	380 (8.7)	183 (4.2)	77 (1.8)	6 (0.1)		4,380 (100.0)	

Note: Figures in Parenthesis are Percentages Source: BWDB

3-3-2 River surface fluctuation of the three major rivers, the Jamura, the Ganges and the Meghna

The annual fluctuation of the water levels of the Jamuna, Ganges and Meghna rivers, which are the three main rivers in Bangladesh, is shown in Fig. 4.3.2. The observation site locations are shown in Fig. 4.3.3.

Mawa is a village located on the bank of the river Padma, which is formed by the confluence of the Jamuna and the Ganges, and stands at a ground elevation almost equal to Dhaka city. The water level fluctuations of Dhaka, Narayanganj and Mawa are compared in Table 4.3.5 in order to compare the fluctuations of the main river flow and the branches.

The water levels in the dry season are almost equal at high tide, but the level at Mawa is higher than at the other locations at low tide.

The water level at Mawa is clearly higher than the levels at Dhaka and Narayanganj during the flood season.

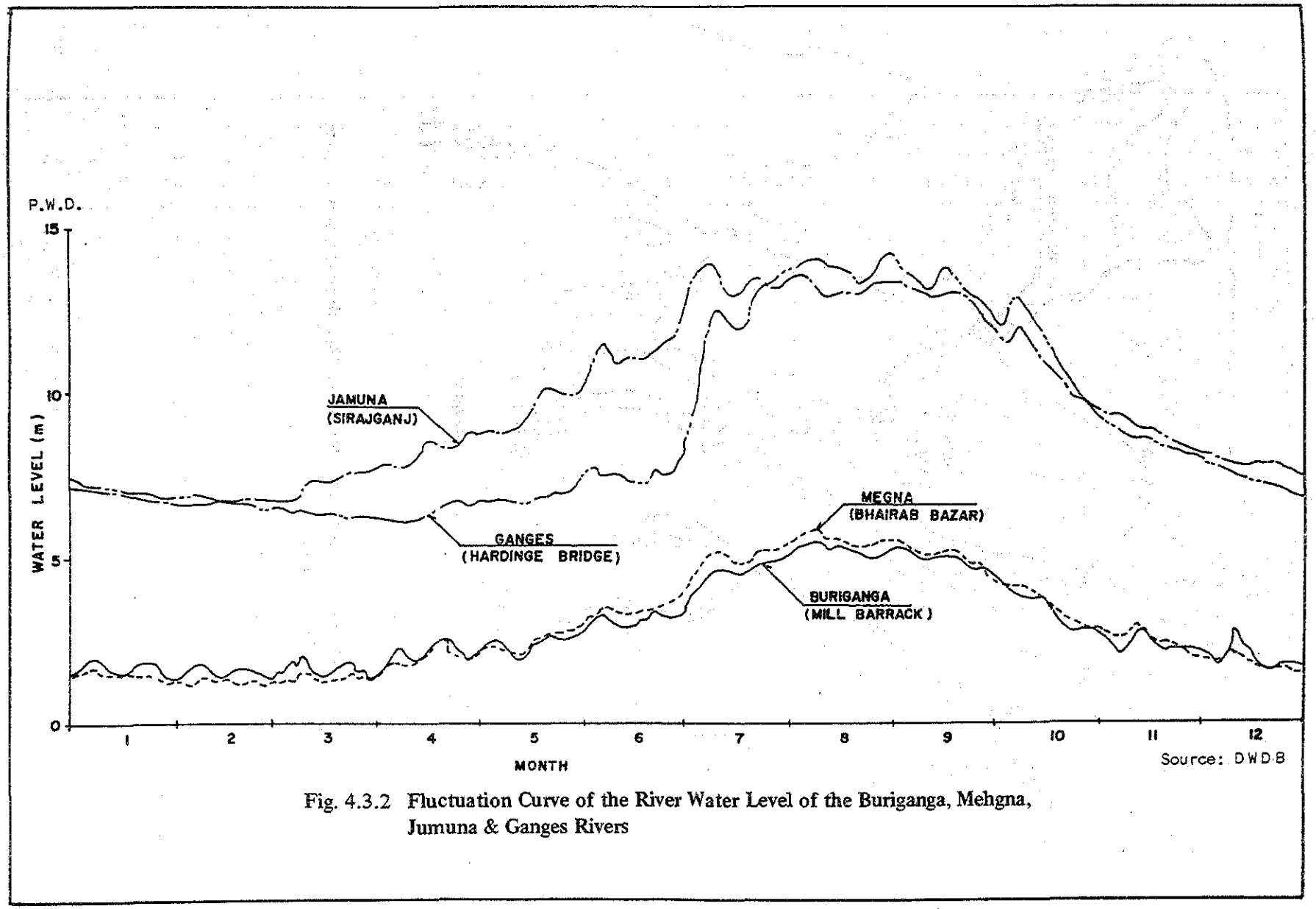

Fig. 4.3.2 Fluctuation Curve of the River Water Level of the Buriganga, Mehgna, Jumuna & Ganges Rivers

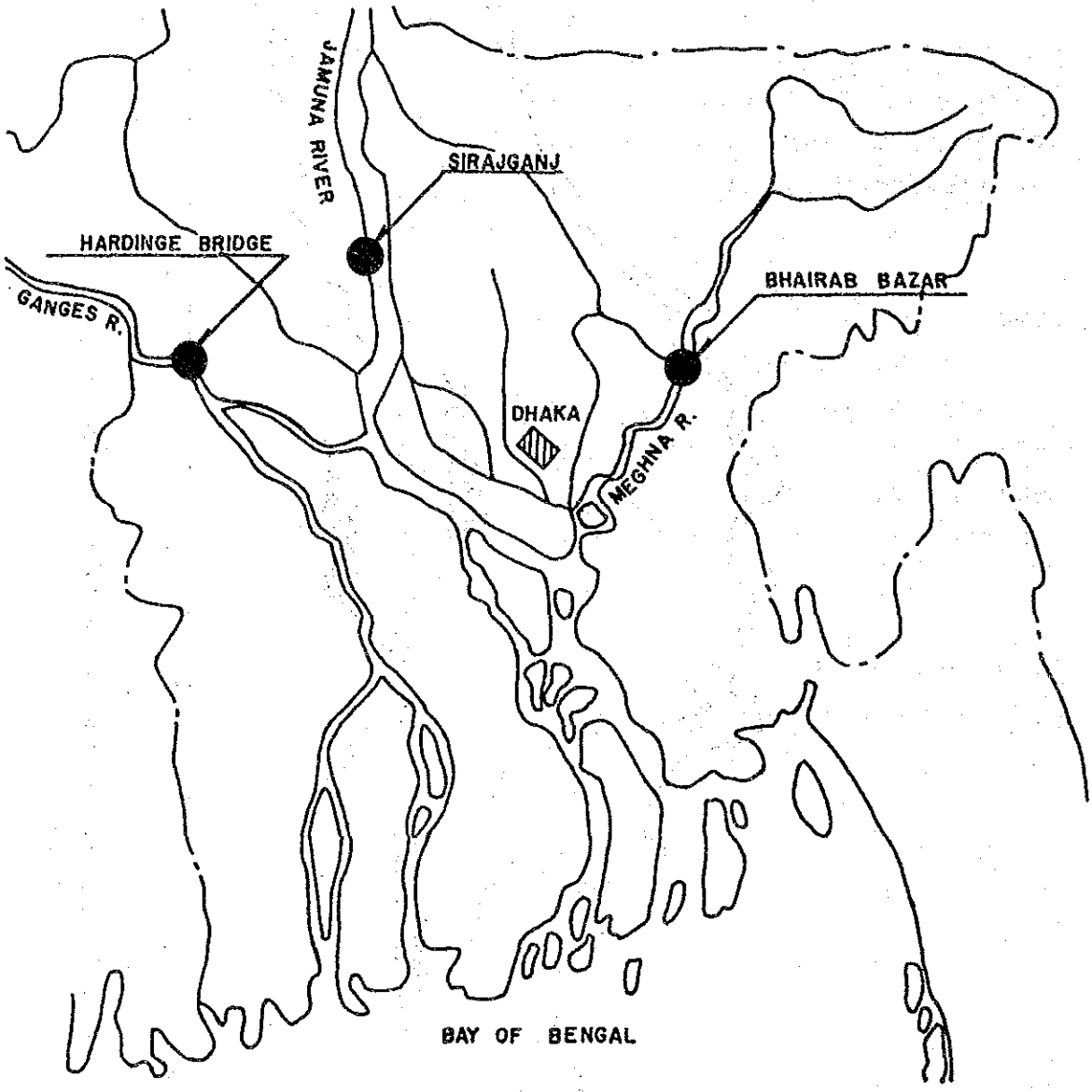

Fig. 4.3.3 Location of Water Gauge Stations: Bhairab Bazar, Shirajgonj & Hardinge Bridge

Table 4.3.5 Comparison of daily HWL and LWL at Dhaka, Narayanganj and Mawa

Month	MAX						MIN					
	H.W.L			L.W.L			H.W.L			L.W.L		
	Dhaka	N'ganj	Mawa	Dhaka	N'ganj	Mawa	Dhaka	N'ganj	Mawa	Dhaka	N'ganj	Mawa
1	1.95	2.03	1.99	1.31	1.49	1.73	1.17	1.05	1.29	0.75	0.85	1.14
2	0.96	1.51	1.70	0.86	1.11	1.50	0.75	0.99	1.31	0.42	0.63	1.10
3	1.87	1.91	2.07	1.20	1.30	1.86	1.28	1.17	1.43	0.69	0.78	1.22
4	2.53	2.51	2.57	1.95	2.15		1.42	1.39	1.42	0.79	0.93	
5	2.81	2.88	3.09	2.43	2.42		1.88	2.00	2.09	1.39	1.66	
6	3.40	3.26	4.09	3.11	3.04		2.87	2.90	3.21	2.52	2.55	
7	5.11	4.81	5.46	5.05	4.74		3.49	3.36	4.30	3.19	3.17	
8	5.46	5.19	5.84	5.43	5.13		5.00	4.87	5.32	4.99	4.67	
9	5.29	5.01	5.54	5.23	4.91		4.51	4.49	4.36	4.46	4.27	
10	4.45	4.44	4.33	4.39	4.19		2.73	2.09	3.64	2.32	1.97	
11	2.82	2.55	2.99	2.26	2.30		2.08	2.15	2.01	1.62	1.75	
12	2.85	2.75	3.02	2.14	2.40		1.56	1.53	1.48	1.07	1.23	

Source: BWDB

Dhka : Burigange River
N'gnj: Lakhya River
Mawa : Padma River