

FAP24

Government of
the People's
Republic of
Bangladesh

Water Resources
Planning
Organization

European
Commission

Delft
Hydraulics



Danish
Hydraulic
Institute



Hydroland
Approtech
Osiris

RIVER SURVEY PROJECT

Special
Report
No.22

River Data Book
January 1993 - March 1995

Part B.1 1: Bhairab Bazar

October 1996

Call - 944
BAP-24

(66)

BN - 793

A - 944



P- 24

- 793

- 944

- 8

Special Report 22

**River Data Book
January 1993 - March 1995**

Part B.11: Bhairab Bazar

October 1996



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Part B: Routine gauging January 1993 - March 1995

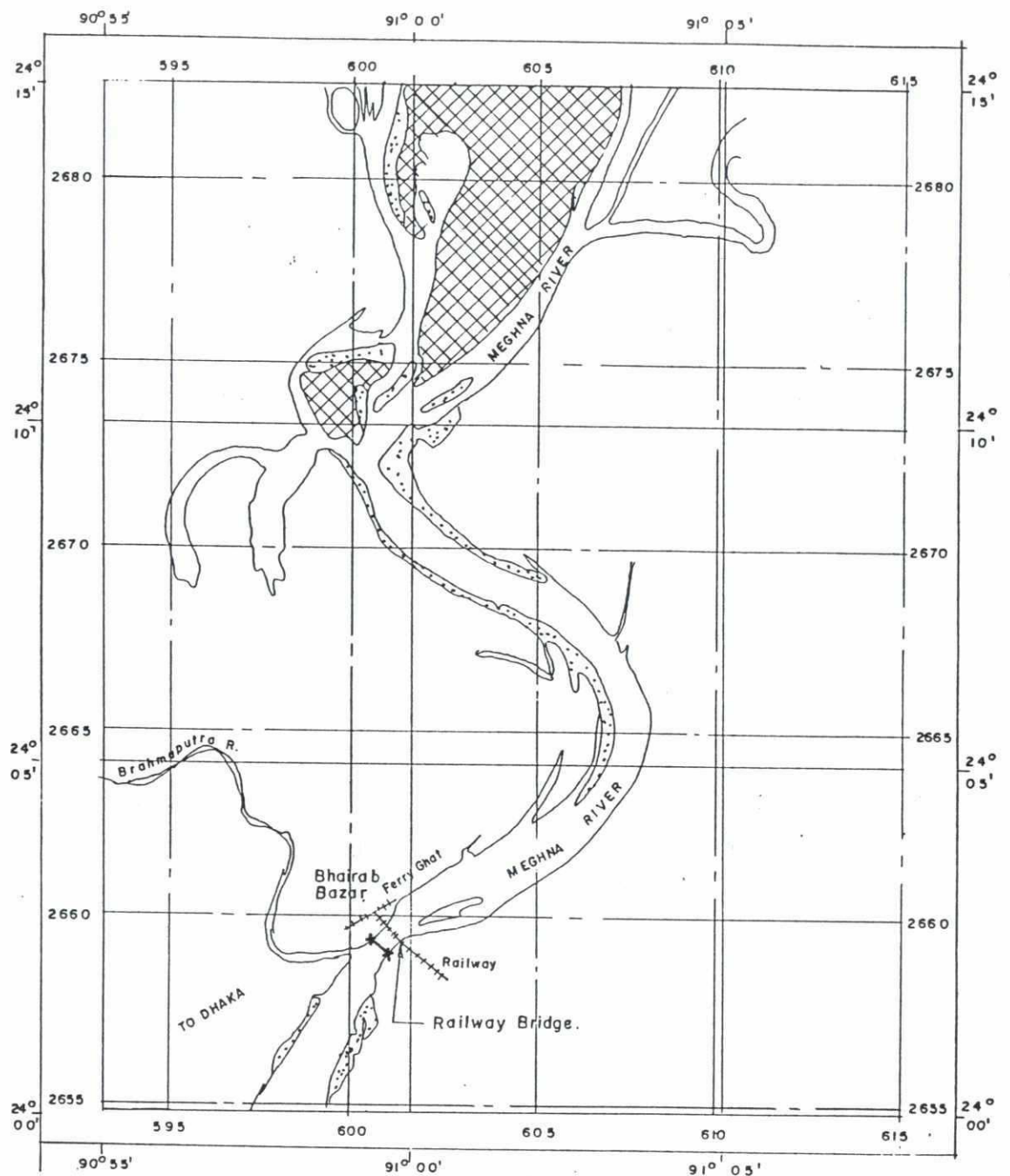
B.1	Bahadurabad
B.2	Sirajganj
B.3	Aricha (Teota)
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Part C: Special surveys June 1994 - March 1995

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Contents of Part B.11

Survey No.	Time
5	27-28/4 93
20	12/10 93
34	10/2 94
45	24/3 94
52	16/4 94
73	4-5/7 94
91	13/8 94
100	5/10 94
121	20/11 94
135	21/2 95
139	17-20/3 95



LEGEND:

- X—X Measurement Cross Section
- High land
- Unstable/low char
- BWDB Embankment



5000m 2500m 0

Map is based on most recent
Satellite image of April, 1989



RIVER SURVEY PROJECT

Delft Hydraulics/Danish Hydraulic Institute
in association with Osiris/Approtech/Hydroland

Survey Bulletin No. 5 - Apr, 1993

Location No. 11 : Meghna River at Bhairab Bazar

File:	Date:	KEY PLAN	Fig.
Scale:	Init:		

River : Meghna
ADCP/EMF Discharge

Date of Survey : 27 April 1993

Location No. 11 : Meghna River at Bhairab Bazar

Date	Transect	Bank		Water Level (m+PWD)	Total Width (m)	Area (sq.m)	Discharge (cumec)
		From	To				
27-04-93	Z34R1T01	Left	Right	2.18	709	6965	368
27-04-93	Z34R1T04	Right	Left	2.18	686	6660	2039
27-04-93	Z34R1T05	Left	Right	2.16	696	7140	799
27-04-93	Z34R1T06	Right	Left	2.16	798	7354	2099
27-04-93	Z34R1T15	Right	Left	2.12	822	7492	2540
27-04-93	Z34R1T16	Left	Right	2.09	783	7440	1306
27-04-93	Z34R1T18	Left	Right	2.07	792	7476	1179
27-04-93	Z34R1T19	Right	Left	2.07	845	7874	2409
27-04-93	Z34R1T23	Right	Left	0.27	836	7692	2176
27-04-93	Z34R1T24	Left	Right	2.11	697	7259	395
27-04-93	Z34R1T25	Right	Left	2.11	820	7493	1406
27-04-93	Z34R1T27	Right	Left	2.19	792	7846	577
27-04-93	Z34R1T29	Left	Right	2.18	828	7636	398
27-04-93	Z34R1T30	Right	Left	2.17	860	7625	999
27-04-93	Z34R1T31	Left	Right	2.14	692	7261	391
27-04-93	Z34R1T32	Right	Left	2.14	835	7268	1895
27-04-93	Z34R1T33	Left	Right	2.11	766	7507	925
27-04-93	Z34R1T34	Right	Left	2.11	842	7839	2417
27-04-93	Z34R1T35	Left	Right	2.09	780	7196	979
27-04-93	Z34R1T36	Right	Left	2.08	838	7830	2719
27-04-93	Z34R1T37	Left	Right	2.06	772	7178	886
27-04-93	Z34R1T38	Right	Left	2.06	813	7522	2702
27-04-93	Z34R1T39	Left	Right	2.04	754	7173	1125
27-04-93	Z34R1T40	Right	Left	2.04	818	7639	2486
27-04-93	Z34R1T41	Left	Right	2.01	765	7245	980
27-04-93	Z34R1T45	Right	Left	1.99	793	7275	2366
27-04-93	Z34R1T46	Left	Right	1.99	763	6984	516

3.1 SUMMARY OF RESULTS (ADCP/EMF-discharge)

River : Meghna
ADCP/EMF Discharge

Date of Survey : 28 April 1993

Location No. 11 : Meghna River at Bhairab Bazar

Date	Transect	Bank		Water Level	Total Width	Area	Discharge
		From	To	(m+PWD)	(m)	(sq.m)	(cumec)
28-04-93	Z34S1T02	Left	Right	2.12	757	6796	602
28-04-93	Z34S1T05	Left	Right	2.20	803	7744	741
28-04-93	Z34S1T06	Right	Left	2.20	651	6448	1353
28-04-93	Z34S1T07	Left	Right	2.22	627	6381	708
28-04-93	Z34S1T08	Right	Left	2.23	800	7112	1556
28-04-93	Z34S1T10	Right	Left	2.24	792	7183	1969
28-04-93	Z34S1T11	Left	Right	2.28	773	7292	1233
28-04-93	Z34S1T12	Right	Left	2.28	830	7479	3036
28-04-93	Z34S1T14	Right	Left	2.26	793	7187	2554
28-04-93	Z34S1T15	Left	Right	2.23	801	7497	2533
28-04-93	Z34S1T16	Right	left	2.23	834	7686	1795
28-04-93	Z34S1T17	Left	Right	2.19	774	7380	3669
28-04-93	Z34S1T18	Right	Left	2.19	854	8010	769

3.2 SUMMARY OF RESULTS (ADCP/EMF-discharge)

✓

Type	Time		File Name	Ver. No.	Easting	Northing	Q(ADCP) (on-line) (m³/s)	Q (off-line) (m³/s)	DISCHARGE GAUGING					SEDIMENT TRANSPORT GAUGING				
	From	To							ADCP +++30	HYDRO +++50	EMF +++60	S4 +++70	MEX +++80	Suspended Sediment Samples	Tube Samples	Helley Smith Samples	Integrated Sediment Samples	Bottom Samples
Transect	05:43:13	05:51:41	Z34R1T01*				1172											
Transect	05:52:03	05:56:41	Z34R1T04				1229											
Transect		07:01:25	Z34R1T05				1510											
Transect	07:03:00	07:09:02	Z34R1T06				1652											
Transect	09:07:00	09:12:23	Z34R1T15				1840											
Transect	09:58:47	10:04:21	Z34R1T16				1840											
Transect	10:58:29	11:03:49	Z34R1T18				1732											
Transect	11:04:36	11:11:01	Z34R1T19				1633											
Transect	12:12:46	12:18:15	Z34R1T23				1527											
Transect	12:57:00	13:03:09	Z34R1T24				874											
Transect	13:06:32	13:12:12	Z34R1T25				756											
Transect	13:59:14	14:04:53	Z34R1T26				81											
Transect	14:05:32	14:10:28	Z34R1T27				280											
Transect	16:02:00	16:07:52	Z34R1T29				227											
Transect	16:09:36	16:15:39	Z34R1T30				312											
Transect	16:58:00	17:04:06	Z34R1T31				934											
Transect	17:05:05	17:10:18	Z34R1T32				1160											
Transect	17:57:00		Z34R1T33				1455											
Transect	18:06:33	18:09:12	Z34R1T34				1682											
Transect	18:57:00	19:02:55	Z34R1T35				1899											
Transect	19:04:02	19:09:34	Z34R1T36				1895											
Transect	19:59:32	20:04:42	Z34R1T37				1777											
Transect	20:05:48		Z34R1T38				1750											
Transect	20:59:58	21:05:02	Z34R1T39				1804											
Transect	21:06:17		Z34R1T40				1765											
Transect	21:59:01	22:03:57	Z34R1T41				1828											
Transect	23:06:47	23:12:12	Z34R1T45				1704											
Transect	23:58:15	00:02:58	Z34R1T46				1211											

* transect in PSD 24 data base

Table 2.1 SURVEY PROGRAMME AS MADE

Date of Survey : 27 April 1993
Location No. 11 : Meghna River at Bhairab Bazar
Station No.11

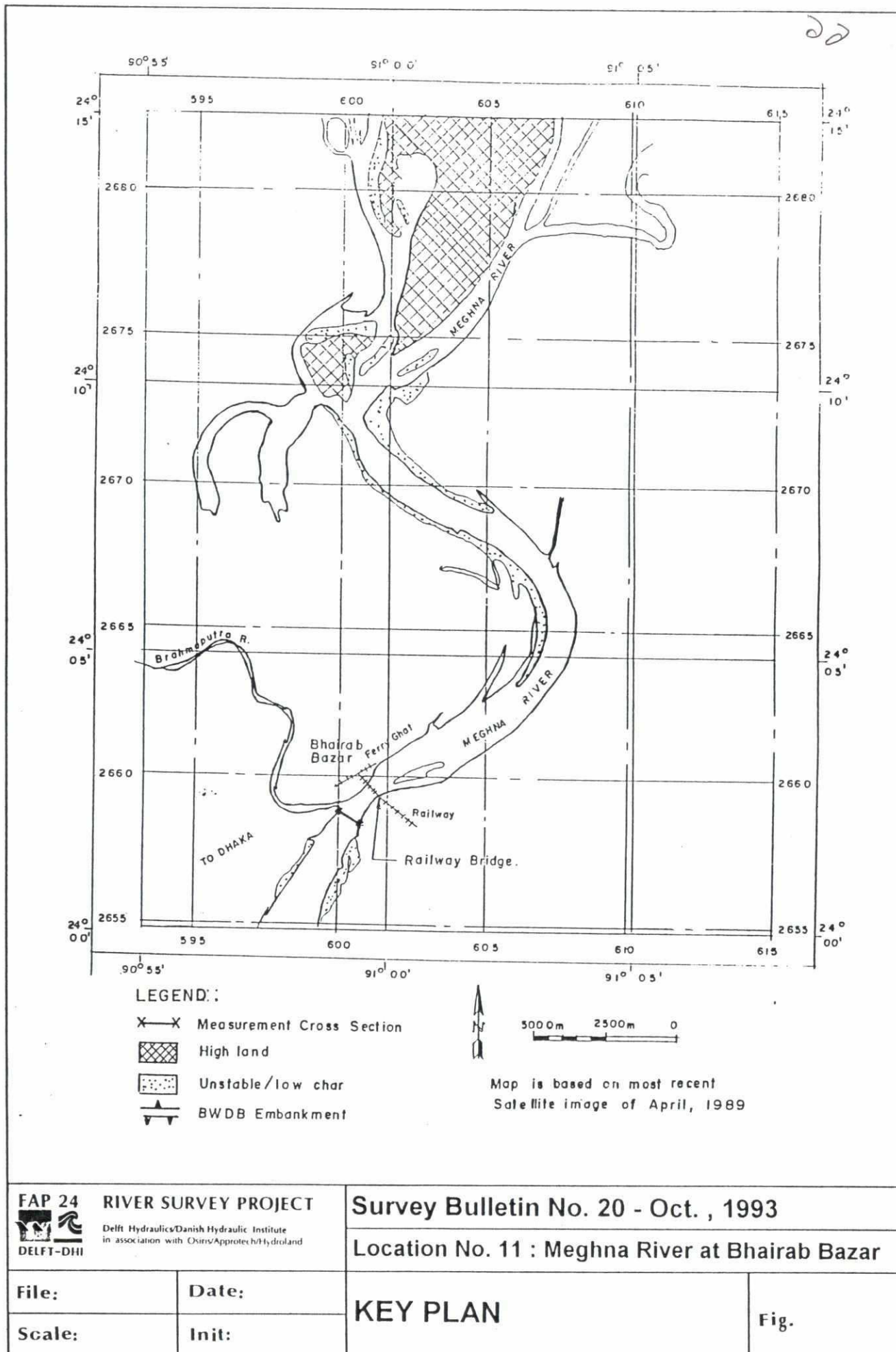
Type	Time		File Name	Ver. No.	Easting	Northing	Q(ADCP) (on-line) (m ³ /s)	Q (off-line) (m ³ /s)	DISCHARGE GAUGING					SEDIMENT TRANSPORT GAUGING				
	From	To							ADCP +++30	HYDRO +++50	EMF +++60	S4 +++70	MEX +++80	Suspended Sediment Samples	Andreasen Tube Samples	Helley Smith Samples	Integrated Sediment Samples	Bottom Samples
Transect	00:59:12	01:03:57	Z234S1T02				91											
Transect	02:00:05	02:05:43	Z234S1T05				998											
Transect	02:08:00	02:13:21	Z234S1T06				1029											
Transect	02:30:16	02:36:06	Z234S1T07				1121											
Transect	02:37:49	02:43:46	Z234S1T08				1276											
Transect	03:01:34	03:08:01	Z234S1T09				1422											
Transect	03:09:01	03:15:36	Z234S1T10				1299											
Transect	04:00:08	04:05:01	Z234S1T11				1078											
Transect	04:06:17	04:11:57	Z234S1T12				1123											
Transect	05:06:20	05:11:12	Z234S1T14				413											
Transect	05:58:45	06:04:19	Z234S1T15				606											
Transect	06:05:00	06:10:34	Z234S1T16				521											
Transect	07:01:27	07:06:03	Z234S1T17				1446											
Transect	07:07:02	07:12:58	Z234S1T18				1483											

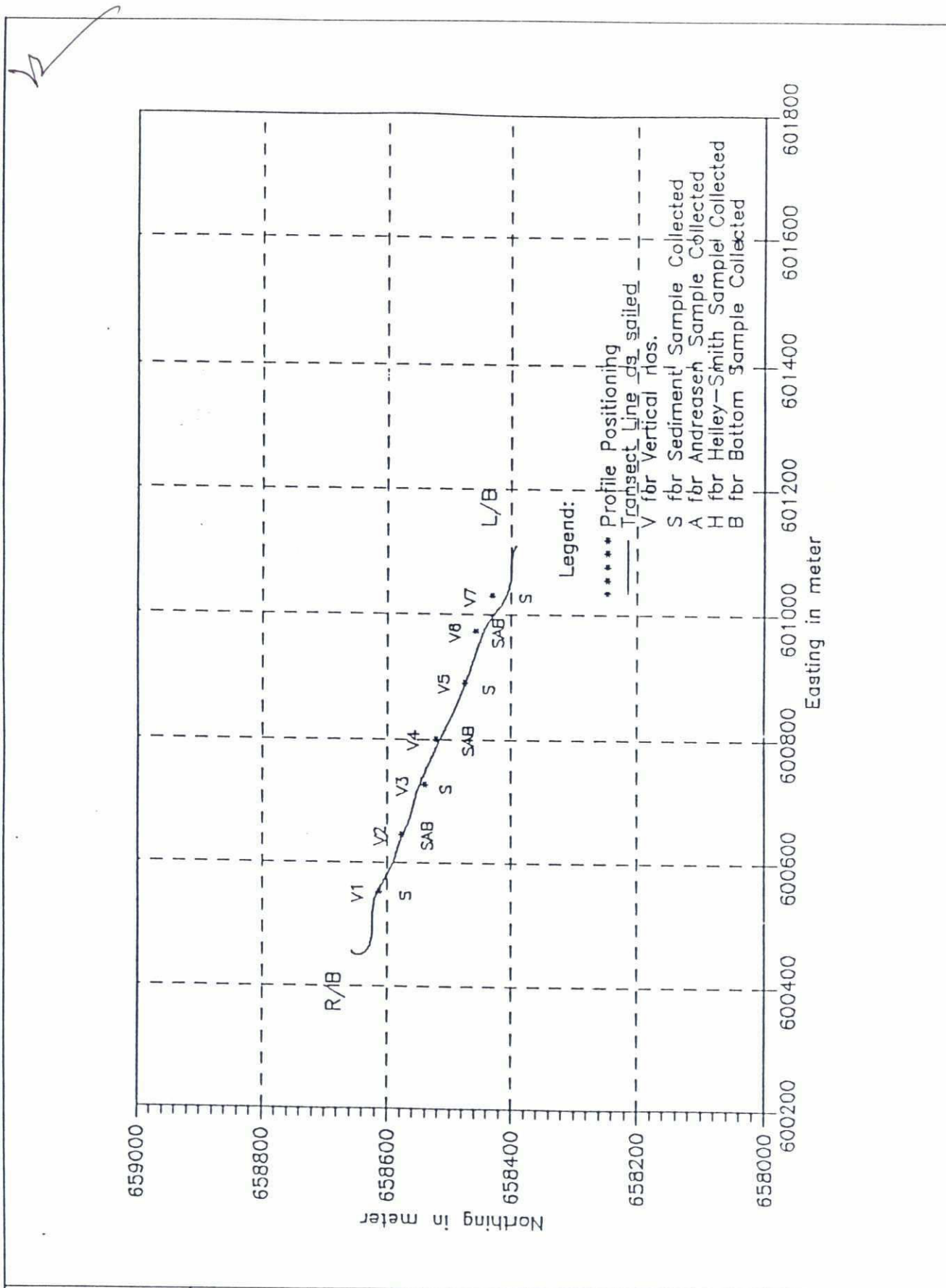
Table 2.2 SURVEY PROGRAMME AS MADE

Date of Survey : 28 April 1993
Location No. 11 : Meghna River at Bhairab Bazar
Station No.11

2

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	Z34R1T01 .ase
Echosounder	1	QUATTRO	Z34R1T01 .ech
Transect plot data	1	QUATTRO	Z34R1T01 .trs
Table 5.1 PSD 24 Database file description			





FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 20 : October 1993

Location 11 : Meghna River, Bhairab Bazar

Date :

Init :

Location of Measurements

Type	Time		File Name	Ver. No.	Easting (meter)	Northing (meter)	DISCHARGE GAUGING					SEDIMENT TRANSPORT GAUGING				
	From	To					ADCP	HYDRO	EMF	S4	MEX	Suspended Sediment Samples	Andreasen Tube Samples	Helley Smith Samples	Integrated Sediment Samples	Bottom Samples
Transect	10:27:45	10:36:07	Z3AC1T01*				T	T	T							
Transect	10:39:59	10:48:07	Z3AC1T02				T	T	T							
Transect	17:37:24	17:45:29	Z3AC1T03				T	T	T							
Profile	13:11:59	13:59:52	Z3AC2P01	1	600553	658613	P	P	P	P		6	-	-	-	-
Profile	11:58:13	13:08:40	Z3AC1P01	2	600646	658577	P	P	P	P		6	1	-	-	1
Profile	17:12:07	15:58:48	Z3AC2P02	3	600729	658541	P	P	P	P		6	-	-	-	-
Profile	14:20:35	15:19:36	Z3AC1P02	4	600801	658523	P	P	P	P		6	1	-	-	1
Profile	16:23:54	17:04:04	Z3AC2P03	5	600891	658475	P	P	P	P		6	-	-	-	-
Profile	16:15:14	17:17:28	Z3AC1P03	6	600973	658457	P	P	P	P		6	1	-	-	1
Profile	17:22:16	17:44:22	Z3AC2P04	7	601031	658431	P	P	P	P		3	-	-	-	-

* transect in PSD 24 data base

Date of Survey : 12 October 1993
Location : Meghna River at Bhairab Bazar
Station No. 11

Table 2.1 SURVEY PROGRAMME AS MADE



16

Type Of Samples	Sample Nos.	Total Sample Nos.	Vertical No.
Point Integrated Samples	A806,A807,A808,A809,A810,A811	6	1
	A781,A798,A155,A773,A777,A774	6	2
	A812,A813,A800,A801,A802,A804	6	3
	A778,A779,A783,A784,A775,A135	6	4
	A805,A817,A819,A816,A826,A815	6	5
	A776,A780,A782,A143,A752,A750	6	6
	A829,A828,A837	6	7
Andreasen Tube Samples	A735	1	2
	A857	1	4
	A331	1	6
Vanveen Samples	DHA-1	1	2
	DHA-2	1	4
	DHA-3	1	6

Date of Survey : 12 October 1993

Location : Meghna River at Bhairab Bazar

Station No. 11

Table 2.2 List of Sediment Samples

River : Meghna
ADCP/EMF Discharge

Date of Survey : 12 October 1993
Location : Meghna River at Bhairab Bazar
Station No. 11

Date	Transect	Bank		Water Level	Total Width	Area	Discharge
		From	To	(m+PWD)	(m)	(sq.m)	(cumec)
12/10/93	Z3AC1T01	Right	Left	5.36	738	14338	7583
12/10/93	Z3AC1T02	Left	Right	5.36	739	14204	7390
12/10/93	Z3AC1T03	Left	Right	5.34	745	14145	7421

Table 3.1 SUMMARY OF RESULTS (ADCP/EMF-discharge)

River : Meghna
Concentration

Date of Survey : 12 October 1993

Location : Meghna River at Bhairab Bazar

Station No. 11

Vertical 1		Vertical 2		Vertical 3		Vertical 4	
Total depth = 27.75 m		Total depth = 30.25 m		Total depth = 29.80 m		Total depth = 28.00 m	
Depth	Conc.	Depth	Conc.	Depth	Conc.	Depth	Conc.
[m]	[mg/l]	[m]	[mg/l]	[m]	[mg/l]	[m]	[mg/l]
0.50	13.60	0.50	10.74	0.50	9.83	0.50	19.35
4.96	7.74	6.05	15.85	5.99	14.29	5.62	21.35
9.90	10.47	12.10	17.28	11.11	18.07	11.22	11.36
14.84	10.75	18.10	24.24	17.85	18.29	16.80	15.91
19.77	13.09	24.11	35.21	23.95	19.11	22.40	22.47
24.16	13.25	28.69	42.11	29.43	20.48	27.74	29.30

Vertical 5		Vertical 6		Vertical 7	
Total depth = 21.90 m		Total depth = 8.60 m		Total depth = 5.20 m	
Depth	Conc.	Depth	Conc.	Depth	Conc.
[m]	[mg/l]	[m]	[mg/l]	[m]	[mg/l]
0.50	12.33	0.50	47.24	0.50	723.81
4.18	13.48	2.00	22.95	2.96	719.15
8.02	13.75	3.18	34.44	3.93	878.82
12.00	13.95	4.74	30.88		
16.03	14.44	6.31	35.00		
19.81	23.60	7.67	38.33		

Ss = 160.0(Kg/s)

Table 3.2 SUMMARY OF RESULTS (Suspended Sediment Concentration)

27

River : Meghna
Grain size of Bed material

Date of Survey : 12 October 1993
Location : Meghna River at Bhairab Bazar
Station No. 11

Sample No.	Date	Time	D16 (mm)	D35 (mm)	D50 (mm)	D90 (mm)	Standard Deviation
DHA-1	12/10/93	12:45	0.151	0.194	0.236	0.430	1.612
DHA-2	12/10/93	14:55	0.172	0.256	0.299	0.452	1.580
DHA-3	12/10/93	17:04	0.121	0.146	0.166	0.232	1.352

Table 3.3 SUMMARY of RESULTS (grain size bed material)

River : Meghna
Grain size of Suspended sediment

Date of Survey : 12 October 1993
Location : Meghna River at Bhairab Bazar
Station No. 11

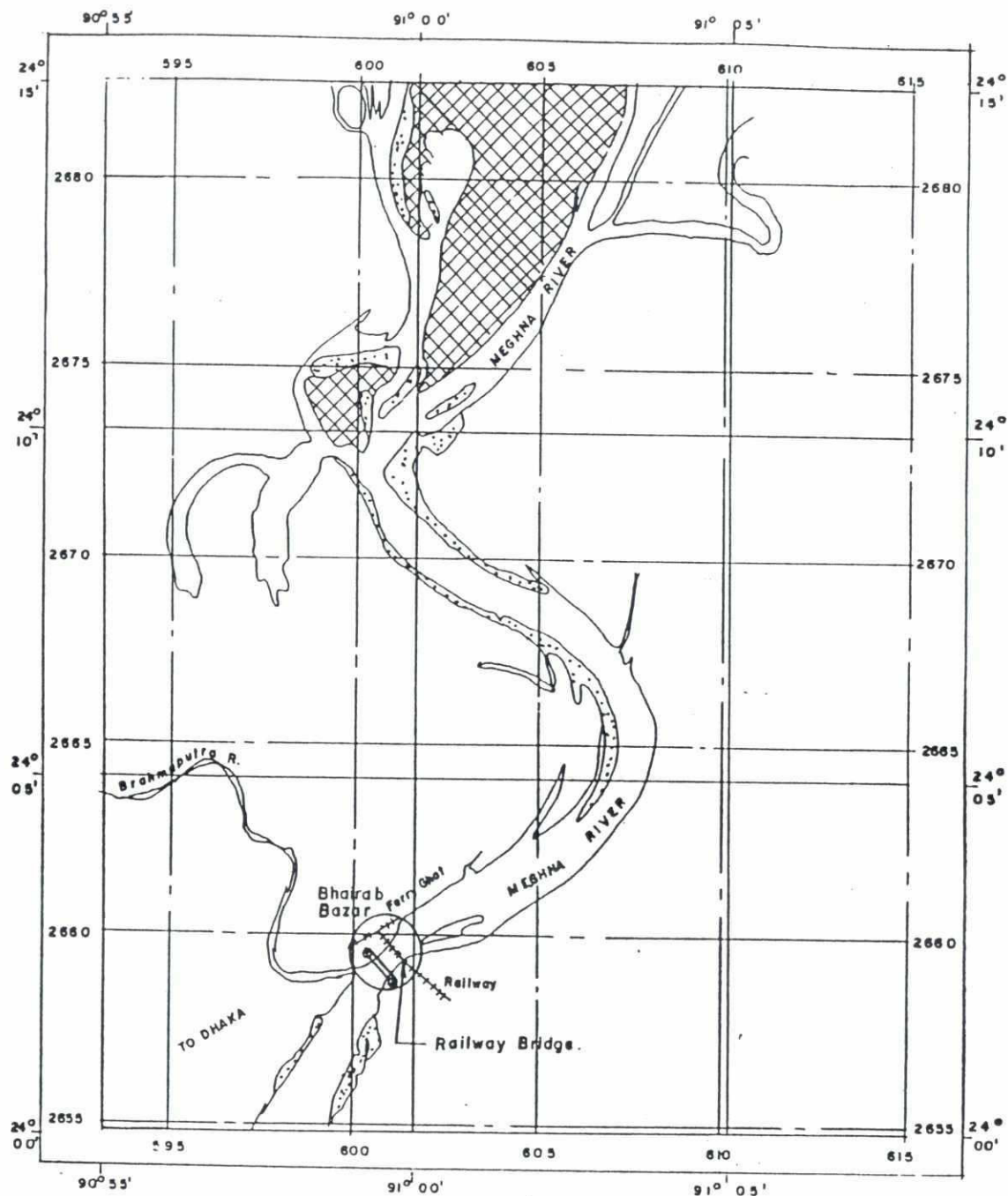
Sample No.	Date	Time	D16 (mm)	D35 (mm)	D50 (mm)	D90 (mm)	Standard Deviation
A735	12/10/93	12:40	0.004	0.009	0.015	0.069	3.875
A857	12/10/93	15:03	0.004	0.007	0.013	0.110	3.894
A331	12/10/93	16:55	0.006	0.010	0.011	0.053	2.826

Table 3.4 SUMMARY OF RESULTS (grain size suspended sediment)

28

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	Z3AC1T01 .ase
Echosounder	1	QUATTRO	Z3AC1T01 .ech
Sediment transport data	1	QUATTRO	Z3AC1T01 .sed
Bed load sediment analysis	1	QUATTRO	Z3AC1T01 .bdl
Suspended sed. conc. analysis	1	QUATTRO	Z3AC1T01 .ssc
Transect plot data	1	QUATTRO	Z3AC1T01 .trs
Iso-velocity plot data	1	MIKE 21	Z3AC1T01 .ct2 Z3AC1T01 .dt2

Table 5.1 PSD 24 Database file description



LEGEND:

- Measurement Cross Section
- High land
- Unstable/low char
- BWDB Embankment



5000m 2500m 0

Map is based on most recent
Satellite image of April, 1989

FAP 24

DELFT-DHI

RIVER SURVEY PROJECT

Delft Hydraulics/Danish Hydraulic Institute
in association with Osiris/Approtech/Hydroland

Survey Bulletin 34 - 12 Feb, 1994

Location No.11 : Meghna River at Bhairab Bazar

File:

Date:

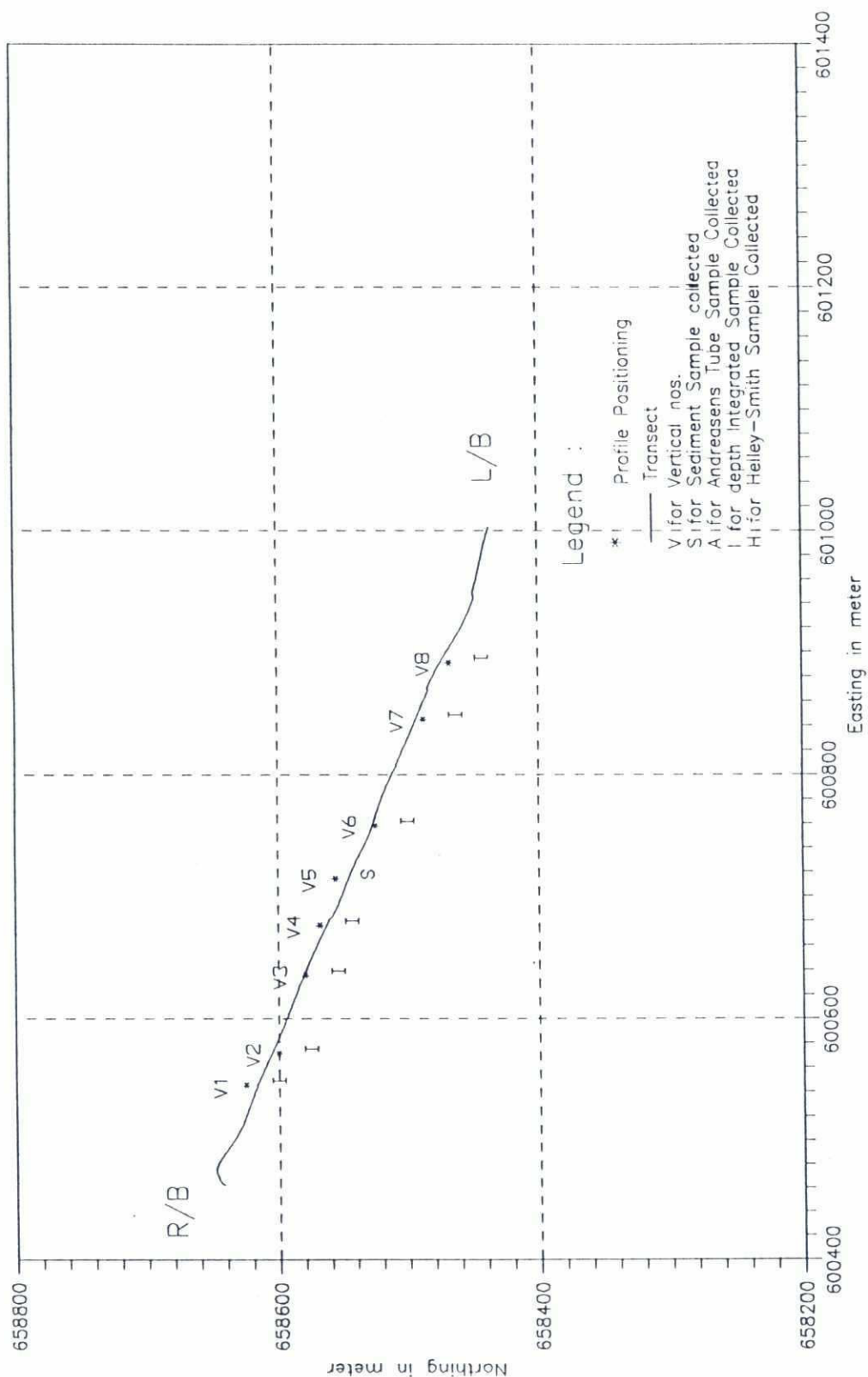
Scale:

Init:

KEY PLAN

Fig.

20



Legend :

* I Profile Positioning

— Transect

V for Vertical nos.

S for Sediment Sample collected

A for Andreasens Tube Sample Collected

I for depth Integrated Sample Collected

H for Helley-Smith Sample Collected

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 34 : February 1994

Location 11 : Meghna River, Bhairab Bazar

Location of Measurements

Date :

Init :

River : Meghna
ADCP/EMF Discharge

Date of Survey : 10 February 1994
Location : Meghna River at Bhairab Bazar
Location No : 11

Date	Transect	Bank		Level (m+PWD)	Width (m)	Area (sq.m)	Discharge (cumec)	Sediment Transport (Kg/s)
		From	To					
10-02-94	Z42A1T01	Right	Left	1.34	638	11384	1360	38
10-02-94	Z42A1T02	Left	Right	1.34	625	11396	1243	31
10-02-94	Z42A1T04	Right	Left	1.36	630	11388	397	2
10-02-94	Z42A1T05	Left	Right	1.36	613	11403	570	6
10-02-94	Z42A1T06	Right	Left	1.37	633	11484	369	1
10-02-94	Z42A1T07	Right	Left	1.38	635	11682	521	23
10-02-94	Z42A1T08	Left	Right	1.43	626	11504	735	41
10-02-94	Z42A1T09	Right	Left	1.46	633	11642	1810	57
10-02-94	Z42A1T10	Left	Right	1.48	624	11501	1244	40
10-02-94	Z42A1T12	Left	Right	1.51	633	11587	1557	31
10-02-94	Z42A1T13	Right	Left	1.52	631	11555	1747	51
10-02-94	Z42A1T14	Right	Left	1.53	636	11589	1691	54
10-02-94	Z42A1T15	Left	Right	1.53	628	11595	1406	32
10-02-94	Z42A1T16	Right	Left	1.52	646	11777	1139	38
10-02-94	Z42A1T17	Left	Right	1.51	621	11650	679	6
10-02-94	Z42A1T18	Right	Left	1.51	631	11491	490	8
10-02-94	Z42A1T19	Left	Right	1.51	633	11624	94	27
10-02-94	Z42A1T20	Right	Left	1.49	638	11535	677	26
10-02-94	Z42A1T21	Left	Right	1.49	634	11555	791	40
10-02-94	Z42A1T22	Right	Left	1.45	634	11599	1443	47
10-02-94	Z42A1T24	Left	Right	1.45	620	11455	1498	50
10-02-94	Z42A1T25	Right	Left	1.43	633	11432	1197	45
10-02-94	Z42A1T26	Left	Right	1.40	626	11431	1593	59
10-02-94	Z42A1T27	Right	Left	1.36	635	11418	1064	33
10-02-94	Z42A1T28	Left	Right	1.33	633	11222	1523	47
10-02-94	Z42A1T29	Right	Left	1.33	630	11286	1009	33
10-02-94	Z42A1T30	Left	Right	1.30	626	11343	1598	48
10-02-94	Z42A1T31	Right	Left	1.30	641	11412	597	14
10-02-94	Z42A1T32	Left	Right	1.30	669	11486	789	18

Table 3.1 SUMMARY OF RESULTS (ADCP/EMF-discharge)



22
River : Meghna
S4 Velocity

Date of Survey : 10 February 1994
Location : Meghna River at Bhairab Bazar
Location No : 11

Vertical 5	
Total depth = 27.10 m	
Depth	Velocity
[m]	[m/s]
0.50	0.11
5.40	0.16
10.80	0.15
16.20	0.21
21.60	0.13
25.90	0.08

$Q_w = 123 \text{ m}^3/\text{s}$

Table 3.2 SUMMARY OF RESULTS (S4 Current)

River : Meghna
Concentration

Date of Survey : 10 February 1994
Location : Meghna River at Bhairab Bazar
Location No : 11

Vertical 5	
Total depth = 27.10 m	
Depth	Conc.
[m]	[mg/l]
0.50	1.45
5.40	1.56
10.80	3.97
16.20	4.07
21.60	5.51
25.90	6.31

$Q_s = 123 \text{ kg/s}$

Table 3.3 SUMMARY OF RESULTS (Suspended Sediment Concentration)

26

River : Meghna
Depth integrated concentration

Date of Survey : 10 February 1994

Location : Meghna River at Bhairab Bazar

Location No : 11

Sample No.	Vertical No.	Date	Time	Total Depth (m)	Concentration (mg/l)
A698	1	10/02/94	10:10	23.10	16.25*
A356	2	10/02/94	13:59	24.90	3.02
A462	3	10/02/94	15:45	26.30	29.96*
A122	4	10/02/94	16:06	26.70	3.02
A351	6	10/02/94	17:05	26.90	3.68
A745	7	10/02/94	12:50	21.60	4.73
A123	8	10/02/94	11:57	13.00	166.21*

* : data invalid

Table 3.4 SUMMARY OF RESULTS (depth integrated concentration)

28

Type	Time		File Name	Ver. No.	Easting (meter)	Northing (meter)	DISCHARGE GAUGING					SEDIMENT TRANSPORT GAUGING									
	From	To					ADCP	HYDRO	EMF	S4	MEX	Suspended Sediment Samples	Andreasen Tube Samples	Helley Smith Samples	Integrated Sediment Samples	Bottom Samples					
Transect	07:31:33	07:37:59	Z42A1T01				T	T	T												
Transect	07:42:13	07:48:44	Z42A1T02				T	T	T												
Transect	08:25:48	08:31:10	Z42A1T04				T	T	T												
Transect	08:35:32	08:42:08	Z42A1T05				T	T	T												
Transect	08:44:38	08:51:02	Z42A1T06				T	T	T												
Transect	09:35:28	09:41:58	Z42A1T07				T	T	T												
Transect	09:46:03	09:52:35	Z42A1T08				T	T	T												
Transect	10:38:29	10:44:50	Z42A1T09				T	T	T												
Transect	10:47:41	10:54:47	Z42A1T10				T	T	T												
Transect	11:30:52	11:37:46	Z42A1T12				T	T	T												
Transect	11:39:53	11:46:35	Z42A1T13				T	T	T												
Transect	12:17:28	12:23:14	Z42A1T14				T	T	T												
Transect	12:25:05	12:31:46	Z42A1T15				T	T	T												
Transect	13:30:12	13:36:20	Z42A1T16				T	T	T												
Transect	13:39:12	13:45:46	Z42A1T17				T	T	T												
Transect	14:29:35	14:36:08	Z42A1T18				T	T	T												
Transect	14:38:28	14:44:48	Z42A1T19				T	T	T												
Transect	15:27:02	15:33:10	Z42A1T20				T	T	T												
Transect	15:35:15	15:41:28	Z42A1T21				T	T	T												
Transect	16:28:02	16:35:08	Z42A1T22				T	T	T												
Transect	16:41:49	16:48:04	Z42A1T24				T	T	T												
Transect	17:33:01	17:39:27	Z42A1T25				T	T	T												
Transect	17:41:35	17:49:01	Z42A1T26				T	T	T												
Transect	19:02:20	19:08:32	Z42A1T27				T	T	T												
Transect	19:14:11	19:20:29	Z42A1T28				T	T	T												
Transect	20:11:13	20:17:41	Z42A1T29				T	T	T												
Transect	20:20:29	20:27:04	Z42A1T30 *				T	T	T												
Transect	21:19:58	21:26:28	Z42A1T31				T	T	T												
Transect	21:29:13	21:35:38	Z42A1T32				T	T	T												
Profile	10:05:00	10:18:00	Z42A1P01	1	600545	658625	P	P	P												
Profile	13:59:00	14:05:00	Z42A1P04	2	600571	658600	P	P	P												
Profile	15:45:00	15:49:00	Z42A1P05	3	600635	658579	P	P	P												
Profile	16:06:00	16:13:00	Z42A1P07	4	600676	658568	P	P	P												
Profile	18:03:00	18:38:00	Z42A1P09	5	600714	658554	P	P	P												
Profile	17:03:00	17:10:00	Z42A1P08	6	600758	658525	P	P	P												
Profile	12:46:00	12:53:00	Z42A1P03	7	600845	658488	P	P	P												
Profile	17:57:00	12:06:00	Z42A1P02	8	600891	658468	P	P	P												

* transect in PSD 24 data base

Date of Survey : 10 February 1994
Location : Meghna River at Bhairab Bazar
Location No : 11

Table 2.1 (SURVEY PROGRAMME AS MADE)

20

Type Of Samples	Sample	Total	Vertical
	Nos.	Sample Nos.	No.
Point Integrated Samples	A1287,A1268,A1325,A1310,A1330,A1350	6	5
Depth Integrated samples	A698	1	1
	A356	1	2
	A462	1	3
	A122	1	4
	A351	1	6
	A745	1	7
	A123	1	8

Date of Survey : 10 February 1994

Location : Meghna River at Bhairab Bazar

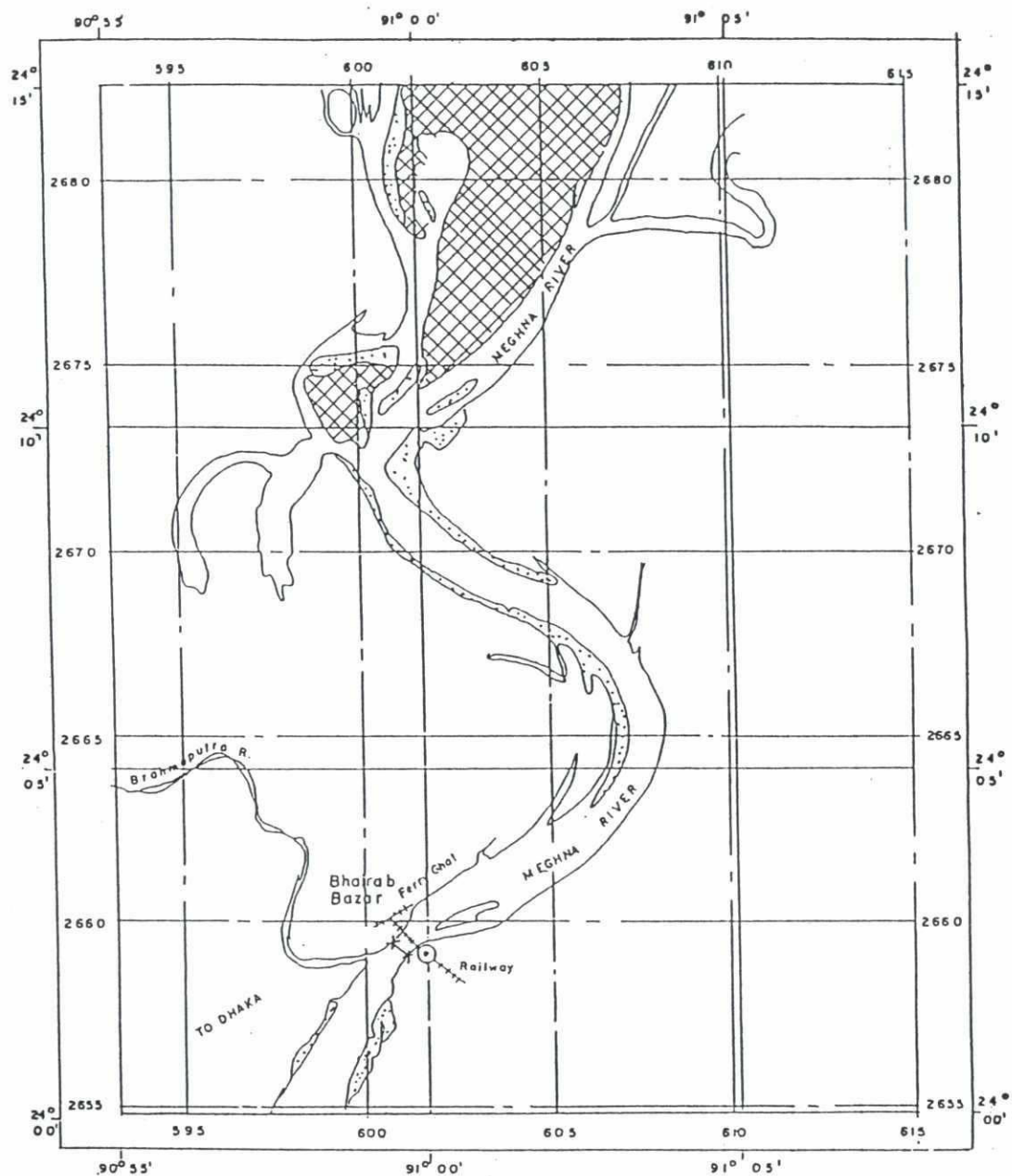
Location No : 11

Table 2.2 List of Sediment Samples

27

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	Z42A1T30 ase
Echosounder	1	QUATTRO	Z42A1T30 ech
Sediment transport data	1	QUATTRO	Z42A1T30 sed
Bed load sediment analysis	1	QUATTRO	Z42A1T30 .bdl
Suspended sed. conc. analysis	1	QUATTRO	Z42A1T30 .ssc
Transect plot data	1	QUATTRO	Z42A1T30 .trs
Iso-velocity plot data	1	MIKE 21	Z42A1T30 .ct2 Z42A1T30 dt2

Table 5.1 PSD 24 Database file description



LEGEND :

- X—X Measurement Cross Section
- High land
- Unstable/low char
- FAP 24 Staff gauge

5000m 2500m 0

Map is based on satellite
Images of March 1994



RIVER SURVEY PROJECT

Delft Hydraulics/Danish Hydraulic Institute
in association with Osiris/Approtech/Hydroland

Survey Bulletin No.45 - March, 1994

Location No.11 : Meghna River at Bhairab Bazar

File:

Date:

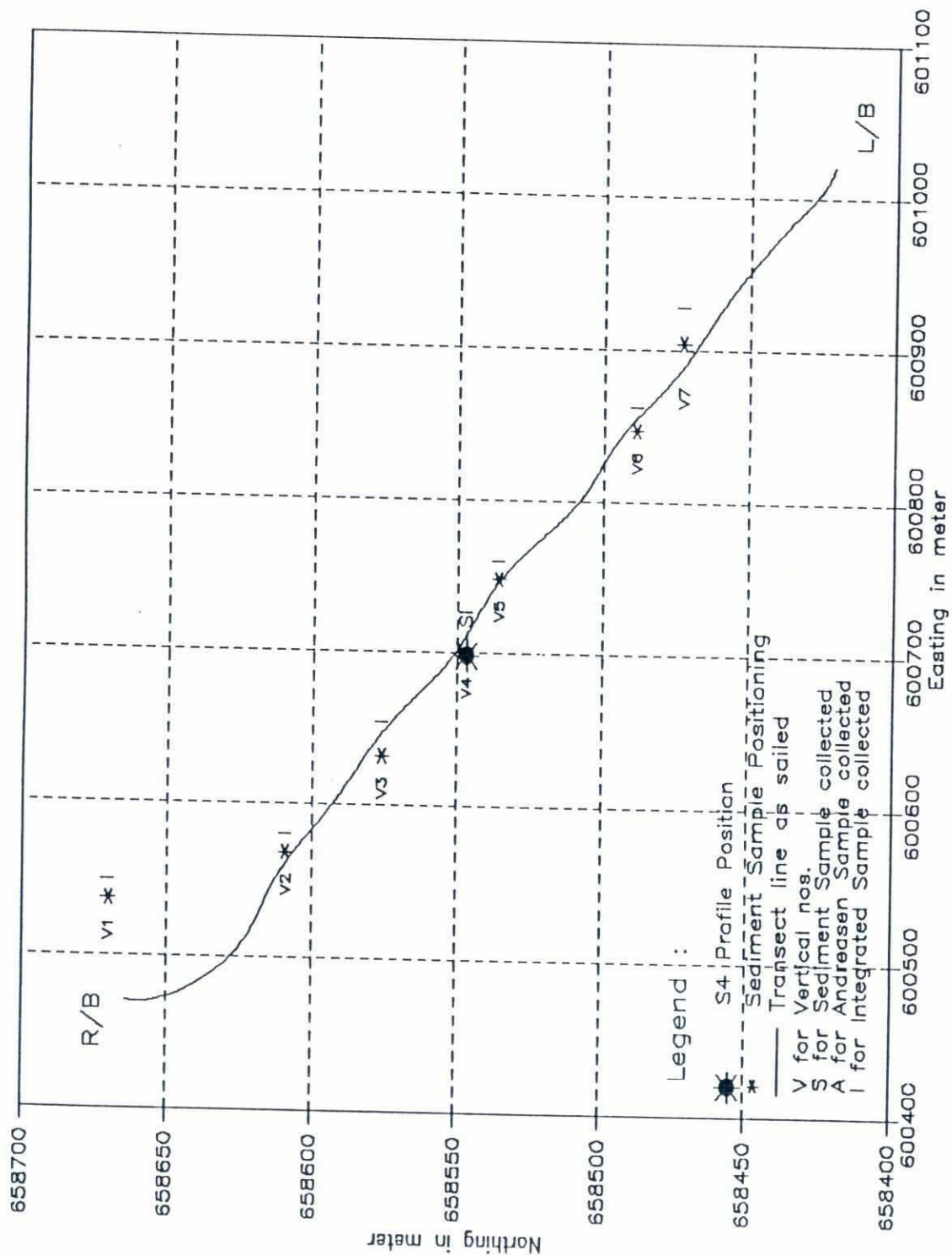
Scale:

Init:

KEY PLAN

Fig.

26



River : Meghna
ADCP/MEF Discharge

Date of Survey : 24 March 1994
Location : Meghna River, Bhairab Bazar
Station No. 11

Date	Transect Files	Bank		Water Level (m+PWD)	Total Width (m)	Area (sq.m)	Discharge (cumec)	Sediment Transport (Kg/s)
		From	To					
24-03-94	Z43O1T02	Right	Left	1.83	634	11713	1133	26
24-03-94	Z43O1T05	Right	Left	1.65	612	11567	127	3

Tidal area

Table 3.1 SUMMARY OF RESULTS (ADCP/EMF-discharge)



90
River : Meghna
S4 Velocity

Date of Survey : 24 March 1994
Location : Meghna River, Bhairab Bazar
Station No. 11

Vertical 4	
Total depth = 26.90m	
Depth	Velocity
[m]	[m/s]
5.32	0.26
10.64	0.20
15.96	0.20
21.28	0.15
25.52	0.08

Table 3.2 SUMMARY OF RESULTS (S4 Current)

Concentration

Date of Survey : 24 March 1994
Location : Meghna River, Bhairab Bazar

Vertical 4	
Total depth = 26.90m	
Depth	Conc.
[m]	[mg/l]
5.32	16.21
10.64	18.18
15.96	18.58
21.28	31.66
25.52	19.40

Table 3.3 SUMMARY OF RESULTS (Suspended Sediment Concentration)

62

River : Meghna
Depth integrated concentration

Date of Survey : 24 March 1994
Location : Meghna River, Bhairab Bazar
Station No. 11

Sample No	Vertical No.	Date	Time	Total Depth (m)	Concentration (mg/l)
A334	1	24/03/94	20:25	20.60	11.55
A692	2	24/03/94	19:42	25.00	7.92
A903	3	24/03/94	18:55	26.10	45.25
A465	4	24/03/94	16:26	26.00	18.50
A1159	5	24/03/94	15:10	26.90	15.19
A333	6	24/03/94	13:52	21.20	19.34
A335	7	24/03/94	12:10	12.60	13.10

Table 3.4 SUMMARY OF RESULTS (Depth integrated concentration)

2
River : Meghna

Bed load

Date of Survey : 24 March 1994

Location : Meghna River, Bhairab Bazar

Station No. 11

Helley-Smith samples		
Vertical no.	Bed load sb in Kg/ms	
	1	2
3	0.001494	0.003016

Table 3.5 SUMMARY OF RESULTS (Sediment transport, bed load)

Date of Survey : 24 March 1994

Location : Meghna River, Bhairab Bazar

Sample No	Date	Time	D35 (mm)	D50 (mm)	D65 (mm)	Standard Deviation
A1362	24/03/94	18:52	0.284	0.324	0.370	1.423
A703	24/03/94	19:05	0.286	0.326	0.371	1.408

Table 3.6 SUMMARY OF RESULTS (Grain size bed load)

Type	Time		File Name	Ver. No.	Easting (meter)	Northing (meter)	DISCHARGE GAUGING					SEDIMENT TRANSPORT GAUGING				
	From	To					ADCP	HYDRO	EMF	S4	MEX	Suspended Sediment Samples	Andreasen Tube Samples	Helley Smith Samples	Integrated Sediment Samples	Bottom Samples
Transect	08:50:14	08:56:04	Z43O1T02*				T	T	T							
Transect	20:49:35	20:54:57	Z43O1T05				T	T	T							
Transect	20:58:54	21:04:13	Z43O1T06				T	T	T							
Profile	13:22:17	13:30:46	Z43O1P02	7	600904	658473	P	P	P			-	-	-	1	-
Profile	13:52:13	13:59:51	Z43O1P03	6	600847	658489	P	P	P			-	-	-	1	-
Profile	15:08:37	15:16:57	Z43O1P04	5	600748	658536	P	P	P			-	-	-	1	-
Profile	17:25:51	18:20:50	Z43O1P06	4	600698	658547	P	P	P	P		6	-	-	1	-
Profile	18:52:14	19:07:36	Z43O1P07	3	600632	658576	P	P	P			-	-	2	1	-
Profile	19:42:00	19:51:14	Z43O1P08	2	600568	658609	P	P	P			-	-	-	1	-
Profile	20:25:46	20:34:48	Z43O1P09	1	600537	660670	P	P	P			-	-	-	1	-

* transect in PSD 24 data base

Date of Survey : 24 March 1994
Location : Meghna River, Bhairab Bazar
Station No. 11

Table 2.1 (SURVEY PROGRAMME AS MADE)



Type Of Samples	Sample Nos.	Total Sample Nos.	Vertical No.
Point Integrated Samples	A1412,A1411,A1418,A1451,A1414,A1453	6	4
Depth integrated Samples	A334	1	1
	A692	1	2
	A903	1	3
	A465	1	4
	A1159	1	5
	A333	1	6
	A335	1	7
Helley-Smith Samples	A1362,A703	2	3

Date of Survey : 24 March 1994

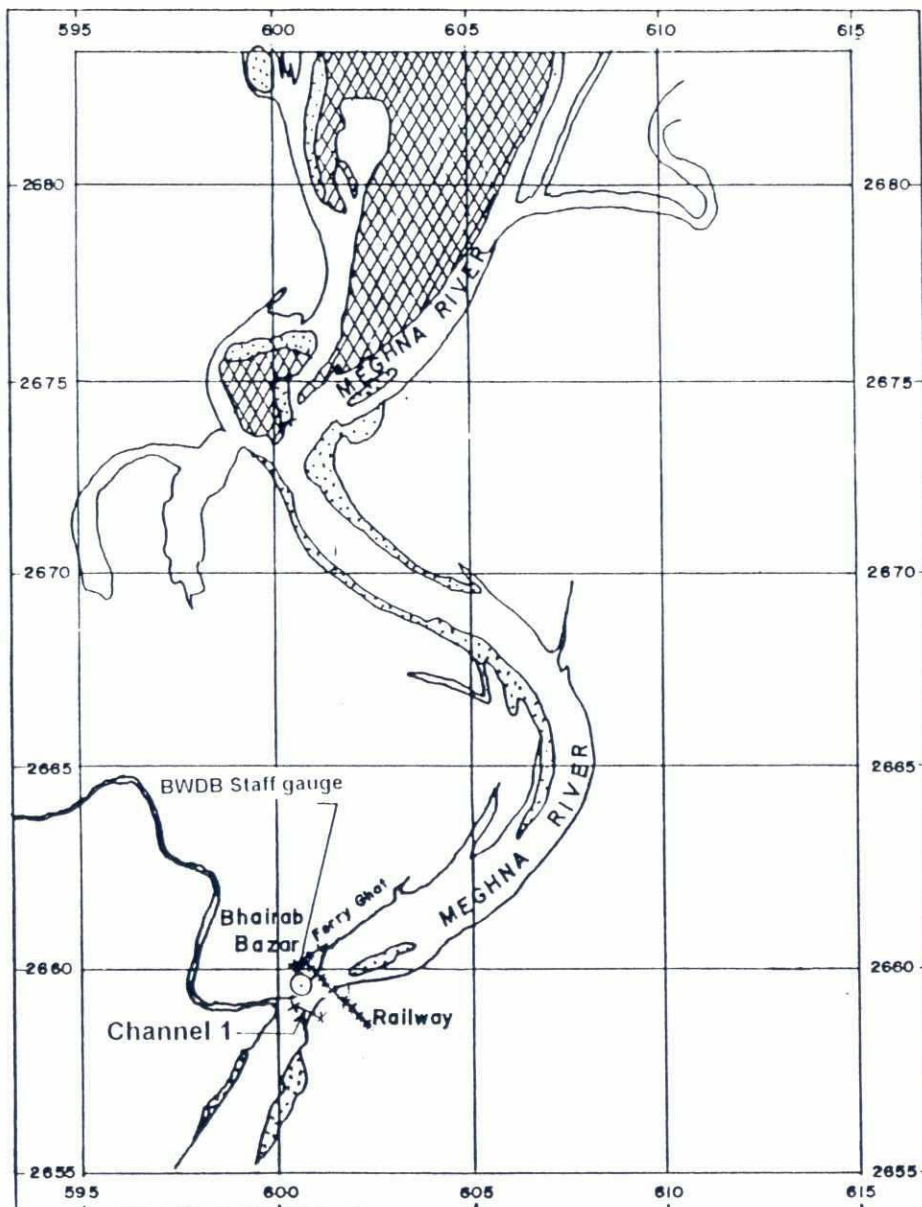
Location : Meghna River, Bhairab Bazar

Station No. 11

Table 2.2 List of Sediment Samples

GG

Types of Data	Channel	Format	Filename
ADCP/S4/EMF	1	QUATTRO	Z43O1T02 .ase
Echosounder	1	QUATTRO	Z43O1T02 .ech
Sediment transport data	1	QUATTRO	Z43O1T02 .sed
Bed load sediment analysis	1	QUATTRO	Z43O1T02 .bdl
Suspended sed. conc. analysis	1	QUATTRO	Z43O1T02 .ssc
Transect plot data	1	QUATTRO	Z43O1T02 .trs
Iso-velocity plot data	1	MIKE 21	Z43O1T02 .ct2 Z43O1T02 .dt2
Table 5.1 PSD 24 Database file description			



LEGEND:

- ✕✕ Cross section
- ▨ High land
- ░ Unstable/low char
- BWDB Staff gauge



5000m 2500m 0

Map is based on satellite
images of April 1989

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 52 : 16 April, 1994

Location 11 : Meghna River, Bhairab Bazar

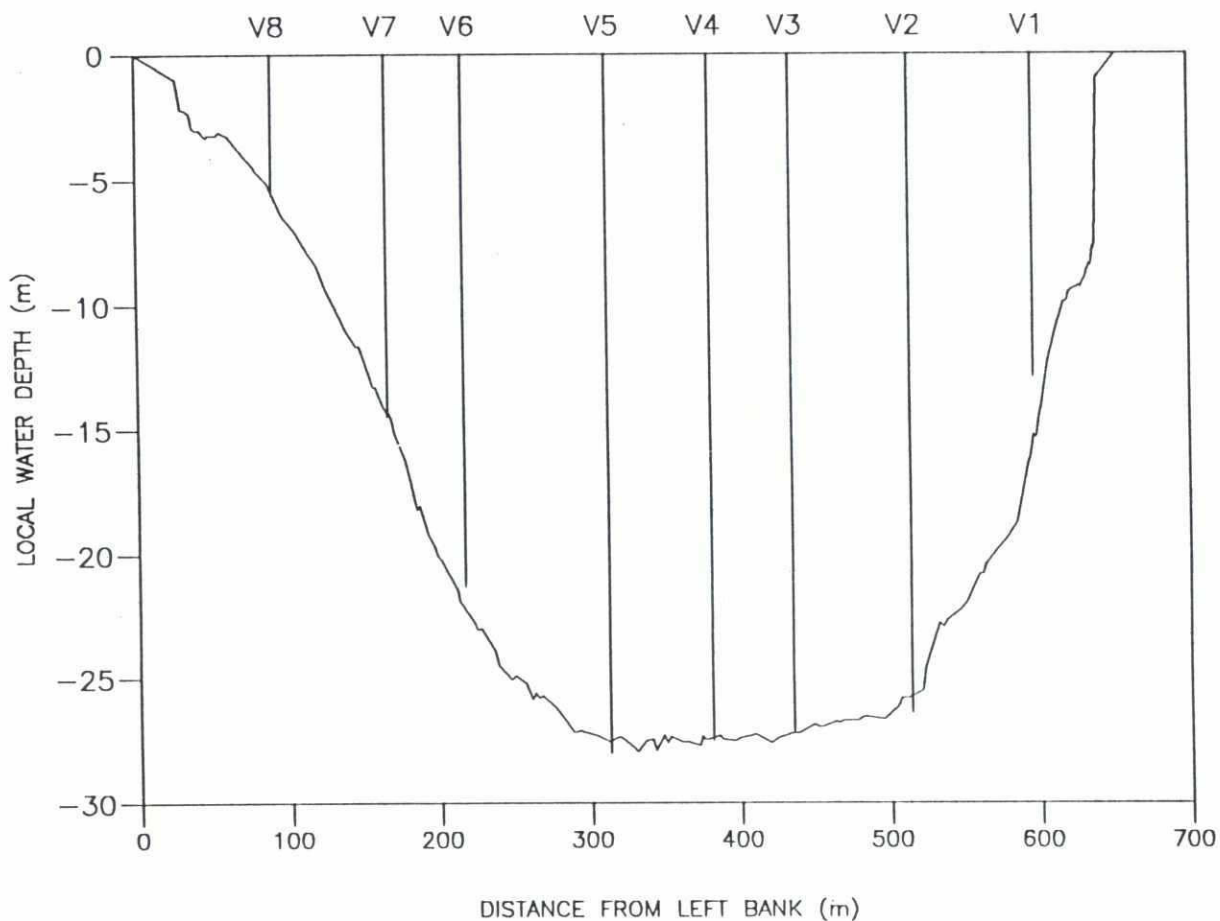
Date : 10 Aug 1994

Init : mk


Location map

page

1.1



Water-level : 2.51 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI		Survey Bulletin 52 : 16 April, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z44G1T04	Date : 10 Aug 1994	Cross-sections and measured verticals Channel 1	page 1.2
	Init : mk		

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	4	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No of verticals in channel	8	-	-	-
	ADCP	7	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	6	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	1	-	-	-
	Integrated bottle sampling	8	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	6	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	653	12050	2 51	2506	0 01	111.14

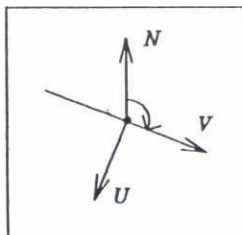
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bhairab Bazar	Channel 1	16 Apr 94	2 51	BWDB

Table 2.3: Water-levels

<div><div><div>FAP 24</div><div>DELFT · DHI</div></div></div> <div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div>		Survey Bulletin 52 : 16 April , 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z44G1T04	Date : 10 Aug 1994	Survey programme as made and key figures	page 2.1
	mk		

97

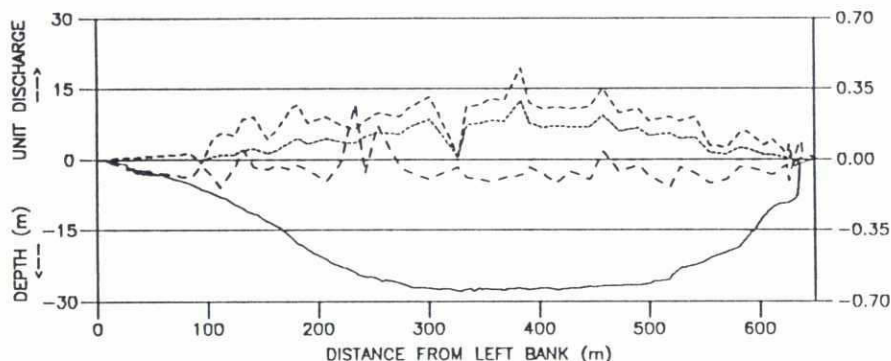


TRANSECT AZIMUTH = 112°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



FLOW

LEGEND :

— WATER DEPTH (m below STAGE)

--- UNIT DISCHARGE ($m^3/s.m$)

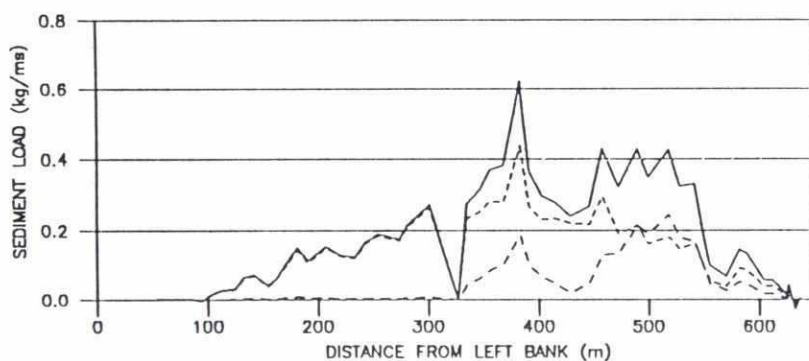
... U - (m/s)

-.- V - (m/s)

STAGE = 2.51 (m+PWD)

A = 12050 (m^2)

Q = 2506 (m^3/s)



SEDIMENT TRANSPORT

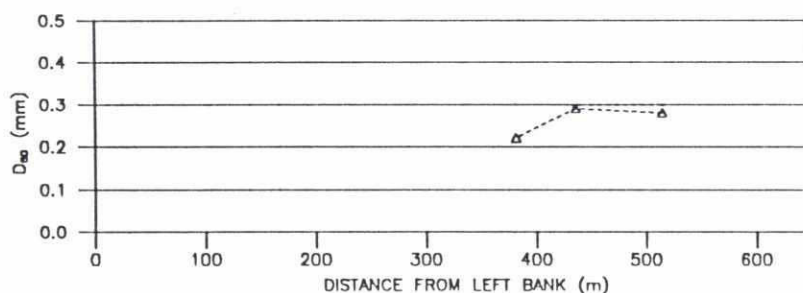
LEGEND :

— S_{TOTAL} 111.15 (kg/s)

--- $S_{WASH\ LOAD}$ 81.77 (kg/s)

... $S_{SUSP.\ LOAD}$ 29.37 (kg/s)

-.- $S_{BED\ LOAD}$ 0.01 (kg/s)



GRAIN SIZE

LEGEND :

◇◇◇◇◇ $D_{50\ SUSP.}$ (mm)

△△△△△ $D_{50\ BED\ LOAD}$ (mm)

□□□□□ $D_{50\ BED\ MAT.}$ (mm)

FAP 24



RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 52 : 16 April, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z44G1T04

Date : 10 Aug 1994

Init : mk

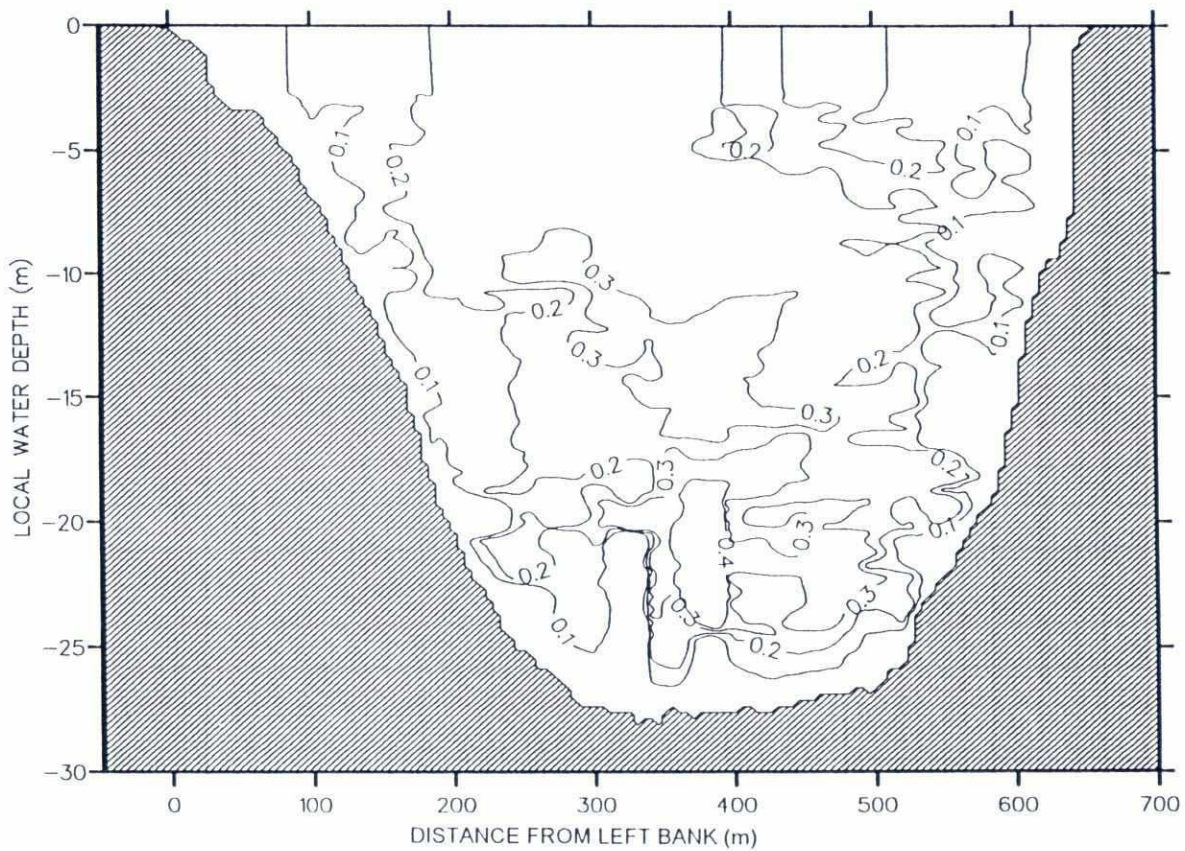
Horizontal distribution of flow and sediments

Channel 1

page

3.1

80



Iso-velocity contours (m/s)


Water-level : 2.51 m + PWD measured at the station indicated on page 1.1

<div data-bbox="119 1720 279 1859"> FAP 24 DELFT - DHI </div> <div data-bbox="327 1765 598 1848"> RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization</small> <small>Commission of the European Communities</small> </div>		Survey Bulletin 52 : 16 April, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z44G1T04	Date : 10 Aug 1994	Cross-sectional distribution of flow velocity Channel 1	page 4.1
	Init : mk		

Andreasen settling tube							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)							

US BM-54 bed samples							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.2 : Grain size of bed material							

Helley-Smith								
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm		D35 (mm)	D50 (mm)	D65 (mm)
1	2	9404160944-1002	26.40	4.985	95.015	0.207	0.269	0.324
	2	9404160944-1002	26.40	0.384	99.616	0.231	0.282	0.335
	3	9404161110-1132	27.10	0.297	99.703	0.268	0.310	0.359
	3	9404161110-1132	27.10	1.241	98.759	0.222	0.277	0.333
	4	9404161240-1334	27.50	8.998	91.002	0.173	0.222	0.284
	4	9404161240-1334	27.50	1.827	98.173	0.165	0.225	0.292
Table 5.3 : Grain sizes of bed load								

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 52 : 16 April , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
	Date : 10 Aug 1994	Grain size distributions	page
	mk		5.1

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9404160707-0711 9404160715-0720 9404161655-1701 9404161703-1709	Z44G1T01 Z44G1T02 Z44G1T03 Z44G1T04 *

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1 2 3 4 5 6 7 8	9404160911-0933 9404160944-1002 9404161110-1132 9404161240-1334 9404161400-1414 9404161552-1604 9404161621-1630 9404161640-1647	600503 600575 600647 600696 600761 600842 600898 600964	658649 658609 658577 658553 658534 658477 658479 658439	12.90 26.40 27.10 27.50 28.00 21.30 14.50 5.60	Z44G1P01 * Z44G1P02 * Z44G1P03 * Z44G1P04 ** Z44G1P05 * Z44G1P06 * Z44G1P07 * Z44G1P08 *

Table 6.2: Vertical profiles

* S4 and MEX not available ** MEX not available

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	4	6	9404161240-1334	600696	658553	27.50


Table 6.3: Suspended sediment - point sampled

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	1 2 3 4 5 6 7 8	1 1 1 1 1 1 1 1	9404160911-0933 9404160944-1002 9404161110-1132 9404161240-1334 9404161400-1414 9404161552-1604 9404161621-1630 9404161640-1647	600503 600575 600647 600696 600761 600842 600898 600964	658649 658609 658577 658553 658534 658477 658479 658439	12.90 26.40 27.10 27.50 28.00 21.30 14.50 5.60

Table 6.4: Suspended sediment - depth integrated

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley-Smith Sample	1	2 2 3 3 4 4	9404160944-1002 9404160944-1002 9404161110-1132 9404161110-1132 9404161240-1334 9404161240-1334	600575 600575 600647 600647 600696 600696	658609 658609 658577 658577 658553 658553	26.40 26.40 27.10 27.10 27.50 27.50	A703 A348 A358 A691 A33 A122


Table 6.5: Bed load

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 52 : 16 April , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
	Date : 10 Aug 1994	Collected data and their storage (1)	page 61
	mk		

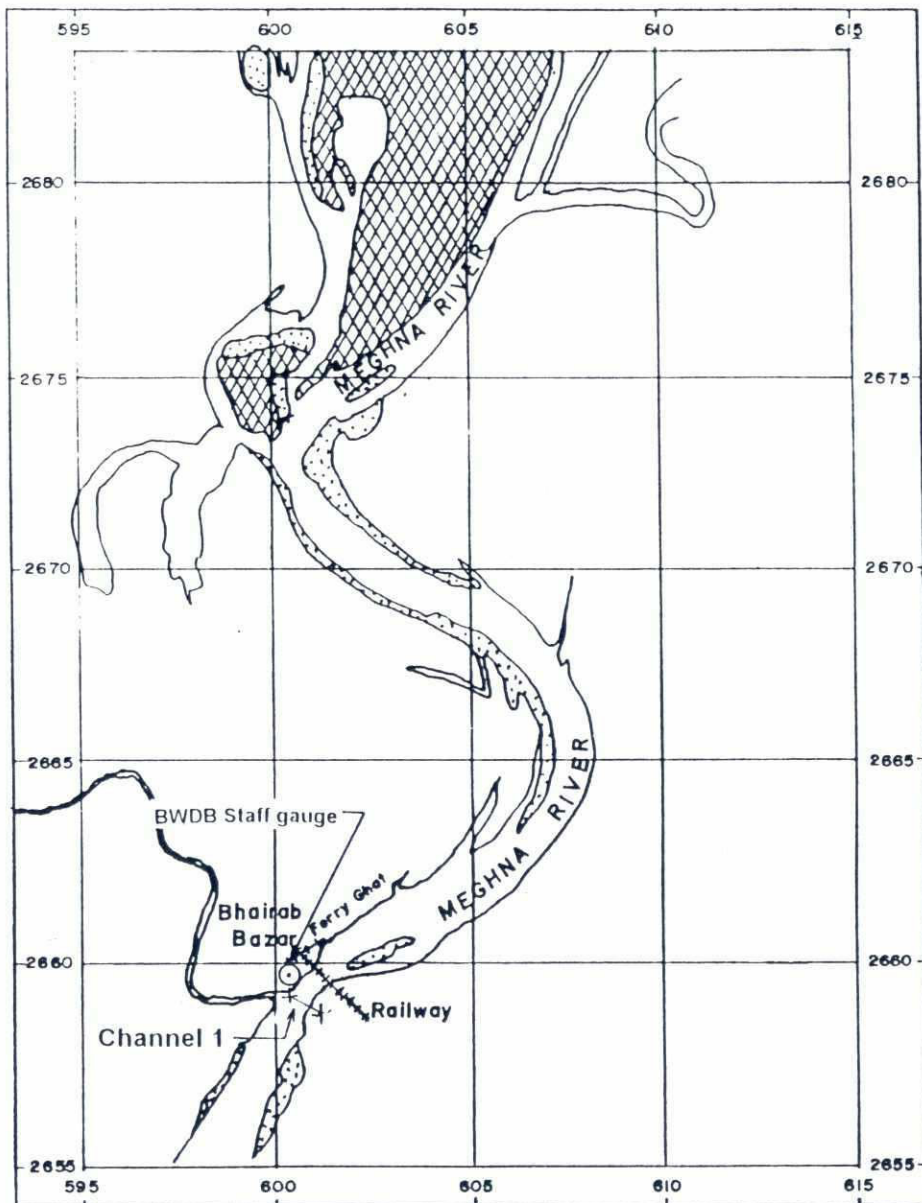
Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z44G1T04 .ase
Echosounder data	1	QUATTRO	Z44G1T04 .ech
Sediment transport data	1	QUATTRO	Z44G1T04 .sed
Bed load sediment analysis	1	QUATTRO	Z44G1T04 .bdl
Susp. sed. conc. analysis	1	QUATTRO	Z44G1T04 .ssc
Transect plot data	1	QUATTRO	Z44G1T04 .trs
Iso-velocity plot data	1	MIKE 21	Z44G1T04 .ct2 Z44G1T04 .dt2

Table 7.1 PSD 24 Database file description



FAP 24  DELFT - DHI		Survey Bulletin 52 : 16 April, 1994	
RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization</small> <small>Commission of the European Communities</small>		Location 11 : Meghna River, Bhairab Bazar	
	Date : 10 Aug 1994	PSD 24 Database file description	page
	Init : mk		7.1

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LEGEND:

- *—* Cross section
- ▨ High land
- ▤ Unstable/low char
- BWDB Staff gauge



5000m 2500m 0

Map is based on satellite images of April 1989

FAP 24



RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 73: 04 - 05 July, 1994

Location 11 : Meghna River, Bhairab Bazar

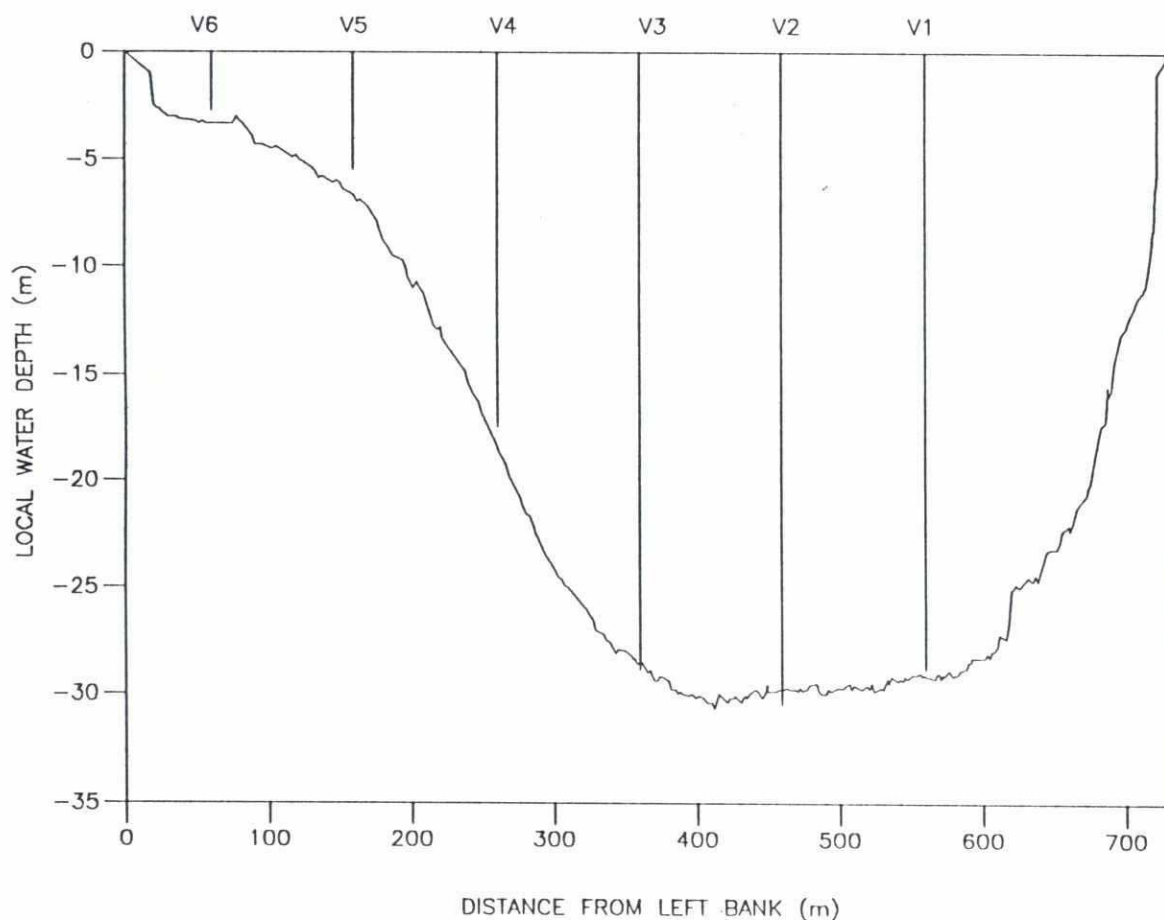
Date : 17 Sep 1994

Init : sjr


Location map

page

1.1



Water level : 4.83 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI		Survey Bulletin 73 : 04 -05 July , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
File : Z4753T03	Date : 17 Sep 1994	Cross-sections and measured verticals Channel 1	page 1.2
	Init : sjr		

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Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	6	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No of verticals in channel	6	-	-	-
	ADCP	-	-	-	-
	S4 current meter	-	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	2	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	6	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	-	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

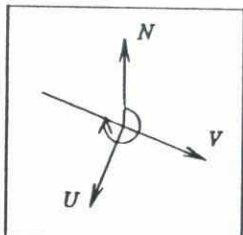
	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	733	13846	4.83	6889	-	2182

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bhairab Bazar	Channel 1	04 Jul 94	4.86	BWDB
		05 Jul 94	4.83	

Table 2.3: Water-levels

<div><div><div><div>FAP 24</div><div>DELFT - DHI</div></div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 73 : 04 -05 July , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
File : Z4753T03	Date : 17 Sep 1994	Survey programme as made and key figures	page 2.1
	Init : sjr		

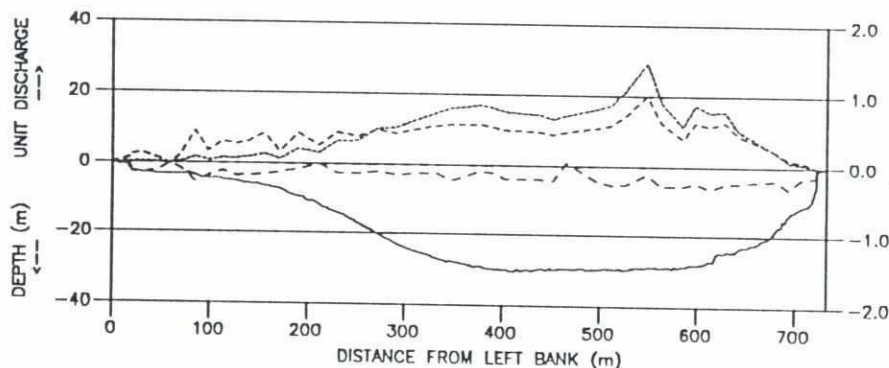


TRANSECT AZIMUTH = 292°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



LEGEND :

— WATER DEPTH (m below STAGE)

..... UNIT DISCHARGE (m³/s.m)

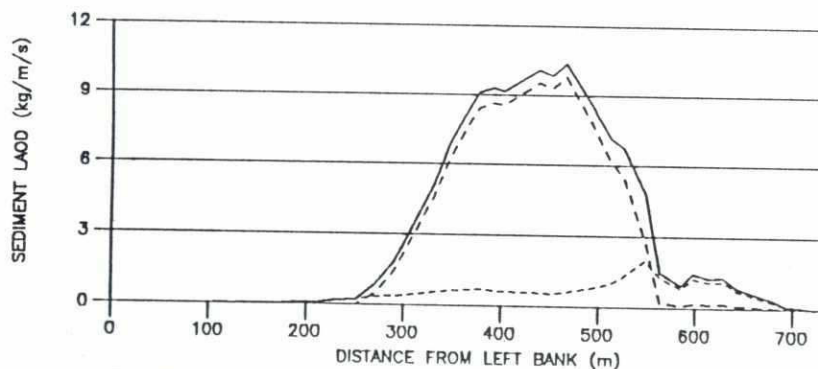
--- U (m/s)

-.- V (m/s)

STAGE = 4.83 (m+PWD)

A = 13846 (m²)

Q = 6889 (m³/s)



LEGEND :

— S_{TOTAL} 2182 (kg/s)

..... S_{WASH LOAD} 349 (kg/s)

--- S_{SUSP. BED} 1833 (kg/s)

-.- S_{BED LOAD} - (kg/s)

Sample not collected

GRAIN SIZE

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 73 : 04 -05 July , 1994

Location 11 : Meghna River , Bhairab Bazar

File : Z4753T03

Date : 17 Sep 1994

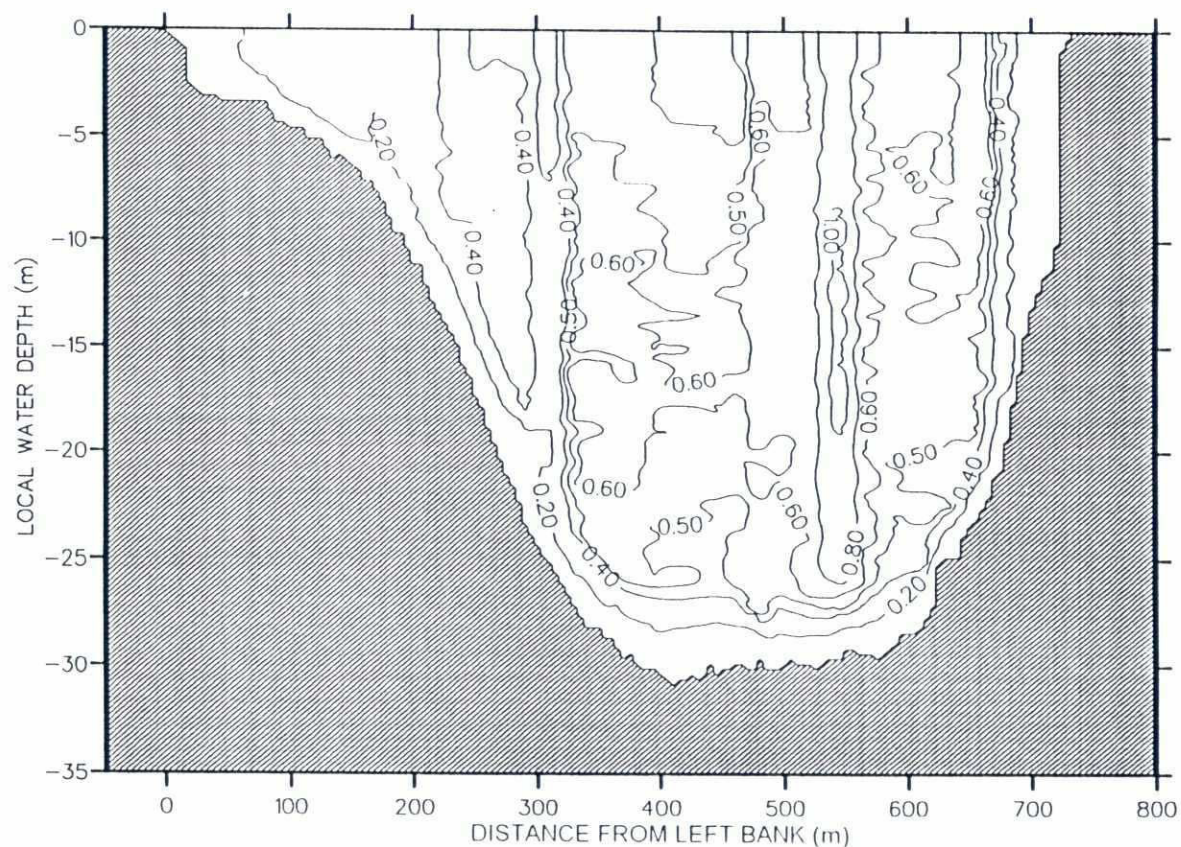
Init : sjr

Horizontal distribution of flow and sediments
Channel 1

page


3.1

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Iso-velocity contours (m/s)

Water level : 4.83 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI		Survey Bulletin 73 : 04 -05 July , 1994	
RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization</small> <small>Commission of the European Communities</small>		Location 11 : Meghna River , Bhairab Bazar	
File : Z4753T03	Date : 17 Sep 1994	Cross-sectional distribution of flow velocity Channel 1	page 4.1
	Init : sjr		

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Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9407041756-1803 9407050953-0959 9407051012-1020 9407051031-1038 9407051543-1550 9407051558-1605	Z4743T05 Z4753T03 * Z4753T04 Z4753T05 Z4753T06 Z4753T07

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	ADCP , S4 & MEX not collected						


Table 6.2: Vertical profiles

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	3	2	9407051355-1405	600793	658516	28.90

Table 6.3: Suspended sediment - point sampled


Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	1	1	9407051412-1415	600608	658592	28.80
		2	1	9407051408-1410	600701	658554	30.50
		3	1	9407051355-1405	600793	658516	28.90
		4	1	9407051335-1353	600885	658478	17.50
		5	1	9407051325-1333	600978	658439	5.50
		6	1	9407051130-1225	601070	658401	2.70

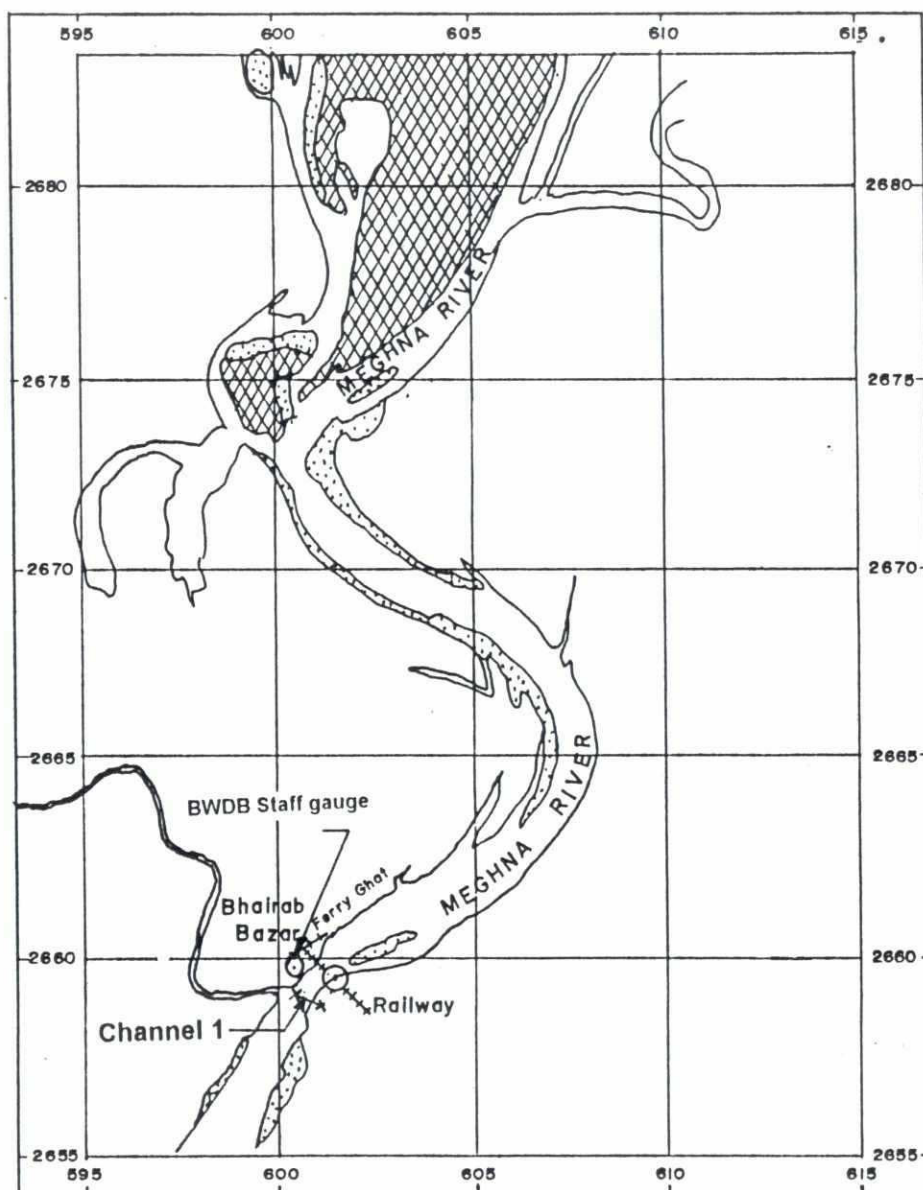
Table 6.4: Suspended sediment - depth integrated

 FAP 24 DELFT - DHI	RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities	Survey Bulletin 73 : 04 -05 July , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
	Date : 17 Sep 1994	Collected data and their storage (1)	page 6.1
	Init : sjr		

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z4753T03 .ase
Echosounder data	1	QUATTRO	Z4753T03 .ech
Sediment transport data	1	QUATTRO	Z4753T03 .sed
Susp. sed. conc. analysis	1	QUATTRO	Z4753T03 .ssc
Transect plot data	1	QUATTRO	Z4753T03 .trs
Iso-velocity plot data	1	MIKE 21 MIKE 21	Z4753T03 .ct2 Z4753T03 .dt2

Table 7.1 PSD 24 Database file description

<div><div><div><div><div></div><div>FAP 24</div></div><div><div>DELFT - DHI</div></div></div><div><div><div></div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div></div></div>		Survey Bulletin 73 : 04 -05 July , 1994	
		Location 11 : Meghna River , Bhairab Bazar	
	Date : 17 Sep 1994	PSD 24 Database file description	page 7.1
	Init : sjr		



FAP 24



RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 91: 13 August, 1994

Location 11 : Meghna River, Bhairab Bazar

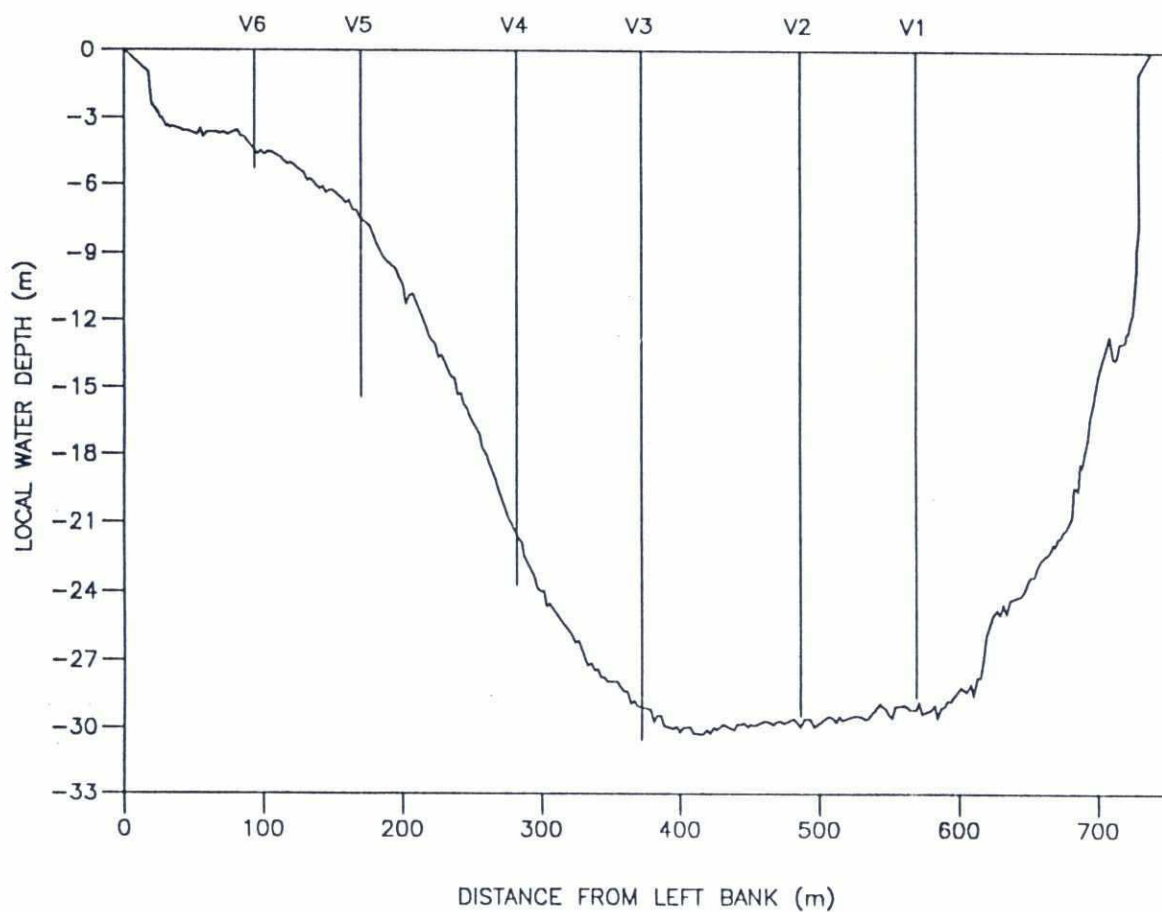
Date : 02 Nov 1994

Intt : mk


Location map

page

1.1



Water level : 5.22 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI		Survey Bulletin 91 : 13 August, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z48D3T03	Date : 02 Nov 1994	Cross-sections and measured verticals Channel 1	page 1.2
	Init : mk		

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Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	3	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No. of verticals in channel	6	-	-	-
	ADCP	6	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	34	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	6	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	5	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-

Table 2.1: Survey programme as made

Channel	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	740	14015	5.22	5980	0.3	183.7

Table 2.2: Key figures

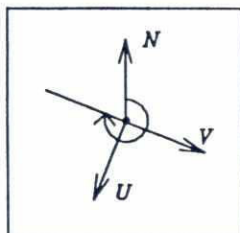
Gauge Location	Channel	Date	Water level (Daily average) (m+PWD)	Gauge
Bhairab Bazar	Channel 1	13 Aug 94	5.22	BWDB

Table 2.3: Water-levels



FAP 24 DELFT - DHI		RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization</small> <small>Commission of the European Communities</small>		Survey Bulletin 91 : 13 August, 1994	
				Location 11 : Meghna River, Bhairab Bazar	
File :	Date : 02 Nov 1994	Survey programme as made and key figures			page 2.1
Z48D3T03	Init : mk				

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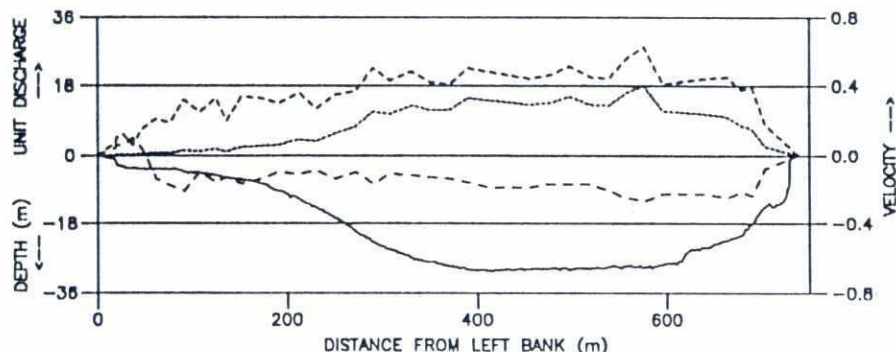


TRANSECT AZIMUTH = 292°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



FLOW

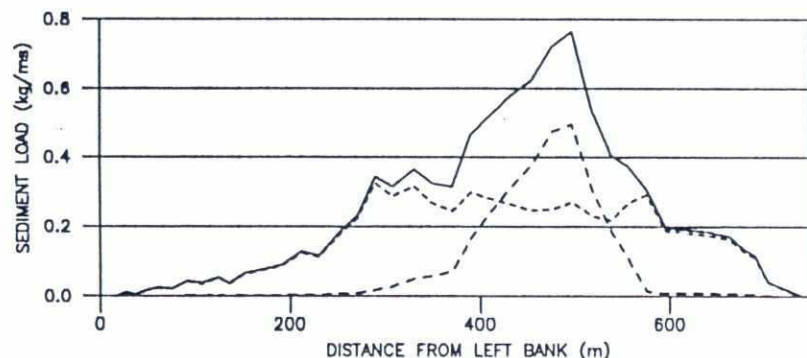
LEGEND :

- WATER DEPTH (m below STAGE)
- UNIT DISCHARGE (m³/s.m)
- - - U - (m/s)
- . - V - (m/s)

STAGE = 5.22 (m+PWD)

A = 14015 (m²)

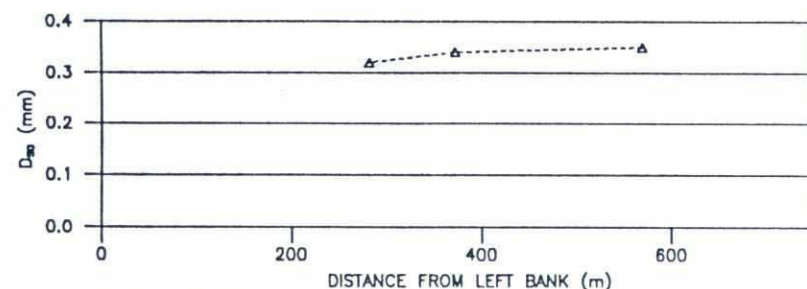
Q = 5980 (m³/s)



SEDIMENT TRANSPORT

LEGEND :

- S_{TOTAL} 184.0 (kg/s)
- - - S_{WASH LOAD} 121.2 (kg/s)
- . - S_{SUSP. BED} 62.5 (kg/s)
- S_{BED LOAD} 0.3 (kg/s)



GRAIN SIZE

LEGEND :

- ◇◇◇◇◇ D₅₀ SUSP. (mm)
- △△△△△ D₅₀ BED LOAD (mm)
- D₅₀ BED MAT. (mm)

FAP 24



RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 91 : 13 August, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z48D3T03

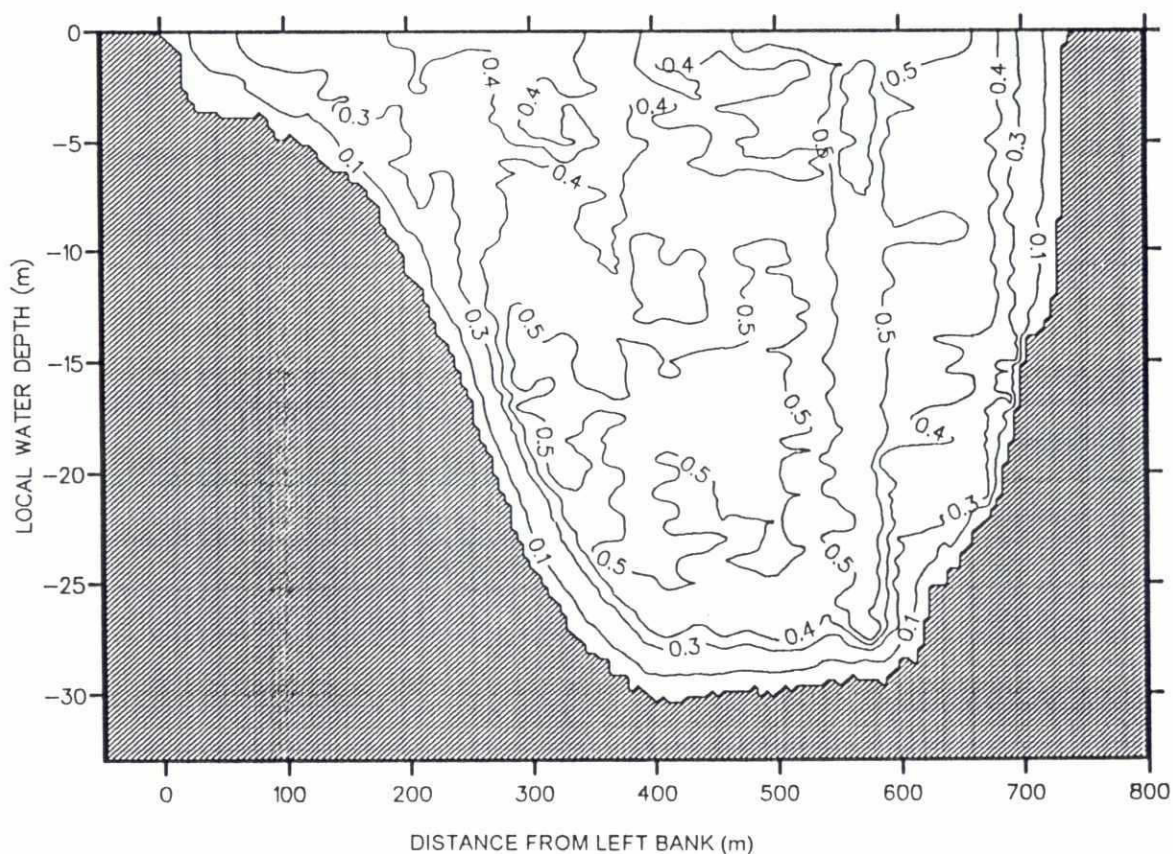
Date : 02 Nov 1994

Init : mk

Horizontal distribution of flow and sediments
Channel 1

page

3.1



Iso-velocity contours (m/s)

Water-level : 5.22 m + PWD measured at the station indicated on page 1.1

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 91 : 13 August, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z48D3T03

Date : 02 Nov 1994

Init : mk

Cross-sectional distribution of flow velocity
Channel 1

page


4.1

12

Andreasen settling tube							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)							

US BM-54 bed samples							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.2 : Grain size of bed material							

Helley-Smith								
Channel	Vertical	time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm		D35 (mm)	D50 (mm)	D65 (mm)
1	1	9408131424-1434	28.6	0.221	99.780	0.312	0.349	0.389
	3	9408131320-1334	30.5	0.603	99.400	0.281	0.322	0.369
	3	9408131320-1334	30.5	0.286	99.710	0.309	0.347	0.389
	4	9408131216-1225	23.7	0.730	99.270	0.268	0.311	0.361
	4	9408131216-1225	23.7	0.664	99.340	0.282	0.323	0.370
Table 5.3 : Grain sizes of bed load								

<div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	Survey Bulletin 91 : 13 August, 1994	
			Location 11 : Meghna River, Bhairab Bazar	
	<div>Date : 02 Nov 1994</div>	<div>Grain size distributions</div>	page	5.1
	<div>init : mk</div>			

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Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9408130930-0937 9408130948-0954 9408131536-1543	Z48D3T01 Z48D3T03 * Z48D3T10

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9408131424-1434	600591	658561	28.6	Z48D3P08 *
		2	9408131339-1408	600673	658544	29.4	Z48D3P08 *
		3	9408131320-1334	600785	658518	30.5	Z48D3P05 *
		3	9408131433-1459	600785	658518	30.5	Z48D2P01 **
		4	9408131216-1225	600865	658474	23.7	Z48D3P03 *
		5	9408131152-1205	600976	658451	15.4	Z48D3P02 *
		6	9408131120-1125	601057	658438	5.30	Z48D3P01 *

Table 6.2: Vertical profiles

** ADCP and MEX not available

* S4 and MEX not available

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	1	6	9408131424-1434	600591	658561	28.6
		2	6	9408131339-1408	600673	658544	29.4
		3	5	9408131320-1334	600785	658518	30.5
		4	6	9408131216-1225	600865	658474	23.7
		5	6	9408131152-1205	600976	658451	15.4
		6	5	9408131120-1125	601057	658438	5.30


Table 6.3: Suspended sediment - point sampled

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	1	1	9408131424-1434	600591	658561	28.6
		2	1	9408131339-1408	600673	658544	29.4
		3	1	9408131320-1334	600785	658518	30.5
		4	1	9408131216-1225	600865	658474	23.7
		5	1	9408131152-1205	600976	658451	15.4
		6	1	9408131120-1125	601057	658438	5.30

Table 6.4: Suspended sediment - depth integrated


Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley-Smith Sample	1	1	9408131424-1434	600591	658561	28.6	A1884
		3	9408131320-1334	600785	658518	30.5	A1868
		3	9408131320-1334	600785	658518	30.5	A1985
		4	9408131216-1225	600865	658474	23.7	A2138
		4	9408131216-1225	600865	658474	23.7	A2159

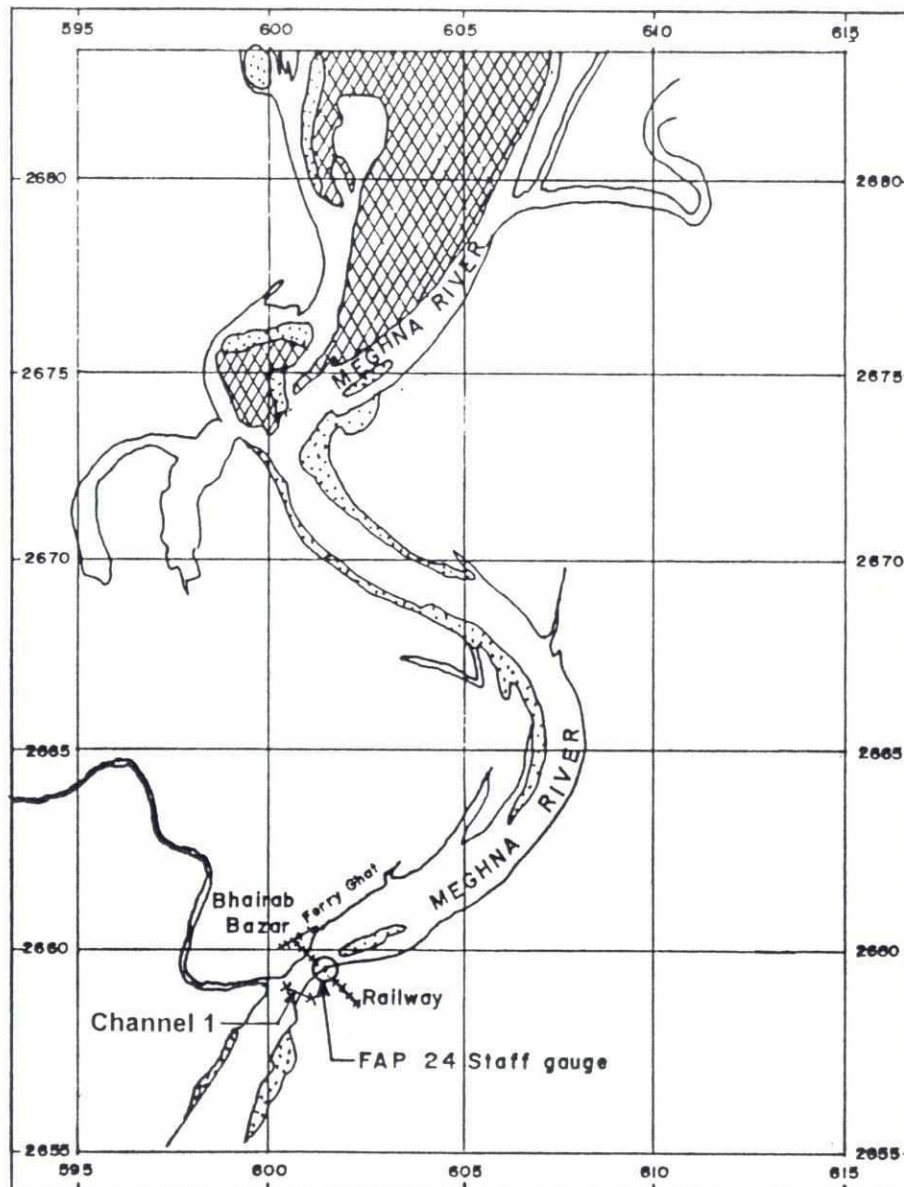
Table 6.5: Bed load

FAP 24  DELFT - DHI		RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 91 : 13 August, 1994			
				Location 11 : Meghna River, Bhairab Bazar			
		Date : 02 Nov 1994 init . mk		Collected data and their storage (1)			page 61

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z48D3T03 .ase
Echosounder data	1	QUATTRO	Z48D3T03 .ech
Sediment transport data	1	QUATTRO	Z48D3T03 .sed
Sus. sed. conc. analysis	1	QUATTRO	Z48D3T03 .ssc
Bead load sediment analysis	1	QUATTRO	Z48D3T03 .bdl
Transect plot data	1	QUATTRO	Z48D3T03 .trs
Iso-velocity plot data	1	MIKE 21	Z48D3T03 .dt2 Z48D3T03 .ct2

Table 7.1 PSD 24 Database file description

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 91 : 13 August, 1994	
		Location 11 : Meghna River, Bhalrab Bazar	
	Date : 02 Nov 1994	PSD 24 Database file description	page 7.1
	Init : mk		



LEGEND:

- ✕—✕ Cross section
- ▨ High land
- ░ Unstable/low char
- ⊙ FAP 24 Staff gauge



5000m 2500m 0

Map is based on satellite
images of April 1989

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 100 : 05 October, 1994

Location 11 : Meghna River, Bhairab Bazar

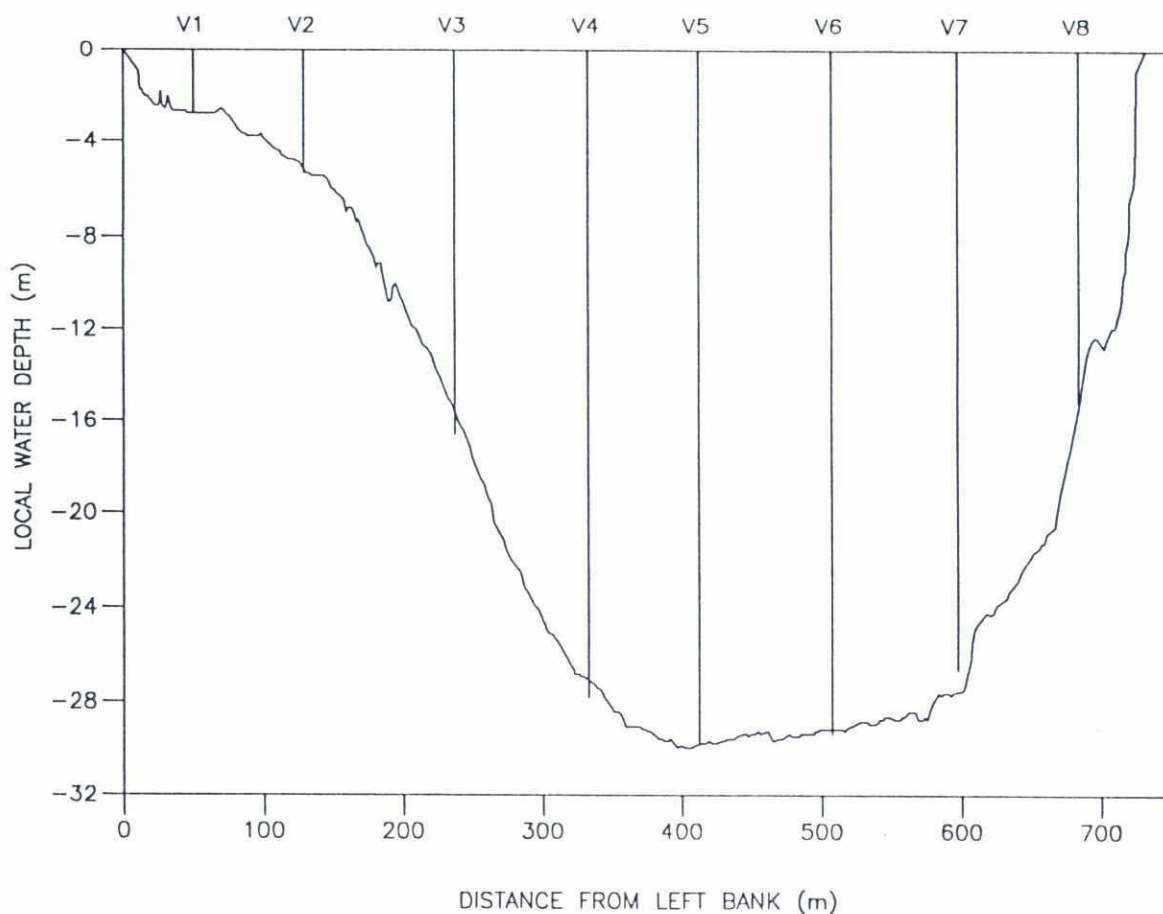
Date : 15 Jan 1995

Init : mk/tr


Location map

page

1.1



Water-level : 4.32 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI	RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization</small> <small>Commission of the European Communities</small>	Survey Bulletin 100 : 05 October, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z4A53T01	Date : 15 Jan 1995	Cross-sections and measured verticals Channel 1	page
	Init : mk/tr		1.2

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Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	4	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No. of verticals in channel	8	-	-	-
	ADCP	8	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	6	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	8	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	8	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

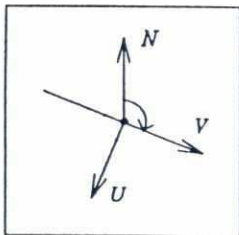
Channel	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	732	13634	4.32	5543	0.50	124.7

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m + PWD)	Gauge
Bhairab Bazar	Channel 1	05 Oct 1994	4.32	FAP 24

Table 2.3: Water-levels

 FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 100 : 05 October , 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z4A53T01	Date : 15 Jan 1995	Survey programme as made and key figures	page 21
	Init : mk / tr		

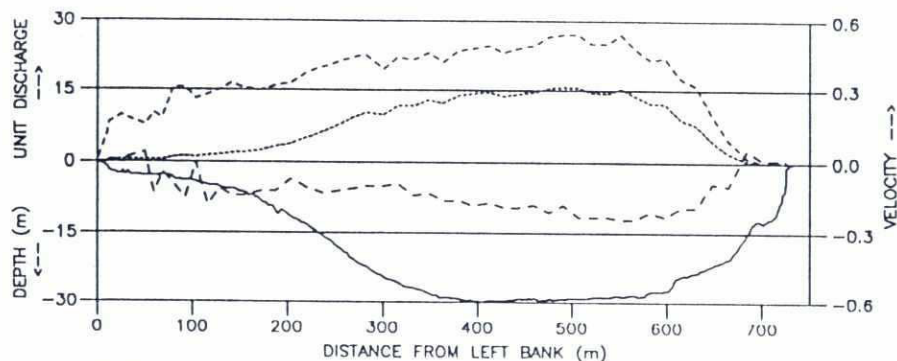


TRANSECT AZIMUTH = 112°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



FLOW

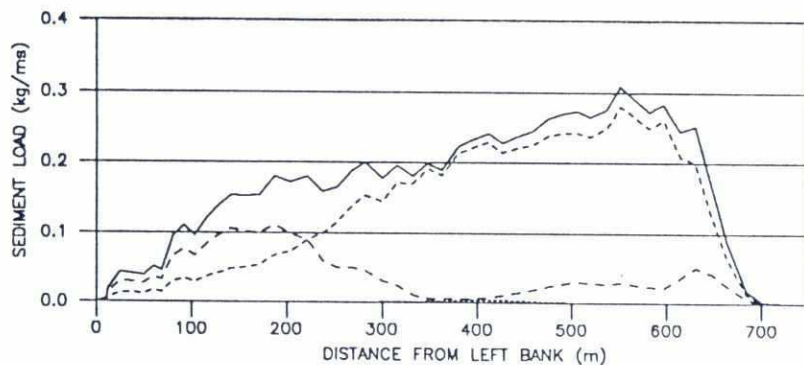
LEGEND :

— WATER DEPTH (m below STAGE)
 UNIT DISCHARGE ($m^3/s.m$)
 --- U - (m/s)
 -.- V - (m/s)

STAGE = 4.32 (m+PWD)

A = 13634 (m^2)

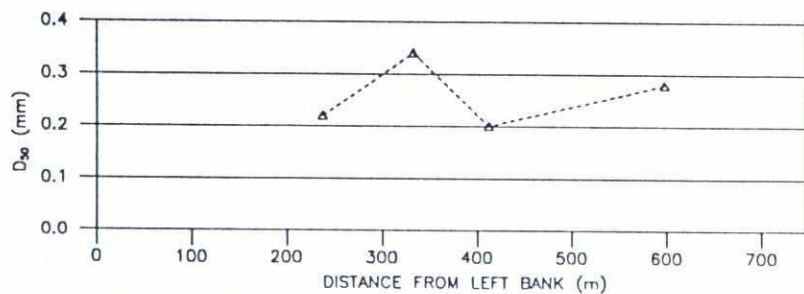
Q = 5543 (m^3/s)



SEDIMENT TRANSPORT

LEGEND :

— S_{TOTAL} 125.2 (kg/s)
 --- $S_{WASH LOAD}$ 96.8 (kg/s)
 -.- $S_{SUSP. BED}$ 27.9 (kg/s)
 $S_{BED LOAD}$ 0.5 (kg/s)



GRAIN SIZE

LEGEND :

◆◆◆◆◆ $D_{50 SUSP.}$ (mm)
 ▲▲▲▲▲ $D_{50 BED LOAD}$ (mm)
 □□□□□ $D_{50 BED MAT.}$ (mm)

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
 Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 100 : 05 October, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z4A53T01

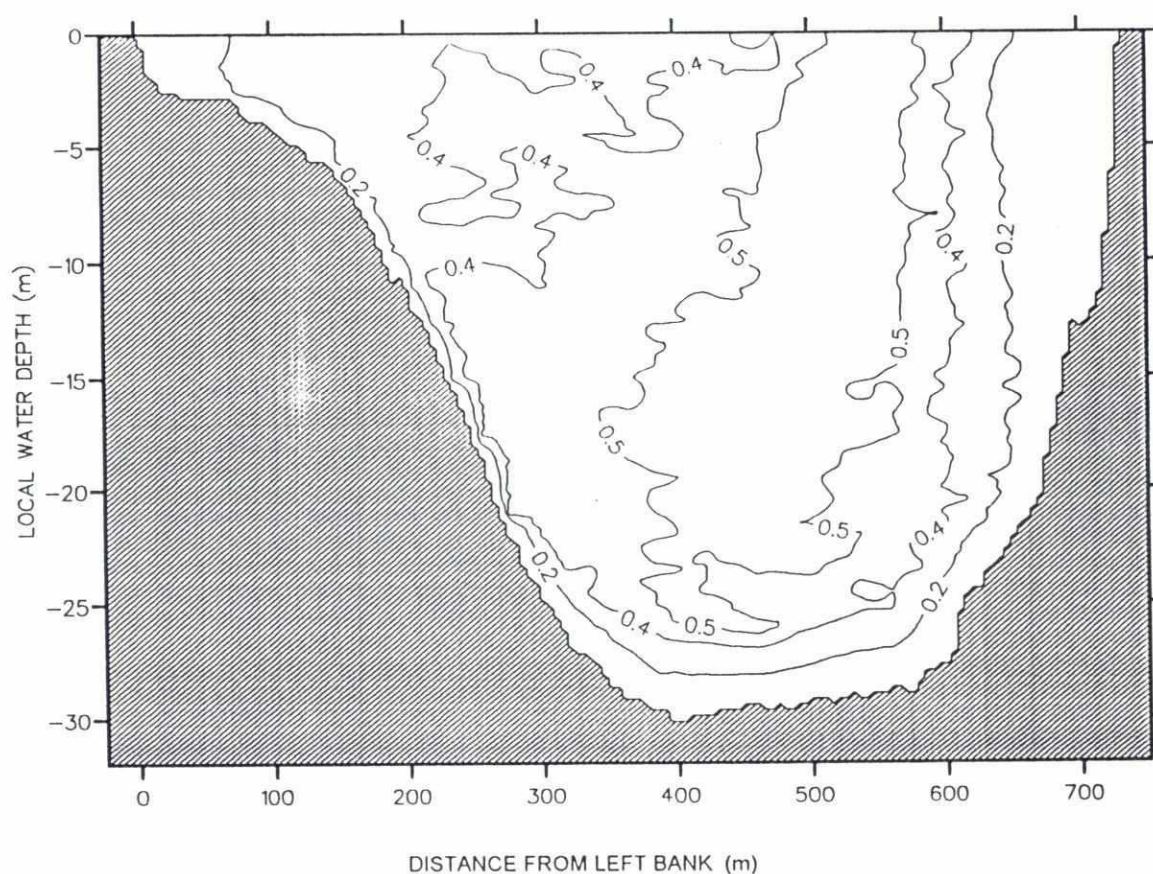
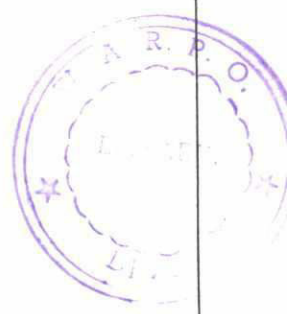
Date : 15 Jan 1995

Init : mk/tr


Horizontal distribution of flow and sediments
 Channel 1

page

3.1



Iso-velocity contours (m/s)
Water-level : 4.32 m + PWD measured at the station indicated on page 1.1


 <p>FAP 24 DELFT - DHI</p>		Survey Bulletin 100 : 05 October, 1994	
<p>RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p>		Location 11 : Meghna River, Bhairab Bazar	
File : Z4A53T01	Date : 15 Jan 1995	Cross-sectional distribution of flow velocity Channel 1	page 4.1
	Init : mk/tr		

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Andreasen settling tube							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)							

US BM-54 bed samples							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.2: Grain size of bed material							

Helley-Smith								
Channel	Vertical	Time (YYMMDDHHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm		D35 (mm)	D50 (mm)	D65 (mm)
1	3	9410051359-1417	16.60	0.621	99.379	0.181	0.219	0.272
	4	9410051326-1345	27.80	0.107	99.893	0.302	0.339	0.381
	5	9410051227-1259	29.70	0.139	99.861	0.188	0.225	0.278
	7	9410051114-1140	26.60	0.693	99.307	0.227	0.281	0.337
	3	9410051359-1417	16.60	0.607	99.393	0.183	0.222	0.276
	4	9410051326-1345	27.80	0.029	99.971	0.301	0.339	0.381
	5	9410051227-1259	29.70	0.014	99.986	0.161	0.180	0.201
	7	9410051114-1140	26.60	0.371	99.629	0.238	0.288	0.341
	Table 5.3: Grain sizes of bed load							

<div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	Survey Bulletin 100 : 05 October , 1994	
		Location 11 : Meghna River, Bhairab Bazar		
	<div>Date : 15 Jan 1995</div>	Grain size distributions		page 51
	<div>Init mk / tr</div>			

Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9410050852-0859 9410050909-0915 9410051520-1527 9410051534-1539	Z4A53T01 * Z4A53T02 Z4A53T03 Z4A53T04

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9410051455-1503	601079	658405	2.80	Z4A53P10 *
		2	9410051435-1444	600996	658434	5.40	Z4A53P09 *
		3	9410051359-1417	600895	658474	16.60	Z4A53P08 *
		4	9410051326-1345	600807	658512	27.80	Z4A53P07 *
		5	9410051227-1259	600743	658538	29.70	Z4A53P06 *
		5	9410051215-1334	600751	658534	29.90	Z4A52P01 **
		6	9410051153-1210	600655	658577	29.30	Z4A53P05 *
		7	9410051114-1140	600566	658621	26.60	Z4A53P04 *
		8	9410051019-1025	600484	658641	15.20	Z4A53P03 *


Table 6.2: Vertical profiles

*S4 and MEX not available

** ADCP and MEX not available

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	5	6	9410051215-1334	600751	658534	29.90


Table 6.3: Suspended sediment - point sampled

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 100 : 05 October , 1994	
		Location 11 : Meghna River, Bhairab Bazar	
	Date : 15 Jan 1995	Collected data and their storage (1)	page 6.1
	Init : mk / tr		

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	1	1	9410051455-1503	601079	658405	2.80
		2	1	9410051435-1444	600996	658434	5.40
		3	1	9410051359-1417	600895	658474	16.60
		4	1	9410051326-1345	600807	658512	27.80
		5	1	9410051227-1259	600743	658538	29.70
		6	1	9410051153-1210	600655	658577	29.30
		7	1	9410051114-1140	600566	658621	26.60
		8	1	9410051019-1025	600484	658641	15.20
Table 6.4: Suspended sediment - depth integrated							

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley-Smith Sample	1	3	9410051359-1417	600895	658474	16.60	A80
		4	9410051326-1345	600807	658512	27.80	A2154
		5	9410051227-1259	600743	658538	29.70	A1943
		7	9410051114-1140	600566	658621	26.60	A3004
		3	9410051359-1417	600895	658474	16.60	A1589
		4	9410051326-1345	600807	658512	27.80	A2160
		5	9410051227-1259	600743	658538	29.70	A2191
		7	9410051114-1140	600566	658621	26.60	A1928


Table 6.5: Bed load

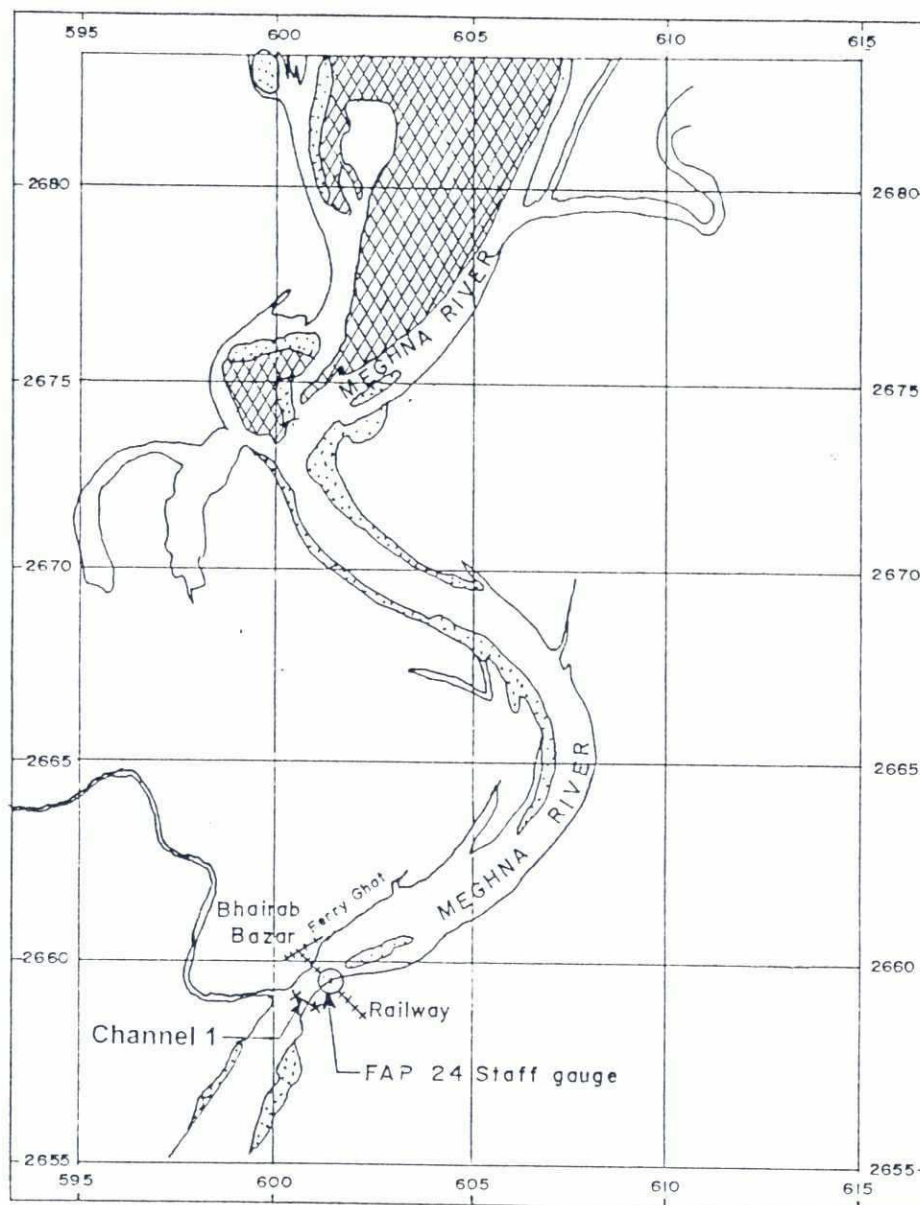
<div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div> <div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div>		Survey Bulletin 100 : 05 October , 1994	
		Location 11 : Meghna River, Bhairab Bazar	
	Date : 15 Jan 1995	Collected data and their storage (2)	page
	Init : mk / tr		6.2

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Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z4A53T01 .ase
Echosounder data	1	QUATTRO	Z4A53T01 .ech
Sediment transport data	1	QUATTRO	Z4A53T01 .sed
Bed load sed. analysis	1	QUATTRO	Z4A53T01 .bdl
Sus. sed. conc. analysis	1	QUATTRO	Z4A53T01 .ssc
Transect plot data	1	QUATTRO	Z4A53T01 .trs
Iso-velocity plot data	1	MIKE 21	Z4A53T01 .ct2 Z4A53T01 .dt2

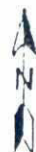
Table 7.1 PSD 24 Database file description

 <p>FAP 24 DELFT - DHI</p>	<p>RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p>	Survey Bulletin 100 : 05 October , 1994	
		Location 11 : Meghna River, Bhairab Bazar	
	Date : 15 Jan 1995	PSD 24 Database file description	page
	Init : mk / tr		7.1



LEGEND:

- X-X Cross section
- High land
- Unstable/low char
- FAP 24 Staff gauge



5000m 2500m 0

Map is based on satellite images of April 1989

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 121: 20 November, 1994

Location 11 : Meghna River, Bhairab Bazar

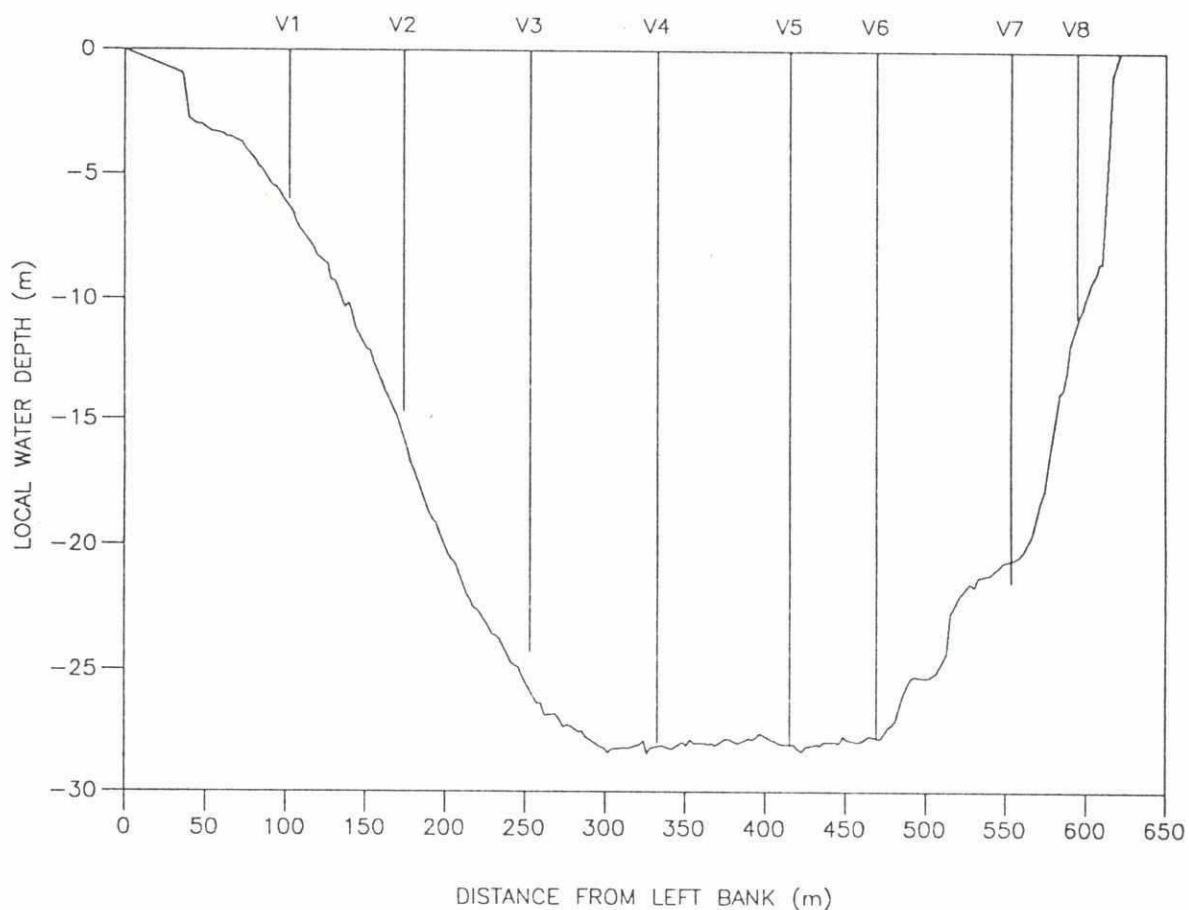
Date : 31 Jan 1995

Init : mk/tr


Location map

page

1.1



Water level : 2.16 m + PWD measured at the station indicated on page 1.1

FAP 24  DELFT - DHI		Survey Bulletin 121 : 20 November, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z4BK1T05	Date : 31 Jan 1995	Cross-sections and measured verticals Channel 1	page 1.2
	Init : mk / tr		

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	4	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No. of verticals in channel	8	-	-	-
	ADCP	8	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	6	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	8	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	2	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

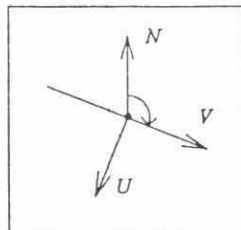
Channel	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	615	11674	2.16	1865	0.20	44.40

Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m + PWD)	Gauge
Bhairab Bazar	Channel 1	20 Nov 94	2.16	FAP 24

Table 2.3: Water-levels

 FAP 24 DELFT - DHI		Survey Bulletin 121 : 20 November, 1994	
RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Location 11 : Meghna River, Bhairab Bazar	
File : Z4BK1T05	Date : 31 Jan 1995	Survey programme as made and key figures	page
	Init : mk / tr		2.1

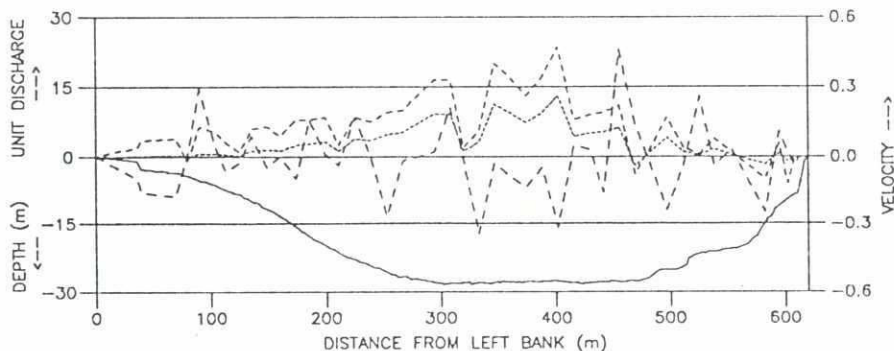


TRANSECT AZIMUTH = 112°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

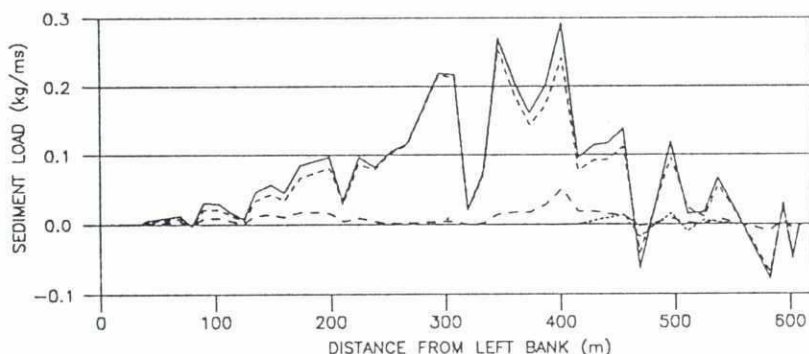
N - MAGNETIC NORTH



FLOW

LEGEND :

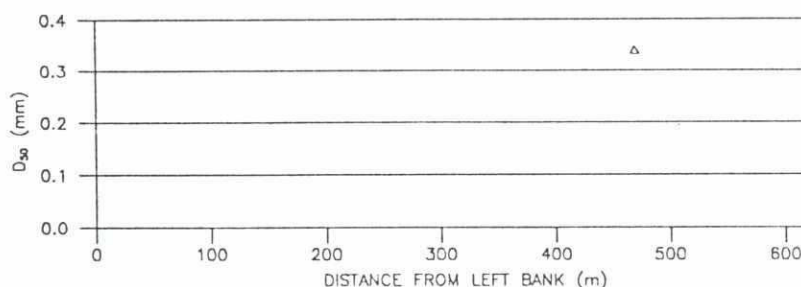
- WATER DEPTH (m below STAGE)
- UNIT DISCHARGE ($m^3/s.m$)
- U - (m/s)
- .- V - (m/s)
- STAGE = 2.16 (m+P.W.D)
- A = 11674 (m^2)
- Q = 1865 (m^3/s)



SEDIMENT TRANSPORT

LEGEND :

- S_{TOTAL} 44.6 (kg/s)
- S_{WASH LOAD} 39.6 (kg/s)
- .- S_{SUSP. BED} 4.8 (kg/s)
- S_{BED LOAD} 0.2 (kg/s)



GRAIN SIZE

LEGEND :

- ◇◇◇◇◇ D₅₀ SUSP. (mm)
- △△△△△ D₅₀ BED LOAD (mm)
- D₅₀ BED MAT. (mm)

FAP 24



RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 121 : 20 November, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z4BK1T05

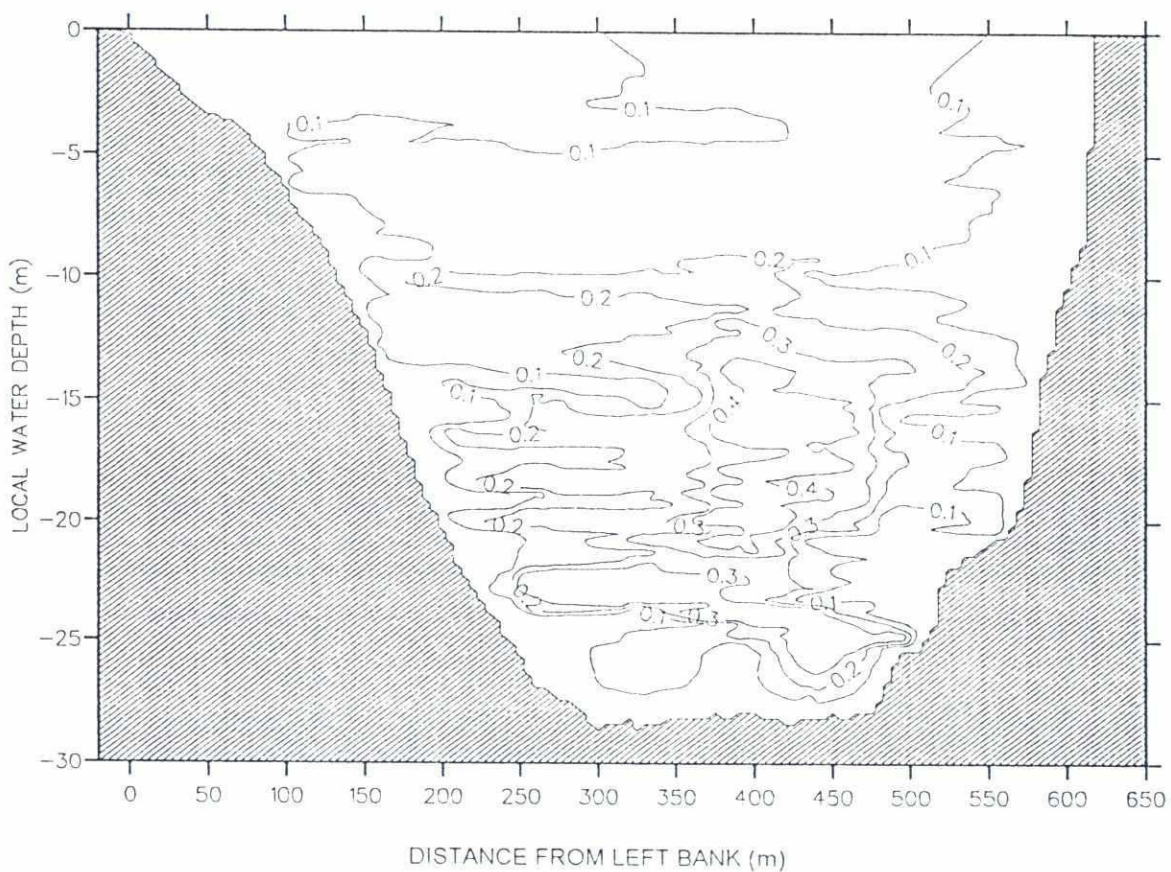
Date : 31 Jan 1995

Init : mk / tr

Horizontal distribution of flow and sediments
Channel 1

page

3.1



Iso-velocity contours (m/s)

Water level : 2.16 m + PWD measured at the station indicated on page 1.1

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 121 : 20 November, 1994

Location 11 : Meghna River, Bhairab Bazar

File : Z4BK1T05

Date : 31 Jan 1995

Init : mk / tr

Cross-sectional distribution of flow velocity
Channel 1

page

4.1



Andreasen settling tube							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							

Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)

US BM-54 bed samples							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent ≤ 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							

Table 5.2 : Grain size of bed material

Helley-Smith								
Channel	Vertical	Time (YYMMDDHHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm		D35 (mm)	D50 (mm)	D65 (mm)
1	6	9411201357-1418	27.80	0.048	99.952	0.309	0.346	0.387
	6	9411201357-1418	27.80	3.074	96.926	0.295	0.334	0.377
Table 5.3 : Grain sizes of bed load								

<div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	<div>Survey Bulletin 121 : 20 November, 1994</div>	
		<div>Location 11 : Meghna River, Bhairab Bazar</div>		
<div>Date : 31 Jan 1995</div>		<div>Grain size distributions</div>		<div>page</div> <div>5.1</div>
<div>Init : mk / tr</div>				

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Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9411200952-0957 9411201007-1011 9411201523-1528 9411201544-1548	Z4BK1T03 Z4BK1T05 Z4BK1T06 Z4BK1T09

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9411201504-1515	600985	658487	6.00	Z4BK1P09 *
		2	9411201451-1456	600918	658513	14.70	Z4BK1P08 *
		3	9411201441-1447	600849	658537	24.30	Z4BK1P07 *
		4	9411201149-1220	600775	658565	28.00	Z4BK1P02 **
		5	9411201416-1432	600698	658610	28.10	Z4BK1P06 *
		6	9411201357-1418	600638	658632	27.80	Z4BK1P05 *
		7	9411201344-1348	600574	658654	21.50	Z4BK1P04 *
		8	9411201330-1340	600533	658680	10.70	Z4BK1P03 *

Table 6.2: Vertical profiles

* S4 and MEX not available

* MEX not available

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	4	6	9411201149-1220	600775	658565	28.00


Table 6.3: Suspended sediment - point sampled

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	1	1	9411201504-1515	600985	658487	6.00
		2	1	9411201451-1456	600918	658513	14.70
		3	1	9411201441-1447	600849	658537	24.30
		4	1	9411201149-1220	600775	658565	28.00
		5	1	9411201416-1432	600698	658610	28.10
		6	1	9411201357-1418	600638	658632	27.80
		7	1	9411201344-1348	600574	658654	21.50
		8	1	9411201330-1340	600533	658680	10.70

Table 6.4: Suspended sediment - depth integrated

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Helley-Smith Sample	1	6	9411201357-1418	600638	558632	27.80	A1912
		6	9411201357-1418	600638	558632	27.80	A2173


Table 6.5: Bed load

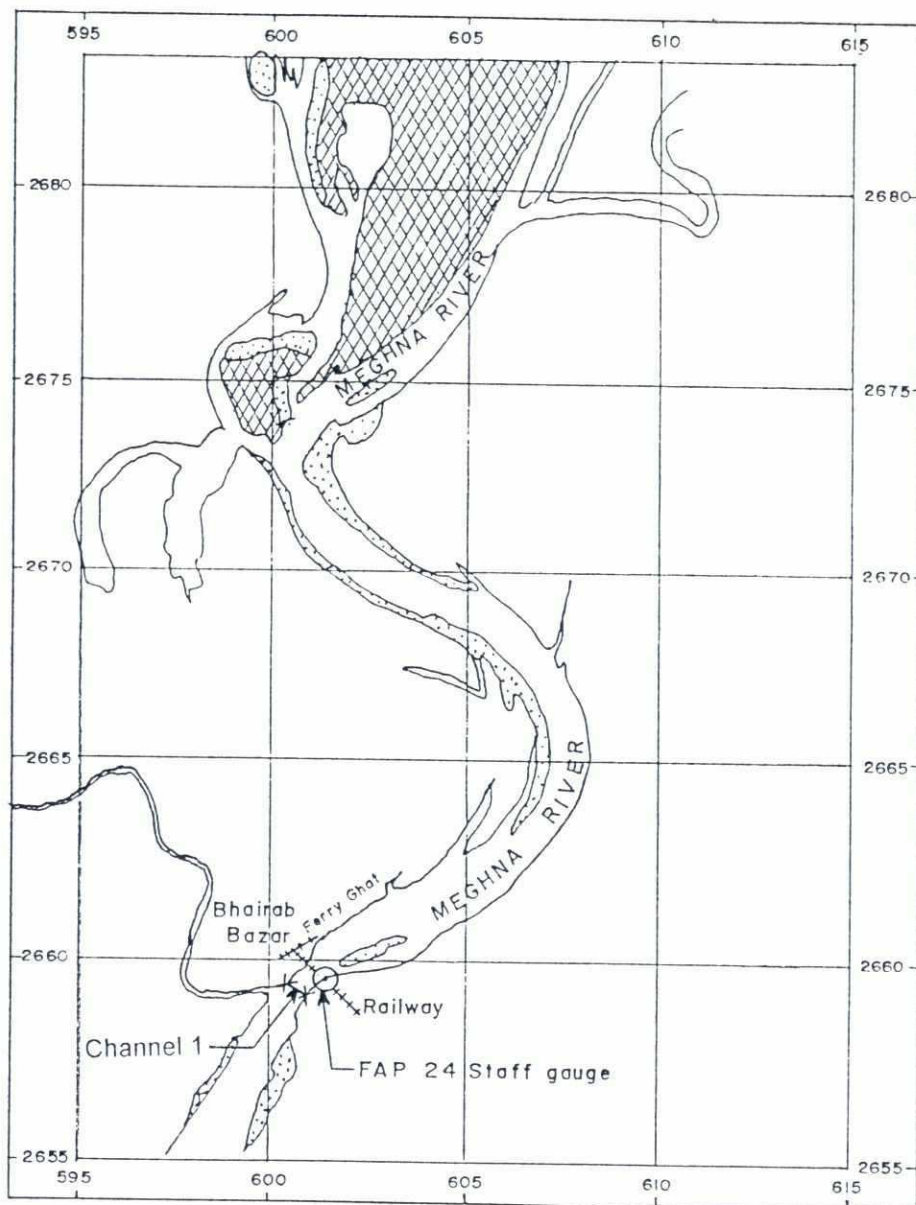
<div>FAP 24</div> <div></div> <div>DELFT - DHI</div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	Survey Bulletin 121 : 20 November, 1994	
		Location 11 : Meghna River, Bhairab Bazar		
	Date 31 Jan 1995	Collected data and their storage (1)	page 61	
	Init : mk / tr			

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Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z4BK1T05 .ase
Echosounder data	1	QUATTRO	Z4BK1T05 .ech
Sediment transport data	1	QUATTRO	Z4BK1T05 .sed
Bed load sed. analysis	1	QUATTRO	Z4BK1T05 .bdl
Sus. sed. conc. analysis	1	QUATTRO	Z4BK1T05 .ssc
Transect plot data	1	QUATTRO	Z4BK1T05 .trs
Iso-velocity plot data	1	MIKE 21	Z4BK1T05 .ct2 Z4BK1T05 .dt2

Table 7.1 PSD 24 Database file description

 <p>FAP 24 DELFT - DHI</p>	<p>RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p>	Survey Bulletin 121 : 20 November, 1994	
		Location 11 : Meghna River, Bhairab Bazar	
	Date : 31 Jan 1995	PSD 24 Database file description	page
	Init : mk / tr		7.1



LEGEND:

- ✕—✕ Cross section
- ▨ High land
- ░ Unstable/low char
- FAP 24 Staff gauge



5000m 2500m 0

Map is based on satellite images of April 1989

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 135 : 21 February, 1995

Location 11 : Meghna River, Bhairab Bazar

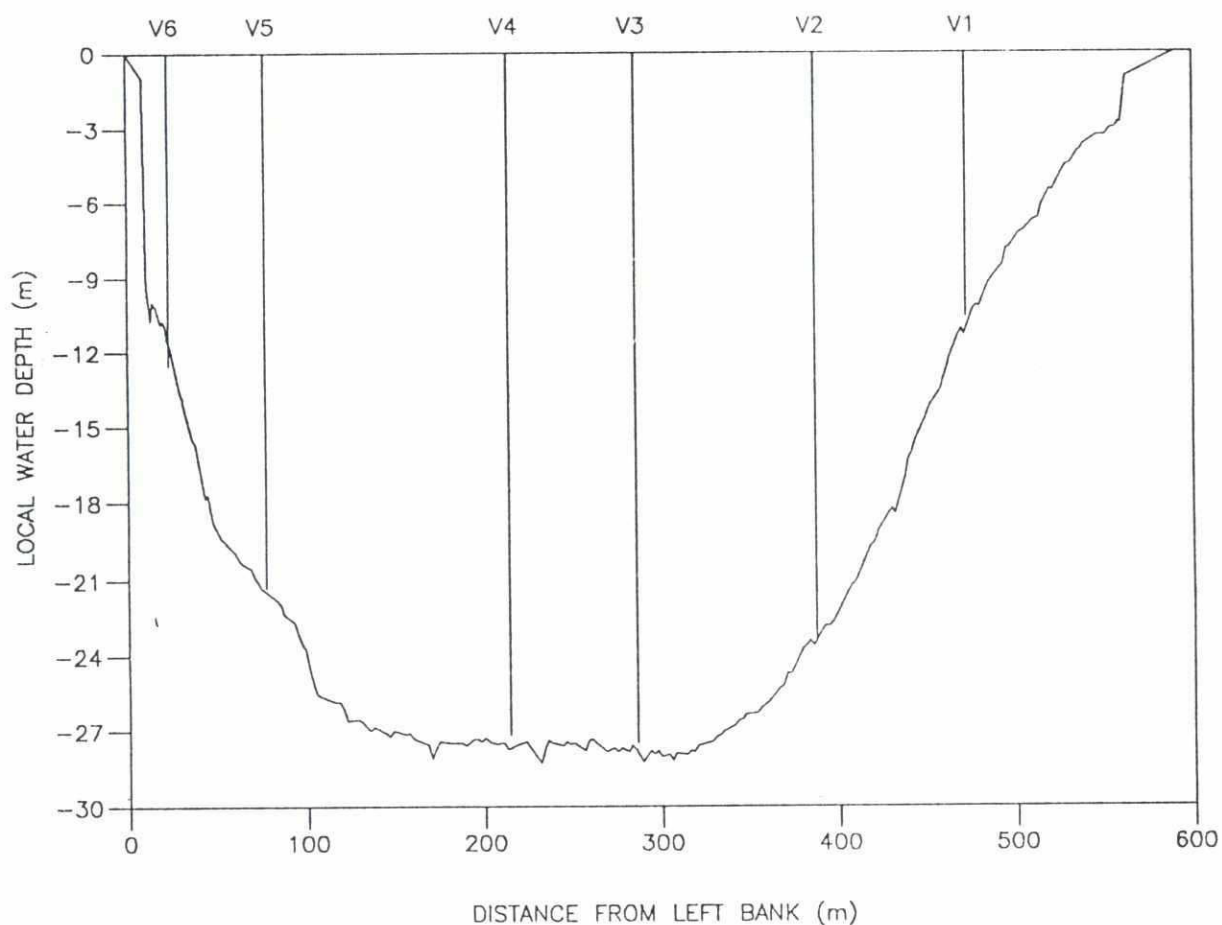
Date : 21 Aug 1995

Init : mk



Location map

page

1.1



Water-level : 1.49 m + PWD measured at the station indicated on page 1.1

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 135 : 21 February, 1995	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z52L1T08	Date : 21 Aug 1995	Cross-sections and measured verticals Channel 1	page
	Init : mk		1.2

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	4	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	-	-	-	-
Vertical current profile	No. of verticals in channel	6	-	-	-
	ADCP	6	-	-	-
	S4 current meter	1	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	6	-	-	-
	Andreasen settling tube	-	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	6	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	-	-	-	-
	Delft Bottle	-	-	-	-
Bed material	US BM-54 bed sampler	-	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

Channel	Width (m)	Area (m ²)	Stage h (m+PWD)	Discharge Q (m ³ /s)	Bed load transport Sb (kg/s)	Suspended Sediment transport Ss total (kg/s)
Channel 1	590	11473	1.49	1618	0	3.8

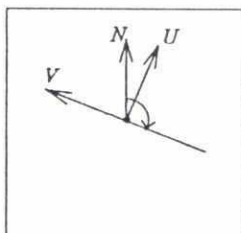
Table 2.2: Key figures

Gauge Location	Channel	Date	Water level (Daily average) (m + PWD)	Gauge
Bhairab Bazar	Channel 1	21 Feb 95	1.49	FAP 24

Table 2.3: Water-levels

 FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 135 : 21 February, 1995	
		Location 11 : Meghna River, Bhairab Bazar	
File : Z52L1T08	Date : 21 Aug 1995	Survey programme as made and key figures	page
	Init : mk		2.1

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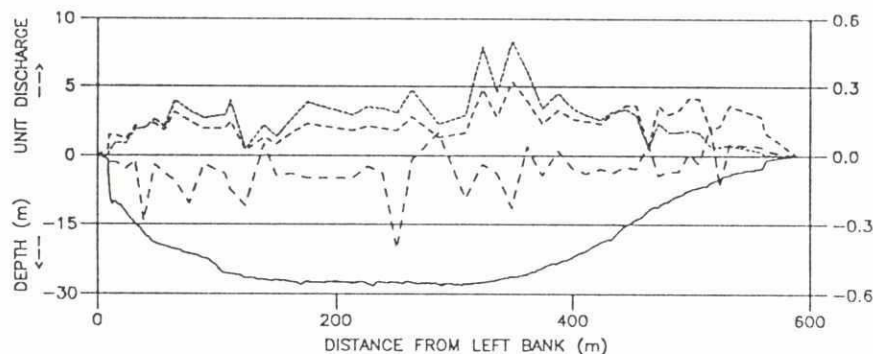


TRANSECT AZIMUTH = 112°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



FLOW

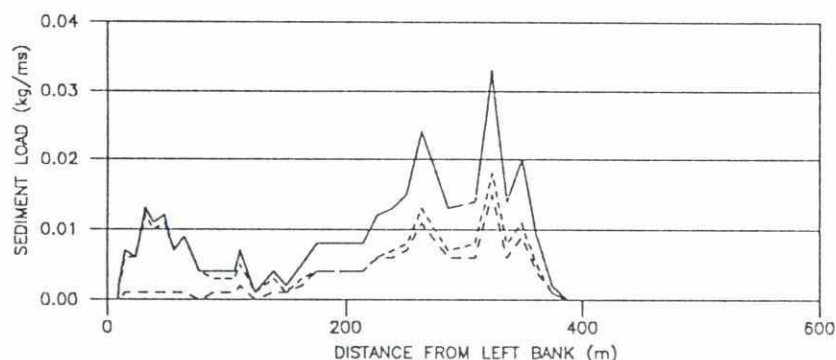
LEGEND :

- WATER DEPTH (m below STAGE)
- UNIT DISCHARGE (m³/s.m)
- U - (m/s)
- .- V - (m/s)

STAGE = 1.49 (m+PWD)

A = 11473 (m³)

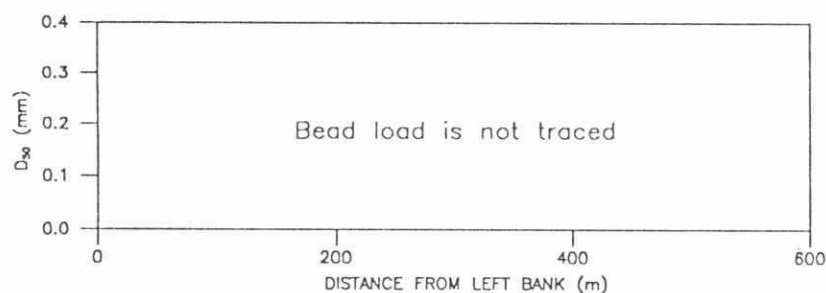
Q = 1618 (m³/s)



SEDIMENT TRANSPORT

LEGEND :

- S_{TOTAL} 3.8 (kg/s)
- S_{WASH LOAD} 2.4 (kg/s)
- .- S_{SUSP. BED} 1.4 (kg/s)
- S_{BED LOAD} 0.0 (kg/s)



GRAIN SIZE

LEGEND :

- ◇◇◇◇◇ D₅₀ SUSP. (mm)
- △△△△△ D₅₀ BED LOAD (mm)
- D₅₀ BED MAT. (mm)



RIVER SURVEY PROJECT
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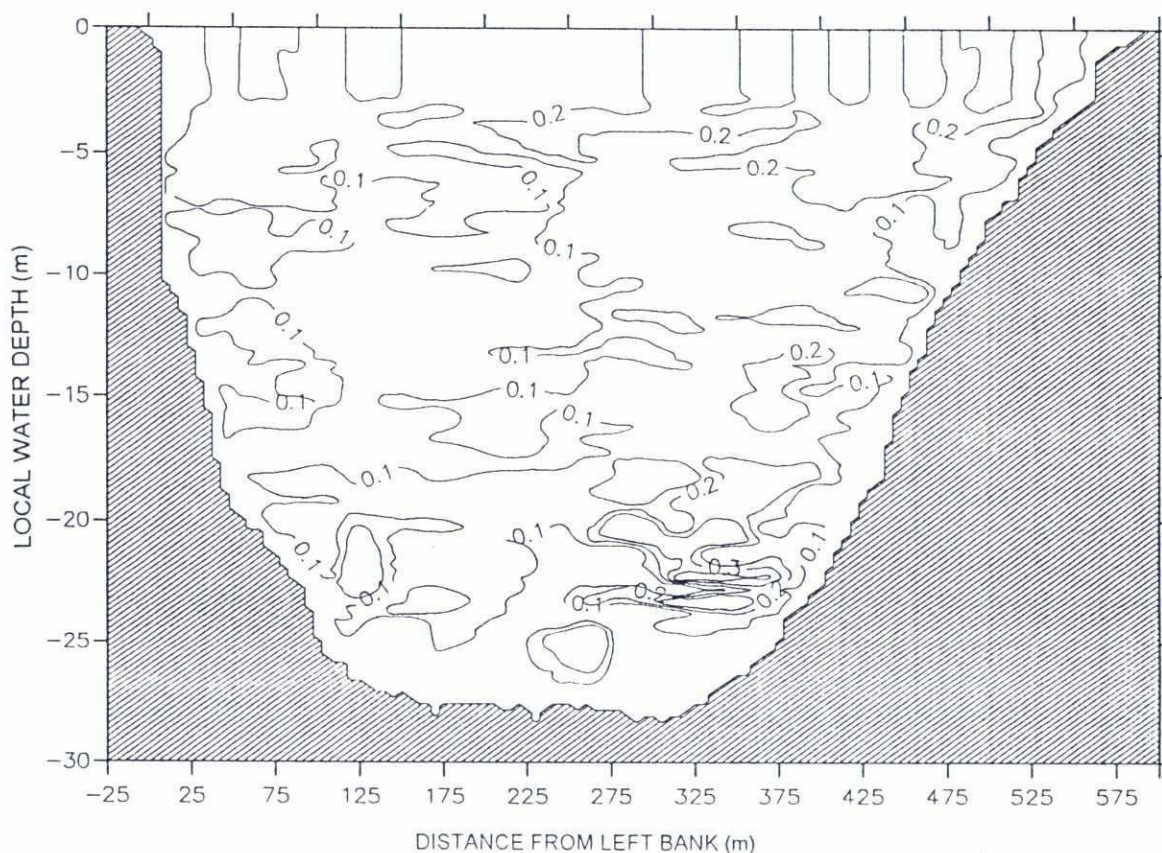
File : Z52L1T08

Date : 21 Aug 1995

Init : mk

Horizontal distribution of flow and sediments
Channel 1

page
3.1



Iso-velocity contours (m/s)

Water-level : 1.49 m + PWD measured at the station indicated on page 1.1

FAP 24
DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization
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Survey Bulletin 135 : 21 February, 1995

Location 11 : Meghna River, Bhairab Bazar

File : Z52L1T08

Date : 21 Aug 1995

Init : mk


Cross-sectional distribution of flow velocity
Channel 1

page
4.1

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Andreasen settling tube							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)							

US BM-54 bed samples							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth	Weight percent < 0.06 mm > 0.06 mm	D10 (mm)	D50 (mm)	D90 (mm)
Sample not collected							
Table 5.2 : Grain size of bed material							

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 135 : 21 February, 1995	
		Location 11 : Meghna River, Bhairab Bazar	
	Date : 21 Aug 1995	Grain size distributions	page 5.1
	Init : mk		

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Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9502211014-1020 9502211030-1034 9502211554-1559 9502211615-1621	Z52L1T03 Z52L1T04 Z52L1T08 * Z52L1T10

Table 6.1: ADCP & EMF transects

* : transect in PSD 24 data base and presented in Sections 3 and 4

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9502211537-1543	600947	658512	10.60	Z52L1P07 *
		2	9502211515-1524	600866	658548	23.40	Z52L1P06 *
		3	9502211214-1327	600787	658590	27.50	Z52L1P02 **
		4	9502211415-1421	600701	658624	27.20	Z52L1P03 *
		5	9502211433-1441	600579	658660	21.30	Z52L1P04 *
		6	9502211453-1500	600520	658668	12.50	Z52L1P05 *

Table 6.2: Vertical profiles

* S4 and MEX not available


** MEX not available

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	3	6	9502211214-1327	600787	658590	27.50

Table 6.3: Suspended sediment - point sampled

Method	Channel	Vertical	No. of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments	1	1	1	9502211537-1543	600947	658512	10.60
		2	1	9502211515-1524	600866	658548	23.40
		3	1	9502211214-1327	600787	658590	27.50
		4	1	9502211415-1421	600701	658624	27.20
		5	1	9502211433-1441	600579	658660	21.30
		6	1	9502211453-1500	600520	658668	12.50

Table 6.4: Suspended sediment - depth integrated


FAP 24  DELFT - DHI		RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 135 : 21 February, 1995	
				Location 11 : Meghna River, Bhairab Bazar	
Date : 21 Aug 1995 Init : mk		Collected data and their storage (1)			page 6.1

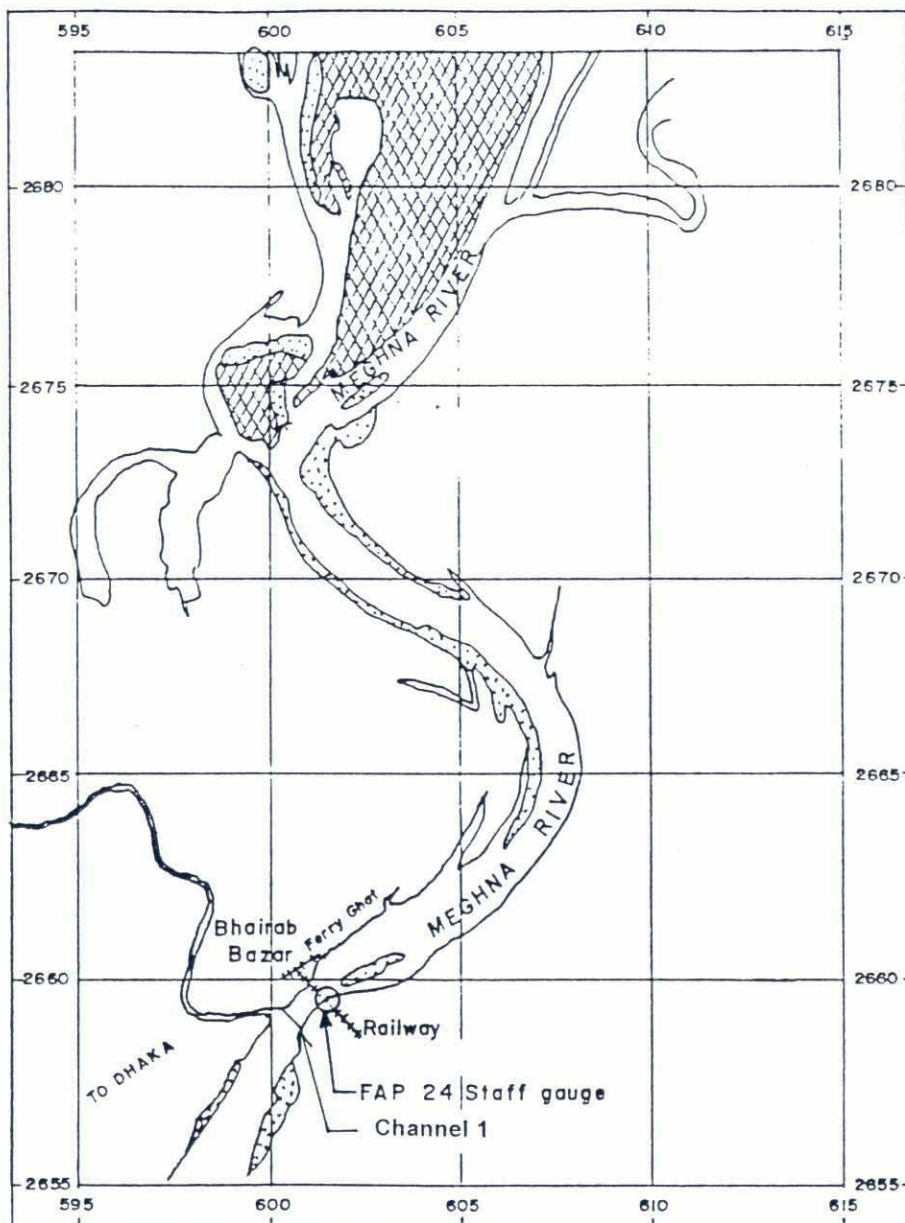
50

Types of Data	Channel	Format	Filename
ADCP/S4/EMF data	1	QUATTRO	Z52L1T08 .ase
Echosounder data	1	QUATTRO	Z52L1T08 .ech
Sediment transport data	1	QUATTRO	Z52L1T08 .sed
Sus. sed. conc. analysis	1	QUATTRO	Z52L1T08 .ssc
Transect plot data	1	QUATTRO	Z52L1T08 .trs
Iso-velocity plot data	1	MIKE 21	Z52L1T08 .ct2 Z52L1T08 .dt2

Table 7.1 PSD 24 Database file description



FAP 24  DELFT - DHI		Survey Bulletin 135 : 21 February, 1995	
RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Location 11 : Meghna River, Bhairab Bazar	
	Date : 21 Aug 1995 Init : mk	PSD 24 Database file description	page 7.1



LEGEND:

- ✕✕ Cross section
- High land
- Unstable/low char
- FAP 24 Staff gauge



5000m 2500m 0

Map is based on satellite
images of April 1989

FAP 24

DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization
Commission of the European Communities

Survey Bulletin 139 : 18 - 19 March, 1995

Location 11 : Meghna River, Bhairab Bazar

Date : 13 Aug 1995

Init : mzh/sjr

Location map

page
1.1

Type of measurement	Method	No. of measurements in channel			
		1	2	3	4
Discharge	ADCP transect	50	-	-	-
	EMF transect	-	-	-	-
	Echo-Sounding	49	-	-	-
Vertical current profile	No. of verticals in channel	1	-	-	-
	ADCP	103	-	-	-
	S4 current meter	50	-	-	-
	Ott current meter	-	-	-	-
Vertical sediment profile	Pump bottle sampling	78	-	-	-
	Andreasen settling tube	19	-	-	-
	MEX turbidity meter	-	-	-	-
	Integrated bottle sampling	-	-	-	-
	Collapsible bag	-	-	-	-
Bed load	Dune tracking	-	-	-	-
	Helley-Smith sampler	-	-	-	-
	Delft Bottle	47	-	-	-
Bed material	US BM-54 bed sampler	5	-	-	-
	Van Veen bed sampler	-	-	-	-


Table 2.1: Survey programme as made

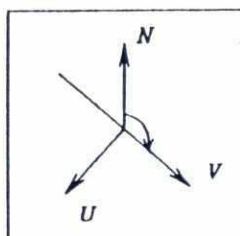
Channel 1	Width	Area	Stage	Discharge
File Names	(m)	(m ²)	h (m+PWD)	Q (m ³ /s)
Z53I3T10	601	10730	1.67	1756
Z53I3T15	608	10781	1.66	1051
Z53I3T17	607	10745	1.63	388
Z53I3T21	599	10736	1.57	433
Z53I3T25	616	10814	1.51	1155
Z53I3T29	590	10688	1.49	1347
Z53I3T35	605	10601	1.46	1492
* Z53I3T38	615	10715	1.42	1534
Z53I3T42	603	10607	1.44	1026
* Z53I3T46	573	10467	1.55	631
Z53I3T51	575	10689	1.62	1859
* Z53J3T02	584	10703	1.69	2143
Z53J3T06	584	10705	1.73	1979
Z53J3T10	585	10760	1.72	1382
Z53J3T13	584	10779	1.69	720
* Z53J3T18	582	10701	1.65	234
Z53J3T22	577	10743	1.58	1039
* Z53J3T26	578	10624	1.55	1334
Z53J3T31	577	10620	1.51	1330
Z53J3T35	601	10712	1.49	1429
Z53J3T39	590	10684	1.48	1352
Z53J3T43	596	10794	1.50	183
Z53J3T45	595	10673	1.58	606
Z53J3T50	595	10707	1.65	1406
Z53J3T53	611	10820	1.69	1951
Z53J3T57	605	10820	1.73	1999

Table 2.2: Key figures

* iso-velocity plots & velocity distribution presented

Note : Each transect measurement performed twice (reverse direction)

 FAP 24 DELFT - DHI		RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 139 : 18 - 19 March , 1995	
				Location 11 : Meghna River , Bhairab Bazar	
Files : Z53I3T38 Z53I3T46 Z53J3T02 Z53J3T18 Z53J3T26		Date : 13 Aug 1995 Init : mzh/sjr		Survey programme as made and key figures	
				page 2.1	

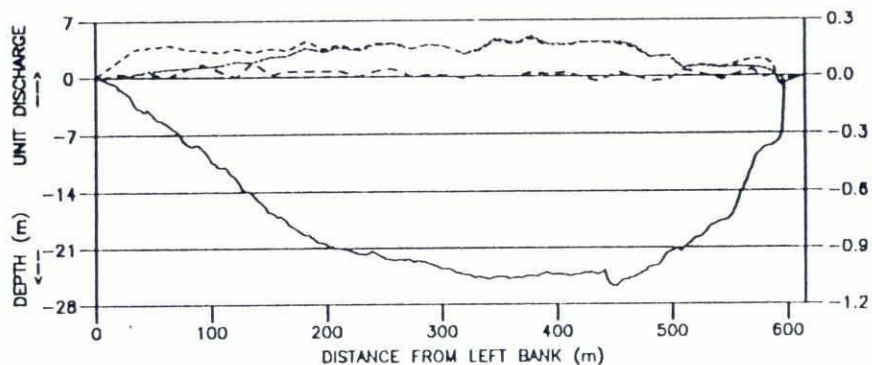


TRANSECT AZIMUTH = 132°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



(18/3 20:02 - 20:07)

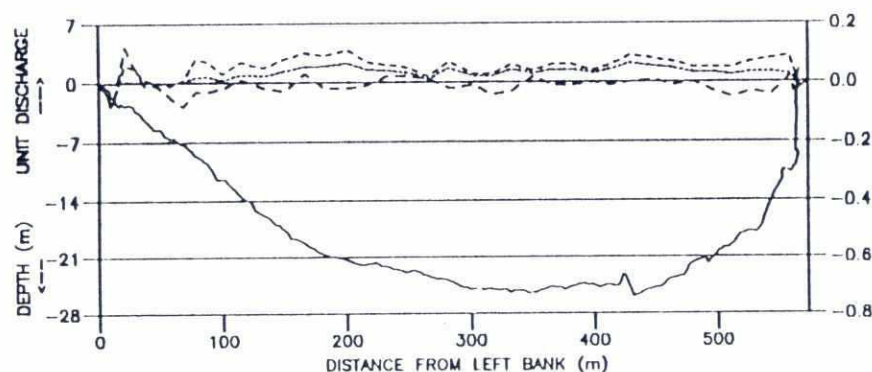
LEGEND :

— WATER DEPTH (m below STAGE)
 --- UNIT DISCHARGE ($m^3/s.m$)
 ... U (m/s)
 -.- V (m/s)

STAGE = 1.42 (m + PWD)

A = 10715 (m^3)

Q = 1534 (m^3/s)



(18/3 22:03 - 22:08)

LEGEND :

— WATER DEPTH (m below STAGE)
 --- UNIT DISCHARGE ($m^3/s.m$)
 ... U (m/s)
 -.- V (m/s)

STAGE = 1.55 (m + PWD)

A = 10467 (m^3)

Q = 631 (m^3/s)

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

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Survey Bulletin 139 : 18 - 19 March , 1995

Location 11 : Meghna River , Bhairab Bazar

File : Z53I3T38

Z53I3T46

Date : 13 Aug 1995

Init : mzh/sjr

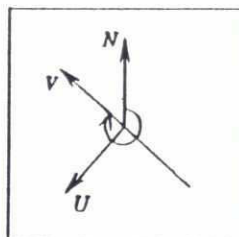
Horizontal distribution of flow

Channel 1

page

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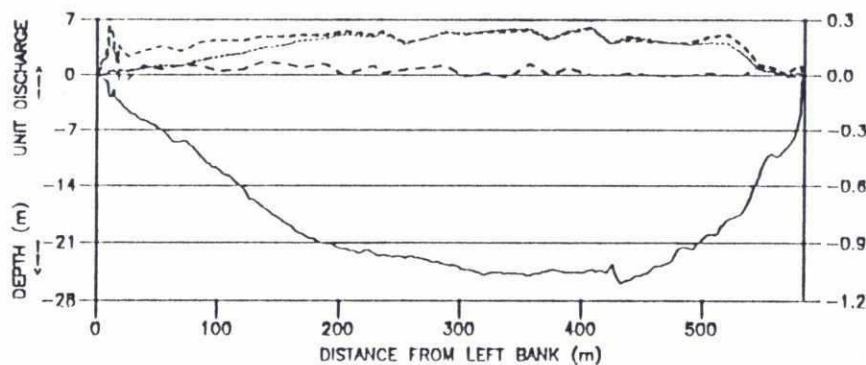


TRANSECT AZIMUTH = 312°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



LEGEND :

— WATER DEPTH (m below STACK)

--- UNIT DISCHARGE (m³/s.m)

... U (m/s)

-.- V (m/s)

STACK = 1.69 (m+PWD)

A = 10703 (m²)

Q = 2143 (m³/s)

(19/3 00:16 - 00:21)

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 139 : 18 - 19 March , 1995

Location 11 : Meghna River , Bhairab Bazar

File : Z53J3T02

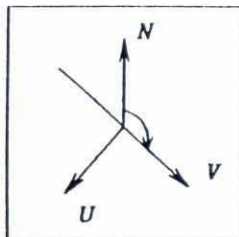
Date : 13 Aug 1995

Init : mzh/sjr

Horizontal distribution of flow
Channel 1

page

3.2

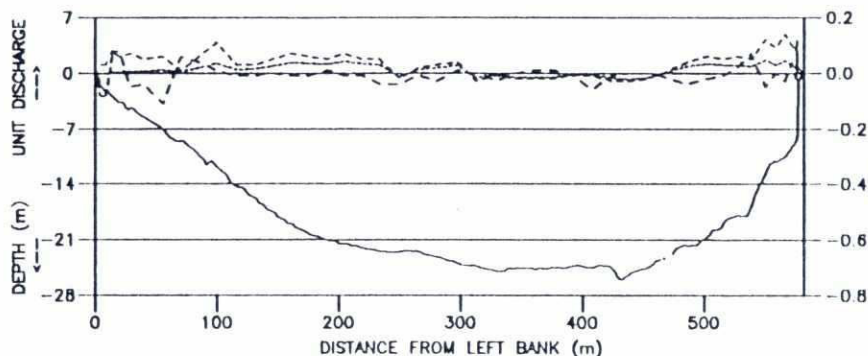


TRANSECT AZIMUTH = 132°

U - VELOCITY NORMAL TO TRANSECT (m/s)

V - VELOCITY PARALLEL TO TRANSECT (m/s)

N - MAGNETIC NORTH



(19/3 04:01 - 04:07)

LEGEND :

— WATER DEPTH (m below STAGE)

- - - UNIT DISCHARGE (m³/s.m)

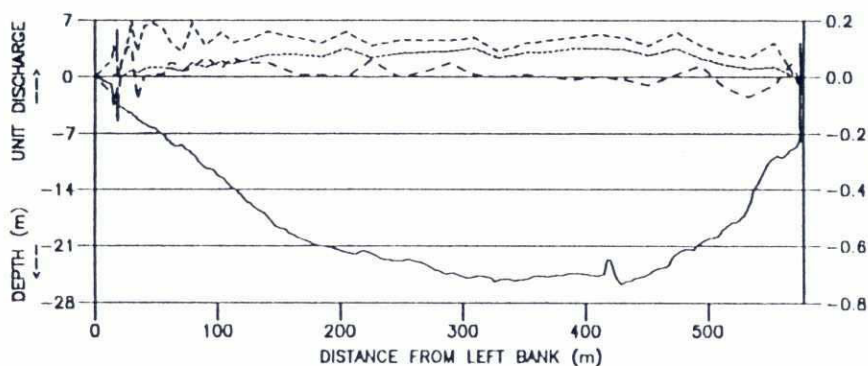
... U (m/s)

- . - V (m/s)

STAGE = 1.65 (m + PWD)

A = 10701 (m³)

Q = 234 (m³/s)



(19/3 06:00 - 06:07)

LEGEND :

— WATER DEPTH (m below STAGE)

- - - UNIT DISCHARGE (m³/s.m)

... U (m/s)

- . - V (m/s)

STAGE = 1.55 (m + PWD)

A = 10624 (m³)

Q = 1334 (m³/s)

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 139 : 18 - 19 March , 1995

Location 11 : Meghna River , Bhairab Bazar

File : Z53J3T18

Z53J3T26

Date : 13 Aug 1995

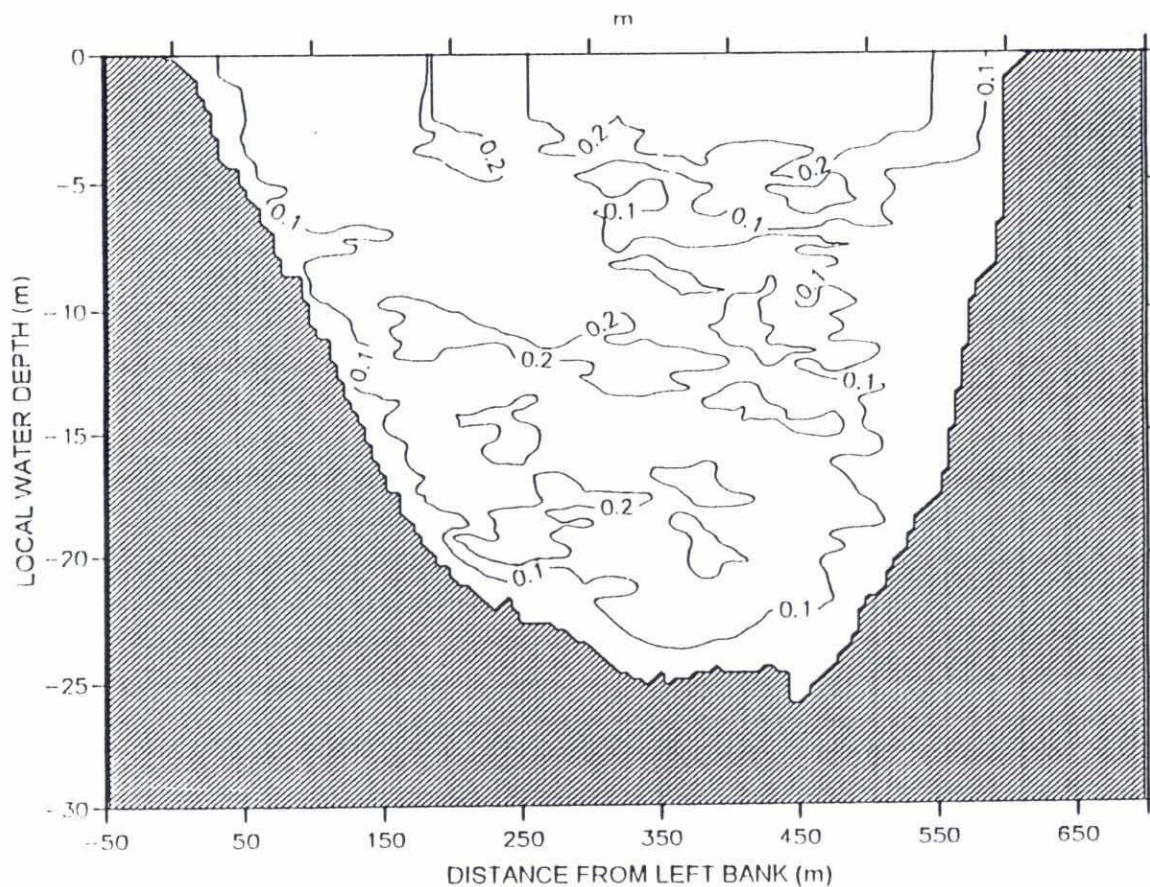
Init : mzh/sjr

Horizontal distribution of flow

Channel 1

page

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Iso-velocity contours (m/s)

Water level : 1.42 m + PWD measured at the station indicated on page 1.1
at 20:02 hours on 18 Mar 95

FAP 24



DEIFT - DHI

RIVER SURVEY PROJECT

Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 139 : 18 - 19 March , 1995

Location 11 : Meghna River , Bhairab Bazar

File : Z5313T38

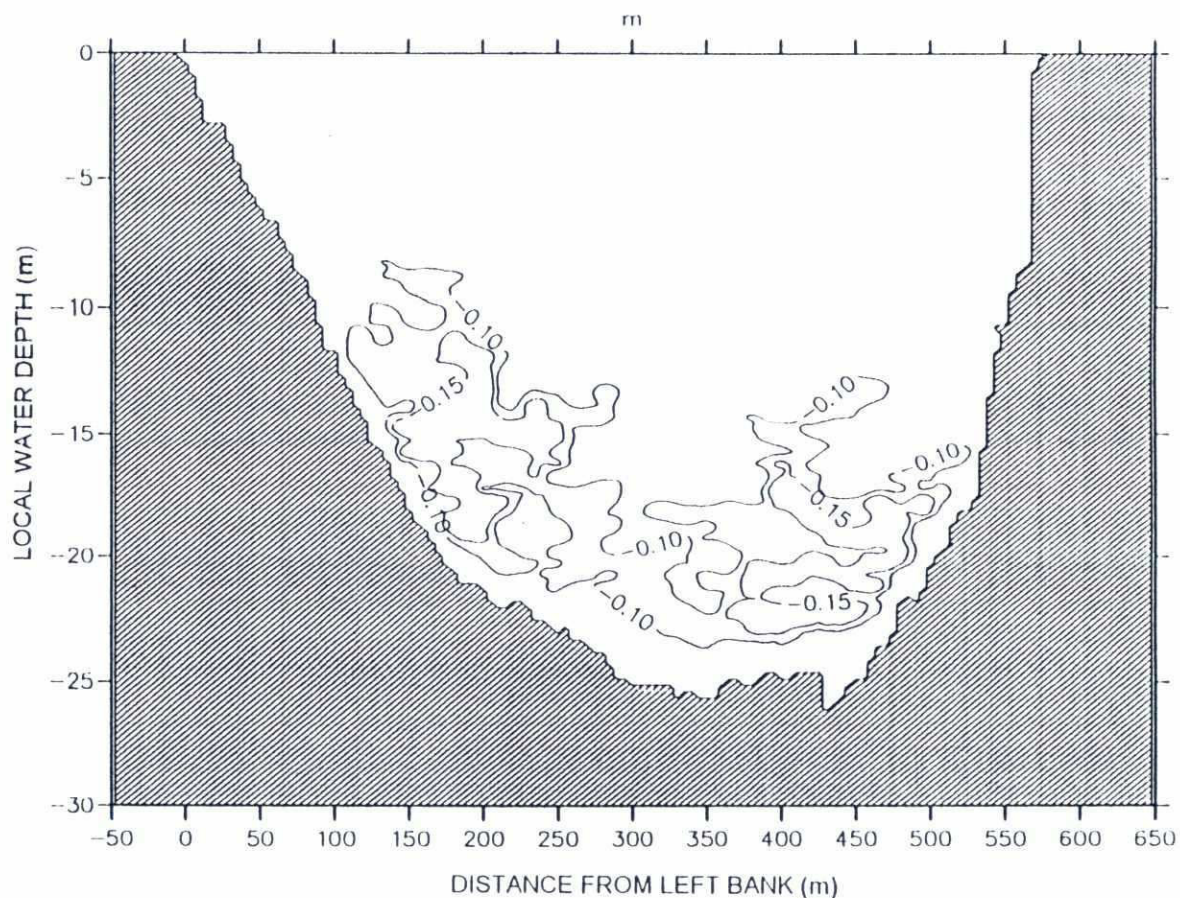
Date : 13 Aug 1995

Init : mzh/sjr

Cross-sectional distribution of flow velocity
Channel 1

page

4.1



Iso-velocity contours (m/s)

Water level : 1.55 m + PWD measured at the station indicated on page 1.1
at 22:03 hours on 18 Mar 95

FAP 24



DELFT - DHI

RIVER SURVEY PROJECT
Flood Plan Coordination Organization

Commission of the European Communities

Survey Bulletin 139 : 18 - 19 March , 1995

Location 11 : Meghna River , Bhairab Bazar

File : Z53I3T46

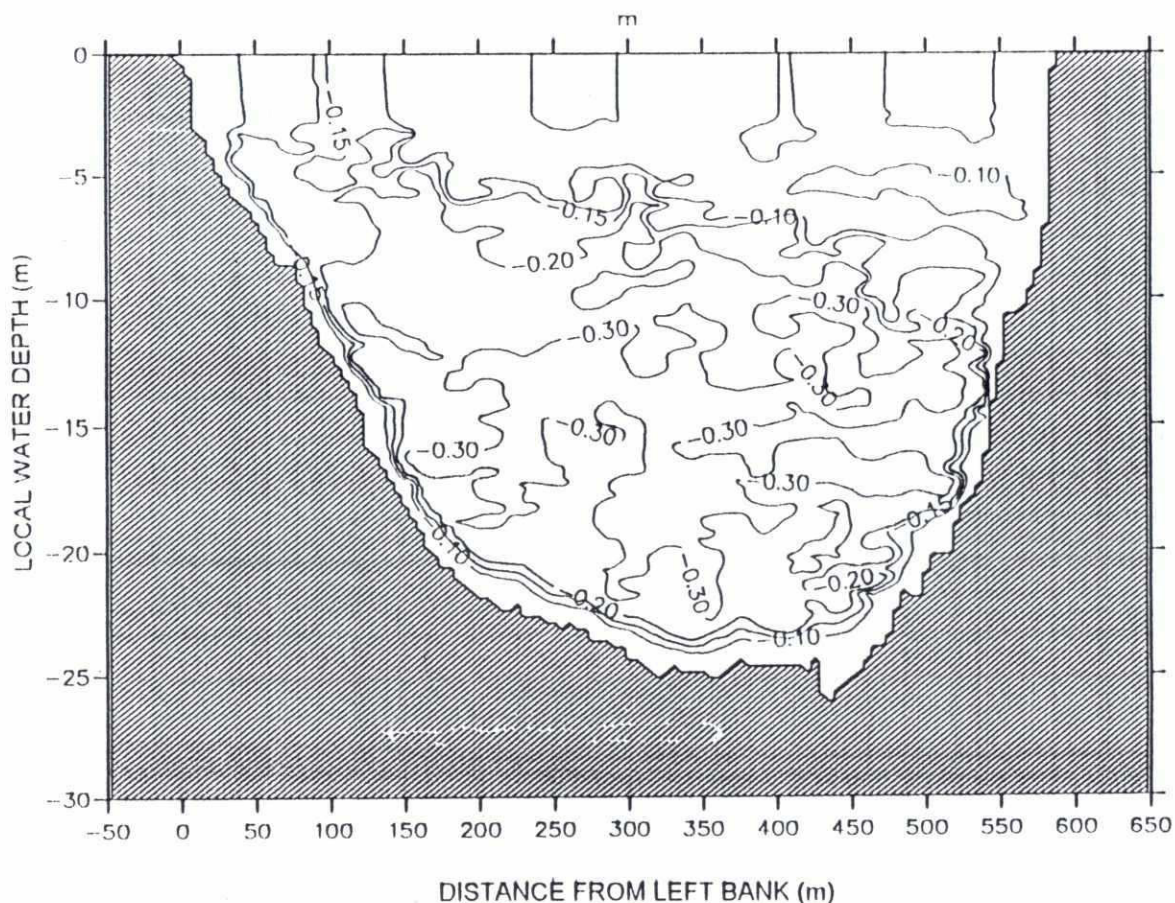
Date : 13 Aug 1995

Init : mzh/sjr

Cross-sectional distribution of flow velocity
Channel 1


page

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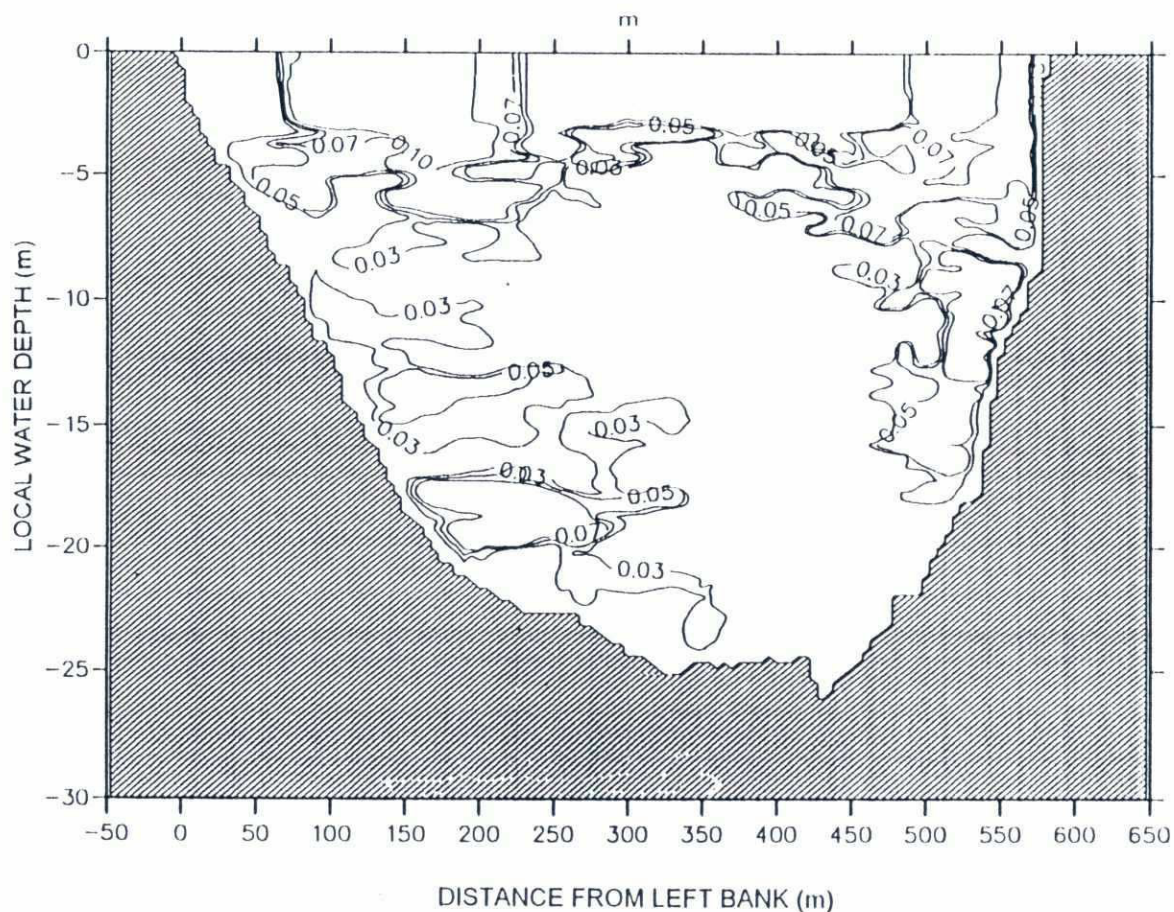


Iso-velocity contours (m/s)

Water level : 1.69 m + PWD measured at the station indicated on page 1.1
at 00:16 hours on 19 Mar 95

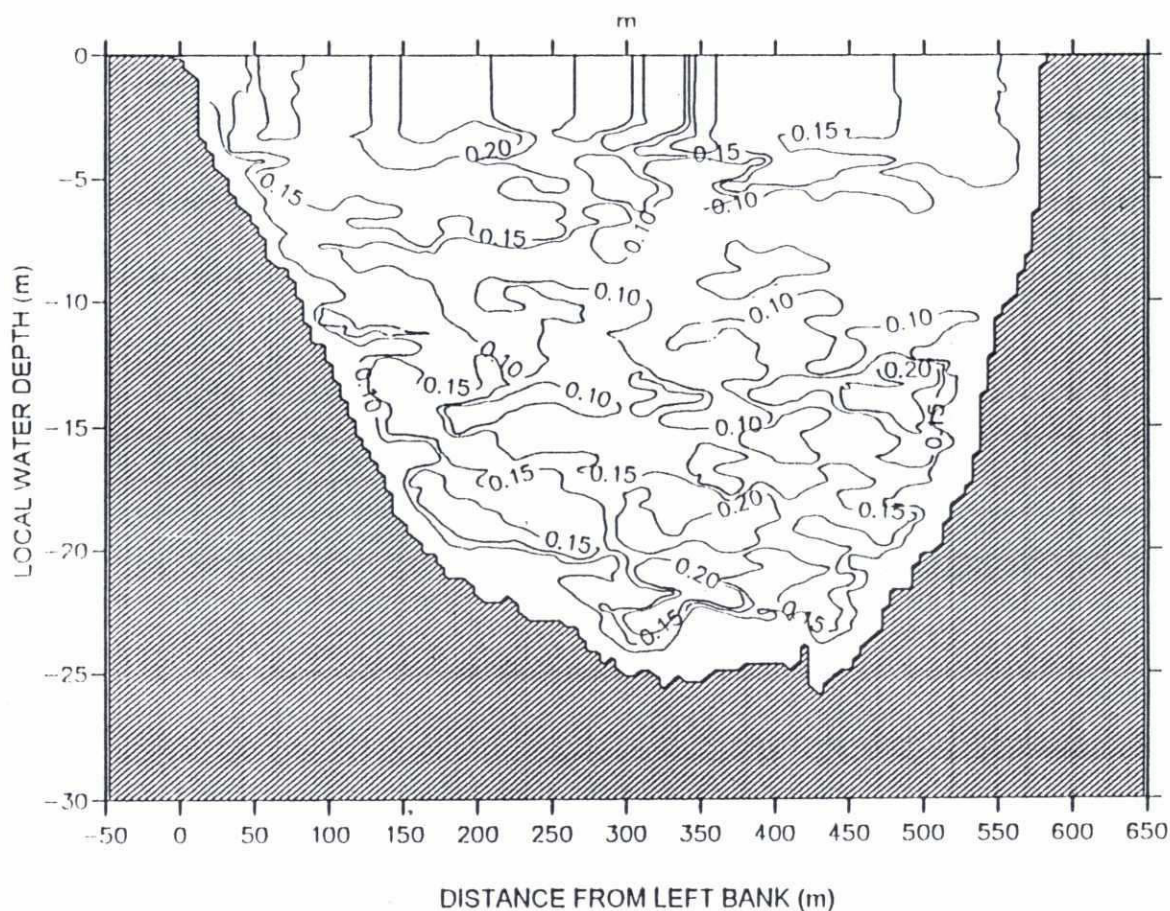
FAP 24  DELFT - DHI		Survey Bulletin 139 : 18 - 19 March , 1995	
		Location 11 : Meghna River , Bhairab Bazar	
File : Z53J3T02	Date : 13 Aug 1995	Cross-sectional distribution of flow velocity Channel 1	page
	Init : mzh/sjr		43

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Iso-velocity contours (m/s)
 Water level : 1.65 m + PWD measured at the station indicated on page 1.1
 at 04:01 hours on 19 Mar 95

<div data-bbox="97 1778 234 1816" data-label="Text"> <p>FAP 24</p> </div> <div data-bbox="97 1816 234 1877" data-label="Image"> </div> <div data-bbox="90 1877 240 1906" data-label="Text"> <p>DELFT - DHI</p> </div> <div data-bbox="295 1821 564 1906" data-label="Text"> <p>RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p> </div>		Survey Bulletin 139 : 18 - 19 March , 1995	
		Location 11 : Meghna River , Bhairab Bazar	
File : Z53J3T18	Date : 13 Aug 1995	Cross-sectional distribution of flow velocity Channel 1	page 44
	Init : mzh/sjr		



Iso-velocity contours (m/s)

Water level : 1.55 m + PWD measured at the station indicated on page 1.1
at 06:00 hours on 19 Mar 95

FAP 24  DELFT - DHI		Survey Bulletin 139 : 18 - 19 March , 1995	
		Location 11 : Meghna River , Bhairab Bazar	
File : Z53J3T26	Date : 13 Aug 1995	Cross-sectional distribution of flow velocity Channel 1	page 4.5
	Init : mzh/sjr		

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Andreasen settling tube								
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent		D35	D50	D65
				< 0.06 mm	> 0.06 mm	(mm)	(mm)	(mm)
1	1	9503181211-1213	26.30	92.424	7.576	0.007	0.013	0.034
		9503181233-1235	26.30	97.765	2.235	0.004	0.007	0.018
		9503181516-1518	25.80	92.662	7.338	0.012	0.015	0.023
		9503181547-1549	25.80	86.656	13.344	0.006	0.009	0.015
		9503181730-1732	24.80	60.670	39.330	0.025	0.031	0.070
		9503181820-1822	24.80	92.236	7.764	0.010	0.032	0.038
		9503181835-1837	24.80	63.782	36.218	0.013	0.027	0.065
		9503182110-2112	24.60	90.990	9.010	0.010	0.023	0.030
		9503182135-2137	24.60	88.939	11.061	0.011	0.023	0.058
		9503190018-0020	26.00	87.734	12.266	0.004	0.017	0.029
		9503190027-0029	26.00	86.742	13.258	0.009	0.017	0.023
		9503190305-0307	26.10	73.477	26.523	0.009	0.021	0.045
		9503190328-0330	26.10	88.891	11.109	0.011	0.015	0.020
		9503190610-0612	24.90	85.951	14.049	0.010	0.014	0.021
		9503190625-0627	24.90	90.390	9.610	0.004	0.009	0.017
		9503190910-0912	25.00	82.088	17.912	0.017	0.021	0.037
		9503190929-0931	25.00	91.755	8.245	0.012	0.019	0.031
		9503191215-1217	25.10	60.398	39.602	0.018	0.031	0.072
		9503191240-1242	25.10	77.055	22.945	0.011	0.015	0.029

Table 5.1: Grain size of near bed suspended sediment (0.3 m above river bed)


US BM-54 bed samples								
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent		D35	D50	D65
				< 0.06 mm	> 0.06 mm	(mm)	(mm)	(mm)
1	1	9503181306-1308	26.30	1.760	98.240	0.184	0.220	0.271
		9503181805-1807	24.80	8.795	91.205	0.162	0.189	0.221
		9503190018-0020	26.00	0.347	99.653	0.159	0.178	0.198
		9503190618-0620	24.90	1.426	98.574	0.174	0.203	0.236
		9503191225-1227	25.10	2.904	97.096	0.172	0.204	0.241

Table 5.2 : Grain size of bed material

Helley-Smith							
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent < 0.06 mm > 0.06 mm	D35 (mm)	D50 (mm)	D65 (mm)
Sample not collected							


Table 5.3 : Grain size of bed load

Table 5.3 : Grain size of bed load

<div>FAP 24</div> <div></div> <div>DELFT - DHI</div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	<div>Survey Bulletin 139 : 18 - 19 March , 1995</div>	
<div>Date : 13 Aug 1995</div>		<div>Location 11 : Meghna River , Bhairab Bazar</div>		
<div>Init : mzh/sjr</div>		<div>Grain size distributions</div>		<div>page</div> <div>51</div>

Delft - Bottle								
Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Depth (m)	Weight percent		D35	D50	D65
				< 0.06 mm	> 0.06 mm	(mm)	(mm)	(mm)
1	1	9503181305-1310	26.30	-	-	-	-	-
		9503181345-1350	26.80	-	-	-	-	-
		9503181500-1505	26.20	4.887	95.113	0.138	0.163	0.193
		9503181530-1535	25.80	-	-	-	-	-
		9503181635-1640	25.30	-	-	-	-	-
		9503181720-1725	24.80	-	-	-	-	-
		9503181810-1815	24.80	-	-	-	-	-
		9503181905-1910	24.60	-	-	-	-	-
		9503182005-2010	24.50	-	-	-	-	-
		9503182115-2120	24.60	-	-	-	-	-
		9503182238-2245	24.90	1.486	98.514	0.155	0.175	0.197
		9503182350-2355	25.80	1.898	98.102	0.160	0.180	0.204
		9503190042-0047	26.00	-	-	-	-	-
		9503190237-0242	26.30	-	-	-	-	-
		9503190340-0345	26.70	0.063	99.937	0.162	0.182	0.204
		9503190431-0436	25.30	1.134	98.866	0.157	0.178	0.203
		9503190527-0532	25.10	-	-	-	-	-
		9503190627-0632	24.90	-	-	-	-	-
		9503190737-0742	24.80	-	-	-	-	-
		9503190815-0820	25.00	-	-	-	-	-
		9503190905-0910	25.00	-	-	-	-	-
		9503191010-1015	25.40	-	-	-	-	-
		9503191110-1115	25.40	-	-	-	-	-
		9503191205-1210	25.10	42.341	57.659	-	0.076	0.111
		9503191355-1400	25.30	-	-	-	-	-
		9503181318-1323	26.30	-	-	-	-	-
		9503181355-1400	26.80	-	-	-	-	-
		9503181510-1515	26.20	-	-	-	-	-
		9503181540-1545	25.80	-	-	-	-	-
		9503181645-1650	25.30	-	-	-	-	-
		9503181730-1735	24.80	-	-	-	-	-
		9503181820-1825	24.80	-	-	-	-	-
		9503181915-1920	24.60	-	-	-	-	-
		9503182015-2020	24.50	-	-	-	-	-
		9503182125-2130	24.60	-	-	-	-	-
		9503182250-2255	24.90	-	-	-	-	-
		9503182400-2405	25.80	0.535	99.465	0.158	0.177	0.198
		9503190056-0101	26.00	-	-	-	-	-
		9503190140-0145	26.30	-	-	-	-	-
		9503190351-0356	26.70	1.354	98.646	0.152	0.172	0.195
		9503190750-0755	24.80	-	-	-	-	-
		9503190825-0830	25.00	-	-	-	-	-
		9503190915-0920	25.00	-	-	-	-	-
		9503191015-1020	25.40	-	-	-	-	-
		9503191120-1125	25.40	-	-	-	-	-
		9503191220-1225	25.10	-	-	-	-	-
		9503191345-1350	25.30	0.144	99.856	0.165	0.187	0.213


Table 5.4 : Grain sizes of bed load

 <p>FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p>		Survey Bulletin 139 : 18 - 19 March , 1995	
		Location 11 : Meghna River , Bhalrab Bazar	
	Date : 13 Aug 1995	Grain size distributions	page 5.2
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Method	Channel	Line	Time (YYMMDDHHMM-HHMM)	File name
Echo-Sounding	1	7	9503181221-1226	Z53I3T07
			9503181333-1337	Z53I3T12
			9503181533-1539	Z53I3T20
			9503181627-1632	Z53I3T24
			9503181712-1717	Z53I3T27
			9503181817-1822	Z53I3T32
			9503181915-1920	Z53I3T36
			9503182020-2025	Z53I3T40
			9503182115-2121	Z53I3T44
			9503182222-2227	Z53I3T48
			9503182321-2326	Z53I3T52
			9503190025-0029	Z53J3T03
			9503190123-0127	Z53J3T07
			9503190221-0226	Z53J3T11
			9503190325-0330	Z53J3T16
			9503190419-0424	Z53J3T20
			9503190536-0540	Z53J3T24
			9503190628-0631	Z53J3T29
			9503190720-0724	Z53J3T33
			9503190816-0821	Z53J3T37
			9503191037-1042	Z53J3T46
			9503191117-1122	Z53J3T51
			9503191216-1220	Z53J3T55
			9503191315-1319	Z53J3T59
		8	9503181240-1245	Z53I3T09
			9503181340-1346	Z53I3T13
			9503181526-1531	Z53I3T19
			9503181618-1623	Z53I3T23
			9503181719-1723	Z53I3T28
			9503181829-1834	Z53I3T33
			9503181922-1928	Z53I3T37
			9503182028-2033	Z53I3T41
			9503182123-2128	Z53I3T45
			9503182231-2237	Z53I3T49
			9503182329-2333	Z53I3T53
			9503190031-0035	Z53J3T04
			9503190130-0134	Z53J3T08
			9503190228-0232	Z53J3T12
			9503190331-0335	Z53J3T17
			9503190425-0429	Z53J3T21
			9503190541-0545	Z53J3T25
			9503190623-0626	Z53J3T28
			9503190726-0730	Z53J3T34
			9503190823-0828	Z53J3T38
			9503190923-0927	Z53J3T41
			9503191045-1050	Z53J3T47
			9503191125-1129	Z53J3T52
			9503191222-1227	Z53J3T56
			9503191322-1327	Z53J3T60


Table 6 1: Echo-Sounding

FAP 24  DELFT - DHI		RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 139 : 18 - 19 March , 1995	
				Location 11 : Meghna River , Bhairab Bazar	
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		Init : mzh/sjr			
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Method	Channel	Time (YYMMDDHHMM-HHMM)	File name
ADCP & EMF transect	1	9503181315-1321 9503181324-1329 9503181413-1419 9503181421-1426 9503181457-1502 9503181504-1510 9503181559-1604 9503181607-1612 9503181656-1502 9503181604-1609 9503181758-1803 9503181809-1814 9503181858-1903 9503181905-1910 9503182002-2007 9503182010-2016 9503182058-2103 9503182107-2112 9503182203-2208 9503182211-2216 9503182259-2303 9503182307-2313 9503190008-0013 9503190016-0021 9503190104-0109 9503190113-0118 9503190205-0209 9503190213-0218 9503190300-0305 9503190317-0321 9503190401-0407 9503190410-0415 9503190522-0527 9503190528-0532 9503190600-0606 9503190614-0631 9503190706-0710 9503190713-0717 9503190800-0805 9503190807-0812 9503190900-0905 9503190907-0912 9503191000-1004 9503191029-1033 9503191100-1005 9503191108-1113 9503191200-1205 9503191207-1212 9503191300-1305 9503191307-1312	Z53I3T10 Z53I3T11 Z53I3T15 Z53I3T16 Z53I3T17 Z53I3T18 Z53I3T21 Z53I3T22 Z53I3T25 Z53I3T26 Z53I3T29 Z53I3T31 Z53I3T34 Z53I3T35 Z53I3T38 * Z53I3T39 Z53I3T42 Z53I3T43 Z53I3T46 * Z53I3T47 Z53I3T50 Z53I3T51 Z53J3T01 Z53J3T02 * Z53J3T05 Z53J3T06 Z53J3T09 Z53J3T10 Z53J3T13 Z53J3T15 Z53J3T18 * Z53J3T19 Z53J3T22 Z53J3T23 Z53J3T26 * Z53J3T27 Z53J3T31 Z53J3T32 Z53J3T35 Z53J3T36 Z53J3T39 Z53J3T40 Z53J3T43 Z53J3T45 Z53J3T48 Z53J3T50 Z53J3T53 Z53J3T54 Z53J3T57 Z53J3T58

Table 6.2: ADCP & EMF transects * : transect in PSD 24 data base and presented in Sections 3 and 4


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RIVER SURVEY PROJECT <small>Flood Plan Coordination Organization Commission of the European Communities</small>		Location 11 : Meghna River , Bhairab Bazar	
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Method	Channel	Vertical	Time (YYMMDDHHMM-IIHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9503181200-1205	600693	658528	26 30	Z5311P01 *
			9503181215-1220	600693	658528	26 30	Z5311P02 *
			9503181230-1237	600694	658532	26 60	Z5311P03 *
			9503181246-1251	600699	658527	26 90	Z5311P04 *
			9503181300-1306	600694	658531	26 80	Z5311P05 *
			9503181315-1320	600697	658529	27 10	Z5311P06 *
			9503181330-1336	600694	658531	26 80	Z5311P07 *
			9503181345-1350	600703	658525	26 50	Z5311P08 *
			9503181400-1405	600693	658528	26 20	Z5311P10 *
			9503181415-1420	600699	658530	26 30	Z5311P11 *
			9503181430-1435	600704	658519	26 70	Z5311P12 *
			9503181445-1450	600709	658503	26 00	Z5311P13 *
			9503181500-1504	600701	658509	26 30	Z5311P14 *
			9503181515-1520	600696	658493	25 90	Z5311P15 *
			9503181530-1535	600699	658504	25 80	Z5311P16 *
			9503181545-1550	600699	658504	25 80	Z5311P17 *
			9503181600-1605	600639	658482	25 30	Z5311P18 *
			9503181615-1620	600637	658484	25 30	Z5311P19 *
			9503181630-1636	600640	658479	25 10	Z5311P20 *
			9503181646-1650	600638	658481	25 10	Z5311P21 *
			9503181701-1706	600645	658476	24 80	Z5311P22 *
			9503181718-1723	600654	658468	24 40	Z5311P23 *
			9503181730-1737	600647	658472	24 90	Z5311P24 *
			9503181745-1750	600645	658476	24 80	Z5311P25 *
			9503181800-1805	600645	658474	24 80	Z5311P27 *
			9503181815-1820	600646	658473	24 90	Z5311P28 *
			9503181830-1835	600645	658474	24 80	Z5311P29 *
			9503181845-1846	600640	658474	24 60	Z5311P30 *
			9503181848-1853	600639	658474	24 80	Z5311P31 *
			9503181900-1906	600644	658475	24 80	Z5311P32 *
			9503181916-1920	600638	658475	24 60	Z5311P33 *
			9503181930-1935	600638	658475	24 60	Z5311P34 *
			9503181943-1949	600642	658473	24 50	Z5311P35 *
			9503182001-2006	600641	658473	24 50	Z5311P36 *
			9503182029-2035	600641	658473	24 50	Z5311P38 *
			9503182045-2052	600645	658472	24 80	Z5311P39 *
			9503182100-2106	600642	558475	24 60	Z5311P40 *
			9503182115-2122	600645	658476	24 80	Z5311P41 *
			9503182131-2137	600642	558475	24 60	Z5311P42 *
			9503182145-2152	600656	658476	25 10	Z5311P43 *
			9503182202-2208	600655	658496	24 90	Z5311P44 *
			9503182219-2224	600657	658484	25 40	Z5311P45 *
			9503182230-2237	600655	658496	24 90	Z5311P46 *
			9503182250-2255	600675	658511	26 10	Z5311P47 *
			9503182300-2306	600673	658518	25 80	Z5311P48 *
			9503182315-2321	600675	658522	26 30	Z5311P49 *
			9503182331-2337	600673	658518	25 80	Z5311P50 *
			9503182346-2351	600673	658522	25 90	Z5311P51 *


Table 6.3 Vertical profiles (continued)

* MEX not available

FAP 24  DELFT · DHI		RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities		Survey Bulletin 139 : 18 - 19 March , 1995	
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Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9503190013-0018	600700	658517	26.00	Z53J1P01 *
			9503190021-0028	600700	658517	26.00	Z53J1P02 *
			9503190036-0040	600700	658516	26.30	Z53J1P04 *
			9503190046-0051	600684	658532	26.30	Z53J1P06 *
			9503190102-0107	600683	658530	26.10	Z53J1P08 *
			9503190118-0123	600674	658491	25.30	Z53J1P10 *
			9503190131-0136	600657	658490	25.10	Z53J1P11 *
			9503190146-0151	600648	658487	24.90	Z53J1P13 *
			9503190201-0207	600648	658487	24.90	Z53J1P14 *
			9503190215-0221	600645	658484	24.80	Z53J1P15 *
			9503190230-0236	600679	658531	26.30	Z53J1P16 *
			9503190245-0251	600676	658529	26.60	Z53J1P17 *
			9503190300-0305	600668	658525	26.30	Z53J1P18 *
			9503190315-0321	600670	658524	26.00	Z53J1P19 *
			9503190332-0330	600667	658510	25.70	Z53J1P20 *
			9503190345-0350	600674	658491	25.60	Z53J1P21 *
			9503190400-0405	600676	658487	25.40	Z53J1P22 *
			9503190415-0420	600667	658487	25.30	Z53J1P23 *
			9503190430-0435	600656	658490	25.70	Z53J1P24 *
			9503190445-0451	600651	658494	25.40	Z53J1P25 *
			9503190500-0506	600651	658498	25.60	Z53J1P26 *
			9503190515-0520	600642	658491	24.90	Z53J1P27 *
			9503190530-0535	600650	658482	25.20	Z53J1P28 *
			9503190545-0551	600648	658485	25.00	Z53J1P29 *
			9503190630-0636	600646	658487	25.30	Z53J1P34 *
			9503190645-0651	600646	658483	24.90	Z53J1P35 *
			9503190700-0706	600640	658482	25.30	Z53J1P36 *
			9503190715-0721	600644	658484	24.90	Z53J1P37 *
			9503190730-0736	600645	658484	24.80	Z53J1P38 *
			9503190745-0751	600647	658479	25.10	Z53J1P39 *
			9503190800-0806	600650	658475	25.00	Z53J1P40 *
			9503190816-0821	600649	658475	24.90	Z53J1P41 *
			9503190830-0838	600650	658475	25.00	Z53J1P42 *
			9503190845-0851	600668	658489	25.00	Z53J1P43 *
			9503190904-0910	600644	658480	25.00	Z53J1P44 *
			9503190915-0921	600644	658480	25.00	Z53J1P45 *
			9503190930-0936	600644	658480	25.00	Z53J1P46 *
			9503190945-0951	600663	658482	25.00	Z53J1P47 *
			9503191000-1007	600662	658487	25.40	Z53J1P48 *
			9503191017-1023	600778	658545	25.70	Z53J1P49 *
			9503191030-1036	600662	658487	25.40	Z53J1P50 *
			9503191045-1051	600681	658498	25.60	Z53J1P51 *

Table 6.3 Vertical profiles (continued)	* MEX not available
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Method	Channel	Vertical	Time (YYMMDDHHMM-IIHMM)	Easting (m)	Northing (m)	Depth (m)	File name
Vertical current & turbidity profiles (ADCP/S4/MEX)	1	1	9503191100-1106	600646	658500	25.40	Z53J1P52 *
			9503191126-1131	600646	658500	25.40	Z53J1P54 *
			9503191133-1136	600653	658474	24.90	Z53J1P55 *
			9503191145-1152	600634	658698	25.10	Z53J1P56 *
			9503191202-1211	600635	658495	25.10	Z53J1P57 *
			9503191215-1221	600637	658490	25.20	Z53J1P58 *
			9503191230-1236	600634	658698	25.10	Z53J1P59 *
			9503191248-1255	600659	658486	25.60	Z53J1P60 *
			9503191300-1307	600659	658487	25.30	Z53J1P61 *
			9503191315-1321	600636	658493	25.10	Z53J1P62 *
			9503191330-1337	600659	658487	25.30	Z53J1P63 *
			9503191345-1353	600630	658506	25.60	Z53J1P64 *
			9503191357-1404	600634	658515	25.70	Z53J1P65 *

Table 6.3 Vertical profiles

* MEX not available


Method	Channel	Vertical	No of samples	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)
Suspended sediments (pump bottle)	1	1	3	9503181202-1251	600693	658528	26.30
			3	9503181301-1330	600694	658531	26.80
			3	9503181400-1500	600693	658528	26.20
			3	9503181500-1540	600699	658504	25.80
			3	9503181635-1656	600637	658484	25.30
			3	9503181659-1737	600645	658474	24.80
			3	9503181802-1842	600645	658474	24.80
			3	9503181857-1933	600638	658475	24.60
			3	9503182002-2050	600641	658443	24.50
			3	9503182100-2137	600642	658475	24.60
			3	9503182209-2240	600655	658446	24.90
			3	9503182300-2351	600673	658518	25.80
			3	9503190007-0055	600700	650517	26.00
			3	9503190105-0135	600700	650516	26.30
			3	9503190201-0234	600684	650532	26.30
			3	9503190300-0340	600683	658530	26.70
			3	9503190400-0433	600674	658491	25.30
			3	9503190500-0534	600657	658490	25.10
			3	9503190600-0637	600640	658487	24.90
			3	9503190700-0722	600645	658484	24.80
			3	9503190800-0840	600650	658475	25.00
			3	9503190856-0943	600644	658480	25.00
			3	9503190957-1037	600642	658487	25.40
			3	9503191100-1138	600646	658500	25.40
			3	9503191158-1244	600634	658498	25.10
			3	9503191258-1338	600659	658487	25.30

Table 6.4 Suspended sediment - point sampled

 <p>FAP 24 RIVER SURVEY PROJECT Flood Plan Coordination Organization Commission of the European Communities</p>		Survey Bulletin 139 : 18 - 19 March , 1995	
		Location 11 : Meghna River , Bhairab Bazar	
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Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No.
Delft Bottle Sample	1	1	9503181305-1310	600693	658528	26.30	A974
			9503181345-1350	600694	658531	26.80	A1050
			9503181500-1505	600693	658528	26.20	A964
			9503181530-1535	600699	658504	25.80	A939
			9503181635-1640	600637	658484	25.30	A137
			9503181720-1725	600645	658474	24.80	A760
			9503181810-1815	600645	658474	24.80	A139
			9503181905-1910	600638	658475	24.60	A1030
			9503182005-2010	600641	658443	24.50	A1017
			9503182115-2120	600642	658475	24.60	A753
			9503182238-2245	600655	658446	24.90	A770
			9503182350-2355	600673	658518	25.80	A1015
			9503190042-0047	600700	650517	26.00	A798
			9503190237-0242	600684	650532	26.30	A750
			9503190340-0345	600683	658530	26.70	A968
			9503190431-0436	600674	658491	25.30	A790
			9503190527-0532	600657	658490	25.10	A945
			9503190627-0632	600640	658487	24.90	A977
			9503190737-0742	600645	658484	24.80	A1037
			9503190815-0820	600650	658475	25.00	A1022
			9503190905-0910	600644	658480	25.00	A1002
			9503191010-1015	600642	658487	25.40	A1054
			9503191110-1115	600646	658500	25.40	A971
			9503191205-1210	600634	658498	25.10	A1043
			9503191355-1400	600659	658487	25.30	A987
		1	9503181318-1323	600693	658528	26.30	A954
			9503181355-1400	600694	658531	26.80	A957
			9503181510-1515	600693	658528	26.20	A764
			9503181540-1545	600699	658504	25.80	A963
			9503181645-1650	600637	658484	25.30	A785
			9503181730-1735	600645	658474	24.80	A956
			9503181820-1825	600645	658474	24.80	A793
			9503181915-1920	600638	658475	24.60	A969
			9503182015-2020	600641	658443	24.50	A1009
			9503182125-2130	600642	658475	24.60	A762
			9503182250-2255	600655	658446	24.90	A1052
			9503182400-2405	600673	658518	25.80	A965
			9503190056-0101	600700	650517	26.00	A984
			9503190140-0145	600700	650516	26.30	A975
			9503190351-0356	600683	658530	26.70	A754
			9503190750-0755	600645	658484	24.80	A1033
			9503190825-0830	600650	658475	25.00	A962
			9503190915-0920	600644	658480	25.00	A1045
			9503191015-1020	600642	658487	25.40	A1028
			9503191120-1125	600646	658500	25.40	A795
			9503191220-1225	600634	658498	25.10	A1038
			9503191345-1350	600659	658487	25.30	A1047

Table 6.5 Bed load



<div><div>FAP 24</div><div></div><div>DELFT - DII</div></div> <div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div>		Survey Bulletin 139 : 18 - 19 March , 1995	
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Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No
US BM-54 bed samples	1	1	9503181306-1308	600693	658528	26 30	U-1
			9503181805-1807	600645	658474	24 80	U-2
			9503190018-0020	600700	650517	26 00	U-3
			9503190618-0620	600648	658487	24 90	U-4
			9503191225-1227	600634	658498	25 10	U-5


Table 6.6: Bed material

Method	Channel	Vertical	Time (YYMMDDHHMM-HHMM)	Easting (m)	Northing (m)	Depth (m)	Sample No
Andreasen settling tube	1	1	9503181211-1213	600693	658528	26 30	A454
			9503181233-1235	600693	658528	26 30	A728
			9503181516-1518	600699	658504	25 80	A722
			9503181547-1549	600699	658504	25 80	A721
			9503181730-1732	600645	658474	24 80	A14
			9503181820-1822	600645	658474	24 80	A3
			9503181835-1837	600645	658474	24 80	A724
			9503182110-2112	600642	658475	24 60	A734
			9503182135-2137	600642	658475	24 60	A1
			9503190018-0020	600700	650517	26 00	A856
			9503190027-0029	600700	650517	26 00	A1070
			9503190305-0307	600683	658530	26 10	A1063
			9503190328-0330	600683	658530	26 10	A1074
			9503190610-0612	600648	658487	24 90	A457
			9503190625-0627	600648	658487	24 90	A23
			9503190910-0912	600644	658480	25 00	A1073
			9503190929-0931	600644	658480	25 00	A331
			9503191215-1217	600634	658498	25 10	A735
			9503191240-1242	600634	658498	25 10	A850

Table 6.6: Bed material

<div><div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 139 : 18 - 19 March , 1995	
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Types of Data	Channel	Format	Filename 200
ADCP/S4/EMF data	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .ase Z53I3T46 .ase Z53j3T02 .ase Z53j3T18 .ase Z53j3T26 .ase
Echosounder data	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .ech Z53I3T46 .ech Z53j3T02 .ech Z53j3T18 .ech Z53j3T26 .ech
Sediment transport data	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .sed Z53I3T46 .sed Z53j3T02 .sed Z53j3T18 .sed Z53j3T26 .sed
Bed load sed. analysis	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .bdl Z53I3T46 .bdl Z53j3T02 .bdl Z53j3T18 .bdl Z53j3T26 .bdl
Susp. sed. conc. analysis	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .ssc Z53I3T46 .ssc Z53j3T02 .ssc Z53j3T18 .ssc Z53j3T26 .ssc
Susp. sed. size. analysis	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .ssz Z53I3T46 .ssz Z53j3T02 .ssz Z53j3T18 .ssz Z53j3T26 .ssz
Bed material analysis	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .bdm Z53I3T46 .bdm Z53j3T02 .bdm Z53j3T18 .bdm Z53j3T26 .bdm
Table 7.1 PSD 24 Database file description (continued)			

<div><div><div>FAP 24</div><div><div>DELFT - DHI</div></div></div><div><div>RIVER SURVEY PROJECT</div><div>Flood Plan Coordination Organization</div><div>Commission of the European Communities</div></div></div>		Survey Bulletin 139 : 18 - 19 March , 1995	
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Types of Data	Channel	Format	Filename
Transect plot data	1	QUATTRO QUATTRO QUATTRO QUATTRO QUATTRO	Z53I3T38 .trs Z53I3T46 .trs Z53j3T02 .trs Z53j3T18 .trs Z53j3T26 .trs
Iso-velocity plot data	1	MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21 MIKE 21	Z53I3T38 .ct2 Z53I3T38 .dt2 Z53I3T46 .ct2 Z53I3T46 .dt2 Z53j3T02 .ct2 Z53j3T02 .dt2 Z53j3T18 .ct2 Z53j3T18 .dt2 Z53j3T26 .ct2 Z53j3T26 .dt2

Table 7.1 PSD 24 Database file description

<div><div>FAP 24</div><div></div><div>DELFT - DHI</div></div>		<div>RIVER SURVEY PROJECT</div> <div>Flood Plan Coordination Organization</div> <div>Commission of the European Communities</div>	<div>Survey Bulletin 139 : 18 - 19 March , 1995</div>	
			<div>Location 11 : Meghna River , Bhairab Bazar</div>	
		<div>Date : 13 Aug 1995</div>	<div>PSD 24 Database file description</div>	
		<div>Init : mzh/sjr</div>		
			page	
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